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# Monetary Variables and their Relationship to the Iraqi Stock Exchange Index

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**Abstract**
Financial markets are of great interest to developed and developing countries alike, because of their great role in mobilizing savings and directing them to various investment channels that support the growth and development of the economy, and these markets affect and are affected by many variables and economic policies, including It includes the monetary policy variables, and the research aimed to show the monetary policy variables in Iraq, which are represented by the money supply, interest rate, exchange rate and their relationship to the Iraq Stock Exchange Index.

**Keywords**: Monetary variables ،stock market index.

## Introduction
The stock market, like other markets, is influenced by various factors and events from within and outside the market. Some variables may have a positive impact and a number may have a negative impact, causing volatility in their indicators. To reduce these fluctuations, these factors and variables affecting market indices must be examined. To indicate the relationship of monetary changes (cash offer, interest rate, exchange rate) In Iraq's securities market, these variables were analysed, thus demonstrating their relationship with the market index. Financial markets are of great importance in driving economic activity and require the establishment and establishment of financial markets that have a clear development in the banking and monetary system and are supported by legislative, legal and regulatory frameworks with the need for political, economic and security stability.

## 1. Literature Review
1.1. First: monetary variables conceptual framework:

**1. View Cash**

A cash offer is defined as money with direct purchasing power, i.e. the direct ability to convert to all goods and services available for exchange in other words the ability to discharge from all debts. Or is the net total of the bank traded and auxiliary currencies as well as current deposits with commercial banks and excludes from it all auxiliary transactions, term deposits and savings deposits as they are included in the semi-cash [1]. The presentation of cash is linked to the so-called 0M monetary base representing circulating paper and mineral exporting currencies as well as commercial bank currency reserves at the Central Bank [2] . The central bank is the only bank responsible for the offer of cash, it influences and controls it in line with the development of economic activity. The supply of cash is a macroeconomic variable that reflects a picture of the "economic situation" at a given point in time, and is termed the amount of money or cash mass. Its components reflect a true picture of the extent to which the banking system is developing, the public's awareness of banking, and the degree to which financial and monetary markets have developed, and the degree to which the cash supply ratio to national income is restricted [3] .

**2. Exchange rate:**

There are several definitions of the exchange rate that can be explained by the following:
Exchange rate to be the ratio on which a number of local cash units are exchanged for foreign cash units [4] . The number of units is known as a particular currency that can be purchased or exchanged in one of the other currencies [3] . Foreign exchange is as the process by which the local currency is exchanged for foreign currencies through the foreign exchange market, and the foreign exchange market is defined as] the market in which international financeable currencies are exchanged among persons) Natural and legal, through the adoption of institutional arrangements, through which the demand and supply derived from these currencies meets, directing the bulk of exchanges of goods, services and financial assets in the approved currencies [5].

**3. Interest Rate**

Interest rates are a vital tool of monetary policy and are taken into account when dealing with variables such as investment, inflation and unemployment, central banks tend to generally lower interest rates when they wish to increase investment and consumption in the country's economy. However, low interest rates as a macroeconomic policy can be risky and may create an economic bubble [6] .

**1.2. There are several definitions of interest rate.**

interest rate is known: the rate at which commercial banks deal with individuals and economic units, i.e. the interest that commercial banks receive when granting loans and credit facilities to individuals and economic units, and also from individuals and economic units against a commercial banks' smoker. Commercial banks adhere to the upper rate limit set by the central bank and the central bank is the only monetary authority with the right to change that rate. For example, in the case of inflation, interest rates on deposits are raised to tempt individuals and institutions to deposit their money to absorb maximum liquidity in the market and keep it in the central bank [7] .

**1.3. Second: Stock market index (conceptual framework):**

It is a statistical indicator used as a measure of the overall movement in the market consisting of a total of securities reflecting the state of the entire market. If this index rises, it assumes that the market as a whole is high and when it falls, the market as a whole falls, and its importance is considerably reduced by its use by all market dealers, and is used to measure market trends and price movement as a whole [6] .

**1.4. Third: Monetary variables and their relationship in stock market performance**

First: Offer of cash and its relationship in the stock market:

The Central Bank is the only bank responsible for the offer of cash. It influences and controls it in line with the development of economic activity. Since stock market activity is an important part of economic activity, any change in the offer of cash will have an impact on the performance of this market. The relationship between the money offer and the capital markets has received considerable attention from writers and researchers and has presented a series of studies. (sprinkel) in 1964 to the fact that there is a strong relationship between the capital markets and the money supply in the United States, and has since tested the relationship between the money supply and the capital market of various economies [8] . Because of the belief that money supply changes have significant direct effects via changes in stock prices, indirect effects through their effects on real economic activity that appears in return as a major determinant of equity prices [9] . Fluctuations in the supply of cash lead to fluctuations in equity prices based on a series of cause-and-effect hypotheses. This hypothesis is in its simplified form (the change in the supply of cash causes changes in equity prices directly or indirectly across the bond market and the rate of return or through changes in GDP). Direct change occurs through the Central Bank increasing its cash supply by a greater proportion than usual, as individuals find themselves in more liquidity than they need for financial transactions, spending some of these excess funds buying securities from them. (Stocks), and as long as the cash supply is steady especially in the short term, excess demand for stocks generates heavy trading volume and leads to higher share prices and value, while results are similar with the indirect transition across the bond market and the yield ratio being somewhat more complicated [10] . This happens when the Central Bank increases the money supply resulting in a decline in interest rates. Since the inverse relationship between interest rates and bonds, lower interest rates lead to higher bond prices [11] . Rising bond prices are directly depressing their yields and because the yield on bonds is less likely to decrease the turnout for bond purchases, Bond buyers turn to the stock market because their bond exchanges have become more expensive and lower yields and as a result of expanding demand for stocks, the volume of stock trading increases and its prices and value rise s GDP, because the increase in the supply of cash leads to a lower interest rate, More investment expenditure, more consumer expenditure and a higher percentage of GDP along with greater shareholder dividends as a result of increased production that is usually reflected in the level of demand for the company's products equity ", dividends distributed to higher shareholders stimulate equity purchases, which in turn leads to increased volume of trading and higher share prices and value. The result in the previous three cases, whether the chain of reason is directly from cash supply to equity prices or indirectly across the bond market and yield ratio or across GDP, is that the increase in cash supply leads to increased demand for equities and then . Lawrences Ritter's market performance indicators. The increase in the supply of cash may sometimes have a negative impact, just as it has a positive impact on equity prices. This has a negative impact on the volume of new issuances. Part of the increase in the supply of cash may go in the form of new issuances of equities and bonds, absorbing a desperate portion of available liquidity and then declining equity prices *[12]* . The increase in cash supply also has a negative impact and has a positive impact on companies' profits. and the negative effect is that there may be inflation that ultimately increases the minimum return requested by investors, Since the company's market value and then the market value of the ordinary share it issues are determined by the expected volume of cash flows and the required minimum return on investment, it can be said that the final result of the impact of the offer of cash on share prices depends on the magnitude of the impact of each variable *[13]* .

Second: Exchange rate and its effect on the stock market:

The exchange rate represents the local currency swap ratio in other currencies *[14]* . and can be defined as the unit of foreign exchange expressed in units of the national currency *[15]* . Changes in exchange rates affect internal price levels and inter-firm competition. Companies are usually exposed to risks arising from changes in exchange rates if they have net assets or obligations in a foreign currency If the value of the foreign currency rises and the company's net assets exceed its foreign currency-denominated obligations, the company in this case will benefit and when the liability exceeds the foreign currency-denominated assets, The company will earn if the value of the foreign currency falls *[16]*. In any event, this will affect the company's revenues and expenses and this will affect the company's securities prices and the return of the investor. Likewise, the value of the currency paid by the buyer for a securities when it is sold or when it receives a return that has an important impact on the position of the financial market. For example, the depreciation of the currency depends on the nature of the financial asset as to whether it is a stock or bond. This can be seen in the following cases:

First, with respect to variable yield securities: the depreciation of the national currency will lead individuals to shed their reserves and replace others with stocks, and the heavy purchase of shares generates an increase in volume of trading and then an increase in stock prices and value *[12]* .

Second: For fixed-income securities such as bonds: When the currency depreciates, the holders of the bonds whose coupons are paid in the low currency are converted, because the depreciation of the currency leads to the purchase of securities that generate a return in a high currency against the low national currency of the bonds sold, which are bonds with a yield in the national currency that will increase their yield and the value of their recovery is a temptation for their owner.

**Third: Interest rate and its effect on the stock market:**

The interest rate represents the price of giving up money or capital *[17]* . The State uses a tool to control markets and guide economic activity. Any modest but minor change affects the movement of funds in society and investment trends, whether direct in the form of projects or indirect in securities [18] . With regard to the impact of interest rates on capital markets, this is highlighted under multiple forms, as follows:

First, interest rate is an important element of project expenditure because projects usually resort to borrowing in the absence of their own available reserves, accumulated profits and liquid cash assets.

Second: Securities prices in capital markets represent the present value of future funds. Direct value depends on the discount or yield rate, which is the rate of interest prevailing at the same moment and related to employment for the same duration [19] .

Third: Interest rate affects private investments in businesses and thus affects total expenditure and dividends distributed to shareholders and equity prices.

IV: The interest rate affects the allocation of funds between equity and bond markets, thereby affecting the demand and prices of stocks and bonds[20] .

## 3. The objective of the research

The research seeks to achieve, inter alia:

1- Know the theoretical aspect of the monetary variables and the Iraq Stock Market Index.
2- Determine the relationship between monetary variables and the Iraq Stock Market Index.
3- Analysis of the reality of the monetary variables and the Iraq Stock Market Index and statement of the relationship between them.

## 2.11. *research question*

The problem with the research is the uneven readiness of the Iraqi securities market in terms of the development of the market and the development of its banking and monetary systems on the one hand, and the lack of clarity of economic relations between the monetary variables and the Iraq Securities Market Index on the other.

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## *1.5. research hypotheses*

The research is based on the premise that there are positive relationships between the cash variables of the Iraq Stock Exchange as well as direct, indirect effects varying by index type.

## 2. methodology

*Fourth requirement: Analysis of the relationship between cash variables and the Iraq Stock Market Index for the period 2010-2020 To indicate the relationship between the monetary changes (presentation of cash, interest rate, exchange rate) and the Iraq Stock Exchange Index, where the correlation between the monetary variables and the market index in Iraq will be established as shown in the following table*

Table (1) Cash Variables and Iraq Stock Market Index for the Period (2004-2020)

| Years | View Cash (m1) | Parallel exchange rate% | Real Interest Rate% | General market index (point) |
|---|---|---|---|---|
| 2004 | 10148626 | 1453 | 6 | 100.89 |
| 2005 | 11399125 | 1472 | 7 | 136.03 |

| | | | | |
|---|---|---|---|---|
| 2006 | 15460060 | 1476 | 16 | 125.02 |
| 2007 | 21721167 | 1266 | 23.3 | 113.15 |
| 2008 | 28189934 | 1203 | 23.3 | 92 |
| 2009 | 37300030 | 1182 | 13.4 | 730.56 |
| 2010 | 51743489 | 1185 | 12.4 | 100.89 |
| 2011 | 62473929 | 1196 | 8.4 | 136.03 |
| 2012 | 63735871 | 1233 | 9.2 | 125.02 |
| 2013 | 73830964 | 1232 | 13.39 | 113.15 |
| 2014 | 72692448 | 1214 | 12.6 | 92 |
| 2015 | 65435425 | 1247 | 12.29 | 730.56 |
| 2016 | 70709253 | 1275 | 12.38 | 649.48 |
| 2017 | 71161551 | 1258 | 12.57 | 580.54 |
| 2018 | 77828984 | 1209 | 12.34 | 510.12 |
| 2019 | 86771000 | 1196 | 12.28 | 493.76 |
| 2020 | 95884000 | 1227 | 12.2 | 444.9 |

Source:
- Columns (1.2.3) Central Bank of Iraq, Central Statistical Agency, Ministry of Planning, for years (2010-2020).
- Column (5) Iraqi Stock Exchange Database for the period (2010-2020).

**Discussion**

Table (1) shows the relationship between the monetary variables and the market index, where we note that there is a correlation between the cash supply variable and the market index, where we note that there is a rise in the cash supply variable during the period (2004-2012) where the increase in the market index was accompanied by only some volatility during the two years (2008, 2008), respectively, followed by a variable supply to rise in 2020 with the volatility of the market index. It is noted from the previous table that there is a fluctuation in the values of the exchange rate variable accompanied by a rise and decrease in the values of the market index, but the relationship of the interest rate variable to the market index we note from the table (1) There is a rise in interest rates for the duration (2004-2008) offset by a rise in market index values for the duration (2004-2006) and fluctuated during the period (2007-2008) to return interest rate values during the period (2012-2020) to rise and decrease offset by a decrease in market index values for the said period.

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## 4 Conclusions

1. Monetary variables are a major factor affecting the investment climate in the stock market and can be classified from regular risks to the financial markets.
2. There is a strong correlation between the cash supply variable and the market index, as any increase in the cash supply reflects positively on the stock market.

3. Political, security and financial and administrative corruption in Iraq have adversely affected Iraq's stock market.
4. Exchange rate policy is an important policy that strives to achieve internal and external balances of the national economy, so monetary authorities must pay considerable attention.

**Recommendations:**

1. To ensure that stock market policy is consistent with government economic policies, as well as to revitalize the Iraqi securities market and provide it with an investment climate because this helps it to attract savings and direct them towards investment.
2. The need to develop the work of the Iraqi Stock Exchange in order to increase its effectiveness in servicing the national economy.
3. Working to activate the interest rate in Iraq in order to encourage investment rather than directing Iraqi investors to invest in foreign currencies
4. We must work to develop investor awareness by raising investor awareness by identifying scientific foundations by establishing centres within the market that allow investor access to information on central bank procedures and monetary policy.

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**Declaration of Competing Interest**

The author declares that I have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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