

## Analysis of the impact of the components of the general budget on the indicators of the Iraqi stock market for the period

2008-2022

إثر مكونات الموازنة العامة على مؤشرات سوق العراق للأوراق المالية للمدة من  
2008 إلى 2022

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المستخلص

تهدف الدراسة الى التحقق من تأثير مكونات الموازنة العامة على مؤشرات سوق العراق للأوراق المالية واختبارها من خلال متغيرات (الإيرادات العامة، النفقات العامة، عجز وفائض الموازنة، الإيرادات الضريبية) على المؤشرات (عدد الشركات المدرجة، حجم التداول، المؤشر العام، الأسهم) للفترة من 2008 – 2022، على الرغم من اجراء دراسات لتوضيح تأثير الموازنة العامة على النمو الاقتصادي الا انه تم اجراء دراسة حول عجز الموازنة وتأثير على النشاط الاقتصادي في سياق المالية العامة، وكانت الحاجة الى ذلك. استكشاف تأثير عناصر الموازنة نتيجة زيادة النفقات العامة وتأثيرها على زيادة حجم الاستهلاك وزيادة الطلب على المستورد نتيجة تقلب سعر صرف العملة.

الكلمات المفتاحية: الموازنة العامة، النمو الاقتصادي، عجز الموازنة، النشاط الاقتصادي، المالية العامة، الإيرادات الضريبية

**Keywords:** general budget ,economic growth, budget deficit , economic activity , public finance, tax revenues

### Abstract

**Purpose:** The study aim is to verify the impact of the general budget components on the indicators of the Iraq Stock Exchange, and test them through the variables (public revenues, public expenditures, budget deficit and surplus, tax revenues) on the indicators (number of listed companies, trading volume, general index). shares) for the period from 2008-2022.

**Theoretical Framework:** Although studies were conducted to clarify the impact of the general budget on economic growth, a study was conducted on the budget deficit and its impact on economic activity in the context of public finance, and there was a need , To explore the effect of the budget elements as a result of the increase in the fiscal deficit due to the increase in public expenditures and its impact on the increase in the volume of consumption and the increase in demand for the importer as a result of the fluctuation of the currency exchange rate.

**Design/Methodology/Approach:** Used the methodologies of Zainab and Adeeb (2022) to test the impact of public budget components on economic activity. With regard to testing the validity of the hypothesis and the study model, time series path analysis was used within the analysis of the multiple regression equation and the VAR model to test the validity of the hypotheses.

The study sample consisted of the Iraq Stock Exchange, which is inclusive of all indices of the companies listed in the Iraq Stock Exchange, trading volume and the general stock index, as well as the possibility of circulating the results fairly to the community.

## Findings:

The results indicate that the elements of the general budget as indicators of the size of economic activity and the structure of economic sectors have a direct impact on the indicators of the Iraqi market for securities, especially when there is a budget deficit and the government resorts to borrowing, such an effect is statistically significant. The results provide practical solutions to enhance economic activity through redistribution of income and diversification of various sources of financing, including revitalization of the financial market.

**Research, Practical and Social Implications:** Future studies can look at other indicators of the elements of the general budget and evaluate their impact on the different dimensions of the relationship between the general budget methodology and the diversification of various funding sources and long-term financial instruments.

**Implications/Originality/Value:** This study contributes to the literature related to the public budget by analyzing the results of the effect of the equations of increasing public revenues to finance the increased public expenditures on the indicators of the Iraq Stock Exchange, and presents a practical and applied perception of the role played by the general budget plan on the structure of the economic sectors.

## 1- . Introduction.

The budget is a financial plan that expresses the objectives of economic, political and social policies that seek to satisfy public needs, provide public services and develop infrastructure. Therefore, the budget represents a reflective indicator of the country's economic activity (Al-Zwaini, 2006). The state seeks to maximize public revenues and diversify its sources to cover public expenditures, by investing in projects that achieve sustainable development and which are reflected in the standard of living of individuals and increase the volume of consumption and then stimulate domestic demand to create a strong competitive market to attract investing companies and increase profits and then the growth of tax revenues. Public revenues with the structure of economic sectors and economic growth (Hossam, 2021).

The Iraqi economy witnessed an increase in public expenditures due to the lifting of economic sanctions on Iraq after 2003 and the resumption of oil exports abroad. Iraq Stock Exchange, where the share of the banking sector reached more than 80% of the financial market, and then the activation of the stock market in Iraq (Ali Abd, 2012). Therefore, the importance of choosing the title of the study appears to study the interaction between the components of the budget in the indicators of the Iraqi market for securities, as the budget reflects the economic, social and political goals that seek to advance economic activity.

The financial market represents a window reflecting the economic activity. It is possible to read the development in the budget structure and analyze the fluctuation during the period of the study and find out its reasons because the budget is affected by the conditions of economic activity because public revenues are linked to economic activity, economic

structure and the degree of economic growth. Economic growth depends on stimulating investments and profits achieved.

The problem of the study of general framework of the state's general budget has not been fulfilled in accordance with the economic, social and political goals that aim to achieve economic growth by improving the level of economic activity, Since most of the years the budget suffered from a financial deficit due to the increase in current operating expenses and the financing of the deficit by borrowing from the banking sector, and thus higher interest rates and then investment financing costs and lower profits, which is reflected in the stock values of companies listed in the financial market.

## 2-. Literature Review

(Bevan, D, 2001) presents the concept of the general budget as a tool of fiscal policy used in managing the economy and directing it in a way that suits the general policies of the state, so it represents a comprehensive and estimated plan at the state level for all public revenues and public expenditures during a specific period of time, often one year. Sees (Ahuja, D., & Pandit, D, 2020) the budget as a detailed plan with estimates of expenditures and revenues for a future year, and it is disposed of after the legislative authority approves it, and it determines the doors of its spending within a period of time and the mechanisms for collecting public revenues and diversifying its sources.

According to the propositions of (Bahmani-Oskooee, M, 1999), the general budget represents a control method for following up the implementation of the general budget items and the extent to which the budget preparation goals are achieved by comparing the actual performance with the planned performance in the budget, and then expresses the implementation of the goals that the state seeks to achieve in order to maximize the sources of revenue public .

And (Biza, R.A and others., 2015) refers to the term budget as a plan for estimating the public expenditures of the state and then working on allocating the necessary revenues to cover them during the fiscal year. Therefore, it is a broad plan that includes all the activities of the state sectors and their objectives that affect the movements of the general economy.

Describes (Fouladi, Masoome, 200) the general budget as a mirror that reflects the movements of economic activity in the country. During periods of prosperity, public revenues increase from fees, taxes, and exports, and then redirected towards the doors of new expenditures with the aim of stimulating the movement of the economy and then the gross domestic product, and vice versa during periods of recession, it decreases. Public revenues, the budget deficit increases, the state resorts to borrowing, and then financing costs rise and economic activity declines.

The concept of the general budget can be defined as an action plan that expresses the state's financial, economic and social goals adopted by the state by providing detailed estimates of public expenditures and revenues that show the financial position of the state during a fiscal year Both sides of the general budget include public expenditures and public revenues.

### A. Expenditure Side

Public expenditures represent an indicator of the extent to which states interfere in economic and social life, and represent any amount paid for the purpose of achieving a public interest such as satisfying public needs or providing a public benefit or public services. The import gap from abroad, the maximization of wealth, and the preservation of the surplus in the balance of payments (Ramey, V. A., 2012).

Discussed (Ardagna, S., 2007) there is a correlation between public expenditures and economic fluctuations due to financial crises and the common relationships between economic variables whose effects were reflected on the standard of living of individuals due to the deterioration of economic activity and the inability of the market mechanism to address financial and economic problems. These variables encouraged state intervention in economic life to address the economic and social conditions, and sees (Ahmed, I. and Qayyum, A., 2007) In developing countries, the increase in public expenditures means the state's intervention in economic and social life by directing spending towards the country's infrastructure and encouraging productive projects for the purpose of raising the rate of economic growth and increasing the per capita share of services. And then the formation of fixed capital to build productive projects to confront economic fluctuations, especially economic recession, through increasing the export capacity of national companies and competition in foreign markets.

## **B. Revenue Side.**

Public revenue refers to all sources of public revenue. It includes all sources of public income that the state earns during a specific period of time often a year, to finance public expenditures during the fiscal year. Public revenues are also used to cover interest payments on government loans (Ardagna, S., 2007).

The economic and social goals of the state are linked to maximizing public revenues from various sources, such as direct and indirect tax revenues for public benefits provided to the public, other revenues from exports, government fees, and rent revenues for state property, and then they represent the cash flow entering the state (Biza, R.A and others 2015).

General economic policies affect revenue maximization by supporting investments, which are the main engine for driving economic growth and thus increasing corporate profits and then increasing their market value, as well as encouraging the private sector and future profits that affect investor expectations (Agnello, L., D and R. M. Sousa , 2013)

Directing investments towards infrastructure projects contributes to creating job opportunities by supporting the industrial and agricultural sectors, and then increasing aggregate demand and supply, which plays a role in attracting private investments to enter the various industrial and agricultural fields, and then maximizing profits, which contributes to financing public revenues to cover the increase in public expenditures (Catao, L. and M. Terrones, 2001).

## **C. concept and functions of the financial market.**

The concept of financial markets refers to the markets in which investors buy and sell securities. Securities are traded at the local and global levels with the aim of increasing returns and reducing risk through diversifying financial portfolios.

Financial markets are a means of financing fiscal deficit units by playing the role of a financial intermediary between savings owners and transferring them to investors, and then driving economic growth by providing a source of funding at low costs by achieving a balance between supply and demand for funds, which leads to an increase in cash flow towards opportunities. investment contributes to attracting foreign investments and then developing local savings (Ross Levine, 2004).

Financial markets are one of the sectors that work to create liquidity by offering securities (stocks and bonds) and financial derivatives to the public of investors and then converting the securities into cash and vice versa. By stimulating the financial markets, as the trading process can be conducted from any place, as well as through brokerage firms and financial intermediaries (Allen F. and D. Gale, 1997).

There are many definitions of financial markets, including those related to the nature of traded financial instruments. The financial markets in which long-term financial instruments are issued and traded, such as stocks and bonds, are called capital markets. As for the financial market in which short-term financial instruments are issued and traded, such as certificates of deposit, bank acceptances, treasury bills, remittances, and others Short-term instruments are called the money market (Hussein, 2013).

### **3-Financial market functions. The financial market provides a number of functions that can be summarized in the following points.**

1. **Financial intermediation.** Financial markets provide the channel through which money is transferred from lenders who have funds available for lending to investors who need that money to finance their investments through new issues or traded ones, as financial markets work to mobilize investors' savings, by determining the required rates of return accepted by investors and in accordance with commensurate with the size of the expected risks.
2. **Setting prices.** The financial market works through the forces of supply and demand within the financial market by determining the value of traded financial instruments. Financial market analysis also helps in determining the fair value of financial instruments through the means of interaction provided by the financial market for the interaction of sellers and buyers (Benctvenga, V.R. and B.D. Smith, 1991).
  - **Creating liquidity.** Financial markets provide liquidity to dealers through the possibility of converting financial assets into cash easily and at a lower cost. Advances in means of communication and information technology contributed to the possibility of conducting buying and selling operations from any place and time, and then the speed of trading and thus increasing the liquidity of traded securities. The financial market is also the most attractive liquidity. For investors, as they have low risks and high liquidity, and the financial markets depend on sellers and investors with whom the trading process takes place, and the increase in trading operations contributes to price stability and increased liquidity.

1. **Providing information.** The financial market helped reduce the costs of searching for lenders and investors, as the financial market works to save time, effort, and money by providing means of communication between sellers and buyers of securities, and then reducing the costs of financial transactions by providing information about listed companies and their conditions, and this information facilitates the conduct of transactions. Among the dealers in the financial market (Gertler and Peter, 2015).
2. **An indicator of economic activity.** The financial market provides an indicator of economic activity and development in general economic policies, as the financial market represents a group of companies that express the size of the economic sectors. These companies can monitor their performance by tracking the movement of their financial instruments traded in the financial market. The expansion of financial market activity contributes to finding sources of financing. Alternative and then the stability of interest rates, as well as encouraging individuals to save in financial instruments to obtain a higher return and reduce risks by diversifying financial instruments. (Jeremy C and Egon Z, 2015).

### III. Empirical Strategy.

#### A. Methodology .

The methodology of the study relied on the descriptive analysis approach and the quantitative approach for the purpose of analyzing the interaction, the impact relationship and the correlation between the elements of the general budget and the indicators of the Iraqi stock market for the period 2008-2022 to reach the results and build future expectations. The statistical program (EViews21) was adopted, and the VAR model was used to measure the relationship between Study variables by using time lag in order to reach the highest significant relationship in order to test the hypotheses of the study.

#### B . Hypotheses and objectives of the study.

The main hypothesis of the study (the general budget reflects the structure of economic activity, which is reflected in the financial market) and is divided into two sub-hypotheses:

Acceptance Hypothesis) H1): There is a significant impact and correlation between the elements of the general budget and the indicators of the Iraq Stock Exchange.

Null hypothesis (H0): There is no significant correlation and effect between the -3 elements of the general budget and the indicators of the Iraq Stock Exchange.

To achieve the hypothesis of the study, the study objectives to.

- 1- Studying the budget structure in Iraq for the period from 2008-2022.
- 2- Studying the indicators of the Iraqi market for securities for the period 2008-2022.
- 3- Studying the impact and correlation between the elements of the general budget and the financial market indicators.

4 - Testing the hypotheses of the study.

C. Data.

For the purpose of analysis, we collect data for the elements of the general budget for the years from 2008 to 2022, based on the Federal General Budget Law of the Republic of Iraq for the fiscal years from 2008 to 2022. The data related to the indicators of the Iraqi market for securities come from the annual statistical bulletin issued by the Central Bank of Iraq for the years from 2008 to 2022, and table (1) shows the data of the study.

Source:

| General Price Index (point) | Trading Volume | No. of listed companies | tax revenue | budget surplus and deficit | Public expenditures | Public revenues | Year |
|-----------------------------|----------------|-------------------------|-------------|----------------------------|---------------------|-----------------|------|
| 58.360                      | 301.350        | 94                      | 8.059       | 13.364                     | 67.277              | 80.641          | 2008 |
| 100.860                     | 411.928        | 91                      | 10.243      | -0.346                     | 55.589              | 55.243          | 2009 |
| 136.030                     | 941.199        | 86                      | 10.389      | 0.044                      | 70.134              | 70.178          | 2010 |
| 136.030                     | 941.199        | 86                      | 10.701      | 25.231                     | 78.757              | 103.988         | 2011 |
| 125.020                     | 893.825        | 85                      | 13.672      | 14.678                     | 105.139             | 119.817         | 2012 |
| 113.150                     | 2845.425       | 83                      | 19.314      | -25.128                    | 138.424             | 113.296         | 2013 |
| 998.207                     | 901.172        | 83                      | 16.299      | 21.829                     | 83.557              | 105.386         | 2014 |
| 730.560                     | 495.112        | 98                      | 15.399      | -25.414                    | 119.462             | 94.048          | 2015 |
| 649.480                     | 515.958        | 97                      | 11.927      | -24.195                    | 105.895             | 81.700          | 2016 |
| 580.540                     | 386.880        | 101                     | 10.236      | -21.659                    | 100.671             | 79.012          | 2017 |
| 510.120                     | 22.445         | 104                     | 14.483      | -12.016                    | 103.997             | 91.981          | 2018 |
| 493.760                     | 284.914        | 102                     | 11.828      | -27.538                    | 133.107             | 105.569         | 2019 |
| 508.030                     | 330.385        | 104                     | 9.198       | 81.175                     | 67.425              | 148.600         | 2020 |
| 569.200                     | 812.699        | 105                     | 15.149      | 6.232                      | 102.850             | 109.082         | 2021 |
| 585.95                      | 521.519        | 103                     | 5.220       | 21.421                     | 114.841             | 136.262         | 2022 |

. Table (1) Study data (amounts in billion dinars)

1. Annual Statistical Bulletin of the Central Bank of Iraq for the years 2008-2022.
2. The Iraqi Federal Budget Law for the years 2008-2022.

**III. Test the study hypotheses.**

**A. Analysis relationship between budget components and stock market indices.**

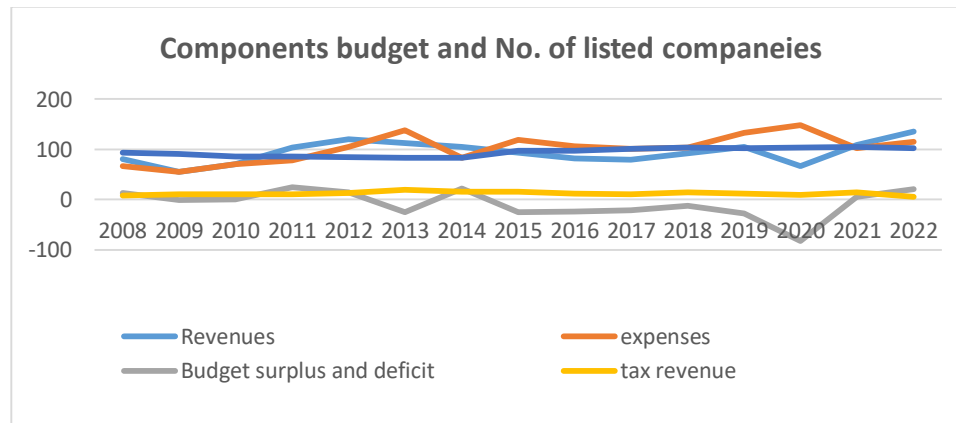
**3 The relationship of the components of the budget and the index No. of listed companies .**

The Iraqi economy depends mainly on the oil sector, and the public sector is the dominant sector in the Iraqi economy compared to the private sector. Figure (1) shows a decrease in the index of the number of listed companies for the years from 2009 to



2014, In the same period, we notice an increase in public revenues and public expenditures due to the rise in global oil prices and the increase in the volume of tax revenues. The reason for the decline in the number of listed companies can be analyzed to the economic and political instability during that period and the decline in the role of the private sector, as well as the flooding of the local market with imported and cheap goods.

And the decrease in the total local demand for local commodities, and then most of the projects were exposed to a great loss. Iraq also witnessed an exodus of capital and competence due to the unstable security situation to neighboring countries. The joint movements of the elements also show that the index of the number of listed companies began to rise gradually for the period from 2015 -2020, respectively (98, 97, 101, 104, 102, 104, 105, 103) This is due to the general economic policies adopted by the government to support the private sector, which plays a fundamental role in the process of economic development and reconstruction of sectors destroyed by wars and limiting imports.



**Figure 1: budget Components and No. of listed companies.**

Figure 2 shows the presence of common movements between the components of the general budget and the number of listed companies. The analysis of the public expenditure path shows that there is a deficit in the general budget for the years from 2015 to 2020, respectively (-25,414, -24,195, -21,659, -12,016, -27,538, -81,181) . This is due to the continuous increase in government military spending due to the war on terrorism, as well as the Corona pandemic, which is one of the reasons for the decline in the contribution of the productive private sector, and then the decline in national income due to the inability to compete with imported foreign goods.

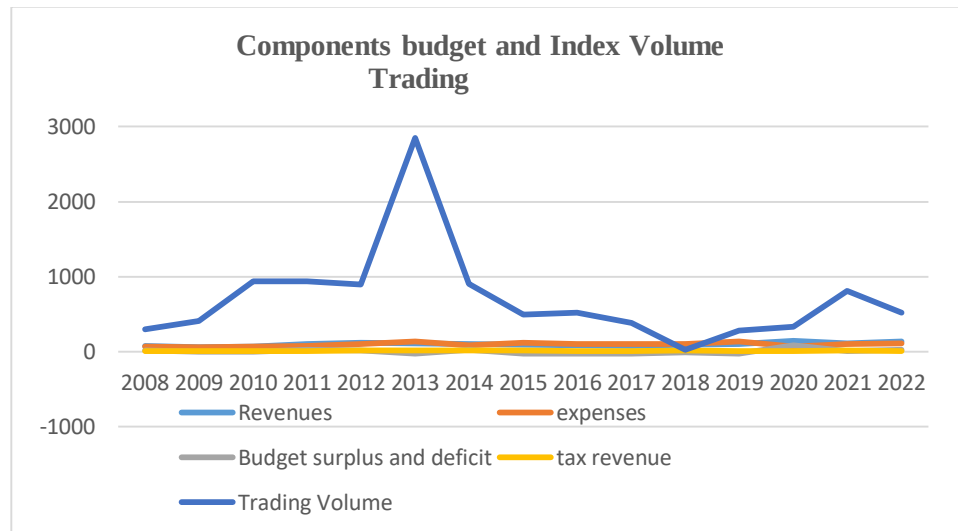
#### **4 The relationship of the budget Components in the trading volume index.**

It appears from the data of Figure (2) that there is a relationship between the movements of trading volume in the Iraqi market for securities and its impact on the Components of the budget, as it is noted that the highest volume of trading was in 2013, when it reached about (2845.425) million dinars, and it was steadily affected by the increase in public expenditures, as it reached the highest proceeds in the year 2013, amounting to (138.424) billion dinars. The increase in government spending contributes to stimulating local demand and supply, and because of the currency injection into the economy, and then the increase in deposits in banks and funds available for lending at low interest rates. These



factors encourage the purchase of shares of companies, based on expectations of future profits that you will reap.

The time series analysis also shows a decrease in the trading volume for the years 2015-2018, as it decreased (495.112, 515.958, 386.880, 22.445) and the reason for this was the high deficit in the public budget due to the decline in global oil prices and the war on terrorism during that period, and public revenues declined by (94.048, 81.700, 79.012, 91.981) and the budget deficit amounted to about (-25.414, -24.195, -21.659 -, 12.016) It is also noted from the figure that the budget achieved a surplus in 2020, 2021, 2022, due to government policies and economic reforms imposed by the International Monetary Fund Iraq has to advance the economy and address the crisis of deficit, unemployment and economic stagnation by giving a greater role to the participation of the private sector in economic life, as the budget surplus amounted to about (81.175, 6.232, 21.421) billion dinars, which was reflected in the volume of economic activity and then on the volume of trading.



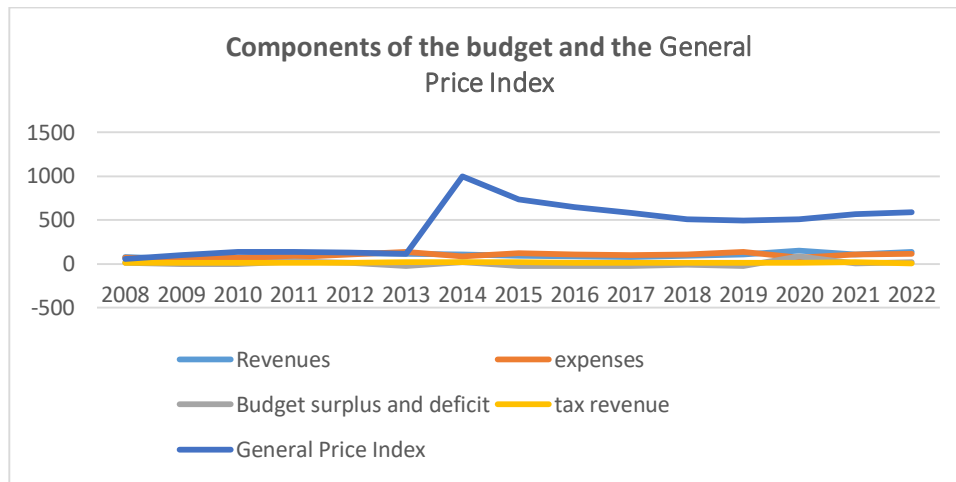
**Figure 2: budget Components and Index Volume Trading.**

Figure (2) shows that the economic reform policies adopted by the government are to complete the process of economic and social development by enhancing public revenues by increasing investment in the oil sector and optimally utilizing economic resources to maximize national income and local savings and granting bank loans for development and infrastructure projects that contribute to Maximizing the profits of investment companies as well as increasing the volume of tax revenues, as tax revenues amounted to (19.314) billion dinars in 2013, which is the highest revenue achieved corresponding to the highest trading volume of (2845.425) million dinars. Also, when tracking the path of tax revenues, we notice a positive relationship between revenue growth and trading volume .

## 5 The relationship between Components of the budget and the general index of stocks.

By tracing the path of the budget Components in Figure (3), we notice that there are common movements between the general index of stocks and the Components of the budget, as it is noted that the general index increased in the first years of the study from

2008 to 2011, respectively, as it reached (58.360, 100.860, 136.030, 136.030, 125.020). This is due to the growth of public revenues, as the budget surplus amounted to (13.364, -0.346, 0.044, 25.231, 14.678). Tracking the path of the general stock index also shows a decrease in the index for the years 2015-2019, as follows (730,560, 649,480, 580,540, 510,120, 493,760). During this period, Iraq was waging a war against terrorist organizations to liberate the occupied regions, which are considered important economic and agricultural areas in supporting The economy, as well as the looting of banks in those areas and the destruction of infrastructure, greatly affected economic and financial stability, and the withdrawal of most deposits from banks and their exit outside Iraq, the decline in the public and private investment index, and then the decline in stock prices.



**Figure 3: budget Components and General Price Index**

Figure (3) shows that there is an increase in public expenditures, where the bulk of government spending goes to military expenditures, and not to support the productive sectors that contribute to maximizing revenues, which was reflected in the increase in the budget deficit, as the deficit for that period reached about (-25.414, -24.195, -21.659, -12.016, -27.538) (This indicates the presence of common movements between the dimensions of the budget and the general stock index.

### **B. Measuring the relationship between the Components of the budget and the indicators of the Iraqi market for securities.**

**6** Estimating the impact of the general budget components on the no. of listed companies.

**Table(2) Results of estimating the impact of the general budget components on the no. of listed companies.**

$$Y1= 96.976 -1.214x4$$

| Parameter | Estimate      | T<br>Calculated | T<br>Tabular | R <sup>2</sup> | F<br>Calculated | F<br>Tabular | Prob(F-<br>statistic) |
|-----------|---------------|-----------------|--------------|----------------|-----------------|--------------|-----------------------|
| <b>B0</b> | <b>96.976</b> | <b>7.8097</b>   | <b>1.753</b> | <b>0.32</b>    | <b>3.82</b>     | <b>3.06</b>  | <b>0.03</b>           |
| <b>B1</b> | <b>-0.058</b> | <b>-0.4336</b>  |              |                |                 |              |                       |

|    |        |         |  |  |  |  |  |
|----|--------|---------|--|--|--|--|--|
| B2 | 0.158  | 1.4477  |  |  |  |  |  |
| B3 | 0.148  | 0.8908  |  |  |  |  |  |
| B4 | -1.214 | -1.7770 |  |  |  |  |  |

Source: EViews21 results.

It is noted from Table (2) that the independent variable (tax revenues) is the most significant and affects the index of the number of companies listed in the Iraq Stock Exchange, where the value of the calculated t was about (1.77), which is greater than the tabular t, and its value is (1.753). The value of (P(F-statistic) of (0.03) is less than the value of ( $\alpha$ ) (0.05), which indicates the existence of a significant tax revenue relationship and the index of the number of listed companies, and (R<sup>2</sup>) shows a ratio of (0.32), meaning that (X<sub>4</sub>) explains what Its rate is 32% of the changes in (y<sub>1</sub>) meaning that the movement of taxes by (1%) leads to the movement of the companies' size index in the opposite direction by (-1.214), meaning that the increase in taxes is reflected in the reduction of the expected profits of companies and then the decrease in retained profits to expand investment as well as a decrease The volume of domestic demand and the orientation towards cheap imported goods. The results also show that the calculated F values exceeded (3.82) the tabular value (3.06) at a significant level (0.05), and confirm the success of the standard model in representing the relationship between the variables.

## 7 Estimating the impact of the general budget components on the trading volume index

**Table (3) Results of estimating the impact of the general budget components on the trading volume index**

$$Y_2 = 1195.208 + 0.2105X_1 + 100.2030X_4.$$

| Parameter | Estimate | T<br>Calculated | T<br>Tabular | R <sup>2</sup> | F<br>Calculated | F<br>Tabular | Prob(F-<br>statistic) |
|-----------|----------|-----------------|--------------|----------------|-----------------|--------------|-----------------------|
| B0        | 1195.208 | -1.2938         | 1.753        | 0.38           | 4.56            | 3.06         | 00.2                  |
| B1        | 8.1821   | 0.8126          |              |                |                 |              |                       |
| B2        | 0.2105   | 2.0259          |              |                |                 |              |                       |
| B3        | -7.0245  | -0.5678         |              |                |                 |              |                       |
| B4        | 100.2030 | 1.9416          |              |                |                 |              |                       |

Source: EViews21 results

It is noted from Table (3) that (public expenditures and tax revenues) are the two most significant variables and affect the trading volume index in the Iraq Stock Exchange, as the calculated t value was about (2.0259, 1.9416), which is greater than the tabular t, and its value is (1.753). . The value of (P(F-statistic) of (0.02) is less than the value of ( $\alpha$ ) (0.05), which indicates the existence of a significant relationship between the variables, and the coefficient of determination (R<sup>2</sup>) is (0.38), meaning that (X<sub>2</sub>,X<sub>4</sub>) explain 38% of the changes in the trading volume index (Y<sub>2</sub>), meaning that the movement of public expenditures by (1%) leads to the movement of the trading volume index in the same direction by (0.2105). This is due to the increase in public expenditures leading to the injection of liquidity into economic activity and then Activating aggregate demand and supply, increasing sales and investments of companies and profits, and increasing trading of their financial instruments in the financial market. The results also show a positive relationship between tax revenues and the trading volume index, because tax reduction

leads to encouraging investment and then increasing profits and thus expanding investments and trading volume by (100.2030). ), and the results show that the calculated F values exceeded (4.56) the tabular value (3.06) at a significant level (0.05). Hence the success of the standard model in representing the relationship between variables.

## 8 Estimating the impact of the general budget components on the general stock index.

**Table (4) Results of estimating the impact of the general budget components on the general stock index.**

$$Y_3 = 8.5209 - 0.5815X_1 + 2.6594 X_2 + 4.6950X_3.$$

| Parameter | Estimate | T<br>Calculated | T<br>Tabular | R <sup>2</sup> | F<br>Calculated | F<br>Tabular | Prob(F-<br>statistic) |
|-----------|----------|-----------------|--------------|----------------|-----------------|--------------|-----------------------|
| B0        | 8.5209   | 8.1799          | 1.753        | 0.46           | 4.43            | 3.06         | 0.001                 |
| B1        | -0.5815  | -4.1127         |              |                |                 |              |                       |
| B2        | 2.7466   | 2.6594          |              |                |                 |              |                       |
| B3        | 4.6950   | 2.7403          |              |                |                 |              |                       |
| B4        | 8.5569   | 0.3235          |              |                |                 |              |                       |

Source: EViews21 results

The analysis of the statistical results in Table (4) shows that (public revenues, public expenditures, and budget surplus) are the most significant variables and affect the general stock index in the Iraq Stock Exchange, where the calculated t value was (2.7403, 2.6594, 4.1127) and these values are greater than the value of tabular t) 1.753). What indicates the significance of the relationship between the independent variables and the dependent variable is the value of (P(F-statistic) of (0.01), which is less than the value of ( $\alpha$ ) of (0.05), and the ratio of the interpretation coefficient (R2) is (0.46), meaning that the variables (X1,X2 (X3) explains 46% of the changes in the general stock index (Y1). In the sense that the movement of public revenues by (1%) leads to a change in the general stock index in the opposite direction by (-0.5815). On the industrial and agricultural sector, this led to an increase in consumption, and thus imports, and then a decrease in corporate profits, and then stock prices. Also, the increase in public expenditures leads to the injection of liquidity through the banking sector, which constitutes more than 85% of the financial market, and then increases the volume of bank loans and increases their profits, and thus the rise in stock prices in the financial market. The results also show a positive relationship between the budget surplus and the general stock index. This is because the surplus is reflected in encouraging investment and then increasing profits and thus expanding investments and increasing stock prices by a percentage, and the results show that the calculated F values exceeded (4.43) the tabular value (3.06) at a significant level (0.05). Hence the success of the standard model in representing the relationship between variables.

## C. Hypotheses Confirmation

The VAR model was used to prove the hypotheses by measuring the interaction relationship between the components of the general budget and the indicators of the Iraqi market for securities by using the time lag in order to reach the highest significant relationship in order to test the hypotheses of the study through the time series data of the study variables, for the purpose of building regression models to estimate Relationships between independent variables and dependent variables The value of covariance between two periods of time depends on the time lag between the two times by processing it by converting it into a stable series by finding the first difference (Dyt) First Difference) and according to the nature of the series and the extent of its response to this conversion and there are many tests that can be Using it to test the stability of the time series that leads to the cancellation of the autocorrelation in random errors is the coefficient of determination R2 and compare the value of (F) calculated for the coefficients of the slow independent variables with the value of (F) calculated for the coefficients of the original series (Narayan: 2008), as well as indicating the direction of the relationship between the independent variables And the dependent variables using the GRANGER-CAUSALITY test and the F-test, depending on the program (EViews21). Tables (5) and (6) show the results of hypothesis testing.

**Table (5) Analysis of the relationship of correlation and regression between the components of the general budget and the indicators of the Iraqi market for securities, using time lag.**

| Vector Autoregression Estimates              |                                      |        |                                      |        |                                      |
|----------------------------------------------|--------------------------------------|--------|--------------------------------------|--------|--------------------------------------|
| Date: 07/14/23 Time: 19:21                   |                                      |        |                                      |        |                                      |
| Sample (adjusted): 2010 2022                 |                                      |        |                                      |        |                                      |
| Included observations: 13 after adjustments  |                                      |        |                                      |        |                                      |
| Standard errors in ( ) & t-statistics in [ ] |                                      |        |                                      |        |                                      |
|                                              | Y1                                   |        | Y2                                   |        | Y3                                   |
| Y1(-1)                                       | 0.791455<br>(0.41320)<br>[ 1.91544]  | Y2(-1) | 0.153205<br>(0.40088)<br>[ 0.38217]  | Y3(-1) | 0.653169<br>(0.40864)<br>[ 1.59841]  |
| Y1(-2)                                       | 0.131159<br>(0.46522)<br>[ 0.28193]  | Y2(-2) | -0.250243<br>(0.40572)<br>[-0.61679] | Y3(-2) | 0.203115<br>(0.37277)<br>[ 0.54488]  |
| C                                            | 6.530432<br>(30.4887)<br>[ 0.21419]  | C      | -1624.115<br>(1598.04)<br>[-1.01632] | C      | -37.86875<br>(687.719)<br>[-0.05506] |
| X1                                           | -0.091047<br>(0.11599)<br>[-0.78497] | X1     | 5.218633<br>(14.9472)<br>[ 0.34914]  | X1     | 3.866187<br>(5.95433)<br>[ 0.64931]  |
| X2                                           | 0.065053<br>(0.09858)<br>[ 0.65991]  | X2     | 6.201509<br>(13.5213)<br>[ 0.45865]  | X2     | -5.397421<br>(5.26666)<br>[-1.02483] |

|           |            |             |            |             |            |
|-----------|------------|-------------|------------|-------------|------------|
|           |            |             |            |             |            |
| X3        | 0.136691   | X3          | -2.753223  | X3          | -3.064688  |
|           | (0.12583)  |             | (16.7000)  |             | (6.92680)  |
|           | [ 1.08632] |             | [-0.16486] |             | [-0.44244] |
|           |            |             |            |             |            |
| X4        | 0.116109   | X4          | 106.0192   | X4          | 28.85291   |
|           | (0.65279)  |             | (75.6952)  |             | (29.6250)  |
|           | [ 0.17786] |             | [ 1.40061] |             | [ 0.97394] |
|           |            |             |            |             |            |
| R-squared | 0.776518   | R-squared   | 0.703949   | R-squared   | 0.628223   |
| F         | 3.474635   | F-statistic | 6.677709   | F-statistic | 7.748934   |

Source: EViews21 results

It is noted from the statistical results in Table (5) by using time lag to reach the highest significant correlation to analyze the correlation and regression relationship between the components of the general budget and the indicators of the Iraqi market for securities, as the results show a positive correlation with significant significance as the interpretation coefficient (R<sup>2</sup>) shows And the test value of (F) calculated is greater than the value of (F) calculated in Table (2) at a significant level of 5%. Therefore, the highest correlation is achieved at a 13-year slowdown, as the coefficient of determination reached (0.776518, 0.628223, 0.703949), and since the interpretation coefficient achieved the highest rates at Take the first differences between (X1, X2, X3) and the independent variables (y1, y2, y3), and this indicates that all independent variables affect the indicators of the Iraqi financial market. Therefore, we will reject the null hypothesis and accept the alternative hypothesis that confirms the existence of a relationship between the variables at a significant level 5%.

#### IV. RESULTS AND DISCUSSION.

It is noted from the results of the study that there is a discrepancy in the impact of the components of the budget in the indicators of the Iraqi financial market. The overall lack of clarity of the budget preparation plan, as it appears that tax revenues are the only variable that affects the index of the number of listed companies, as well as the results show that the increase in public expenditures, which is reflected in the increase in the volume of consumption and then stimulating the total demand and supply, which contributes to increasing the profits of companies and then The rise in stock prices and this is shown through the results in the third model, which shows that the elements of the budget, public revenues, public expenditures, and the surplus and deficit of the budget affect the general index of stocks. Budget It is noted that the general budget as a financial plan did not achieve economic balance in terms of collecting public revenues to cover the increase in public expenditures, and this indicates the dependence of the Iraqi economy on international oil prices and the weak participation of the private sector in economic activity.

#### V. CONCLUSION AND POLICY RECOMMENDATIONS

The study paper was aim to investigate the interaction between the components of the general budget that represent the economic structure and the indicators of the Iraq Stock Exchange, which represent a mirror of economic activity, in order to obtain successful standard models in representing the relationship between variables and provide a comprehensive picture of the relationship of impact and correlation in order to provide important information to makers general economic policies.

With the aim of achieving economic and social balance by redistributing incomes and deducting from those with high incomes and re-spending them to those with low incomes in order to increase the volume of consumption and then encourage investment, economic growth, job creation and economic development, which is reflected in the financial market indicators, which reflects the level of activity of the economic sectors. ,

This conclusion is consistent with the study of (Atilgan, E., Kilic, D., & Ertugrul, H.M. (2017), the results reveal that tax revenues have a statistically significant negative effect on the size of companies index, and this is consistent with the results of the study of Aladejare, S.A. (2019), The relationship between increasing taxes and corporate profits is an inverse relationship that may lead to the exit of companies from the financial market in order to search for investment opportunities and a stable investment environment politically and economically.

The results also show that increasing public revenues and reducing the budget deficit affects the trading volume index and the general stock price index, and this indicates an increase in the available financial resources to finance the private sector, especially in the last years of the study thanks to the reform policies imposed by the International Monetary Fund on Iraq.

The objective of study paper was to investigate the interaction between the components of the general budget that represent the economic structure and the indicators of the Iraqi market for securities, Which represents a reflective mirror of economic activity in order to obtain standard models that are successful in representing the relationship between variables and provide a comprehensive picture about the relationship of impact and correlation in order to provide important information for general economic policy makers.

With the target of achieving economic and social balance through redistribution of income and deduction from those with high incomes and re-spending it to those with low incomes in order to increase the volume of consumption and then encourage investment and economic growth.

To create job opportunities and achieve economic development, which is reflected in the indicators of the financial market, which reflects the level of activity of the economic sectors,

The results reveal that tax revenues have a statistically significant negative effect on the size of companies index, and this is consistent with the results of a study ,Ali Abd al-Hadi (2012) . that the relationship between increasing taxes and corporate profits is an inverse relationship that may lead to the exit of companies from the financial market in order to search for investment opportunities and a stable investment environment politically and economically.

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As the results show, there is a need to intensify efforts to enhance the mobilization of government revenues and attract local savings to finance infrastructure expansion projects, ensure a decrease in the budget deficit and reallocate public expenditures towards investment projects to create job opportunities and reduce the unemployment rate by providing financial facilities, lowering interest rates and offering financial instruments. government in the financial market and stimulate trading through the central bank's open market operations.

This is consistent with the propositions ( Hemming, R., M. Kell and S. Mahfouz (2002) that there is a need to coordinate between fiscal and monetary policies with the objectives of economic and social stability, and carry out economic reforms to enhance domestic savings and direct them towards the financial market to finance investments at lower costs and then encourage private investment and enhance national income and economic activity.

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