The Impact Of Exchange Rate Changes On The Market Value Index In The Iraqi Market Securities As A Model For The Period (2007-2021)

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Abstract:

The current study attempts at investigating the relationship nature between the change done by the monitory authorities in in the Iraqi dinar exchange rate that occurred in December 2020 and the market value index of the Iraq Stock Exchange. The study tries to answer a group of queries such as; does the alter in the exchange rate effect the market cap index? Also, does this alter Contribute in changing the market value index of the Iraqi Stock Exchange? And if it did, what is the size of that effect? The researcher put a hypothesis that states the possibility of the alter in the exchange rate of Iraqi dinar can affect the stock market but doesn't reduce the rates of financial deficit that Iraq has been suffering from since 2016, and it could cause other negative repercussions on the Iraqi economy, the most important of which is high inflation rates.

The researcher adopted the inductive method and employed the descriptive and quantitative methods, as the Iraqi dinar exchange rate data (independent variable) and market value index (dependent variable). The most vital result obtained by the researcher is that the policy of alter in the exchange rate by the Central Bank until 2021, which led to the devaluation of the Iraqi dinar, against the US dollar, to bridge the public budget deficit, is a result of the drop in oil prices.

Introduction

Exchange rate is considered to be one of the most vital economic indicators, it illustrates the economy strength of any country it also takes up a paramount position in monetary policy. It is used as an indicator to measure the economic competitiveness between countries by affecting the economic growth such as international trade, investment and stock prices. It is also considered as an essential tool that connects between the local and foreign commodity prices, meanwhile, stock market had the attention of Developing countries for its essential role in mobilizing savings and directing them towards investment fields that support the economic development and growth in

general. There is a relation between exchange rate and stock market indicators, as alter in exchange rate would affect the competitiveness of companies, which affects its profits and financial assets. This is what prompts the stock markets to adjust the prices of their assets, in addition to the fact that the decrease in the exchange rate will in turn lead to an increase in local prices, and the returns and profits of companies and demand, and thus the level of profits.

Importance of the Study:

The exchange rate has an important role in achieving balance in the payments scale, as well as the high competitiveness of goods and services exported abroad by the country.

Problem of the Study:

This study attempts to answer the question, Does the alter in the exchange rate have an effect on the market value?

Hypothesis of the study:

The alter in the Iraqi dinar exchange rate can affect the market value, however, it does not reduce the rates of financial deficit that Iraq has been suffering from since 2016.

Aims of the Study:

The main goal of the study is to inform the effect of altering the exchange rate on the market value index in the Iraqi Stock Exchange, as well as measuring and analysing the impact of altering the exchange rate on the performance of the market value in Iraq during the period (2007-2021).

Structure of the study:

To reach an acceptable results, the researcher divided the study on three chapters, the first chapter discussed the theoretical background of the exchange rate and market value variables. The second chapter is devoted to the reality of the exchange rate and market value in the Iraqi economy, while the third chapter has been allocated to the standard model that measures the impact of the change in the price of The exchange of the Iraqi dinar in the market value of the Iraqi Stock Exchange, in addition to the conclusions and recommendations.

Chapter One/ Theoretical Background of the Exchange Rate and Market Value Variables

First: Theoretical Background of the Exchange Rate

1. Definition of Exchange Rate: the unit price of foreign exchange, expressed in units of local currency, It is also expressed as the price of one unit of the local currency, expressed in a foreign currency.

Ibn Zawi (2016:14) defines it as the ratio by which a number of domestic monetary units are exchanged for foreign monetary units (Hussein, 2005:1).

2. Types of Exchange Rate According to Hameed (2017:5-6):

- a. Nominal exchange rate: It expresses the relative price of the currency of two countries, as it represents the price of a particular currency in relation to another foreign currency. In other words, an instrument of measurement, and a store of value. It is a commodity that has its own price and market through the exchange rate.
- **b. Real exchange rate:** It is the relative price of a commodity in two countries, i.e. it is the price at which a commodity is exchanged for a commodity in another country. The effect of commodity prices on the direct monetary price is shown here through their influence on foreign exchange rates, as this price is important in knowing the impact of the exchange rate alter on foreign trade.
- c. Equilibrium exchange rate: It represents a permanent equilibrium of the balance of payments when the economy is growing at a natural average, and this price prevails in an undisturbed economic environment, i.e. a stable economic environment free from economic shocks.

- d. Prompted and delayed exchange rate: the prompted rate of the exchange means the current price, which the dealers depend on and is included in the invoices and deals evaluation. These deals represent most of the operations that take place in the exchange market, while the term delayed exchange rate means that price that is included in the operations and deals and based on the prompt price and an average difference interest between these two currencies in the money market, meaning that the difference between the Delayed rate and the prompt rate of exchange depends on the period of time when the deals were concluded and on the interest rates prevailing in the cash markets of the transacting parties. (Mohamed, 2017:505-506)

3. Functions of Exchange rate:

There are several functions of the exchange rate, the most important of which are as follows:

- a. Standard function: it uses exchange rate to measure and compare the local prices of a particular commodity with foreign market prices, and thus represents the link between the prevailing domestic prices and foreign prices.
- b. Developmental function: the exchange rate works to develop certain exports to other specific regions through its role in encouraging those exports, on the other hand, the exchange rate can dispense with certain industrial branches and replace them with imports whose prices are low relative to local prices, and thus the exchange rate affects the

geographical commodity structure countries' foreign trade. (Zarifa, 2017:9

c. Distributional function: The exchange rate plays a distributive function of income. At the external level, it leads to a rise in the exports proportion to the country and a rise in national income and vice versa. What is achieved at the global level is achieved at the local level. When the foreign exchange rate increases, exports become more profitable and the number of fund owners increases.

4. Exchange Rate Trends:

It depends on the nature of the foreign exchange market and according to the following cases:

- **a.** There are no restrictions on the movement of private transactions in the market, and the monetary authorities do not interfere in fixing the exchange rate. In this case, the exchange rate will change from day to day according to changes in supply and demand for foreign exchange.
- **b.** When the monetary authorities pursue stabilization but do not interfere in the market operations of foreign exchange, in this case the exchange rate will change within narrow limits that are changed from time to time by these authorities.
- c. When the monetary authorities restrict the movements of private transactions and these authorities become the sole seller and buyer of foreign exchange in the market, in this case the market mechanism stops determining the foreign exchange rate. (Al-Isawi, 2012:272)

Second: Theoretical Background of Market Value

It is defined as a numerical value that measures the amount of changes that occur in the stock markets, as its value is determined first, and then it is compared at any point in time, which enables to know the market movements, up or down, and the market value index is a true measure of the performance of the stock market, whether in Developed or developing countries. It is also an easy way to convert economic performance into a quantitative picture that can be considered an accurate reference for those who continue in the financial markets. The total market value is calculated by taking the total number of shares multiplied by the price of one share. The market value is a good indicator for measuring the liquidity of stock markets, and the market size reflects the level of Economic activity, the higher the market value, the larger the market size, whether in terms of an increase in the number of shares and the number of listed companies, or in terms of an increase in prices that reflect the volume of financial transactions. (Al-Shimmary, 2019:188)

Among the most important factors that affect the market value of the stock are the size and age of the company, its activity, operating leverage, financial leverage, dividend policy, acquisition and liquidation of investments, investor expectations, company risk, sales, and profitability. (Shamkhy, 2020:39-91)

- 1. Methods of Increasing Market Value:
- a. Reducing the cost of capital.
- b. Reducing the risk of litigation.
- c. Improving investment efficiency (Al-Tamimi, 2016: 400-401).

Chapter Two/ The Developments of Iraqi Dinar Exchange Rate in Return for the US Dollar and the General

Index of Market Value in the Iraqi Stock Exchange for the Period (2007-2021)

As shown in table (1) below, it is noted that the first trimester of the year 2007 witnessed a decrease in the exchange rates of the dollar against the dinar in the official market compared to the previous year, as the exchange rates of the dollar against the dinar in the local markets ranged in the first and second trimester of 2007, between (1289-1263).) dinars / dollar in the market respectively, with a quarterly change rate of about (-2.02%), as well as in the third and fourth quarters of 2007, it is noted that the exchange rate reached (1241-1225) dinars / dollar in the market, with a rate of change of (1.72) -_1.29%) respectively, due to:

1- The monetary policy of the Central Bank is tantamount to supporting the Iraqi dinar exchange rate against the dollar, reducing inflation in the country, and advancing economic growth.

2- Relative stability in the country's security situation.

As for the year 2008, the exchange rate of the Iraqi dinar against the dollar improved, as a result of the monetary policy pursued by the Central Bank of Iraq, as the exchange rates of the dollar against the dinar in the local markets decreased by 5% from the previous year, as the exchange rates of the dollar against the dinar ranged in The local markets, between (1210.66-1200) dinars / dollar, and a rate of change (1.20 - _0.88 -) dinars / dollar for the first and second quarters, and the average exchange rate in the third quarter was about (1187) dinars / dollar, and a rate of change (-1.11), and in the fourth quarter it decreased slightly from the previous quarter, as the exchange rate reached (1175) dinars / dollar, with a rate of change of about (-0.98).

As for the year 2016, it witnessed the stability of the exchange rates of the Iraqi dinar against the US dollar, with an exchange rate of (1182) dinars per dollar for the seasons (first, second, third and fourth) in the official market, and at a rate of change that amounted to (0.91%) in the first semester and reached in the (second) seasons And the third and fourth) (zero), as a result of adjusting the exchange rate this year and making prices close between the official and parallel markets, and as a result of demand factors resulting from speculation. 1182 dinars per dollar, and in the fourth quarter it amounted to (1222.66) dinars per dollar, while the rate of change in the exchange rate reached (zero) during the seasons (first, second and third), while in the fourth quarter it reached (3.44%), due to demand factors The result of speculation, and this in turn was reflected in the increasing gap between the official and parallel exchange rates.

In 2021, the Central Bank raised the price of the US dollar and reduced the value of the local currency, as the exchange rate in the market reached about (1450) dinars / dollar, and it remained stable during the four seasons of this year, with a quarterly change rate that reached in the first quarter (18.59%), as this decision came as a proactive step by the Central Bank, in order to avoid the depletion of its foreign reserves, and to help the government secure the salaries of employees in government departments, to compensate for the decline in oil revenues, caused by the deterioration of crude oil prices in the global market. (Al-Bakri, 2020:448)

It refers to the stock price in the financial market, and it changes continuously during the trading sessions, and the market value of the stock changes, as a result of supply and demand and the prevailing economic conditions such as recession and boom, and through Table (1) we note that the market value in 2007 amounted to about (1,937,389.67) million / dinars, during the first quarter, and in the second quarter it amounted to about (1,835,934.33) million / dinars, and the rate of change was (-5.24%). In the third quarter, the market value increased and amounted to about (2,407,766.67) / million dinars, and a change rate (31.15%), in the fourth quarter, it amounted to (2,125,452.33) million dinars, and the market value continued at this rate until 2010, when this value rose to about (3,017,053.67) million dinars, during the first quarter, with a change rate of (-1.12%), and in the second quarter it amounted to about (3,031,271.67) million dinars, and in the third and fourth quarters, they amounted to about (2,976,446.67) and (3,248,967.00) million dinars, respectively. This rise came as a result of the improvement in the security situation and the application of the investment law, which encourages the entry of foreign investments, the activation of the market database, and the implementation of electronic trading activity.

In the year (2013-2014), the market value started to rise in a very large way, as it reached in the first quarter of 2013 about (9.612,774.67) million dinars, and it continued to rise until the fourth quarter of the same year, reaching (11,467,335.00)million dinars. Also in the year 2014, the market value amounted to about (11,588,864.67) million dinars during the first quarter, as a result of the improvement in the economic situation and the relative stability in the financial markets in Iraq, the expansion of the market size, and the rise in oil prices globally.

As for the years (2015-2016-2017), the market value decreased during all seasons of these years, as a result of the decrease in the volume of liquidity and the weak performance of the banking sector, as well as the economic impact of the terrorist attack of ISIS on Iraq since June 2014, as well as the drop in global oil prices, in the fourth quarter of 2014, and continued until 2015. All of these factors helped to decrease the market value.

In 2021, the market value increased, and amounted to about (14,781,370.00) million dinars, during the first quarter, with a change rate of (7.29%), and in the second

quarter (15,612,942.00) million dinars, with a change rate of (5.63%), and in the fourth quarter It amounted to about (15,893,483.00) million dinars, with a change rate of (-0.30%), as a result of the rise in global oil prices, the stability of the economic situation in Iraq, the development of the Iraqi stock exchange and the use of modern technology in Iraqi banks.

Table (1): Developments of Iraqi Dinar Exchange Rate in Return for the US Dollar and the General Index of Market Value in the Iraqi Stock Exchange for the Period (2007-2021)

Years	Chapters	Official exchange rate	The average rate of change of the official exchange rate	Market Cap Index	Growth rate of the market capitalization index
2007	q1	1289		1,937,389.67	
	q2	1263	-2.02%	1,835,934.33	-5.24%
	q3	1241.333	-1.72%	2,407,766.67	31.15%
	q4	1225.333	-1.29%	2,125,452.33	-11.73%
2008	q1	1210.667	-1.20%	2,248,427.67	5.79%
	q2	1200	-0.88%	2,261,225.00	0.57%
	q3	1186.667	-1.11%	2,387,947.00	5.60%
	q4	1175	-0.98%	2,282,543.00	-4.41%
2009	q1	1170	-0.43%	2,666,583.33	16.83%
	q2	1170	0.00%	2,883,955.33	8.15%
	q3	1170	0.00%	1,827,039.00	-36.65%
	q4	1170	0.00%	3,051,204.33	67.00%
	q1	1170	0.00%	3,017,053.67	-1.12%
2010	q2	1170	0.00%	3,031,271.67	0.47%
2010	q3	1170	0.00%	2,976,446.67	-1.81%
	q4	1170	0.00%	3,248,967.00	9.16%
2011	q1	1170	0.00%	4,095,617.00	26.06%
	q2	1170	0.00%	4,569,975.67	11.58%
	q3	1170	0.00%	5,011,373.33	9.66%
	q4	1170	0.00%	4,821,255.00	-3.79%
2012	q1	1166.667	-0.28%	4,658,493.00	-3.38%
	q2	1166	-0.06%	4,332,082.00	-7.01%
	q3	1166	0.00%	4,121,016.33	-4.87%
	q4	1166	0.00%	4,977,226.00	20.78%
2013	q1	1166	0.00%	9,612,774.67	93.14%
	q2	1166	0.00%	11,828,855.00	23.05%

	q3	1166	0.00%	11,410,843.00	-3.53%
	q4	1166	0.00%	11,467,335.00	0.50%
2014	q1	1166	0.00%	11,588,864.67	1.06%
	q2	1166	0.00%	11,289,198.67	-2.59%
	q3	1166	0.00%	10,096,233.00	-10.57%
	q4	1166	0.00%	9,382,587.33	-7.07%
2015	q1	1166	0.00%	8,389,662.33	-10.58%
	q2	1166	0.00%	8,945,102.67	6.62%
	q3	1166	0.00%	9,175,182.00	2.57%
	q4	1171.333	0.46%	7,978,243.67	-13.05%
2016	q1	1182	0.91%	7,966,978.67	-0.14%
	q2	1182	0.00%	6,770,413.67	-15.02%
	q3	1182	0.00%	7,000,364.33	3.40%
	q4	1182	0.00%	8,106,921.67	15.81%
	q1	1184	0.17%	8,267,514.00	1.98%
2017	q2	1184	0.00%	7,961,447.67	-3.70%
	q3	1184	0.00%	8,141,864.33	2.27%
	q4	1184	0.00%	8,060,139.33	-1.00%
	q1	1184	0.00%	11,913,071.67	47.80%
2010	q2	1183	-0.08%	12,182,031.67	2.26%
2018	q3	1182	-0.08%	11,800,384.67	-3.13%
	q4	1182	0.00%	11,531,062.00	-2.28%
2019	q1	1182	0.00%	11,169,159.67	-3.14%
	q2	1182	0.00%	11,349,884.00	1.62%
	q3	1182	0.00%	11,343,091.67	-0.06%
	q4	1182	0.00%	11,428,757.67	0.76%
2020	q1	1182	0.00%	13,658,083.33	19.51%
	q2	1182	0.00%	13,326,769.33	-2.43%
	q3	1182	0.00%	13,611,230.33	2.13%
	q4	1222.667	3.44%	13,776,470.67	1.21%
2021	q1	1450	18.59%	14,781,370.00	7.29%
	q2	1450	0.00%	15,612,942.00	5.63%
	q3	1450	0.00%	15,941,158.67	2.10%
	q4	1450	0.00%	15,893,483.00	-0.30%

Source: Central Bank of Iraq, Department of Statistics and Research, and quarterly bulletins for the period (2007-2021).

Chapter Three/ Measurment and Analysis of the Impact of Alter in the Iraqi Dinar Exchange Rate on the Stock Prices of the Iraq Stock Exchange for the Period (2007-2021)

I. Time Series Stability(Stationary): By conducting the Augmented Dickey-Fuller test to determine the stability of the model variables, we found that the exchange rate, which is symbolized by the symbol (X) and the general index of market value (y5), stabilized at the first difference (1)1.

2. Diagnostic Tests:

- **a.** Autocorrelation test: By conducting this test, we found that the (P-value) was (0.0014), which is less than (5%), so the model suffers from a problem of autocorrelation, and this problem has been solved by adding a dummy variable to the model.
- **b.** Contrast Homogeneity Stability Test: It turns out that the value of (P-Value) amounted to (0.008), which is less than (5%), so we conclude that the model is free from the problem of instability of homogeneity of variance.
- c. Testing the stability of the model as a whole: Through the figure (1) we notice that all points are located within the unit circle, and also all roots contain a coefficient less than (1), and this means that the model is stable as a whole.

3. Impulse Response Functions (IRF):

In signal processing, the impulse response (IRF) of a dynamic system is its output when presented with a brief input signal, called a pulse. In general, an impulsive or impulse response refers to the reaction of any dynamic system in response to some external change. In both cases, the impulse response describes the system's reaction as a function of time (or perhaps as a function of some other independent variable that determines the dynamic behavior of the system). In all of these cases, the dynamic system and its impulse response may be actual physical objects, or they may be mathematical systems of equations describing these objects. Since the impulse function contains all frequencies, the impulse response determines the response of a linear time constant.

In the case of measuring the impact of changes in the Iraqi dinar exchange rate in the Iraqi stock market, we have tried to explore the impact of the change in the behavior of the Iraqi dinar exchange rate (the independent variable) in (the general price index, trading volume, number of traded shares, number of listed companies, value market) dependent variables, and the results showed the following:

Figure (1) shows the nature of the relationship between the change in the exchange rate of the Iraqi dinar and the market value of the shares of the Iraqi Stock Exchange. , we find that the response of the market value to the change in exchange rates in the first quarter was (146160.7) and began to gradually increase until the end of the period, reaching in the tenth quarter (246906.1)

We believe that these results indicate the weak response of the market value to the change in exchange rates, as internal factors related to joint stock companies also play a role in the response of the market value of the stock to the change in exchange rates.

Figure (1): The Market Value Response to an Alter in the Exchange Rate



Conclusions:

1- The Iraqi dinar exchange rate has risen since (2007) until (2010), due to the policy of the Central Bank of Iraq, in order to strengthen and strengthen the Iraqi dinar, and stabilize the economic situation. And then it started to decline during the years (2013-2015), as a result of the increase in demand for the US dollar for speculative purposes, and that this fluctuation did not leave negative effects on the Iraqi economy, and in (2016-2019), it witnessed improvement and stability as a result of the monetary policy followed and stimulating the economy as a result financial stability.

- 2- Financial markets are the mirror of economic activity, as well as directing funds from areas of surplus to areas of deficit, to achieve economic stability.
- 3- An increase in the exchange rate or its stability leads to an increase in economic activity and transactions in the financial market for local and foreign investors, and this in turn leads to an increase in the stock market index.
- 4- The exchange rate clearly and significantly affects the performance of financial markets, as the instability in exchange rates leads to large fluctuations in costs and profits for listed companies, and this effect is negatively reflected on the stock prices of those companies, either in the case of stability in the exchange rate, opportunities investment increase. costs decrease, which leads to increased profits and an increase in the share prices of companies listed on the Iraqi Stock Exchange.
- 5- The nature of the relationship between the change in the exchange rate of the Iraqi dinar and the market value of the shares of the Iraqi Stock Exchange violated the logic of the economic theory that emphasizes the existence of an inverse relationship between the exchange rate and the market value of the shares. Indicates the weak response of the market value to the change in exchange rates, as internal factors

related to joint stock companies also play a role in the response of the market value of the stock to the change in exchange rates.

Recommendations:

- 1- The exchange rate plays a pivotal role in the level of economic activity in any country, so it must be at its real level, and therefore to maintain the stability of the value of the Iraqi dinar, a low inflation rate must be maintained and the exchange reserves should be invested and worked to increase to face the economic crises that could be spent Including Iraq because of its dependence on oil as a main resource in financing budgets.
- 2- Develop a clear and long-term strategy aimed at improving the exchange rate of the Iraqi dinar against other currencies, especially the dollar in the parallel market gradually to ensure the stability of the Iraqi market in order to be an attractive environment for investment, especially in the field of securities.
- 3- Encouraging local investments, by activating laws and regulations that stimulate the development of and providing investments. the appropriate investment climate for its establishment, which leads to an increase in market activity, and an increase in the contribution of the Iraqi Stock Exchange to the economy.
- 4- Carrying out economic reforms, such as expanding the activity of local financial markets, and allowing the entry of financial institutions (such as banks and foreign brokerage companies), and this in turn leads to an increase in investment and an increase in economic activity, and is reflected positively on the market value index of the Iraqi Stock Exchange.

5- Working towards using modern curricula and methods in quantitative economic analysis in the market value index to match the overall variables of a financial nature.

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