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Relationship Analysis Between Monetary Policy and Financial Sustainability in Iraq For the Period 2015–2021

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Abstract

This research aims to study and analyze the reality of monetary policy and financial sustainability in Iraq through either a descriptive or analytical approach by trying to link and coordinate between monetary policy and fiscal policy to enhance economic sustainability. The research is based on the hypothesis that the monetary policy of Iraq contributes to achieving financial stability, which improves economic sustainability by providing aid and assistance to the state to reduce the budget deficit and exacerbate indebtedness. The author used the monetary policy indicators, the re-deduction of Treasury transfers by the central bank and the money supply, and financial sustainability indicators, including the public debt indicators and the deficit or surplus to GDP indicator, to prove the role of monetary policy in enhancing the financial sustainability of Iraq and to show that monetary policy plays a role in making Iraq's economy more stable. The study found that there is a role for monetary policy in enhancing financial sustainability, significantly when oil prices decrease in global markets, directly or indirectly, through the use of a set of economic tools, including discounting treasury transfers, the money supply, and the exchange rate.

Paper type: Research paper

Keywords: Monetary Policy, Fiscal Policy, Financial Sustainability, Public Debt

1. Introduction

The central bank is the highest monetary authority that bears the responsibility for supplying the money available in the national economy by using monetary policy tools, which are among the important tools in economic stability that all countries seek to achieve, regardless of the different nature of their economic system or the degree of development, and which will work in coordination with a fiscal policy from In order to achieve financial stability, which is the way to enhance financial sustainability and macroeconomic stability, it was amazing to delve into what the central bank is through a course in promoting financial sustainability for Iraq.

The subject of the study begins with a statement of the role of the central bank in promoting financial sustainability and the utmost importance of its relationship to the budget deficit and the volume of debt, whether internal or external, especially in light of economic crises and difficulties, especially the dependence of financial sustainability in Iraq on oil revenues according to the reality of the Iraqi economy, which has a rentier nature because of its dependence on nearly 90% of its revenues on oil, whose prices are characterized by fluctuations through their association with international prices.

The study of monetary policy is also one of the important topics, especially at the present time, in which the government is not isolated from the world and is not separated by its economic and financial policies from the rest of the world, as every crisis that passes in some countries has greatly affected all aspects of the life of other countries, so the role of Economic and financial devices and tools to prevent, protect and deal with any of the fluctuations affecting the course of economic life, and the most prominent of these devices is the Central bank through the use of its monetary policy, which is the economic and financial pillar of the government's work and the basis upon which it relies so that one complements the other.

1.1 Literature review

There are many studies discussing monetary policy, as follows:

According to the national bank of Cambodia, over the past 20 years, Cambodia has experienced rapid economic growth and stable macroeconomic conditions. However, the economy's fundamentals are narrowly built and depend mainly on foreign demand, making it vulnerable to external shocks. Therefore, Cambodia needs to diversify its economy to achieve more stable growth and expand its capacity to employ people more productively. The government has included a diversification plan for the economy in its rectangular strategy and in other sub-national and sectoral development programs. As a monetary, regulatory, and supervisory authority for the banking system, the National Commission of Bahrain has actively promoted economic growth, diversification, and job creation. Moreover, it became NBC, and its functions are increasingly critical, particularly in the aftermath of the recent global financial crisis. NBC's monetary policy supports Cambodia's macroeconomic stability, which attracts a steady flow of foreign investment. The committee also promotes and maintains the peace and development of the financial system by promoting financial inclusion, supervising the payment system, and regulating the banking system. This has contributed to the efficient channelling of financial resources toward capital accumulation in Cambodia over time (Awad, 2015).

Salal (2017) demonstrated the standard method of processing the problem of the study in determining the most critical effects of financial discipline on the objectives of monetary policy. Knowledge of the rationality of this policy through the use of a set of monetary and financial discipline indicators, based on the premise that disrupting fiscal policy has a significant impact on the effectiveness of monetary policy in Iraq, and through the adoption of fiscal rules. In particular, since Iraq relies in some way on oil revenues to cover the general budget and the accumulation of debts that have a mutually influencing relationship between the variables of monetary policy, the purpose of the research is the following: Establishing the relationship between financial adherence expressed in the rules of fiscal policy and the effectiveness of monetary policy expressed in them by offering money in Iraq This is the most important conclusion I reached from the mechanism of the study: that their relationship is inclusive

between the spending government and the show cash and price Exchange in Iraq during the period of the study.

Sabah (2019) used an analytical method to process problems that border effectiveness of banks central in She hypothesized in the study that Politics cash was a tool effective for bank central to achieve the goal of stabilizing the price total (combat inflation) and achiachieving acceptable average growth in the resulting national economy in a sample from the Arab countries during the period (1990–2015). In addition to combating unemployment and installing balance payments, the Objectives of the study were to show the facts of economics in a sample of Arabic countries, showing her conditions as an economic, indeed financial banker, any margin a job at the bank central, and finding that banks central in Arabic should have a role in supporting development otherwise limited to combat inflation, as well as supporting independence.

Abdul Karim (2020) suggested treating the problem economy of Iraq unilaterally, adapting it based on revenues the government derived from oil extraction, and exporting it to markets internationally. and therefore, the twists in This is Amazing Revenues, none of whom was its source, will be that she has antiquities economically a lot, with what in that sector banker. He was searching for the nature of the economy of Iraq and adopting it based on government revenues from oil extraction and export to international markets. and therefore, the twists in this are amazing revenues, none of whom was its source, and she has antiquities economically a lot, With what in that on sector banker. and the goal of the study was to "analyse items revenues government in Iraq and track effect twists in yields oil on her and analyze impact twists in Revenues government on sector bankers in Iraq. It features the economy of Iraq by adopting it on exports of oil that form the main source of revenues in the budget of the public to the state in a light to retreat economic sectors. and he has a duty to this accreditation on economy trait non-stability and flips shocks and flips yields oil associated at prices oil in markets globalism. and must depend on Iraq that he plans long and medium term to diversify his proceeds from petroleum to fund the budget of the public in Iraq and therefore to avoid many risks that may drop prices of oil or disable operations in production and export.

Also, there are many studies that discuss financial sustainability, as follows:

Ibrahim (2018) wanted to confirm how important it is for institutions to invest in clipboards and how important it is for institutions to meet their financial obligations to the public and to nature. He also wanted to show how important it is to support the organization's sustainability and continuity in her work to help savers get a bigger return on their investments so that the organization can keep serving its customers.

Tarbuli (2022) indicated that the usual method to process problem searches was that, in the past, it faced many challenges and imbalances in politics and finance in Iraq that contributed to its weakness in sustainability finance. On the other hand, from the investigation of surplus finance, when prices rose for oil globalism for the economy in Iraq, that did not lead to sustainability finance and to a sudden decline in oil globalism in other periods because of nonexistence. Policy and strategy tax Working on an investigation into sustainability, finance, and covering expenses mounting for the government. and contribute activation mechanisms for sustainability finance in Iraq in mitigation of archaeology's negative effects on oil prices, avoid difficulties in finance that face the country, and maintain rights for generations to come. measurement effect of fluctuation in oil raw prices on sustainability finance for Iraq for the period 1990–2020. and he has affected twists in prices of oil raw materials in markets, globalism on sustainability, finance, and countries selected, but proportions are uneven from the effect on activity by the economist and its budget total. The need to Repair the system tax and improve its effectiveness from during to improve means collection taxes and raise level hardware artistic that get up graphically and activation its turn from okay more yields and reduce accreditation on yields oil, then contribute make a great contribution in sustainability finance.

The research problem is that limited oil revenues in light of the drop in oil prices in global markets and the accompanying increase in public expenditures will lead to a financial gap in the general budget, which exacerbates indebtedness. Here, the following question jumps to mind: what is the role of monetary policy in providing assistance to the state through a set of monetary tools to support the budget and enhance financial sustainability in Iraq?

The objective of the research is to analyze the relationship between monetary policy indicators and indicators of financial sustainability in Iraq for the period 2015–2021 in order to demonstrate the role of monetary policy in enhancing financial sustainability.

2. Material and Methods

The research hypothesis centres on how monetary policy can aid in achieving financial stability and enhancing financial sustainability through the use of various monetary tools. The aim is to provide financial assistance to the state and reduce the deficit in the public budget.

2.1 Monetary Policy

2.1.1 The Concept of monetary policy

Monetary policy refers to the various techniques, tools, and procedures implemented by the monetary authority to regulate and manage the monetary system. The aim is to control the money supply process and achieve economic objectives, including price stability, interest rates, overall output, and loan terms (Khalaf, 2018). Furthermore, monetary policy enables the state to exercise control over its funds and attain independence in managing the money supply, leading to achieving specific goals such as price rate control and full utilization. It also encompasses setting interest rates, serving as a lender of last resort, providing direct and indirect credit, and ensuring financial stability (Ashoor and Ismael, 2020).

2.1.2 Monetary Policy Objectives: The objectives of monetary policy vary from time to time according to economic conditions, and the most important of them can be summarized as follows.

□ **Control inflation rates:** One of the primary objectives of monetary policy is to maintain price stability in the long run. This is achieved through the monetary authority's independence from other governing bodies and by controlling the money supply. An increase in the money supply can lead to a rise in prices, and thus central banks prioritise achieving price stability as a crucial goal of monetary policy. (Ashoor et al., 2021)

□ **Raising the level of employment (tackling unemployment):**

□ Prepare Unemployment is the human resource who is able to work but is unable to find jobs (Khamees, 2020), so Unemployment is one of the main problems in social and economic life. Most of the developing and developed countries of the world seek to reach a high level of employment. We find that the problem of unemployment is generally a goal of economic policies and monetary policy in particular, as its long-term goal is to achieve indirect goals because access to Reducing unemployment rates means an increase in the production of goods and services and thus an increase in supply and demand rates (Al-Afandi, 2013).

□ **Increasing the rate of economic growth:** The objective of monetary policy is to promote high growth rates by increasing the money supply and decreasing interest rates. This is because there is an inverse relationship between interest rates and investment rate. As the investment rate increases, the volume of production increases, resulting in higher growth rates of national output. (Dawood, 2010).

□ **Achieving stability in the balance of payments:** Role Politics cash in investigation stability in balance payments road-on use her tools, in order to stenosis from practical credit where Working on to lift price discount than Makes sinks commercial deliberately on to lift price benefit on loans, or from during to lift rate the reserve legal, this will lead to reducing the demand on credit than Makes the prices go down because of drop the demand on goods displayed this from Side, And from Side other than to rise prices Benefit will Lead to attract heads funds New to Inside for a purpose investment than Lead to drop rate disability in balance payments, and also working on stability price exchange for coins foreign opposite the currency local, because fluctuation in prices exchange and currency local impact negatively on balance payments.

2.1.3 Monetary Policy Instruments: They are the tools that the monetary authorities use directly to achieve their objectives and are divided into three sections as follows

□ **Open market operations:** It is considered one of the essential tools of monetary policy through the control of securities, as the central bank enters through open market operations as a seller or buyer of government securities (bonds). The government or private companies offer these bonds to the public to cover Its expenses, and the bond has a nominal value that is paid on its due date with a specific return annually. We find an inverse relationship between the value of the bond and interest rates (Bida et al., 2021).

□ **Restoring the discount rate:** It is an important tool used by the central bank through its dealings with commercial banks, in order to control the credit process, whether it wants to reduce it or increase it. A cost on commercial banks, so they work to increase the interest rate that they get from borrowers, and vice versa, if they want to increase credit, they will reduce the discount rate, which leads to an increase in the volume of funds granted for credit, and commercial banks reduce interest rates on credit, so the demand for credit increases (Ma'ala, 2017).

□ **Legal Reserve Ratio:** It is the percentage imposed by the Central Bank of the volume of deposits that are placed in commercial banks, in order to keep them with it, and through which the Central Bank can control the money supply. Banks create money, and on the contrary, if he wants to reduce the money supply, he works to increase the legal reserve ratio in order to limit the ability of banks to create money and grant credit, which affects the deposit multiplier.

2.2 Financial Sustainability

2.2.1 The concept of financial sustainability:

The arab aonetary Fund defined it as the state being able to fulfill financial obligations, whether they are in the current period or in the future, and to work to pay off its debts without resorting to scheduling them (Moash,2020).

It is the ability of the government to maintain the various revenues in order to cover its current expenditures for a period of time without the emergence of obstacles or failures that impede the fulfillment of the government's obligations.

2.2.2 Financial Sustainability Indicators:

1.Net Budget Index: This indicator is based on analysing the structure of the government's general budget to clarify the difference between spending and public revenue in the government's general budget and their ratio to GDP. It is one of the important indicators that includes all economic sectors through Stabilizing the debt-to-GDP ratio and thus achieving financial sustainability (Alwan and Taleb, 2019). According to international standards, the specified percentage is safe when the deficit-to-GDP ratio should not exceed (3%) to ensure the government's continued ability to fulfil its obligations and achieve financial sustainability.

2.Public debt-to-GDP ratio indicator: The ratio of public debt, in both its external and internal parts, to GDP is one of the most widespread indicators for measuring financial sustainability in any country. Debt growth, as we note that there is an inverse relationship between them, where the higher the GDP, the lower the debt ratio, and thus leads to achieving the financial sustainability of the state and vice versa. In addition, there are some external variables that affect the size of the debt, such as changes in oil prices, wars, crises, mismanagement and planning in distributing resources to productive sectors in order to develop them and work to improve their returns, and according to the Maastricht International Treaty, the percentage that achieves financial sustainability has been determined, which must be less. from (60%).

3.Tax Gap Index: The tax gap index is considered one of the important indicators in measuring the financial sustainability of the country, and it is measured by the difference between the ratio of public expenditures to GDP and the ratio of tax revenues to GDP, as the lower the tax gap, this proves the achievement of financial sustainability and vice versa.

4.Debt service index to total expenditures: This indicator shows the ratio of the burden of public debt to total public expenditures, which reflects the share of spending allocated to financing the interests of public debt. The sum of cash paid to creditors in exchange for their giving up their money for a specified period of time.

2.3The reciprocal relationship between monetary policy, fiscal policy and debt management

There is harmony between monetary policy and fiscal policy, as one of them helps the other in most cases, and each of them is characterized by transparency and clarity. monetary and financial through several matters, the decisions issued by the Central Bank are monetary policy while government decisions are financial policy, and through rights and duties, fiscal policy determines the size of public debt, while the monetary authority determines the types of this debt, whether it was from banks or from the public by subtracting bonds (Salal, 2017), and through the goal of each of them, we notice when trying to control the money supply to increase and decrease, this is a monetary policy, but if the goal is effectiveness on employment and government needs, then it is a financial policy.

2.3.1 The Impact of fiscal policy on monetary policy:

Fiscal policy has multiple effects on monetary policy, most notably its direct impact on the central bank's ability to control inflation rates, which is its main objective. aggregate demand and thus an increase in prices, and if you follow a deflationary policy, the increase in taxes imposed on income will limit consumer spending and reduce savings, and then investment will decrease. The effect of taxes on income is direct on consumption and indirect on investment, which does not respond to a decrease in the interest rate. In general, the effects of fiscal policy are related to the budgetary constraint (Afonso and M. Sousa, 2009), so increased spending leads to a budget deficit, which results in a change in the size of government bonds and their benefits and in the exploitation of the monetary system for the purpose of providing sufficient liquidity to finance the deficit. In order to reach the desired goal and work to stabilize prices, the monetary and fiscal policies must be in harmony and interdependence between them. No single policy can achieve stability on its own. Rather, fiscal policy must support monetary policy, and vice versa.

2.3.2The Impact of Monetary Policy on Fiscal Policy:

Monetary policy, when applied, affects fiscal policy, for example, when adopting currency supervision and following a fixed exchange rate for the purpose of reducing the large and continuous deficit so that the government is not dependent on financing the deficit on the central bank, which leads to a high rate of inflation, which contributes to achieving financial control of the state. It also affects a group of variables (high public debt ratio, increased inflation, increased public spending, decreased tax revenues), so if the monetary policy follows a restrictive policy by raising the interest rate, it will lead to an increase in the budget deficit. (Dahan, 1998) As follows:

Fiscal policy is defined as the science that studies the rules governing public financial activities practiced by the government or one of its agencies to obtain the necessary resources to provide public services that meet the general needs of society (Al-Ani, 2018).

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1.Revenue: When a contractionary policy is followed by the monetary authority by raising the interest rate, it will cast a delusion on a reduction in economic growth rates and a decrease in national income in the short term, which causes a decrease in tax revenues because it depends primarily on the flexibility of the productive apparatus and thus an increase in the debt ratio to the gross domestic product.

2.Public Debt: Following a contractionary policy by the monetary policy by raising the interest rate in the short term, which will work to raise the long and medium-term interest rates, the debt service will rise, which causes an increase in the government budget deficit, and for the purpose of fully explaining the impact, the bank's procedures must be taken into account Central in controlling the inflation rate and limiting the continuous rise in prices through the interest rate as a means to reach the target price rate (Kamal, 2010).

3.price rates: Monetary policy has the duty to control the money supply in the country through its use of a group of traditional tools that affect the volume of credit through interest rates and the exchange rate. There is an inverse relationship linking the interest rate and inflation, while there is a direct relationship between the volume of money supply and inflation. When you work to reduce inflation, we notice that the budget deficit will increase as a result of the increase in the real size of government debt. Here, we find it necessary to harmonize and link fiscal and monetary policies in order to maintain real and monetary balance.

2.3.3 The Impact of Public Debt Management on Monetary Policy:

Public debt and public budget policy affect real and nominal interest rates, although at certain times monetary policies can determine the harmonious impact of the public budget deficit and work to repay loans through the open market process tool as a seller of treasury bills to the private sector, and the budget deficit limits the independence of policy Monetary through its impact on the exchange rate, which is affected by the interest rate, and the latter affects the net foreign flows of domestic credit, whether governmental or private.(Salal 2017).

2.4 Analysis of the reality of monetary policy, financial sustainability, and the general budget in Iraq for the period (2015-2021).

2.4.1 Analysis of the reality of the general budget in Iraq for the period (2015-2021).

The Iraqi economy is a rentier economy, as it suffers from widespread structural imbalances and a lack of proper use of the available resources. This will reflect on the public budget, as any drop in oil prices in global markets will reflect on the general budget. (Al-Kubaisi and Almafraji, 2022). My agencies:

Table 1: Analysis of the reality of the general budget in Iraq for the period (2015-2021)

Years	General revenues	General revenue growth rate	public expenditures	public expenditure growth rate	Surplus or deficit	Growth rate of deficit or surplus
2015	66,470	-37.18	70,398	-37.96	- 3,928	-48.64
2016	53,413	-19.64	67,067	-4.73	- 13,654	247.60
2017	77,228	44.58	75,490	12.55	1,738	-112.72
2018	106,127	37.52	80,873	7.13	25,254	135.10
2019	107,566	1.35	111,724	38.14	- 4,158	-116.46
2020	63,179	-41.24	76,082	-31.90	- 12,903	210.31
2021	109,081	72.60	102,850	35.18	6,231	-148.29

Source: Central Bank of Iraq, statistical releases for the years (2015-2021).

We note from Table (1) that the overhead during 2015–2016 It was observed that public expenditures decreased at a negative growth rate as a result of the double shock represented by the drop in oil prices in the global markets and the entry of terrorist groups and their control over a third of the country, as expenditures tended to match employee salaries and cover military expenditures, while the period between (2017-2019) witnessed a significant increase In public expenditures as a result of the improvement in the prices of petroleum products in the global markets, which increases the state's general revenues, with a growth rate that reached (12.55), (7.3) and (38.14) respectively, during the period above. The year 2020, it witnessed a significant decrease in the volume of public expenditures, at a negative growth rate (-31.90), as a result of the health crisis that swept the world, the spread of the Corona virus, and the drop in oil prices as a result of the closure and the almost complete cessation of life in most countries of the world, which prompted the Iraqi state to increase expenditures for the health sector to confront The health crisis was the largest share of current expenditures, amounting to (72,873,538) billion dinars, with a rate of (95.9%). As for public revenue during 2015- 2016 witnessed a gradual decrease in the rate of revenues as a result of the first double crisis, the drop in oil prices in global markets, and the second was the entry of terrorist gangs (ISIS) and its control of nearly a third of Iraqi territory and the control of many oil fields that were under its control, as the year 2016 witnessed the lowest percentage of revenues (53.413) million dinars during the study period. As for the period from 2017-2019, it witnessed a gradual increase in the revenue rate as a result of the improvement in oil prices and the Iraqi government's recovery of most of the lands occupied by terrorist gangs, but in 2020 it witnessed a significant decrease in the volume of public revenues due to the double crisis represented by the health crisis and the spread of the Coronavirus and the crisis Financial represented by the decline in oil prices as a result of the decline in global demand, which amounted to (63.179) million dinars, at a negative annual growth rate of (41). As for the surplus or deficit in the budget during the years (2015-2016), the general budget in Iraq witnessed a deficit due to the dual crisis that afflicted the Iraqi economy, represented by the financial crisis with the drop in oil prices, the security crisis, and the entry of the terrorist organization ISIS and its control over large areas of Iraqi territory, which required the government to confront By increasing allocations for military expenditures in order to defeat terrorism and restore occupied lands, In the years 2017 and 2018, the budget witnessed a surplus of (1,738) (25,254) million dinars, respectively, as a result of the improvement in oil prices in global markets, the recovery of most Iraqi lands from the terrorist organization, and the recovery of many fields that were under its control, and in the years 2019 and 2020, the general budget witnessed a deficit (4,158-) (12,903-) million dinars, respectively, due to the double crisis, the first, the health crisis and the spread of the Corona virus, and the second, the acute financial crisis, as a result of the drop in oil prices to almost a quarter of the price, as a result of a decrease in global demand as a result of the closure practiced by most countries in the world due to the

virus, which required this from the government Iraq increased its expenditures on the health sector and provided many medical supplies in order to control the health situation in the country, as the Central Bank worked in agreement with the Ministry of Finance by an administrative decision to reduce the value of the Iraqi dinar in relation to foreign currency at the end of 2020, as it became 1450 dinars per 1 dollar after what was 1192 One dinar for every \$1, as explained previously in the first section, but in 2021 the budget witnessed a surplus as a result of the significant improvement in oil prices in global markets, due to the increase in demand after the virus (Corona) receded, and countries resumed their normal lives, as it amounted to (6,231) million dinars.

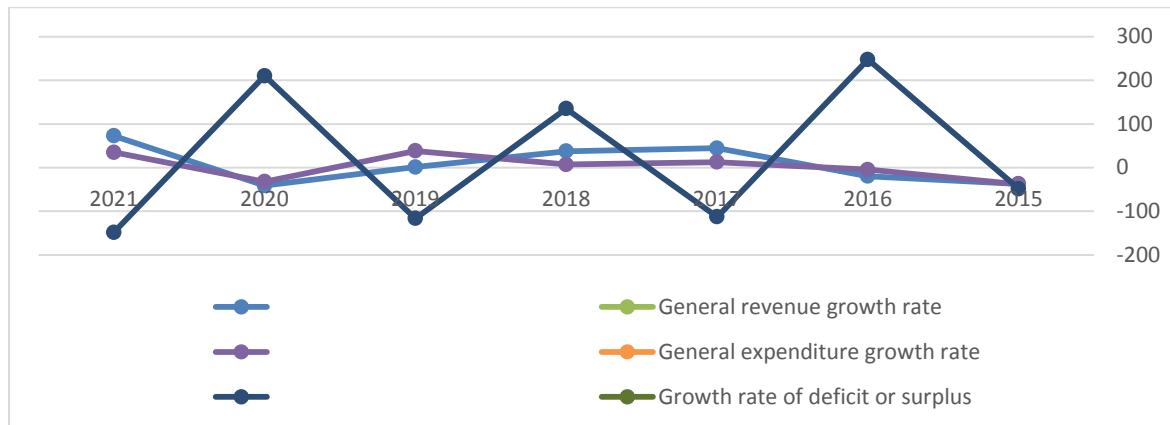


Figure 1: The growth rate of the general budget in Iraq for the period 2015-2021

2.4.2 Analysis of the reality of monetary policy indicators in Iraq for the period (2015-2021).

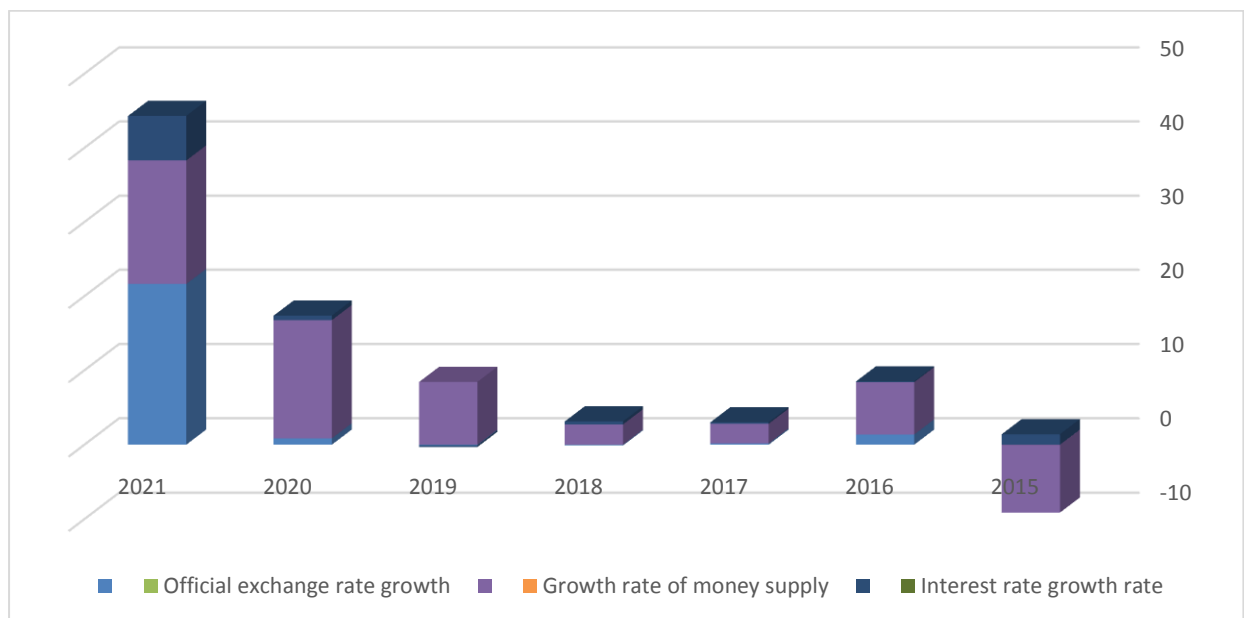
We note from Table (2) that the money supply in 2015 witnessed negative growth rates amounting to (-9.10), and this is due to the economic downturn as a result of the drop in oil prices in the global markets. The growth of the money supply continued positively due to the reciprocal relationship between the government and the Central Bank of Iraq. Whenever the government tries to increase its expenditures, it will work to sell the dollar to the Central Bank, as it reached the highest growth rate in 2021 (16.66), and this is due to the government increasing its expenditures as a result of the double crisis (economic as a result of the drop in oil prices in global markets and health due to the spread of the virus). As for the exchange rate during the period (2016–2019), the official exchange rate increased slightly by 1,182, 1,184, 1,183, and 1,182 dinars, respectively. At the end of 2020, the dinar's value decreased against the foreign currency after a fluctuation in prices, as this decline amounted to 1192 dinars per dollar, with a growth rate of 0.85 in the official market. As for the year 2021, as a result of the dual crises represented (the health crisis as a result of the spread of the coronavirus and the financial crisis as a result of the significant drop in oil prices in global markets), which caused a problem for the Iraqi government and made it unable to commit to its operating expenses at the very least, the Central Bank worked in coordination with the government and the executive committee decided to reduce the value of the local dinar against the foreign currency, as it amounted to 1450 dinars per dollar in the official market, with a growth rate that was the highest during the study period, amounting to (21.64).

Table 2: Analysis of the reality of monetary policy indicators in Iraq for the period (2015-2021)

Years	Official exchange rate	The rate of growth of the official exchange rate	money supply	money supply growth rate	Interest Rate	Interest rate growth rate
2015	1,166	0.00	84,527	-9.10	6	1.4
2016	1,182	1.37	90,466	7.03	4.33	0.1
2017	1,184	0.17	92,857	2.64	4	0.2
2018	1,183	- 0.08	95,391	2.73	4	0.4
2019	1,182	- 0.08	103,441	8.44	4	- 0.2
2020	1,192	0.85	119,906	15.92	3	0.6
2021	1,450	21.64	139,886	16.66	4	6

Source: Central Bank of Iraq, statistical releases for the years (2015-2021). The growth rate of the researcher's work.

As for the interest rate, the Central Bank worked to reduce it during the years (2016–2019) to reach 4% and worked to reduce it to 3% in 2020 to stimulate the macroeconomy, especially after the health crisis that swept the world, to stimulate the banking sector and then the macroeconomy. As a result of the high inflation rate in 2021, when it reached 6%, after it was 0.6% in 2020, the interest rate increased to 4%. Here it must be noted that the central bank's attempt with its monetary policy to activate the role of the interest rate was not effective in the Iraqi economy because the source of funds is the budget.

**Figure 2: The growth rate of monetary indicators in Iraq for the period (2015-2021).**

2.4.3 Analysis of the reality of financial sustainability indicators in Iraq for the period (2015-2021):

Through table (3), we find that the net budget index during the period 2015–2016 The budgets ended with a deficit as a result of the dual crisis that afflicted Iraq, which was represented by the financial crisis with the drop in oil prices in the global markets and the security crisis with the entry of the terrorist organization ISIS into Iraq and its control over some provinces. This is what required the Iraqi government to increase military expenditures in order to fight this organization and expel the danger on the Iraqi lands, as the deficit in relation to the gross domestic product in 2016 reached (-6.93), but during the years (2017–2018) a budget surplus was achieved as a result of the improvement in oil prices, as the surplus to the gross domestic product reached, respectively, (0.76, 9.39). While during the years 2019–2020, a budget deficit was achieved as a result of the spread of the Coronavirus and the drop in oil prices in global markets due to the decrease in global demand for it, the deficit ratio to GDP reached -1.50 and -5.87, respectively, but in 2021 it has A surplus of 2.06 was achieved due to the improvement in oil prices in the global markets.

Table 3: Analysis of the reality of financial sustainability indicators in Iraq for the period (2015-2021).

Years	Net balance indicator to GDP	Net Budget Index Growth Rate	Public Debt Index to GDP	Growth rate of public debt index to GDP	Tax Gap Index	Tax Gap Index Growth Rate	Debt service indicator to overhead	Debt service index growth rate to public expenditure
2015	-2.01	---	50.30	---	35.3	---	2.69	---
2016	-6.93	244.7	62.07	23.3	32.7	-7.3	3.32	23.4
2017	0.76	-110.9	55.31	-10.8	31.4	-3.9	3.56	7.2
2018	9.39	1135.5	45.94	-16.9	28.8	-8.2	3.24	-8.9
2019	-1.50	-115.9	42.65	-7.1	39.1	35.7	2.35	-27.4
2020	-5.87	291.3	65.21	52.8	32.5	-16.8	4.68	99.1
2021	2.06	-135.09	53.70	-17.6	32.6	0.30	1.43	-69.4

Source: Central Bank of Iraq, statistical releases for the years (2015-2021). Ministry of Finance, Public debt department. The proportions of the researcher's work.

As for the index of public debt to GDP during the years (2015-2016) The index ratio began to rise, reaching to enhance the country's financial sustainability (50.30) and (62.07), respectively, as a result of the dual crisis that afflicted Iraq (security and financial), as it required the State of Iraq to expand military spending to confront the threat of the terrorist organization and liberate landscaped.

As the government resorted to borrowing in order to cover its obligations in accordance with the drop in oil prices in global markets, in addition to the disruption of some oil fields by the terrorist organization (ISIS), After that, the percentage of the index decreased during the years (2017–2019) as a result of the improvement in oil prices, but during the year 2020, the world witnessed a health crisis and the spread of the Corona virus, which led to a decrease in oil prices as a result of a decrease in global demand due to the closure practiced by most countries of the world where they worked. The Iraqi government resorted to debt and local borrowing in order to cover health expenditures as the index reached 65.21, which is an unsustainable

percentage higher than the specified percentage, but during the year 2021, the percentage decreased significantly (53.70) as a result of the improvement in the prices of petroleum products. As for the tax gap index, it was characterized by fluctuation and volatility during the study years until 2021, when it reached 32.6. the general budget and greatly reducing dependence on oil revenues, which are subject to change and volatility due to external conditions, to enhance the country's financial sustainability. As for the debt service index to public expenditures during the study period, it started to rise, and the reason for that is due to the double crisis that afflicted the Iraqi economy (security and financial), represented by the entry of ISIS and the drop in oil prices in global markets. This led to a rise in the budget deficit, which prompted the government to resort to public borrowing to cover its obligations; the debt burdens increased until they reached the highest percentage of the index in 2020, which amounted to (4.68) as a result of the spread of the coronavirus and the significant drop in oil prices as a result of the closures practiced by most countries. This led to an increase in the volume of public debt. One of the most important reasons for the growth of debt service is the result of excessive public expenditures by the authorities, especially current expenditures, which result in a large burden on the state, both at present and in the future. debt burdens that they may not benefit from in the first place. All of this is due to the mismanagement of public debt and its failure to use it to revitalize productive sectors, stimulate investment, and establish development projects that contribute to diversifying the sources of funds for the state to supplement the general budget with revenues, reduce its dependence on oil, and thus increase economic growth rates in the country in the future. enhance the country's financial sustainability. As for the index of public debt to GDP during the years 2015–2016, The index ratio began to rise, reaching 50.30 and 62.07, respectively, as a result of the dual crisis that afflicted Iraq (security and financial), as it required the State of Iraq to expand military spending to confront the threat of the terrorist organization and liberate landscapes, as the government resorted to borrowing to cover its obligations due to the drop in oil prices in global markets, in addition to the disruption of some oil fields by the terrorist organization (ISIS), After that, the percentage of the index decreased during the years (2017–2019) as a result of the improvement in oil prices, but during the year 2020, the world witnessed a health crisis and the spread of the coronavirus, which led to a decrease in oil prices as a result of a reduction in global demand due to the closure of most countries in the world where they worked. The Iraqi government resorted to debt and local borrowing to cover health expenditures as the index reached 65.21, an unsustainable percentage higher than the specified percentage. Still, due to the spread of the coronavirus and the significant drop in oil prices due to it, the rate decreased significantly (53.70%) due to the improvement in the prices of petroleum products. The tax gap index was characterized by fluctuation and volatility during the study years until 2021 to enhance the country's financial sustainability when it reached 32.6. the general budget and greatly reducing dependence on oil revenues, which are subject to change and volatility due to external conditions, to enhance the country's financial sustainability. 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supplement the general budget with revenues, reduce its dependence on oil, and thus increase economic growth rates in the country in the future.

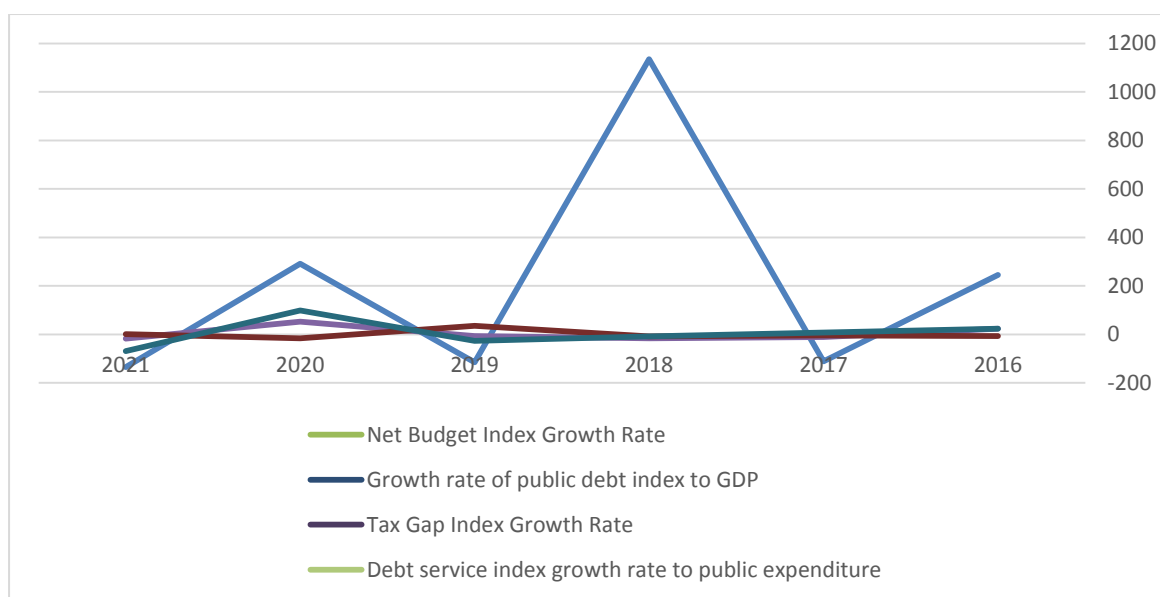


Figure 3: The growth rate of financial sustainability indicators in Iraq for the period (2015-2021).

2.5 Analysis of the relationship between monetary policy and financial sustainability in Iraq for the period (2015-2021).

2.5.1 The role of money supply on financial Sustainability indicators in Iraq for the period (2015-2021).

Table 4: The role of money supply on financial sustainability indicators in Iraq for the period (2015-2021)

Years	Money supply (ms2)	GDP	Public debt /GDP	Deficit or surplus /GDP	MS2/ Deficit or surplus	MS2 /Public Debt	MS2 / GDP
2015	84,527	194,681	50.30	10.72	-2151.9	86.3	43.4
2016	90,466	196,924	62.07	13.96	-662.5	74	45.9
2017	92,857	225,722	55.31	13.27	5342.7	74.2	41.1
2018	95,391	268,919	45.94	2.02	377.7	77.1	35.4
2019	103,441	276,158	42.65	0.02	-248.7	87.8	37.4
2020	119,906	219,769	65.21	13.82	-929.2	82.9	54.5
2021	139,886	301,440	53.70	5.77	2245	86.4	46.4

Source: Statistical releases of the Central Bank (2015-2021). The proportions of the researcher's work.

As for the ratio of the money supply to public debt, it varied during the study period, going up and down. The highest ratio was in 2015, which amounted to 86.3. This is due to the Iraqi government's resorting to debt in order to cover its obligations, especially its military expenditures to confront the terrorist organization. as a result of the remarkable improvement in oil prices, and this reflected an increase in the state's general revenues and, consequently, a decrease in the state's public debt.

As for the money supply ratio to the deficit or surplus, it was significant throughout the study period, as it reached the highest rate in 2017, amounting to (5342.7), and the lowest ratio in 2018, which amounted to (337.7).

We also note that the ratio of the money supply to GDP was average for the duration of the study, as it was the highest ratio in 2020, which amounted to (54.5) as a result of the expansion of health spending in order to prevent the virus and, in return, a decrease in GDP as a result of the significant drop in oil prices, while the lowest percentage was in 2018 (35.4).

It is clear that there is a direct relationship between money supply and indicators of financial sustainability in all study periods except for two years (2016) and 2020, as a result of the shock that the Iraqi economy was exposed to with the entry of the terrorist organization and the drop in oil prices. In 2016, the money supply amounted to 90,466 million dinars. After the year 2015, it was 84,527 million dinars as a result of the government resorting to borrowing to bridge the deficit in the budget due to the increase in its military expenditures in order to liberate the occupied territories that were controlled by the terrorist organization. On the other hand, we find that the financial sustainability index, the deficit or surplus to the GDP, increased (13.96) after what was in 2015 (10.72), then, after that, the index began to decline as a result of the improvement in oil prices in global markets, as well as in the year 2020, the deficit or surplus index to the gross domestic product witnessed an increase and an adverse situation with the money supply as a result of the health crisis and the outbreak of the Coronavirus, which led to the closure of most countries due to isolation and the procedures applied. It led to a decrease in Iraq's oil revenues due to the drop in oil prices in global markets by less than half. The same applies to the public debt index to the gross domestic product, as during the years (2016) and (2020), it was opposite to the money supply, as it reached (62.07) and (65.21), respectively, after it reached (50.31). (42.65), respectively.

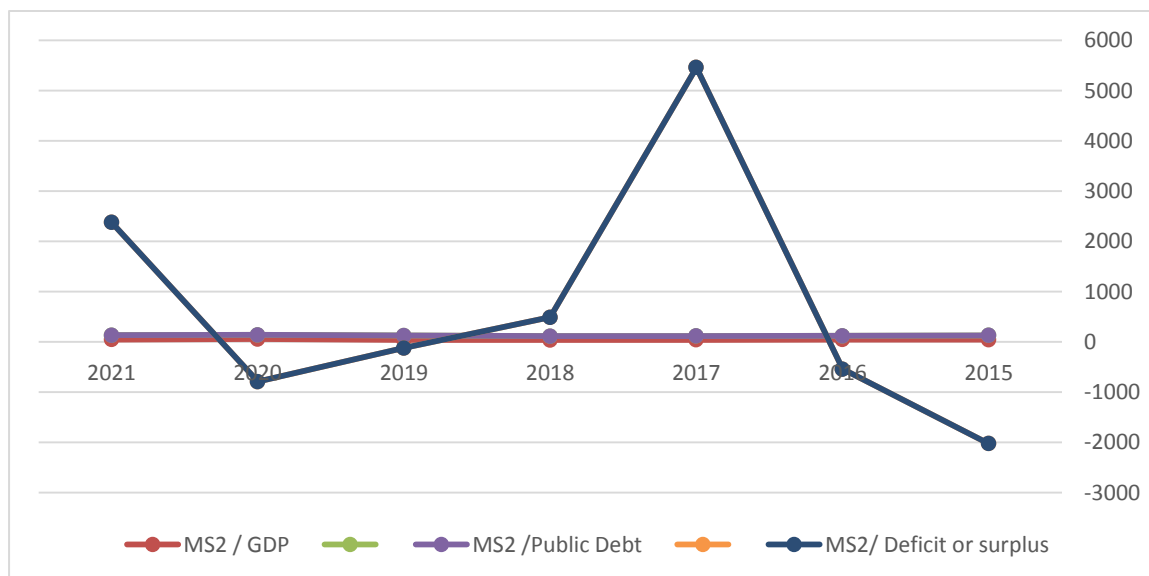


Figure 4: The role of money supply on financial sustainability indicators in Iraq for the period (2015-2021).

2.5.2 The role of rediscounting treasury transfers on financial sustainability indicators in Iraq for the period (2015-2021).

Treasury transfers represent one of the short-term debt instruments issued by the government in the form of securities for the purpose of financing the temporary deficit in the budget in the short term, and its duration is less than a year. We will explain its role in enhancing financial sustainability through the following table (Al-Ani and Jouhi, 2017).

Table 5: Impact of the Central Bank's deduction of treasury remittances on Iraq's financial sustainability for the period 2015-2021

Years	Remittances deducted by the Central Bank	Widespread Money Offer	Cash Base	Annual inflation rate	Ratio of contribution of deducted remittances / deficits	Ratio of contribution of deducted remittances /internal debt	Ratio of contribution of deducted remittances/ Public debt
2015	6,225	84,527	63,049	1.4	-1.58	19.3	6.3
2016	16,225	90,466	68,717	0.1	-1.18	34.2	13.2
2017	16,225	92,857	65,691	0.2	9.33	34.02	12.9
2018	14,925	95,391	67,161	0.4	0.0005	0.03	0.01
2019	14,125	103,441	78,253	-0.2	-3.39	36.8	12.1
2020	40,452	119,906	88,861	0.6	-3.13	62.9	27.9
2021	43,952	139,886	110,137	6	7.05	62.8	27.1

Source: Central Bank of Iraq data, annual statistical releases. Column No. (5, 6, 7) of the researcher's work.

through the table (5) We notice the extent of the effect of deducting treasury transfers on the indicators of financial sustainability (deficit and debt), as we find its impact on the deficit in a positive way throughout the years of study. (2017, 2018, 2021) The general budget ended with a surplus, and the highest percentage of contribution to increasing the surplus was in 2017, amounting to (9.33), and the lowest percentage of contribution to increasing the surplus in 2018 was (0.0005).

As for the statement of the extent of the contribution of the discount of treasury transfers by the Central Bank of Iraq from the internal debt during the study years and the occurrence of the double crisis (security and financial), Iraq began to depend on the internal debt to cover the deficit in the budget through the issuance of bonds and treasury transfers, and in order to provide sufficient liquidity, the bank worked The Central Bank is required to deduct treasury remittances before their maturity period from government banks, as we find that the percentage of the contribution of deducting treasury remittances from the internal debt was the highest percentage in the years (2020, 2021), amounting to (62.9, 62.8), respectively, as a result of the health crisis and the spread of the Corona virus, which resulted in a decrease The global demand for oil due to the closure practiced by most countries of the world to prevent the virus, which resulted in a significant drop in oil prices to below \$30 a barrel during the year 2020, and this made the Iraqi government is unable to cover its current expenditures and provide employee salaries, so it was the duty of the Central Bank and the historical necessity, according to the statement of the Governor of the Central Bank, to deduct treasury transfers to the Ministry of Finance in order to finance the government, while the lowest contribution rate in 2018 amounted to (0.02).

As for the percentage of the contribution of the discount of treasury transfers in relation to the public debt during the years of the study, it started to increase during the two years (2015, 2016) and reached (6.3, 13.2), respectively, while during the two years (2017, 2018) the percentage of contribution decreased, it was (12.9, 0.01), respectively, as a result of The surplus in the general budget, but during the years (2019, 2020, 2021), the percentage of contribution increased, reaching (12.1, 27.9, 27.1), respectively, due to the Iraqi government's reliance on financing the deficit through internal debt and not resorting to external debt because of its disadvantages, risks, and conditions It is imposed on the Iraqi government in order to obtain the external loan, in addition to that it is considered a leakage of the currency abroad. As for internal debt, it has its effects and drawbacks, and the risk ratio in it is much lower than external debt because it is within the framework of the state's borders and according to the state's financial system.

We also notice a gradual increase in the money supply in the broad sense during the years of study. The lowest rate of the money supply was in 2015 amounted to (84,427) million dinars, and the highest rate was in 2021, which amounted to (139,886) million dinars. This is a result of the increased government spending over the years as the Central Bank works on Controlling the money supply through the process of (cash sterilization) through the currency window through which he can withdraw the Iraqi dinar, as well as the cash basis also it was increasing during the years of study as the year 2015 was (63,049) million dinars and in 2021 it reached (110,137) million dinars, where we note that the central bank has a role in controlling the monetary basis in terms of increase or decrease, as we mentioned earlier in the first chapter that the monetary basis consists of two parts. The first is the currency in circulation. The central bank can through monetary sterilization through the currency window and control it Through the process of buying and selling, as for the second part, the legal reserve imposed by the Central Bank on commercial banks to keep a certain percentage of its deposits, and here also the Central Bank can control it by increasing or decreasing the legal reserve percentage by virtue of its ability to direct and control the banking system.

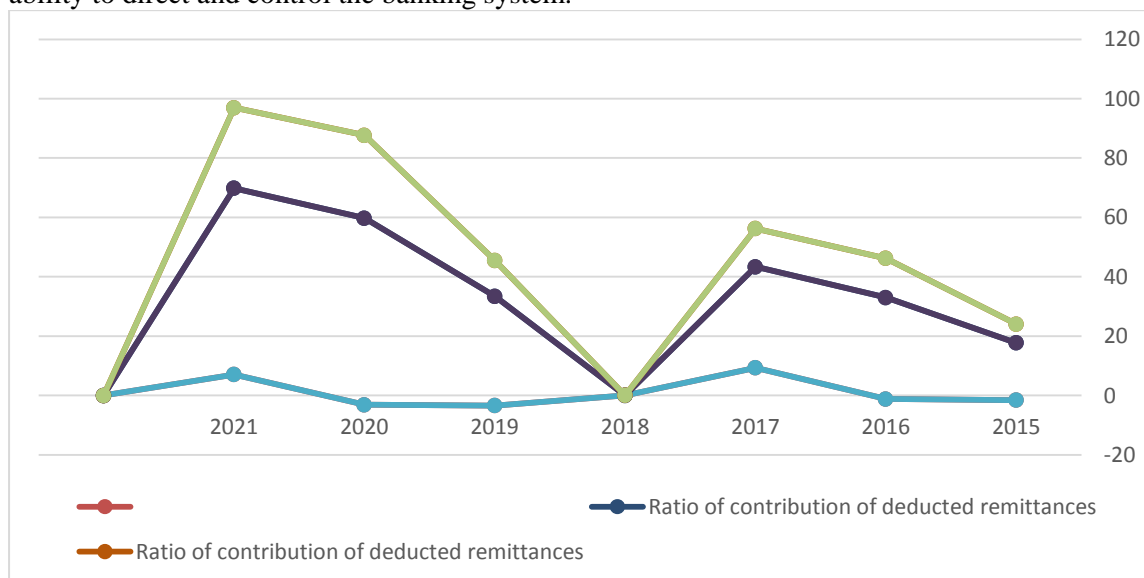


Figure 6: The role of rediscounting treasury transfers by the central bank on financial sustainability indicators in Iraq for the period (2015-2021)

3. Discussion of Results

During the analysis Relationship between Pointers Politics Cash and Pointers Sustainability Finance show that Politics Cash leads to Dora's, which is important in Strengthening Sustainability Finance in Iraq via group from Tools in a direct and change direction, using group from Tools. Rival transfers to Treasury to fund gap finance, as well as monitor the size of they offer in cash and prices. Exchange and support sector real), especially when exposure Iraq to the crisis the wish and financial dual in general 2014, And the situation doubled in general in 2019: health and spread of the coronavirus and the global financial crisis is the result of falling oil prices. A result of the closure that I applied to most countries in the world, and this is Match hypothesis search in contribution politics cash in investigation stability financial and submit This is identical with the macroeconomic theory because when a country is exposed to an economic crisis that tells it to collapse, all economic policies must coordinate and cooperate in developing appropriate solutions to address it. I came up with the study's conclusions next.

4. Conclusions

- 1.The hypothesis that the Central Bank of Iraq contributed to achieving financial stability, which in turn leads to enhancing financial sustainability by providing aid and financial assistance to the state, has been proven correct.
- 2.The dependence of the government in achieving the financial sustainability of Iraq on oil prices that are determined in the global markets, as any fluctuation in oil prices will lead to an impact on the general budget and the economic activity of the state, and thus this will affect the limitation of enhancing financial sustainability.
3. The government relies, in achieving financial sustainability in Iraq, on public debt, both internal and external.
- 4.The weak contribution of other sectors to public revenues in Iraq, especially the agricultural sector and the industrial sector.
- 5.The heavy reliance on oil exports by the government in financing the general budget has led to the weakening of other sectors and the lack of due importance to them.
- 6.Weakness in the preparation, planning and implementation of the general budget in Iraq, which caused a lot of financial resources to be wasted on an annual basis and thus will reflect this on the impact on the size of the state's financial sustainability.
- 7.Increasing the volume of operating expenditure allocation with a decrease in the volume of investment expenditures, which leads to deficits in the general budget and the government resorting to borrowing (public debt) in order to reduce the deficit, and this will have an impact in the future on the size of the country's financial sustainability.

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تحليل العلاقة ما بين السياسة النقدية والاستدامة المالية في العراق للمدة (2015-2021)

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مستخلص البحث

نجد ان السبب في الاعتماد على الصادرات النفطية لتمويل الموازنة العامة هو وجود هشاشة في الاقتصاد العراقي، فإن أي تقلب في أسعار النفط سيجعل البلاد عرضة لعجز الميزانية بسبب نقص الإيرادات، ما يجعله يتأثر بأي أزمة أو مشكلة تصيب العالم الخارجي مما يؤثر على تحقيق الاستقرار المالي في البلاد ومن ثم الاستدامة المالية. استخدم الباحث مؤشرات السياسة النقدية (إعادة خصم حوالات الخزينة من قبل البنك المركزي والعرض النقدي)، ومؤشرات الاستدامة المالية (مؤشر الدين العام إلى الناتج المحلي الإجمالي، ومؤشر العجز أو الفائض إلى الناتج المحلي الإجمالي) لإثبات دور السياسة النقدية في تعزيز الاستدامة المالية للعراق. وتهدف الدراسة الى تحليل واقع السياسة النقدية العراقية والاستدامة المالية من خلال مجموعة من المؤشرات، وتحليل الترابط والمواءمة والتنسيق بين (السياسة النقدية) و (السياسة المالية) من أجل تعزيز الاستدامة المالية. وجدت الدراسة وجود دور للسياسة النقدية في تعزيز الاستدامة المالية، خصوصا عندما يكون هناك نقص في الإيرادات بسبب انخفاض أسعار النفط، سواء بشكل مباشر أو غير مباشر، من خلال استخدامها لمجموعة من الأدوات (إعادة خصم حوالات الخزينة، وعرض النقود، وسعر الصرف).

نوع البحث: بحث مسئل من رسالة ماجستير

المصطلحات الرئيسية للبحث: السياسة النقدية، السياسة المالية، الاستدامة المالية، الموازنة العامة.