

Annual programme of activities of the Parliamentary Budget Office 2024

(as required by Law 243 of 24 December 2012, art. 18, par. 4)

The mission of the Parliamentary Budget Office (PBO) is to contribute to the sustainability of public finance by ensuring the transparency of accounts and data, and the accuracy of the forecasts at the service of Parliament and citizens. As established by its founding law (Law 243/2012, so-called 'reinforced' law, for the implementation of the new article 81 of the Constitution), the PBO shall: verify and assess macroeconomic and public finance forecasts; quantify the impact of major legislative measures on the macroeconomic scenario and public accounts; analyse public finance trends, including by sub-sector, and verify the long-term sustainability of public accounts; assess compliance with budgetary rules and monitor the implementation and use of certain provisions provided for by the European scenario of fiscal rules (specifically, the correction mechanism and the authorisation to deviate from the medium-term objective in the event of exceptional circumstances). Finally, the PBO shall carry out micro- and macroeconomic analyses on topics relevant to public finance-related issues on its own initiative or at the request of Parliamentary Committees.

1. The analysis

This section briefly describes the PBO's achievements in 2023 and in the first months of 2024 and then outlines the activities planned to be completed by the end of the year.

Activity carried out in 2023 and in the first months of 2024

In 2023, the public finance policy documents (the Economic and Financial Document, DEF, and the Update to the Economic and Financial Document, NADEF) were analysed. Specifically, the results of the endorsement of the official macroeconomic forecasts (trend and policy scenarios) and of the public finance assessment were presented to the Budget Committees of the Chamber of Deputies and the Senate of the Republic at the hearings held during the parliamentary examination of the Government's policy documents (April for the DEF and October for the NADEF), as well as, as usual, during the hearing on the Budget Bill for 2024 in November. Moreover, since 2023 the Budgetary Policy Report has

become annual, with a public presentation in June. The Report contains a description and analysis of macroeconomic and public finance developments since April of the previous year, and some thematic insights.

Alongside these activities, many analytical documents were drafted on specific topics, identified by the PBO within the scope of the duties assigned by the founding law or drafted upon requests of the Parliamentary Committees. Specifically, in addition to the above-mentioned hearings on the Government's policy documents and on the Budget Law, five hearings and two memoranda were held on public finance-related issues (on the European Commission's "Communication on orientations for a reform of the EU economic *governance scenario*", on tax incentive tools with particular reference to tax credits, on the macroeconomic and public finance effects of tax incentives on construction, on the implementation of the differentiated autonomy of ordinary statute regions, on the coordination of EU economic policies, on the Government mandate for tax reform, on the state of implementation of the National Recovery and Resilience Plan (NRPP)). Five thematic Focuses were published. The topics explored in the Focuses were: the budgetary manoeuvre for 2023 approved by Parliament; territorial health care as a challenge for the National Health Service; a retrospective analysis of the accuracy of public finance forecasts in the policy documents for the years 2015-2022; a comparison of the budgetary strategies set out in the stability and convergence programmes of EU countries; and the implementation of the essential level of social assistance services with regard to the recruitment of social workers. These papers were in some cases accompanied by the publication of specific infographics.

Four editions of the Report on recent economic developments were published in 2023, which analysed the development of the Italian and international economy on a quarterly basis. Each Report included an in-depth analysis. As usual, two of these dealt with forecasts for the Italian economy (February and August); in April, an analysis was presented on the possible effects of tax incentives for energy efficiency on prices, with particular regard to those for household air conditioning systems; the October Report presented a new PBO indicator on the conditions of access to credit for Italian firms.

An updated *database* with interactive graphical representations of the forecasts of the main macroeconomic and public finance variables published by the governments of the Member States in the Stability and Convergence Programmes and in the Draft Budgetary Plans as well as by the European Commission in the Spring and Autumn Forecast was published on the PBO institutional website.

The strengthening and refinement of the quantitative analysis tools used for the PBO's institutional purposes continued.

In the area of macroeconomic analysis, the short-term forecasting models were complemented by new tools, which exploit innovative estimation techniques based on a statistical learning approach. Through *machine learning* techniques large databases are

efficiently analysed and the usefulness of hundreds of time series is tested, both to refine forecasts of key macroeconomic variables and to anticipate cyclical turning points. With regard to the nowcasting models already used by the PBO, the activity concerned the search for new timely economic indicators, with particular reference to the service sector. To this end, the collaboration with the Ministry of Economy and Finance (MEF) for the regular provision of electronic invoice data on a monthly basis was strengthened, and new data were acquired, e.g. on parcel shipments, motorway traffic and investment financing through *leasing*.

In recent months, work continued on the development of the models on inflation, consisting of both alternative measures of the underlying component (*trimmed inflation*) and forecasting models for the main components of inflation. Specifically, work began on the construction of forecast models for the various components of inflation dynamics, depending on the volatility of commodity prices.

The ordinary maintenance of the model on the Italian economy MeMo-It was mainly aimed at assessing the properties through the different multipliers, in order to have elasticities consistent with those of other similar macroeconomic models for Italy; in particular, the block related to international trade was revised, obtaining multipliers on prices and quantities of the exchange rate more in line with the estimates documented in the econometric literature.

As far as the mid-term assessment is concerned, estimates of the macroeconomic impact of investment projects prepared with the NRRP were updated. These assessments were carried out with both the MeMo-It model and the QUEST III R&D model provided by the European Commission and modified by the PBO.

Also with regard to evaluations of economic policy measures, an application was developed in Python in 2023 that is able to analyse the effects of sectoral *shocks* by analysing sectoral interdependencies with input/output tables. The application has a graphical interface that allows it to be used regardless of knowledge of the Python language, thus limiting the possibility of errors typical of spreadsheets.

With regard to the micro-simulation models used for the sectoral analyses and, in particular, those on households, during the second half of 2023, the following were updated: the information bases, acquiring data on tax declarations; the model procedures with reference to tax and social security regulations. These activities allowed, among other things, the realisation of the analyses reported in the hearing of the President of the PBO on 14 November 2023 before the Budget Committees of the Chamber of Deputies and the Senate of the Republic on the effects of the measures contained in the Budget Bill concerning the revision of IRPEF rates, the social security contribution relief for low and medium income workers and that in favour of working mothers.

The PBO microsimulation model aimed at estimating the distributive impact of inflation and support policies implemented by the Government since mid-2021, fed by the ISTAT

household budget survey (HBS) integrated with tax, social security and welfare administrative information (pensions and EESI), has been developed and maintained.

Still in the context of households, the development of an integrated micro-simulation model of direct and indirect taxes has continued, for assessing the overall progressive nature of the fiscal system, including both direct income and property taxation and indirect taxes and excise duties.

The development of a specific model for assessing the impact of the recent EPBD (*Energy Performance of Buildings Directive*) has started, by means of a joint estimate of the energy class, the costs of the interventions required to achieve the objectives defined by the aforementioned directive, and the possible incentive measures, the distributional impact of which can be assessed.

Work continued on the development of long-term projection models and retrospective analysis of public policies.

As regards the microsimulation model on corporate taxation (MEDITA), in 2023, balance sheet data were collected from Bureau van Dijk along with 2021 tax return data (Unified, Consolidated and IRAP Tax Return) from the Revenue Agency. As in previous years, the following was updated: a) Mediocredito centrale's database on public guarantees granted to businesses; b) the electronic invoicing data provided by the Revenue Agency. In addition, all simulation procedures were transferred to a different application to ensure greater efficiency in data analysis. At the same time, some procedures for the combined use of simulation, balance sheet and tax data were modified, so that the tool could be used more quickly and flexibly.

An analysis was carried out of the data contained in tax returns on tax credits granted to corporations as of 2018, supplementing it with information on credit offsets from MEF sources and with that provided by the Committee for the annual tax expenditure report. Finally, a database of tax benefits was constructed based on the latter's annual reports. The results of the analyses were used for Parliamentary hearings on tax incentive instruments and, in particular, on tax credits, and on the macroeconomic and public finance effects of tax incentives on construction.

The model for forecasting pension expenditure in the short to medium term kept being updated and improved using data from the National Social Security Institute (INPS) on career profiles and aggregate contributions since 1995; the model for forecasting healthcare expenditure was updated and constantly maintained (a *database* was set up on a quarterly basis for the 2016-2023 period).

With regard to monitoring the implementation of the NRRP, a *dataset* containing information on individual calls for projects and resource allocations involving local governments as implementing actors was built and updated based on the available information on ReGIS.

In 2023, the ordinary maintenance of the tax revenue forecasting tool, of the *dataset* containing the summary of all discretionary measures, and of the *dashboards* used to monitor the main public finance aggregates during the year was conducted to ensure continuity in the predictive capacity of the public accounts.

The information base that feeds the PBO model for analysing and forecasting interest expenditure on public debt has been updated and published on the website with an interactive visualisation of the main information concerning the evolution of public debt in domestic government bonds (issues, redemptions and net issues) and of the related interest expenditure, as well as the distributions of some indicators (including average rates at issuance, residual duration of debt and other indicators); the publication of the database was accompanied by an infographic entitled “Monetary Policy and Debt Refinancing”, which analysed some of the main factors characterising the dynamics of Italy’s public debt.

As part of the debt sustainability analysis, the model used for the projections on the evolution of the debt-to-GDP ratio over the medium term was adjusted and reformulated in the course of 2023 in order to estimate the consistency of the Government’s public finance policy objectives with respect to the multi-year adjustments required by the legislative proposals to reform the European Union’s framework of fiscal rules put forward by the European Commission at the end of April last year. The methodology developed by the PBO makes it possible to prepare projections that illustrate the evolution of the debt-to-GDP ratio and of the main public finance variables consistent, in general, with the approach outlined in the Commission’s legislative proposals on the new EU *governance*. These scenarios assume, from 2025 onwards, a constant multi-annual budgetary adjustment over a 4-year period or a 7-year period, respectively, such that the debt-to-GDP ratio would fall plausibly and continuously and, at the same time, the deficit would remain stably below the 3 per cent of GDP threshold.

The methodology developed by the PBO also takes into account the so-called “common safeguards”, which, with the aim of guaranteeing and reinforcing debt sustainability, provide that: 1) the resulting debt-to-GDP ratio at the end of the multi-year consolidation period be below the level of the year preceding the start of the trajectory; 2) the minimum annual fiscal adjustment cannot be less than 0.5 percentage points of GDP, as long as the budget deficit is above 3 per cent of GDP 3) in the case of a budgetary adjustment extended to seven years, the bulk of the adjustment takes place during the first four years covered by the plan; 4) the indicator of net primary expenditure financed from domestic resources remains, on average and over the trajectory horizon, below the medium-term GDP growth rate.

In view of its growing complexity, the codification of the PBO model for projecting the medium-term¹ debt-to-GDP ratio and the related stochastic analysis in a special statistical *software (Eviews)* was also completed in 2023. Compared to the earlier, more simplified versions still in use, the new *routine* makes it possible to consider more precisely the impact of price *shocks* on the primary balance and on interest expenditure, and to represent in greater detail the composition by structure of the *stock* of public debt, distinguishing not only between short-term and long-term bonds but also considering the various components of Italian public debt, such as: fixed-rate securities, floating-rate securities, and securities indexed to Italian and European inflation. The stochastic analysis requires further refinements to correct for the tendency to increase the width of the stochastic simulation bands due mainly to the relatively large number of variables subject to *shocks*.

In the first part of 2024, the PBO's institutional activity was devoted to the preparation of three Parliamentary hearings and two Focuses, as well as the usual February Report on recent economic developments, in which the new macroeconomic forecasts for Italy were published.

The hearings focused on: 1) the determination and implementation of the Essential Levels of Services (ESLs) concerning civil and social rights; 2) the identification of the disadvantages arising from insularity and related measures to combat them; 3) Law Decree 19/2024, bearing further urgent provisions for the implementation of the NRRP.

A Focus presented an overview of the public finance strategies in the 2024 Budgetary Policy Documents of the euro area countries with a particular focus on the budgetary policies planned in the main euro area countries (Germany, France, Spain and Italy). As customary, another focus paper covered the latest Budget Law approved by Parliament, confirming the breakdown – introduced last year – of measures by economic areas, through specific classifications adopted at a European level (in particular, it should be mentioned that for revenue-impacting measures, the approach contained in the *Taxation Trends in the European Union* of the European Commission's Directorate-General for Taxation and Customs Union was used, and for expenditure-impacting revenues, reference was made to the *Classification of the Functions of Government*, COFOG).

The work plan for the remainder of 2024

This year, in addition to those related to the Budgetary Policy Report 2024, activities will continue to strengthen the tools needed to carry out the Office's institutional tasks: the assessment of the Government's budget planning documents (in the spring and autumn

¹ See: Gabriellini, C., Nocella, G. e Padriani, F. (2021), "Assessing Italy's public debt dynamics in the medium term with the PBO framework: Illustrative scenario analysis for the post-Covid period", UPB, Nota di lavoro n. 2.

sessions), the forecasting and monitoring of trends in the Italian economy and public finance, as well as the analysis of the financial and distributional impact of major legislative measures and the effects on the economic and social conditions of households and businesses. In the light of the possible final agreement on the legislation on the reform of the EU's framework of budgetary rules, new instruments will also be developed, which are necessary to carry out the tasks that will be assigned to the independent EU budgetary institutions.

Recurring institutional activities: Budgetary Policy Report, development of analysis tools and permanent lines of research

The 2024 Budget Policy Report

This year's Report will focus on medium- to long-term assessments, both historical and forward-looking, as 2024 marks the 10-year anniversary of the PBO. The 2024 Report will be composed of two parts; the first, in addition to illustrating last year's macroeconomic and public finance results, the 2024 trends and the new policy horizon, will include an analysis of the economy and public finance over the 2014-2023 decade; the second part will be devoted to in-depth thematic analysis, including the usual *ex-post* assessment of the Government's macroeconomic forecasts and specific topics with a mainly ten-year focus.

The retrospective analysis of the Report will provide a reading of the main macroeconomic and public finance developments in Italy over the 2014-2023 decade. In particular, the gradual exit from the financial crises in the 2014-19 sub-period and the impact of the pandemic and energy crises in 2020-23 will be considered. In the first period, the low growth of the Italian economy will be assessed, in comparison with the euro area, also in light of public finance dynamics. Emphasis will be placed on the flexibility "at the margin" that characterised the budgetary rules at the EU level during the period ("matrix" of cyclical adjustments, reform clause, investment clause, etc.) and on the characteristics of the national budgetary policy aimed at supporting the cycle and providing stability to the accounts. In the aftermath of the 2020 pandemic crisis, the resilience of the Italian economy will be analysed, also in comparison with other large euro area *partner* countries. The EU's coordinated response to common *shocks* will be analysed, as well as the role of national fiscal policy in countering the recession and the effects of high inflation. Finally, the future outlook for macroeconomic developments and the implications for budgetary targets stemming from the new EU budgetary rules scenario will be outlined. More generally, public finance beyond the NRRP will be discussed in terms of consolidation needs, economic policy priorities and support for public investment.

The sectoral insights in the Report will be devoted to three different topics.

First of all, an analysis will be made of the measures of financial support to households that have been put in place over the last decade and culminated in the introduction of the Single Allowance and other forms of transfers intended for families with children. The analysis will make it possible to reconstruct, in relation to what is happening in other European countries, the evolution of the expenditure (and of tax expenditure) directly or indirectly linked to households and to assess, from a distributional point of view, the possible regulatory developments envisaged in the debate.

Secondly, using the PBO's corporate income tax microsimulation model (MEDITA), an analysis of the demography and economic and fiscal performance of corporations over the last decade will be performed. The analysis will be supplemented with a multi-year reading of the main tax policy measures adopted during the period. To this end, the module for calculating the cost of capital and average and marginal tax rates at the company level will be updated and supplemented.

A third in-depth topic will concern *welfare* programmes, still underdeveloped in Italy, especially those for non-self-sufficiency, which are becoming increasingly crucial in a rapidly ageing country. Demographic trends and the evolution of epidemiological conditions, with the transition towards a greater prevalence of chronic pathologies, have prompted, on the one hand, the strengthening of territorial and home care and, on the other hand, the devising of measures to reform interventions to deal with non-self-sufficiency and disability.

These issues also emerged clearly in the context of the NRRP: the determination of new standards for territorial health care, the financing of investments in territorial structures, the expansion of home care, and the reforms in the area of non-self-sufficiency and disability. The aim is to examine recent developments in this field and the reform projects, to check their potential in relation to the existing situation, from the point of view of health and care, and to identify their limits.

A further in-depth study, based on the time and space available, could concern the evolution of the pension system over the last decade, also in relation to labour market trends, the interaction between public and private pillars and inequalities in pension treatments. A particular focus would be on the pension indexation mechanism, after the recent inflationary jump and the appointment of a specific Committee with the task of proposing a reform.

The development of econometric models and other quantitative tools for institutional activities

In the area of **macroeconomic analysis**, work will be carried out on the structure and simulation procedures of econometric models, in the light of the changed institutional

requirements associated with the new *governance* of public accounts, in the context of which it is necessary to have projections over a long-term horizon.

In particular, the medium- to long-term properties of the MeMo-It model will be tested for the construction of long-term macroeconomic scenarios under different fiscal policy regimes. Also from a medium-term perspective, new approaches will be tested to quantify the impact of structural reforms, in particular those envisaged in the NRRP, on the growth potential of the Italian economy.

The sectoral analysis model with *input/output* tables will be refined and developed. In particular, work will be done on the user interface to make it more intuitive to use. It will be considered whether to continue the development phase to incorporate sectoral dynamics or granularity.

With reference to the short-term models, the indicators with information content will be further extended to track the evolution of the economy, especially at the sectoral level; the forecasting tools for the inflation components will also be refined, taking advantage of the heterogeneity of the information contained in the elementary items or major index groupings. Finally, new operational procedures based on *machine learning* models will be implemented, to be combined with the short-term forecasting modelling of GDP and its main components, already in use by the PBO.

Finally, the aim is to strengthen collaboration with ISTAT for the analysis of microdata from the monthly household and business confidence surveys. Individual household data make it possible to develop alternative measures on the perception of price dynamics and expectations collected directly from consumers. The use of qualitative information at the enterprise level helps to refine indicators already developed by the PBO, first and foremost that on credit access conditions.

In the area of **public finance**, the monitoring of revenue and expenditure aggregates, which is necessary for the preparation of short- and medium-term forecasts, will be analysed. In particular, the activity of updating the database (from SIOPE and RGS - OpenBDAP) dedicated to monitoring and forecasting public finance developed by the PBO will continue. This tool provides useful information to monitor the evolution of the general government account in the current year and, on this basis, to formulate forecasts for future years. As regards expenditure on compensation of employees, a new database will be maintained, which was prepared in the last months of 2023, in order to refine the forecasts with particular reference to contractual renewals. In addition, the collection of information on the components of increases in labour income expenditure other than those foreseen by contractual renewals will be systematised.

Following the changes introduced to European *governance*, and in line with the methodologies and assumptions that the MEF will use, it will be necessary to define the criteria for forecasting public finance aggregates under the assumption of unchanged

policies. It will be necessary to discuss in detail with the MEF the methodological choices that will be adopted for forecasting the State Budget and the steps leading to the forecasting of the items in the general government income statement.

In particular, the assumptions underlying the dynamics of some items of the general government account that may present problematic aspects will have to be assessed. In this regard, it is worth recalling the need, within the scenario of the forecasts at unchanged policies, to introduce assumptions on the resources for contractual renewals of public employees, on the treatment of measures that are declared temporary but are actually extended over time, and on the evolution of some items of capital expenditure. The forecast horizon considered will also have to be extended in line with the provisions of the new European *governance*.

Due to these methodological changes, it is possible that it will be necessary to update the “Memorandum of Understanding between the Parliamentary Budget Office and the Ministry of the Economy and Finance on the transmission of information necessary for the certification of macroeconomic forecasts and the assessment of public finance” in order to acquire all the relevant information for the endorsement of the macroeconomic scenario and the assessment of public finance in a timely manner.

The ex-post analysis of the official public finance forecasts contained in the policy documents will continue, comparing them with the actual result (with an assessment of the main causes for discrepancy). Also in order to make the *ex-post* analyses public, the information provided by the Ministry of Economy and Finance useful for the fulfilment of the provisions of the “Memorandum of Understanding” will be used.

The model for forecasting the expenditure on domestic government bonds will be maintained, updating the database feeding the model and the database with its interactive visualisation published on the PBO website for consultation. From a methodological perspective, the search of alternative strategies for simulating future issuance policy that jointly consider cost-risk objectives on the remaining average life of the *stock* of government debt and on interest expenditure will continue. Finally, the forecasts processed by the model related to government bonds will continue to be supplemented with the estimation of other components contributing to the interest expenditure of the entire public administration (PA).

With specific reference to public debt, the analysis of the components of the *stock-flow* adjustment (i.e. the difference between the change in public debt and net borrowing of general government) will continue. The disaggregation of this item makes it possible to analyse the components of the change in debt other than revenues and expenditures considered in general government net borrowing.

As for debt sustainability analysis, a methodology to identify the elasticities of the primary balance under different price changes in each individual year of the forecasted period of

the policy documents was developed in 2022, still in use, in order to assess the sensitivity of the government's planned primary balances to different assumptions on GDP deflator trends and on the consumption deflator. These elasticities are calculated by assuming different fluctuations in government revenue and expenditure as price change. In order to further refine the analysis of the impact of price *shocks*, account will be taken of the evidence that self-tax revenues react to price changes (GDP deflator growth rate) with a one-year lag. On the expenditure side, an attempt will be made to assess the way in which expenditure on labour income of government employees reacts to inflationary *shocks*.

The deterministic DSA *framework* will also be extended to take account of: 1) the need for a more direct link between the model used for the DSA and the model used to estimate interest expenditure; 2) the impact of the proceeds from the taxation of Italian government bonds on the primary balance; 3) of the impact of government bonds held by the Bank of Italy as a result of its purchasing policies, also considering the impact of the *rollover* and the gradual reduction of the portfolio, on the income it distributes to the State from its holdings of government bonds (so-called 'commissions', which impact on the revenue of the PA account under 'Interest income', i.e. part of 'Other current revenue') 4) monetary policy multipliers (estimated through the econometric model used at the PBO), i.e. the impact of interest rate changes on real GDP growth.

As regards the stochastic *framework*, beyond the work needed to update and refine the existing model so as to make it consistent with the methodology used by the European Commission under the new budgetary rules scenario, the possibility of conducting DSA analysis through vector autoregressive models (VARs) in line with the methods used by the International Monetary Fund (IMF) will continue to be explored. More specifically, work will be done on the estimation of a VAR model for the simulation of the main macro-financial variables determining public debt trends.

Given the increasing complexity of the deterministic *framework* and the need for a more immediate link with the related stochastic *framework*, as outlined above, work will continue on the transition of the model to a stochastic-econometric calculation *software* more suited to handling relatively complex models.

Finally, in line with past years, Italy's public finance performance and strategies will be compared with those of other EU countries, as set out in the Stability and Convergence Programmes and Budgetary Planning Documents and in the European Commission's relevant opinions.

To support the analysis, the **microsimulation models** for households and corporations, already used in past years for the *ex-ante* and *ex-post* evaluation of some legislative measures, will be further strengthened. This will ensure continuity in the ability to analyse issues such as the orientations of tax policy and levy trends for specific sectors, as well as in the reliability of *ex-ante* and *ex-post* impact assessments of legislative measures.

In particular, with reference to household models, the procedure for revising the information bases will be started, subject to the availability of sample and administrative micro-data. In any case, the procedures reconstructing tax, social security and welfare regulations will be updated. With regard to the model for measuring the impact of indirect taxes and price dynamics, data on consumer inflation, tariffs of the main *utilities* and fuels, consumer taxes and excise duties, as well as tariff *bonuses* paid on the basis of the beneficiaries' EESI will be updated at least quarterly.

Developments concerning incentives for energy requalification will be monitored by updating information on new investment and the progress of tax credits. On the same topic, the creation of a specific model for the impact assessment of the recent EPBD, started in the second half of 2023, will be carried out by means of a joint estimation of the energy class, the costs of the interventions needed to achieve the targets defined by the aforementioned directive and the possible incentive measures, the distributional impact of which can be assessed.

The LOSAI information base, on which procedures for reorganising and harmonise information have already been started, also makes it possible to carry out retrospective surveys on employment and wages in the private sector over the last thirty years. The personal tax microsimulation model will allow to analyse the dynamics of wages net and gross of taxation, highlighting the role of the latter in the evolution of inequality in the distribution of employees' incomes.

With regard to the model on corporations, in 2024 the final acquisition of balance sheet data from Bureau van Dick and the data from the tax returns (Unified and Consolidated Tax Return) from the Revenue Agency for 2022 will take place. Mediocredito Centrale's data on public guarantees granted to business is also expected to be updated (the ordinary activity of the SME Fund will be monitored in 2024). The model will also be systematically supplemented with the data contained in the tax returns on tax credits granted to corporations as of 2018. Information from MEF on F24 credit offsets will be also incorporated. Finally, a more systematic use of electronic invoice data is planned, in order to improve the predictive capabilities of the model. The timely nature of the information provided by these data is useful to improve estimates, considering that the modern societies are faced with the structural changes resulting from the health and energy crises happened in the last three years.

With regard to health expenditure forecasting activities, the *database* of quarterly Income Statements (source: BDAP) will be maintained and updated, and a new *database* will be prepared containing information on the stocks of health personnel (Annual Account, source: RGS). In particular, with regard to the quarterly data of the Income Statements, further adjustments will be made useful for the analyses of the PBO, as well as the strengthening of the current modelling; with regard to the personnel *database*, an initial review will be carried out of the information useful for the preparation of an information set functional to meeting the various analysis requirements, such as: the trend in the historical series of the health personnel; their main characteristics (seniority,

qualification, territorial distribution, etc.); salaries and the quantification of contract renewals.

In order to further develop the analysis of territorial finance – which requires the use of heterogeneous data from different sources – a specific database will be created. It will integrate the data of the provisional and final financial statements of local authorities and regions (BDAP), with those on receipts and payments (SIOPE), state transfers (Ministry of the Interior) and personnel (ARAN). In addition, it is intended to build a registry of entities that will allow the analyses to take into account mergers and incorporations and associative forms (Unions of Municipalities and Mountain Communities, social territorial areas, etc.).

Development of analysis tools in light of the EU governance review

The Office will have to equip itself to cope with the tasks arising from the new EU *governance* on the basis of the possible imminent final approval of the relevant legislative proposals.

In order to increase national compliance with the European-rules scenario, Member States will be required to submit medium-term national fiscal-structural plans setting out, for a period of four or five years, depending on the duration of the legislation, budgetary targets, measures to address macroeconomic imbalances, reforms and priority investments at national level. The fiscal targets must be consistent with a four-year fiscal adjustment path, extendable up to seven years in the case of the adoption of specific structural reforms or investment programmes, leading to a primary balance sufficient to ensure sustainable debt and a deficit below 3% of GDP in an unchanged policy scenario after the adjustment period. In addition, Member States will be required to publish an annual progress report on their national plans.

In the national fiscal-structural plans, Member States will define their specific fiscal adjustment programmes, differentiated by country. These will be prepared in terms of multi-year net primary expenditure targets, which will become the only indicator for fiscal surveillance purposes, thus simplifying budgetary rules.

For each Member State with a public deficit above 3 per cent of GDP or a public debt above 60 per cent of GDP, the European Commission will publish a country-specific “reference trajectory”. This trajectory will seek to ensure that debt remains on a realistic downward trend or at prudent levels, and that the deficit remains or is brought and maintained below 3% of GDP in the medium term. In addition, the reference trajectory will have to take into account the so-called “common numerical safeguards” (minimum reduction of debt in relation to GDP and moving towards an overall structural deficit of 1.5%) introduced in the final agreement between the Council of the EU and the European Parliament reached last February. Moreover, for countries in excessive deficit procedure,

the reference path will have to take into account the adjustment required by the corrective part of the Stability and Growth Pact.

The EU economic *governance* reform legislation recognises an enhanced role for Independent Fiscal Institutions (IFIs), such as the PBO, compared to existing EU legislation. In particular, Article 8 of the proposed Directive 2011/85/EU on requirements for budgetary scenarios of the Member States, as amended by the agreement of the Council of the EU in December, recognises certain minimum principles to ensure their functional autonomy and independence. In addition, there are some tasks that would be attributed to the IFIs in the legislative texts, such as:

- i) drafting annual and multi-year macroeconomic and public forecasts that underpin the Government's medium-term planning or validate the forecasts prepared by national authorities;
- ii) monitoring compliance with the numerical fiscal rules in force at national level;
- iii) carrying out the tasks assigned by Regulation 1466/97 on the preventive arm of the Stability and Growth Pact, according to which the IFIs, upon request of the Government or the competent national authority, should provide an assessment of the conformity of the fiscal results reported in the annual progress report on the national structural and budgetary plan with the net expenditure path and, where applicable, also analyse the factors underlying any deviation from the net expenditure path;
- iv) carrying out the tasks assigned by Regulation 1467/97 on the corrective arm of the Stability and Growth Pact according to which the IFIs, upon invitation by the Member State, could be called upon, in the event of the opening of an excessive deficit procedure, to produce a separate, non-binding report on the adequacy of the measures taken with respect to the targets;
- v) assessing the consistency, coherence and effectiveness of the national budgetary *framework*;
- vi) participate in regular hearings and debates in the national parliament.

Member States' budgetary authorities will be required to comply with the assessments conducted or opinions delivered by the above IFIs or publicly justify their decision not to comply with such assessments and opinions.

In this context, as described above, the PBO has already set up tools to derive the reference trajectories, the multi-annual budgetary adjustment and the dynamics of the single indicator of net primary expenditure consistent with the requirements of the new EU *governance* scenario. In view of the final approval of the new budgetary rules, the

Office is preparing the necessary changes to the currently existing tools in order to align it with the final version of the regulation.

The dynamics of the net primary expenditure aggregate will be closely monitored, along with all its components. Expenditure planning will have to be consistent with the targets in terms of the structural primary balance, and annual monitoring will focus on the development of the expenditure aggregate in relation to the multi-year path approved by the Council of the EU. Although still subject to technical discussions between the European Commission and the Member States, the relevant expenditure aggregate is expected to be similar to that used by the net expenditure rule of the current legislation of the Stability and Growth Pact. One difference is that investments are no longer distributed over a four-year period.

To ensure the sustainability and growth perspective of the new *governance*, it will also be important to monitor the development of public investment, especially after the NRRP. In fact, the reform of the preventive arm requires that, in order to extend the period of budgetary adjustment, Member States ensure a higher level of domestically financed public investment over the longer horizon of the plan than that expected before the plan was prepared.

With a view to strengthening the existing tools, several options for medium- to long-term macroeconomic forecasting will be assessed. Specifically, consideration will be given to models that allow representing the macroeconomic impacts of the budgetary adjustments needed to achieve public finance targets.

The impact of investments and structural reforms included in the National Structural and Budgetary Plans, as well as in the NRRP, will be assessed using the macroeconomic models already in use at PBO, such as MeMo-It and the QUEST III R&D general equilibrium model, provided by the European Commission and modified by PBO.

National plans will have to take into account age-related expenditures, primarily pension expenditure and healthcare. As regards pension expenditure, the short-term pension expenditure forecasting model is currently based on the database of contributors managed by INPS and their careers are reconstructed by applying the growth profiles for seniority estimated by INPS, broken down by sector and gender, to the most recent salary data. The database is periodically updated to incorporate new samples released by INPS each time. The objective is to calculate independent estimates using the LOSAI's sample of contributory history. The latter contains for each individual's information on the professional positions held in each year of the career and the related salaries. The use of micro-data allows generating growth profiles with the most appropriate levels of disaggregation, depending on the situation. The first step will be to compare the career profiles released by INPS with those obtained from the LOSAI sample.

Moreover, in 2024, also in the light of the future European budgetary rules, the

development of a dynamic micro-simulation model for the evaluation of public policies over a long-term horizon is expected to continue, linked to demographic and labour market dynamics. In particular, the prospective reconstruction of the population will allow to deal with issues related to medium- to long-term trends in pensions and other age-related expenditures. Several operations have already been completed in this respect (reconstruction of the base year population from the available IT-SILC surveys, their integration with data from the INPS administrative source, estimated transition probabilities between labour market states). In order to make the model operational it is necessary to compare the econometric estimates of the *life-cycle* profile of labour income with those based on the econometric analysis of employment and wage dynamics observed in the past. These estimates make use of administrative data from the INPS source integrated on the IT-SILC sample of the Italian population and of analyses conducted on the longitudinal sample of LOSAI administrative data from the INPS-Ministry of Labour source, which reconstructs for the period 1990-2018 the working careers of a representative sample of employees in the private sector.

For the development of the pension expenditure forecasting model, it will be necessary to update the mechanisms that determine retirement by incorporating the most recent legislation. Completing the model in the medium term will be crucial for medium to long term sustainability analyses of public finances and, within the latter, for comparing PBO's own forecasts with the official ones, i.e. those produced by the State General Accounting Office (Ragioneria Generale dello Stato) based on both national scenarios and scenarios agreed upon at European level within the Ageing Working Group.

Specific lines of analysis

As stipulated in the founding law, among the duties of the PBO is the realization of analyses on 'additional economic and public finance issues relevant to the analyses, audits and assessments' independently chosen by the Office itself.

Below is a description of the specific analyses themes that, compatibly with other institutional priorities, are expected to be completed during the year and those to be launched in 2024 but expected to be completed in the first part of the following year. In some cases, they refer to lines of research started in previous years but not completed due to late acquisition of the necessary information sources or because the time available for research activity was limited by institutional activities.

Analyses on the NRRP

An updated assessment of the impact of the NRRP on economic growth was published in the *2023 Budgetary Policy Report* to take account of the adjustment of the annual

distribution of expenditure for the Plan's projects. The activity was conducted with both the MeMo-It econometric model, used by the PBO for medium-term forecasts, and the QUEST III R&D model, also used by the MEF for the assessments of the macroeconomic effects of the NRRP.

The assessments will be updated to take into account the revision of the Plan authorised by the European Council last December and the remodelling that may take place in the coming months. In addition, the impact of the structural reforms of the NRRP will be assessed with the QUEST III R&D general equilibrium model and models estimating growth potential.

In the next months, several activities will continue to be dedicated to the implementation of the NRRP.

The ReGiS platform will be used to monitor the status of the implementation of the NRRP in all its aspects. The information contained in this platform will require supplementation with other sources (Anac, Opencup, BDAP, Siope+, etc.) and administrative information in order to overcome problems related to timeliness and completeness of the information contained in this platform and to meet the institutional needs for analysis. To this end, collaboration with IRPET will also continue for the analysis of both the evolution of investments undertaken and the effects of the NRRP revision approved last December by the European Commission.

In addition, the monitoring of the NRRP calls for tenders that have local governments as implementing bodies will continue. Particular attention will be paid to the progress of certain measures. In particular, a new assessment will be made of the outcomes of the calls for tenders concerning kindergartens, also in the light of the recent changes (defunding of the Kindergarten plan provided for under the NRRP, and financing of a new plan also through Decree-Law 123/2023, the so-called Caivano Decree). The analysis will also include an assessment of progress with respect to the achievement of the ESLs indicated in the Budget Law for 2022, and a reconstruction of all the sources of funding for Municipalities to provide the service (Municipal Solidarity Fund, 0-6 Fund, Spring Section Fund, *Bonus* crèches, etc.).

The impact of climate change and energy transition on public finance

A review will be conducted to explore the methodologies for estimating the impact on public finance of both climate change, such as higher average temperatures and more frequent extreme weather phenomena, and energy transition, such as increasing energy production from renewable sources and phasing out energy production from fossil fuels. The review would be a preliminary work before the potential construction of analysis models and methodologies that are fit with the Italian scenario.

With regard to the assessment of the impact of climate change, the recent European Commission *paper* (2023) entitled "*The Fiscal Impact of Extreme Weather and Climate Events: Evidence for EU Countries*" represent a starting point, which analyses the risks of extreme weather and climate events on the sustainability of public debt using a *database* of natural disasters and estimates of economic losses due to climate events based on different global warming scenarios. The paper also assesses the effect of climate mitigation and adaptation measures, which are expected to reduce the adverse economic and budgetary impacts of increasingly frequent and intense extreme events.

In the context of the assessment of the impact of the energy transition, it is worth mentioning the models recently used by the UK *Office for Budget Responsibility* and the Dutch *Central Planning Bureau* to assess budgetary costs and debt sustainability under different scenarios of energy transition developments. The methodological approach is described in the EU IFI *Network paper* ("*Assessing the fiscal policy impact of the climate transition*") presented at the European Fiscal Board Annual Conference in 2022, together with the IFIs' responses to a Network questionnaire.

Wealth and public debt sustainability indicators

The reform of the EU budgetary rules scenario considers the medium-term dynamics of the ratio of public debt to GDP as the pivotal element for assessing the sustainability of a country's public finances. However, the debt-to-GDP ratio (i.e. the ratio between a *stock* and a flow variable) may not be the most appropriate indicator to measure the financial stability of a country.² In this respect, some growth models consider the debt to wealth ratio as a relevant variable to measure a country's financial sustainability³. In the light of this approach and also of the indications of inter-temporal consumption models that identify a link between ageing and individuals' propensity to save/wealth, PBO will examine the possibility of constructing a medium-term projection model of the ratio of public debt to wealth considering some structural and demographic variables that may influence its dynamics in the years to come.

² See: Balassone, F., Franco, D. and Zotteri, S. (2007), "The reliability of EMU fiscal indicators: Risks and safeguards", in Larch, M. and Nogueira Martins, J. (eds.), in *Fiscal indicators*, European Economy Economic Papers, n. 297; Casarosa, C. (1986), "Il significato economico del rapporto fra debito pubblico e PIL: un'analisi critica", in *Politica economica*, vol. 2, n. 2; Furman, J. and Summers, L. (2020), "A reconsideration of fiscal policy in the era of low interest rates, Discussion Draft", November 30, available at hks.harvard.edu; Blanchard, O., Leandro, A. and Zettelmayer, J. (2021), "Redesigning EU fiscal rules: from rules to standards", in *Economic Policy*, April; Wyplosz, C. (2011), "Debt sustainability assessment: Mission Impossible", in *Review of Economics and Institutions*, vol. 2, n. 3.

³ Bruce, N. and Turnovsky, S. J. (1999), "Budget balance, welfare, and the growth rate: 'Dynamic Scoring' of the long-run government budget", in *Journal of Money, Credit and Banking*, vol. 31, n. 2, pages 162-186.

The implications for public finance of an inflationary shock

The QUEST III R&D model will be used to run simulations on the impact on public finance of inflationary supply *shocks*, such as an increase in energy prices, or demand. The methodology followed will be similar to that proposed by a recent European Commission analysis.⁴ Moreover, the results generated by the model in terms of real output, prices and interest rates will be used as input to the debt sustainability analysis (DSA) *framework*, as an additional sensitivity analysis.

Evaluation of policy measures

Some analyses will focus on the evaluation of specific public policies implemented in past years or being discussed.

On the corporate side, recent regulatory innovations in the field of international taxation suggest several elements of interest worthy of further study. The first concerns a general framing and description of the multinational companies that would fall within the scope of the *Global Minimum Tax* (GMT). The second concerns an assessment of the potential GMT revenues for Italy in relation to both the methods of calculating the effective tax rate and the constituent elements of the taxable base. The third relates to an analysis of possible systematic differences in the characteristics of the companies falling within the scope of the GMT with respect to the rest of the businesses. A final element concerns the interaction of the GMT – in the calculation of the tax bases and the effective tax rate – with the different types of tax incentives granted to companies. An in-depth investigation could focus on the likelihood that the different incentives in force are used in full by MNEs, and whether and to what extent these may affect the calculation of the effective tax rates and tax bases.

Using Mediocredito Centrale's data on public guarantees granted to enterprises supplemented with other available information on corporations, an assessment will be made of the behaviour of enterprises that accessed guarantees mainly during the health emergency (i.e. between 2020 and 2022, the years of extraordinary activity of the SME Fund).

In addition, the study of the main investment incentive measures and the *ex-post* evaluation of their impact will continue. In particular, the analysis already carried out for research and development incentives will be completed in this direction.

Again with reference to taxation, subject to the availability of a specific panel of administrative micro-data, it is intended to develop an analysis of the effects of the numerous regulatory interventions that over the last decade have involved the discipline

⁴ Motyovszki, G. (2023), "The fiscal effects of terms-of-trade-driven inflation", in *European Economy Discussion Paper*, 190, July.

of taxation of income from self-employment and sole proprietorships. The changes to the flat-rate scheme, the introduction of the electronic invoicing obligation and the proposed introduction of the two-year arrangement (i.e. *concordato preventivo biennale*) in implementation of the tax delegation are only some of the interventions that have affected the taxation of self-employment income. The assessment of the effect of these changes will have to take into account the revisions made to the general taxation scenario and the impact these have had on the overall design of the IRPEF tax. There are several aspects to be explored. The first concerns the evolution, over the last decade, of the number of taxpayers with self-employment income and how this has depended on a natural demographic effect of economic activities or on regulatory changes such as, for example, the progressive expansion of the flat-rate regime. The second aspect concerns the progressive erosion of the IRPEF tax base as a result of the shift of part of it to flat-rate taxation and the consideration of taxpayers' choices towards adopting the regime depending on the change in the access threshold. The third aspect concerns the impact in distributional terms of adopting the flat-rate regime with respect to the rest of the self-employed who choose to remain under the ordinary regime. Finally, even the introduction of the mentioned two-year arrangement would require an analysis in terms of taxpayers' incentives to adhere to it and its impact on revenue and possible effects in terms of evasive behaviour.

With regard to healthcare, 45 years after the establishment of the National Health Service (SSN), we are witnessing a process of progressive privatisation, which concerns both production and financing, especially as a result of the spread of corporate *welfare*, which in turn is incentivised with tax breaks. This issue is closely linked to that of staff shortages in the NHS, which imply a downsizing of public production capacity and often lead to seeking emergency responses through the public financing of services provided by private providers.

It would therefore be useful to examine this aspect, offering evidence on the evolution of the spaces of the private market in healthcare in relation to the public supply, through a precise analysis of the available information on the supply of hospital and territorial services by type of provider, as well as on the trend of public and private expenditure. An attempt would thus be made to verify and measure the extent of the private sector.

Another aspect that needs to be studied in depth, in the health field, is the recent revision of the criteria for the distribution of NHS funding among the Regions, which would allow a step forward towards the completion of the plan for the equalisation of health resources, which has remained partly unimplemented. In fact, the per-capita criterion, weighted on the basis of consumption by age group, has been integrated since 2023 with parameters relating to mortality and others of an economic-social nature, the inclusion of which was provided for as early as 1996 (Law 662/1996). The other criteria, the introduction of which in the mechanism for distributing resources was provided for by the 1996 Law (in particular, territorial epidemiological indicators) and by Legislative Decree 68/2011 (pathway for the improvement of quality standards) have not yet been adopted.

In addition to examining the technical features of the new proposal and assessing its impact on the various Regions, will be consider the role, within the overall distribution of resources, of the so-called “bonus quota”, distributed in recent years taking into account the rebalancing criteria indicated by the Conference of the Regions and Autonomous Provinces and thus on the basis of political agreements.

In the field of assistance, an important issue concerns the existing gaps in the services provided by the different Regions. The subject of social assistance is among those of exclusive regional competence, while the administrative competence in the management of social services lies with the Municipalities. Due to the delay in defining the ESLs, there has long been a strong heterogeneity in the provision of services on the territory, which is also a consequence of the different financial availability. Since 2015, the equalisation of resources for the fundamental functions for the municipalities, including municipal social services, has been implemented; since 2017, state funding in this area has been increased (National Fund for non-self-sufficiency, National Fund for Social Policies, other minor funds); since 2021, service objectives, aimed at overcoming the gaps in the social services provided by the Municipalities, have been financed. The intention is to analyse data on the evolution of expenditure and services provided in the individual territories in order to verify the effects of public policies (in particular, those adopted as part of the path to implementing fiscal federalism) on territorial gaps.

In this regard, it should be recalled that the PBO is focusing on analysing the issue of the determination of ESLs, for which a fast track has been provided by the Budget Law for 2023 in the matters or areas of matters potentially subject to requests for differentiated autonomy, while at the same time the granting of forms of autonomy in these areas has been made conditional on the approval of the relevant ESLs. The Bill on differentiated autonomy approved at first reading by the Senate of the Republic addresses these issues. The PBO has been called to hearings on these topics several times, most recently in January 2024.

In addition, the issue of low birth-rates, which for years has been affecting all the major advanced economies and, in particular, Italy, will be addressed. Over the years, various measures have been adopted to deal with the phenomenon, not always coordinated with each other, resorting to different tools (transfers, services, family-work reconciliation policies, etc.). Starting from a systematic survey of the measures adopted, also in comparative terms with other European countries, analyses will be carried out to highlight both the type of intervention used and, possibly, its effects. Special attention will be paid to the relationship between low birth rates and fertility, given the evolution of the number of women in the population.

2. Transparency of public accounts and communication

In 2023, the PBO was strongly committed to consolidating its presence in the media, with the aim of fostering ever greater transparency on public accounts at the service of citizens. Over the course of the year, the total number of articles and mentions of the Office in the print media was approximately 1,030, 543 on the web and 136 on social media, as well as 37 radio and television reports, in particular corresponding to the most significant hearings at the end of 2023.

In order to increase its communication capacity and the information tools available to the public, the PBO strengthened its presence on the social channel X, in particular to communicate the content developed by the Office, and launched the redesign of the institutional website with the aim of greater accessibility and clarity of navigation.

The section of the PBO website relating to the dissemination of data and analysis through interactive infographics was developed and updated, with the aim of allowing the public easy consultation of the information base used for analysis. In particular, reference is made to the infographics published concerned: the comparison between the Stability Programmes; the Budgetary Planning Documents and the European Commission's forecasts; the government bonds database (which provides a detailed analysis of the composition of debt); the distributional effects of inflation on household budgets; and the calls for NRRP investment projects having local authorities as implementing bodies and in which they participate through completions. A wider use of infographics, which have received positive *feedback* from users and specialised media, may be a key factor in the dissemination of the Office's content on different communication platforms.

This includes the activation of an institutional LinkedIn profile, in line with what has been done by other independent European tax authorities, which will further aim to reach professional and institutional communities more effectively. The new opportunities offered by the X/WhatsApp channel will be evaluated for a possible smooth proactive information vehicle with *alert* mechanism towards media and *stakeholders*.

As part of the liaison with the international institutional bodies of the OECD and EU IFIs, the PBO in 2024 will take part in working groups dedicated to communication and its development through coordinated actions.

Since 2024 is the 10th anniversary of the PBO, the Budgetary Policy Report, which has been publicly presented annually since last year, will contain, in addition to the usual forward-looking view, a retrospective assessment prepared for this occasion, to which special communication materials will be dedicated.

3. The organisational structure

The Office staff currently includes thirty-one resources (twenty-six economists and five administrative employees) against the forty resources required by its founding law. The

gap between the staff plan and the actual workforce is mainly due to the lack of suitable seat for the Office. Article 17, paragraph 6 of Law No. 243 of 24 December 2012, which established the Parliamentary Budget Office, stipulates that “The Presidents of the Senate and the Chamber of Deputies shall concur on making available premises to be used as the seat of the Office along with the necessary equipment”. The Office is currently partly hosted by the Chamber of Deputies (at Palazzo San Macuto) and partly by the Senate of the Republic (at Istituto S. Maria in Aquiro). The lack of a single seat, suitable to accommodate the forty staff units provided for by the founding law, reduces the full functionality of the Office, makes it more difficult fulfilling its institutional mandate, and also reduces the possibility of analysing factors that are becoming fundamental in the evolution of public finance. To name but a few, the energy transition, challenges in the global economy, climate change, demographic trends and economic and social sustainability. The current logistical inadequacy of the seat leads to organisational issues related to the placement of the staff in two separate buildings and the lack of common spaces for meetings and external activities.

In 2023, the PBO carried out recruitment procedures with the aim of filling gaps in the services of sectoral analysis, public finance and macroeconomic analysis, and to hand over, at the end of the Board term of office, an organisational structure similar to and more in line with the one indicated by the founding law.

4. International Activities

Still in 2024, the PBO's international activities will play a central role in its institutional action: aside from bilateral meetings with public and private organisations operating at supranational level (European Commission, IMF, European Central Bank, OECD, economic counsellors of embassies in Italy, *rating* agencies), it is worth reminding that the PBO is a member of the OECD *Working Party of Parliamentary Budget Offices and Independent Fiscal Institutions* (IFIs), the European Commission's EUNIFI working group and the EU's IFIs *Network*, i.e. the network established among the EU national *fiscal councils*.

In the context of this *Network*, it should also be noted that the PBO is a member of the editorial board of the publication *European Fiscal Monitor*, the working group on the reform of EU economic *governance*, the working group on media communication for more effective IFIs, and the working group on the endorsement of macroeconomic forecasts and public finance forecasts. During 2023, the PBO also contributed to the preparation of a *Network paper* on institutional aspects for more effective IFIs.

The PBO will continue to participate in the OECD (STEP) and European Commission (*Expert Meeting on Economic Forecasts*) working groups on macroeconomic forecasts.