

MACROECONOMIC FORECAST December 2024



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BULGARIAN NATIONAL BANK

— 145 YEARS —

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The Macroeconomic Forecast (December 2024) was prepared as of 15 January 2025 and presented to the BNB Governing Council at its meeting on 23 January 2025. The estimates and projections published in this issue should not be regarded as advice or recommendation. The information in the publication should be used exclusively at the user's risk.

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Abbreviations

| BNB | Bulgarian National Bank |
|------|---|
| GDP | Gross Domestic Product |
| EC | European Commission |
| EU | European Union |
| EWRC | Energy and Water Regulatory Commission |
| ECB | European Central Bank |
| CPI | Consumer Price Index |
| CFP | Consolidated Fiscal Programme |
| NSI | National Statistical Institute |
| NRRP | National Recovery and Resilience Plan |
| OPEC | Organization of Petroleum Exporting Countries |
| HICP | Harmonised Index of Consumer Prices |

Summary

The BNB forecast of key macroeconomic indicators is prepared as of 15 January 2025 based on the assumptions about global economic developments and price dynamics of main commodity groups in international markets as of 12 December 2024.

The assumptions about global economic activity and trade developments suggest that growth of external demand for Bulgarian goods and services will be lower than projected in the November 2024 macroeconomic forecast of the BNB over the whole projection horizon. This is mainly due to the deterioration in the economic outlook for Bulgaria's major trading partners in the euro area, as a result of which external demand growth is expected to remain at low historical levels, reaching 1.3 per cent in 2024 and accelerating to 2.9 per cent in 2025 and to 3.4 per sent in 2026. Market participants expect that international energy commodity prices in euro will decline in 2025, mainly in oil prices, while natural gas and electricity prices are expected to remain higher than in 2024. Technical assumptions suggest an essential rise in euro prices of non-energy commodities in international markets in 2025, most pronounced in agricultural raw materials and certain food groups. As a result, euro commodity prices weighted by their importance for Bulgaria's international trade are anticipated to grow at rates slightly above 4.0 per cent in 2025 and between 2.0 and 2.6 per cent in 2026.

Bulgaria's real GDP growth is expected to be 2.3 per cent in 2024, mainly driven by the increased final consumption expenditure and a positive contribution of inventories, while fixed capital investments will contribute negatively to the change in economic activity. Real GDP growth is projected to accelerate to 2.5 per cent in 2025 and to 3.0 per cent in 2026, with this dynamics being mainly determined by the forecast shift of investments and goods and services exports from a decline in 2024 to growth over the rest of the projection horizon. Private consumption is expected to grow at high rates over the 2024–2026 period and appear to be the GDP component with the highest positive contribution to the growth, in line with the projected increase in employment and in real disposable income of households.

Annual inflation measured by the Harmonised Index of Consumer Prices (HICP) is expected to accelerate to 3.5 per cent at the end of 2025 (compared to 2.1 per cent at the end of 2024), with average annual inflation reaching 3.3 per cent (2.6 per cent in 2024). The main group contributors to the inflation acceleration are food, goods and services with administratively controlled prices and tobacco products which together with the group of services are expected to have the largest positive contribution to the overall inflation at the end of 2025. The projected rise in labour costs and strong consumer demand are anticipated to continue exerting pro-inflationary pressure in the medium term. At the end of 2026, annual inflation is projected to slow down to 2.1 per cent due mainly to the groups of food and goods and services with administratively controlled prices, while services inflation is expected to remain close to its level of 2024.

On the basis of the current inflation forecast for Bulgaria and the latest EC inflation forecast for the other EU Member States, Bulgaria is expected to comply with the convergence criterion on price stability in January 2025 and continue to meet it over the remainder of the year.

Risks to the real GDP growth forecast are assessed as balanced for 2024, while prevailing risks for 2025 and 2026 are for lower growth compared to the baseline scenario, given the ongoing global geopolitical conflicts and the existing structural constraints in the economies of some of Bulgaria's major trading partners. A significant internal risk of lower economic activity stems from the likelihood of a slower than projected in the baseline scenario assumption of implementation of investment projects financed by both national and EU funds. In addition, there are risks of higher and persistent inflation in Bulgaria, which is a prerequisite for more limited private consumption growth.

Prevailing risks to the inflation forecast suggest a stronger increase in consumer prices *vis-à-vis* the baseline scenario for the whole forecast horizon. These risks arise from a likelihood of higher international energy prices compared to the technical assumptions in the baseline scenario and from a potential larger than expected increase in administered prices in Bulgaria. A possible faster and strong transmission by firms of projected growth in labour costs on final consumer prices also poses a risk of higher inflation. At the same time, factors that could lead to lower than projected inflation are a potential change or phasing out of government institutions' measures envisaged in the baseline scenario of the forecast, which have a direct effect on consumer prices in Bulgaria.

Bulgarian national bank forecast of key macroeconomic indicators for 2024–2026

External Environment

The BNB forecast of key macroeconomic indicators is prepared as of 15 January 2025 based on assumptions about global economic developments and price dynamics of main commodity groups in international markets as of 12 December 2024.

Assumptions about developments in external demand for Bulgarian goods and services are based on the latest European Central Bank (ECB) projections¹. Foreign demand is expected to grow at a slower pace than projected in the BNB macroeconomic forecast of November 2024, reflecting mainly worsening economic prospects of Bulgaria's major trading partners in the euro area. The assumptions imply that growth in external demand for Bulgarian goods and services will accelerate from 1.3 per cent in 2024 to 2.9 per cent in 2025 and to 3.4 per cent in 2026. These rates are comparatively low historically and impacted by the ongoing trade fragmentation, heightened geopolitical tensions and structural problems in some Bulgaria's major trading partners.

Assumptions underlying the forecast about the change in euro prices² of energy commodities (crude oil, natural gas, electricity)³ and non-en-

ergy commodities⁴ (metals⁵, food⁶ and other commodities⁷) take into account prices of futures contracts concluded in international markets as of 12 December 2024. Market participants expect euro energy prices in international markets to continue declining over the whole forecast period due mainly to crude oil prices, while prices of natural gas and electricity will remain higher than in 2024. Non-energy commodity prices are assumed to grow significantly on an annual basis in 2025. As a result euro commodity prices weighted by their importance for Bulgaria's international trade will grow at rates slightly above 4 per cent in 2025 and within 2.0 and 2.6 per cent in 2026.

As regards crude oil, technical assumptions suggest a decline in euro prices over the entire projection horizon due to expected lower demand for crude oil and a higher global production capacity. Market participants expect the price of natural gas in Europe to rise on an annual basis in 2025, reflecting the heightened geopolitical uncertainty related also to the expiry of the Russian gas transit contract through Ukraine, as well as increased demand for LNG. The assumptions imply that the electricity price will increase on a quarterly basis in the first quarter of 2025, and the average annual price in 2025 will remain higher than in 2024. The technical assumption suggests that natural gas and electricity prices in the European market will remain unchanged

¹ For further details, see ECB staff macroeconomic projections, December 2024. The ECB forecast includes information on the global economy development as of 20 November 2024 and information on dynamics of euro area economic activity as of 27 November 2024.

² The forecast for euro prices of commodities is based on a technical assumption about the EUR/USD exchange rate, which is fixed for the entire forecast horizon at its average value for the last ten days as of the date when the external environment assumptions were made.

³ The assumption about price dynamics of petroleum products for the entire projection horizon is based on data on futures contracts traded in international markets. Estimates of electricity price movements are based on market information on futures contracts concluded in the German market, encompassing the period until the fourth quarter of 2025 (inclusive), after which a technical assumption is made that prices will remain unchanged until the end of 2026. As regards natural gas, prices of futures contracts for delivery at Title Transfer Facility (TTF) rates until the fourth quarter of 2025 (inclusive) are also used, after which a technical assumption is made that prices will remain unchanged until the end of 2026.

⁴ Futures contracts concluded for trading of relevant commodities in international markets are used, with data available until the end of the fourth quarter (inclusive) of 2025. Public information on sufficient volumes and number of futures transactions for these commodities in international markets is not available for the remainder of the forecast horizon.Therefore, price dynamics is estimated by taking into account the historical correlation with the global trade dynamics set forth in the forecast's external assumptions.

⁵ Including steel, copper, aluminium, lead, zinc, nickel and tin weighted in accordance with Bulgaria's foreign trade flows.

⁶ Including pigmeat, coffee, wheat, maize, rice, soybeans, sugar, cocoa, milk and livestock weighted in accordance with Bulgaria's foreign trade flows.

⁷ Including rubber, timber and cotton weighted in accordance with Bulgaria's foreign trade flows.

until the end of the forecast horizon compared to those reported in the fourth quarter of 2025.

Market participants expect a stronger increase in euro prices of non-energy commodities in international markets in 2025 compared with that projected in the BNB forecast of November 2024. The increase will be most pronounced in agricultural commodities and particular food groups. As regards food prices in euro, market expectations suggest that the increase will be concentrated in particular products, such as coffee, cocoa and meat. The assumptions underlying the forecast imply that growth in metal prices will accelerate in 2025, with the increase being moderate but broad-based. It is assumed for 2026 that prices of non-energy commodities will rise at a rate of around 3 per cent in line with growth in global economic activity and trade.

In addition, technical assumptions include also market participants' expectations of a continued gradual decrease in short-term interest rates in the euro area over the entire projection horizon. Compared with the November forecast, shortterm interest rates in the euro area are assumed to be lower.

Economic Activity in Bulgaria

In the first nine months of 2024, annual growth of real GDP was 2.3 per cent according to non-seasonally adjusted data of the NSI. Available economic indicators⁸ for the fourth quarter of 2024 show quarter-on-quarter growth of economic activity in Bulgaria which is similar to that in the previous quarters. Taking into account these developments and technical assumptions of the external economic environment, real GDP growth is projected to reach 2.3 per cent in 2024 (from 1.9 per cent in 2023). Higher real GDP growth in 2024 will be mainly driven by the transition from a negative to a positive contribution of changes in inventories⁹, followed by the projected acceleration in household consumer expenditure growth. Private consumption is projected to increase by 4.2 per cent in real terms over 2024 (compared to 1.4 per cent in 2023), with growth being supported by higher employment and increased real disposable income of households amid higher labour demand and persistent high labour shortages in Bulgaria. Other factors favouring consumer expenditure growth in 2024 will be higher social transfers to households, public sector wage growth and high lending activity, supported by both the active supply of credit resources by banks and increased demand by households. Strong growth in government expenditure on compensation of employees reported in January-September 2024 is projected to add most significantly to the acceleration of government consumption growth in real terms to 1.7 per cent in 2024 (from 1.1 per cent in 2023)¹⁰. Fixed capital investments declined in the first nine months of the year due to a decline in public investments¹¹, which based on BNB estimates is driven by the high base of investments funded by national resources in the corresponding period in 2023. Overall for 2024, public investments are projected to decrease due to expected lower national investments, with the completion of EU-funded projects under the 2014-2020 programming period and yet initial phase of project implementation under the 2021-2027 programming period being of relatively less importance. Total investments

⁸ This refers to the following indicators: production indices in industry, construction and services; retail trade turnover index; the unemployment rate; business climate and consumer confidence index; producer price index in industry; new loans to corporations and households; global PMI.

⁹ In 2023, a decreased accumulation of inventories was observed in the economy in line with the decline in economic uncertainty following the war in Ukraine, the reported decline in non-energy commodity prices and improved functioning of global supply chains (down 81.4 per cent in new stocks over 2023, compared to growth of 306.3 per cent in 2021 and 19.0 per cent in 2022). At the same time, the inventories component contributed positively to real GDP growth in the first nine months of 2024, and this dynamics is expected to be sustained until the end of the year. A technical assumption is made for the 2025–2026 period that the contribution of inventories to the economic activity dynamics will be neutral.

¹⁰ Public wage growth is also partially reflected in projected annual growth of the government consumption deflator. The estimate of government consumption components for the first half of 2024 is based on quarterly non-financial accounts data of the general government sector published by the NSI, while for the third quarter of 2024 information from the consolidated fiscal programme (CFP) is used.

¹¹ The NSI does not provide official data on the breakdown of total investments into private and public in the economy. Private investment series is constructed by the BNB as a difference between total investments and the estimated amount of public investments on an accrual basis in real terms. The estimate of public investments for 2023 and the first half of 2024 is based on quarterly non-financial accounts data of the general government sector published by the NSI, while for the third quarter of 2024 information from the CFP is used.

in fixed capital in the economy are expected to decrease by 1.2 per cent in real terms in 2024. Net exports are expected to contribute negatively to the annual change in real GDP in 2024 due to the projected decline in exported goods and services coupled with growth in imports of goods and services. The forecast of exports reflects the technical assumption of low growth in external demand over 2024, data reported for the first nine months of 2024, which imply a weaker agricultural harvest, and weaker exports of cereals and oilseeds accordingly, and available economic indicators for the fourth guarter of 2024.12 The forecast of real growth in goods and services imports is based on the dynamics of final demand components and BNB estimates of their import content.

Real GDP growth is expected to increase to 2.5 per cent in 2025. Its acceleration will be driven mainly by the projected shift of investments and exports of goods and services from a decline in 2024 to growth in 2025. Fixed capital investments are projected to increase by 7.6 per cent in real terms in 2025, supported by both private and public sectors. The implementation of EU-funded projects under the National Recovery and Resilience Plan (NRRP)¹³ will contribute positively to the increase in public sector investment activity. The forecast includes a technical assumption that by 2026 a total of 61 per cent of the funds approved for Bulgaria under the Recovery and Resilience Facility will be absorbed, mainly through investments in fixed capital of the general government sector. Major factors expected to support private sector investments include the projected increase in final demand for Bulgarian goods and services, projected growth of credit to the private sector and the anticipated improvement in corporate profits. Private consumption will continue to have the major positive contribution to economic growth in 2025, underpinned by increased employment, higher nominal labour income and increases in social transfers to households, although the growth rate of private consumption will slightly slow down from 2024 to

3.7 per cent. The main factor behind lower private consumption growth is the projected acceleration of inflation in Bulgaria, which will have an adverse effect on the household purchasing power. Government consumption is projected to rise by 1.3 per cent in real terms in 2025, which will be mainly driven by the dynamics in compensation of employees in the public sector.¹⁴ Exports of goods and services are expected to grow by 2.9 per cent in real terms in 2025 in line with the technical assumptions about the dynamics of external demand for Bulgarian goods and services. Despite the assumed improvement in external demand as compared to the previous year, growth in exports of goods will be constrained by planned repairs in a large metallurgical plant¹⁵ in the second guarter of 2025. As a result, real growth in imports of goods and services over 2025 is expected to be higher than that in exports. Consequently, net exports will continue to have a high negative contribution to the change in real GDP (-1.3 percentage points).

Economic growth is expected to accelerate to 3.0 per cent in 2026, which will be driven mainly by the contracted negative contribution of net exports and the accelerated increase in private consumption. The main contributors to the dynamics of net exports will be a projected acceleration of goods and services exports in line with the set technical assumptions about external demand and completion of repairs which are anticipated to limit exports in 2025. At the same time, growth of goods and services imports is expected to slow down, mostly in line with the profile of fixed capital investments and their estimated import content. Private consumption is envisaged to increase by 4.0 per cent in real terms in 2026 and to have the largest positive contribution to real GDP growth. This will be driven by both the projected slower inflation and tightened labour market conditions, leading also to a retention of the trend toward a significantly higher growth rate of nominal wages vis-à-vis consumer prices.

¹² NSI data on industrial turnover in the external market, external trade and business environment are taken into account.

¹³ The expected acquisition of new fighter planes for the Bulgarian Air Force is expected to be another factor supporting investment activity growth in 2025. In the forecast, the acquisition of fighter planes has a neutral contribution to real GDP growth, as acquisition costs are equally accounted for in government investments and in goods imports.

¹⁴ The forecast of the dynamics in compensation of employees in the public sector for 2025–2026 takes into account the information on approved amendments to the Law on the Ministry of the Interior and the Law on Defence and Armed Forces of the Republic of Bulgaria, which are expected to enter into force on 1 January 2025. Also, an assumption is made that the policy of maintaining wages in the education sector at 125 per cent of the national average wage will continue.

¹⁵ According to the quarterly report of Aurubis AG, a repair in its Pirdop plant is planned in the second quarter of 2025.

Balance of Payments

The balance of payments current account is expected to be close to neutral in 2024 and then the deficit is anticipated to gradually increase to 1.5 per cent of GDP in 2025 and 1.7 per cent of GDP in 2026. The increase in the trade balance deficit due to anticipated higher growth in imports of goods than exports of goods is projected to be the main contributor to the current account deficit. At the same time, the surplus in services trade is expected to remain high and to stabilise as a share of GDP over the forecast period, reflecting continued growth in tourist visits to Bulgaria and strong growth in exports of computer and information services. According to the forecast, the deficit on the net primary income item will slightly decline as a percentage of GDP in 2024 compared to 2023 and continue to decrease slightly as a percentage of GDP over the forecast period due mainly to the expected interest rates cut in the euro area and, consequently, the expected rate of return on foreign investments in Bulgaria. In 2024 and 2025, the capital account surplus is expected to remain close to its 2023 level as a percentage of GDP, before increasing in 2026 on an annual basis due to the assumed increase in incoming capital transfers from the EU, including also under the NRRP.

Labour Market

Employment rose by 1.1 per cent in the first nine months of 2024, with growth expected to be maintained for the entire 2024 on average and to be supported mainly by employment increases in the services sector. Despite a projected increase in real GDP in the 2025-2026 period, employment growth is expected to slow down to 0.2 per cent in 2025 and the number of employed to remain almost unchanged in 2026 as a result of adverse demographic developments in Bulgaria leading to a labour force decline. These developments will result in a gradual decline in the unemployment rate from 4.2 per cent in 2024 to 3.6 per cent in 2026. Concurrently, real labour productivity is expected to increase from 1.2 per cent in 2024 to 2.3 per cent in 2025 and 3.0 per cent in 2026 in line with the projected increase in economic activity in Bulgaria amid limited growth in employment. Nominal growth in compensation per employee remained high in the first nine months of 2024 (12.8 per cent) and is expected to come to 12.5 per cent on average for 2024. Nominal compensation per employee is projected to increase by 9.0 per cent in 2025, with growth supported by higher economic activity, an increase in the minimum wage by 15.4 per cent from the beginning of the year, the assumed rise in public sector wages and significant labour shortages in Bulgaria. Higher economic activity in the context of limited labour supply and increasing labour shortages in Bulgaria is assumed to continue to put pressure on wage growth at a rate higher than that corresponding to the rise in labour productivity and inflation in 2026, with compensation per employee growth expected to be 7.7 per cent. As a result, income growth will continue to support the increase in household real disposable income and hence private consumption over the entire forecast horizon. Wage increases will also prompt a strong rise in unit labour costs (by 11.1 per cent in 2024). Unit labour cost growth is expected to slow down to 6.6 per cent in 2025 and 4.5 per cent in 2026, reflecting more moderate wage growth amid accelerated labour productivity growth.

Monetary Sector

In the upward phase of the interest rate cycle in 2022-2024, the transmission of the ECB monetary policy to interest rates on deposits and loans in the household sector in Bulgaria remained weak in the context of a sustained significant inflow of attracted funds, high liquidity and strong competition in Bulgaria's banking sector. Considering the low pass-through of the ECB's monetary policy effects during the upward phase of the interest rate cycle and relatively low household loan and deposit rates in Bulgaria, the transmission in the downward phase of the interest rate cycle is expected to remain limited in this sector. Based on market expectations of further downward dynamics in short-term interest rates in the euro area, as well as some decline in interest rates on attracted funds from households in the banking system in the second half of 2024, a slight decline in interest rates on both new time deposits and new household loans until the beginning of 2026 is projected to be maintained until the end of the forecast horizon at levels close to those reached at the beginning of 2026. In the interest rates on newly extended

loans to non-financial corporations, expectations are for a stronger decline until mid-2026 due to a stronger link between these lending rates and interbank market benchmarks in the euro area. Compared with the previous forecast, interest rates on household deposits and loans and interest rates on corporate loans have been revised downward.

Annual growth of non-government sector deposits is projected to remain relatively high, but to follow a downward trend over the projection horizon due to expected slower wage growth, and to reach 9.1 per cent at the end of 2025 and 7.7 per cent at the end of 2026. The annual growth rate of credit to the non-government sector is also expected to slow down to 11.7 per cent at the end of 2025 and to 9.8 per cent at the end of 2026 in line with the projected slower increase in private consumption, house prices and private investments, and the assumption of a slowdown in corporate overdraft growth from the high levels reported at the end of 2024.

Inflation

Annual HICP inflation stood at 2.1 per cent at the end of 2024 (compared with 5.0 per cent at the end of 2023)¹⁶. The main factors contributing to the inflation slowdown were lower food inflation due to the base effect of the high growth rates in the previous year and lower industrial goods prices. Concurrently, food and services continued to have a significant positive contribution to overall inflation.

The inflation forecast is based on technical assumptions about movements in main energy and agricultural commodity prices, the projected degree of their pass-through by firms to final consumer prices (notably in services and food groups), and on the effects of fiscal measures underlying the forecast. Based on the information available as of 15 January 2025, the inflation forecast for 2024–2026 includes the following measures: increases in the excise duty on tobac-co products for 2024–2026 as provided for in

the Excise Duties and Tax Warehouses Law¹⁷; termination of the reduced tax rates on supply of bread and flour and on restaurant and catering services (zero and 9 per cent VAT) and restoration of the standard VAT rate of 20 per cent as of 1 January 2025¹⁸; an increase in the fee for issuing identity documents by 67 per cent as of 1 January 2025.19 Based on decisions published by the Energy and Water Regulatory Commission, the forecast includes changes in the prices of water and sewerage services in 2025-2026²⁰ and an increase in the electricity price for households as of 1 January 2025.²¹ While preparing the forecast, it is assumed that the measure for providing compensation to business electricity consumers will remain in place after the end of 2024.22

¹⁶ HICP data at the end of 2024 were published after the cut-off date of the macroeconomic forecast. Average annual inflation in 2024 was 2.6 per cent compared to 8.6 per cent in 2023.

¹⁷ The excise duty calendar was adopted by the Law on Amendment to the Tax and Social Insurance Procedure Code (published in the Darjaven Vestnik, issue 100 of 16 December 2022). It provides for a simultaneous increase in the specific excise duty rate and a reduction in the proportional excise rate on tobacco products. Based on the adopted excise calendar and the Updated Medium-Term Budget Forecast for the 2025– 2028 Period of the Ministry of Finance of 13 December 2024, the forecast provides for the two steps of raising the minimum excise duty *per* 1000 cigarettes by 5.7 per cent in 2025 and by 4.3 per cent in 2026 to be realised in 2025, leading to a cumulative increase in the prices of tobacco products by 10.1 per cent in 2025. In 2026, no effect of increasing excise duty rates is envisaged in the forecast.

¹⁸ The periods of validity of the reduced VAT rates for the supply of bread and flour (published; Darjaven Vestnik, issue 42 of 14 May 2024) and for the supply of restaurant and catering services (published; Darjaven Vestnik, issue 106 of 22 December 2023) were extended until 31 December 2024 by the amended Value Added Tax Law. The forecast assumes that in the event of a restoration of the standard VAT rate, the effect of the increase would be fully passed on to final consumer prices in the relevant sub-groups.

¹⁹ The effect of the increased fee for issuing identity documents is estimated at 0.37 percentage points of an increase in overall inflation on an average annual basis for 2025.

²⁰ The forecast assumes a change in the prices of water supply and sewerage services from 1 January 2025 in line with the decision on approved water supply and sewerage services prices for 2025 published by the EWRC, as well as a change in the prices in 2026 based on approved business plans for the development of water supply and sewerage companies in Bulgaria for 2022–2026.

²¹ By the decision published by the EWRC on 1 January 2025, the regulator approved an average electricity price increase of 8.42 per cent for household consumers.

²² By a decision of the Council of Ministers, a programme to compensate non-household end-users of electricity for the period from 1 July 2024 to 31 December 2024 was approved. The compensation is 100 per cent of the difference between the average monthly stock exchange price for the day-ahead segment of the Independent Bulgarian Energy Exchange EAD for the respective month and the BGN 180/MWh threshold. We assume that firms will continue to receive compensation for the price of electricity, as the draft Law on Revenue and Expenditure in 2025 approved by the Council of Ministers provides that until the adoption of the State Budget Law of the Republic of Bulgaria for 2025 the government will continue to collect contributions from energy companies to the Electricity System Security Fund to finance business consumers' compensations.

Annual inflation is expected to accelerate to 3.5 per cent at the end of 2025 (from 2.1 per cent at the end of 2024) and to reach 3.3 per cent on average (from 2.6 per cent in 2024). The expected upward dynamics of inflation in 2025 reflects mainly the assumptions about increases in certain administratively controlled prices (fees for issuing identity documents, water and sewerage services, electricity for household consumers), higher excise duties on tobacco products and a projected acceleration in food inflation. We project food inflation to accelerate significantly in 2025 (to 5.1 per cent, from 2.8 per cent in 2024) and to have the highest positive contribution to the headline inflation at the end of the year, partly reflecting the restoration of the standard VAT rate of 20 per cent for bread and flour supply and rising international agricultural commodity prices. High projected growth in unit labour costs and sustained strong consumer demand are expected to continue exerting pro-inflationary pressure on consumer services prices, and this group is also anticipated to have an essential positive contribution to the headline inflation. Inflation in the group of goods and services with administratively controlled prices and tobacco products is expected to accelerate in 2025 (to 5.9 per cent, against 4.6 per cent in 2024), reflecting the projected rise in the fee for issuing identity documents, increased prices of tobacco products as a result of changed excise duty rates, higher electricity prices for household consumers approved by the EWRC and projected increases in water and sewerage prices.

At the end of 2026, the growth rate of consumer prices is projected to slow down to 2.1 per cent (against an annual average of 2.1 per cent), due mainly to lower inflation in the group of food and goods and services with administratively controlled prices, while core inflation will remain similar to its level in the previous year. These developments in food inflation broadly follow the assumptions used in the forecast for energy and agricultural commodity prices in international markets. Concurrently, retention of high core inflation is largely driven by expectations of a sustained strong pro-inflationary effect of domestic macroeconomic factors. The services and food groups would continue to have the highest positive contribution to the headline inflation at the end of 2026, reflecting largely a projected rise in firms' labour costs. At the same time, in

line with the assumptions about declining oil prices in international markets, we expect the energy products group to continue to have a negative contribution to the headline inflation by the end of 2026 (albeit less negative than that at end-2025). This is not expected, however, to be reflected strongly in the other HICP components, given the pro-inflationary factors listed above and projected strong private consumption. For 2025-2026, an assumption is made that administered prices would rise in line with projected dynamics of firms' labour costs, with an exception to this approach for regulated central gas supply prices²³ and those of tobacco products and water supply and sewerage services. The growth rate of administratively controlled prices thus obtained for 2026 is increased further on an expert basis to include the average estimated error observed historically in this group's inflation²⁴.

²³ The forecast provides a technical assumption that the central gas price will follow natural gas price dynamics in international markets.

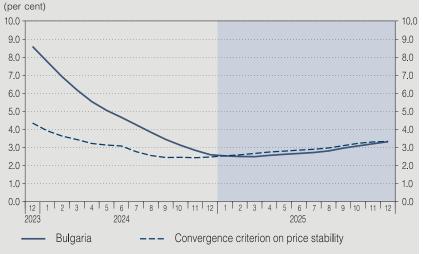
²⁴ See the highlight 'Assessment of the Size and Factors Behind the Errors in the Inflation Forecasts in the Post-COVID-19 Pandemic Period', published in the June 2023 Macroeconomic Forecast.

Assessment of the degree of fulfilment of the convergence criterion on price stability

Convergence reports of the European Commission and the European Central Bank, providing their assessments of the progress non-euro area Member States have made towards adopting the euro, are based on the convergence criteria referred to in Article 140(1) of the Treaty on the Functioning of the European Union (TFEU) and further elaborated in Protocol (No 13) on the convergence criteria¹. Article 1 of Protocol (No 13) states that 'The criterion on price stability referred to in the first indent of Article 140(1) of the Treaty on the Functioning of the European Union shall mean that a Member State has a price performance that is sustainable and an average rate of inflation, observed over a period of one year before the examination, that does not exceed by more than 1½ percentage points that of, at most, the three best performing Member States in terms of price stability. Inflation shall be measured by means of the consumer price index on a comparable basis taking into account differences in national definitions.' Convergence reports of the ECB further clarify the approach to be followed in applying the provi-

sions of the TFEU for preparing convergence assessments.² Chart 1 illustrates dynamics of the price stability criterion (excluding the identification of outliers in its calculation) and of average annual inflation³ in Bulgaria. Forecast values for 2025 are calculated on the basis of the BNB's current inflation forecast for Bulgaria and the latest forecast of the European Commission of 15 November 2024 regarding inflation in the other EU countries⁴. For December 2023 - December 2024 period, the average annual inflation level in Bulgaria decreased steadily at faster rates than the decline in the price criterion.

Chart 1. Forecast of the Price Stability Criterion and Average Annual Inflation in Bulgaria



Note: The convergence criterion on price stability, as illustrated in the chart, does not include in its calculation the identification of the Member States considered to be outliers. Sources: NSI. Eurostat. BNB calculations.

¹ See OJ C 202, 7.6.2016, p 281-282.

² See pages 7-8 of the ECB's 2024 Convergence Report: Convergence Report, June 2024.

³ Average annual inflation is calculated as the percentage change in the HICP for the last 12 months as of a given month with reference to the previous 12 months.

⁴ The BNB and EC forecasts employ quarterly data; therefore, additional conversions of projected values have been made. Quarterly forecast values of annual inflation are mechanically interpolated so as to obtain annual rates of increase in consumer prices by month. Subsequently, on the basis of thus obtained inflation by month, average annual inflation is calculated in each month for the previous 12 months based on reported and forecast data. This mechanical approach to obtain forecast inflation values by month creates an additional uncertainty in presented assessments of the degree of fulfilment of the convergence criterion on price stability.

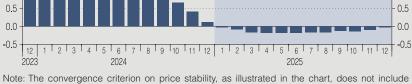
Chart 2 shows the deviation of Bulgaria's average annual inflation from the price stability criterion (excluding the identification of outliers in its calculation), with the difference between the two gradually declining in 2024. Based on reported data as of December 2024 on all EU countries, including Bulgaria, the price criterion was 2.47 per cent (excluding the identification of outliers), whereby the average annual inflation in Bulgaria (2.60 per cent) exceeded the criterion by 0.13 percentage points.

According to the forecast as of 15 January 2025, average annual inflation in Bulgaria is expected to be 3.3 per cent in 2025, representing an upward revision compared to the November 2024 macroeconomic forecast. Even so, the estimates indicate that Bulgaria can comply with the convergence criterion on price stability in January 2025 and continue to comply with it in the remainder of the year.

Notably, there is a very high degree of uncertainty surrounding the outlook for the price stability criterion and the expected deviation of average annual inflation in Bulgaria from this criterion. Aside from the uncertainty over the inflation outlook in Bulgaria (see Risks to the Forecast Section) and in



Chart 2. Forecast of a Deviation of Average Annual Inflation in



Note: The convergence criterion on price stability, as illustrated in the chart, does not include in its calculation the identification of the Member States considered to be outliers. Sources: NSI. Eurostat. BNB calculations.

the other EU countries, thus presented estimates depend also to a considerable extent on the final parameters of the government institutions' measures in Bulgaria⁵ affecting consumer prices, as well as on the extent of the transmission of their effects to the HICP components.

⁵ For more information on the measures incorporated in the forecast, see the inflation part of the Section 'Forecast of Key Macroeconomic Indicators for 2024–2026'.

Forecast revisions

Compared to the November 2024 macroeconomic forecast, current expectations are for higher real GDP growth in 2024 and lower growth in 2025 and 2026. The main drivers for the revision in the GDP forecast and its main components are related to incoming additional reporting data on economic activity in the third and fourth quarters of 2024 and changes in the technical assumptions for the external environment.

For 2024, real GDP growth is raised by 0.1 percentage points, driven by the projected positive contribution of fixed capital investments and inventories and projected higher growth in government consumption compared with the November 2024 forecast. These revisions are only partly offset by the expected lower growth in private consumption and a decline in goods and services exports amid expectations of growth in the previous forecast. These changes mostly reflect new reporting data releases. An additional factor behind the upward revision of government fixed capital investments is the information published by the Ministry of Finance on the expected performance of the general government budget.²⁵

The revision towards lower real GDP growth in 2025 by 0.2 percentage points is due to projected weaker growth in private consumption, fixed capital investments and goods exports. The downward revision in private consumption stems mainly from the revision towards a larger increase in consumer prices over 2025, leading to a slower rise in households' disposable income in real terms compared with the previous macroeconomic forecast. The revision of gross fixed capital formation is due to the base effect of a projected higher amount of public investments for 2024. The revision of goods exports is influenced by the underlying new technical assumptions about external environment developments, which suggest a slower increase of external demand in 2025 compared to the November 2024 macroeconomic forecast.

Economic activity growth in 2026 has been revised negatively by 0.4 percentage points compared to that in the November 2024 macroeconomic forecast. The main contributors are a projected higher negative contribution of net exports following weaker growth of goods exports given the new external assumptions in combination with a stronger rise in goods imports compared to the November 2024 forecast. In addition, projected growth in government consumption and fixed capital investments has also been slightly lowered vis-à-vis the previous forecast. The government consumption revision is mainly related to the additional information reflected in the Updated Medium-term Budget Forecast for 2025-2028 published in December 2024. The revision of gross fixed capital formation in 2026 is due to the projected lower investment activity of the private sector in line with the projected slower growth of final demand for Bulgarian goods and services.

The headline inflation forecast at end-2025 has been revised towards a larger increase in consumer prices (by 1.0 percentage points), which is mainly due to significant upward revisions in the groups of goods and services with administratively set prices, tobacco products and food. Based on new data releases on changes to the prices of certain administrative services (the fee for issuing identity documents, water and sewerage services, electricity) approved by regulators and updated information on excise duty rates for tobacco products, inflation in goods and services with administratively controlled prices and in tobacco products at end-2025 has been significantly revised towards higher growth of prices (by 2.8 percentage points compared to the previous forecast). The rate of change in food prices has also been revised upwards at end-2025 (by 2.1 percentage points) due to renewed technical assumptions about dynamics in international agricultural commodity prices, which have a significantly higher pro-inflationary impact compared to the November 2024 forecast. As regards core components, a revision is made towards higher inflation in 2025 (by 0.2 percentage points). This

²⁵ For more information, see The Updated Medium-Term Budget Forecast for the 2025–2028 Period of 13 December 2024, published on the National Assembly's website.

is due to an upward revision for the services group, which is only partially compensated by a revision towards a weaker rise in industrial goods prices. Concurrently, the inflation forecast for the group of energy products at the end of 2025 has been revised to a larger decline in prices (by 2.2 percentage points) mainly determined by the updated assumptions about crude oil price dynamics in international markets. The annual inflation forecast at the end of 2026 is lowered by 0.3 percentage points, with downward revisions observed by sub-component in consumer prices of food and core components (by -1.0 and -0.2 percentage points, respectively) and a stronger fall in energy prices (by -0.4 percentage point), reflecting base effects and updated assumptions about international prices of energy and agricultural commodities and core inflation dynamics in the euro area.

| Annual rate of change, per cent | Forecast of 15 January 2025 | | | Forecast of 8 November 2024 | | | | Revision (percentage points) | | | | |
|---|--------------------------------|------|------|--------------------------------|------|------|------|---------------------------------|------|------|------|------|
| | 2023 | 2024 | 2025 | 2026 | 2023 | 2024 | 2025 | 2026 | 2023 | 2024 | 2025 | 2026 |
| GDP at constant prices | 1.9 | 2.3 | 2.5 | 3.0 | 1.9 | 2.2 | 2.7 | 3.4 | 0.0 | 0.1 | -0.2 | -0.4 |
| Private consumption | 1.4 | 4.2 | 3.7 | 4.0 | 1.4 | 4.8 | 4.2 | 4.0 | 0.0 | -0.6 | -0.5 | 0.0 |
| Government consumption | 1.1 | 1.7 | 1.3 | 1.5 | 1.1 | 0.7 | 1.0 | 2.3 | 0.0 | 1.0 | 0.3 | -0.8 |
| Gross fixed capital formation | 10.2 | -1.2 | 7.6 | 2.8 | 10.2 | -6.3 | 9.4 | 3.2 | 0.0 | 5.1 | -1.8 | -0.4 |
| Exports of goods and services | 0.0 | -0.5 | 2.9 | 4.2 | 0.0 | 1.5 | 3.0 | 4.3 | 0.0 | -2.0 | -0.1 | -0.1 |
| Imports of goods and services | -5.5 | 1.9 | 5.4 | 4.7 | -5.5 | 2.4 | 5.7 | 4.4 | 0.0 | -0.5 | -0.3 | 0.3 |
| | | | | | | | | | | | | |
| HICP at end of period | 5.0 | 2.1 | 3.5 | 2.1 | 5.0 | 1.9 | 2.5 | 2.4 | 0.0 | 0.2 | 1.0 | -0.3 |
| Core Inflation | 5.3 | 2.1 | 3.0 | 2.4 | 5.3 | 1.8 | 2.8 | 2.6 | 0.0 | 0.3 | 0.2 | -0.2 |
| Energy products | -0.6 | -5.6 | -3.2 | -1.2 | -0.6 | -7.2 | -1.0 | -0.8 | 0.0 | 1.6 | -2.2 | -0.4 |
| Food | 6.0 | 2.7 | 4.9 | 2.3 | 6.0 | 3.6 | 2.8 | 3.3 | 0.0 | -0.9 | 2.1 | -1.0 |
| Goods and services with administratively controlled prices and | | | | | | | | | | | | |
| tobacco products | 5.4 | 3.9 | 5.1 | 2.1 | 5.4 | 3.4 | 2.3 | 2.1 | 0.0 | 0.5 | 2.8 | 0.0 |

GDP and Inflation Forecast Revisions (15 January 2025 vis-à-vis 8 November 2024)

Note: Reported HICP data for 2024.

Source: BNB.

$R_{\rm ISKS}$ to the forecast

The baseline scenario of the forecast is characterised by a high uncertainty about external developments due to ongoing military conflicts and significant global geopolitical tensions. An uncertainty over the forecast of economic activity from the domestic economic environment arises from the budgetary framework parameters, which will be approved with the adoption of the State Budget Law for 2025 and the Updated Medium-term Budget Forecast for 2025–2028 by the National Assembly. Taking into account the assumptions underlying the baseline scenario, risks to the real GDP growth forecast are assessed as balanced for 2024, while prevailing risks for 2025 and 2026 are for lower real GDP growth in Bulgaria.

Risks of lower economic activity stem from both the global and domestic macroeconomic environment. As regards the global environment, these risks relate mainly to the likelihood of weaker external demand for Bulgarian goods and services as a result of a heightened economic uncertainty amid a continued trade fragmentation and rising global geopolitical tensions. Other risks arise from the possibility that euro area GDP growth would remain persistently lower than that in the technical assumptions as a result of larger than currently projected negative economic effects of a structural nature in some of Bulgaria's major trading partners. An internal risk to the materialisation of the forecast arises from possible initiation of urgent measures for fiscal consolidation which could limit economic activity in the short term, with macroeconomic effects depending on the type of initiated measures. Concurrently, the risk of slower than projected implementation of investment projects financed by both national and EU funds remains. Risks of lower real GDP growth in Bulgaria in 2025 stem also from the possibility of a stronger than projected acceleration of inflation, which would imply lower household income growth in real terms and lower private consumption growth. At the same time, the growth rate of private consumption is likely to be higher than projected in the baseline

scenario in case of a larger than anticipated increase in wages and a stronger than projected propensity of households to consume given the expectations of lower interest rates on household deposits and loans compared with the previous macroeconomic forecast.

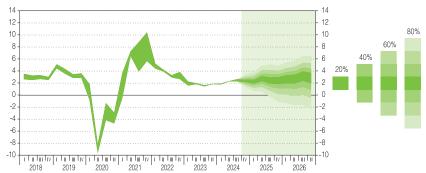
The forecast uncertainty for a particular indicator may be graphically illustrated by means of a fan chart. Chart bands of a particular colour indicate an interval within which the forecast value is expected to fall with a certain probability (for more details, see the notes to the charts)^{26.} Usually, each interval widens with the increase in the forecast horizon, reflecting the increasing uncertainty further into the future. The middle band of the chart, depicted in the darkest colour, includes the baseline scenario of the annual rate of change of real GDP, and the constructed distribution shows a 20 per cent probability for the actual value to fall within this band in each of the guarters. According to the probability distribution for 2025, with a 60 per cent probability the annual rate of change of real GDP is expected to be in the range of 0.8 per cent to 4.0 per cent.

Risks to the inflation outlook are assessed as oriented towards higher growth of consumer prices compared to the baseline scenario over the entire projection horizon. Such risks stem from a potentially larger than expected increase in administered prices, as well as in food and services prices, owing to a possible faster and

²⁶ The fan chart is constructed on the basis of the so-called asymmetric exponential distribution. To present the forecasting team's estimate of the uncertainty of projected values, it is necessary to estimate the general uncertainty of the forecast (by determining the dispersion σ of the distribution) and the so-called balance of risks (by determining the asymmetry parameter v of the distribution), indicating in which direction the realised value is more likely to deviate from the projected value. The balance of risks is determined subjectively by the forecasters on the basis of possible changes in the structure of the economy, inaccuracies in the information available at the time of the forecast production, imperfections in forecasting methods employed, forthcoming economic policy decisions, etc. Historical data on the average forecast error made by the BNB experts when preparing previous forecasts are used to determine the general uncertainty to the forecast. For details on the construction of the fan chart, see Measurement and Presentation of Uncertainty in Forecasting Economic Indicators, Economic Review, 2012, issue 1.

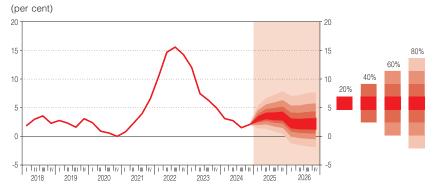
strong pass-through by firms of projected growth in labour costs and international agricultural commodity prices to final consumer prices. In addition, higher than expected prices of crude oil, natural gas and electricity in international markets would create a prerequisite for higher than projected inflation to be recorded in energy products. A possible discontinuation of the programme for compensation of business consumers for the price of electricity and a stronger than projected in the baseline scenario carry-over of the increase of certain indirect taxes on consumer prices would also lead to higher than projected inflation. At the same time, factors that could result in lower than forecast inflation are a potential change or phasing out of government measures envisaged in the baseline scenario of the forecast, which have a direct effect on consumer prices in Bulgaria. The fan chart of inflation suggests that with a probability of 60 per cent, annual inflation in consumer prices is expected to range between 1.5 and 6.4 per cent at the end of 2025.

Fan Chart of the Expected Annual Rate of Change in Real GDP (per cent)



Notes: The chart provides historical series and annual real GDP growth forecast according to non-seasonally adjusted data. The fan chart shows expert views of the forecasters on the uncertainty surrounding the projected value based on a probability distribution. The reporting period includes revised GDP growth estimates, with the latest reporting periods revised on fewer occasions, thus narrowing the band. The middle band of the projected horizon chart, depicted in the darkest colour, includes the central projection and the probability distribution shows a 20 per cent probability for the actual value to fall in this band in each of the quarters. If neighbouring bands (in the same brighter colour) are added to the middle band, there would be a 40 per cent coverage of the probability mass. Thus, by adding each same colour couple of bands, the probability for the value to fall there would be increased by 20 percentage points to reach 80 per cent. The probability for the value to remain outside the coloured part of the chart is 20 per cent based on the distribution chosen.

Fan Chart of the Expected Annual Rate of Change in Inflation at the End of the Period



Notes: The fan chart shows the expert views of the forecasters on the uncertainty surrounding the projected value based on a probability distribution. The middle band of the chart, depicted in the darkest colour, includes the central projection and the probability distribution shows 20 per cent probability for the actual value to fall in this band in each of the quarters. If neighbouring bands (in the same brighter colour) are added to the middle band, there would be a 40 per cent coverage of the probability mass. Thus, by adding each same colour couple of bands, the probability for the value to fall there would be increased by 20 percentage points to reach 80 per cent. The probability for the value to remain outside the coloured part of the chart is 20 per cent based on the distribution chosen.

Forecast of Key Macroeconomic Indicators for 2024–2026

(per cent)

| | 2023 | 2024 | 2025 | 2026 |
|---|-------|-------|-------|------|
| Annual rate of change | | | | |
| GDP at constant prices | 1.9 | 2.3 | 2.5 | 3.0 |
| Private consumption | 1.4 | 4.2 | 3.7 | 4.0 |
| Government consumption | 1.1 | 1.7 | 1.3 | 1.5 |
| Gross fixed capital formation | 10.2 | -1.2 | 7.6 | 2.8 |
| Exports of goods and services | 0.0 | -0.5 | 2.9 | 4.2 |
| Imports of goods and services | -5.5 | 1.9 | 5.4 | 4.7 |
| HICP at end of period ¹ | 5.0 | 2.1 | 3.5 | 2.1 |
| Core Inflation | 5.3 | 2.1 | 3.0 | 2.4 |
| Energy products | -0.6 | -5.6 | -3.2 | -1.2 |
| Food | 6.0 | 2.7 | 4.9 | 2.3 |
| Goods and services with administratively controlled prices and tobacco products | 5.4 | 3.9 | 5.1 | 2.1 |
| Employment | 1.1 | 1.1 | 0.2 | 0.0 |
| Unit labour costs | 12.5 | 11.1 | 6.6 | 4.5 |
| Labour productivity | 0.8 | 1.2 | 2.3 | 3.0 |
| Unemployment rate (share of labour force, %) | 4.4 | 4.2 | 3.9 | 3.6 |
| Claims on the non-government sector | 12.2 | 14.1 | 11.7 | 9.8 |
| Claims on corporations ² | 7.6 | 9.9 | 7.5 | 6.6 |
| Claims on households | 15.9 | 20.4 | 17.0 | 13.6 |
| Deposits of the non-government sector | 9.5 | 10.0 | 9.1 | 7.7 |
| Share of GDP | | | | |
| Balance of payments current account | 0.9 | -0.6 | -1.5 | -1.7 |
| Trade balance | -4.1 | -5.3 | -6.8 | -6.9 |
| Services, net | 8.2 | 7.9 | 8.1 | 8.2 |
| Primary income, net | -4.8 | -4.5 | -4.4 | -4.1 |
| Secondary income, net | 1.6 | 1.3 | 1.5 | 1.1 |
| Annual rate of change | | | | |
| External assumptions | | | | |
| External demand | 0.7 | 1.3 | 2.9 | 3.4 |
| Average annual Brent oil price (in USD) | -17.2 | -2.4 | -11.4 | -2.6 |
| Average annual price of non-energy products (in USD) ³ | -4.9 | 3.3 | 2.2 | 2.8 |
| Brent oil price at the end of period (in USD) | -4.9 | -11.4 | -5.2 | -2.1 |
| Price of non-energy products at the end of period (in USD) | 1.3 | 4.7 | 2.7 | 3.2 |

¹ Reported HICP data for 2024.

² Data refer to non-financial corporations.

³ Prices of non-energy products are weighted according to the structure of Bulgarian imports of goods. Source: BNB.

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The sculptural composition by Kiril Shivarov depicting Hermes and Demeter on the southern façade of the Bulgarian National Bank building is used in cover design.