The Central Bank of the Republic of Uzbekistan

RESEARCH AGENDA

2025-2026

Key Priority Areas of the Research Agenda

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I — Improving the effectiveness of monetary policy transmission mechanisms and analyzing inflation expectations of households and business entities

II — Assessing the effectiveness of the economic policies implemented in the country

III — Analyzing financial stability and macro-prudential policy measures

IV — Assessing the impact of new phenomena in the global economy (demographic shifts, geopolitical developments, and fragmentation processes)

V — Ensuring the stable functioning of the payment system under the condition of expanding participants and emerging new services

VI — Analyzing the demand and supply of in economy financing based on micro-level data

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Based on the Central Bank's need for research-based policymaking, the research planned for the upcoming two years will be focused on analyzing the key factors affecting inflation, examining inflation expectations among households and business entities, and maintaining financial stability. In addition, attention will be paid to ensuring the resilience of the payment system amid the expanding participation of market players, as well as to assessing both internal and external economic developments.

The findings of these research efforts will provide valuable input into macroeconomic modeling, enable the adoption of well-informed economic decisions, and deepen the analysis of internal and external macroeconomic dynamics. They will also help identify and mitigate potential risks emerging from global structural transformations and unprecedented phenomena.

The research conclusions derived from each thematic direction will assist in deepening our economic understanding of causal relationships and will contribute to more accurate and effective policy decisions in fulfilling the Central Bank's mandate.

The core idea underpinning these research priorities is the recognition that the Research Agenda should not only address shifts in the economic and financial landscape but also reflect the belief that traditional tools may no longer suffice to answer emerging policy questions. Climate change, the recent COVID-19 pandemic, and ongoing geopolitical instability worldwide vividly demonstrate the types of new factors that are reshaping the research agenda. As such, the Central Bank's analytical toolkit must incorporate a blend of traditional, innovative, and unconventional approaches.

It is important to note that the topics listed in this document do not represent an exhaustive list of all research conducted within the Central Bank. Rather, they highlight the key thematic areas that define new directions for central bank research, while continuing to reflect and complement traditional areas of inquiry.

Research conducted within the scope of key macroeconomic topics will be published in internationally recognized academic journals and presented at conferences and seminars organized by the Central Bank or other national and international platforms.

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Furthermore, collaboration with foreign universities and research institutes will be continuously enhanced to conduct joint research initiatives. By publicly sharing our research agenda, we aim to strengthen cooperation with both domestic and international researchers. We are committed to learning from the knowledge and experience of highly qualified academic circles and the broader research community operating outside the Bank.

In addition, research findings will be regularly published on the Central Bank's official website, particularly in the research section, as well as on the Bank's official social media platforms. At the end of each year, annual reports summarizing completed research and analytical outputs will be prepared and made publicly available.

Our commitment to independence, transparency, and diversity of thoughts remains unchanged. In the upcoming years, our research activities will continue to incorporate internal and external perspectives and foster diverse viewpoints.

I. Enhancing the Effectiveness of Monetary Policy Transmission Mechanisms and Analyzing Inflation Expectations of Households and Business Entities

1.1. Analyzing the factors considered by business entities in setting prices for goods and services

The pricing decisions made by business entities have a significant impact on market stability and inflationary processes. The factors taken into account when setting prices directly affect the economic activity of enterprises and the purchasing power of the population.

Price-setting frequency varies substantially across products: some goods experience price changes monthly, while others are adjusted only once a year. These differences in the duration of price rigidity result in varying degrees of multiplier effects stemming from price changes in goods and services.

The price dynamics of each individual good or service differ from the general price level trend. This is primarily due to the presence of individual (micro-level) factors, in addition to broader macroeconomic influences that affect prices.

Price changes are also closely linked to wage adjustments. This is particularly relevant in labor-intensive sectors, where enterprises tend to revise prices in response to labor cost dynamics.

Given the importance of identifying key pricing trends and influencing factors, analyzing the volatility of prices for goods and services is essential for ensuring the precision and effectiveness of macroeconomic policy.

Moreover, the pricing behavior of business entities provides important insights into the efficiency of market mechanisms in the economy. This, in turn, helps market participants develop more stable strategies.

By conducting both empirical and theoretical analyses of price-setting determinants, policy recommendations can be developed to enhance economic policymaking and support the achievement of internal market stability objectives.

1.2. Assessing the impact of monetary policy on current economic developments

In the current environment of heightened uncertainty, monetary policy remains one of the key tools for ensuring economic stability. This increases the need for regularly assessing the medium-term effects of monetary policy on macroeconomic developments under various scenarios.

Such analysis requires in-depth, research-based studies that support the formulation of optimal policy decisions adapted to the current economic conditions. One of the core areas of focus in this research is the interrelationship between monetary policy and socio-economic policy, both of which directly influence the country's sustainable development. Addressing challenges in the socio-economic sectors, in turn, improves household welfare and enhances the effectiveness of monetary policy.

The impact of monetary policy measures on the economy—particularly on output and labor market indicators—can vary depending on the state of the economy. For instance, a change in the central bank's policy rate may have a different effect during an overheating phase compared to a recession.

Moreover, while lowering interest rates may stimulate demand, raising them does not always lead to a slowdown in economic activity; in some cases, the opposite may occur. Therefore, it is crucial to understand and analyze how economic agents respond to changes in monetary policy.

Reactions also differ across sectors of the economy. The financial sector tends to respond more quickly, while the real sector adjusts more gradually. Likewise, the impact of interest rate changes varies among households and firms. Small businesses and low-income households tend to be more sensitive to such changes.

Studying the impact of monetary policy on current economic processes is essential for developing effective measures aimed at achieving price stability, supporting economic activity, and ensuring sustainable growth. This area of research will therefore remain a priority.

1.3. The impact of current fiscal policy on monetary policy transmission, financial markets, and financial stability

In the coming years, analyzing the impact of current fiscal policy on monetary policy transmission, financial markets, and financial stability will remain one of the Central Bank's key research priorities. These issues are critical for improving the effectiveness of the government's economic policy measures and ensuring macroeconomic stability. Fiscal policy—through tools such as taxation, public expenditures, and external borrowing—has a direct influence on the effectiveness of monetary policy transmission mechanisms.

An increase in government spending can raise domestic demand and intensify inflationary pressures, which may lead to the tightening of monetary policy. Therefore, a deep understanding of the interlinkages and mutual transmission channels between fiscal and monetary policies is essential to ensure the overall coherence of economic policy.

Fiscal policy also has a significant impact on financial markets and financial stability. The size of public debt and the mechanisms used for its financing are among the main factors affecting financial markets. An increase in government borrowing may reduce market liquidity or lead to higher interest rates, thereby negatively affecting the private sector.

Moreover, exceeding established fiscal deficit parameters may directly influence investor decisions and generate risks within the financial system. Through its research on the interaction between fiscal policy and financial markets, the Central Bank aims to support the implementation of measures that ensure financial stability.

Additionally, an expanding deficit may increase the demand for government securities in financial markets while crowding out private sector investments. In such cases, the Central Bank supports economic activity by managing interest rates and liquidity.

From this perspective, if fiscal policy imbalances are not taken into account based on thorough research and analysis, they may intensify economic instability and weaken the effectiveness of monetary policy transmission mechanisms. Therefore, the Central Bank's research in this area plays a vital role in deeply examining the effects of fiscal policy on the financial system, identifying related risks, and developing appropriate countermeasures.

Overall, the Central Bank's research in this field is essential for ensuring the optimal coordination of economic policy measures, enhancing macroeconomic stability, and promoting economic activity. These research efforts contribute to strengthening the alignment between fiscal and monetary policy and improving the effective management of economic processes, thereby creating conditions for sustainable long-term economic development.

This section will cover the following research topics:

- Analysis of economic and institutional factors influencing pricing decisions of business entities
- Assessment of the asymmetric effects of monetary policy
- The impact of inflation on income inequality
- Factors affecting the pass-through from the policy interest rate to deposit and lending rates
- Evaluation of the dynamic effects of deposit and lending rates on inflation
- The role and significance of the exchange rate channel in the transmission mechanism of Uzbekistan's monetary policy
- Forecasting the GDP deflator and quantitatively assessing its relationship with other price indicators
- Estimating the long-term equilibrium optimal credit growth rate for the Uzbek economy
- Analysis of the impact of inflation expectations and interest rates on final consumption
- Assessment of the impact of fiscal policy on the transmission mechanisms of monetary policy
- Evaluation of the monetary policy transmission mechanism under conditions of dollarization
- Assessment of the Balassa-Samuelson effect for the Uzbek economy

II. Assessing the effectiveness of economic policies implemented in the country

2.1. Conducting analyses on key fundamental issues based on mathematical and quantitative assessment

Analyses focused on fundamental issues based on mathematical and quantitative assessment serve as essential tools for better understanding complex economic processes, providing reliable information for decision-making, and optimizing economic policy measures.

Mathematical modeling enables in-depth analysis of the interrelationships between key macroeconomic indicators such as inflation, interest rates, and economic growth. At the same time, quantitative methods help evaluate different economic scenarios and anticipate potential risks within the economy.

In this regard, the Dynamic Stochastic General Equilibrium (DSGE) model and Quantitative Integrated Policy Analysis (QIPA) are among the Central Bank's core tools for assessing economic policy. The DSGE model facilitates the analysis of both short- and long-term effects of policy measures on the economy by mathematically modeling the interlinked dynamics within the economic system.

Quantitative Integrated Policy Analysis allows for the joint examination of economic, social, and environmental factors. This approach evaluates various policy measures in an integrated manner, assessing their impact on economic development and sustainability. It is especially important for ensuring policy coherence and promoting the efficient allocation of resources.

The Central Bank's research based on DSGE and QIPA plays a critical role in the strategic management of economic policy and in evaluating its outcomes. These tools allow for the assessment of both immediate and long-term implications of policy decisions, enabling the Central Bank to design precise and well-founded policy actions.

Today, many countries are developing and utilizing DSGE models to analyze how macroeconomic indicators respond to different shocks and to determine appropriate macroeconomic policies under such conditions through rigorous evaluation.

In addition, these analyses make it possible to evaluate the effectiveness of economic policy instruments and forecast their impact on the economy. Based on the results of such assessments and research, the Central Bank develops recommendations for formulating optimal strategies in the design of economic policy.

2.2. Assessing the effectiveness and adverse consequences of economic policy based on general equilibrium and econometric models

Analyses related to these topics hold particular importance in the Central Bank's research agenda. In particular, the use of general equilibrium models enables the analysis of interlinkages across all sectors of the economic system and serves as a vital tool for assessing the impact of fiscal and monetary policy measures on economic stability and for informing optimal policy decisions.

Specifically, structural and econometric models are employed to assess systematic risks in the housing and mortgage markets, as well as to evaluate the effectiveness of social protection programs and government subsidies allocated to various sectors through the state budget.

Changes in housing prices affect the economy primarily through shifts in household wealth, consumption expenditures, and labor market dynamics. A decline in housing prices negatively influences household wealth, which can reduce consumer confidence and, in turn, weaken secondary demand for goods and services.

Furthermore, falling housing prices may lead to tighter credit conditions. In other words, a drop in housing prices reduces the collateral value available for borrowing, prompting banks and other lenders to raise their mortgage lending requirements, particularly with respect to down payments. This could constrain the financial capacity of potential homebuyers, thereby reducing housing demand further and potentially accelerating the decline in housing prices.

Subsidies allocated from the state budget are typically intended to support economic development by reducing poverty levels, redistributing national wealth, or assisting sectors that are structurally dependent on energy. However, subsidies may fail to achieve these objectives and can potentially undermine the economic, social, and environmental dimensions of sustainable development.

Moreover, subsidies may reduce incentives for innovation and investment, perpetuate inefficient technologies and consumption patterns, and weaken the competitiveness of the private sector. In particular, subsidies in the energy sector may contribute to fiscal imbalances, crowd out more productive public investments (such as in health care, education, or transport infrastructure), exacerbate energy shortages, and increase energy-related losses.

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At the same time, the Central Bank's research based on general equilibrium and econometric models provides a robust scientific foundation for refining economic strategies, evaluating and managing the behavior of economic agents, and mitigating the effects of various shocks. These studies also support the development of well-grounded policy recommendations.

2.3. Developing alternative indicators for macroeconomic variables and generating new data sources based on artificial intelligence and machine learning technologies

Building robust data infrastructure—an essential component of research—and expanding the use of artificial intelligence and machine learning technologies will remain among the Central Bank's strategic priorities in the coming years.

In this context, the list of statistical indicators used to assess external and internal macroeconomic developments through alternative metrics will be refined. New databases will be developed, and particular emphasis will be placed on integrating these data sources into analytical work and research activities.

This section will cover the following research topics:

- Extending the Dynamic Stochastic General Equilibrium (DSGE) model for Uzbekistan's economy to incorporate sterilized interventions
- Improving the methodology for estimating the size of the shadow economy
- Assessing systematic risks in the housing and mortgage markets using modeling approaches
- Evaluating the impact of changes in tax administration on the activities of small and medium-sized enterprises
- Assessing the effectiveness of social protection programs in improving household incomes and living standards
- Analyzing the effectiveness of subsidies allocated to economic sectors from the state budget
- Evaluating the impact of privatization and property rights reforms on economic efficiency
- Assessing the effects of trade policy quotas and tariffs on economic sectors in Uzbekistan using the GTAP (Global Trade Analysis Project) model
- Developing and refining a set of AI-based indicators for monitoring economic activity across industries, regions, and enterprises

- ❑ Nowcasting household final consumption using electronic payment data
- ❑ Assessing the competitiveness of human capital in Uzbekistan
- ❑ Analyzing the level of economic diversification and dependency on raw material exports in Uzbekistan

III. Analyzing financial stability and macro-prudential policy measures

3.1. Ensuring financial stability amid the expansion of micro-financial services and market participants

Ensuring financial stability in the context of the expanding scope of micro-financial services and the growing number of market participants is one of the Central Bank's key priorities.

On one hand, trends related to the growth of micro-financial services and the number of market participants necessitate the study of the economic and social impact of microfinance institutions, as well as the ongoing assessment of their risks and potential implications for financial stability. On the other hand, these developments require the implementation of necessary measures to ensure the sustainable and transparent operation of such institutions by enhancing risk-based supervision systems and improving prudential regulations, including capital adequacy and liquidity requirements.

In addition, it is essential to develop new methods for assessing risks, implement strategies for risk mitigation, and strengthen debt monitoring mechanisms and analytical frameworks through advanced monitoring systems. Another critical area is the promotion of financial literacy among microfinance service users. This includes developing tailored financial literacy programs, organizing training and educational modules that help clients understand debt management and credit terms, and drawing on international best practices in this field.

Empirical research on the socio-economic impact of microfinance services will help clarify their role in promoting economic growth, increasing employment, reducing poverty, and enhancing financial inclusion. The findings and policy recommendations derived from this line of research will contribute significantly not only to strengthening financial stability but also to supporting the long-term and sustainable development of the microfinance sector.

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3.2. Assessing risks that may arise as a result of macroprudential policy implementation

Due to current global policy trends and the rise of transnational risks affecting financial stability, as well as the lessons learned from past global financial crises, central banks are increasingly tasked with improving macroprudential policy frameworks.

Worldwide, efforts are being intensified to monitor interbank liquidity flows, assess the risk levels of systemically important banks, and develop tools for the early identification of potential vulnerabilities. This necessitates comprehensive research on identifying various risks within the banking system, evaluating their interconnections, and, in particular, analyzing how macroeconomic risks impact banking activity.

In this context, the Central Bank must also carry out research focused on identifying and managing risks associated with the digital finance ecosystem, especially as advanced technologies expand the scope and range of digital banking services.

These studies should place special emphasis on managing prudential indicators, and on maintaining financial stability by adopting flexible regulatory approaches to capital and liquidity requirements in stress scenarios.

3.3. Analysis of household debt burden

In recent years, the increase in consumer, mortgage, and auto loans in Uzbekistan—as well as the growing volume of debt acquired through installment-based purchases—has raised concerns about potential risks related to household debt burden.

While these developments play a role in stimulating consumption, the rising debt levels may adversely affect economic growth and household financial stability. Therefore, in assessing credit risk, it is crucial to analyze the balance between household income and expenditures. At the same time, improving financial literacy is essential for promoting responsible borrowing behavior among the population.

The development of digital financial services is also introducing new complexities into the analysis of household debt burden. On one hand, the expansion of online lending facilitates easier access to credit; on the other hand, it may increase risks associated with rising debt levels. Therefore, there is a growing need to identify the risks associated with digital services and to develop effective strategies for their management.

In the future, the analysis of household debt burden will place particular emphasis on improving financial literacy, enhancing prudential supervision tools, and managing risks associated with digital financial services. Research will be conducted to develop policy measures tailored to household financial behavior, taking into account the impact of consumer, mortgage, and auto loans, as well as installment-based purchases, on the overall financial burden.

Household debt analysis plays a crucial role in ensuring financial stability, and research in this area will contribute to reducing financial risks and promoting sustainable economic growth..

This section will cover the following research topics:

- ❑ Analysis of risks arising from the growth of microfinancial services and market participants
- ❑ Identification of systemic risks in banks and assessment of the effectiveness of supervisory mechanisms to mitigate these risks
- ❑ Impact of macroprudential policies aimed at expanding credit volumes on the real sector
- ❑ Analysis of factors influencing banks' lending interest rates through bank-level surveys
- ❑ Assessment of financial literacy among small business entities based on survey data
- ❑ Macroprudential measures to optimize household debt burden
- ❑ Managing risks emerging from the development of digital financial services

IV. Assessing the impact of new phenomena in the global economy (demographic shifts, geopolitical developments, and fragmentation processes)

4.1. The impact of global economic, political, and trade policy changes on the country's macroeconomic policy

In today's era of globalization, economic and political transformations, as well as shifts in trade policy, have a significant impact on the macroeconomic policies of countries. These processes have become critical factors influencing domestic economic stability, the national financial system, and the external trade balance.

Global trade and geopolitical changes—including countries reassessing their international trade partners and shifts in the composition of trade relations—directly affect national economies. Analyzing the implications of these changes for the domestic economy is highly relevant for the research agendas of central banks and supports the development of adaptive policy strategies.

Monitoring global economic conditions—such as international financial flows, exchange rate volatility, and trade balance dynamics—provides valuable insight for the Central Bank in optimizing measures to ensure financial stability and control inflation.

Moreover, in an environment characterized by rapidly evolving economic and political conditions, such research plays a crucial role in helping central banks identify potential risks and develop effective mechanisms to manage them.

4.2. Labor market analysis

Labor market analysis is reflected in the research agendas of many central banks and plays a critical role in ensuring economic stability and shaping macroeconomic policy. As one of the key indicators of economic development, the labor market contributes to economic growth and stability through factors such as the unemployment rate, employment levels, wage growth, and labor productivity.

Labor mobility has a significant impact on wage inflation and enterprise efficiency. When labor mobility is high, firms can more easily recruit new employees, which reduces upward pressure on wages. However, the departure of skilled workers from the labor market or their migration to other countries may lead to wage increases and, consequently, contribute to inflation.

Based on this, it is important to continuously analyze factors such as changes in global migration policies, the introduction of additional restrictions on migrant workers, increased competition in labor markets, and wage reductions resulting from economic downturns.

Moreover, given that labor market dynamics directly influence domestic demand, consumption, and investment levels, studying labor market indicators regulated by monetary and fiscal policy can support the development of effective policy strategies.

The advancement of automation and digital technologies significantly affects job availability and employment, requiring a new approach to managing labor resources. Research in these areas is crucial for anticipating these changes and shaping adaptive national policies in response.

4.3. Conditions for supporting the economy in the context of global climate change

Global climate change is one of the most pressing challenges of our time and is having a profound impact on the economy. Developing adaptive strategies to minimize the negative effects of climate change and ensure economic stability has become an urgent priority.

The environmental problems resulting from climate change affect various sectors of economic activity. For example, declining agricultural productivity, water scarcity, and damage to infrastructure pose significant risks to sustainable economic development.

To address these challenges, it is essential to introduce environmentally sustainable technologies, utilize renewable energy sources, and promote green investments.

At present, many foreign central banks are exploring innovative technological solutions to adapt to climate change and support sustainable development. In this context, particular attention is being paid to the negative effects of climate change on inflation, shifts in resource prices and distribution, and the development of green financing mechanisms.

To address these challenges, it is essential to implement environmentally sustainable technologies, utilize renewable energy sources, and encourage green investment.

Currently, foreign central banks are exploring new technological solutions to adapt to climate change and ensure sustainable development. In this context, particular importance is placed on analyzing the adverse effects of climate change on inflation, changes in resource pricing and distribution, and identifying pathways to promote green financing.

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To promote economic growth under climate change conditions, it is necessary to adapt the financial system—particularly by developing green financing mechanisms through banks and other financial institutions. This includes introducing dedicated credit lines and insurance programs to support green economy projects, as well as advancing regulatory policies to ensure that enterprises comply with environmental standards and requirements. Research in these areas is essential to guide effective policymaking and implementation.

This section will cover the following research topics:

- Expanding the Dynamic Stochastic General Equilibrium (DSGE) model for Uzbekistan's economy to include labor market analysis
- Assessing the impact of global trade policy changes on the national economy using the GTAP (Global Trade Analysis Project) model
- The impact of technological progress and global demographic changes on labor market composition, and labor supply and demand
- Analysis of adaptive financial and economic measures in the context of climate change and the use of green energy sources
- Evaluating the potential impact of changes in global migration policy on Uzbekistan's economy
- The impact of labor mobility on wage inflation and enterprise efficiency
- Assessing the effects of external supply shocks on inflation

V. Ensuring the stable operation of the system in the context of expanding participation in payment systems and the emergence of new service types

5.1. Ensuring financial stability amid the development of payment systems and the expansion of digital banking services

Globally, the financial market is undergoing structural transformation driven by the emergence of new business models and digital technologies. Digital banking services are taking on a pivotal role in the modern financial system, introducing revolutionary changes in delivering fast and convenient financial services to clients.

These services contribute not only to increasing financial inclusion but also to improving banks' operational efficiency and enhancing financial literacy. Digital banking services allow clients to access financial services anytime and from anywhere, particularly by managing bank accounts, making payments, and obtaining loans through the internet and mobile devices. This significantly facilitates financial inclusion, especially for populations living in remote and underserved areas.

Moreover, digital banking services enable personalized approaches to clients through the application of artificial intelligence and machine learning technologies. For example, AI-powered chatbots are effective in providing instant advice and technical support to clients. Additionally, the use of big data analytics opens new possibilities for deeper analysis of customers' needs and financial behavior.

Despite the above-mentioned advantages of digital banking services, they also pose certain risks, such as cybersecurity threats. Cyberattacks, data breaches, and identity theft can undermine clients' trust in the banking system and create instability in payment systems and financial markets.

Therefore, it is essential to continuously study these processes through research, taking into account the importance of implementing modern security measures, ensuring the stable and uninterrupted operation of payment systems, and raising client awareness of cybersecurity.

5.2. Risk analysis in the context of emerging digital currencies driven by new technologies

Global trends—particularly the rapid development of information technologies and digital currencies—are introducing new challenges for central banks. These dynamics require regulatory responses and policy decisions from monetary authorities. In particular, new digital technologies, including central bank digital currencies (CBDCs), have opened up possibilities for creating more advanced and efficient payment instruments and systems for international transactions.

The introduction of such technologies highlights the importance of assessing their implications for the banking sector, monetary policy, and macro prudential regulation. The use of digital innovations in cross-border settlements may also influence capital flow dynamics and the dollarization process in domestic economies.

Furthermore, the proliferation of such technologies is changing the very functions of money. The rapid growth of tools such as cryptocurrencies and CBDCs raises important questions regarding their role within the financial system, their development prospects, and the potential risks and implications they may pose for monetary policy, financial stability, and payment infrastructure.

At the same time, given that the adoption of digital currencies and other innovative solutions complicates oversight and supervision, it becomes essential for central banks to continuously analyze and assess the impact of these developments through dedicated research, and to design appropriate policy responses as part of their core mandate.

5.3. Key cybersecurity challenges for the Central Bank in protecting payment system users

In today's digital economy, the expansion and development of payment systems has, on the one hand, increased convenience and broadened access to financial services for users; on the other hand, cybersecurity issues have become critically important in ensuring the efficiency and reliability of these systems. Safeguarding users' personal data, bank account information, and transaction records in payment systems necessitates the implementation of advanced cryptographic technologies, two-factor authentication, and other enhanced security measures.

In this context, conducting sector-specific research is essential to support the development of security systems aimed at real-time monitoring of payment systems, early detection of threats, and timely implementation of preventive measures. Research carried out in this area should inform policy recommendations and the design of measures that also promote user awareness and capacity in cybersecurity—particularly regarding fraud schemes and protection against cyber risks.

This subsection will cover the following research topics:

- The impact of digital banking services and the expansion of payment systems on economic and financial security
- The influence of central bank digital currencies (CBDCs) on the transmission channels of monetary policy
- The implications of blockchain technologies for payment systems
- Analysis of technological and regulatory measures adopted by central banks to ensure cybersecurity
- The role of financial technologies and payment innovations in enhancing financial inclusion
- Study of consumers' vulnerability to digital financial fraud
- Analysis of population-level financial inclusion, and its impact on household expenditures, savings, and investment behavior
- The relationship between the coverage of digital payment systems and the financial transparency of enterprises

VI. Analyzing the supply and demand for financing in the economy based on micro-level data

6.1. Assessing the access of households and enterprises to credit, and its impact on enterprise growth and formation

Credit resources serve, on the one hand, as a key source of financing for businesses to expand production, establish new enterprises, and implement technological modernization. On the other hand, the availability of financial resources positively influences household incomes and investment processes, thereby stimulating economic growth.

Access to credit depends on the terms set by banks and non-bank credit institutions, including interest rates, collateral mechanisms, and the state's support policies for entrepreneurship. Insufficient access to credit resources may hinder business development and negatively affect the financial stability of the population.

Additionally, expanding financing opportunities supports job creation, increases consumer purchasing power, and strengthens investment activity. From this perspective, to foster economic growth and ensure financial stability, it is important to improve access to credit for households and businesses and to conduct in-depth research on the socio-economic impact of credit mechanisms.

These studies should be conducted at the micro level, as microdata enables a more accurate understanding of how households and businesses respond to monetary policy, inflation, and financial shocks. While aggregate data can obscure the effects of policy changes, micro-level data can clearly show how such changes impact individual economic agents.

It should also be noted that inadequate access to financing for households and entrepreneurs may contribute to the expansion of the shadow economy.

The shadow economy is one of the key factors negatively affecting economic development. It leads to losses in the state budget due to lower tax revenues, reduces the number of formal jobs, and weakens economic transparency.

Addressing this issue requires expanding access to formal finance — particularly through bank credit and other official funding sources — which can significantly reduce the share of informal economic activity by encouraging households and businesses to engage with the formal financial system.

Moreover, facilitating access to official financial resources, implementing guarantee mechanisms, promoting digital banking services, and introducing simplified tax regimes for entrepreneurs can further support the reduction of the shadow economy.

6.2. Analysis of credit scoring systems in financial institutions

Credit scoring systems play a key role in accelerating decision-making for financial institutions, providing borrowers with quicker and more equitable credit evaluations, reducing risk, increasing financial transparency, and improving lending practices.

From the standpoint of financial stability and risk management, it is essential to assess the effectiveness of these scoring systems, as misjudgments in risk evaluation by credit institutions can have adverse effects on the overall stability of the banking sector.

The Central Bank, through its research in this area, can evaluate the reliability and effectiveness of scoring models used in financial institutions and develop recommendations to strengthen financial risk management practices.

Traditional credit scoring models often face limitations in assessing individuals with no financial history or limited data. Therefore, it is important to assess the performance of existing models and develop proposals for expanding credit access through digital technologies.

To evaluate the broader economic impact of credit activity, it is essential to analyze how scoring and credit evaluation mechanisms influence entrepreneurship development, investment volumes, and consumer purchasing power. Such analysis can support the Central Bank in enhancing its macroeconomic policy design.

In general, it is essential for the Central Bank to conduct in-depth research on the risks and effectiveness of credit scoring systems, to develop targeted recommendations for credit institutions, and to strengthen its regulatory functions in order to ensure stability in the credit market.

The outcomes of such research will help enhance transparency in the credit system, promote standardized approaches across banks and financial institutions, and improve access to credit for both households and businesses.

This section will cover the following research topics:

- Behavioral analysis of individuals and businesses in the economy
- The impact of limited access to credit on economic growth
- Analysis of financing needs among individuals and businesses operating outside the banking system or within the informal economy, including capital availability and barriers to capital
- Evaluation of how existing and/or proposed policy measures aimed at reducing the shadow economy influence business growth, financial transparency, and ultimately their access to financing
- Analysis of demand and supply for non-traditional credit products offered by credit institutions, including factors such as debt burden and information that influences the lending process
- Assessment of the effect of non-traditional data used—or potentially usable—in due diligence processes conducted by credit institutions on decision-making and default risk
- Evaluation of how well the current credit scoring system explains borrowers' default probabilities and credit repayment risks

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