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The Impact of Monetary Policy on Inflation and Financial Stability in Post-Conflict Iraq

Summary

The Iraqi economy, both monetary and real, entered a new phase after 2003, characterized by significant changes. Following Law 56 of 2004, the Central Bank of Iraq gained independence, granting it the authority to formulate monetary policy and choose appropriate implementation tools. This independence also allows the bank to develop new tools aligned with Iraq's specific monetary policy objectives. The purpose of this paper is to examine the role of monetary policy instruments on inflation and financial stability in post-conflict Iraq. A time series of data was collected from both the World Bank's open data system and the Central Bank of Iraq (CBI) for the period from 2003 to 2021. The results displayed that monetary policy tools, including money supply, exchange rate, and GDP growth greatly influenced financial stability and inflation control in Iraq. In addition, the study also revealed that maintaining a constant money supply growth rate might contribute to financial stability in Iraq. Finally, the study concluded that monetary tools alone might not tame Iraqi inflation and financial stability. Success hinges on government commitment to sound fiscal policies, boosting production, and restoring consumer trust, working alongside the central bank.

Keywords: Monetary policy; Inflation; Financial stability
Jel code: E31; E51; E52; E58

Introduction

Recently, inflation can be seen as a serious issue that creates a significant obstacle to macroeconomic planning (Chowdhury & Sundaram 2023). A consistent increase in the level of prices across the economy is known as inflation. In the time of reducing the value of money, inflation causes to increase in the price index (Pahlavani & Rahimi 2009). The connection between the rate of inflation, money supply, exchange rate, the rate of interest, gross domestic product (GDP), government spending, and revenue from taxes is very strong (Bashir et al., 2011). Therefore, managing and controlling prices can be seen as an important component of economic planning, which is usually managed by the Central Bank of Iraq (CBI) (Salih & Kabasakal, 2021). However, Iraqi monetary policy suffered many difficulties in obtaining stability due to continuous war that has a significant impact on abnormal inflation, higher unemployment rate and weak economic growth. Moreover, according to Emerenini & Charles (2014) consumer price index (CPI) is used to estimate the level of inflation and it is significantly determined by the rate of interest, exchange rate, supply of money and some other variables. In contrast, the amount by which the general price level decided for products in economy might be represented or defined as inflation through time. Hence, inflation has frequently become a problem in all countries. Numerous theories have been already suggested why a country is undergoing an inflationary surge. Some elements involve rising demand that passes supply, such as increasing production costs and some economic problems that affect how inflation is measured. Practically, two important indices were utilized, which are "producer price and consumer price indices" (PPI and CPI). Producer price indices measure changes in producers' purchasing power, whereas consumer price indices estimate changes in customers' purchasing power.

A country monetary policy, which is being conducted by the Central Bank, has a significant impact on financial and economic condition (Qin et al., 2013). Authorities including policy makers have attempted to implement suitable measurement that can control inflation and maintain market stability (Gbadebo & Mohammed, 2015). While the rate of inflation is low, consumers and companies are not required to consider it when making regular decisions. Governments and authorities should control economic system by adopting both monetary and fiscal policies (Christiano & Fitzgerald, 2003).

The big aim of monetary policy is low unemployment rate, flat or low exchanage and price stability. Basically, each aspect of monetary policy involves adjusting the quantity of money in circulation. This procedure of adjusting includes direct selling and buying of payment instruments. The stable market activities by monetary policy can adjust and control the currency supply and this has a great effect on other market forces, such as exchange rate and interest from short-term debt (Ahiabor, 2013). Therefore, the purpose of this research is to investigate the role of monetary policy on controlling inflation and managing financial stability in Iraq. Previous studies have illuminated the efficiency of monetary policy (Akarara & Azebi, 2018; Al-Jafari & Altaee, 2019; Angelina & Nugraha, 2020; Bhattacharya & Jain, 2020; Ezeibekwe, 2020; Kaur et al., 2016; Mehar, 2023; Onodugo et al., 2018; Chaudhry et al., 2015). However, studies on the role of monetary policy on inflation and financial stability in developing economies like Iraq, are scarce. Given the ongoing challenges with inflation control and economic growth in Iraq, the country presents a valuable research opportunity.

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The Objective of Monetary Policy

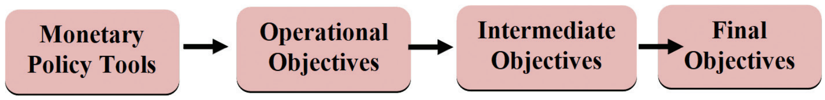

Figure 1: The aims of monetary policy

Source: Authors elaboration (2024)

Figure 1 shows the sequence of objectives by monetary policy. The primary aim is to attain transparency (Geraats, 2002) and suitable level of economic equilibrium and also to reach the achievement of economic growth across all sectors (Akarara, 2018). To obtain this objectives, monetary policy has tried to protect and stabilize the currency value and achieve equitable income distribution. However, these goals are similar with all aspects of economic policy. Among the monetary policy and some other macro strategy, such as trade and fiscal policy might impair the fulfillment of the main goals of the monitory policy due to the absence of harmonization among the above polices. In order to emphasize the significance of practical and strategic goals, it is considered that the goal of the central bank is to obtain the growth rate by 5% in one year. This target can be achieved through increasing money supply (intermediate goal) and operational goal by 4% and 5% respectively.

Lireature Review

Numerous studies from different countries have empirically acknowledged the impact of monetary policy on controlling inflation and financial stability through a variety of ways in both emerged and emerging economy.

A study by (Chaudhry et al., 2015) focused on controlling inflation through the role monitory policy in Pakistan. The data from annual time series between 1972-2013 was collected and applied in their study model via ARDL method. From an econometric viewpoint, diagnostics verified that the models are stable and acceptable. The findings demonstrated that the interest rate and supply of money have considered as a significant strategy for controlling inflation for long-term period. Additionally, the national outcome gives lower pressure on the rate of inflation for the short-term period as well.

Bhattacharya & Jain (2020) investigated what impact can monetary policy have on controlling food price inflation in both developed and developing countries. The study collected data of 16 countries between 2006-2016. The results display that unscheduled tightening of monetary policy significantly and favorably affects inflation in food prices in both developed and developing nations. Further, the study concluded that in light of the rising prices brought on by the food industry, a tightening of monetary policy could potentially destabilize both the food and the entire inflationary market.

Mehar (2023) examined the role of monetary policy in expanding economic development. The study used a large sample data among 186 countries in the world. The findings demonstrated that spending on infrastructure is encouraged by outside debt, and this constitutes one of the key factors influencing the development of the gross domestic product (GDP). The findings also confirmed that the amount of funding extended to the private market is determined by the amount of cash and the number of companies that use financial institutions to fund their investment.

Another investigation by (Al-Jafari & Altaee, 2019) focused on determining the sources of real inflation in Iraq between (1995–2015). Autoregressive Distributed Lag (ARDL) Model was employed to find the long-run causation among variables. They found that when the money supply increase, the rate of inflation will be higher for long-run. During the examined period, Iraq's import-openness brings about a rise in the general price level. Exchange rate was also considered as a main cause of inflation in Iraq. Finally, the study concluded that if the growth rate of money supply was maintained, financial stability and economic growth could be achieved in Iraq.

Moreover, a study by (Ahiabor, 2013) examined the effect of monetary policy on reducing inflation rate in Ghana during (1985-2009). The dependent variable was the rate of inflation, while the explanatory variable was interest rate, exchange rate and money supply. The findings illustrated a positive and significant connection between money supply and inflation control. However, the relationship between interest rate and inflation was negative. Finally, the results presented a positive and significant link between the rate of exchange and inflation control.

Similarly, a research conducted by Angelina & Nugraha (2020) explored the role of monetary policy on controlling inflation and national economy in Indonesia. The time series data were collected to stabilize the study model and then analyzed by a statistical method of Two-Stage Least Square. The results illustrated that supply of money and supply of money from the previous period and exchange rate have significant and positively related to inflation control. However, inflation was significant but negatively affected by State Bank of Indonesia (SBI). National economy had also a positive influence on inflation but the results was not significant.

Further, Iya & Aminu (2014) conducted a study on determinants of inflation in Nigeria during (1980-2012). Time series data were collected and then analyzed through the estimation of Augmented Dickey-Fuller (ADF) and ordinary least square (OLS) method to find the causation between inflation, money supply, state expenditure, rate of exchange and the rate of interest. The findings revealed that the relationship between inflation and the above variables were positive and significant.

Lastly, Kirimi (2014) applied ordinary least square (OLS) regression model to test the determinants of inflation in Kenya, for the period covering (1970-2013). The findings displayed that exchange rate, supply of money affect inflation positively. However, inflation was inversely correlated with the perception of corruption and rate of GDP growth.

Method

This study used robust approach to collect a time series data, gathering from two primary sources, the World Bank open data system and the Central Bank of Iraq (CBI). The period covered, which spans from 2003 to 2021, encompasses a time when Iraq saw substantial changes in its politics and economy. Comprehensive economic metrics were obtained from data on the World Bank's open system, while particular monetary policy data was obtained from the official website of the Central Bank of Iraq. To ensure consistency and transparency, the two sources were reached using their freely accessible web interfaces. This multidimensional data collection aims to build a solid foundation for investigating the effectiveness of monetary policy on controlling inflation and managing financial stability within the Iraqi context.

Table 1: Investigating monetary policy in Iraq (2003-2021)

Years	Money supply (M2) in IQD billion	Δ Money supply (M2)	GDP in IQD billion	Δ GDP	Financial stability
2003	6,953	25.201	2,9585	–27.880	–1.101
2004	11,498	65.359	53,235	79.939	0.818
2005	14,659	27.493	73,533	38.129	0.721
2006	21,050	43.596	95,587	29.992	1.454
2007	26,920	27.884	111,455	16.601	1.680
2008	34,861	29.502	157,026	40.887	0.722
2009	45,355	30.100	130,643	–16.802	–1.791
2010	60,289	32.926	162,064	24.051	1.369
2011	72,067	19.536	217,327	34.099	0.573
2012	75,336	4.536	254,225	16.978	0.267
2013	87,679	16.384	273,587	7.616	2.151
2014	90,728	3.477	266,332	–2.652	–1.311
2015	84,527	–6.835	194,680	–26.903	0.254
2016	90,466	7.026	196,924	1.153	6.096
2017	92,857	2.643	221,665	12.564	0.210
2018	95,391	2.729	268,918	21.317	0.128
2019	107,648	12.850	276,157	2.692	4.773
2020	119,906	11.387	215,661	–21.906	–0.520
2021	139,886	16.663	301,152	39.641	0.420

Source: authors elaboration based on World Bank and CBI Data (2024)

Results

Gauging Monetary Policy

Table 1 displays the money supply (M2) in Iraqi dinars (IQD) for the period from 2003-2021. The money supply changed at a comparatively high rate of 30.1% in 2009. This implies that efforts were being made by the Central Bank of Iraq to increase the money supply and boost the national economy. On the other hand, the financial stability was -1.791, indicating that there may have been some doubts about the stability of the financial system as a whole. Compared to 2009, the rate of change in the money supply in 2020 was lower at 11.39%. This implies that the Iraqi Central Bank was less expansionist in 2020. Although it was still negative, financial stability was -0.52, which was better than it was in 2009. Overall, the Central Bank of Iraq managed financial stability and growth in the economy through monetary policy but not effeciently.

The wave of inflation in Iraq between (2003-2021)

Figure 2 illustrates the fluctuation of the inflation rate in Iraq between (2003-2021). Generally, it can be seen that Iraq had a huge wave of the rate of inflation. The rate is cautiously growing from 33.6% in 2003 to 53.2% in 2006, which was the highest rate that was recorded in Iraq between 2003-2021. However, a sharp decrease was experienced in 2007 to (–10.06%), which can be considered as the smallest rate from 2003-2021. In 2008, it increased again to 12.6% then declined again in 2019 to -0.19% which is the second lowest during 2003-2021. In 2021, it was raised to 6.04% and is expected to increase again in 2022 due to the consequences of the COVID-19 pandemic. Compared to the previous table (table 1), the implemented monetary policy represents a significant economic strategy for reducing the inflation rate except in 2006. The Iraqi Central Bank established and executed this strategy, aiming to regulate the money supply and stabilize cash flow. These measures ensure that funds are used appropriately, considering the economic conditions.

Trends in Iraq's money supply (2003-2021)

Figure 3 shows the trend in the rate of change of Iraq's money supply between 2003 and 2021. It reveals significant growth between 2003 and 2011, with an average annual increase of around 25%. This growth likely stemmed from several factors, including post-invasion reconstruction efforts, increased oil exports, and expansionary monetary policy by the Central Bank of Iraq (CBI). From 2012 to 2015, the money supply growth slowed considerably to an average of around 5% per year. This slowdown was likely attributable to factors such as declining oil prices, the rise of ISIS, and tighter monetary policy by the CBI. In 2016, the money supply contracted by 6.8%, likely due to the continued impact of the ISIS conflict and the government's efforts to reduce its budget deficit. From 2017 to 2020, the money supply grew again, averaging around 7% annually. This growth was likely driven by increased oil exports and expansionary monetary policy by the CBI.

Fluctuations in the Iraqi dinar exchange rate (2003-2021)

Figure 4 shows the wave of the rate of exchange that is implemented by Iraqi central banks.

It is highlighted that Iraqi Dinar (IQD) has a value of 1,453 IQD per 1 USD from 2003 to 2006. From 2007 and 2008, the rate decreased to 1,254 and 1,193 IQD respectively per 1 USD. From 2009 to 2020, the value of IQD had almost a constant value, which was around 1,118 IQD per 1 USD. Finally, a rapid increase was noted in 2021 by 17.5%. Overall, the Iraqi Central Bank's management of the exchange rate played a crucial role in stabilizing inflation and fostering financial stability over the years. By maintaining relatively consistent exchange rates from 2009 to 2020, around 1,118 IQD per 1 USD, the Central Bank demonstrated its commitment to controlling inflation. However, the sudden increase of 17.5% that was seen in 2021 suggests that there may be problems that call for greater intervention.

Conclusions

The objective of this study is to investigate the impact of monetary policy on inflation control and financial stability in Iraq. The study used a time series data from 2003-2021 that obtained from the World Bank open data and central bank of Iraq (CBI). The results demonstrated that financial stability and controlling inflation in Iraq were significantly impacted

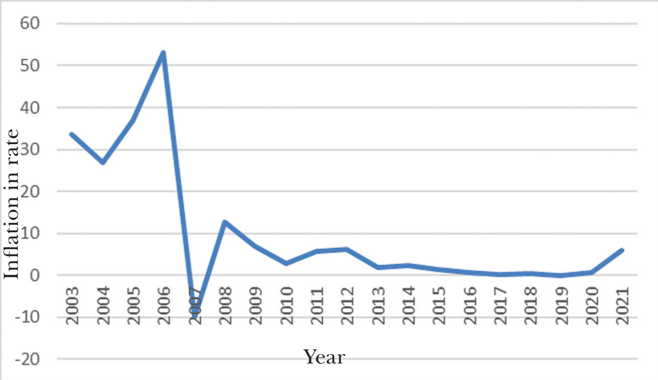

Figure 2: Inflation trend in Iraq from (2003-2021)

Source: authors elaboration based on World Bank and CBI Data (20233)

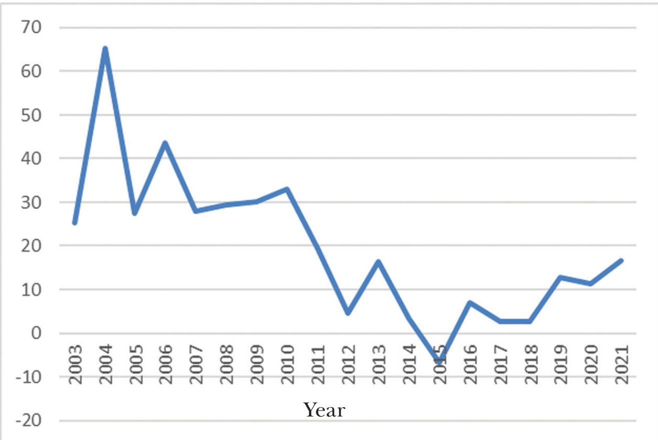

Figure 3: Rate of Change in Iraq's Money Supply (%) (2003-2021)

Source: authors elaboration based on World Bank and CBI Data (2024)

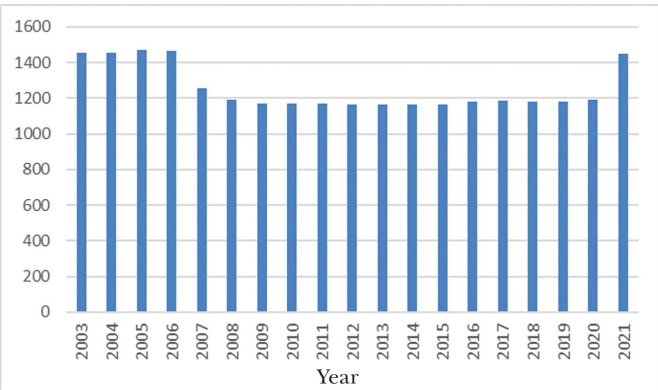

Figure 4: Trends of Iraqi Dinar (IQD) exchange rate (2003-2021)

Source: authors elaboration based on World Bank and CBI Data (2024)

by the supply of money, rate of exchange between 2003-2021. If the growth rate of money supply was maintained constant, the control of inflation and financial stability could be achieved. These results are similar with the findings of (Ahiabor, 2013; Al-Jafari & Altaee, 2019; Bhattacharya & Jain, 2020; Chaudhry et al., 2015). Previous analysis of Iraqi monetary policies revealed that the country's monetary climate might have been helpful but not serious. Inflation in Iraq continues to fluctuate, as past trends suggest. Therefore, controlling inflation and achieving the optimum level of financial stability in Iraq cannot be seen as an easy task or it may not be managed in a short-time period. This is because it requires persistent work over a long time due to a number of economic factors, such as shifting oil prices, unstable geopolitics, and structural problems in the economy.

During periods of inflation, people are discouraged from saving money because the purchasing power of their savings erodes over time. This incentivizes them to spend their money quickly before prices rise further, potentially leading to shortages and the emergence of black markets where sellers exploit the situation by buying goods at lower prices and selling them at inflated rates. This phenomenon significantly hinders economic growth as it discourages investment and fuels inflation. While monetary policy plays a crucial role in controlling inflation, it may not be sufficient on its own. Complementary measures are often necessary, including government policies, fiscal policy, and supply-side policies. These can help regulate government spending, personal consumption, and public and private investment, ultimately contributing to a decline in the inflation rate.

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