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The Role of Quantitative Easing on the Stability of Financial Markets in Iran

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Abstract:

In the present study, the role of quantitative easing on the stability of financial markets in Iran has been analyzed from the quarterly data of 2006-2021 using the econometric model with vector error correction model (VECM). To estimate the model from some observable variables, the effects of quantitative easing on financial market variables, including (liquidity volume, capital adequacy rate, credits granted to the private sector by banks, bank deposit interest rate, stock market index and exchange rate) were estimated. The data was extracted from the official website of the Securities and Exchange Organization and the Central Bank. In VECM models, the estimation was done in both short-term and long-term periods with the aid of Eviews software. The findings of the research, based on the estimation of long-term and short-term relationships, show that quantitative easing has a positive and significant effect on the stability of financial markets. With the MP1 index increasing by one percent, the Financial Market Stability Index increased by 4.157 percent.

1- Introduction

Quantitative easing is an unconventional monetary policy adopted by the central bank to prevent the reduction of money supply when the conventional monetary policy has become ineffective (Aloui & Ben Maatogh, 2024). To encourage companies and financial and commercial institutions to receive loans and facilities, the Central Bank increases the money supply. This facility is for the

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investment of these institutions to improve the economy's general trend. The central bank buys long-term securities from the open market during this process. The purchase of these securities enters new money into the economy. During this process, the increase in demand for these securities with fixed income reduces the interest rate; moreover, it causes the growth of the Central Bank's balance sheet (Abd al-Razzaq Matrou et al., 2024). Central banks increase the money supply by purchasing government bonds and other securities to implement quantitative easing. An increase in the money supply lowers the interest rate. Banks can lend more easily when interest rates are low. Quantitative easing is usually implemented when the interest rate is near zero. At this stage, the central bank has fewer tools to influence economic growth (Dildora et al., 2024).

In addition, to maintain the stability of the financial markets in the presence or absence of a crisis, the central bank can intervene in the three main areas of macroeconomics, financial institutions, and financial markets. The central banks of Iran, by using unconventional monetary policy tools through quantitative easing, credit easing, endogenous facilitation and intervention in the foreign exchange market and changes in bank reserves, applied monetary policy. Among the objectives of central banks is to ensure financial stability and support investors, reduce the exchange rate and stimulate the stock market. The financial markets are oversensitive to the information published in the environment of Macroeconomics (Lenza & Slacalek, 2024). Central bank statements can directly impact market stakeholders' expectations; they can, in turn, affect their investment choices (Rodriguez-Rodriguez et al., 2024). The theory of rational expectations states that economic actors predict the future returns of financial assets through the information released by the central bank. Based on their predictions, they buy and sell in a way that maximizes their future profit (Asadollahi et al., 2023). There is only a minimal attempt in the literature to quantitatively analyze the transmission channels through which central bank quantitative easing affects financial markets. To fill the gap, we derive monetary policies from production curves and decompose them into factors that receive signaling and portfolio readjustment channels. The signaling channel is expected to stimulate aggregate demand by “signaling” central bank credits to maintain an accommodative monetary policy stance over the years (Glinsky & Spencer, 2023). The large-scale government bond purchase program, often called the quantitative easing policy, is perhaps the most well-known among the unconventional policies central banks in advanced economies used during the recent global crisis (Buehl et al., 2024). The portfolio readjustment channel works through market demand and supply of government securities, which lowers long-term government bond yields, increases riskier asset prices, and injects additional liquidity into the market. This, in turn, strengthens the balance sheet conditions of the central bank, reduces borrowing constraints, and

facilitates credit for firms and households, thereby stimulating spending (Li & Wang, 2024).

Considering the importance of the subject, one of the issues that economic policymakers should pay attention to when applying monetary and financial policies is how the volume of stock market liquidity affects these policies. On the other hand, one of the main discussions in financial economics is the stability of capital financial markets and indicators of Macroeconomic factors such as production, inflation, exchange rate, and money volume in the long term compared to the short-term periods. Therefore, the macroeconomic situation has always been one of investors' main concerns, especially in the stock markets. Considering that investors have different time horizons for investment, investigating the role of quantitative easing on the stability of financial markets in Iran in various time scales is particularly important.

2. Review Of Literature

2.1 Stability of financial markets

Researchers in financial markets are looking for a suitable index to measure the pressures of monetary policy on macroeconomic variables. These indices include the four primary rates of the economy: bank interest rate, financing bond rate, exchange rate and stock price index; these are usually called the financial stability index (Aloui & Ben Maatogh, 2024). One of the advantages of these indicators is that they show the effect of the central bank's monetary policy on financial assets and, in turn, can predict production and inflation through the central bank's monetary policy transmission mechanism. Changes in the level of prices and production fluctuations are compiled and presented by the International Monetary Fund, along with indicators for evaluating economic conditions, including the index of monetary and financial conditions (Aqaei et al., 2021). Financial liberalization has dramatically changed the form of crises, dimensions, and frequency of crises. Furthermore, the speed and volume of capital transfer and financial network connections have commonly caused the herd effect. Of course, the problems of financial institutions are an integral part of the vitality of financial activities (Olasehinde-Williams et al., 2024). Some financial institutions grow and develop, and some have a crisis and become bankrupt. However, as long as the institution(s) supervising the financial activity have the necessary knowledge to predict the critical situation of the said institutions, the transfer of the crisis from the institution affected by the crisis to other institutions can be prevented; the scale of the crisis-stricken institution is not in such degree that it overshadows the stability of the country's financial markets; and finally, compensatory measures provided to fulfill the financial obligations of the crisis-stricken institution to the depositors and creditors are predicted; the financial problem of an institution, even if it leads to bankruptcy,

does not threaten the financial stability of the country. Nevertheless, it is not practically easy to apply the abovementioned conditions. Financial institutions are connected (Bastin et al., 2021). A part of one institution's assets is another institution's liabilities, and vice versa. As a result, the financial crisis in one financial institution is quickly transferred to other institutions through the payment system. The default of a financial institution in repaying its debts means the failure of other institutions to meet their demands from the bank and causes them problems (Aloui et al., 2024).

2.2 Quantitative easing

In quantitative easing, the central bank buys "long-term" government bonds from banks and places them in the assets section of its balance sheet. When the central bank decides to expand the composition of its balance sheet, it must choose which financial assets to buy. The economic logic of this action is that the yield of sovereign bonds acts as a standard for pricing riskier private sector bonds (Liu et al., 2024). When long-term government bonds are purchased, the yield of private sector securities is expected to decrease in parallel with the yield of government bonds. In addition, with this action, the central bank seeks to reduce the long-term interest rate. In this case, long-term investments are encouraged, and as a result, an incentive is created to increase the total demand. In this way, the central bank pursues the goal of price stability or financial stability (Hosseinzadeh & Ismailzadeh, 2021). Banks play an essential role in the success of the central bank's quantitative easing policy. If the central bank buys the banks' bonds, additional liquidity is provided by the banks, as well as loans and new credit. The policy of the (Central) Bank of Japan between 2001 and 2006 and the (Central) Bank of England and the US Federal Reserve after the 2007 global crisis are examples of quantitative easing (Balcilar et al., 2024).

2.3 Research background

According to the studies carried out abroad, Aloui and Ben Maatog (2024) found that the unconventional monetary policy of the European Central Bank has a positive effect on the stock market. A quantitative easing shock leads to an increase in stock prices and a decrease in absolute volatility and the implicit risk premium. In a study, Dildora et al. (2024) found the importance of central bank interventions in reducing the impact of crises, which leads to a discussion about the consequences and potential future directions for crisis management. Finally, their article ended by emphasizing the vital role of central banks in maintaining economic stability during the crisis. In the research of Lee and Wang (2024), they found that the implementation and exit of quantitative easing are closely related to the change in unemployment rate, degree of inflation rate and M0 of currency circulation. Balcilar et al. (2024) found that the reduction of quantitative easing in the United States causes large capital outflows from quantitative easing. Additionally, reducing large-scale asset purchases and other unconventional monetary policy tools significantly impacts quantitative easing. In the study of

Rodríguez-Rodríguez et al. (2024), they found that money supply is used as an operational monetary policy tool for the Federal Reserve and the European Central Bank, and we confirm its use as an explanation. A tool for the behavior of two monetary authorities by applying strategy, identifying the reaction of monetary policy regarding the economic situation as well as other possible concerns of the monetary power concerning the financial behavior of governments and the evolution of the asset market, regardless of the monetary policy is possible at any given time. The research of Lenza and Slacalek (2024) found that quantitative easing compresses the income distribution because many households with lower incomes are employed. In contrast, monetary policy has only minor effects on the Gini coefficient for wealth. While high-wealth households benefit from higher stock prices, middle-wealth households benefit from higher house prices. In the research of Aloui et al. (2024), they found that the unprecedented nature of the crisis attributed to the reluctance and pessimism of investors and the change are related to Bitcoin's behavior that it is no longer considered as a safeguard. In the research of Boehl et al. (2024), they found that quantitative easing can increase the total investment index by easing the financing facilitates. Increasing the production capacity of companies reduced their final costs. These anti-inflationary side effects of supply prevailed over the inflationary effects caused by the aggregate demand stimulus. Olasehinde-Williams et al. (2024) found that the causal effect of quantitative easing on stock market returns and volatility changes over time. The impact on stock market returns is also greater than stock market volatility. In Liu et al.'s (2024) study, quantitative easing in the United States was found, and their main empirical results are as follows. First, the return spillover from the oil market to other markets is driven by different frequencies (short-term to long-term) and intensified during the global financial crisis of 2007-2009. Second, quantitative easing has various effects on overflow intensity at different frequencies, with the impact on short-term overflows being less significant. Third, the research provides the first empirical evidence for the double-edged sword effect of quantitative easing on systemic risk from a frequency perspective.

According to the studies carried out inside the country, Abdul Razzaq Matrou et al. (2024) found that financial inclusion has a negative effect in the short term. However, in the long term, it has a positive and significant effect on financial stability and social development in the studied countries due to its vast dimensions. Also, financial inclusion and financial literacy should be considered as practical factors in financial stability in the countries under review. They should be considered both in the short term and long term. In Asadollahi et al.'s (2023) study, the ratio of dividends paid has a positive and significant effect on the financial stability of banks in the long term. The ratio of accumulated profits also has a negative and significant effect on the financial stability of banks in the

long term. Hence, stability in the policy of dividend distribution is a factor in the financial stability of banks, which has a positive and significant effect in the long term. In another research, Keshavarz et al. (2022) found that despite the occurrence of price bubbles in conventional and Islamic financial markets, the average and standard deviation of price bubbles in the Islamic market are far less than in the conventional financial market. Bastin et al. (2021) found that the effect of the exchange rate on economic growth was negative and significant; in higher quantiles, this effect became more hostile. Moreover, the presence of the sanctions variable in the model led to the effects of bank credits in higher quantiles of economic growth, and the interest rate did not significantly affect economic growth. Taghizadeh et al. (2021) found that by separating the behavior of households in lending and borrowing, economic fluctuations and instability were more different than the homogeneous behavior of households. In another research Hosseinzadeh and Esmailzadeh (2021) found that the passing of economic growth over a threshold had a positive and significant effect on bank credits, and this effect was more effective in the period of recession than in the period of prosperity. As a result, the asymmetry of monetary policy due to the existence of different economic conditions will be confirmed for Iran's economy according to the New Keynesian view. In another study, Aqaei et al. (2021) found that financial and commercial liberalization had a negative effect on the composite index of financial stability in such a way that the interaction of the financial markets of countries leads to the transfer of liquidity and volatility in the financial market. Using the financial stability index to measure governments' efficiency in reducing the effect of financial crises can be helpful.

3. Methods

The econometric study method with vector error correction model (VECM) addresses the results of the present research analysis.

3.1 Model pattern design

The overview of the developed model (Vector Error Correction Model (VECM) econometrics based on the study of Trifonova and Kello (2021) is as follows:

$$Y_t = \mu_1 + A(L)Y_{t-1} + B(L)X_t + \vartheta_t \qquad (1)$$

where $Y_t$represents the vector of endogenous variables, X represents the vector of exogenous variables, $\mu_1$is an unconstrained intercept in the error correction model, A is a matrix of coefficients measuring short-term effects of endogenous variables, B is a matrix of coefficients measuring short-term effects of exogenous variables, α is a matrix of coefficients measuring the speed of adjustment to equilibrium, $\vartheta_t$is the error term.

3.2 Model Characteristics

To estimate the model from a number of observable variables, the role of quantitative easing on financial market variables, including (liquidity volume,

capital adequacy rate, credits granted to the private sector by banks, bank deposit interest rate, stock market index and exchange rate) was estimated. The research data were extracted from the official websites of the Securities and Exchange Organization and the Central Bank.

3.2.1 Independent variable

The independent variable in this study is the quantitative easing used to estimate the model.

3.2.2 Dependent variable

The dependent variable in this study is the stability of financial markets, which is based on macro-financial indicators of the economy. Macro-financial sector indicators include liquidity volume (money supply growth rate), capital adequacy rate, domestic credits granted to the private sector by banks, bank deposit interest rate, stock traded index and exchange rate. The explanations of the variables are given further.

4. Experimental Analysis

In this study, in order to investigate the role of quantitative easing on the stability of financial markets in Iran, time series data and a vector error correction model were used. In the first method, following the existing economic literature and the study of Farzin and Ghorban (2012), with some changes, the following model was used to introduce the stability index of financial markets:

$$FS_t = \sum_{i=}^{n} \frac{z_{it}-z_i}{\sigma_{z_{i,t}}} \qquad (2)$$

where z_{it}represents the bank liquidity index, capital adequacy index, credit risk, currency risk and bank deposit interest rate risk, $z_i$is the average of the mentioned variables and $\sigma_{z_{it}}$is the standard deviation. From now on, this index will be used with the symbol FS1.

In the second method, according to Ghalibaf et al. (2020), and applying a small change according to the purpose of the research, equation (2) is used:

$$FS_t = \sum_{i=}^{n} w_i\left(\frac{z_{it}-z_i}{\sigma_{z_{i,t}}}\right) \qquad (3)$$

In equation (2), z_{it}represents the variables of liquidity volume, capital adequacy rate, credits granted to the private sector, bank deposit interest rate, stock market index and exchange rate, $z_i$is the average of the mentioned variables, $\sigma_{z_{it}}$is the standard deviation and $w_i$is the weight of the variables, which is calculated using the vector autoregression model. FS2 is the symbol of this indicator.

In the third method, the stability index is calculated as follows:

$$FS_t = \frac{z_t-z_{min}}{z_{max}-z_{min}} \qquad (4)$$

where z_t are the variables introduced in the second method, z_{max} and z_{min} are the maximum and minimum values of the mentioned variables respectively. This indicator is also displayed with FS3 symbol.

4.1 Estimation using FS1 financial stability index

In the estimation process of VAR and VECM models, the optimal number of lags must be determined before estimating the final model. Informational statistics are used for this purpose. Due to the small number of observations, this research made the decision based on the Schwartz Bayesian criterion. The results of this criterion determined the optimal number of lags as 1.

Table 1. Examining optimal numbers of lags

Hanan Queen criterion (HQ)	Schwartz Bayesian Information Criterion (SBC)	Akaike information criterion (AIC)	Lag	
6.280	6.367	6.225	0	MP1
5.200	5.373	5.089	1	
4.954	*5.214	4.788	2	
4.879	5.226	4.658	3	

Source: Research findings

After determining the optimal lags, the model was again estimated with a lag of variables. Then, to check the existence of long-term relationships between the model's variables, the Johanson Jusilius test was performed. The results of this test are presented in Table (2).

Table 2. Results of co-integrated test

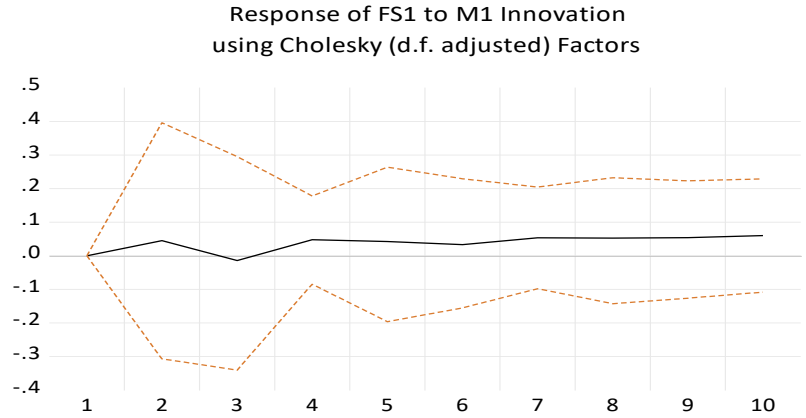
Result	Significance probability	Test statistics	The number of cointegrated vectors	
Rejected	0.03	16.864	None	MP1
It cannot be rejected	0.20	1.634	At Most 1	
Trace Test Indicates 1 Cointegrating Eqn(S) at the 0.05 Level				

According to the results of Table (2), the establishment of a long-term vector between the variables cannot be rejected. Therefore, the VECM model can be used to estimate. In VECM models, estimation was done in both the short and long term. Considering the logic governing the VAR and VECM models in the present study and in the estimation section of short-term relationships, the estimation results of the coefficient of the error correction term, instantaneous reaction functions, and analysis of variance are examined. In the long-term relationship estimation section, the long-term vector between the financial market stability index and the M1 index was extracted. The coefficient of determination and the F statistic of the basic models can be seen in Table 3 to check the validity of the estimation results and their reliability. The results of Table 3 are obtained after estimating the model. However, considering that the validity of the

estimation results can be measured by examining the results of the mentioned statistics, these results were first examined.

4.1.1 Instantaneous reaction functions

The next step of this study is to investigate what response the other variable in the system gives after creating an impulse in one variable. In this section, first, a standard deviation of momentum was entered into the MP1 variable, and its effect on FS1 was investigated.



Source: Research findings

Figure 1. Instantaneous reaction function of FS1 to the impulse entering M1

Since the variables in the system are related to each other, following one unit of impulse to the M1 variable, the FS1 variable is affected. The variable of financial stability increased during the period of impulse occurrence. However, after going through a fluctuating path, it showed an upward trend over time. As the error correction coefficient also showed, the convergence to the long-term equilibrium did not happen until the end of the tenth period.

4.1.2 Variance decomposition functions

At this stage, the prediction error variance is divided into two parts. One part is related to the variance of the variable itself, and the other part is related to the variance of another variable. In fact, the variable's contribution to the desired variable's changes over time is examined. The results of variance analysis of FS1 variable prediction error in 10 periods, M1, are shown in Table (3).

Table 3. Examining the results of analyzing the variance of the prediction error of FS1 variable

M1	FS1	Period
0.000	100	1
0.044	99.955	2
0.041	99.958	3
0.066	99.933	4
0.081	99.918	5
0.084	99.915	6
0.104	99.895	7
0.119	99.880	8
0.133	99.866	9
0.150	99.849	10

Source: Research findings

The results of Table (3) showed that, in the first period, most of the changes in the FS1 variable are explained by the variable itself. Over time, the effect of the variable itself decreased, but this decrease was not noticeable. On the other hand, the share of facilities increased from 0 in the first period in the first model to 0.15 percent in the tenth period.

4.1.3 Estimation of long-term relationships

The results of estimating long-term relationships were presented in equations (5).

$$FS1 = 29.94 + 15.05MP1^{**} \qquad (5)$$

The results of equation (5) show that quantitative easing has a positive and significant long-term effect on the stability of financial markets. Therefore, with a one-percent increase in the M1 index, the financial stability index increased by 15.05. This confirms the research hypothesis. Therefore, applying an appropriate quantitative easing policy will increase the stability of financial markets.

4.2 Estimation using FS2 financial stability index

In this section, the optimal number of lags was checked in the first step. The decision was made based on the Schwartz Bayesian criterion (SBC). According to the results of this criterion, the optimal number of breaks was determined as 1.

Table (4). Examining the results of determining the optimal interval

Result	Hanan Queen criterion (HQ)	Schwartz Bayesian criterion (SBC)	Akaike information criterion (AIC)	Lags	
The first optimal lag was determined	3.586-	3.500-	3.642-	0	MP1
	5.401-	*5.228-	5.512-	1	
	5.456-	5.196-	5.622-	2	
	5.478-	5.131-	5.699-	3	

Source: Research findings

After determining the optimal lag, the model was estimated once again, this time with a variable lag. Then, to check the existence of long-term relationships between the variables of the model, the Johanson Jucilius test was performed. The results of this test are presented in Table (5).

Table 5. The results of the homogeneity test

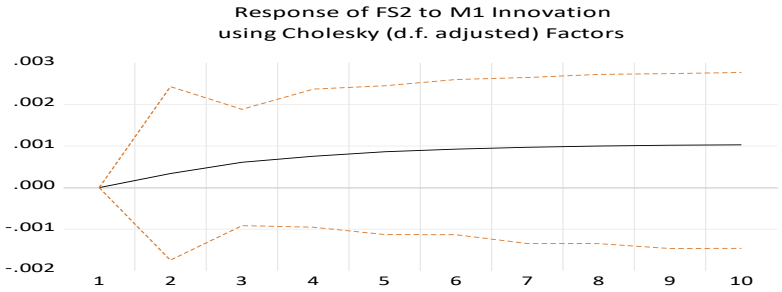
Result	Significance probability	Test statistics	The number of co-integration vectors	
Rejected	0.00	59.519	None	MP1
It cannot be rejected	0.51	3.365	At Most 1	
Trace Test Indicates 1 Cointegrating Eqn(S) at the 0.05 Level				

Source: Research findings

According to the results of Table 5, establishing a long-term vector between the variables cannot be rejected. Therefore, the VECM model can be used to estimate. The estimation results, divided into short-term and long-term, are presented below. Before examining the estimation results, considering the results of the F statistic, the coefficient and error correction coefficient were determined.

4.2.1 Instantaneous reaction functions

In the next step, the Instantaneous reaction functions of the financial stability index following a standard deviation of the impulse to the MP1 variable were analyzed separately.



Source: Research findings

Figure 2. Instantaneous reaction function of FS1 to the impulse entering M1

Following a unit impulse to the MP1 variable, the financial market stability variable had an increasing trend during the impulse occurrence period. Over time, though the increasing trend continued, its slope was accompanied by a significant decrease; hence, it was placed at an almost constant distance from the initial trend. This effectiveness was stable until the end of the tenth period.

4.2.2 Variance decomposition functions

At this stage, the results of analyzing the variance of the prediction error of the FS2 variable in 10 periods were examined. The results are shown in Table (6).

Table 6. Examining the results of variance analysis of FS2 variable prediction error

MP1	FS2	Period
0	100	1
0.72	99.27	2
2.37	97.62	3
3.72	96.27	4
4.85	95.14	5
5.73	94.26	6
6.41	93.58	7
6.96	93.03	8
7.39	92.60	9
7.75	92.24	10

Source: research findings

In the first period, most of the changes in the FS2 variable are explained by the variable itself. Over time, the influence of the variable itself decreases, but this decrease is not remarkable. On the other hand, the share of facilities increased from 0 in the first period to about 8 percent in the first model in the tenth period.

4.2.3 Estimation of long-term relationships

Equations (4) and (5) present the long-term estimation results and the vector between the financial market stability index and quantitative easing.

$$FS2 = -0.393 + 0.18MP1^{**} \qquad (6)$$

The results of equation (6) show that the facility has a positive and significant effect on the stability of financial markets. With a one-percent increase in the quantitative easing index, the financial market stability index increased by 0.18, which confirms the research hypothesis.

4.3 Estimation using FS3 financial stability index

The investigation of information statistics shows that the optimal lag in the studied pattern is 2.

Table 7. Examining the results of determining the optimal interval

Result	Hanan Queen criterion (HQ)	Schwartz Bayesian criterion (SBC)	Akaike information criterion (AIC)	Lag	
The optimal lag was determined to be 2.	3.343	3.430	3.288	0	MP1
	1.393	* 1566	1.282	1	
	1.322	1.582	1.156	2	
	1.295	1.642	1.074	3	

Source: Research findings

The results of Johanson's test are presented in Table 7.

Table 8. Results of homogenous test

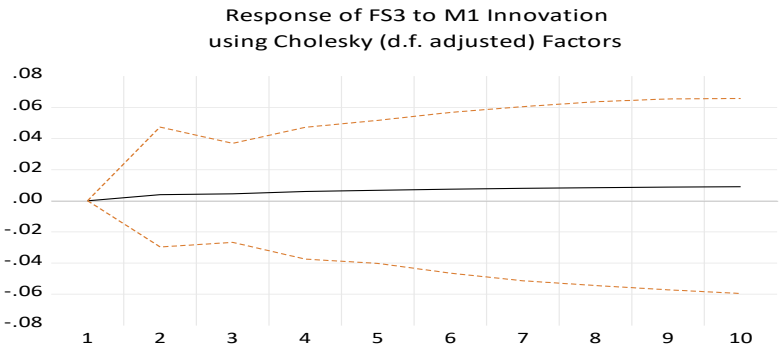
Result	Significance probability	Test statistics	The number of co-integration vectors	
Rejected	0.00	53.842	None	MP1
It cannot be rejected	0.47	0.662	At Most 1	
Trace Test Indicates 1 Cointegrating Eqn(S) at the 0.05 Level				

Source: Research findings

According to the results of Table 8, establishing a long-term vector between the variables cannot be rejected.

4.3.1 Instantaneous reaction functions

In this section, a momentum standard deviation was entered into the MP1 variable and its effect on FS3 was investigated.



Source: Research findings

Figure 3. Instantaneous reaction function of FS3 to the impulse entered MP1

The financial market stability index increased following a one-unit impulse to the MP1 variable. This increase continued until the end of the period and did not stop.

4.3.2 Variance decomposition functions

Table (9) shows the results of the variance analysis of the FS3 variable prediction error in 10 periods.

Table 9. Analysis of the variance analysis results of FS3 variable prediction error

MP1	FS3	Period
0.00	100	1
0.12	99.87	2
0.38	99.61	3
0.75	99.24	4
1.17	98.82	5
1.64	98.35	6
2.12	97.87	7
2.61	97.38	8
3.09	96.90	9
3.56	96.43	10

Source: research findings

In this period, most of the changes in the FS3 variable are explained by the variable itself. Over time, the effect of the variable itself decreases, and the share of quantitative easing reached 0 in the first period and, in two patterns, reached about 4% in the pattern of the tenth period.

4.3.3 Estimation of long-term relationships

Equation 7 presents the estimation results and the long-term vector between the financial market stability index and the MP1 index.

$$FS3 = 4.157 MP1^{**} \qquad (7)$$

The results of equation 7 show that quantitative easing has a positive and significant effect on the stability of financial markets. With a one percent increase in the MP1 index, the financial market stability index increased by 4.157 percent.

5. Conclusion

The primary purpose of the current research is to investigate the role of quantitative easing on the stability of financial markets in Iran, using time series data and vector error correction models. According to the most critical findings, central banks add amounts to the reserves of member banks by extending the amount of new credit (which is maintained in accordance with the banking system of maintaining deficit). It can be said that quantitative easing extracts money from nothing based on commodities or anything with physical value due to lack of support. Therefore, quantitative easing aims to increase financial reserves and accessibility and turn this into a way to grow and stimulate economic activity. The main idea of this method is to keep down the number of profits, strengthen the lending system for businesses and consumers, and promote

and strengthen the level of confidence throughout the economy. However, in practice, quantitative easing is not always efficient. It can be said that quantitative easing is a controversial point of view and category and has its defenders and detractors. Facilitation is an alternative method that modern central banks invented to support the economy shortly after the crisis. This method was widely used by the Federal Reserve, the central bank of the United States, to support the economy after the 2008 recession. There is extensive debate about the potential uses and risks of this technique. On the one hand, some people refer to it as a wonderful tool in the central banker's kit, while on the other hand, others refer to it as fake money. Therefore, according to the research results, it is suggested that the quantitative easing of the European Central Bank is transferred to the stock market through five main channels: liquidity, waiting, portfolio reallocation, interest rates, and risk premium channels. The findings contribute to a better understanding of the behavior of stock market assets in a data-rich economic context and guide investors and policymakers in the presence of unconventional monetary instruments. For example, decision-makers and investors should consider the short-term impact of quantitative easing interventions and the changing behavior of financial actors over time. In addition, high stock market returns can increase risk tolerance. This can cause investors to underestimate the market risk. Decision-makers and market participants should consider the impact of the massive injection of money through quantitative easing, which may increase the risk of a speculative bubble in the financial market. Therefore, the importance of this article is that looking at quantitative easing from multiple perspectives can better understand the nature of policy operations and help society avoid the negative effects of quantitative easing.

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Conflict Of Interest
The authors declare no conflict of interest.

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نقش تسهیلات مقداری بر ثبات بازارهای مالی در ایران

چکیده:
در پژوهش حاضر نقش تسهیلات مقداری بر ثبات بازارهای مالی در ایران از داده‌های فصلی ۱۳۸۵–۱۴۰۰ با استفاده از الگو اقتصادسنجی با مدل تصحیح خطای برداری (VECM) پرداخته است. برای برآورد مدل از تعدادی متغیر قابل‌مشاهده اثرات تسهیلات مقداری را بر متغیرهای بازار مالی شامل (حجم نقدینگی، نسبت کفایت سرمایه، اعتبارات اعطائی به بخش خصوصی توسط بانک‌ها، نرخ بهره سپرده بانکی، شاخص بازار سهام و نرخ ارز) برآورد شد. داده‌های پژوهش از سایت رسمی سازمان بورس و اوراق بهادار و بانک مرکزی مورد استخراج قرار گرفت. در الگوهای VECM، برآورد به دو صورت کوتاه‌مدت و بلندمدت به کمک نرم‌افزار Eviews انجام شد. یافته‌ها پژوهش براساس برآورد روابط بلندمدت و کوتاه‌مدت نشان می‌دهد تسهیلات مقداری تأثیر مثبت و معنی‌داری بر ثبات بازارهای مالی دارد.
کلمات کلیدی: تسهیلات مقداری، ثبات بازارهای مالی، رویکرد مدل تصحیح خطای برداری.