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The impact of some macroeconomic variables on international reserves, with special reference to Iraq

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ABSTRACT

The occurrence of economic crises in developing countries has given great attention to international monetary reserves, to represent a factor of safety and support for the economy in times of recession and depression, and works to support economic stability and provide reserves for economic plans, in addition to the fact that the volume of reserves serves as a safety valve for the rentier state that suffers from problems and structural imbalances Through the study, it was found that the volume of reserves is positively affected by the price of crude oil, as the volume of reserves increases as a result of the rise in crude oil prices, and is negatively affected by the foreign currency sale window.

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Introduction

The occurrence of economic crises in developing countries has given great attention to international monetary reserves, to represent a factor of safety and support for the economy in times of recession and depression, and works to support economic stability and provide reserves for economic plans, in addition to the fact that the volume of reserves serves as a safety valve for the rentier state that suffers from problems and structural imbalances Through the study, it was found that the volume of reserves is positively affected by the price of crude oil, as the volume of reserves increases as a result of the rise in crude oil prices, and is negatively affected by the foreign currency sale window. The exchange rate of the Iraqi dinar, and the volume of imports of goods and services from abroad, as international payments are settled through foreign currency, especially in light of a rentier economy that depends on imports from the sale of crude oil and a stagnation in the production system.

Research Hypothesis:

The fluctuations in crude oil prices and the instability of sales of the currency sale window affect the changes that occur in the international monetary reserves at the Central Bank of Iraq, as well as the impact of imports that directly affect the reserves, and the exchange rate negatively affects the reserves of foreign currency.

Research importance:
The issue of international monetary reserves is very important in the Iraqi economy, because reserves contribute to achieving economic stability, and the last resort to which the state returns in times of economic crises

Research problem:
Despite the availability of cash reserves in large quantities compared to other countries, they are not sufficient to achieve economic stability in the event of a decline in crude oil prices, due to the weak contribution of economic sectors to the formation of the gross domestic product, and the dependence entirely on goods and services imported from abroad.

First: International monetary reserves in the economic literature:

Historically, the Greeks were limited to occasional notes about money in their discourses on politics and morals, especially since the Greek economy was mainly an agricultural economy, where many aspects of a self-sufficient agricultural society were preserved. To use gold and silver as money, but rather his view of the job performed by him was a negative view as a basis for the accumulation of wealth and hoarding, yet he considered it a tool for trade within the framework of distinguishing between the local money used within the state and the public money that the state keeps to cover its military campaigns. **(Abdul Redha, 2015:19)** With the beginning of the emergence of the nation-state and the development of economic wealth according to the vision of the Marcantilian school, where the merchants adopted economic policies, the main goal was to enrich the state by increasing gold and silver as wealth. Its commercial dealings with the countries of the East in particular, therefore, these capabilities must be developed to the fullest extent, especially in light of the advantages that these minerals have, such as their inability to perish, so that they can be stored for an unlimited period being a great value in a small space.**(Al-Maamouri, 2007: 228)**
However, there was no talk about the monetary reserves of a country in the modern, contemporary sense, that is, the central reserves with some monetary authorities. During this period, the money supply consisted largely of silver and gold coins with a sub-role of paper money, where silver and gold coins were used, as well as bullion. To make international payments, so a large part of the money supply was available for the purposes of domestic and international payments, and this is what must be taken into account when trying to answer the question about the size of a country's money supply. **(De Beaufortk, 1977: 8)** As for the classics, whose economic policy was based on foundations that included its founder Adam Smith's criticism of Mercantilism, as he believed that wealth depends on capital, which is the means to increase production and is based on specialization and division of labour, as the wealth that increases according to skill and efficiency which can be used to work. **(Al-Maamouri, 2007: 17)** As for Keynes, he referred to reserves in more detail. In (1930) he explained in his treatise on money the principles of reserve needs, distinguishing three objectives for maintaining reserves: 1-In order to provide cash resources for use in final emergency situations. 2-For psychological reasons, to enhance confidence, and caution that this goal can be easily exaggerated. 3-To avoid short-term fluctuations in the balance of payments, which was to be considered the main objective.

On this basis, the elements of international reserves have developed with the development of monetary systems and the development of international economic relations. Under the rule of gold, countries have tied the value of their currency to a certain weight of gold, according to conditions, perhaps the most prominent of which are determining the value of the currency with a certain weight of gold and a specific carat, the availability of convertibility of the local currency into gold or The reverse unconditionally, as well as the freedom of individuals to import and export gold, and the Bretton Woods Agreement contributed to defining the international monetary system, which was characterized by: **(Abdullah and Ibrahim, 1998: 189)**
1-Being a system based on the exchange base of the dollar in gold, and based on the announced parity rate between the dollar and gold, the dollar turned into the international reserve currency.
2-The system ensures the stability of exchange rates between different currencies.
3-Targeting freedom of trade, eliminating restrictions on international payments, and reaching a multilateral system for payments.

Second: the collapse of the gold base

Although the US dollar was one of the most trusted and generally accepted currencies in the period after the Second World War, the central banks did not have enough of it, specifically the European countries that came out of the war with great damage that were in need of import from the United States of America Without the possibility of increasing its exports, and as a result, the importance of the dollar in international transactions increased, but the matter did not continue in this case with the advent of the year (1960) with which the gold crisis began to appear, especially since some countries such as France see that the gold base is the most objective system It is far from the control of the authorities and governments and is based on the rule of economic freedom, and the non-interference of the state in economic activity, and with the emergence of the signs of the gold crisis during the sixties of the last century due to the increase in the official price of gold from (35) dollars to (40) dollars per ounce, as a result of the intensification of speculative operations and thus The intensification of demand for it in addition to the instability of the exchange rate resulting from the imbalance in the balance of payments, as well as the large inflow of capital, which resulted in the emergence of a state of mistrust in the US dollar. **(Al-Hajjar, 2003: 148)**

With the desire of the United States of America to preserve the US dollar, and support it in international monetary relations as an international reserve currency, it made two successive reductions in the exchange rate of the US dollar, and to stop the requirement to convert it into gold. From Bretton Woods to the contemporary international monetary system, where the international reserve of each country is made up of four main elements**:** Gold, Special Drawing Rights, Reserve Position (IMF), and convertible foreign currency which is often the dollar**. (Krianin, 2010: 296)**

Third: The concept and main components

The accumulation of international reserves is a form of self-protection against financial crises, as it enables central banks to intervene in the foreign exchange market and helps protect the economy from external shocks, as countries keep them to determine the change in the value of the local currency, support for monetary policy and the exchange rate, as well as Meeting external debt, emergency protection and import financing.**(Atiya et al., 2021: 192)**

Especially in light of the changing circumstances, the abandonment of the international gold rule, and the absence of the international monetary authority that works to coordinate the monetary policies of different countries, which deepened the imbalance between the volume of exchange and the volume of means of payment and for the development of the means of payment, thus increasing them and achieving international monetary stability, noting that a number of Solutions were proposed before the deepening of the crisis and the emergence of international monetary problems, perhaps the most prominent of them: **(Shehab, 2007: 285)**

1-N. Kaldor, A.G Hart and J. Tinbergen (1964) suggested linking currency values to gold and a group of raw materials in order to organize the international monetary basis, but the success of this proposal requires the organization of markets for raw materials as well as their storage The problem was how to choose the commodities that make up the group of raw materials.

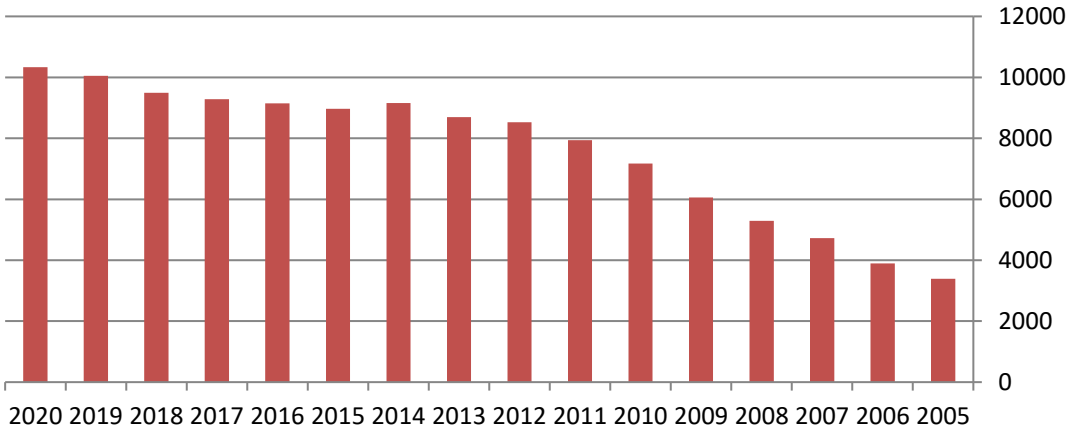
2-J.M. Keynes (1944) suggested the establishment of an international monetary clearing union, which would create the purchasing power necessary for international exchange, through international money commensurate with the volume of international economic activity, which he called Bancor, with the aim of facilitating the policy of internal and external monetary expansion and increasing trade exchange. and achieving economic stability.

Here, international reserves should be at the disposal of the monetary authorities or subject to the control of those authorities, and many definitions of international reserves have emerged. We can refer to the most important of them. **(Kashif, 2017:606)**

a- Foreign monetary assets, foreign currencies, as well as foreign currency bonds and gold, which are controlled by the monetary authority represented by central banks.

b - The available external assets under the control of central banks, which can be used in order to achieve economic stability, and then face the imbalances directly from the representative of the imbalance in the balance of payments, or indirectly through interfering in the exchange rates to influence the exchange rate of the currency, in addition to To enhance confidence in foreign currency.

Figure-1 Evolution of international reserves for the period (2005-2020)



Source: Figure compiled by researchers on the basis of: IMF, Annual Report, 2020, P3

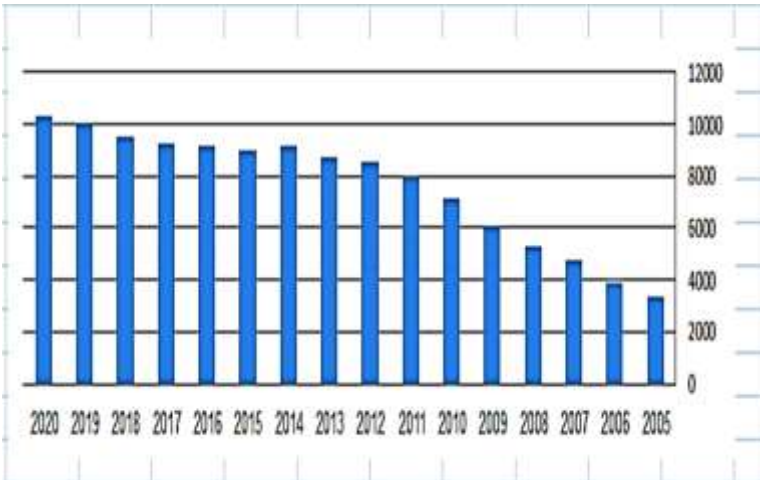
In the context of supply and demand for international reserves, the latter means the demand for reserves by a country, but depends mainly on a number of factors, perhaps the most important of which are: The degree to which the local currency is allowed to fluctuate. Track managed exchange rates, or greater than that in a free exchange system, as well as the volume of state payments, and the degree of change in the external imbalance that is financed through reserves. **(Krianin, 2010: 296)** As for the presentation of international reserves, the reserves of each country consist of: **(IMF, 2020: 3)**

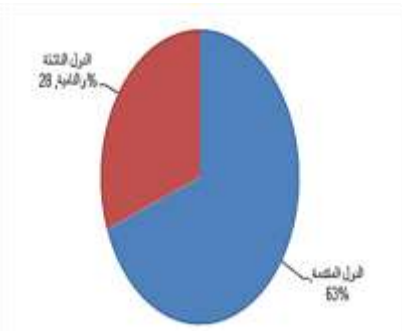
a- (GOLD) What is meant by gold owned by the monetary authority as reserve assets, and includes gold bullion and unallocated gold accounts with non-residents (IMF, 2011: 22), and at the international level, the total gold according to London market prices was (1386.6) billion A unit of special drawing rights in 2020, compared to (315.5) billion units of special drawing rights in 2005, which constitutes (13%) of the total international reserves for the year 2020 compared to (9%) for the year 2005, and that the most important reasons that Lead to an increase in the relative importance of gold compared to the components of other international reserves, but mainly due to the significant rise in gold prices, which led to an increase in the share of gold in international reserves.

b-The share of developed countries in the total gold reached a limit (63%), compared to (28%) in favor of emerging and developing countries for the year 2020. In practice, the actual stock of official gold held by emerging and developing economies, as well as shares held by advanced economies, witnessed Minor changes during the term (2005-2020).

Figure 2 - Development of gold reserves for the period (2005-2020)

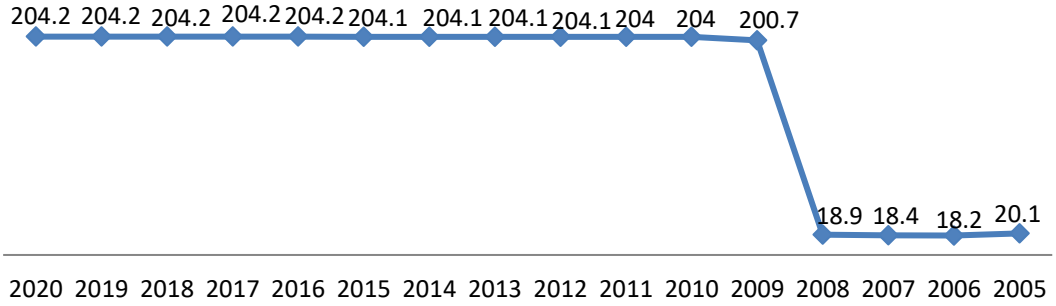
)SDR billion of(





c- Special Drawing Rights: International reserve assets created by the International Monetary Fund as a supplementary reserve asset to the reserve assets of member countries of the Fund. The fund distributes special drawing rights among its members on the basis of the proportions of their shares in the fund.
d- The allocation is linked to the state's regular share in the fund, and each unit of the (SDR) was originally equal to one dollar at the beginning of the seventies of the last century, while in light of exchange rate fluctuations, today it is evaluated by a weighted average of the four most important major currencies: the dollar The US, the Euro, the Japanese Yen and the British Pound Sterling, and that their value fluctuates on a daily basis, in addition to that, the SDR allocations are made by entering amounts according to the Special Drawing Rights of the Fund, and its importance as a reserve asset stems from the commitment of all countries to accept them from each other, and transfers between those countries in Its possession is a change in the (IMF) accounts. **(Krianin, 2010: 295)**

Figure 3 Evolution of the Special Drawing Rights (SDR) as a component of international reserves. (billion SDR)



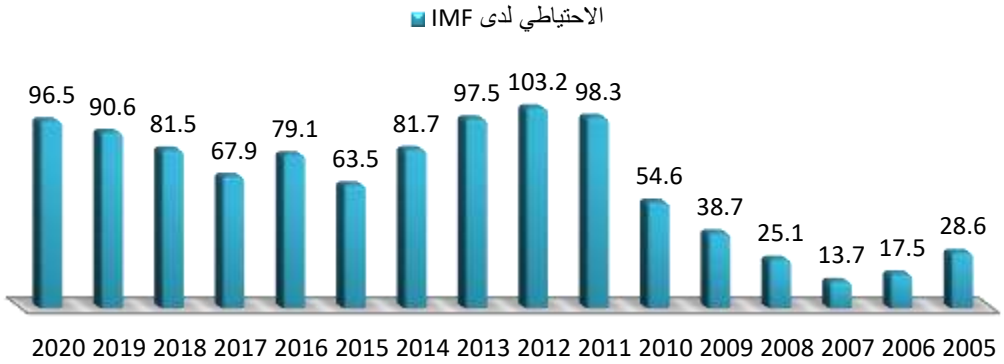
Source: Figure compiled by researchers based on: IMF, Annual Report, 2020,3.

It is noted from the figure that despite the significant increase in the holding of SDRs in 2009, it witnessed very slight changes during the period (2009-2020), however, the introduction of the (SDR) in the cash circulation comes mainly to fill the deficit in international liquidity In order to ensure that the countries of the world are provided with an adequate level of international assets. **(Al-Hajjar, 2003: 162)** Noting that the share of developed countries amounted to (63%) compared to (37%) in developing countries for the year (2020)**.**

B- The International Monetary Fund (IMF Reserve Position:

Position the reserve in the International Monetary Fund, which consists of the reserve tranche, i.e. amounts of foreign currency that a member state may withdraw from the International Monetary Fund within a short period, i.e. a debt to the International Monetary Fund under a loan agreement in the account of public resources, at the disposal of the member state including: That is the reporting country's lending to the IMF under the General Agreements to Borrow and the New Arrangements to Borrow, and claims on the Fund set out in SDRs are foreign currency claims. **(IMF, 2011: 23)**

Figure 4 International Monetary Fund Reserve for the Period (2005-2020)
billion SDR)



Source: Figure compiled by researchers based on: IMF, Annual Report, 2020,3.

It is noted from the figure that the reserves of the (IMF) have increased, as the year 2020 reached the limits of (96.5) billion SDR, compared to (28.6) in 2005, which means an increase in the reserve positions of the member countries of the International Monetary Fund, which also reflects The importance of this asset as it reflects the total shares of the member states of the (IMF), which these countries can resort to in order to obtain credit facilities that they usually use in settling their balance of payments deficit. **(Al-Haggar, 2003: 162)** Noting that the assets linked to the International Monetary Fund constituted in 2020 the limits (1%) of the total international reserves.

C- foreign exchange reserves: It is the largest component of the total international reserves, and as shown in Figure-4, it includes **(Kadhim and Al-Hamdi, 2017: 82)**

*- Securities, which include equity and debt securities with high liquidity and tradability, as well as long-term securities that are also liquid and tradable, as the inclusion of securities issued in foreign currency is limited to securities issued by non-resident entities.

*-Deposits, which include deposits with foreign central banks and the Bank for International Settlements, as well as other banks.

Fourthly: **measuring the response to the shock of international reserves to economic variables.** 1- Formulating the standard model

The economic literature that is concerned with economic measurement, begins by describing the model whose variables are to be tested and measured, and then testing the response of the impulse function (shock) and the possibility of predicting the behavior of variables affecting international reserves. International monetary reserves (FCR) is a dependent variable, which represents the crude oil price (OP) as an independent variable, the exchange rate (ER), the currency sale window (CWS), oil revenues (ORE), and imports (IM), all of the above are illustrative independent variables. During the period (2004-2020). The function of international monetary reserves in Iraq can be expressed in the following formula. **(Peter.K:2015,438)**

$$\boldsymbol{FCR_t = f(OP_t, ER_t\ , CWS_t\ , ORE_t\ , IM_t)} \dots\dots\dots\dots\dots (\mathbf{1})$$

The study model used takes the following standard form: **(John.W:2008,413)**

$$\boldsymbol{FCR_t = B_0 + B_1 OP_t + B_2 CWS_t + + B_3 ORE_t + IM_t + \varepsilon_t}. \dots\dots (\mathbf{2})$$

For the purpose of obtaining the standard model and testing the pulse response function of the international monetary reserves in Iraq during a time series of (17) observations, extending from the year (2004) to the year (2020), as shown in Table (2).

Table (2) International monetary reserves and economic variables in Iraq during the period (2004-2020)

YEAR	IM	CWS	ORE	ER	OP	FCR
2004	21.302	6.01	17.7	1469	31.3	13652193
2005	20.002	10.46	23.5	1469	45.5	19901327
2006	18.707	11.17	30.4	1467	55.6	27763676
2007	18.3	15.98	39.3	1255	62.6	40196751
2008	30.2	25.86	63.4	1193	88.8	58718278
2009	32.7	33.99	39.3	1170	58.9	51872801
2010	37.3	36.17	51.5	1170	75.6	59252271
2011	40.6	39.79	79.4	1170	103	71410911
2012	47.8	48.64	93.8	1170	106	82001306
2013	50.1	53.23	89.5	1166	103	90648557
2014	45.2	54.46	83.7	1188	97	77363120
2015	33.1	44.3	51.3	1190	44.7	62810373
2016	29.2	33.52	97.1	1190	36	52617915
2017	29.1	42.2	57.6	1190	49.3	57893000
2018	33.1	47.13	86.3	1190	65.6	67017000
2019	21.4	51.1	78.5	1190	61.1	70720000
2020	23.2	62.4	79.2	1190	62.5	70728100

Source
1-Central Bank of Iraq, annual bulletins for different years
2-Ministry of Planning, Development Cooperation, annual bulletins for different years
3-The Central Bank of Iraq, Department of Statistics and Research, annual statistical bulletins for different years

1-Model stability test

Time series are characterized by stability when they are devoid of a unit root, and the stability is tested for each time series separately based on the modified Dickey-Fuller test (ADF), at the first level and difference as in the two tables (3). **(Keith.C& Stephen.G:2009, 130)** The test was used to detect the stability in the level or in the first difference of the economic variables so that the researchers do not fall into the regression and false morality, so scientific honesty and necessity require knowing the degree of stability of the variables, and then we obtain moral estimates, by testing the following hypotheses: **(Yule.G: 2012,176)**

The null hypothesis: there is instability in the presence of a unit root

Alternative Hypothesis: Stability Negation of the first hypothesis (null) The (ADF) test in studying the stability of the y_t series, for example, depends on estimating the models using the following (OLS) method: **(M.S Bartlett: 2014, 426)**

$$\mathbf{1}-:\Delta \boldsymbol{Xt} = \boldsymbol{\lambda}.\boldsymbol{X_{t-1}} - \mathbf{1}\sum_{\boldsymbol{j=2}}^{\boldsymbol{p}} \phi \boldsymbol{j}\ \boldsymbol{\Delta Xt} - \boldsymbol{j} + \mathbf{1} + \varepsilon \boldsymbol{t} \dots\dots\dots\dots\dots\dots\dots (\mathbf{3})$$

$$\mathbf{2}-:\Delta \boldsymbol{Xt} = \boldsymbol{\lambda}.\boldsymbol{X_{t-1}} - \mathbf{1}\sum_{\boldsymbol{j=2}}^{\boldsymbol{p}} \phi \boldsymbol{j}\ \boldsymbol{\Delta Xt} - \boldsymbol{j} + \mathbf{1} + \boldsymbol{c} + \varepsilon \boldsymbol{t} \dots\dots\dots\dots\dots\dots (\mathbf{4})$$

$$\mathbf{3}-:\Delta \boldsymbol{Xt} = \boldsymbol{\lambda}.\boldsymbol{X_{t-1}} - \mathbf{1}\sum_{\boldsymbol{j=2}}^{\boldsymbol{p}} \phi \boldsymbol{j}\ \boldsymbol{\Delta Xt} - \boldsymbol{j} + \mathbf{1} + \boldsymbol{c} + \boldsymbol{bt} + \varepsilon \boldsymbol{t} \dots\dots\dots\dots (\mathbf{5})$$

The above equations differ from each other. Equation (3) is devoid of the constant and the time trend. Equation (4) does not include the time trend only, while Equation (5) contains the constant and the time trend. After using the test (ADF), the degree of stability was determined for each variable, and the two tables (3) show the results as below:

a-**International Monetary Reserves (FCR):** The test was conducted on the time series according to the (ADF) test, and it was found that the variable is stable in the first difference ((I (1)) at a significant level (5% and 10%) in the trend and without a constant and trend.

b- Crude oil price (OP): The test result showed that the variable suffers from the existence of the unit root in the level at the section and direction without them, but when taking the first difference ((I (1) it was found that the variable is stable in the section and direction and without them and at a significant level (5% and 10 %), then the variable is stable with degree I(1).

c-Currency Window Sales (CWS): After testing the variable, it was found that the variable was unstable in the level in all cases with a significant level (5%, 10%), and at the first difference, the variable appeared unstable in the section and in the direction at a significant level (10%, 5%)), and showed stability without the presence of a constant and a trend in the rank ((I(1), considering that the test is in a state without a constant and a trend that is the decisive factor in stability.

d-Exchange rate (ER): The unit root test of the exchange rate showed that the series is not stable at the level, and after taking the first difference for it, it was found to be stable in the direction and without a constant, and the direction is at a significant level (5%, 10%), which means that the variable is integrated with rank ((I) 1).

e-Oil Revenues (ORE): The test showed that the oil revenues are very stable at the level, stable in the first difference, and devoid of the unit root in the case of direction without a constant and direction, which means that the variable is stable of order ((I(1).

f-Imports of goods and services (IM): The unit root test (ADF) was performed. It was found that the variable is unstable at the level and in its three cases at a significant level (5, 10%). After taking the first difference, it

was found that the variable is stable without a constant and a trend at a level. Significant (5%, 10%), meaning that it is integrated from the rank ((I(1).

Table (3) Dickie-Fuller (ADF) test for time series stability

Test I(1) ADF			Test I(0) ADF			VAR	
None	Intercept & Trend	Individual Intercept	None	Intercept & Trend	Individual Intercept		
-1.966270	-2.538371	-3.081002	-1.964418	-3.759743	-3.081002	5%	FCR
-1.605026	-3.759743	-2.681330	-1.605603	-3.324976	-2.681330	10%	
-2.301380	**-4.728363**	-2.359087	0.633349	-2.221058	-2.481684	T - statistic	
-1.966270	-3.759743	-2.681330	-1.964418	-3.733200	-3.065585	5%	OP
-1.605026	-3.324976	-3.081002	-1.605603	-3.310349	-2.673459	10%	
-3.537687	**-3.387165**	**-3.414418**	-0.286419	-2.029580	-2.150945	T - statistic	
-1.966270	-3.759743	-3.081002	-1.964418	-3.759743	-3.065585	5%	CWS
-1.605026	-3.324976	-2.681330	-1.605603	-3.324976	-2.673459	10%	
-2.728252	-2.116315	-2.297310	1.492284	-2.279829	-1.069328	T - statistic	
-1.966270	-3.791172	-3.098896	-1.966270	-3.733200	-3.959148	5%	ER
-1.605026	-3.342253	-2.690439	-1.605026	-3.310349	-3.081002	10%	
-2.745475	**-3.641921**	-2.206211	-1.154281	-1.467396	-2.681330	T - statistic	
-1.966270	-3.759743	-3.081002	-1.966270	-3.733200	-3.065585	5%	ORE
-1.605026	-3.324976	-2.681330	-1.605026	-3.310349	-2.673459	10%	

-6.803322	**-7.079145**	-6.978093	0.481248	-3.118003	-2.383051	T - statistic	
-1.966270	-3.759743	-3.081002	-1.964418	-3.733200	-3.065585	5%	IM
-1.605026	-3.324976	-2.681330	-1.605603	-3.310349	-2.673459	10%	
-3.019944	-3.285745	-2.911987	-0.300817	-0.841647	-1.261097	T - statistic	

The table was prepared by the researchers based on the data of Table (2) and using the (Eviews 12) program.

2- test the response function of the pulse (shock)

The shock function test (pulse) reflects the amount of response in the dependent variable, represented in the international monetary reserves (FCR) to the shock, or a large sudden change without timelines until the independent variable adapts to change, but the change is large and fast, such as changes that occur in crude oil prices , as an external independent variable (OP), or changes to the explanatory variables in present or future values. **(Andrew.H: 2014,248)** As this test is very suitable for measuring and predicting the future of international monetary reserves, by relying on the changes that occur in a group of changes that researchers believe have an impact on the rise and fall of the volume of cash reserves in the future, and this prediction is based on predicting flexibility and the impact of independent variables represented in the price of oil. Crude (OP) as the main source of cash reserves, and the currency sale window (CWS), which represents the source of currency leakage from the Iraqi economy, and may represent a drain on foreign currency, a large part of which goes to cover the current spending of the Iraqi government, and the exchange rate (ER) of the Iraqi dinar in front of The dollar, which is always priced higher than its real value, which leads to an increase in the value of the Iraqi currency at the expense of the dollar, which is negatively reflected on the international monetary reserves in the long and medium term and its main and active role in influencing the dependent variable is as follows:

a-The impulse response function of one unit was tested as shown in Table (4) and Chart (7), the response of international monetary reserves (FCR) to a sudden shock of one unit in the same variable and other independent explanatory variables, as we note the response in cash reserves in The central bank starts positive in the first year and gradually decreases until it is negative by (-0.79) in the fourth cycle, then begins to rise again and gradually gradually to be in the fifth (537) and the sixth (1834), the seventh (2765) and the eighth year) 2983) as it increased by two times until it reached in the tenth year to (8592).

b-The response of the international monetary reserves to the changes that occurred in the prices of crude oil in the global market (PO) to a sudden shock of one unit in the price of oil strongly in the first year and its effect continued in the other years, so that the amount of impact doubled remarkably during the years of study, and this It shows the amount of rentierism in the Iraqi economy, and the absence of shock absorbers that occur in changes in crude oil prices, as the decline in crude oil prices is directly reflected on foreign exchange, due to the absence of commodity production sectors, which mitigate the amount of shock and shift demand from foreign goods To local commodities, the impact of the shock in the first year was an amount of (1903) and a monetary one, and its impact appears in the second year in a positive way by (2758.57), and it increases in an upward manner so that it is in the fifth year (6758.4), in the seventh (12957.61), and in the tenth year (23867.9) and this increase is evident in Figure (7). The researchers conclude that crude oil prices play an important role in monetary reserves, so they must be given importance commensurate with their role in the Iraqi economy, and the need to try to neutralize cash reserves International fluctuations that occur in the global oil market.

c- The currency sale window (CWS) to the banking system is a major source of currency leakage from the central bank, especially when sales are made based on the import permit for consumer goods and services, most of the cash that is sold to banks and then foreign exchange flows abroad for the purpose of import, it vanishes quickly , because the goods and services that enter the Iraqi economy do not affect the work of the

multiplier and accelerator in the economy, because the tendency to consume does not increase the speed of circulation of Iraqi money (the dinar), but rather works for the benefit of the US dollar, and then the speed of turnover does not affect the local demand from Goods and services produced in the commodity sectors, rather, the demand for goods and services imported from abroad is reflected, so we note that the impact of a sudden external shock of one unit affects the first year (0.975) in which the currency window sales (CWS) increase, affecting the international monetary reserves in the year Third, its effect will be (185.8) monetary units, and the effect of the currency sale window will be greater during the long term, and this is evident through the increasing time course of the volume of foreign exchange leakage during this period. Change, so its impact will be greater in the tenth session to reach (75825.3) monetary units.

d- The exchange rate (ER) expresses the direct relationship between the country's economy and the outside world through the foreign currency, in particular the dollar, which is the dollar cash reserves (FCR), as the increase in the exchange rate of the local currency against the dollar is negatively reflected on the leakage of the dollar abroad, because The value of imported goods from abroad has a competitive advantage over goods manufactured at home, as the study period was characterized by an increase in the value of the Iraqi dinar, which was reflected in the volume of settlements in the balance of payments, and directly affected foreign cash reserves in the Iraqi economy, so the amount of shock Which foreign cash reserves were exposed to, by one unit in the first year (-0.013) monetary units, and increased in the first four years until it reached (207.81) monetary units in the fourth year, then was characterized by relative stability until the eighth year, and then began to decline in the years The ninth and the last, and it was (10.39) in the ninth year and it was (-0.028), due to the change in the exchange rate, so the effect was negative on foreign monetary reserves.

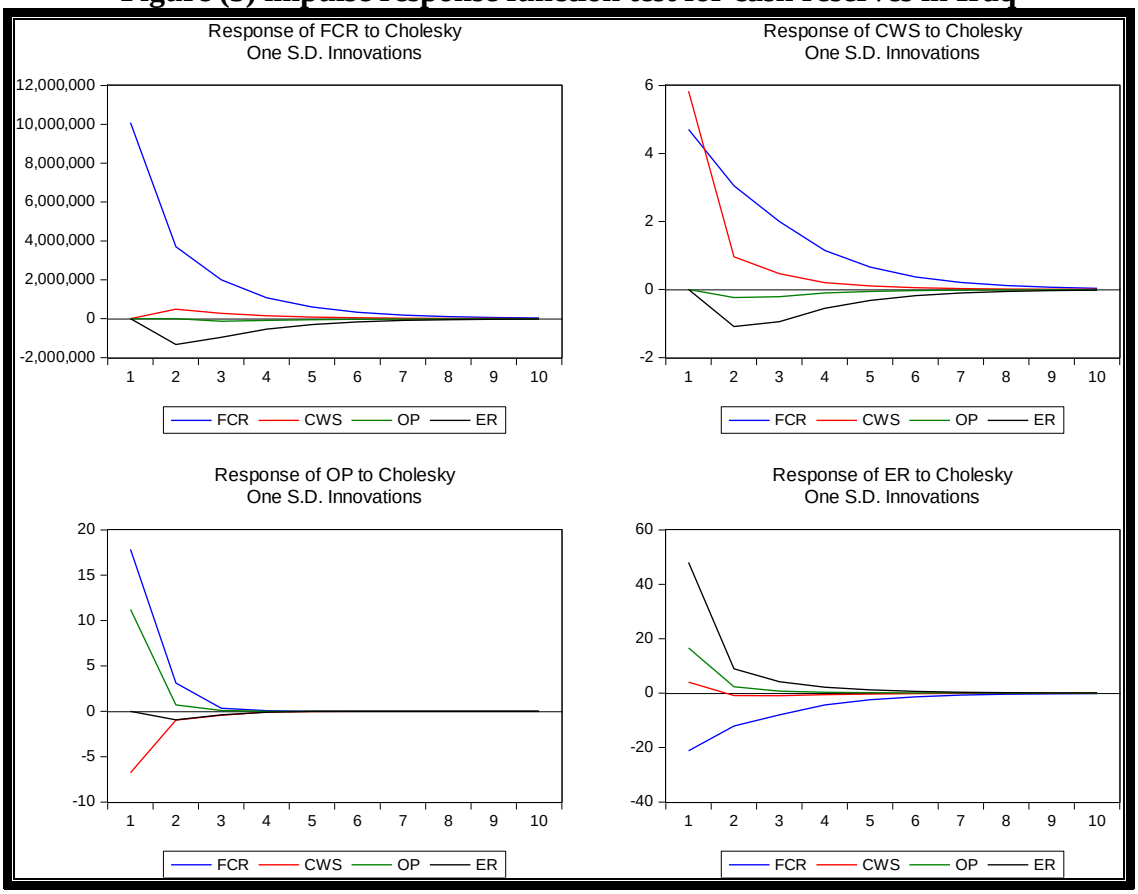
e- Forecasting imports (IM) of goods and services and its impact on international monetary reserves (FCR) is the dependent variable in the Iraqi economy, as imports do not differ from the rest of the explanatory variables that show the increase and decrease in cash reserves in the Central Bank of Iraq by showing the positive or negative effect in a manner Upward and downward curves as in Figure (7), and this is shown in Table (4), where imports for the first year were (32.69) and rose to (74.65) in the second year, and the rise continued, so it was in the fourth year (175.29) and increased to (276.92) in the eighth year , and reached (1483.1) in the tenth year.

Table (4) impulse response function test in the Iraqi economy

Response of FCR:					
Period	**RESERV(FCR**	**G PO**	**CWS**	**ER**	**IM**
1	**0.000000**	**1903.07**	**0.975**	**-0.013**	**32.69**
2	**127.54**	**2758.57**	**78. 92**	**96.4**	**74.65**
3	**50.62**	**4352.61**	**185.8**	**129.7**	**82.01**
4	**-0.79**	**5743. 60**	**2376.6**	**207.8**	**175.29**
5	**537.01**	**6758.4**	**9052.54**	**201.4**	**180.7**
6	**1834.02**	**8792.43**	**19762.6**	**210.6**	**201.5**
7	**2765.25**	**12957.61**	**42654.4**	**207.1**	**250.4**
8	**2983.88**	**10762.46**	**57011.9**	**213.5**	**276.92**
9	**4231.19**	**16540.85**	**61549. 4**	**10.39**	**679.30**
10	**8592.02**	**23867.90**	**75825. 3**	**-0.028**	**1483.1**

Source: Prepared by the researchers based on the use of (Eviews 12) program

Figure (5) impulse response function test for cash reserves in Iraq



Source:
Figure prepared by researchers based on Table (4) and (Eviews 12) program

Conclusions and recommendations:

Conclusions:

1. The international monetary reserves are the basis on which the monetary authority depends in controlling the monetary mass in order to control the economic stability.
2. The greatest impact on monetary reserves is through fluctuations in crude oil prices in the global market, and this is what was shown by testing the impulse response function in the Iraqi economy.
3. The rentier Iraqi economy and the lack of diversification of its exports due to the stagnation of the production system, made the cash reserve a wall of defense on which the state relies in times of economic crises, despite it being weak and rickety in the face of the drop in crude oil prices. The sale of currency in the open market was an important factor in achieving prices, but it caused a large leakage of foreign cash reserves from the Iraqi economy.
4. The inflexibility of the production system and economic exposure made the Iraqi economy affected by external shocks resulting from fluctuations in crude oil prices.
5. The existence of a long-term and reciprocal equilibrium relationship between the dependent variable and the independent variables, where the international monetary reserves respond to the changes that occur in the independent variables to different degrees, foremost of which is crude oil prices.

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Recommendations:

1. Studying the global market for crude oil and adopting global expectations for crude oil prices to avoid and avoid expectations that cause external shocks, by drawing a financial policy commensurate with oil exports at expected prices without prejudice to international monetary reserves.
2. Direct control by the monetary authority of currency sale operations through the currency sale window, and giving a greater role to more banks to avoid the state of monopoly that occurs in the foreign currency sale window.
3. Develop a program supported by the state to stimulate the commodity sectors, and activate the role of the private sector by setting up specialized committees with the aim of diversifying local products to reduce dependence on abroad and to limit currency leakage to import consumer goods and services.
4. Putting pressure on public expenditures, especially consumption, which are limited to the very necessary, and establishing a financial fund to counter external shocks in times of financial crises to maintain economic stability.

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