

Transition from the resource-based economy to knowledge-based economy has been set as one of the long-term priority goals for economic and social development of the Republic of Belarus, to be accomplished by 2025–2030.

Implementation of this ambitious program involves activities in the following directions:

- 1) introduction of innovative technologies in manufacturing and increasing the share of innovation-intensive companies;
- 2) digitalization of information flow between all sectors of economy and at all levels of the society;
- 3) development of the market of educational services and improving the quality of the services provided;
- 4) increasing government expenditures for research and development and ensuring the implementation of research findings in production;
- 5) increasing the value of human capital by maintaining the high level of wellbeing of people, supporting education and science, improving the living standards of people.

Though there are significant steps taken towards implementation of the program, the Republic of Belarus is faced with a lot of barriers on this way and its ranking in the Knowledge Economy Index is improving slowly.

E. Sivashenko

Е.С. Сивашенко

БГЭУ (Минск)

Научный руководитель К.А. Белова

THE CONCEPT OF MONETARY POLICY AND ITS TYPES

Понятие денежно-кредитной политики и ее типы

Monetary policy is a policy of the state, which affects the amount of money in circulation in order to ensure full employment, price stability, as well as the growth of real output.

In this regard, it seems relevant to consider the main types of its implementation.

Based on classical economic theory, we can distinguish 2 main types of monetary policy:

- hard policy (the policy of "expensive" money, monetary restriction) — involves limiting the rate of growth of the amount of money in circulation and is mainly aimed at limiting inflationary processes, as well as improving the balance of payments;

- soft policy ("cheap" money policy, monetary expansion) — accompanied by a fairly high rate of growth of monetary aggregates, its direction is to stimulate the growth of output and employment.

The choice of policy depends on the goal set and the characteristics of the situation in the economy. For example, if there is an economic recession and unemployment, and the state goal is to expand production, in this case the central bank pursues a policy of "cheap" money, reflected in Fig. 1.

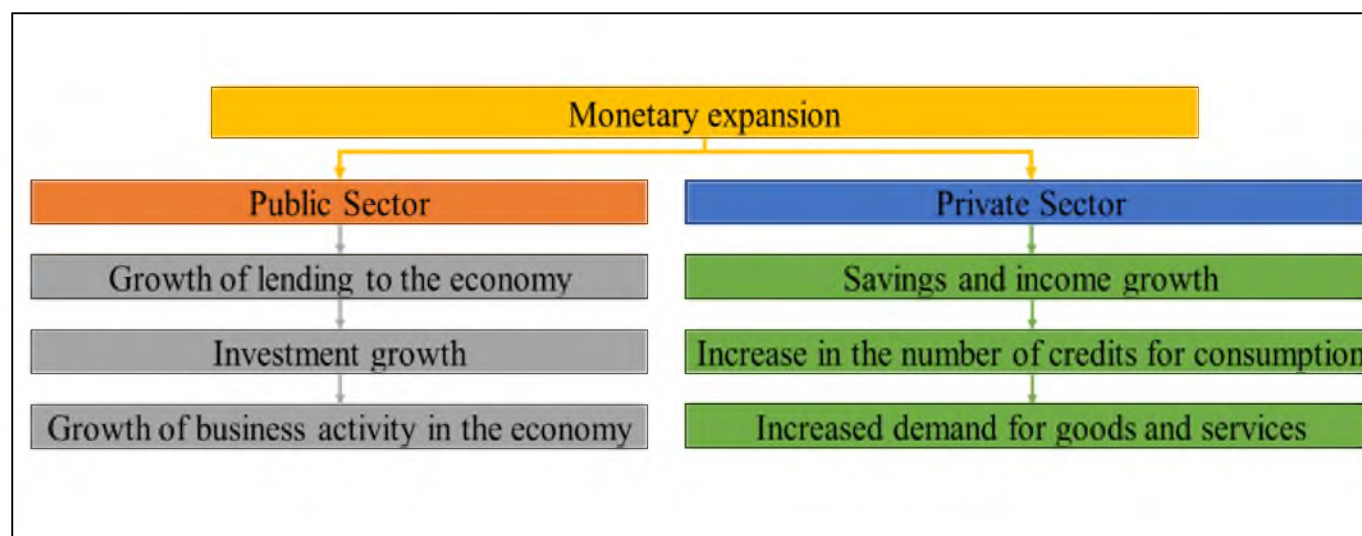


Fig. 1. Impact of monetary expansion on the economy

The measures carried out by it in this case:

- buys government securities on the open market, while transferring money in payment for them to the accounts of the public and, of course, to banks' reserves — this provides more lending opportunities for commercial banks and leads to an increase in the money supply;

- lowers the base interest rate — this allows commercial banks to increase borrowing and to expand lending to their customers at lower interest rates, which also leads to an increase in the money supply;

- reduces the required bank provisioning rate — this leads to an increase in the money multiplier and expands lending opportunities to the economy.

And at a time of high inflation, the central bank pursues a policy of "expensive" money, so it reduces its supply, which is reflected in Fig. 2.

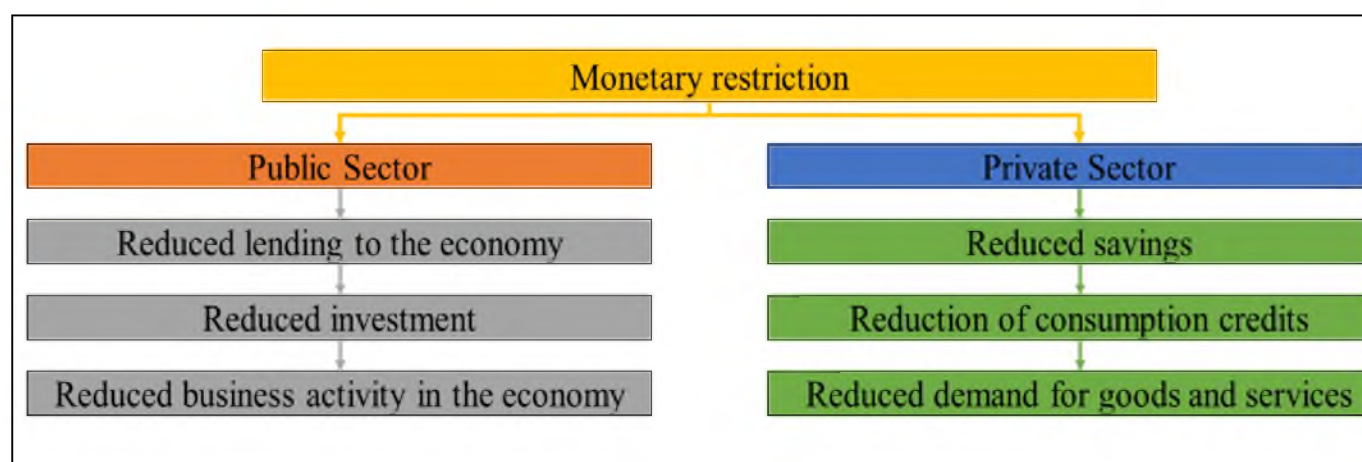


Fig. 2. Impact of monetary restriction on the economy

And specifically:

- sells government securities on the open market — thus causing a reduction in the reserves of commercial banks and current accounts of households paying for these securities. This reduces the commercial banks' lending capacity and leads to a reduction in the money supply;

- raises the base interest rate — this causes commercial banks to stop borrowing from the central bank and raise interest rates on their loans, which leads to restraining the growth of the money supply;

- raises the bank's required reserve requirement rate — this leads to a reduction in the money multiplier and limits the growth of the money supply.

In conclusion, it should be said that based on the current economic situation both in the country and in the states that directly affect the economy of this country, the central bank chooses the type of monetary policy pursued in order to promote sustainable and balanced development of the economy.

M. Sokolovskaya

М.А. Соколовская

БГЭУ(Минск)

Научный руководитель Г.Е. Казючиц

INNOVATION SOLUTIONS TO ENVIRONMENTAL PROBLEMS

Инновационные решения экологических проблем

The year 2022 has shown how much global warming can threaten us. A good example is the fall of the mass of ice sheets. In June 2022, experts from the University of Maine, British Antarctic Research and Imperial College London came to the conclusion that Antarctic glaciers began to retreat at an unprecedented level over the past 5.5 thousand years. That's why, according to a recent study by Washington University in St. Louis. Red bricks can be converted into energy-saving devices that can be charged to store electricity.

The purpose of the article is to explain the work of chemical processes in the development of a supercapacitor using a brick hematite microstructure as a reagent for vapor deposition of nanofiber deposition from a conductive polymer poly (PEDOT). Vapor-phase synthesis leads to the production of PEDOT coatings with high electrical conductivity and free charge transfer, which makes them an exemplary method of generating electricity. Demonstrate analogs of the electricity substitute and provide for their implementation in the future.

The result of the study is the transformation of the fired brick into a PEDOT coating. by dissolving iron oxide with hydrochloric acid vapors. As previously reported, partially