



Effect of the Development of the Cryptocurrency Market on the Money Market in Iran and the European Union

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ABSTRACT

In this study, the researcher tried to comparatively study the effect of the development of cryptocurrency market on the Money market in Iran and the European Union, while clarifying its effects in order to deal with the negative effects of cryptocurrency industry and its threats to the stock exchange and to encourage the stock exchange organization to consider cryptocurrencies as an alternative investment asset to diversification strategies in their portfolio. The statistical population in this study is the Money market in Iran and the European Union. The current research period for Iran and the European Union is 2013 to 2021. The method of data analysis based on the research paradigm has been a quantitative approach, so the method of vector regression has been selected using EViews software. In this model, using regression models and theoretical foundations of VAR method, long-term analysis was performed and using autoregressive vector and vector error correction model, as well as short-term analysis and using causal tests were examined to test research hypotheses. In the present study, the researcher presented an analytical model and estimated the research model and then, by selecting the appropriate variables and performing the stationary test, the variables were performed using the generalized Dickey-Fuller unit root test and the hypotheses were answered by determining the optimal interval length of the model and performing Granger stability and causality test and regression estimation.

Keywords:

digital money, money market, stock market, deposit.

1. Introduction

Financial markets, as the flow of financial resources from the non-productive sector to the productive sector, play a vital role in economic growth, job creation, investment, stabilization of monetary and financial variables, and overall improvement of society's welfare. The importance of these markets is so high that they are referred to as the main arteries of the economy. In a general classification, financial markets can be classified into two markets: 1) money and 2) capital (Zolfaghari et al., 2016).

Cryptocurrency is a concept that has been around for less than a decade in financial markets. The world's first digital currency, Bitcoin, was launched in 2009 by an unknown individual or group called Satoshi Nakamoto. Digital currencies or "cryptocurrencies" were introduced to the world on January 3, 2009 with "Bitcoin". After a short time, they accounted for a significant volume of the market, so that in 2018 the value of these currencies was more than 142 billion dollars. This type of currency has met with relative popularity, and over time, finds more grounds for its activity. Computer software programmers are constantly designing and delivering a variety of cryptocurrencies. Digital currencies are known with characteristics such as being based on "blockchain" technology, designed based on decentralized control and without dependence on government and central ruler, without the backing of money, gold, often extractable, valuable, convertible into other cryptocurrencies, physical currencies and commodities and with its ability to store value and unit of counting (Kheradmand, 2019).

Although there are many studies that have examined and evaluated the cryptocurrency market and the money market alone or in conjunction with each other, but given the review and evaluation of previous studies, the view that a study focuses solely on the effect of cryptocurrency market development on money markets in Iran and the European Union is not available and the results can be useful and effective.

The American economic crisis in 2008 affected the entire world economy and many banks and large financial institutions went bankrupt and the housing market suffered crises that caused property expropriation, wealth reduction and business bankruptcy. The value of the stock in the American market and the stock market in many countries where people are suffering a lot of losses were created as a

result of severe mistrust between people and capitalists. Due to these crises and the disorganization of the system, it needs a centralized and transparent monetary system in which people's bank interest does not exist and money does not value and is felt by self-control. The concept of money, meaning cryptocurrency, was first introduced in 1998.

In fact, a new idea of money was proposed, which uses a computer encryption method to control the production of money and conduct transactions without intermediaries and central authorities. Virtual money has no central service provider or financial institution to control transfers; Because everything is based on peer-to-peer communication and governments could not manipulate it and banks could not increase or decrease its value (Hudson, 2014).

Cryptocurrencies are managed in a decentralized manner, may affect the performance of banks and the diversity of their deposits (Abdullah Osman et al., 2019), weakening the power of countries to control the economy. Due to the efficiency and profit of digital currencies as well as its decentralization, many investors tend not to deposit their assets in the bank.

A better understanding of the variability of bank deposits is essential for bank management and policymakers, especially central banks.

The current study aims to investigate the long-term and short-term effects of the development of cryptocurrency market capital on the variability of bank deposits (money market) in Iran and the European Union, and aims to investigate the cause and effect relationships between cryptocurrencies and bank deposits.

Therefore, the main issue of this article is to investigate the effect of the development of the cryptocurrency market on the money market in Iran and the European Union.

Literature Review

The nature of virtual money and its advantages and disadvantages

The idea for digital money dates back to 1983 by David Chaum and Stephen Bernes. People like Adam Beck developed network authentication and a spam control mechanism before Wei Dai proposed the cryptocurrency protocol. Wei Dai introduced the concept of virtual money, meaning encrypted governments, first on his personal website in 1998 as

an idea to facilitate finance and create money without the presence of intermediaries. Over the years, the idea was pursued in various formats by IT professionals, until in 2009 Bitcoin was introduced as the first virtual currency and a successful operational example of previous projects. The first spark of the concept of virtual money, meaning encrypted money, was introduced in 1998 by Wei Dai to facilitate financial operations and the creation of money without the presence of intermediaries (banks) and by members of society. He proposed a new type of electronic money that used computer encryption to control money production and transactions without intermediaries and central reference (Bohme et al., 2015).

With the advent of the Internet, efforts were made to create a means to pay and execute transactions more easily, more securely, and cheaper than traditional money, but the difficulty of paying a single currency twice hindered the success of initial efforts. Further explanation is that banks always monitor electronic financial exchanges, so that no one can spend the same money twice. This is not the case with cash because one banknote cannot be given to two people at the same time, but with digital money there is always the risk that a money be spent several times.

Advantages and disadvantages of virtual money

Security Problems: One of the serious problems of virtual money is its uncontrolled creation on by infiltrating the server. On the other hand, the electronic nature of virtual currencies poses security challenges such as loss, hacking of user accounts and theft. In addition as will be explained, if a user forgets his account information and password his money is gone forever.

Risk of virtual money drop: Due to the lack of an observer in the virtual money system and the possibility of creating infinite virtual money, there is a possibility of drop of this money. Other risks that affect the real money system may also threaten virtual money.

The threat to the real economy: Where real and virtual money intersect, virtual money can stimulate demand in the real world. Other factors affecting monetary policy can also be affected in this way. Currency outflows are another scourge of virtual currencies in the current money order.

Money laundering and tax evasion through cybercrime: Given the lack of specific legal rule over the realm of cyber money, it can be used to incite money laundering, tax evasion and other cybercrime and facilitate the commission of these phenomena.

Lack of identification: The root of these issues is the possibility of incompatibility of the user profile of the owners of these currencies with their true identity. In fact, the owners of these funds are not nameless but anonymous, and therefore it is easier for them to commit such offenses and crimes. Although it is possible to track transactions and identify a user's footprint on these networks, there has been no policy on transparency and pursue.

Volatility and the likelihood of a decline in the value of virtual money: If the popularity of virtual money decreases or there is any risk, the virtual user community will be affected. Virtual money risks include market risk, shallow market risk, counterparty risk, transaction risk, operational risk, information privacy risk, and regulatory risk.

Technical complexity and general popularity: Understanding this type of money is not understandable to the general public due to its technical complexity, due to which it had not yet public attention, and even other Internet services are not yet reliable for many. With all the optimistic technical, security and economic analyses, experts still do not rule out the possibility of fraud and loss of funds used in this network.

The advantages of virtual money include high transaction speed, low commission cost, high security and control, anonymity of traders and freedom of payment and transfer of money without the need for intermediaries. An important reason for the emergence of base cryptocurrencies was the desire to create a system for fast and cheap transactions without the need for a third party.

Blockchain, cryptocurrency and economic aspects of base cryptocurrencies

Blockchain is a database that consists of all the transactions that have taken place in the network of a cryptocurrency. Groups of data that are called block are added to the database one at a time, creating a very long list. Once information has been added to the blockchain, it can no longer be deleted or changed. Information stays in the blockchain forever and

everyone can see it. Blockchain is a distributed database that allows you to transfer information from one place to another with high security. One of the main features of this technology is that it is distributed (Oveysi and Alaei, 2019).

The importance of the role of the money market and capital market

The money market is a market for trading money and other financial assets that are money substitutes that are less than one year old. In the money market, short-term financial instruments with a maturity of less than one year are used. Capital markets include the stock market, the bond market and the derivatives market, and the proportional development of these markets can play an important role in the development and promotion of economic and financial activities. In this regard, it is necessary to point out how capital markets work. In the primary markets, companies issue financial instruments. They use these instruments as a way to use community savings sources to finance themselves, and investors seek answers to questions such as how to cover risk, how to determine the fair price of issued securities.

A very important point about the entry of international investors in emerging and pristine markets is to provide the conditions for the development of the capital markets of these countries. Given that foreign investors without understanding the specific conditions of each country and without a precise and in-depth introduction of investment opportunities almost cannot realize the potential of emerging market companies; Many international financial companies are interested in developing and investing in regional capital markets and attending them.

While it is assumed that most developing countries have benefited from fiscal reform, the effect of these changes depends on how much investment they have attracted and how productive they have been. Countries with a supportive legal and political environment to encourage investment have more ways of financing companies. Providing various possibilities and ways of financing will increase the success rate in attracting liquidity, and the existence of such a structure not only accelerates financing but also leads to stable economic growth, thus preventing economic shocks in financial systems.

It has been proven that rich and developed countries have developed capital markets, and this is a prerequisite for economic growth. Therefore, whatever strategy we adopt, whether it is the development of domestic industries or the presence in global markets, we must believe that both strategies emphasize the development of capital markets. On the other hand, increasing financial development not only leads to increased trade between emerging economies, but also contributes to the growth of trade between emerging countries and developed countries.

Studies done

Internal studies

Ganji and Torab (2020) evaluated the role of digital currency transactions and its future influence on global financial markets and investment. The findings show that the Dow Jones Industrial Average fell 20 percent and the US Stock Exchange index fell 14 percent. With the decrease in the EU and US GDP, increased inflation due to the printing of banknotes due to the distribution of monetary support packages to compensate for the losses caused by the Covid-19 virus and the devaluation of the dollar, digital currencies, especially Bitcoin, have become a popular value reserve among market traders. This article describes the role of digital currencies in reforming the financial system and predicts the future of financial markets towards digital currencies.

Oveysi and Alaei (2019) examined the blockchain and digital and cryptocurrencies in accounting. Digital currencies and cryptocurrencies are one of the types of virtual currencies that are centrally managed and can be exchanged, traded, used for online shopping, etc. and are placed in front of centralized banking systems. The results of this study show that the accounting of cryptocurrencies should be reported at fair value and the recognition of an increase in value in the event of profit or loss for the period.

Navabpour et al. (2015) evaluated the subject of jurisprudential analysis of the functions of cryptocurrencies (studied in Bitcoin). In this research, first the thematics of cryptocurrencies has been done, then the jurisprudential dimensions of the subject have been explained by two approaches of individual and governmental jurisprudence, as well as at two levels of trading and extraction. Finally, using the research method of multi-stage ijtehad and the opinion of

Islamic financial experts and great religious sources of imitation, the conditions of the permission to use cryptocurrencies have been determined and its use has been faced with jurisprudential forms.

Bagheri Saeed (2017) examined the issue of digital currency, opportunities and potential threats. The latest concept to emerge is the digital currency. Digital currencies such as Bitcoin, Atrium and Light Coin... have surprised everyone, and in the meantime, Bitcoin has attracted more attention than its competitors. Bitcoin is by far the most popular virtual currency, but it cannot be guaranteed to remain so in the future. Undoubtedly, this new network will be a good platform for governments and nations to invest. Inadequate information, however, can have an adverse effect on the economy and lives of its users.

External studies

Allen (2022) evaluated the subject of digital currencies, diversity, and the Covid-19 epidemic. This paper provides an analysis of cryptocurrencies and the effect of Covid pandemics on their effectiveness as a tool to diversify the stock portfolio and examines the correlation between the continuous combined returns of Bitcoin, Atrium and the S&P500 index using parametric and nonparametric variants. The results indicate that while the shock caused by the Covid-19 epidemic does not appear to have increased the correlation between the digital currency series, it does appear to have increased the correlation between digital currency returns and returns on the S&P500 index.

Judici et al. (2020) examined the subject of market cryptocurrencies: market analysis and outlook. The rising value of cryptocurrencies in the market and the growing popularity around the world pose many challenges and concerns for trade and the industrial economy. The results of this study show that the cryptocurrency is not associated with other assets. They contribute to diversification and do not pose a serious risk to systemic stability.

Sami and Abdallah (2020) in an article entitled "How does the digital currency market affect stock market performance in the MENA region?" examine the effect of the digital currency market on stock market performance in the Middle East and North Africa region. The results show that there is a significant relationship between the digital currency market and stock market performance in the MENA

region. For the Persian Gulf countries, every one percent increase in digital currency returns reduces the stock market performance by 0.15 percent.

Salawu and Moloi (2018) explored the benefits of using legal currency cryptocurrencies: The experience of Nigerian accountants. The study concluded that the cryptocurrency or its revised form by the Nigerian federal government is desirable to protect its economy as well as the interests of its citizens. However, the government must take a holistic view of the economy and consider every factor involved in passing the law to ensure that the legal decision is in the interest of all citizens.

Berentsen and Schär (2018) have examined the subject of a brief introduction to the world of cryptocurrencies. The article covers the main idea and motivation, how it works and the possible applications of the cryptocurrency and blockchain technology. They say that findings show that Bitcoin has a wide range of convenient and interesting uses, and that the creators of Bitcoin intended to create a decentralized electronic payment system such as cash.

Ali et al. (2014) examined the economic Issue of digital currencies: A Case Study of the Bank of England. Although, in theory, digital currencies can be used as money for anyone with a device with an Internet connection, at present they only act as money to a limited extent and only to a relatively small number of people. The results of this study show that digital currencies do not currently pose a risk to monetary or financial stability in the UK.

Methodology

The approach of the present study is a quantitative one in that in this approach, which is linear and perhaps nonlinear, only the researcher tests what has been explored in the past and the researcher is completely separate from reality or problem. Therefore, the strategy of the present study is descriptive as well as in terms of tactics in quantitative work it can be said that the researcher, using the time series data collection tool, first prepares the data and then deals with their validity and reliability (Moradi and Mir Almasi, 2019).

Research variables

Cryptocurrencies (digital currency)

The world's first digital currency called Bitcoin was launched in 2009 by an unknown individual or group

called Satoshi Nakamoto (Alizadeh and Safarzadeh, 2019). Spotify, Skype, Facebook and Swish Max are all examples of technological solutions created through a world of globalization, in which new ways of solving everyday problems are constantly being found. At the same time, they challenge the status quo. Of course, these changes are also observed in the financial market (Hatefi Majomard, 2018).

Money Market

The money market is a market for trading money and other financial assets that are money substitutes that are less than one year old. In the money market, short-term financial instruments with a maturity of less than one year are used (Mohammadi Aghdam and Qawam, 2015).

Bank deposits

A deposit account is a type of current account, savings or any other type of bank account, by opening it, the customer deposits an amount of money with the bank and receives interest on it. By definition, the deposit market is a market for trading money and other financial assets that are close substitutes for money that have a maturity of less than one year (Tehran Stock Exchange Education Management, 2019).

Results

Descriptive statistics

Descriptive statistics of research variables including number of observations, mean, standard deviation, minimum, maximum, skewness coefficient and elongation coefficient using the data of Iran and Europe is presented in Table (1).

Table (1): Descriptive statistics

Indicator	Iran	Europe
	deposit	deposit
Average	12600870	1316.784
Median	11505558	1279.939
Max	24716853	2314.697
Minimum	5132671	625.3265
Standard deviation	5463987	428.8435
Skewness	0.597378	0.565953
Elongation	2.230837	2.845912

Table (2): Correlation of variables with the price of cryptocurrency (Bitcoin) in Iran

Variables	deposit	Cryptocurrency price (Bitcoin)
deposit	1.000000	

Cryptocurrency Price (Bitcoin)	0.797368	1.000000
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Table (3): Correlation of variables with the price of the cryptocurrency (Bitcoin) in Europe

Variables	Cryptocurrency price (Bitcoin)	deposit
deposit	0.601816	1.000000
Cryptocurrency price (Bitcoin)	1.000000	

Stationary test of variables

The augmented Dickey-Fuller unit root test is one of the most common tests used today to determine the significance of a time series process. Therefore, in this section, an augmented Dickey-Fuller Test has been performed for the mentioned variables, the results of which are summarized as described in Table (4).

Table (4): Results of the augmented Dickey-Fuller unit root test for model time series data

Variables	Measurement error	Description
Iran's deposit	0.0125	Became stationary by one-time differencing
Price of cryptocurrency (Bitcoin)	0.00	Became stationary by one-time differencing
European deposit	0.0012	Became stationary by one-time differencing

Model stability test

After determining the optimal number of interrupts, it is necessary to first ensure the stability of the model. To ensure the stability of the model in the self-explanatory pattern, the root inverse of the multivariate characteristics of the pattern is calculated and evaluated. The criterion for judging is that the roots are in a single circle. To prove the stability of the model, none of the roots should be outside the circle.

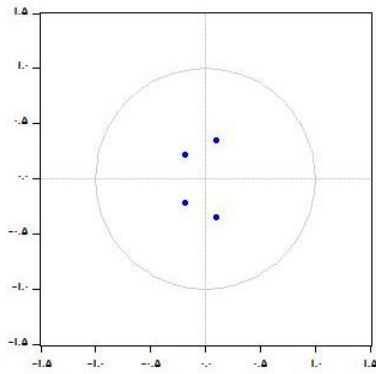


Figure 4-1: Inverting the root of the multivariate characteristics of the self-explanatory pattern of Iranian data

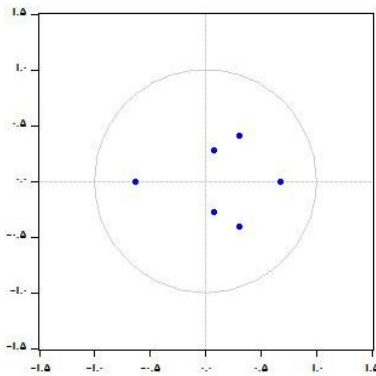


Figure 4-2: Inverting the root of the multivariate characteristics of the self-explanatory pattern of European data

All roots are in the circle for both Iran and EU models, so the estimated models are convergent and have the necessary stability.

Answering research hypotheses

Hypothesis 1: The cryptocurrency market is the most important reason for the money market in Iran.

To answer the present hypothesis, we will first identify the optimal interruption and then answer the research hypothesis with Granger causality test.

Determining the optimal interval length of the model

After stationary test and static detection of pattern variables, the important issue in the vector regression model is to determine the optimal interval length. In

this study, Akaike (AIC), Schwartz-Bayesian (SC), Likelihood Ratio (LR), Hannan Quinn (HQ) and Final Prediction Error (FPE) criteria were used to determine the optimal interval length. The results for determining the optimal interrupt length are shown in the table below. Therefore, according to Table (5), the optimal interval length, based on AIC criteria, FPE and HQ criteria and Final Prediction Error (FPE) is three.

Table (5): Determining the optimal interrupt length of the model

LogL	LR	FPE	AIC	SC
-1675.172	NA	5.05e+16	44.13610	44.19744
-1661.319	26.61166	3.90e+16	43.87682	44.06083
-1647.429	25.95287	3.00e+16	43.61655	43.92323
-1637.809	17.46863*	2.59e+16*	43.46865*	43.89799*

Granger causality

As can be seen in Table (6), the deposit variable has no intermittent effect on the cryptocurrency price and cannot be the cause of the cryptocurrency price because its measurement error is not more than 5% (0.0849) and is not significant, also the cryptocurrency price can be the cause of the deposit because its measurement error is less than 5% (0.00) and is significant. Therefore, there is one-way relationship from the cryptocurrency price to the deposit variable. Therefore, the first hypothesis of the research that the cryptocurrency market is Granger causality on the money market in Iran is confirmed.

Table (6): Granger causality

Variable-dependent	Independent variable	Measurement error
Cryptocurrency price	deposit	0.0849
deposit	Cryptocurrency price	0.00

Hypothesis 2: The cryptocurrency market is a major cause of money markets in the European Union.

Determining the optimal interval length of the model

After stationary test and static detection of pattern variables, the important issue in the vector regression

model is to determine the optimal interval length. In this study, Akaike (AIC), Schwartz-Bayesian (SC), Likelihood Ratio (LR), Hannan Quinn (HQ) and Final Prediction Error (FPE) criteria were used to determine the optimal interval length. The results for determining

the optimal interrupt length are shown in the table below. Therefore, according to Table (7), the optimal interrupt length, based on AIC criteria, FPE and HQ criteria and SC criterion and Likelihood Ratio to ensure system stability is three.

Table (7): Determining the optimal interrupt length of the model

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-430.6737	NA	9.06e+10	30.90527	31.00042	30.93436
1	-428.3353	4.175787	1.02e+11	31.02395	31.30942	31.11122
2	-428.0887	0.405181	1.34e+11	31.29205	31.76784	31.43750
3	485.6306	1370.579*	8.20e-18*	-33.68790*	-33.02180*	-33.48427*

Granger causality

As can be seen in Table (8), the deposit variable has no intermittent effect on the cryptocurrency price and cannot be the cause of the cryptocurrency price because its measurement error is more than 5% (0.9984) and is not significant, also the cryptocurrency price cannot be the cause of the deposit because its measurement error is higher than 5% (0.9143) and is not significant. Therefore, there is no one-way or two-way relationship from the cryptocurrency price to the deposit or from the deposit to the cryptocurrency price. Therefore, the two hypothesis of the research that the cryptocurrency market is expensive on the money market in Europe is not confirmed.

Table (8): Granger causality

Dependent variable	Independent variable	Measurement error
Cryptocurrency price	deposit	0.9984
deposit	Cryptocurrency price	0.9143

Hypothesis 3: The cryptocurrency market has a significant effect on the money market in Iran.

Also, the Ordinary Least Squares (OLS) method has been used to investigate the effect of the variable price of the cryptocurrency (Bitcoin) on the deposit.

According to Table (9), it is clear that the price of the cryptocurrency (Bitcoin) has no effect on the money market in Iran because its measurement error is above 0.05 and the value of 0.98 is estimated. Therefore, the third hypothesis of the research is rejected. Also, the tests of violation of classical hypotheses such as variance inhomogeneity, correlation, Jarque-Bera and Ramsey RESET show good fit of the model because in all tests the measurement error is estimated to be more than 0.05. The model determination coefficient is also estimated at 30%, which indicates that the independent variables explain 30% of the dependent variable changes. Also, the value of 2.03 in Durbin-Watson statistic indicates the absence of autocorrelation in the model and the measurement error F is estimated to be less than 0.05, which indicates the confirmation of the present regression line.

Table (9): Estimation of the third research hypothesis

Independent variable	Coefficient	Standard deviation	T statistic	Measurement error
Width from origin	1413842	3713821	0.380	0.7
Cryptocurrency price (Bitcoin)	-0.1919	15.00	-0.012	0.9898
Determination coefficient	0.30	Heterogeneity variance measurement error		0.76
Modified determination coefficient	0.27	Correlation measurement error		0.83
Durbin-Watson	2.03	Jarque-Bera measurement error		0.64
Measurement error F	0.00	Ramsey RESET measurement error		0.59

Hypothesis 4: The cryptocurrency market has a significant effect on the money market in Europe.

The researcher has used the generalized torque method to investigate the effect of the cryptocurrency variable (Bitcoin) on the money market.

According to Table (10), it is clear that the price of cryptocurrencies (Bitcoin) has no an effect on the money market in the EU because its measurement error is more than 0.05 and estimated at 0.94.

Therefore, the fourth hypothesis of the research is rejected. Also, the measurement error of Sargan test is estimated above 0.05, which indicates the appropriateness of instrumental variables in the model. The model determination coefficient is also estimated at 37%, which shows that the independent variables explain 37% of the dependent variable changes. Also, the value of 2.1 in the Durbin-Watson statistic indicates the lack of autocorrelation in the model.

Table (10): Estimation of the fourth research hypothesis

Independent variable	Coefficient	Standard deviation	T statistics	Measurement error
Width from origin	-1.21	1974	-0.06	0.9517
Cryptocurrency price (Bitcoin)	-0.000177	0.0024	-0.071	0.944
Determination coefficient	0.37	Sargan statistic measurement error		0.20
Durbin-Watson	2.16	Sargan Statistics		5.95

Discussion and Conclusions

In examining the hypotheses, the deposit variable has no intermittent effect on the cryptocurrency price and cannot be the cause of the cryptocurrency price, But the price of cryptocurrency can be the reason. So there is a one-way relationship from the price of cryptocurrency to stay. Therefore, the first hypothesis of the research about the Granger causality of the cryptocurrency market on the money market in Iran is confirmed. The deposit variable does not have an intermittent effect on the cryptocurrency price and cannot be the cause of the cryptocurrency price, nor can the cryptocurrency price be the cause of the deposit, so there is no one-way or two-way relationship from the cryptocurrency price to the deposit or from the deposit to the cryptocurrency price. Therefore, the research hypothesis is based on The Granger causality of the cryptocurrency market on the money market in Iran is not confirmed.

Also, in the further investigation of the hypotheses using OLS ordinary least squares, it was found that the price of cryptocurrency (Bitcoin) has no effect on the amount of bank deposits in Iran. Therefore, the third hypothesis of the research is rejected. And by using the method of generalized moments, it was found that the price of cryptocurrency (Bitcoin) has no effect on the amount of bank deposits in the European Union. Therefore, the fourth hypothesis of the research is rejected.

In this study, the results obtained for the hypotheses indicate that there is currently no evidence of severe risks to monetary and financial systems.

They contribute to diversification and do not pose a serious risk to systemic stability, and in this respect are consistent with the findings of Judici et al. (2020) and Ali et al. (2014).

Also, according to the results of the first and third hypothesis, considering that the cryptocurrency is ahead of the deposit in terms of time, and in a meaningful way, its past values can help in predicting the future values of the deposit, in other words, the cryptocurrency is the cause of the deposit in the Granger criterion. Before its impact becomes meaningful, it is recommended that banks be encouraged to consider cryptocurrencies as an alternative investment asset for investment diversification strategies in their portfolio or even blockchain technology in their system in order to facilitate their customers with the cost. A low transaction, a high level of security and ease of use are used, and in this regard, it is consistent with the findings of Abdullah Othman et al. (2019).

The findings of this research show that it seems that the cryptocurrency market does not have the same effect on the economies and markets of countries, but has a different effect, and the extent of this effect depends on whether the economy is bank-oriented or capital-oriented, and the value of the money market, the size of the gross domestic product.

Iran's market has a bank-oriented economy and liquidity is provided by banks, while the market of European Union member countries has a capital-oriented economy and liquidity is provided from the capital market. The size of the capital market (market

value compared to GDP) is about 80% in developed countries, 38% in Middle East countries, and 18% in Iran.

Also, the results of the assumptions can be due to the difference in the efficiency level of the markets. In Iran, all three levels of market efficiency (allocation efficiency, operational efficiency, information efficiency) have a lower position than the European Union market.

Although this effect is not significant at the moment, but considering the growing trend of the cryptocurrency market and the bank-oriented nature of Iran's economy, it can have significant effects on the money market in Iran in the future and cause a decrease in deposits in banks.

The findings of this research show that in order to deal with the negative effects of the cryptocurrency market on the money market, developing countries should move towards a capital-oriented economy.

Suggestions

In the present era, when money has taken on a new definition, surely the macroeconomic policies of governments must also undergo many changes in order not to reduce the efficiency of a dynamic economy. Many factors affect the efficiency of an economy, but the control of such things as bank deposits and related interest rates is completely in the hands of governments and the central bank, so that in critical situations they can reduce or increase interest rates against the outflow of money and currency from the country, take the demand for the purchase and investment in cryptocurrencies. In this regard, financial regulators under the control of governments are now trying to get the most out of the cryptocurrency market. Regulations around the world on cryptocurrencies vary considerably; Some governments welcome digital currencies, while others ban or restrict their use. Central banks around the world are considering introducing their digital currencies to compete with cryptocurrencies.

So far, more than 80 countries have entered the field of digital currency, but digital currencies have not yet been fully and formally supported by governments and central banks. Many digital currency experts estimate the quantitative and qualitative development of a wide range of cryptocurrencies and electronic money in the near future. Therefore, activists in this field suggest that governments adopt transparent, forward-looking

and development-oriented policies in this area and all related markets in cyberspace, because otherwise they are likely to be refrained from the growing trend of new technologies and competition in the novel financial markets.

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