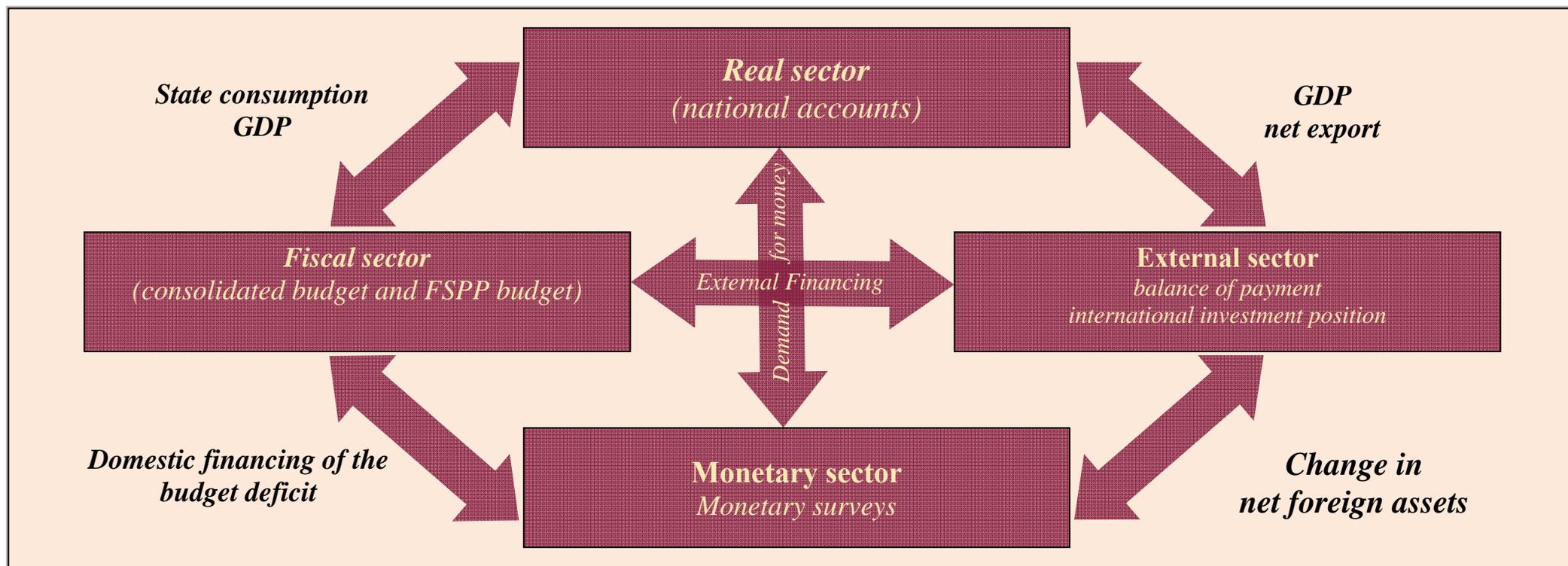


## GENERAL PROVISIONS of FINANCIAL PROGRAMMING



**Theoretical basis:** balance approach to description of the economy. Balances of the main sectors of the economy (real, external, fiscal and monetary) are interconnected – any measures applied in response to a shock in one sector will have influence on the balance of at least one other sector.

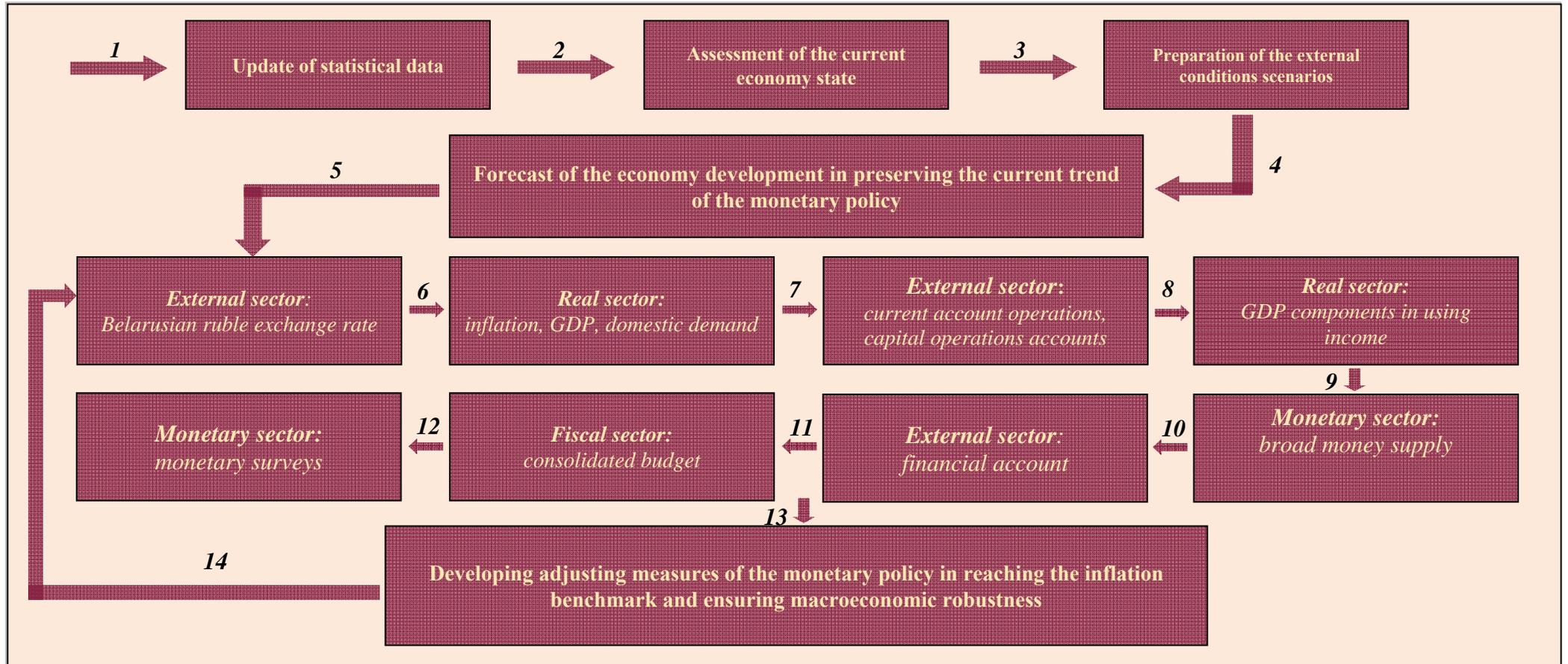
**Target:** on the basis of analysis of the main sectors of economy, working out measures of monetary policy that are necessary for achieving a target benchmark of inflation and ensuring a macroeconomic robustness.

### Tasks:

- analysis and forecast of economies development of the countries that are the main trading partners of the Republic of Belarus
- analysis of the current state of the economy of the Republic of Belarus;
- scenario forecast for short- and middle-term periods;
- working out measures of monetary policy.

**Toolkit:** sectoral balance tables; satellite econometric models; Bloomberg and Reuters informational systems (forecast for the development of the economies of the trading partners of the Republic of Belarus, the world commodity and financial markets)

## ALGORITHM of FINANCIAL PROGRAMMING

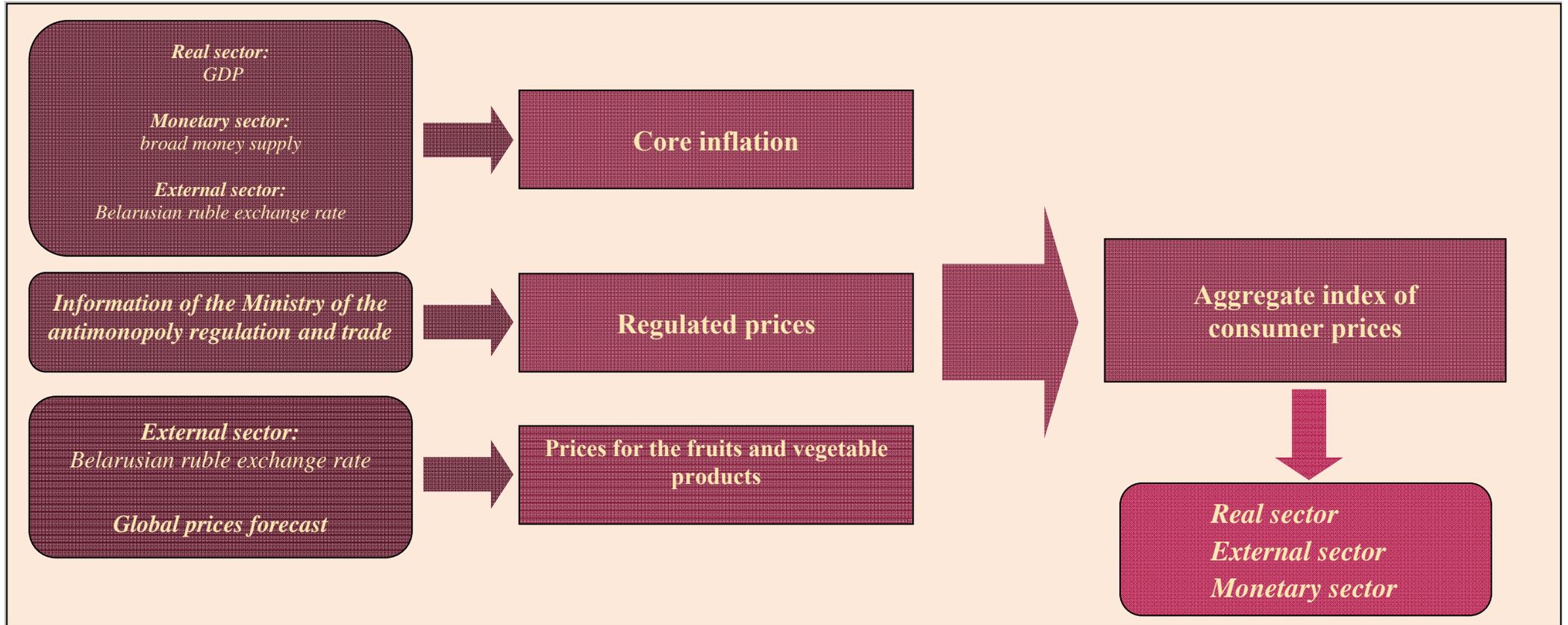


**Financial programming process** is the development of a **financial programme** that comprises a complex of policy measures coordinated between the policy measures' economy sectors.

**Financial programming has an iterative character** – interconnection of the economy sectors means that the preparation of the development forecast for a separate sector suggests generating expert opinions regarding the development of the situation in other sectors. After receiving additional results, an obligatory check for coordination and interconnection of the economy sectors' forecast dynamics is conducted.

## REAL SECTOR: INFLATION

**Inflation level**, that is reflected through the **aggregate index of consumer prices**, is estimated on the basis of the weighted sum of the aggregated components: core inflation, changes in administratively regulated prices, and prices for the fruits and vegetable products.



For the purpose of forecasting the core inflation, the National Bank applies the index of econometric models that take into account the main macroeconomic factors of generating inflationary processes in the short- and middle-term periods (inflationary expectations, Belarusian ruble exchange rate, GDP, monetary supply and others).

The forecast of changing regulated prices is coordinated with the Ministry of the antimonopoly regulation and trade. Forecast of prices for the fruits and vegetable products is based on the forecast of the dynamics of the global prices for the agricultural products (international organizations, Bloomberg information system) and Belarusian ruble exchange rate.

## REAL SECTOR: GDP

The **real sector** of the economy reflects **real economic operations** in the economy between the households, financial and non-financial corporations, government agencies and the rest of the world. Forecasting of the real sector lays in the **forecast of the GDP**, reflecting the market value of the final goods and services produced in the country in the given period.



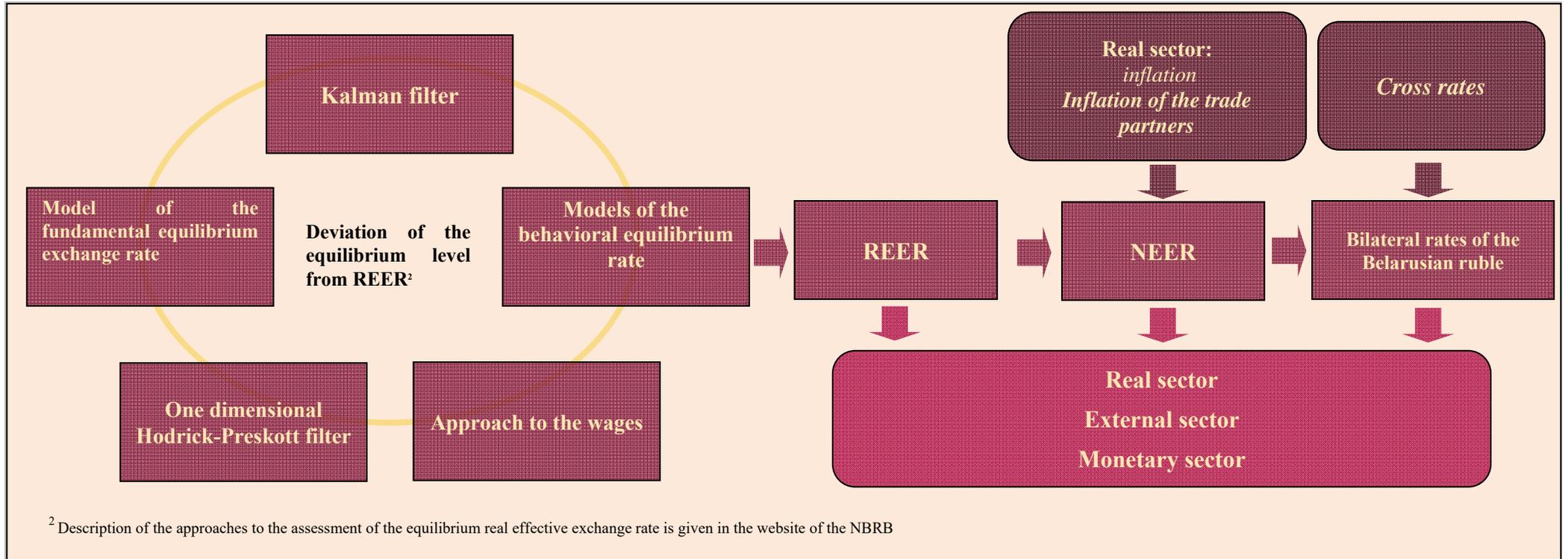
Short-term evaluation of the real GDP (up to 6 months) is carried out with the help of the econometric models: dynamic factor model<sup>1</sup> and outstripping indicator model allowing to forecast the dynamics of the economic cycle on the basis of the given system “Enterprises monitoring”. The forecast for the middle-term perspective is based on the evaluated interconnections between the GDP and the main factors that define its dynamic (interest rates, Belarusian ruble exchange rate, economic activity in the trade partnering countries of the Republic of Belarus).

The forecast of the real GDP is divided into the components of incomes usage. The constituents of the domestic demand (expense for the final consumption and gross accumulation) are defined on the basis of applying the statistical methods (extrapolation, regressive models) with account of expert judgments. Net export of goods and services is forecasted within the framework of the external sector. The forecast of the GDP deflator and its main components according to the methods of income usage is carried out on the basis of the forecast estimates of the consumer prices index, as well as the prices of export and import of goods and services with account of the degree of the GDP import capacity and its components.

<sup>1</sup>A.Bezborodova, “Approach to the estimate of the current value of the GDP in Belarus and its short-term forecast” / A.Bezborodova. A. Novopoltsev, S.Profilatov// Banking bulletin. – 2017. – No.2 (643). – pages 11-18.

## EXTERNAL SECTOR: FOREIGN EXCHANGE RATE

**External sector** reflects **economic operations** and **financial flows** between a **country and the rest of the world** and constitutes in evaluation of the external position of the country that is represented by the balance of payments and international investment position (IIP). One of the key macroeconomic indicators forecasted within the framework of the external sector is the foreign exchange rate.



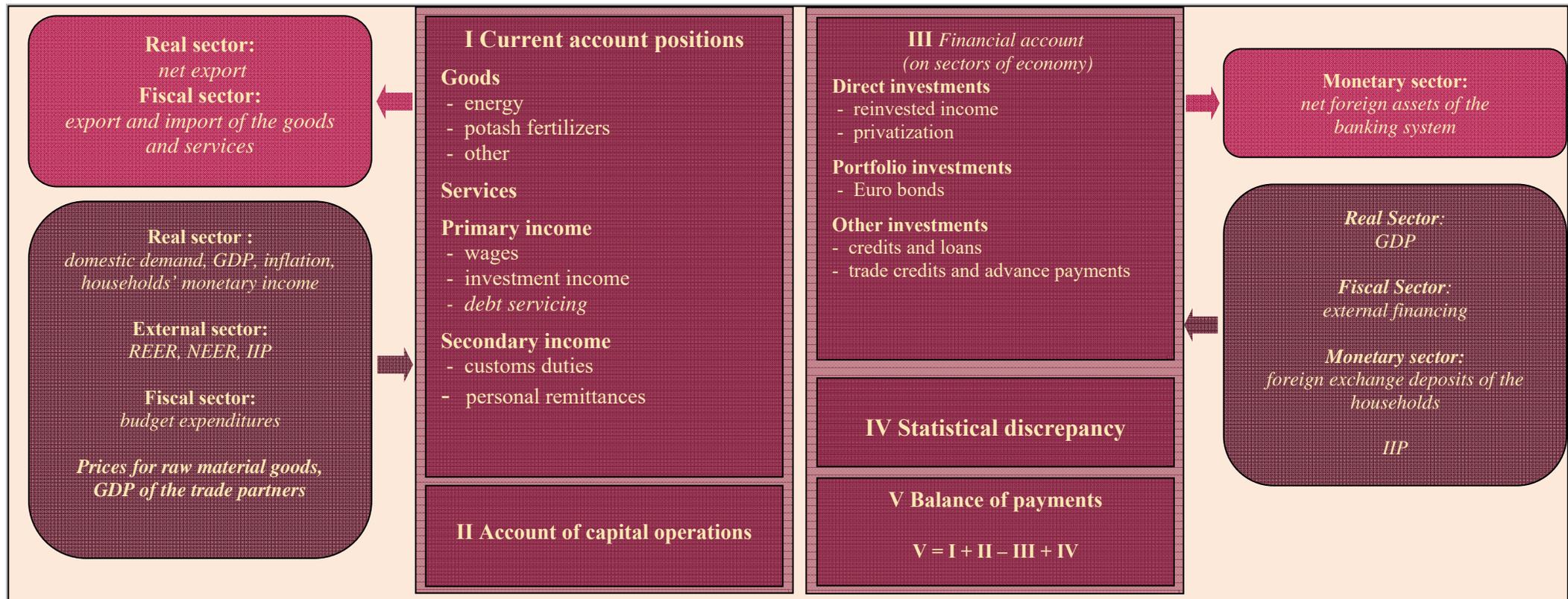
Forecast dynamics of the real effective exchange rate (REER) of the Belarusian ruble is generated from the suggestion on the achievement of the REER equilibrium level in the middle-term period. Flexible exchange rate formation suggests carrying out the function of the automatic economy stabilizer by the exchange rate.

The forecast of the nominal exchange rate of the Belarusian ruble (NEER) is the result of the adjustment of the REER by difference of the inflations within a country and in the trade partnering countries. The breakdown of the NEER into the bilateral nominal exchange rates of the Belarusian ruble against the US dollar, Euro and Russian ruble are carried out with account of the forecast cross-rates of the US dollar against the Euro and the Russian ruble against the US dollar.

## EXTERNAL SECTOR: BALANCE OF PAYMENTS

Forecasting of the **balance of payments** is carried out in terms of **separate items and indicators**, which enables complete reflection of influence of the external and domestic factors on the external position of the country. The forecast of the **foreign trade by other goods** is carried out with the help of the **econometric models** kit, reflecting the influence of the main factors on the physical quantity and prices of their export and import<sup>3</sup>. Trade in the **energy goods and potash fertilizers** is forecasted separately from other goods on the basis of the information received from designated companies.

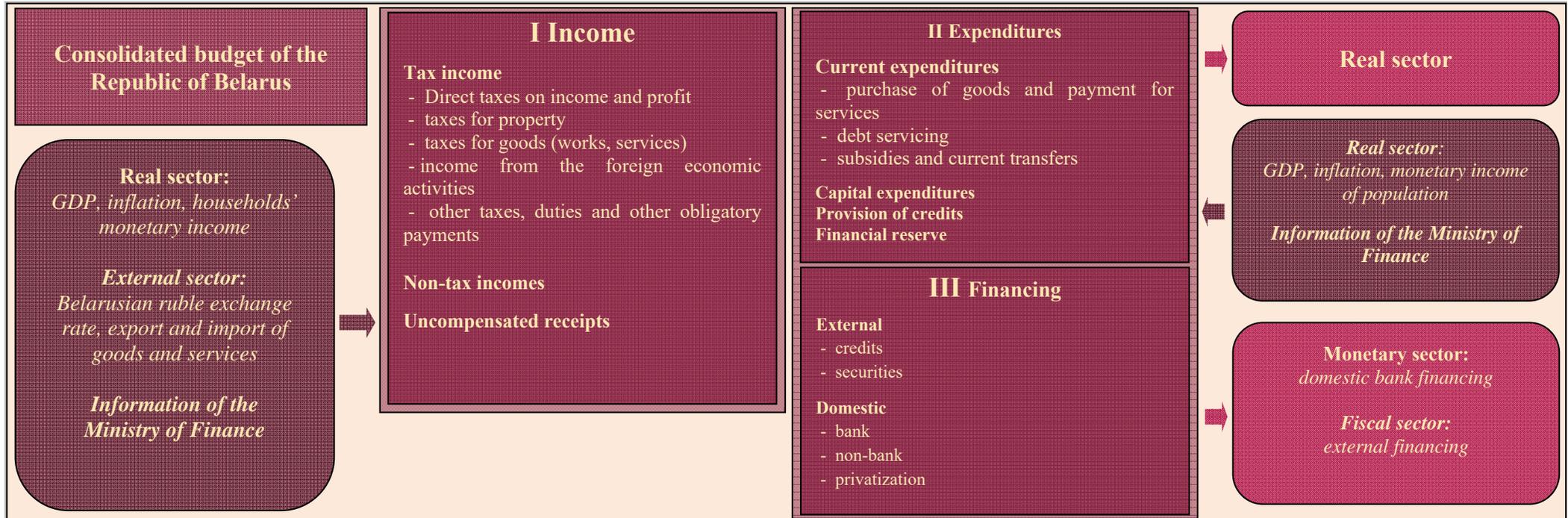
Forecast of the indicators of the financial account is carried out allowing for the separation of operations from different sectors (the central bank, deposit organizations, excluding the central bank, sector for government management, other sectors). On the basis of the forecast of separate items and interconnection between them, the enlarged indicators of the balance of payments are generated with the help of balance sheet identities.



<sup>3</sup>A.Vechersky, *Model of forecasting the balance of payments of the Republic of Belarus*. Banking bulletin, 2011, No. 28 (237), pages 14-23

7  
**FISCAL SECTOR**

The forecast of the **fiscal sector** lays in the forecast of the income and expenditures of the **consolidated budget of the Republic of Belarus** and the **Fund for Social Protection of Population of the Republic of Belarus (FSPP)**.

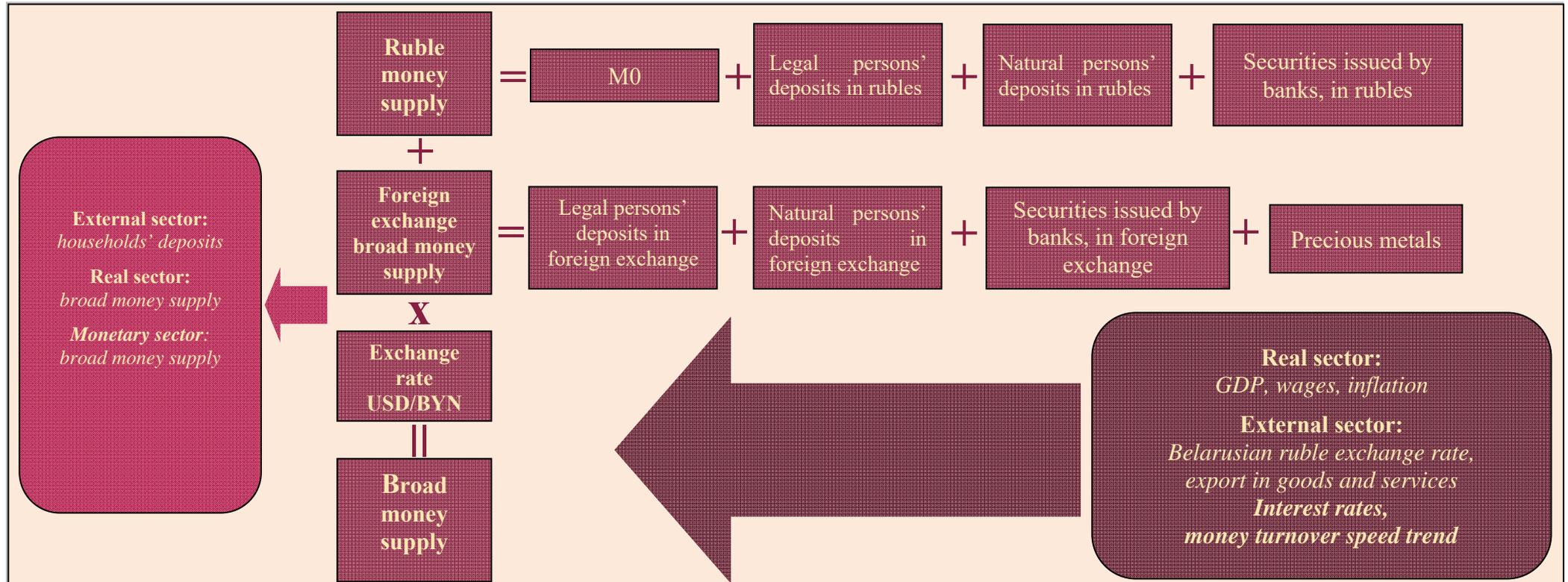


Building forecast of the consolidated budget income is based on the functional classification of the expenditures – economic classification. The forecast of the separate items of the income and expenditures is built using the relevant dynamic coefficients that characterize the change in proceeds of a certain tax depending on the change of its taxation basis approximated by a certain macroeconomic indicator (GDP, expenditures for a final usage, income of households and other). When forecasting, the information of the Ministry of Finance on the planned implementation of the consolidated budget is taken into account, as well as information on the attraction, repayment and service of the state credits and issuance of the state securities.

Forecast of the FSPP income is implemented using the elasticity (dynamic coefficient) on the nominal charged wages with account of the information of the Ministry of Finance on the planned transfers and subventions from other budgets of the budgetary system of the Republic of Belarus. The expenditures are considered equal to those planned in the Law “On the budget of the state non-budgetary fund of the social protection of the population in the Republic of Belarus” for another year.

## MONETARY SECTOR: BROAD MONEY SUPPLY

**Monetary sector** will intermediate **the transfer of resources** between all the sectors of the economy and is represented by monetary surveys. The first stage of the forecast of the monetary surveys comprises in the forecast of the broad money supply.

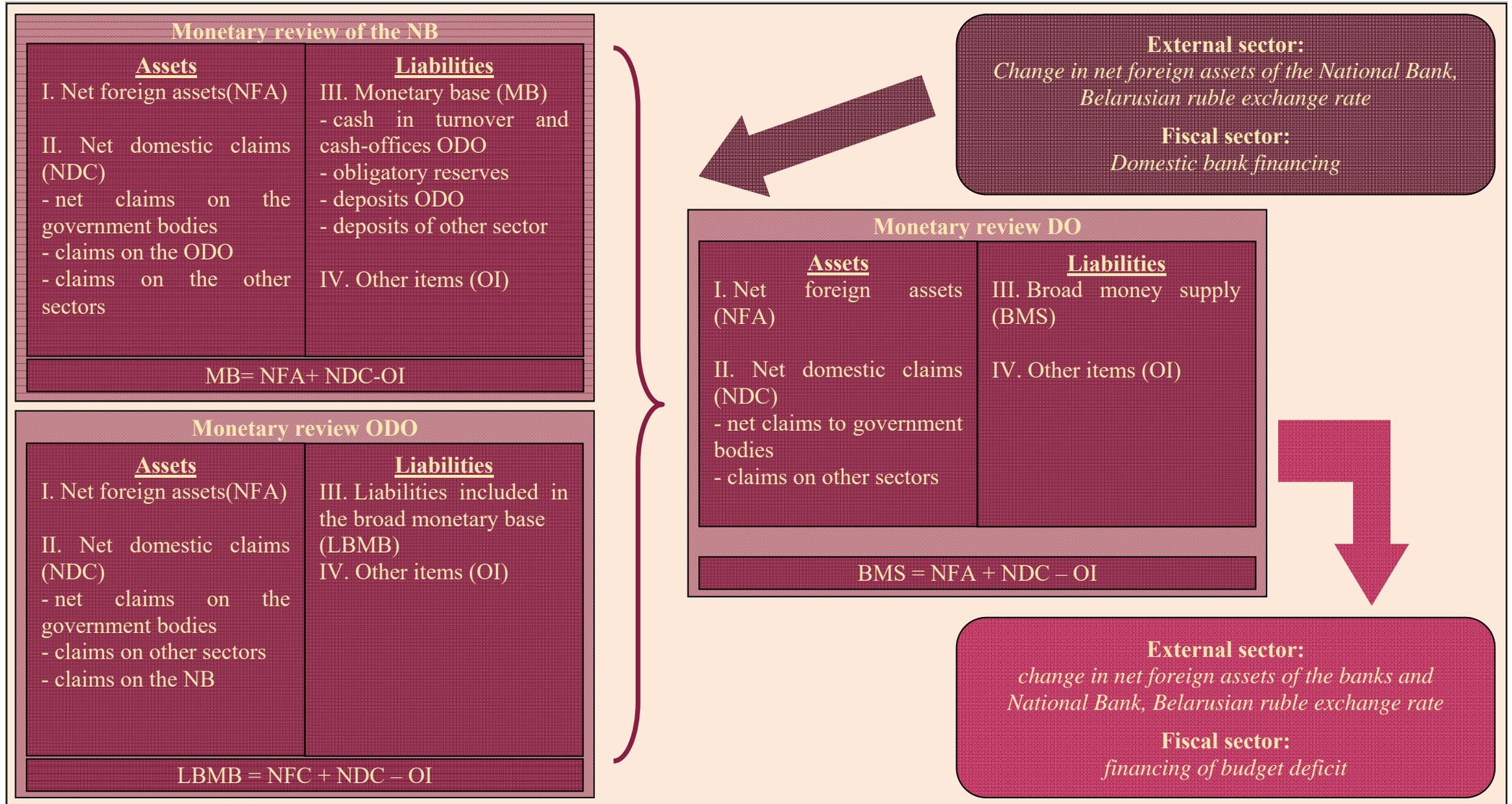


The forecast of the money supply M3 (broad money supply) and M2\* (ruble money supply) is based on the qualitative theory of money, in accordance with which the money supply is in the direct proportion from the volume of transactions in the economy (GDP) and the level of prices, and in reverse proportion from the speed of turnover of money that is approximated by a number of factors (interest rates, Belarusian ruble rate and other).

Forecast of separate money aggregates is based on the theory of the demand for money under which lays the economic entities' necessity in money resulting from their functions. Behavioral characteristics of the economic agents at the microlevel form a resulting vector of demand for money at the macrolevel that may be represented in a form of the function of a certain money aggregate from the variable of the transaction scale in the economy and the indicator of the return on assets that are alternative to the given money aggregate.

## MONETARY SECTOR: MONETARY SURVEYS

Building monetary surveys of the National Bank, other deposit operations (ODO) and deposit organizations<sup>4</sup> (DO) of the Republic of Belarus is based on the adherence of the balance sheet identities that are relevant to the given money surveys.



<sup>4</sup>When building a survey of the deposit organizations, mutual claims of the National Bank and other deposit organizations are consolidated.