Proposed Scenario for the Monetary Policy Base with Islamic Visions in Iraq

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Abstract

This research aims to address the problem that Iraq's monetary policy faces, which is the significant challenge of developing effective and Sharia-compliant monetary policy tools. Relying solely on a fixed interest rate without considering the real sector and the real economy cannot resolve issues such as rising inflation, savings, income, investment, and economic growth. The importance of this research lies in its attempt to demonstrate that the Central Bank of Iraq can effectively implement its monetary policy within an Islamic economic system based on the principles of justice, stability, and efficiency, allowing it to achieve its objectives through the proposed quantitative and qualitative tools.The objectives of the research include exploring the need for new monetary tools in accordance with Islamic Sharia that align with contemporary changes in Iraq's monetary system, particularly amidst current economic crises. It does so by examining monetary, financial, and real indicators and exploring the possibility of finding alternative Islamic tools to replace traditional monetary instruments. The study also hypothesizes that the expected participatory profit rate, as an alternative to the interest rate, is crucial for structuring the mechanisms and procedures of monetary policy to achieve its ultimate goals. This is based on the intellectual, scientific, and logical foundations of the Taylor rule for monetary policy, enhanced with an Islamic perspective. To achieve the research objectives and validate its hypotheses, the study employed a descriptive, analytical, and quantitative approach. A scientifically accepted proposal was formulated for an Islamic adaptation of the monetary policy rule based on the intellectual, scientific, and logical foundations of the Taylor rule for monetary policy. This adaptation explores the feasibility of transitioning from a conventional monetary policy to an Islamic monetary policy within the Iraqi economy. Various indicators were used to investigate the relationships between the variables during the study period, utilizing co-integration relationships and the ARDL model. Quarterly data for the study's model variables were collected for the period Q1 2010 to Q4 2022, using the software (Eviews 13). Accordingly, the study concluded that the hypothesis is valid, demonstrating that the expected participatory profit rate, as an alternative to the interest

rate, is crucial for structuring the mechanisms and procedures of monetary policy to achieve its ultimate goals. This conclusion is grounded in the intellectual, scientific, and logical principles of the Taylor rule for monetary policy, enhanced by the Islamic dimension.

Keywords: Taylor Rule, Monetary Policy, Central Bank, Expected Participatory Profit, Islamic Theory, Iraq.

1. Introduction

In recent years, many countries have entered into the experience of Islamic finance. Despite the presence of traditional banking and monetary infrastructure, establishing Islamic institutions can be challenging, as they are expected to adhere to Sharia law while operating alongside their conventional counterparts. However, when the two financial systems coexist, monetary policy practice becomes a real challenge that requires much thought. In fact, the prohibition of certain practices, such as the use of interest, within Islamic finance creates a genuine need to design tools that align with Sharia principles.

The rationale behind proposing the expected participatory profit rate as an alternative to the interest rate was developed after the recent financial crisis demonstrated that the interest rate, which is very important for organizing the procedures and mechanisms of monetary policy to reach its final objectives, has failed to support the monetary authority in achieving its goals, not only in the East but also in the West. Under these circumstances, we need to seek an alternative approach to managing and controlling monetary policy sustainably, as a fixed interest rate without considering the real sector and the real economy cannot solve the problem of rising inflation, savings, income, investment, and economic growth.

Therefore, in this part of the research, we conduct a modest scientific attempt to propose a scientifically accepted Islamic formulation of the monetary policy rule using the Taylor rule. The aim is to assist monetary policymakers and push them towards the discussion table to crystallize these ideas and mature them practically, so we can together combine Islamic theory with conventional theory, as a means to enhance the wisdom of monetary decisions while incorporating the Islamic dimension.

Research Problem:

Relying on a fixed interest rate without considering the real sector and the real economy cannot solve the problem of rising inflation, savings, income, investment, and economic growth. Therefore, a modest scientific attempt is needed to propose a scientifically acceptable Islamic formulation of the monetary policy rule according to Islamic thought.

Research Hypothesis:

The expected participatory profit rate as an alternative to the interest rate is crucial for structuring the procedures and mechanisms of monetary policy to achieve its final goals. This is based on the intellectual, scientific, and logical foundations of the Taylor rule for monetary policy, enhanced with an Islamic dimension.

Research Objectives:

To propose Islamic monetary tools as an Islamic approach for central banking monetary operations. It is assumed that the central bank may not engage with the uncertain returns of projects (assets) and that the ultimate goal of its monetary policy is to achieve economic stability by utilizing excess (idle) liquidity in the economy.

Research Significance:

The significance of the research lies in its attempt to demonstrate that the Central Bank of Iraq can effectively implement its monetary policy within an Islamic economic system based on the principles of justice, stability, and efficiency. The proposed quantitative and qualitative tools of the Central Bank of Iraq's monetary policy can help achieve its objectives.

2. Research Methodology

The research combines the descriptive analytical approach with the quantitative approach, using the ARDL model and the Ordinary Least Squares (OLS) method based on quarterly data for the study model variables from Q1 2010 to Q4 2022.

Previous Studies:

A: Local Studies:

1. Study by: Al-Wadi, Kazem Ammar Majeed (2009)

Title "Mechanisms for Implementing an Islamic Monetary System in Selected Islamic Countries for the Period 1981-2006," PhD Dissertation, Al-Mustansiriya University, College of Administration and Economics, 2009.

This study aimed to identify the nature and dimensions of the Islamic economic and monetary system by examining its principles and assumptions to establish the foundations of Islamic economic and monetary theory, and then explore the possibilities of its application in reality. The study presented the potential for application in its theoretical part to serve as a benchmark for identifying points of convergence or divergence from the Islamic approach in the applied part of the study.

The study concluded that the real sector and the monetary sector in the Islamic economy are closely linked, with integration achieved by replacing interest (usury) with legitimate profit.

2. Study by: Jamali, Ali Shanshol (2009)

Title: "An Analytical Study: The Dynamic and Derived Functions of Money in the Islamic Economy," Baghdad College of Economic Sciences University Journal, Issue 22, 2009.

This study aimed to understand the dynamic and derived functions of money in the Islamic economy and the potential benefits of applying them in daily life to serve individuals, society, the national economy, and humanity as a whole.

The study concluded that money in the Islamic economy mitigates the negative effects of globalization and combats monetary inflation by prohibiting interest rates and hoarding, monitoring prices, using book money, maintaining the value of currency, and creating a conducive environment for the operation of Islamic banks within the new global system through various investment and financing formulas such as mudarabah, musharakah, and murabaha.

B. Arabic Studies:

1. Study by: Mudabbir Halim (2022)

Title: "The Efficiency of Monetary Policy Tools in the Islamic Economy in Expansionary and Contractionary Policies," published in Al-Shehab Journal for Islamic Research and Studies , Institute of Islamic Sciences, University of El Oued, Algeria, Vol. 8, Issue 1, 2022.

This study aimed to determine the efficiency of using monetary policy tools under the Islamic economy for both expansionary and contractionary policies, utilizing economic models to measure the impact of Islamic monetary policy tools on economic stability and comparing the results of these models with those of countries that rely on the interest rate as the primary monetary policy tool.

The study concluded that monetary policy tools in the Islamic economy are characterized by diversity, flexibility, and effectiveness in the monetary market, whether an expansionary or contractionary monetary policy is applied.

2. Study by: Muhammad, Abdullah Shahin (2017)

Title: "The Efficiency of Monetary Policy Tools in the Islamic Economy," published in The Algerian Journal of Globalization and Economic Studies, Vol. 8, 2017.

This study aimed to present an Islamic perspective on monetary policy and its tools according to Islamic Sharia in light of the diversity of economic systems.

The study concluded that converting high-powered money into deposits in any amount, and vice versa, under a full reserve system, leads to a change in the components of the money supply but does not affect the overall money supply or economic stability.

C. Foreign Studies:

1. Study by: Taha Eğri & Zeyneb Hafsa Orhan (2021)

Title: Islamic Monetary Economics, Finance, and Banking in Contemporary Muslim Economies, 2021.

This study aimed to identify the fundamental principles of Islamic finance within contemporary Islamic economies.

The study concluded that monetary policy tools in the Islamic economy rely on variables related to profit-sharing rates.

2. Study by: Fahim Khan & Zohra Jabeen (2020)

Title: Monetary Economics and Monetary Policy in Islamic Perspective, 1st Edition, 2020.

This study aimed to outline the fundamentals of monetary economics in Islamic thought and possible solutions.

The study concluded that some key aspects of the monetary system and the required policies for the growth of Islamic banking over conventional banks reveal the true essence of Islamic spirit in Islamic banking operations.

The Current Study and Its Distinctive Features (Development and Innovation)

This study is distinguished from previous studies in the following ways:

1. This study explores experimental scenarios that can be revisited when considering the transition to an Islamic monetary system. Previous studies focused on Islamic central banks and did not address banks using conventional monetary policy that incorporates features of Islamic monetary policy.

2. Additionally, this study examines the potential to develop new monetary tools in accordance with Islamic Sharia, in order to keep pace with contemporary changes in the monetary system in Iraq amidst the current economic crises.

Second Section: Conceptual Framework

First: The Concept of the Expected Profit Rate (Participatory):

The concept of the expected profit rate in the Islamic monetary system refers to the central bank's control over the majority of investment deposits. Accordingly, the central bank can adjust the participation rate as it deems appropriate, taking into account the trajectory of economic activity in specific situations[1], such as:

1. Economic Recession: When the economy is heading toward a recession and needs a stimulus, the central bank reduces the participation rate on its deposits with commercial banks. As a result, the participation rate in the market decreases. If private sector financiers are unwilling to lend their funds, commercial banks turn to the central bank for financing at the reduced rate. This decrease in demand for money from the private sector forces them to accept the rate set by the central bank; otherwise, zakat will be imposed on their funds. Thus, the rate set by the central bank becomes the market rate. It is important to note that the pessimistic outlook of entrepreneurs does not limit the effectiveness of this tool, as it does in the capitalist system, where outcomes differ in the Islamic system. In the Islamic system, the entrepreneur may only lose their effort, similar to speculation, unless proven wrong. If the project owner is a company, they only lose their share of capital participation; in any case, there will be no debt owed to any entity regarding the project’s capital.

2. Inflationary Trends: When the economy moves toward inflation, indicating an excess of money in circulation, the central bank has the power to increase the participation rate on its deposits. This reduces the demand for capital to be invested, which in turn reduces the government's demand for money to invest in government investment certificates. Even if the

[1]) Mohammed Abdullah Al-Mubarak. "The Islamic Central Bank Model." Islamic Finance Journal, Arab Monetary Fund, vol. 8, 2005, pp. 259–272.

private sector offers its funds for small participation rates, it cannot meet all the demands of entrepreneurs. Consequently, the private sector's participation rate must be increased, followed by the market as a whole[2]

The participation rates in profits and losses are determined by the Islamic central bank at two levels[3]:

1. First Level: Determining the participation rate of the central bank in refinancing banks. The rate decreases when financing is directed toward desired fields, leading to increased profit margins and incentivizing banks to focus on these activities. Conversely, if the rate increases within a financed activity that reduces the bank's profit margin, it refrains from expanding credit in that area.

2. Second Level: Adjusting the minimum and maximum participation rates for other banks' profits based on the importance of economic activities. The range between the minimum and maximum should not be too large to avoid significantly impacting profit margins. This approach encourages the demand for bank funds to gradually move toward developing branches and activities with higher profit margins. By differentiating profit-sharing based on various aspects of economic activity, it contributes to resource allocation in line with national policy objectives

Second: The Concept of the Taylor Rule:

The Taylor Rule is a rule targeting interest rates in monetary policy. It was proposed in 1992 by the American economist John Taylor. The Taylor Rule provides guidelines for determining the target interest rate based on inflation and output gaps, represented by the following equation[4] :

$$r = p + 0.5y + 0.5(p - 2) + 2 \quad \ldots (1)$$

Where:

- r = nominal short-term interest rate (policy rate).

- p = inflation rate during the previous quarters.

- y = percentage deviation of real GDP from the targeted real GDP. In this case, $Y=\{(Y - Y^*)\}\{Y^*\}*100$, where Y is the actual real GDP and Y^* is the targeted real GDP.

- $0.5(p - 2)$ = inflation response coefficient.

- $0.5(y)$ = output gap response coefficient.

1. Economic Implications of the Rule:

r = the interest rate on funds. It is the overnight lending rate between banks and also the interest rate managed by the central bank to directly influence the bank reserves held by banks (the policy rate).

[2]) Al-Kafrawi, Awf. Research in Islamic Economics. University Culture Foundation, Alexandria, 2000, p. 412.
[3]) Al-Rifai, Fadi Muhammad. Islamic Banks. Halabi Legal Publications, Beirut, 2004, p. 174.
[4]) Taylor, John. "Discretion Versus Policy Rules In Practice. Carnegie-Rochester Conference Series on Public Policy, Vol. 39, 1993, pp. 195-214.

p = Inflation or deflation for the past year (over a period of four months). Inflation and deflation represent changes in the general price level, either through an increase with inflation or a decrease with deflation. A small amount of inflation is the prevailing norm in most economies worldwide, meaning that one dollar in one year does not have the same value as a dollar in another year, for example.

y = The deviation of real GDP from the targeted growth level set by policymakers, expressed as a percentage. These three variables together represent the amount by which the central bank will increase the interest rate in response to rising inflation and the output gap.

The Taylor Rule states that a one-percentage-point increase in inflation should prompt the central bank to raise the nominal interest rate by more than one percentage point. Since the real interest rate is approximately the nominal interest rate minus the inflation rate, this implies that when inflation rises, the real interest rate should also increase. The idea that the nominal interest rate should be raised by "more than one-for-one" to cool the economy when inflation rises (thus raising the real interest rate) is known as the Taylor Principle.

The Taylor Principle assumes a unique equilibrium level of inflation. If the principle is violated, the inflation path may become unstable. This means that the rule generates a relatively high real interest rate (a “tight” monetary policy) when inflation exceeds its target or when output is above the full-employment level, aiming to reduce inflationary pressures. Conversely, it recommends a relatively low real interest rate (an “easy” monetary policy) in the opposite scenario to stimulate production.

At times, monetary policy objectives may conflict, such as in the case of stagflation, where inflation exceeds its target, accompanied by a significant output gap. In such cases, the Taylor Rule helps determine the relative weights assigned to reducing inflation versus boosting output[(5)].

Importance of the Taylor Rule

The Taylor Rule provides a systematic framework for determining interest rates. It helps achieve economic stability by maintaining low inflation and ensuring sustainable economic growth.

3. The Taylor Principle in Economics

The Taylor Principle emphasizes that central banks should use inflation and GDP data to determine a target interest rate on funds that promotes economic stability. They can achieve this by employing a policy rule in the form of a mathematical equation, which defines the extent of interest rate adjustments when actual data deviate from expectations.

In this context, to propose a transformation from conventional monetary policy to Islamic monetary policy under the Taylor Rule, the nominal exchange rate can replace the inflation rate

[5]) Y is the average expected GDP growth rate, which varies by country. In the United States, the average GDP growth rate, using the 2010 dollar as a reference, was 2.25% between 2010 and 2019, which is typical for advanced economies. In developing economies, the average is usually higher. For example, in China, the average, using the 2010 dollar as a reference, was 7.68% for the same period between 2010 and 2019. Over time, this figure changes with trends.Since its inception, the Taylor Rule formula has received praise and modifications from others. For instance, Dr. Ben Bernanke, former Chairman of the Federal Reserve and Nobel Prize winner in Economics in 2022, created his version of the formula where he uses the core Personal Consumption Expenditures (PCE) deflator as a measure of inflation and changes the output coefficient to 1.0 instead of using 0.5. For more details, see:
Brancaccio, Emilia; Fontana, Giuseppe (2013). "'Solvency Rule' versus 'Taylor Rule': An Alternative Interpretation of the Relation Between Monetary Policy and the Economic Crisis." Cambridge Journal of Economics, pp. 17–33. ISSN 0309-166X. JSTOR 23601922.

when the central bank adopts an exchange rate targeting policy[6]. Thus, the equation (1) would take the following form:

$$i = EX + 0.5y + 0.5(EX - 2) + 2 \quad \dots (2)$$

Where:

- i = Basic interest rate

- EX = Official exchange rate (Dinar/USD)

- y = Targeted real GDP

Analytical Framework for the Enhanced Islamic Monetary Policy Function

To formulate a monetary policy function under the Islamic economic framework for the period 2010–2022 and validate the research hypothesis, expected profit or Islamic participatory profit [7](between the central bank and the banking sector) will replace the interest rate in equation (2). The forecast relies on macroeconomic variables, including the Central Bank of Iraq's policy rate as the rate around which returns in the Islamic economy revolve, analogous to the role of interest rates in conventional economies.

Key determinants include the exchange rate and monetary policy decisions concerning targeted inflation and money supply growth. An increase in broad money supply enhances market liquidity, facilitating corporate financing, which, in turn, boosts profits. The GDP index at constant prices was used, transforming the variables into the following form:

Equation (3): Predicted Profit Rate (Participatory Profit)

$$Re = y + \text{Inf}^* + ex + m2 \quad \dots (3)$$

Where:

- Re = Predicted profit rate (participatory profit)

- y = Economic growth rate (real GDP)

- Inf^* = Targeted inflation rate (expressed as the change in the base consumer price index)

- ex = Official exchange rate (Dinar/USD)

- $m2$ = Broad money supply

1. Estimating Predicted (Participatory) Profit Using a Regression Model

The use of regression models to estimate predicted values of variables is a common technique for addressing missing data. This method relies on the assumption that the missing values of a

[6]) The Taylor Rule has been used as a framework for the Central Bank of Iraq's monetary policy after 2003. For more details, refer to:
- Shabibi, Sinan (2007). *"Features of Monetary Policy in Iraq after 2003,"* Arab Monetary Fund, Abu Dhabi, pp. 12–22.

[7]) The reason for not using the real interest rate in the equation lies in the failure and criticism of this tool by the Central Bank of Sudan when it attempted to adopt it as part of a transition toward Islamic monetary policy. For more details, refer to Chapter 2, Section 3 of the thesis.

variable can be predicted based on the values of other influencing variables within the same dataset.

A scenario was formulated based on the variables mentioned in Equation (3). These predictions are purely hypothetical and may or may not materialize in reality. The regression equation is as follows:

$$ie = \beta_0 + \beta_1 \cdot y - \beta_2 \cdot \text{Inf}^* - \beta_3 \cdot Ex + \beta_4 \cdot m2 + \varepsilon \quad \dots (4)$$

Based on Equation (4), participatory profit was estimated using quarterly data for the period from Q1 2010 to Q4 2022. Thus, the monetary policy equation under the hypothetical Taylor Rule becomes:

$$ie = EX + 0.5y + 0.5(EX - 2) + 2 \quad \dots (5)$$

Where:

- ie = Predicted profit rate (participatory profit)

Targeted GDP Growth and Islamic Monetary Policy

The targeted growth rate of real GDP at constant prices will be calculated based on the quarterly GDP growth rates for the study period.

Replacing the interest rate with the Islamic profit rate in monetary policy enables the Islamic economy to adjust profit-sharing ratios on financial instruments. Increasing the profit-sharing ratio can encourage savings and reduce consumption, thereby helping control inflation. It also allows for the regulation of the money supply.

Economic Implications of the Taylor Rule Enhanced by Islamic Dimensions

The idea of replacing interest rates with participatory profit in the Taylor Rule unleashes the potential for adopting a systematic adaptive approach to monetary policy that is more aligned with the realities of the Iraqi economy. This is especially relevant as it aims to remove interest rates due to their long-standing ineffectiveness, the reservations regarding their compliance with Islamic principles, and other related concerns. In contrast, participatory profit reflects more significant economic implications, including the investment climate, economic stability, expectations, exchange rate risks, and more. A decline in participatory profit indicates the presence of bottlenecks, problems, or disturbances in local markets, and it is essential for policymakers to prepare the necessary tools to implement appropriate measures to maintain the validity and effectiveness of the monetary framework in use.The relationship between the exchange rate and participatory profit is inversely related; an increase in the exchange rate of the local currency against foreign currencies (a depreciation of the local currency) leads to a decrease in the profits generated from investments to levels lower than expected, assuming that the investment is financed solely in local currency. Conversely, when investment is financed in foreign currency, a direct relationship is established between the exchange rate and participatory profit regarding the returns generated from that investment (assuming cash flows out in foreign currency).

[8]If the costs of imported inputs are paid in foreign currency, this will negatively impact the total profits generated from investment, meaning that a rise in the exchange rate will lead to a decline in participatory profit. In contrast, the relationship between the targeted real GDP and participatory profit is direct; the higher the targeted GDP level, the more monetary policy tools are mobilized to increase investment across all types, resulting in an increase in participatory profit[9]. The targeted GDP is considered one of the main factors affecting the expected Islamic participatory profit, as investors share project risks in proportion to the targeted GDP[10].

3. Analytical Framework for the Monetary Policy Function According to the Taylor Rule Enhanced by Islamic Dimensions

A. Description of Standard Model Variables

Several indicators have been selected to investigate the relationships among the variables of the function throughout the study period. These include expected profit (or participatory profit) as the dependent variable, and the independent variables: nominal exchange rate and real GDP growth rate at constant prices.

Table (1) Variables for Measuring and Testing the Enhanced Taylor Rule with Islamic Dimensions for the Period (Q1 2010 - Q4 2022)

Variables	Term	Variables	Term
Y^*	Targeted real GDP at constant prices	(ie)	Expected profit rate (participatory profit)
EX	Official exchange rate / Dinar/USD		

Table prepared by the researcher as noted above.

B. Results of the Econometric Study

Using cointegration relationships and the ARDL model, quarterly data for the study model variables from Q1 2010 to Q4 2022 was employed. It was found that the structural parameters of the model stabilized at the second difference with a significance level of 5%.

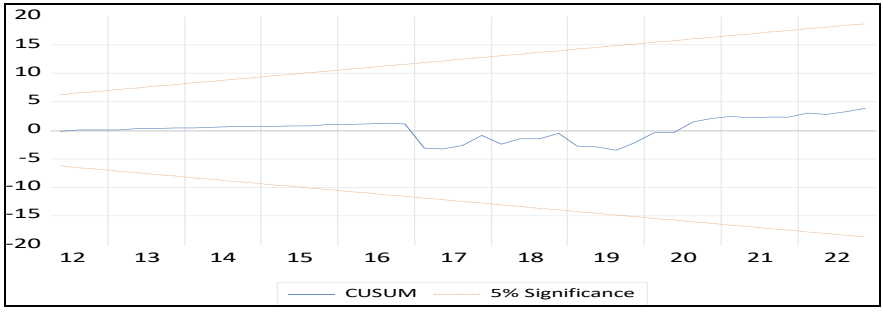


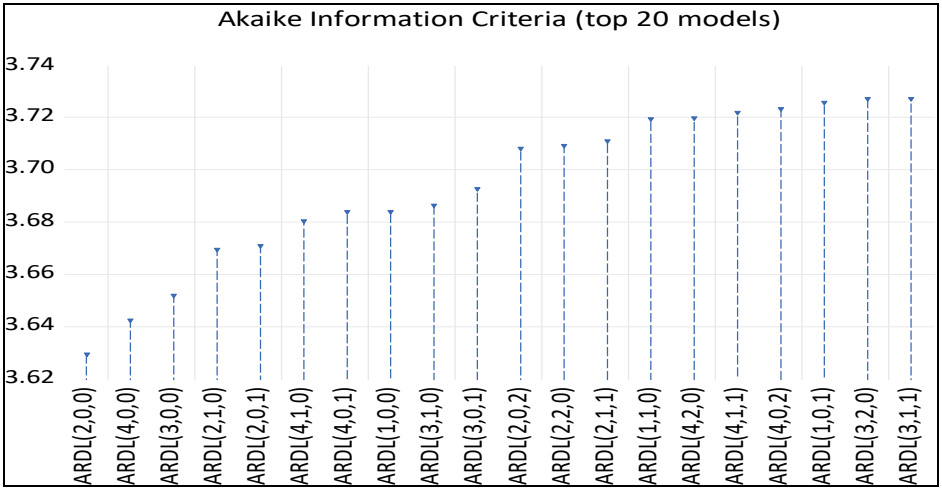
Figure (1): Stability of the Structural Parameters of the Model

Source: From the researcher's work based on the results of Eviews (version 13).

[8]) Al-Din, Mohammed Nasr, Participatory Profit in Islamic Jurisprudence, Dar Al-Nahda Al-Arabiya for Publishing and Distribution, 2015, pp. 23-26.
[9]) Al-Din, Mohammed Nasr, Participatory Profit in Islamic Jurisprudence, op. cit., p. 31.
[10]) Al-Din, Mohammed Nasr, Participatory Profit in Islamic Jurisprudence, op. cit., p. 33.

It was noted that the shortest lag and best possible model selection is (1, 0, 0) according to the Akaike Information Criterion, as illustrated in Figure (2).

Figure (2): Akaike Information Criterion for the Monetary Policy Model in Iraq According to the Taylor Rule Enhanced by Islamic Dimensions for the Period (Q1 2010 - Q4 2022)



Source: From the researcher's work based on the results of Eviews (version 13).

C. Model Estimation

The model was estimated using the ARDL model with a linear form[11], utilizing quarterly data for the period Q1 2010 to Q4 2022 for measurement purposes. Thus, the number of observations is 52. The estimation results for the model are shown in Table (2):

Table (2) Estimation Results of the Variables of the Monetary Policy Function According to the Taylor Rule Enhanced by Islamic Dimensions for the Period (Q1 2010 - Q4 2022)

Dependent Variable: Y
Method: ARDL
Date: 06/29/24 Time: 15:32
Sample: 2010Q3 2022Q4
Included observations: 50
Dependent lags: 4 (Automatic)
Automatic-lag linear regressors (4 max. lags): X1 X2
Deterministics: Restricted constant and no trend (Case 2)
Model selection method: Akaike info criterion (AIC)
Number of models evaluated: 100
Selected model: ARDL(2,0,0)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
Y(-2)	0.310055913959362	0.145985483301243	2.12388181994534	0.03921046287565403

[11]) We utilized the linear, semi-logarithmic, and double-logarithmic forms for measurement, but the results were not significant. Therefore, we relied on the ordinary data model, which is the linear model.

X1	0.0641991825257 1559	0.03695419736269 097	1.73726361570313	0.08918155985729376
X2	0.0057764712611 98695	0.00249236142047 3798	2.317669987084212	0.02507230705298068
C	-4.8721325985412 31	2.64717847565277 9	-1.840500231983713	0.07229469731322449
R-squared	0.7925776453019 105	Mean dependent var		7.959999999940001
Adjusted R-squared	0.7741401026620 802	S.D. dependent var		2.91251365408451
S.E. of regression	1.3841639475136 08	Akaike info criterion		3.58270916948327
Sum squared resid	86.215942511840 39	Schwarz criterion		3.773911470026084
Log likelihood	-84.567729237081 74	Hannan-Quinn criter.		3.655520096060958
F-statistic	42.987162703001 65	Durbin-Watson stat		2.101490174933443
Prob(F-statistic)	8.0199108561800 22e-15			

*Note: p-values and any subsequent test results do not account for model selection.

Source: Based on the researcher's work using the (Eviews 13) program.

According to the results in Table (2), the equation is as follows:

$$ie = 4.87 + 0.064\ Y^* + 0.007\ EX \quad \ldots (6)$$

The estimation results for the above model indicate that the sign of the exchange rate is consistent with the assumptions of economic theory. An increase in the exchange rate of the local currency by (1%) leads to an increase in the expected profit by (0.007%). This is because a rise in the local currency exchange rate results in a decrease in import costs, thereby increasing project profits in the local currency (assuming that the project is financed in local currency). Conversely, the estimation results show that the targeted growth in real GDP at constant prices and the expected or participatory profit are in line with the assumptions of economic theory, as the sign appeared positive. This aligns with economic theory, where the relationship is direct; thus, an increase in the targeted economic growth rate by (1%) leads to an increase in expected or participatory profit by (0.064%).

The results of the econometric study indicate the significance of the estimated model through the significance test of the estimated parameters (P-value) and the error correction results. All independent variables included in the model have a significance level of less than (5%), indicating that these variables have a substantial and significant effect. The adjusted R^2 value is statistically acceptable, indicating that the independent variables in the model affect the dependent variable by (79%), while the remaining (21%) is attributed to various other factors not included in the model.

Moreover, the model passed all econometric tests, demonstrating no autocorrelation problems among the residuals, as shown by the Durbin-Watson (DW) test at significance levels of (1%, 5%). Additionally, there is a short-term cointegration relationship among the variables, as

indicated by the stability of the structural parameters in the model. This means that there is no separation between the real and monetary sectors, highlighting the effectiveness of the interest rate alternative (expected or participatory profit) in influencing economic activity. Therefore, there is a necessity to find an alternative to the interest rate and shift toward an Islamic monetary policy.

3. Findings:

1. The role of monetary policy and the objectives that the Central Bank of Iraq aims to achieve lead us to consider Islamic financial tools and innovations. These can assist the traditional central bank in fulfilling its roles and responsibilities within the framework of Sharia principles. Moreover, a gradual shift toward an Islamic monetary policy for the Central Bank of Iraq is possible by finding an alternative to the interest rate.

2. The description of the model for the monetary policy rule in light of Islamic theory is based on economic theory or on the available information regarding the phenomenon under study, which the researcher investigates through the variables measured in previous research and empirical studies.

3. This study represents an attempt to apply a monetary policy from an Islamic perspective in Iraq by establishing structural foundations for monetary policy using several scenarios. It seeks to create a monetary policy equation in Iraq and align its tools with the framework of Sharia after being statistically and mathematically tested. This study employed a time series consisting of 13 years based on annual and quarterly data and formulated scenarios based on indicators that facilitate the transition from a traditional monetary policy to one aligned with the concepts of theory and Sharia.

4. There is no separation between the real sector and the monetary sector, which demonstrates the effectiveness of the interest rate alternative (expected or participatory profit) in influencing economic activity.

4. Recommendations

1. Implementation of Effective Islamic Monetary Policy: The Central Bank should adopt an effective Islamic monetary policy to control the money supply and regulate the flow of capital in and out of the country. The goal is to manage inflation, maintain the exchange rate of the national currency, achieve targeted growth in GDP, reduce unemployment, and achieve a balance in the balance of payments.

2. Coordination with Islamic Banks: In an Islamic society, the monetary authority should maintain a relationship of organization and coordination with Islamic banks, facilitating collaboration in the implementation of economic development plans. To achieve this, it needs to retain a diverse range of financial tools and products that enable it to manage liquidity profitably while providing the necessary flexibility to respond to changes in the economic environment.

3. Gradual Transition to Islamic Monetary Policy: The shift from traditional monetary policy to Islamic monetary policy should be gradual, with a stepwise Islamicization of the banking system. This process should leverage the experiences of countries that have historically transitioned to an Islamic monetary system.

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