REPUBLIC OF AZERBAIJAN

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ABSTRACT

of the dissertation for the degree of Doctor of Philosophy

IMPROVING THE INTERRELATIONSHIP BETWEEN MONETARY AND FISCAL POLICY IN THE REPUBLIC OF AZERBAIJAN

Specialization: 5301.01 – Domestic Fiscal Policy and Public Finance

Field of Science: Economics

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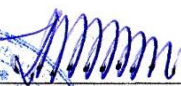
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INTRODUCTION

Relevance and Degree of Development of the Topic:
One of the key issues faced by both developing and developed countries is inflation, budget deficit, and accumulated public debt. Furthermore, researchers often highlight the financing of budget deficits through seigniorage (income generated from the issuance of both cash and non-cash money, defined as the difference between the production cost of banknotes and their nominal value) as the main cause of high inflation in many developing and transition economies. This indicates that, in most cases, high inflation is linked to the budget deficit. Over time, accumulated problems in the fiscal sphere and miscalculations in monetary policy can lead to outcomes such as hyperinflation or a debt crisis.

The government and the Central Bank are associated with the consolidated budget constraint of the public sector: typically, the current budget deficit is financed through new government debt and seigniorage. On the one hand, the Central Bank, which controls the money supply, has an important goal – to maintain low and stable inflation. On the other hand, the Central Bank must also address issues related to financial system stability, particularly the stability of public debt. This means that even under formal independence from the government, the Central Bank is often required to address fiscal issues, using seigniorage to cover a part of the budget deficit. In other words, the policies of the government and the Central Bank must be aligned with each other.

Fiscal and Monetary Policy: The Impact on Economic Dynamics
Fiscal and monetary policies have distinct, and at times opposing, effects on economic dynamics. Therefore, two possible scenarios for the manifestation of the results of fiscal-monetary interactions can be presented: 1) a disruption of macroeconomic equilibrium, leading to a worsening of its disruptive effect on the economy; 2) achieving financial stabilization through effective public finance policies. It is clear that the first scenario does not take into account the specifics of each policy individually, while the second is based on a synergistic

effect, assuming the coordinated use of fiscal and monetary tools in line with the principle of complementarity.

Both foreign and local scholars have always paid special attention to the issues of fiscal and monetary policy. The 2009 financial and economic crisis further emphasized the importance of this issue, highlighting the necessity of achieving financial stabilization and the post-crisis recovery of the economy. This led to the identification of new goal vectors for implementing both fiscal and monetary policies, as well as the selection of tools and levers for their successful resolution, resulting in the formation of new approaches. However, given the frequent opposing effects of these policies on macroeconomic indicators, there is a need to develop a more effective model of fiscal-monetary interaction. At the same time, fiscal and monetary policies have been given special attention in the implementation of various state programs and legislative acts—such as the "Azerbaijan 2030: National Priorities for Socio-Economic Development" (Decree of the President of the Republic of Azerbaijan, February 2, 2021), "Strategic Roadmaps for National Economy and Key Sectors" (Decree of the President of the Republic of Azerbaijan, December 6, 2016), the Decision of the Cabinet of Ministers of the Republic of Azerbaijan on approving the unified budget classification of Azerbaijan (October 11, 2018), and the Law of the Republic of Azerbaijan on the "Budget System" (July 2, 2002), among other directive documents. This legislative framework has created favorable conditions for the development of monetary and fiscal policies.

As a result of the 2020 Patriotic War, the restoration and resettlement of the territories liberated from occupation has been identified as one of the main priorities in the 2024 state budget. To this end, it is planned to allocate 4 billion manats for the implementation of the first State Program of the "Great Return" in that year. Therefore, the allocation of 4 billion manats for the implementation of the first State Program of the "Great Return" in the liberated territories is not a random decision, as this issue will remain a focal point in the expenditure section of the state budget in the coming years. In recent years, including in the 2024 state budget, special attention has been given to financing key sectors such as social welfare, the military, healthcare,

education, and other important areas. In this sense, new challenges in the field of fiscal and monetary policies have defined the selection of the dissertation topic and justified its relevance.

Degree of Development of the Topic:

It should be noted that individual aspects of monetary and fiscal policies have been sufficiently explored in the works of Azerbaijani scholars such as Səmədzadə Z.Ə., Ataşov B.X., Bağırov M.M., Ələkbərov Ə.Ə., Həsənli M.X., Xudiyev N.N., İbrahimov E.Ə., Kəlbiyev Y.A., Qafarov Ş.S., Quliyeva A.E., Məmmədov Z.F., Məmmədov S.M., Novruzov N.A., Sadıqov E.M., and others.

Research on the improvement of the interrelation between monetary and fiscal policies has been conducted in CIS countries by economists such as Afanasyev M.Y., Zernova L.E., İqonina L.L., Karanina E.V., Mayevskiy V.İ., Kuzmenko V.V., Molodıx V.A., Kovalçuk T.T., Kurıleva O.İ., Kurılev A.İ., and others. Among the researchers from developed countries, some of those who have studied this area include Akram T., Li H., Buckle R.A., Blinder A. S., Cevik E.I., and others.

However, in these studies, the interrelation between monetary and fiscal policies has not been comprehensively examined with a consideration of the specific features of the issues at hand. In general, the interrelation between monetary and fiscal policies, and in this regard, the policy of improving this relationship, is directly addressed in our research.

Object and Subject of the Research:

The object of the research consists of the state institutions, regulatory bodies, and financial structures involved in the interrelation of monetary and fiscal policies in the Republic of Azerbaijan. The subject of the research includes the issues of improving the interrelation between monetary and fiscal policies, including the existing regularities, applied methods and tools, as well as the factors influencing these relationships.

Aim and Objectives of the Research:

The aim of the dissertation is to study the scientific essence of the interrelation between monetary and fiscal policies from both theoretical and practical aspects, as well as to determine the role of this

interrelation in economic growth. To achieve this aim, the following tasks have been set and addressed in the dissertation:

☐ Investigating the research possibilities of the interrelation between monetary and fiscal policies;

☐ Examining theoretical approaches to the classification of the interrelation between monetary and fiscal policies;

☐ Identifying indicators that contribute to the effective coordination of monetary and fiscal policies;

☐ Assessing the interrelation between monetary and fiscal policies and their efficiency;

☐ Analyzing the efficiency of state regulation of the interrelation between monetary and fiscal policies;

☐ Recommending key diversification directions for monetary and fiscal policies;

☐ Developing proposals for the improvement of monetary and fiscal policies in ensuring sustainable economic development.

The methodology of the research is based on modern analytical tools and a systemic approach applied in studies focused on the interrelation between monetary and fiscal policies. The dissertation utilizes econometric and statistical analysis, logical generalization, forecasting, as well as methods of grouping and comparative evaluation.

Main Propositions Defended in the Dissertation:

The following propositions have been put forward in the dissertation regarding the investigation of the interrelation between monetary and fiscal policies:

☐ The coordination of monetary and fiscal policies, through the systematic application of criteria, stimulates overall economic activity;

☐ The distribution of authority between key institutions, such as the Central Bank and the Ministry of Finance, within the broader context of macroeconomic regulation, significantly impacts socio-economic progress;

☐ There exists a functional dependency between the forms of interaction between monetary and fiscal policies and the relationships among states, business entities, etc., with respect to both internal and external threats;

The relationship between fiscal policy, long-term interest rates, and monetary policy should be effectively resolved based on the HANK model (Heterogeneous Agent New Keynesian Model);

 The management of national debt and the automatic stabilizing mechanisms of counter-cyclical fiscal policy should be more widely utilized;

 In contemporary conditions, the primary objective of monetary policy is to focus on ensuring the sustainability of national economic development and creating an environment that facilitates economic growth.

The Scientific Novelty of the Research:

 A new approach to the classification of criteria for the coordination of fiscal and monetary policies has been proposed;

 The calculation of the monetary policy and the society's integral damage function has been carried out using the example of Azerbaijan;

 Rules for the application of weak, medium, and strong integration forms of monetary and budget policies have been developed;

 The use of the HANK model to evaluate the relationships between fiscal policy, long-term interest rates, and monetary policy in Azerbaijan has been substantiated;

 The classification of elements of the optimal tax mechanism of fiscal policy has been refined and systematized in line with modern conditions;

 The threshold indicators of financial-monetary policy in ensuring sustainable economic development have been clarified and grouped.

The Theoretical and Practical Significance of the Research:

The theoretical significance of the dissertation lies in the fact that the specific proposals and recommendations made for the improvement of the interrelation between monetary and fiscal policies in Azerbaijan, along with the developed methodological foundations for managing the coordination of these policies, can serve as a reliable source for future research on this topic.

The propositions outlined in the dissertation can be utilized in the preparation of relevant projects and programs, in the activities of government organizations, as well as in the teaching of the "Finance"

and "Monetary Policy" courses at higher education institutions, thus defining the practical significance of the research.

Approval and Application:
The topic of the research aligns with the general direction of scientific research at the Department of "Finance and Banking" of Azerbaijan Cooperative University and was discussed and approved at regular scientific seminars.

The main essence of the dissertation, including the theoretical-methodological and practical considerations, new scientific approaches, proposals, and recommendations put forward by the author, has been presented at various levels of scientific-practical conferences. In total, the author has published 5 scientific articles (1 abroad) and 4 theses (1 abroad). The main findings of the research are reflected in the following theses: "Aspects of the Interaction of Fiscal and Monetary Policies" (Nakhchivan, 2022), "Efficiency of Budget Expenditures and Its Determination" (Baku, 2022), "Directions of Interaction between Monetary and Fiscal Policies" (Moscow, 2023), and "Ways of Diversifying the Interaction of Monetary and Fiscal Policies" (Baku, 2023). Published scientific works include "The Impact of Fiscal and Monetary Policies on Economic Development" (Baku, 2022), "Research Methods of the Interaction of Monetary and Fiscal Policies" (Baku, 2022), "Mechanisms of Interaction between Budget-Tax and Monetary Policies" (Baku, 2022), "Indicators of Effectiveness of Monetary and Fiscal Policies in Modern Economic Conditions" (Baku, 2022), and "Factors Affecting the Systemic Unity of Monetary and Fiscal Policies" (Moscow, 2023).

Organization where the dissertation was carried out: Azerbaijan Cooperative University.

Structure and Volume of the Dissertation: The dissertation consists of an introduction, three chapters, a conclusion, and a list of references. The introduction contains 11,989 characters, the first chapter contains 61,039 characters, the second chapter contains 44,579 characters, the third chapter contains 80,629 characters, the conclusion contains 10,280 characters, and the list of references consists of 21,040 characters. The total text of the dissertation, excluding tables, graphs, appendices, and the reference list, is 228,416 characters.

KEY POINTS PRESENTED FOR DEFENSE

1. The systematic application of criteria for coordinating monetary and fiscal policies stimulates overall economic activity.
Inflation targeting is currently one of the widely adopted monetary policy regimes. In 2016, over 30 countries applied this regime. By adjusting the central bank's interest rates, it influences the decisions of economic agents, thereby attempting to control the inflation rate. However, various challenges may arise in achieving the priority goals using monetary measures. One such challenge is the fiscal policy, which may not be aligned with the inflation target. Therefore, examining the interaction between fiscal and monetary tools and understanding how they affect the government's economic policies, as well as the possible outcomes, is one of the current key issues.

In modern socio-economic development, increasing the functional efficiency of fiscal and monetary policies is one of the fundamental problems in economic theory and practice. Fiscal policy refers to the government's influence on the economic climate through changes in government spending and taxation.

Monetary policy is one of the four main macroeconomic tools based on the monetary system's ability to influence the money supply and, consequently, interest rates, which in turn affects investment and real GDP. The analysis of fiscal and monetary policies has developed along several directions, with potential for joint action:

- From the perspective of the new Keynesian economic paradigm, fiscal policy's exogenous or passive role is studied, alongside the investigation of optimal monetary policy. Here, the central bank's objectives, tools, advantages, and criteria for optimal behavior are analyzed based on its independence and conservatism.

- The interaction of fiscal and monetary policies is analyzed from the viewpoint of general dynamic equilibrium, considering various threats. The role of fiscal policy is viewed as a rule for fiscal authorities, primarily in the form of automatic stabilizers (assuming full independence of the central bank), with an investigation of the relative balance between fiscal and monetary policies, as well as the strategic alignment of fiscal and monetary tools.

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- The theoretical game models based on the institutional changes in the interaction between fiscal and monetary authorities are used to evaluate this interaction from the perspective of public welfare theory. Among existing studies, the theories focusing on the interaction of fiscal and monetary policies can generally be divided into two large groups.

The first group of research examines the issue of choice between output and inflation based on the coordination of fiscal and monetary tools. This approach has been somewhat extensively discussed by Russian researchers such as Pekarskiy S.E., Atamanchuk M.A., and Merzlekov S.A., who developed a theoretical game model adapted to an export-oriented economy with a stabilization fund.

The second group explores the sustainability of government debt and the inflation rate. These works study the impact of fiscal authorities on inflation, arguing that inflation is not just a monetary phenomenon, but also a fiscal one.

From classical theory, Sargent, Woodford, Bruno, and Fischer models are distinguishable. The second direction refers to the active and passive behavior of monetary and fiscal tools.

Other authors econometrically assess the equations for monetary and fiscal policies. At the same time, the active/passive behavior of the authorities is defined in terms of coefficients. The Taylor rule is used for analyzing the behavior of the central bank.

Based on the combination of monetary and fiscal authority behaviors, David proposed a classification of the economic situation (see Table 1). We consider this to be a more optimal classification. An econometric analysis of monetary policy behavior was conducted using quarterly data from 1990-2016.

Table 1. Classification of the Interaction Between Fiscal and Monetary Policy

Interaction States		Monetary Policy	
		Active	Passive
Fiscal Policy	Active	Instability	Fiscal monetary theory
	Passive	Ricardian equivalence	Uncertainty

Source: Compiled by the author.

The authors of modern theoretical models considering the interaction

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between fiscal and monetary policies conclude that an active policy regime by the Central Bank is necessary to stabilize the inflation level and the dynamics of public debt.

2. In the context of overall macroeconomic regulation, the distribution of powers between key responsible institutions, such as the Central Bank and the Ministry of Finance, significantly affects the processes of socio-economic progress.

The unity of fiscal and monetary policies has a significant impact on the priority and effectiveness of monetary and budgetary policies during different phases of the economic cycle. State debt, therefore, plays a unique role in this process, influencing the development of the relationship between the state's monetary and fiscal policies. According to theory, the current growth of government debt, which is based on future tax revenues, should not affect people's consumption or capital accumulation. The practical relevance of this theory, particularly when evaluating D. Ricardo's proposals, is addressed through the Ricardian equivalence hypothesis in economic theory. This theory studies the key relationships between the state's monetary and fiscal policies, identifies the important factors determining them, and explores indicators such as the economic cycle's positive impact, monetary inflation, the relationship between the roles of the Ministry of Finance and the Central Bank, and the influence of state debt.

Monetary and fiscal policies are closely intertwined. Central banks and governments pursue the same goals—reducing inflation, stimulating production, and stabilizing the financial sector. Fiscal regulation determines the volume of government debt, and the imbalance in the state budget often leads to high inflation. The interaction between the government and the Central Bank is one of the key challenges in establishing optimal macroeconomic policy.

In contemporary scientific literature on modeling the strategic interaction of fiscal and monetary policies, two main problem groups jointly addressed by the government and the Central Bank can be identified. The first area of research into the interaction of fiscal and monetary policies concerns the sustainability of government debt and inflation levels. Authors suggest that the central bank is independent and conservative, meaning it is more focused on controlling inflation than on increasing production.

In Azerbaijan today, the Central Bank uses the reserve requirement tool to influence the money supply. The reserve requirement determines the ratio of reserves held by the Central Bank to the deposits and rewards placed by banks. This indicator directly impacts the formation of bank reserves and the provision of credit opportunities.

The formation of money demand in Azerbaijan has its unique characteristics. Transaction, precautionary, and speculative factors influence the volume of money demand.
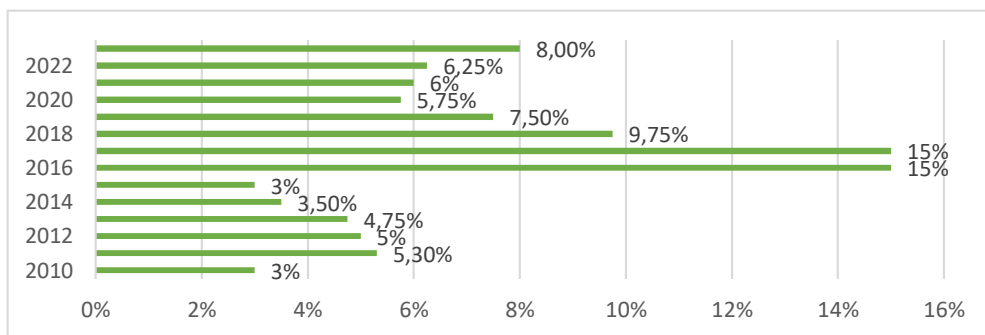

Figure 2. Information on the level of change in the discount rate [1]
(The indicators for the month of December for the respective years were taken)
Source: Central Bank of the Republic of Azerbaijan

Overall, research shows that in recent years, there have been no significant changes in interest rates in the country, and the impact of inflation on nominal interest rates has been minimal. At the same time, the level of interest rates remains high relative to the existing volume of aggregate savings and investment.

Over the past 12 years, the share of the oil and non-oil sectors in GDP production has changed. This can also be seen in the table below.

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[1] https://cbar.az/page-40/statistical-bulletin

Table 2. In the years 2012-2023 in the Republic of Azerbaijan
The share of oil and non-oil sectors in the production of GDP

Years	gross domestic product (GDP)			Non-oil GDP		Capital investment		nominal earnings of the population		Nominal average monthly salary		Consumption price index	
	Total, million Manat	Growth rate, %	GDP deflator	Total, mln. manats	Growth rate, %	Total, mln. manats	Growth rate, %	Total, mln. manats	Growth rate, %	Total, manat	Growth rate, %	compared to the previous month, %	average annual, %
2012	53995,0	102,2	101,5	26165,4	109,6	15338,5	118,0	34769,5	113,8	396,0	108,7	0,7	1,1
2013	57708,2	105,8	99,6	29982,8	109,9	17872,1	115,1	37562,0	108,0	420,5	106,2	1,9	2,4
2014	58977,8	102,8	98,6	33038,2	106,9	17615,8	98,3	39472,2	104,8	444,3	105,7	0,5	1,4
2015	54380,0	101,1	91,1	34500,9	101,1	15957,0	88,9	41744,8	105,7	464,4	104,5	4,4	4,0
2016	60425,2	96,9	114,7	35951,2	95,6	15772,8	78,3	45395,1	108,7	498,6	107,4	3,0	12,4
2017	70135,1	100,1	116,0	40012,3	102,7	17430,3	102,8	49187,9	108,3	528,2	105,9	0,5	12,9
2018	80092,0	101,4	111,5	41588,6	101,9	17244,9	95,7	53103,7	109,2	544,1	102,9	0,8	2,3
2019	81896,2	102,5	100,2	44481,8	104,0	18539,5	105,5	57035,0	107,4	634,8	116,6	0,5	2,6
2020	72578,1	95,8	92,4	44862,1	97,1	17226,1	92,7	55726,1	98,2	707,3	111,4	0,8	2,8
2021	92857,7	105,6	121,3	51082,9	107,2	16815,5	95,5	57181,5	102,6	732,1	103,4	1,6	6,7
2022	133825,8	104,6	137,3	61619,5	109,0	18272,3	105,5	69163,0	120,5	839,4	114,7	1,0	13,9
2023	123005,5	101,1	90,5	68341,3	103,7	20296,6	109,8	78050,2	112,8	933,8	111,2	0,5	8,8

Source: Bulletin of the Central Bank of the Republic of Azerbaijan [149].

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Thus, it can be generally stated that the efficiency of fiscal policy largely depends on the government's response to changes occurring in the economy.

3. The forms of interaction between monetary and fiscal policies have a functional dependence on internal and external threats in the relationships between states, business entities, and others.

The criterion for the optimality of macroeconomic policy is the losses incurred by society, the government, and the Central Bank. Below, the loss functions of the government, the Central Bank, and society, which are necessary for further analysis of the model we use, have been investigated. The effective implementation of fiscal and monetary policies requires comprehensive coordination by the relevant state authorities.

The coordination of actions between the government (State Tax Service and Ministry of Finance) and the Central Bank must primarily take into account the necessity of conducting a sustainable policy at the macroeconomic level.

As seen in Table 3, net foreign and domestic assets in the national economy showed positive dynamics from 2017 to 2023.

Table 3. Key Macroeconomic Results of Monetary Policy in Azerbaijan (in million manats, at the end of the period)

Date	Net Foreign Assets	Net Domestic Assets	Economy's Demand	Broad Money Supply	Broad Money Supply in Manats	Velocity of the Manat
2017	15051,3	7720,8	11363,2	22772,1	12466,4	5,63
2018	14951,3	9109,1	13057,8	24060,4	14643,6	5,45
2019	16923,4	11942,9	15036,4	28866,3	18238,6	4,48
2020	18435,9	10749,9	14933,9	29185,8	20305,5	3,57
2021	20171,0	14475,6	17432,9	34646,6	23874,9	3,89
2022	25030,8	17794,1	20472,8	42824,9	29565,6	4,53
2023	25216,5	19856,9	23505,8	45073,5	35371,8	3,48

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The distribution of powers in this manner reflects the question of which of these institutions— the Central Bank or the Ministry of Finance—has a greater impact on economic growth when solving

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priority macroeconomic issues. An analysis of international practices indicates that four main roles can be distinguished between them:

1. The Central Bank and the Ministry of Finance have an equal impact on economic growth, but they make decisions without consulting each other.

2. The Central Bank and the Ministry of Finance have an equal impact on economic growth, but they make decisions in coordination with each other.

3. The Central Bank has a greater impact on economic growth than the Ministry of Finance.

4. The Ministry of Finance has a greater impact on economic growth than the Central Bank.

Our analysis shows that, currently, the Central Bank of Azerbaijan holds more weight than the Ministry of Finance. This indicates that the existing macroeconomic regulation system in the country is of a monetary nature. This is reflected in the fact that the primary method for achieving the most important goals is related to monetary policy, while fiscal policy, which involves ensuring the functioning of the government apparatus and creating institutional, infrastructure, and other conditions for economic development, takes a secondary role.

For the provision of financial stability, it is necessary to reconcile the monetary and fiscal components of financial regulation, as well as coordinate decisions in the medium and long-term perspective. The result of such coordination could be the balanced dynamics of the country's national debt. Compared to developed countries, the historical dynamics of Azerbaijan's national debt over several years are shown in Chart 3.
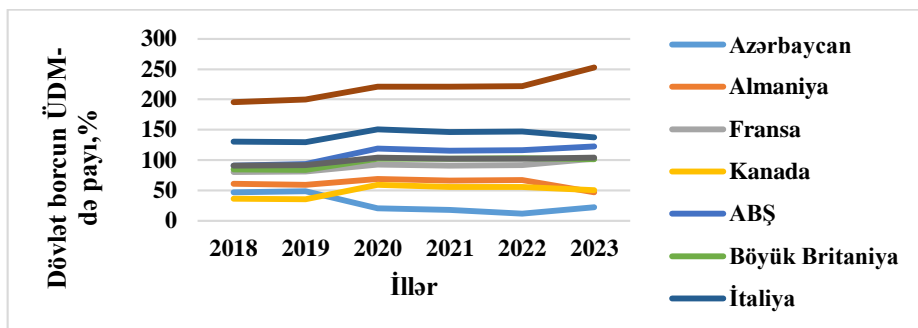
Chart 3. Comparative Dynamics of the Share of Public Debt in GDP for
Azerbaijan and Foreign Countries
Source: Prepared by the author.

In general, in our opinion, several conclusions can be drawn that prevent fiscal dominance:

• Direct government financing through credit is prohibited by law in order to avoid inflationary consequences.

• The Central Bank is allowed to acquire government securities exclusively on the secondary market and solely for the purposes of monetary policy.

• The Central Bank should avoid quasi-fiscal operations that lead to a loss of control over monetary policy tools and the money supply.

• Let me know if you'd like more translations or any adjustments!

4. The relationship between fiscal policy, long-term interest rates, and monetary policy should be efficiently addressed based on the HANK model (Heterogeneous Agent New Keynesian model).

The Heterogeneous Agent New Keynesian (HANK) model offers a natural framework for analyzing the interaction between fiscal and monetary policies. These models represent real characteristics such as incomplete markets and heterogeneity in income and wealth distribution, which makes them particularly suitable for analyzing policies that involve significant redistribution. The model examines the relationships between fiscal policy, long-term interest rates, and monetary policy.

To analyze this relationship, we propose using the HANK model. Given that households are heterogeneous in terms of income and

wealth, this New Keynesian model is characterized by incomplete markets and specific income shocks. The model includes parameters such as progressive taxation, aggregate demand shocks, and the zero lower bound on nominal interest rates. Special attention is given to the role of progressive taxation.

It is important to note that the main feature of the HANK model is its practical adequacy, making it an empirical real process for assessing the government's overall revenue, considering the key parameters of fiscal and monetary policies.

Our research shows that ensuring financial stability requires the alignment of the monetary and fiscal components of financial regulation, as well as the coordination of decisions in the medium and long-term perspective. When government debt is denominated in national currency, monetary levers, by regulating inflation and interest rates, will also influence the devaluation rate of this debt and its related contingent costs (contingent costs are the amounts of money included in the expenditure budget to cover potential unplanned events). This, in turn, will facilitate the reduction of inflation and interest rates. This will help reduce the risk of default for the central bank.

For this purpose, we believe that the establishment of a unified state financial policy, which includes the Central Bank's monetary policy as a key component, is essential. This body should have the necessary authority to solve issues related to aligning the directions of financial system development and mechanisms for coordinating monetary and fiscal policies. At the same time, without reducing the Central Bank's role and independence in the formulation and implementation of monetary policy, the functions of developing a unified financial policy should be entrusted to a specific government body, such as the Ministry of Economy or the Ministry of Finance, according to international practice.

One of the special coordinating bodies for monetary and fiscal policies could be a Monetary Policy Committee within the structure of the Central Bank of Azerbaijan, whose responsibility would be to prepare and implement agreed-upon monetary policy.

The primary task of both monetary and fiscal policies is to prevent inflation and ensure its low level over the long term. Both the

government and the central bank share equal responsibility for fulfilling this task, using their respective functions and available tools.

5. "The management of public debt should more extensively utilize the automatic stabilizing mechanisms of countercyclical fiscal policy."
Implement the tax policy formulated by the state, a tax mechanism consisting of a set of taxation rules , norms, methods and forms should be applied , from planning tax and collection revenues to their accounting and organization of tax returns . The tax mechanism, together with the tax policy, is an integral element of the country's financial mechanism. Using the tax mechanism, state authorities carry out regulation in the field of taxation and create the basis for effective interaction of all tax relations of authorized state bodies with each other, as well as taxpayers with authorized bodies.

In our opinion, measures to improve fiscal policy at the regional level should be divided into specific and general; methodological and organizational-legal; measures whose main goal is to expand the tax base of the regions, increase the efficiency of state activities in ensuring the economic development of territories, and modernize fiscal management tools at the regional level.

Approaches to the concepts of procyclical and countercyclical policy are not unambiguous. *Procyclical fiscal policy* is an increase in budget expenditures during the highest phases of economic growth, that is, the expenditure of financial resources in "good times". *Countercyclical fiscal policy* is an increase in budget expenditures during the lowest phases of economic growth, that is, the saving of fiscal resources during the highest phases of economic growth, that is, the stimulation of demand . Thus, the concept of countercyclical fiscal policy implies the expenditure of financial resources during the crisis phases of economic development. In our opinion, Azerbaijan should pay more attention to countercyclical fiscal policy.

The limiting feature of increasing the level of budget balance is automatic stabilizing mechanisms. The application of automatic stabilizing mechanisms in resource-oriented countries depends on the coordination of current budget expenditures with non-resource revenues; increasing the sensitivity of public investment expenditures; cyclical

regulation of the use of stabilization funds. There is a government of a country that, while the budget surplus should constitute a maximum of 1% of GDP, has developed a countercyclical mechanism that requires the budget deficit to be reduced to 30% of the annual growth rate (which is 5% more than the real GDP growth rate).

The main instruments of countercyclical fiscal policy include fiscal adjustment, budget expenditure adjustment, and public debt management policy. All types of instruments can be applied both in growth conditions (growth prevention policies are applied) and in weakening conditions (growth stimulation policies are applied). In Table 4, we have summarized and classified the main mechanisms of countercyclical policy.

Table 4 .

Countercyclical fiscal policy measures

Tools	Mechanism	Expected result
In the context of economic growth		
Preventive fiscal policy	Reducing state budget expenditures, increasing the tax burden. Repaying or minimizing state debts	Smoothing economic cycles. Reducing the level of public debt
Financial markets regulation policy	Weakening of regulatory and control mechanisms	Increased risks in the financial system
In the context of a weakening economy		
Tools	Mechanism	Expected result
Stimulative fiscal policy	Expansion of state budget expenditures, reduction of tax burden, issuance of government bonds	the money supply , stimulating entrepreneurial activity. Increasing the level of public debt
Financial markets regulation policy	Strengthening regulatory and supervisory mechanisms . Reimbursement of losses in the financial system through public investments	Minimizing financial system volatility

Source: Table developed by the author.

Application in the experience of many developed and developing countries . Within the framework of this study, we reviewed the experience of recent financial and economic crises of recent decades and

classified the policies of countries in terms of instruments and the results of their implementation, as well as the degree of development of economies . It should be noted that the experience of developed and developing countries differs to some extent, at least in terms of the breadth of the spectrum of macroeconomic regulation instruments used, especially those applied during fiscal regulation of the economy . The experience of many countries has been studied by us from the point of view of fiscal and monetary regulation in crisis conditions. Within the framework of our study, we paid attention only to the examples of countries that have applied countercyclical regulation instruments, which, in our opinion, are a more effective means of ensuring sustainable economic development in the country.

6.   In modern conditions, the main goal of monetary policy is aimed at ensuring the sustainability of the development of the national economy and creating an environment that ensures the realization of economic growth.

As is known from international experience, the main method of implementing the main functions of the Central Bank is monetary policy . In economic theory, its content is defined as a system of measures used by the state to prevent price and inflation growth, as well as to ensure an increase in production volumes and employment of the population, thereby maintaining macroeconomic balance by influencing the amount of money in circulation . In practice, monetary policy is understood as a complex of measures aimed at ensuring the stability of the national currency based on the use of a set of methods and tools, which include interest rates on the Central Bank's operations in the field of money circulation and credit; mandatory reserve requirements; operations with securities in the open market; refinancing of banks ; determination of money supply growth guidelines ; currency interventions; regulation of capital imports and exports; issuance of Central Bank bonds and operations with them; direct quantitative restrictions, etc. The analysis of these two definitions allows us to conclude that theoretical and applied approaches to the characterization of the essence of monetary policy differ.

In our opinion, such basic conditions are as follows:

• A high level of independence in the development and implementation

of the Central Bank's monetary policy, and in determining strategic, intermediate and operational objectives, as well as the instruments for achieving them;

- of a developed financial sector and a well-functioning capital market, and primarily a highly liquid government securities market;

- balanced fiscal policy and its high level of coordination with monetary policy. This is due to the fact that the budget deficit is one of the main factors affecting the level of inflation.

- High level of communication policy of the Central Bank.

In our opinion, the introduction of a national digital currency into circulation can significantly transform monetary policy. Thus, as of July 2020, more than 30 Central Banks have already completed the research stage of assessing the possibilities of introducing a national digital currency into circulation. The Central Banks of China and Sweden have announced full-scale experiments in the practical application of a national digital currency. First, the introduction of a national digital currency requires the opening of individual settlement accounts for all citizens at the Central Bank. In this case, demand stimulation can be carried out by paying benefits to all citizens or to individual categories of the population
.

Secondly, the population and households can store their temporarily free money and assets either in the national digital currency or in accounts in commercial banks. Considering that in the process of reducing costs, financial intermediaries providing settlement and cash services will be removed from many areas of economic relations, it can be expected that the first method of storing funds will prevail.

Third, the Central Bank can minimize public costs during the transition to negative interest rates. Currently, restrictions on the transition to negative interest rates are determined by the possible outflow of funds from commercial banks. If the national digital currency provides for the calculation of interest on cash balances on accounts, the Central Bank will acquire the tool to apply negative rates to all participants in the money market. To prevent the transfer of assets to cash, measures such as limiting the circulation of high-denomination banknotes in the financial and monetary sphere and imposing a limit on the transfer of funds from digital to cash can be taken.

ensuring sustainable economic development through monetary and fiscal policy is the most important direction of our country's economic policy. However, in order to prevent possible economic security threats and achieve sustainable development in the country, it is necessary to form a new system of financial and economic security indicators of the state. The new system of financial and economic security indicators of the state should be calculated not only on the basis of macroeconomic, but also microeconomic indicators. Indicators calculated on the basis of microeconomic indicators will allow to promptly and correctly determine the priority ways of preventing financial risks, taking into account the impact of internal and external threats.

RESULT

The study of the interaction between monetary and fiscal policy has shown that the correct establishment of this relationship is of great importance in ensuring the pace of economic growth. The analysis and study of this process allowed us to come to such a main conclusion that the interaction between monetary and fiscal policy arises on the basis of a single financial and monetary policy, and the process also performs the function of improving various indicators of economic growth (for example, the level of inflation, the volume of public debt, exchange rates, etc.).

At the same time, summing up our research, we should note that the following main scientific results were achieved in the dissertation work, and scientifically and practically significant proposals and recommendations were put forward:

1. Thanks to the great victory in the 44-day Patriotic War in 2020, the return of refugees and internally displaced persons to their homelands has begun. The powerful Azerbaijani state expresses its determination to ensure the mass return of our refugees to the territories liberated from occupation. The restoration of the territories liberated from occupation and ensuring the "great return" is one of the five important priority tasks set by Azerbaijan in the period up to 2030.

2. As a result of the coordination of monetary and fiscal policies, real GDP growth of 3.2% was achieved in 2023. Thus, the ratio of public debt to GDP was maintained at a level below 15% until 2024 , but this

requires additional measures to maintain fiscal stability.

3. the main problems of macroeconomic policy of many developed and developing countries, including the Republic of Azerbaijan, is the management of public debt. The government and the Central Bank control its volume through monetary and fiscal policy. In this case, the Dixit-Lambert model is used to analyze the effect, which takes into account some aspects of export-oriented economies. In this model, the government and the Central Bank are concerned not only with the general goal of controlling the level of public debt, but also with their specific goals: the size of the initial budget deficit and the exchange rate are taken into account.

4. The growth of the money supply was recorded at an annual level of 8-10%, which is associated with the financing of public debt. The average discount rate set by the Central Bank for 2022-2024 was 6.5%. As a result of the increase in interest rates, inflation decreased from 14.4% to 2.4% in 2023. Priorities for monetary regulation were determined through the analysis and research conducted.

5. Restricting the activities of the Central Bank does not meet the interests of economic development, since the Central Bank controls the interest rate, which is one of the main parameters of national economic growth. In such a situation, the Central Bank prioritizes macroeconomic stability in accordance with its goal rather than economic growth. The impact of structural changes in monetary aggregates on economic dynamics has been determined.

6. Due to the lack of a unified methodological approach in the assessment of fiscal policy in the current period due to the different goals set, we consider it necessary to conduct an assessment based on indicators such as efficiency in the formation of revenues and expenditures, as well as budget balancing and sustainability.

7. The development of domestic financial markets implies a higher degree of interaction between fiscal and monetary policies. Domestic financial markets are one of the sources of financing the budget deficit, while the need to pay public debt service costs at market rates is an obstacle to its collection. At the same time, the presence of developed financial markets allows the Central Bank to conduct monetary policy more effectively using indirect market instruments.

8. In our opinion, the effective coordination of monetary and fiscal policies in Azerbaijan is still not at a high level. Therefore, based on the research conducted, the author proposes to implement necessary measures in 4 directions to improve the coordination between monetary and fiscal policies:

- *Alignment of objectives* : Monetary policy implemented by the Central Bank and fiscal policy implemented by the government should be aligned with objectives and strategy.
- *Information sharing* : The Central Bank and the government should establish regular mechanisms to exchange information about their plans and forecasts.
- *Joint problem solving* : When economic problems such as inflation or recession arise, the Central Bank and the government should develop and implement joint measures to solve them.
- *Coordination of instruments* : Monetary and fiscal instruments should be used together to achieve common goals. For example, the Central Bank can set interest rates and the government can change tax policy or spending to support economic growth.

9. It is suggested that a realistic budget process based on a "conservative" macroeconomic forecast be followed, both in relation to economic growth (the key variable in any budget) and exogenous variables such as energy prices. The transition to an inflation targeting regime places high demands not only on monetary but also on fiscal policy.

10. The Heterogeneous Agent New Keynesian (HANK) model offers a natural setting for analyzing the interaction between fiscal and monetary policy. This model represents real-world features such as incomplete markets and heterogeneity in the distribution of income and wealth, which makes it particularly suitable for analyzing policies that involve significant redistribution. This model examines the relationship between fiscal policy, long-term rates, and monetary policy. We propose to use the HANK model to analyze this relationship.

11. State tax policy, implemented with the help of tax mechanism tools, is characterized by a specific macroeconomic strategy and a deliberate impact on the development of the economy, which is continuous and relatively constant over time. The elements of the tax mechanism

(fiscal policy measures) are presented in Figure 3.3.1.

12. In modern conditions, the choice of Azerbaijan's monetary policy is aimed at ensuring the sustainability of the development of the national economy and creating conditions for economic growth . In addition, new challenges in the world economy - the global oil price crisis, the negative consequences of the COVID-19 pandemic, and the wars in Ukraine and Israel-Hamas - require the implementation of new methodological approaches to monetary policy, as well as the improvement of its tools and mechanisms.

The main content of the dissertation work has been published in the following scientific works:

1. Fiskal və pul-kredit siyasətinin iqtisadi inkişafa təsiri // – Bakı: "Tikin-tinin iqtisadiyyatı və menecment" elmi-praktiki jurnal, 2022, № 1. – s. 297-303.

2. Pul-kredit və fiskal siyasətin qarşılıqlı əlaqələrinin tədqiqat üsulları // Bakı: "Gənc tədqiqatçı" elmi-praktiki jurnal, 2022, № 2. – s. 267-274.

3. Büdcə-vergi və pul-kredit siyasətlərinin qarşılıqlı əlaqə mexanizmi // – Bakı: Audit jurnalı, elmi-praktiki jurnal, 2022, № 3 – s. 34-46.

4. Müasir iqtisadi şəraitdə pul-kredit və fiskal siyasətin səmərəlilik göstəriciləri // – Bakı: "İpək Yolu" elmi jurnalı, 2022 № 4 – s. 66-77.

5. Fiskal və pul-kredit siyasətinin qarşılıqlı əlaqələrinin aspektləri // – Naxçıvan: "Naxçıvan Muxtar Respublikasında sənayenin diversifika-siyası beynəlxalq iqtisadi inteqrasiya amili kimi" mövzusunda beynəlxalq konfrans, 29 aprel 2022. – s. 311-314.

6. Büdcə xərclərinin səmərəliliyi və onun müəyyən edilməsi // – Bakı: Ümummilli Lider Heydər Əliyevin anadan olmasının 99-cu ildönümünə həsr edilmiş "Keyfiyyət təminatı rəqabətqabiliyyətli iqtisadi inkişafın əsas amili kimi" mövzusunda beynəlxalq elmi-praktiki konfrans, 5 may 2022. – s. 429-431.

7. Факторы, влияющие на системное единство денежно-кредитной и фискальной политики // – Москва: "Конкуретоспособность в глобальном мире: экономика, науки, технологии", 2023 № 5 – s. 297-300.

8. Направления взаимодействия денежно-кредитной и бюджетной политики // – Москва: Инновационные подходы в современной науке: сб. ст. по материалам CXLII междунар. науч.-практ. Конф., 2023 № 10 (42) – s. 98-101.

9. Pul-kredit və fiskal siyasətinin qarşılıqlı əlaqələrinin şaxələndirilməsi yolları // – Bakı: Ümummilli Lider Heydər Əliyevin anadan olmasının 100 illik yubileyinə həsr olunmuş "Heydər Əliyev və müasir türk dünyası" mövzusunda beynəlxalq elmi-praktiki konfrans, 2 may 2023-cü il – s. 442-445.

The defense of the dissertation will take place on April 30, 2025, at 14:00 at the meeting of the ED 2.10 Dissertation Council operating under Azerbaijan State University of Economics.

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