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1 Introduction

The Banco de Portugal projects that the Portuguese economy will grow by 6.3% in 2022, 2.6% in 2023 and 2% in 2024. The rate of change projected for 2022 is the result of the carry-over effect of developments in activity in the previous year, associated with the pandemic crisis recovery process, which continued into the beginning of the current year (Table I.1.1). GDP reached pre-pandemic levels in the first quarter.

The deteriorating international environment constrains developments in economic activity. With the invasion of Ukraine by the Russian Federation, the Portuguese economy, although not directly exposed, is suffering from the indirect impacts of the conflict, resulting in increased uncertainty, higher inflation rates and sharper disruptions in global production chains — also affected by the pandemic situation in China. These factors contribute to a slowdown in external demand. The current projection assumes, in line with the Eurosystem's assumptions, a gradual dissipation of these shocks from mid-2022 onwards. Financing conditions are expected to worsen over the projection horizon, with gradually less accommodative monetary policies, given rising inflationary pressures around the world.

Table I.1.1 • Projections of Banco de Portugal for 2022-24 | Annual rate of change, in percentage (unless otherwise stated)

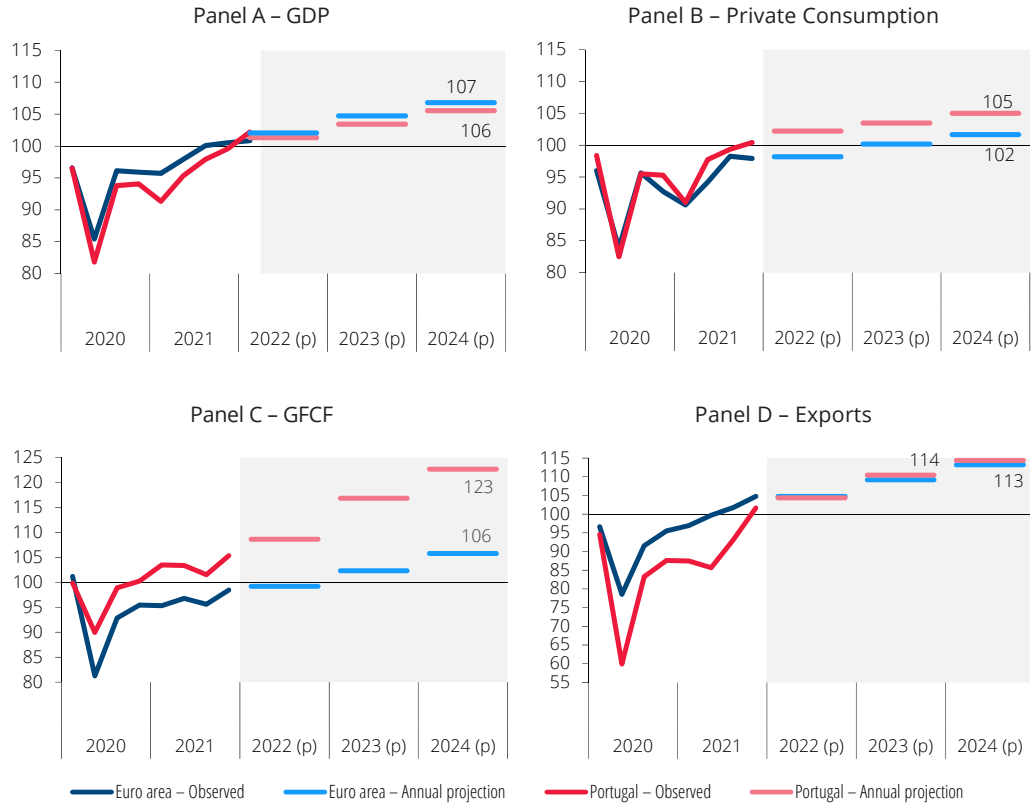
	Weights 2021	EB June 2022				EB March 2022			
		2021	2022 (p)	2023 (p)	2024 (p)	2021	2022 (p)	2023 (p)	2024 (p)
Gross domestic product (GDP)	100.0	4.9	6.3	2.6	2.0	4.9	4.9	2.9	2.0
Private consumption	64.3	4.5	5.2	1.2	1.5	4.4	3.6	1.9	1.6
Public consumption	19.0	4.1	2.2	-0.9	-0.2	5.0	1.5	-1.5	-0.1
Gross fixed capital formation	19.8	6.4	5.0	7.6	5.0	6.1	9.2	6.0	3.9
Domestic demand	103.0	5.0	4.8	2.1	1.9	5.0	4.3	2.1	1.8
Exports	42.0	13.1	13.4	5.8	3.6	13.0	14.2	7.5	3.8
Imports	45.0	12.9	9.5	4.5	3.4	12.8	12.3	5.5	3.3
Employment (number of persons) (a)		2.1	1.7	0.4	0.2	2.1	1.4	0.6	0.4
Employment (hours worked) (a)		4.5	5.8	2.0	0.2	5.0	5.1	2.2	0.4
Unemployment rate (b)		6.6	5.6	5.4	5.4	6.6	5.9	5.7	5.6
Current plus capital account (% of GDP)		0.7	0.4	2.2	1.0	0.7	-0.4	1.8	0.7
Trade balance (% of GDP)		-2.6	-3.5	-2.2	-1.7	-2.6	-4.1	-2.7	-2.1
Harmonised index of consumer prices		0.9	5.9	2.7	2.0	0.9	4.0	1.6	1.6
Energy goods		7.5	18.8	4.5	0.0	7.5	14.2	-2.1	-1.8
Excluding energy goods		0.4	4.8	2.5	2.2	0.4	3.1	1.9	2.0

Sources: Banco de Portugal and Statistics Portugal. | Notes: (p) – projected, p.p. – percentage points. Cut-off date for macroeconomic projections: 20 May. For each aggregate, this table shows the projection corresponding to the most likely value, conditional on the set of assumptions. (a) According to the national accounts concept. (b) In percentage of the labour force.

Projected growth for Portugal is 3.5 percentage points (p.p.) higher than that projected by the Eurosystem for the euro area in 2022. This difference is of 0.5 p.p. in 2023 and approximately nil in 2024. From 2022 to 2024, Portugal will resume the convergence process with the euro area observed in the pre-pandemic years. The 2021-22 recovery in activities most affected by the pandemic is contributing to this result, with a particular impact on services exports and private consumption. In the first quarter of 2022, the level of activity in Portugal and the euro area stood slightly above the pre-pandemic level (Chart I.1.1, Panel A). As the international environment and the pandemic

situation return to normal, activity momentum in Portugal and the euro area will gradually converge to estimated long-term growth. At the end of the horizon, GDP in Portugal is expected to be 7% higher than in 2019, a cumulative change larger than that projected for the euro area.

Chart I.1.1 • GDP and global demand components in Portugal and the euro area | Index 2019 =100



Sources: Banco de Portugal, Eurosystem and Statistics Portugal. | Notes: The shading marks the projection period. Panel A includes the flash estimate for GDP in the first quarter of 2022.

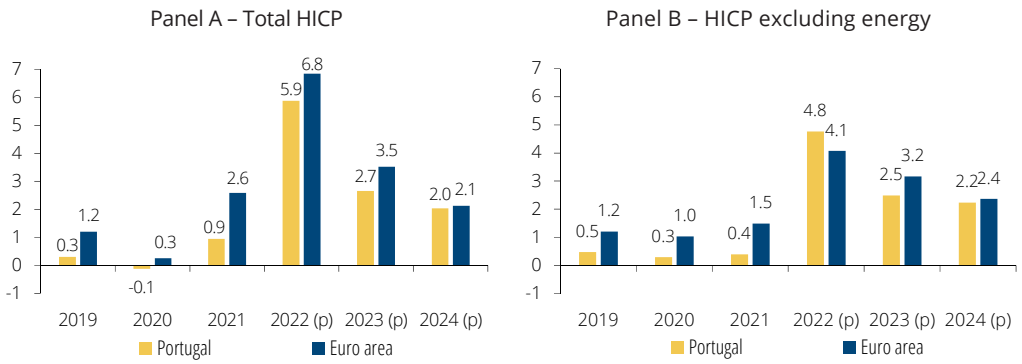
Inflation, as measured by the annual rate of change in the HICP, is projected to increase from 0.9% in 2021 to 5.9% in 2022, declining to 2.7% and 2.0% in the two subsequent years (Chart I.1.2). This profile is largely explained by external inflationary pressures, with a direct impact on energy prices. The contribution of food prices to inflation is also expected to be significant, particularly in 2022. However, 2022-24 average price growth in these components is expected to fall short of the projected for the euro area. Over the projection horizon, dissipating external pressures on prices will be partly offset by an increase in domestic pressures.

The current context poses downside risks for activity and upside risks for inflation, particularly for 2022. The invasion of Ukraine is the main source of uncertainty. This Bulletin includes a box presenting a scenario characterised by more adverse effects of the war (Box 1).

The deteriorating international environment has entailed downward revisions of the quarter-on-quarter rates of change in GDP throughout 2022. However, annual GDP growth is projected to be higher in 2022 than that included in the March 2022 *Economic Bulletin*, reflecting the projection error recorded in the first quarter of this year. The carry-over effects of these revisions will lead to annual growth in 2023 being lower than previously projected. Inflation is revised upwards over

the whole horizon. This revision is the result of recent projection errors and higher import deflators compared with those considered in the previous *Economic Bulletin*, reinforced in 2023-24 by higher domestic price pressures.

Chart I.1.2 • Total HICP and HICP excluding energy in Portugal and in the euro area | Annual rate of change, in percentage



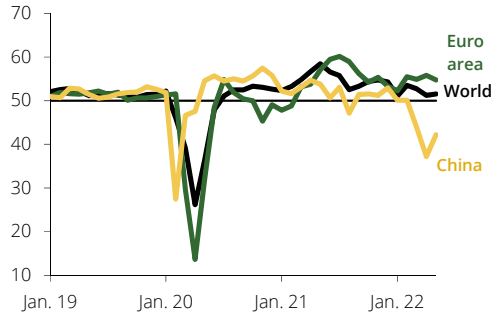
Sources: Banco de Portugal, Eurosystem and Statistics Portugal.

2 External environment, financing conditions and policies

The invasion of Ukraine and the resurgence of the pandemic in Asia, particularly in China, limit economic activity, trade and headline inflation. The global Purchasing Managers' Index (PMI) declined slightly on average in April-May compared with the previous quarter (Chart I.2.1), signalling a deceleration in global activity. Future output expectations decreased more sharply. In the euro area, despite a 0.6% growth in the first quarter of 2022 and some stability in activity indicators, economic sentiment fell in March and remained relatively unchanged in the following months. Maritime transport costs and suppliers' delivery times point to some resurgence of disruptions in global supply chains (Chart I.2.2). Inflation remained high at a global level, against a background of significant and broad-based growth in international commodity prices, more pronounced after the invasion of Ukraine (Chart I.2.3). In the euro area, inflation rose to a new historic high of 8.1% in May, according to preliminary information.

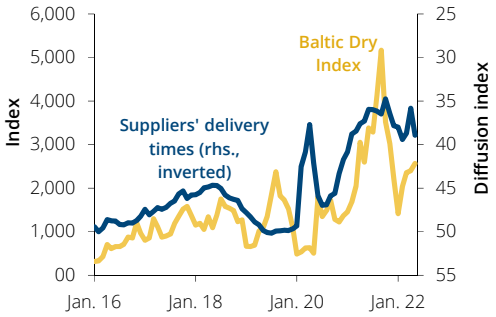
As inflation rose sharply, the accommodative stance of monetary policy has declined globally, including in the euro area. In the United States, the Federal Reserve announced in March and May 2022 the first increases in the federal funds rate since 2018, of 25 basis points (b.p.) and 50 b.p. respectively, as well as a reduction of its balance sheet starting in June. Meanwhile, in the euro area, the Governing Council announced in June 2022 that net purchases under the Asset Purchase Programme (APP) would end and that the normalisation process of monetary policy would continue in the coming months. This includes the intention to raise the key ECB interest rates by 25 b.p. at its July monetary policy meeting and again in September. Against this background, monetary and financial conditions in the euro area became less favourable, as evidenced, for example, by the increase in the twelve-month EURIBOR to positive levels for the first time in six years.

Chart I.2.1 • Global PMI | Diffusion index



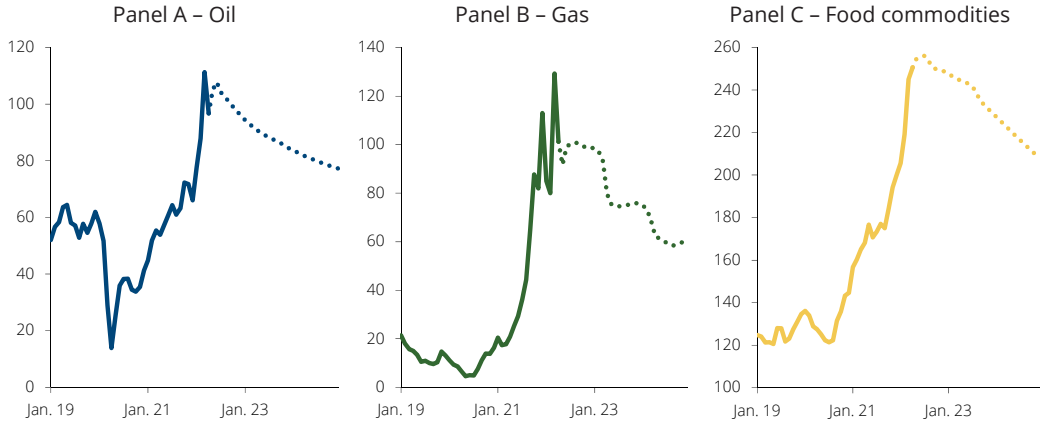
Source: S&P Global. | Notes: The PMI diffusion index presented is a composite indicator calculated based on monthly surveys to purchasing managers in the manufacturing and services sectors, where a value below 50 indicates a decline in activity. Data up to May 2022.

Chart I.2.2 • Maritime transport costs and suppliers' delivery times | Index



Sources: S&P Global and Baltic Exchange (Banco de Portugal calculations). | Notes: The Baltic Dry Index provides a benchmark for the price of moving the major raw materials by sea (dry bulk). Suppliers' delivery times - global manufacturing PMI; readings below 50 indicate that delivery times deteriorated. Data up to May 2022.

Chart I.2.3 • Observed values and assumptions for the price of oil, gas and food commodities | In euros



Source: Eurosystem. | Notes: The dashed lines include the period after the last complete month at the cut-off date of the technical assumptions of the projection exercise (May 17). The technical assumptions for oil, gas and food commodity prices are based on futures markets.

Global activity and trade growth are expected to decline in 2022 and stabilise in 2023-24. In the assumptions of the June Eurosystem projection exercise, global growth decelerates from 6.3% to 3.0% in 2022 and accelerates slightly in 2023-24 (Table I.2.1). Euro area GDP is expected to decelerate from 5.4% in 2021 to 2.8% in 2022 and 2.1% in 2023 and 2024. Global trade will slow down in 2022 and, less markedly, in 2023, with a 3.6% growth rate in 2024. The deceleration in global activity and trade in 2022 reflects low quarterly growth expected throughout the year in most economies. Compared with the March issue of the *Economic Bulletin*, the assumptions for world GDP and trade growth have been revised downwards for 2022-23 and remain relatively unchanged for 2024.

External demand for Portuguese goods and services is projected to slow down in 2022-23 and the growth rate will stabilise in 2024 (Table I.2.1). The slowdown is likely to reflect the goods component, as international tourism is expected to recover strongly. The latest European Travel Commission

projections indicate that the number of tourists travelling to western Europe will grow by approximately 93% in 2022, 19% in 2023 and 13% in 2024, with an estimated return to pre-pandemic levels at the end of the horizon. Compared with the March *Economic Bulletin* projection exercise, external demand growth was revised down for 2022-23 and remains relatively unchanged in 2024.

International commodity prices remain high, despite some reduction over the projection horizon. Oil and gas prices will increase by around 64% and 112% respectively in 2022 (Chart I.2.3 and Table I.2.1). In the following years, the price of these commodities are expected to decrease somewhat. At the end of the horizon, the price of oil will stand at around €80 per barrel and the price of gas at around €63 per MWh. Similar developments are expected for non-energy commodities, including food commodities. Competitors' import prices will grow by about 12% in 2022 and 1.7% on average in 2023-24. External price developments weigh on inflation in the euro area, which is projected by the Eurosystem to stand at 6.8% in 2022, 3.5% in 2023 and 2.1% in 2024. Compared with the March issue of the *Economic Bulletin*, international prices have generally been revised upwards, with the exception of gas prices for 2022.

Table I.2.1 • Projection assumptions

		EB June 2022				Revisons vis-à-vis EB March 2022			
		2021	2022	2023	2024	2021	2022	2023	2024
International environment									
World GDP	yoy	6.3	3.0	3.3	3.4	0.1	-1.1	-0.2	0.1
Euro area GDP	yoy	5.4	2.8	2.1	2.1	0.0	-0.9	-0.7	0.5
World trade	yoy	11.4	4.3	3.2	3.6	0.5	-0.9	-1.1	0.0
External demand	yoy	10.2	4.9	3.2	3.5	0.8	-0.9	-1.4	0.2
International prices									
Oil prices	aav	60.1	98.9	88.9	80.2	0.0	5.5	8.9	6.3
Gas prices (MWh)	aav	46.6	98.8	80.9	62.9	0.0	-35.2	6.7	16.2
Non-oil commodity prices	yoy	37.4	26.3	-3.1	-6.3	7.8	12.2	2.9	-0.3
Competitors' import prices	yoy	7.7	12.4	2.3	1.0	0.1	4.8	1.0	-0.3
Monetary and financial conditions									
Short-term interest rate (3-month EURIBOR)	%	-0.5	0.0	1.3	1.6	0.0	0.3	0.7	0.8
Implicit interest rate in public debt	%	1.9	2.0	2.2	2.2	0.0	0.1	0.1	0.1
Effective exchange rate index	yoy	1.2	-3.4	-0.6	0.0	0.0	-1.6	-0.6	0.0
Euro-dollar exchange rate	aav	1.18	1.07	1.05	1.05	0.0	-3.5	-4.9	-4.9

Sources: Banco de Portugal and Eurosystem (Banco de Portugal calculations). | Notes: yoy – year-on-year rate of change, % – in percentage, aav – annual average value, Mwh – megawatt-hour. Technical and external environment assumptions, as well as projections for euro area GDP and inflation, coincide with those in the Eurosystem projection exercise released on 9 June ("Eurosystem staff macroeconomic projections for the euro area", June 2022), which include information up to 17 May. The international prices are measured in euros. The technical assumption for the price of oil, gas and non-energy commodities is based on futures markets. The import price of competitors corresponds to a weighted average of the export deflators of the countries from which Portugal imports, weighted by their weight on total Portuguese imports (for more information, see "Trade consistency in the context of the Eurosystem projection exercises: an overview", *ECB Occasional Paper* 108, March 2010). The evolution of the 3-month EURIBOR is based on expectations implied by futures contracts. The implicit interest rate on public debt is computed as the ratio of interest expenditure for the year to the simple average of the stock of debt at the end of the same year and at the end of the preceding year. An increase in the exchange rate corresponds to an appreciation. The effective exchange rate of the euro is computed against 42 trading partner countries. The revision in the euro-dollar exchange rate is presented in percentage. The technical assumption for bilateral exchange rates assumes that the average levels observed in the two weeks prior to the cut-off date will remain stable over the projection horizon.

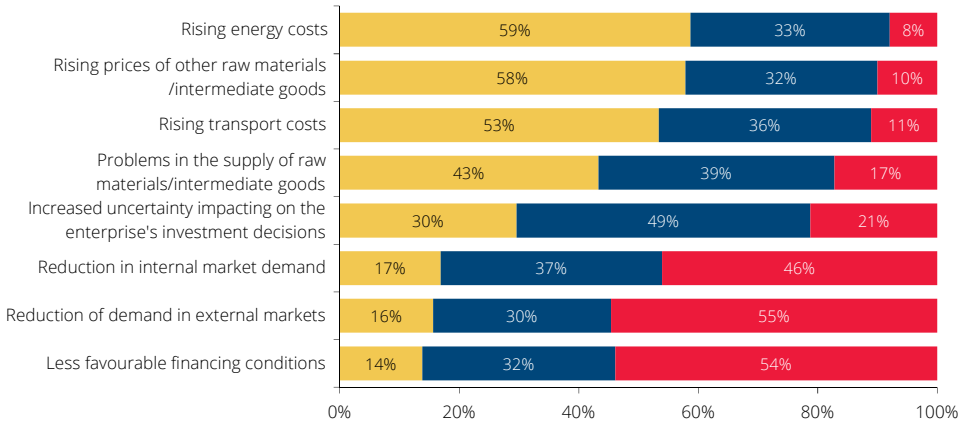
Monetary and financial conditions will become less favourable. The three-month EURIBOR will rise from 2022 onwards (Table I.2.1) and reach positive figures in 2023, after eight years in negative territory, reaching 1.6% in 2024. Against this background, the implicit interest rate on Portuguese government debt increases — albeit gradually given the structure of public debt in terms of rates and maturities — reaching 2.2% in 2023-24. The interest rate path has been revised upwards over the projection period. Regarding the foreign exchange market, the exchange rate expressed in nominal effective terms will depreciate in 2022-23 and stabilise in 2024.

3 The Portuguese economy in 2022-24

The short-term outlook for GDP points to average quarter-on-quarter rates of change around zero between the second and fourth quarters of 2022. Information released by Statistics Portugal points to a quarter-on-quarter growth of 2.6% in the first quarter of 2022 (1.7% in the previous quarter) and a year-on-year growth rate of 11.9%. The higher growth was partly determined by the acceleration in private consumption. Gross fixed capital formation (GFCF) slowed down from the previous quarter, with an acceleration in construction but more unfavourable developments in the machinery component. External trade flows of goods were affected by the impact of a new wave of the pandemic, constraints on production chains, particularly in the car sector, and, from the end of February, the invasion of Ukraine. The effects of the war on the confidence of economic agents and uncertainty, as well as the erosion of purchasing power resulting from inflation, give rise to a less favourable outlook for the remainder of the year. By contrast, the recovery in services exports is expected to continue, taking into account the very favourable preliminary indications for the tourism sector.

On the supply side, the Fast and Exceptional Enterprise Survey (IREE)[1] analysed in Box 2 shows that a large majority of firms reports a negative impact on activity from recent international developments. This impact is mostly felt through an increase in production costs and difficulties accessing commodities and intermediate goods (Chart I.3.1). In the latter case, more noticeably in construction and industry. In the services sector, developments underlying the National Accounts for the first quarter of 2022 continued to be favourable, reflecting the recovery in the sectors most affected by the pandemic.

Chart I.3.1 • Fast and Exceptional Enterprise Survey results – Relevance of factors arising from the current international context, with a potential negative impact on current activity | Percentage of responding firms



Sources: Banco de Portugal and Statistics Portugal (Fast and Exceptional Enterprise Survey).

1. Further details on the results of this survey are available here.

Strong growth in 2022 reflects the past pandemic crisis recovery. In particular, the carry-over effect associated with GDP developments throughout 2021 contributes 3.7 p.p. to the annual rate of change projected for 2022. The growth recorded in the first quarter of 2022 was also key to these developments. By contrast, for the remaining quarters of the year, activity is expected to be relatively stagnant on average. In the expenditure composition net of import content in 2022, services exports give an important contribution (3.9 p.p.), largely due to the recovery observed in the second half of 2021 (Table I.3.1). The contribution from private consumption (1.9 p.p.) largely reflects the strong momentum during 2021 and the first quarter of 2022. In the remainder of the year, private consumption is likely to be affected by the impact of the more unfavourable international environment. This will also constrain goods exports.

Table I.3.1 • GDP and import-content net contributions of the main expenditure aggregates
| Rate of change, in percentage, and contributions, in percentage points

	Average value 2015-19	2020	2021	2022 (p)	2023 (p)	2024 (p)	Cumulative value 2020-24 (p)
GDP	2.6	-8.4	4.9	6.3	2.6	2.0	6.8
Contribution to GDP growth:							
Private consumption	0.9	-3.2	1.6	1.9	0.4	0.6	1.1
Public consumption	0.1	0.2	0.5	0.3	-0.2	0.0	0.8
Investment	0.5	0.0	0.3	0.4	0.8	0.5	2.1
Exports of goods and services	1.1	-5.4	2.4	3.7	1.6	0.9	2.8
Exports of goods	0.4	-0.8	0.9	-0.2	0.3	0.3	0.4
Exports of services	0.7	-4.6	1.5	3.9	1.3	0.5	2.4

Sources: Banco de Portugal and Statistics Portugal. | Notes: Demand aggregates, net of imports, are obtained by subtracting an estimate of the imports used in each component. For more information on the methodology underlying this calculation, see Cardoso and Rua (2021) "Unveiling the real contribution of final demand to GDP growth", Banco de Portugal, *Economic Studies* – Vol. 7, No. 3.

Growth will decline in 2023-24, stabilising at rates close to 2% at the end of the horizon. In these years, average contributions from services exports and consumption to growth are expected to decline, while the contributions from goods exports and investment will increase. In the latter case, projected developments are partly associated with inflows of European funds (see Special issue).

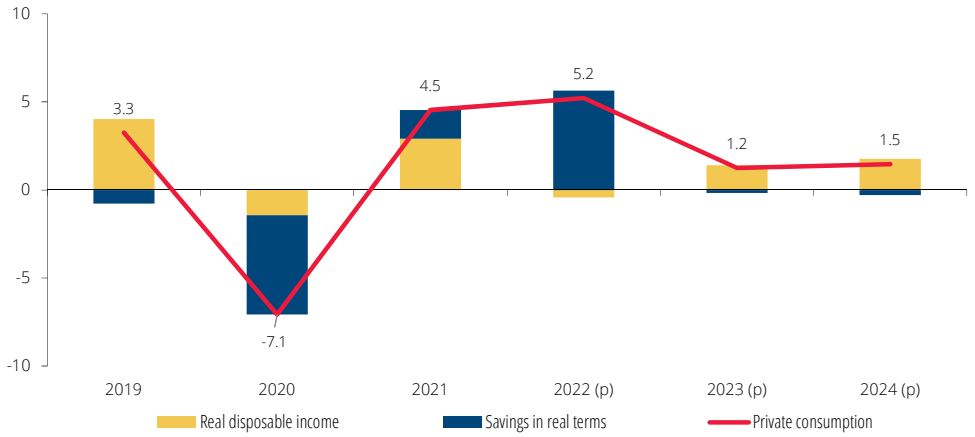
Private consumption will increase by 5.2% in 2022, and decelerate in 2023-24 to grow in tandem with real disposable income (Chart I.3.2). In early 2022, consumption grew above real disposable income. In the following quarters, consumption is expected to be restrained by higher uncertainty, declining confidence and the impact of inflation on household purchasing power. Real disposable income will fall by 0.4% in 2022 and grow moderately in the following two years (1.5% on average). These developments are highly constrained by the marked profile of inflation. Worsening financing conditions and the slowdown in employment projected for 2023-24 also contribute to restraining disposable income growth.

Private consumption growth in 2022 is expected to stem from a reduction in current savings (Chart I.3.2). This translates into the savings rate declining to 6% on average over the projection horizon, slightly lower than before the pandemic. These developments are compatible with a situation of partial downsizing of the wealth built up during the pandemic, as agents make their consumption decisions taking into account disposable wealth and expected future income flows.[2]

2. For a discussion of the potential impact of accumulated savings on consumption, see the Box on "Household saving during the pandemic crisis" in the December 2021 issue of the *Economic Bulletin*.

This downsizing should be limited by the high level of uncertainty, which encourages precautionary savings, and by the fact that the savings accumulated during the pandemic were more concentrated in higher income households, which tend to have a lower propensity to consume.[3]

Chart I.3.2 • Decomposition of private consumption growth | Annual rate of change, in percentage, and contributions, in percentage points



Sources: Banco de Portugal and Statistics Portugal. | Note: A positive (negative) contribution of savings to consumption growth corresponds to a reduction (increase) in savings.

Public consumption growth declines. After a 4.1% rise in real terms in 2021, the rate of change of public consumption is expected to be 2.2% in 2022 and -0.9% in 2023. These developments reflect the progressive reduction in spending associated with the pandemic and a deceleration in public employment. Public consumption growth in 2022 is liable to reflect the effects of the implementation of the Recovery and Resilience Plan (RRP) on intermediate consumption expenditure. In 2024, public consumption is expected to show a rate of change of approximately zero as the number of civil servants stabilises and expenditure financed by the RRP decelerates.

GFCF will continue to grow by around 6% on average in 2022-24, close to the figures recorded in 2021. This is largely driven by anticipated inflows of European funds. In particular, public investment growth in real terms is expected to stand at 16.4% on average in 2022-24. In line with the outlook in the Stability Programme and the draft State Budget, public investment should accelerate by 12 p.p. in 2022. This growth reflects the faster implementation of the RRP and an acceleration in public investment without European financing. In the following years, the lower contribution made by European funds due to the transition between multiannual frameworks and, in 2024, a deceleration in investment financed by the RRP determine the gradual deceleration in public GFCF.

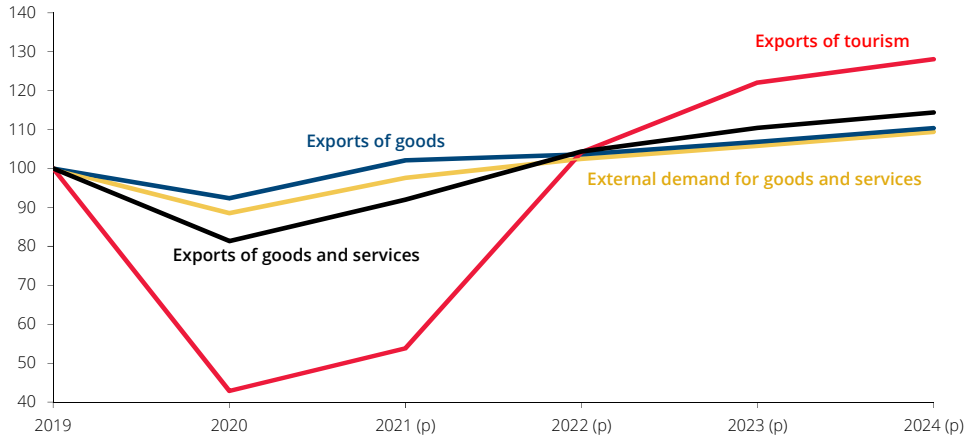
Housing investment will grow by 2.1% in 2022, reflecting carry-over effects from the previous year. Over the course of 2022 this component should also reflect the negative impacts stemming from increased uncertainty and supply-side constraints. In 2023-24, this component is expected to grow in line with households' real disposable income, amid a slight worsening of financing conditions, but with some factors explaining the recent buoyancy, such as demand from non-residents or for tourism investment, persisting. Business investment growth is supported by the high capacity

3. See the box entitled "Propensity to consume in Portugal and the euro area: an analysis with survey data", in the May 2020 issue of the *Economic Bulletin*.

utilisation rate in industry and construction, which reached ten-year highs in early 2022, and the prospects for a pick-up in demand. In the short term, there are some constraints associated with the worsening international environment that limit the growth of this component. In 2023-24, with these factors dissipating as expected, business GFCF will grow faster than expected on the basis of its historic elasticity in relation to GDP, even in a context of somewhat worsening financing conditions.

Exports will grow by 13.4% in 2022, gradually decelerating to close to the pre-pandemic pace in 2024. This profile is determined by the recovery in services exports, with growth projections of around 41% in 2022, 10% in 2023 and 4% in 2024. These developments occur against a background of declining constraints on international mobility and of financial availability of economic agents due to savings accumulated during the pandemic crisis. The dynamics of tourism have been a positive surprise in recent months and it is projected to return to pre-pandemic levels by mid-2022. Goods exports are projected to slow down by 1.5% in 2022 (10.6% in 2021). Supply-side disruptions are expected to dissipate from mid-2022 onwards, leading to higher growth in goods exports, 3.2% on average in 2023-24 (Chart I.3.3). These developments are in line with those of the external demand for Portuguese goods and services.

Chart I.3.3 • Exports and external demand | Index 2019=100



Sources: Banco de Portugal, Eurosystem and Statistics Portugal.

Imports will decelerate gradually from 9.5% in 2022 to 3.4% in 2024. In recent quarters, import elasticity to global demand weighted by import content has been above the historic average, a phenomenon already observed in previous recoveries, and to which the post-pandemic recovery in services imports also contributed. Trade openness of the economy, as measured by the share of exports plus imports in GDP, maintains its upward trend over the projection horizon, which was only interrupted in 2020.

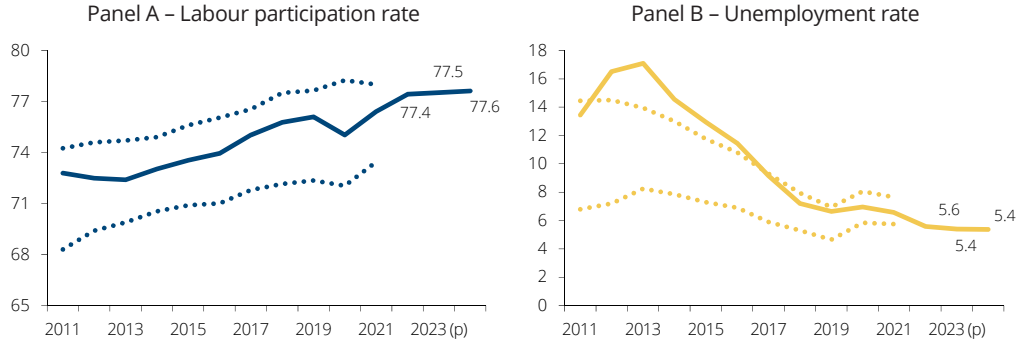
The current and capital accounts show a surplus over the projection horizon, with the goods and services account deficit being offset by the inflows of European funds. This net lending capacity of 1.2% of GDP on average in 2022-24 is slightly lower than the figures recorded before the pandemic crisis (1.4% in 2018-19). The goods account deficit widens over the projection horizon (-11.3% of GDP on average compared to -7.6% in 2018-19). The strong deterioration in the goods account balance in 2022 is largely explained by a volume effect, which is expected to subside in following years, reinforced by negative terms of trade and price effects. This worsening is partly offset by a progressive increase in the services surplus as a percentage of GDP, which will exceed its

pre-pandemic values in 2023. Income and capital account balances will increase as a percentage of GDP from pre-pandemic values, largely due to inflows of EU funds, which are expected to account for 3.8% of GDP on average over the projection horizon.

Employment growth will decline over the projection horizon, from 1.7% in 2022 to 0.2% in 2024. This aggregate had already exceeded pre-pandemic figures in the second quarter of 2021. Recovery differs across sectors, but even in the activities most affected by the pandemic, employment figures are close to those of 2019. The favourable employment outlook for 2022 is corroborated by the findings of the IREE, which show that a group of firms, accounting for 44% of employment, plans to increase the number of persons employed, while a group equivalent to 40% of employment intends to keep the same number of employees. The accommodation and food services sector stands out, where firms accounting for 63% of employment intend to increase the number of people employed.

The activation of individuals with weak labour market attachments (discouraged) helped the labour participation rate in 2021 to resume the upward trend it experienced in the past decade, reaching historical highs (Chart I.3.4). This increase also reflects the increasing educational attainment of the working age population and greater female labour market participation.[4] The projection assumes a gradually increasing profile for the participation rate, but the unfavourable demographic outlook remains a structural constraint for employment growth. The increasing number of firms reporting difficulties in hiring skilled labour force as an obstacle to activity, particularly in construction, signals some labour supply shortages. According to the IREE, 53% of firms in the sectors covered refer to the availability and cost of labour as a potential factor with a negative or very negative impact on their activity in 2022.

Chart I.3.4 • Labour participation and unemployment rates | In percentage



Sources: Banco de Portugal, Eurostat and Statistics Portugal. | Notes: The unemployment rate is expressed as a percentage of the labour force and the labour participation rate as a percentage of the working age population (15-64 years). The dotted lines refer to the first and third quartiles of the distribution of these variables for the euro area countries.

The unemployment rate is expected to remain on a downward path. The increase in the number of unemployed during the pandemic was lower than in previous crises, reflecting the policies adopted to maintain employment. After standing at 6.6% in 2021, the unemployment rate should decline to 5.6% in 2022 and 5.4% in 2023 and 2024, reflecting pressures stemming from labour market demand dynamics.

4. See the box entitled "Recent evolution of the participation rate in Portugal: decomposition by gender, level of education and demography effect", in the May 2022 issue of the *Economic Bulletin*.

The constraints on employment growth created by demographic developments should limit the contribution of labour to growth (Table I.3.2). The contribution of capital stock is expected to increase over the projection horizon (from 0.3 p.p. in 2022 to 0.5 p.p. in 2024) and stand above the 2015-19 average, reflecting the buoyancy of investment, both observed and projected. The contribution of total factor productivity (including human capital) to GDP growth at the end of the horizon is projected to amount to 1.4 p.p., favoured by developments in investment, particularly in areas such as digitalisation.

Table I.3.2 • Growth accounting approach to GDP | Average rate of change, in percentage, and contributions, in percentage points

	GDP	Capital Stock	Hours worked	Human capital	Total factor productivity (excl. human capital)
1986-2010	2.7	1.2	0.4	0.7	0.4
2011-2014	-1.5	-0.4	-1.4	0.7	-0.4
2015-2019	2.6	-0.1	1.3	0.5	0.8
2020-2024 (p)	1.5	0.3	0.3	0.5	0.2
2020	-8.4	0.2	-6.3	0.6	-3.3
2021	4.9	0.2	2.8	0.5	1.3
2022 (p)	6.3	0.3	3.6	0.5	1.7
2023 (p)	2.6	0.4	1.3	0.5	0.5
2024 (p)	2.0	0.5	0.1	0.5	0.9

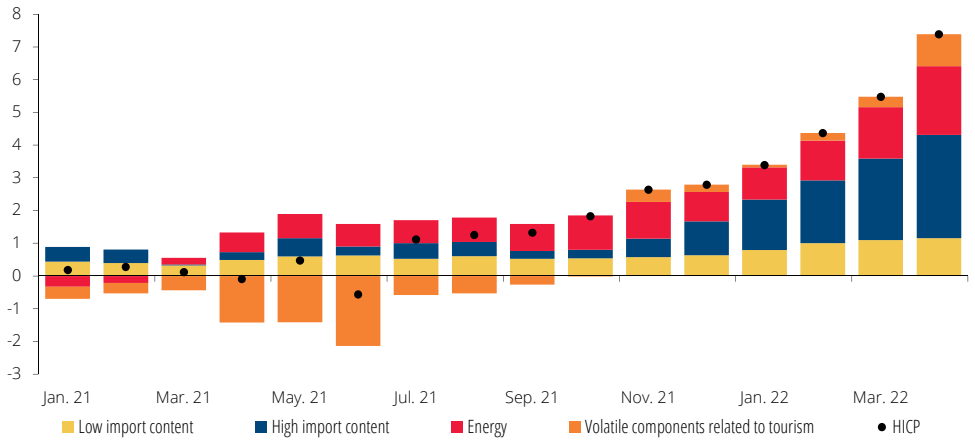
Sources: Banco de Portugal and Statistics Portugal. | The growth accounting exercise is based on a Cobb-Douglas production function and decomposes the change in GDP into the contributions of labour (hours worked) and capital factors and their combined efficiency (total factor productivity). The values presented correspond to the average values for the periods indicated.

Real wages per employee in the private sector will fall by around 1% in 2022, reflecting the surge in inflation. For 2023-24, average real wage growth is assumed to stand at 2%, closely in line with productivity growth. An incomplete pass-through of price increases to wages is assumed over the projection horizon, in an environment where long-term inflation expectations remain anchored. While average HICP growth over the projection horizon is of around 3.5%, nominal wages per employee in the private sector are expected to grow by 1.5% above productivity over the same period. The current projection incorporates the 6.4% minimum wage increase announced for 2023.

Inflation is projected to increase to 5.9% in 2022, declining to 2.7% in 2023 and 2% in 2024. The recent increase in inflation mainly reflects external pressures (Chart I.3.5). Even excluding energy, the goods import deflator is expected to grow at close to 11% in 2022, decelerating to around 1.8% on average in 2023-24. The upward trend in external prices, which started in 2021 with the impact of a rapid recovery in global demand and slower supply reaction, intensified with the Russian invasion of Ukraine. The current projection assumes the dissipation of external inflationary pressures from mid-2022 onwards, implying a deceleration profile of the HICP in 2023-24, extensive to energy and non-energy components, but more marked in the former, in line with the assumptions for oil and natural gas prices. Domestic price pressures are expected to remain contained, given the incomplete pass-through of the price hike to wages. The projection anticipates private sector profit margins to recover somewhat, following the declines recorded in recent years.

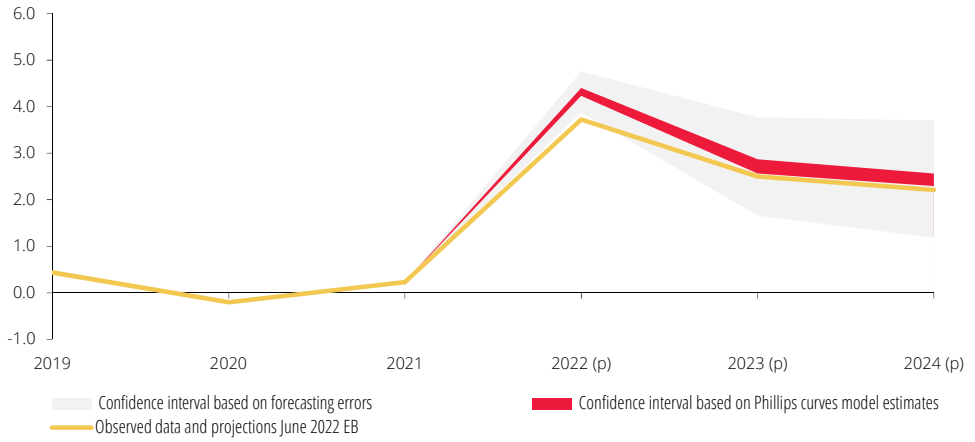
Inflation projections excluding the more volatile components are in line with those obtained based on simple relationships between the inflation rate and measures of the cyclical position of the economy (Chart I.3.6). The calculation of these Phillips curves took into account specifications including unemployment, disposable income and output gaps.

Chart I.3.5 • Observed HICP | Annual rate of change, in percentage, and contributions, in percentage points



Sources: Banco de Portugal and Statistics Portugal. | Notes: The import content includes direct and indirect content of private consumption in 2017 and was estimated on the basis of the correspondence between the products of the HICP basket (considering 4-digit COICOP) and the nomenclature of products of the national accounts at the most detailed level available of the import contents (82 products). The HICP components of high import content correspond to the components caracterized by an estimated import content above 20% in consumption expenditure.

Chart I.3.6 • Forecasts for the HICP excluding food and energy based on Phillips Curve models | Annual rate of change, in percentage



Sources: Banco de Portugal, ECB and Statistics Portugal. | Notes: The confidence interval based on forecast errors aims at dealing with the high uncertainty of the current context and is based on the average absolute out-of-sample (out-of-sample) forecast errors for the period 2016 Q1-2022 Q1. The sample period starts in 1995 Q1 and ends from 2015 Q4 (in the case of the shorter estimation sample) to 2019 Q1 (in the case of the longer estimation sample). For a more detailed presentation of these models see Serra, S. (2018) "The end of the Phillips curve? - Results for Portugal.", *Banco de Portugal Economic Studies* volume 5, April 2018.

4 Uncertainty and risks

The current projection is surrounded by high uncertainty, which alone may lead to the postponement of consumption and investment decisions, with an impact on activity. The baseline scenario of the projections already reflects the impact of the heightened uncertainty

generated by the onset of the Russian invasion of Ukraine, but it may be exacerbated in the event of an escalation of the conflict (Box 1).

Underlying the current projection are downside risks for activity and upside risks for inflation mainly externally driven and particularly for 2022. The main risk focus is a possible more adverse development of the war in Ukraine and its economic fallout. This includes consequences for commodity prices and sharper disruptions in production chains beyond the effects of uncertainty. In the event of stricter sanctions on Russia, access to some commodities, in particular energy, may be restricted. The impacts of this risk materialising are analysed in an alternative scenario presented in Box 1. Another constraint on international trade flows may result from the maintenance or reinforcement of restrictive measures associated with the pandemic in China, with an impact on the production and distribution of goods in that country. The risk of a resurgence of the pandemic in Europe cannot be ruled out either.

A sharper increase in global and euro area inflation may result in a faster normalisation of monetary policy, and consequent worsening financing conditions. This risk, as well as that of a more restrained evolution of real disposable income, may be mitigated by the savings built up during the pandemic, equivalent to around 10% of disposable income at the end of 2021.

The main upside risk to inflation over the horizon stems from the invasion of Ukraine, reflected in commodity prices and in the continued constraints in global production chains, with an indirect impact on prices. The risk shared by euro area countries of a greater pass-through of price increases to wages, leading to potential second-round effects, must also be taken into account. In the short term, upside risks to inflation are reinforced by the upward projection error associated with the May flash estimate for the HICP released after the cut-off date of this Bulletin's projection exercise.

5 Conclusion

Current projections reflect a continued recovery of the Portuguese economy in the aftermath of the pandemic, in an external environment substantially worsened by the onset of the Russian invasion of Ukraine. This conflict has heightened inflationary pressures and constraints on global value chains created by the adjustment process between supply and demand after the pandemic. High geopolitical uncertainty may affect economic activity for a long period.

The evolution of the Portuguese economy benefits from the fading effects of the pandemic in some sectors, most notably tourism, favoured by the past accumulation of household savings. In 2023-24, investment is also expected to contribute to growth, supported by inflows of European funds. These short-term developments are superseded by the structural dynamics of the Portuguese economy, which determine potential output growth. The positive effect of increasing skills and labour market participation stands out, against a background of unfavourable demographics that urgently needs to change.

The continued increase in labour force qualifications is essential amidst technological transformation geared towards digitalisation and compatible with increases in capital per worker. An effective implementation of the investments and reforms underpinning the RRP, in particular the modernisation of public administration, especially in terms of justice, will enable the reduction of context costs and further long-term growth gains.

Box 1 • A more adverse scenario for the Portuguese economy associated with the impact of the war in Ukraine

The heightened uncertainty caused by the invasion of Ukraine and its potential macroeconomic impacts justifies the consideration of an adverse scenario for the Portuguese economy. This longer lasting scenario with more severe economic spillovers from the invasion is based on external environment assumptions common to the adverse scenario presented by the Eurosystem in its June projections. These shocks result in a reduction of the annual GDP growth rate against the Bulletin's projections of 1.5 p.p. in 2022 and 2.6 p.p. in 2023, partially reversed in 2024 (0.7 p.p.). Inflation is 0.9 p.p. and 1.6 p.p. higher than in this Bulletin's projections for 2022 and 2023 respectively.

The scenario assumes that the invasion is protracted, with rising geopolitical tensions and new economic sanctions imposed, leading to commodity price surges, additional disruptions in global value chains, higher uncertainty and stronger financial frictions.

This scenario undertakes an abrupt shutdown in oil and gas imports from Russia to Europe over the second half of 2022, with limited capacity to switch to other suppliers or energy sources in the short term, in particular for gas.[5] At the end of the horizon, gas and oil supplies from Russia should be completely substituted. The dependence of the Portuguese economy on gas and oil from Russia is low – on average, in the 2018-2021 period, oil and gas imports from this source accounted for 4.8% and 1.4% of total energy commodity imports respectively. However, an abrupt halt in Russian supplies of these commodities to Portugal and Russia's most energy-dependent trading partners will have relevant direct and indirect impacts, leading to potential production stoppages in some sectors, intense disruptions in global value chains and shortages of some intermediate goods.

Trade disruptions — in particular, in oil, gas and other commodities of which Russia and Ukraine are major global suppliers, including some food commodities — reinforce the increase in the prices of these goods in international markets (Chart C1.1). This adverse scenario assumes a further 42% increase in oil prices in 2022 and 20% in 2023 compared to those included in this Bulletin's projections (Section I.2). In the case of gas, the additional increase is even more significant (almost 200% in 2022 and about 35% in 2023), reflecting greater difficulty in switching to alternative sources. At the end of the horizon, the price of these energy commodities remains above the one included in the projections. The assumption of higher oil and gas prices results in a sharp increase in firms' production costs, constraining their activity, particularly in sectors where direct and indirect energy dependence is high (Chart C1.1). The adverse scenario also assumes prices of non-energy commodities and other goods above those included in the projections, particularly in terms of developments in food prices.

Direct trade links between Portugal and the two countries in conflict are limited: in the 2018-2021 period, joint exports to Russia and Ukraine averaged 0.3% of Portuguese exports of goods; imports accounted for 1.6% of total imports. However, some of Portugal's major trading partners are highly exposed, therefore a worsening of the situation may indirectly weaken external demand for Portuguese products. Under the adverse scenario's assumptions, growth in external demand for the Portuguese economy in 2022 and 2023 is significantly lower than that considered in this Bulletin's projections (Table C1.1 and Section I.2). In cumulative terms, the drop in external demand against that assumed in the projections is around 6%.

5. Note that the EU has agreed to implement an almost complete ban in oil imports from Russia by the end of 2022.

Table C1.1 • Assumptions of the adverse scenario | Annual rate of change, in percentage, and difference from the projection assumptions, in percentage points

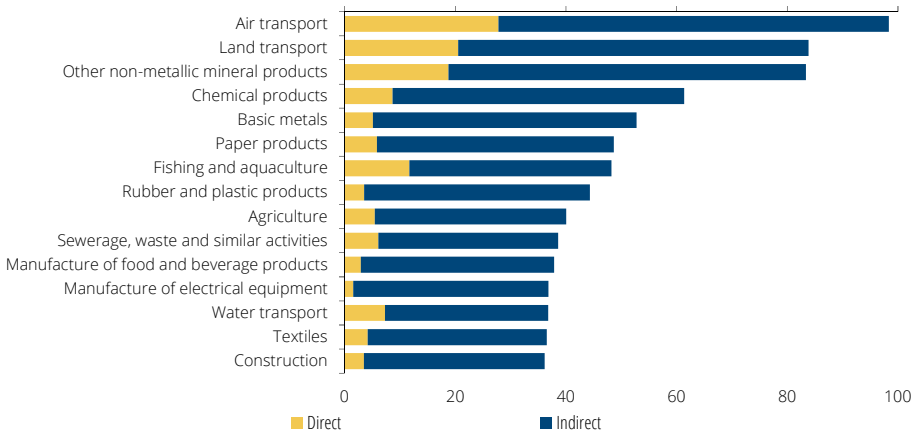
	Adverse scenario			Differences from projection		
	2022	2023	2024	2022	2023	2024
Oil price	106.4	9.8	-20.7	42.0	19.9	-10.9
Gas price	303.7	16.3	-39.8	191.7	34.4	-17.5
Non-energy commodity prices	29.4	5.3	-2.9	3.1	8.4	3.4
Competitors' prices	12.9	5.2	0.5	0.4	2.9	-0.6
External demand	3.2	-1.0	3.8	-1.8	-4.2	0.3

Source: Eurosystem (Banco de Portugal calculations).

Also considered were channels operating through increased financial market tensions and uncertainty. These shocks affect firms' investment decisions and lead households to increase precautionary savings. Note that the adverse scenario uses the same assumptions for monetary and fiscal policy as those assumed in this Bulletin's projections.

This scenario assumes a tightening of financial conditions, reflected in a decline in asset prices and an increase in risk premia. Bank interest rates on loans to households and firms rise more sharply than implied in the Bulletin's projections (around +100 b.p.).

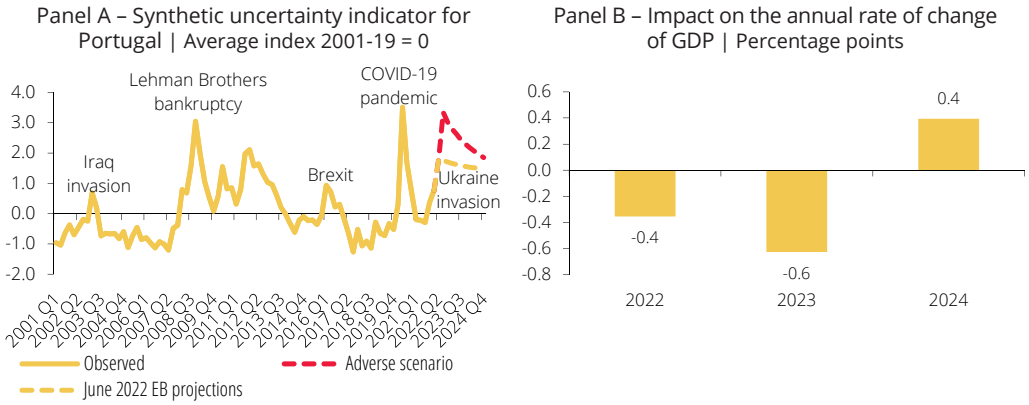
Chart C1.1 • Sectors most dependent on the energy sector (top 15) | Value of energy uses (direct and indirect), in % of output value



Source: Statistics Portugal (Banco de Portugal calculations). | Note: Total monetary units of the energy sector needed, directly or indirectly, to obtain a unit of production in each of the sectors of the Portuguese economy (presented as a percentage of production), obtained from the symmetrical input-output matrices of 2017. These total needs are broken down into direct (direct uses of the energy sector) and indirect (uses of energy products that were used in the production of other products used as intermediate consumption in the sector of activity considered). The energy sector corresponds to the aggregation of sectors of activity in extractive industries, refined petroleum products and electricity and gas.

The invasion of Ukraine prompted a sudden surge in economic uncertainty. The synthetic uncertainty indicator for Portugal has remained at high levels since late February (Chart C1.2). The projections assumed uncertainty would remain high over the horizon. However, it is possible that uncertainty is heightened in a scenario of worsening conflict and geopolitical tensions. In the adverse scenario, uncertainty was considered to increase further from the third quarter to a level close to that observed at the onset of the COVID-19 pandemic. From the end of the year, uncertainty declines but remains higher than that considered in the projections.

Chart C1.2 • Synthetic uncertainty indicator for Portugal and impact on GDP

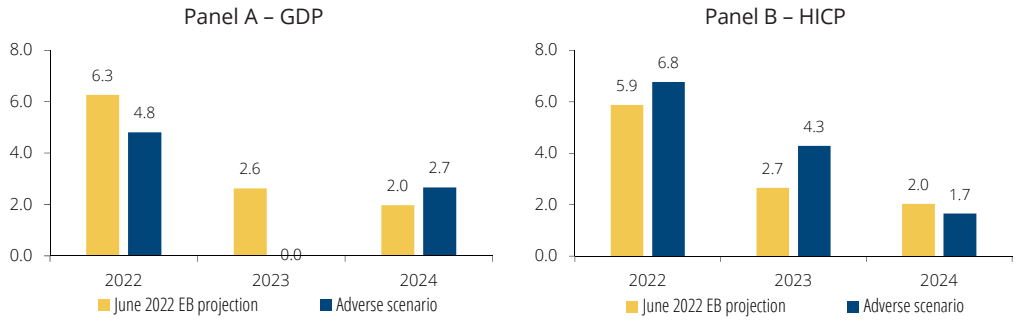


Source: Banco de Portugal. | Note: The uncertainty indicator is presented in Manteu e Serra (2017), "Impact of uncertainty measures on the Portuguese economy", *Working Paper* 9/2017, Banco de Portugal. The indicator was standardized with the mean and standard deviation for the period 2001-19.

Shocks are implemented from the third quarter of 2022 onwards. The impact on economic activity and inflation was estimated using the Banco de Portugal's forecasting and simulation models: the medium-term macroeconomic model ("M" Model), the inflation-forecasting model (MIMO) and the dynamic general equilibrium model (PESSOA).

Compared to the Bulletin's projections, the annual GDP growth rate is estimated to be reduced by 1.5 p.p. in 2022 and 2.6 p.p. in 2023, with a positive impact in 2024 (0.7 p.p.) (Chart C1.3). Under this scenario, activity would enter a recession by the end of 2022, followed by a recovery, albeit incomplete. In 2024, GDP would be 3.3% lower than in this Bulletin's projections.

Chart C1.3 • GDP and HICP in Portugal – projection of the June 2022 *Economic Bulletin* and adverse scenario | Annual rate of change, in percentage



Source: Banco de Portugal.

In this scenario, inflation will reach 6.8% in 2022 and 4.3% in 2023, respectively 0.9 p.p. and 1.6 p.p. higher than in this Bulletin's projection. Higher inflation stems mainly from a rise in import prices and their pass-through to consumer prices. Lower demand partly offsets these effects. As the international markets gradually normalise, surges in import prices, especially for energy goods, are gradually reversed, contributing to inflation in 2024 being slightly lower than projected in this Bulletin (Table C1.1 and Chart C1.3).

Box 2 • Outlook for prices and wages in 2022 – an analysis based on the Fast and Exceptional Enterprise Survey results

The intensification of some of the adverse effects of the pandemic and the economic spillovers from the invasion of Ukraine prompted Statistics Portugal and the Banco de Portugal to launch a new edition of the Fast and Exceptional Enterprise Survey (IREE) in May 2022.[6] Around 7,000 firms have answered, which corresponds to a response rate of 74%.

By May 2022, operating conditions had been restored in 90% of firms and 56% had already reached or surpassed their pre-pandemic levels of activity. Notwithstanding the favourable outlook for the current year — with 54% of firms anticipating an increase in their business turnover — entrepreneurs are pessimistic about recent developments. More than 80% of firms believe that the current international environment constrains the predicted dynamics of their activity and are concerned about the rise in commodity (energy and others) and intermediate goods prices, the increase in transport costs and disruptions in global supply chains. Industry and energy is the sector where the expected impact is the most negative.

These external shocks have an impact on price formation. Two thirds of firms intend to increase their sales prices in 2022, while almost a third intend to keep them unchanged and only 2% expect a drop from the previous year.[7] The share of firms expecting a rise in prices increases with firm size (52% in micro-firms and 73% in medium and large firms) and surpasses 70% in Industry and energy, Accommodation and food services and Transportation and storage.

Among the sectors covered by the IREE, the average price increase forecasted for 2022 is 7.5%, with 26% of firms expecting increases of more than 10% (Chart C2.1). This is a rough estimate — as firms report ranges — and may reflect the evolution of both consumer prices and prices charged between firms.

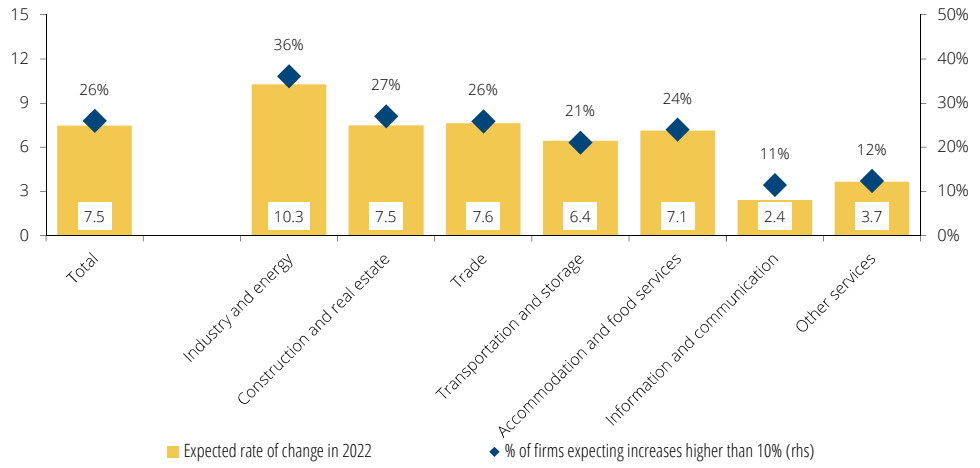
Firms expecting to raise prices tend to report a better outlook for their businesses, higher energy costs and more dynamic wages. By comparing firms that plan to raise prices in 2022 with those that expect them to remain unchanged, the percentage anticipating an increase in their business turnover and employment this year is higher in the first group (62% and 40% respectively, compared to 40% and 19% in the second group) (Table C2.1). The number of firms most affected by the adverse effects of the pandemic and the invasion of Ukraine — increased costs and constraints on the supply of goods — is also higher in the first group. Since early-2022, and against the same period of the previous year, 88% of the firms that will raise prices have reported an increase in liquid fuel costs, 85% in electricity and 61% in gas (79%, 81% and 58%, respectively, in firms that will maintain their prices). The share of firms anticipating an increase in wages is also higher in this group of firms (90% compared to 75% in firms with no price changes), with 42% of firms expecting higher increases than those observed in 2021. Wage growth per employee is expected to be stronger in firms anticipating a rise in prices this year.

In analysing the reasons for the expected price increase, firms highlight the same factors that negatively affect their activity, in particular, the increase in non-energy and energy commodities costs, emphasised by 60% and 49% of firms, respectively. Firms also assess the rise in other costs (36%) and wage growth (20%) as very relevant. Industry and energy — the sector with the largest expected price increase — and Construction and real estate stand out with the highest percentage of firms

6. The survey was conducted from 9 to 20 May and the main results were released on 8 June. The survey microdata are available from Statistics Portugal and the Banco de Portugal for research purposes.
7. These results are supported by data from European Commission surveys, which show that the percentage of firms intending to raise prices in a three-month horizon has been increasing and is at an all-time high.

mentioning the increase in non-energy commodities and intermediate goods costs as very relevant (75% and 69% of the firms, respectively). In Transportation and storage, the increase in energy costs accounts for most of the answers (70%). Wage growth was mentioned by almost a third of the firms in Accommodation and food services and 29% of the firms in Other services.

Chart C2.1 • Expected rate of change in firms' sales prices in 2022 | In percentage



Sources: Banco de Portugal and Statistics Portugal (Fast and Exceptional Enterprise Survey). | Notes: For each firm, the change in its sales price was considered to correspond to the midpoint of the reported range. For the bracket "equal to or greater than 50%", a change of 75% was considered. Results were aggregated using a simple average.

Table C2.1 • Characterisation of firms expecting to increase and to maintain prices in 2022 | Percentage of firms

	Firms expecting to maintain prices	Firms expecting to increase prices
Outlook for 2022		
Increase in business turnover	40%	62%
Increase in employment	19%	32%
Most relevant factors with a negative impact on activity		
Rising energy costs	29%	54%
Rising prices of other raw materials and intermediate goods	24%	54%
Rising transport costs	24%	49%
Problems in the supply of raw materials or intermediate goods	18%	40%
Wages		
Increase in 2022	75%	90%
Acceleration in 2022	31%	42%

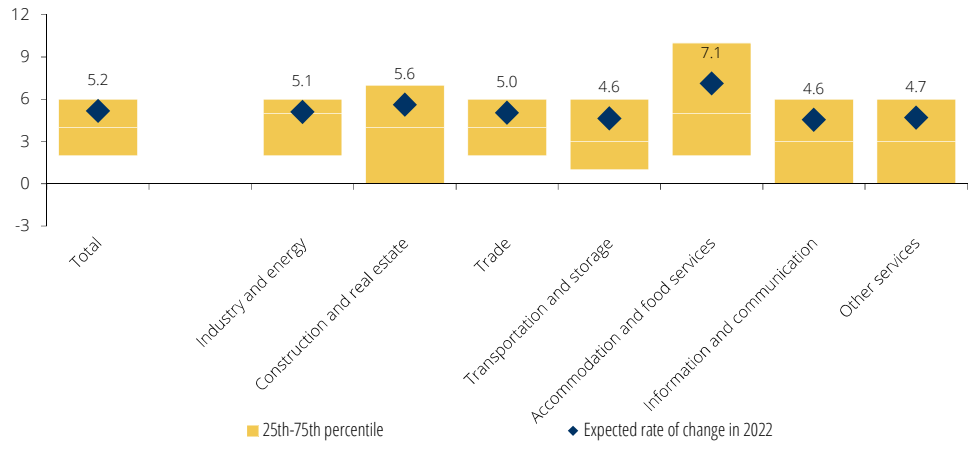
Sources: Banco de Portugal and Statistics Portugal (Fast and Exceptional Enterprise Survey).

Upward cost pressures are being passed through to final prices, but the majority of firms (60%) have reported that this is happening at a moderate pace, i.e. that the pass-through from cost increases to prices is less than 50%. Only 12% of the firms with cost increases consider that the pass-through will be total, while 28% report a pass-through of more than 50%. Services excluding Trade appear to have passed on cost increases more moderately than the other sectors. Overall, firms reporting higher transmission of cost increases have tended to raise their prices further. The limited pass-through of costs to prices is due to demand issues (noted by 54% of firms), competition (41%) and, to a lesser extent, contracts already signed (36%). The limited pass-through suggests that some firms may be absorbing part of the cost increases into their profit margins.

The current high inflation environment may influence wage developments, contributing to higher increases. This effect may be amplified by economic conditions, in particular the labour market situation, where available slack has been shrinking. According to IREE results, 82% of firms expect wages per employee to increase in 2022, while 18% expect them to be unchanged (compared to 76% and 23% respectively, in 2021). Nevertheless, only for 36% of firms the estimated growth in 2022 is higher than in 2021. The average growth of wages per employee projected for 2022 is around 5%, after a 4.2% change in 2021 (Chart C2.2). These developments point to a real wage loss in 2022, in contrast to gains recorded over the past five years. By sector of activity, results do not significantly differ from those obtained for the total, except for Accommodation and food services, where a 7.1% wage growth is forecasted for 2022 (1.9 p.p. higher than in the previous year) in a context of strong recovery in employment. An analysis of interquartile ranges — which discards 25% of the observations in each extreme — shows that there is greater variability in the responses of firms in Accommodation and food services and Construction and real estate.

The main factors that positively contribute to wage developments are the increase in the minimum wage (28%), the need to retain workers (27%) and higher inflation (to offset purchasing power loss) (23%). Pressures driven by the increase in the minimum wage are most referred to by Accommodation and food services (37%) — reflecting the prevalence of this remuneration in the sector[8] —, in Industry and energy (35%) and in Transportation and storage (34%). In the sectors of Information and communication and Construction and real estate, the most cited factor is the need to retain staff (34% and 31% respectively), suggesting pressures from a shortage of skilled labour. Notwithstanding the wage growth forecast for 2022, entrepreneurs also highlight factors that contribute to mitigate this development, in particular heightened economic uncertainty and increased production costs, the latter especially mentioned by industrial firms. The group expecting an increase in wages has a larger share of firms that foresee employment growth.

Chart C2.2 • Expected rate of change in wages per employee in 2022 | In percentage



Sources: Banco de Portugal and Statistics Portugal (Fast and Exceptional Enterprise Survey). | Notes: The white line dividing the interquartile range represents the median. In most cases, the presence of very high rates of change among the firms' responses explains the difference between the average rate of change and the median.

8. According to information from the Ministry of Labour, Solidarity and Social Security, 45% of employees in the Accommodation and food services were paid the minimum wage in July 2021.

II Special issue

NextGenerationEU in Portugal: opportunities and challenges

NextGenerationEU in Portugal: opportunities and challenges[1]

Introduction

The COVID-19 pandemic triggered immediate responses from European authorities to mitigate its economic impact. Besides the measures taken by national governments and the European Central Bank, the European Investment Bank's credit lines and the European temporary support to mitigate unemployment risks in an emergency (SURE) are particularly noteworthy. However, the extent of the shock and the asymmetries across countries and sectors of activity made clear the need for a more structural and coordinated reaction in the European Union (EU).

On 27 May 2020, the European Commission presented the European Recovery Plan. This plan complements the monetary and fiscal policy measures during the recovery phase but particularly focuses on the long term and on strengthening potential growth. Its design was based on the identification of the challenges faced by the European economy, selecting three major courses of action: (i) ensuring the liquidity of firms, in particular in the sectors most affected by the pandemic; (ii) fostering public and private investment, fulfilling structural needs and responding to the challenges of climate transition and digital transformation; and (iii) ensuring sustained and inclusive growth (European Commission, 2020). The plan is financed by a reinforced multiannual financial framework and by a new temporary and emergency instrument, the NextGenerationEU (NGEU). The main components of NGEU are the Recovery and Resilience Facility (RRF) and the Recovery Assistance for Cohesion and the Territories of Europe (REACT-EU) initiative.

This Special issue describes the implementation of the NGEU in Portugal and evaluates *ex ante* its economic effects. Most of the planned projects are expected to help boosting climate transition and digital transformation while addressing social and territorial cohesion issues. Estimates for the impact on the Portuguese economy suggest that the NGEU contributes to increase by 0.5 percentage points (p.p.) the average growth rate of gross domestic product (GDP) in 2022-24. In the long run, the potential output is about 1% higher.

NGEU

The NGEU provides €807 billion, of which €421 billion in the form of grants and €386 billion in the form of loans. For an immediate response to the pandemic shock, 6.3% of the NGEU is allocated to a macroeconomic stabilisation component centred on REACT-EU. This mostly applies to 2021-22 but it may run until 2023. In Portugal, the envelope corresponds to around 1% of GDP and is being earmarked for measures to support employment and the sectors most affected by the pandemic — including the *ADAPTAR, APOIAR* and *ATIVAR* programmes — besides a learning recovery plan *(Plano de Recuperação das Aprendizagens)* and the purchase of vaccines against COVID-19.

NGEU's main financial component is the RRF. The total envelope for RRF amounts to €724 billion, in grants and loans, corresponding to 90% of total NGEU. The maximum grant allocation for each

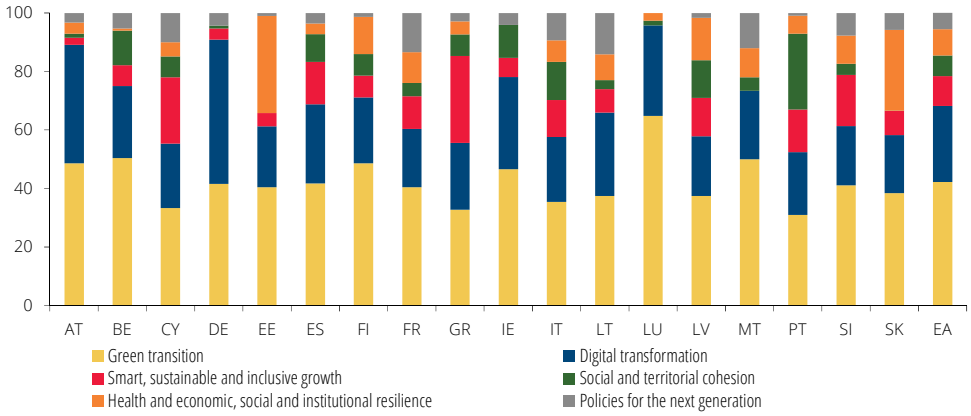
1. Prepared by Maria M. Campos and Cláudia Duarte.

country in 2021 and 2022 (70% of the total) takes into account the population, (the inverse of) GDP per capita and the average unemployment rate in 2015-19. In determining the key applicable to the remaining 30%, the unemployment rate is replaced by the fall in real GDP in 2020 and in 2020-21, in cumulative terms. Initially, the allocation key considers the Commission's Autumn 2020 GDP projections, with the final amounts being reassessed in June 2022 based on Eurostat's release of the 2021 National Accounts. The maximum amount of loans is capped at 6.8% of each country's Gross National Income (GNI) in 2019.

The RRF funds are intended to finance the national Recovery and Resilience Plans (RRP). The plans submitted by governments combine investments and reforms that aim to address the structural constraints of the economies. The focus is on strengthening public and private investment, with a component of support for firms and social projects, as well as support for employment and vocational training. Amongst euro area countries, only the Netherlands' RRP has not yet been submitted to the Commission.

The funds should be earmarked for projects aligned with the six key pillars of the European policy: green transition; digital transformation; smart, sustainable and inclusive growth; social and territorial cohesion; health and economic, social and institutional resilience; and policies for the next generation. The plans clearly favour the first two pillars (Chart 1). Green transition projects are typically associated with investments in sustainable mobility, energy efficiency improvements and boosting hydrogen or other renewable sources. The digital transformation pillar encompasses projects for the digitalisation of public services and the corporate sector or to develop digital inclusion skills. As regards other pillars, contributions vary significantly. However, smart, sustainable and inclusive growth is a prominent pillar in several countries.

Chart 1 • Share of EU policy pillars in the national RRP | Percentage of total estimated cost of the RRP



Source: RRF scoreboard. | Note: The distribution across the EU policy pillars reflects the pillar to which each measure primarily contributes, in line with the categorisation made by the Commission.

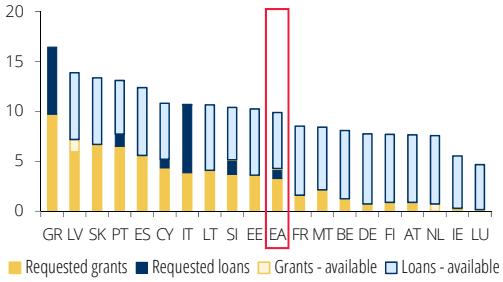
The vast majority of euro area countries has requested the maximum grant amounts to finance their RRP. The take-up of loans has been remarkably low; only Greece, Italy and, to a lesser extent, Slovenia, Portugal and Cyprus have requested significant amounts (Chart 2). This situation may change, as countries can still submit requests until August 2023. Moreover, following the recent presentation of the REPowerEU plan (European Commission, 2022), the Commission urges countries to include new initiatives in their RRP leading to the diversification of energy suppliers and to lower the dependence on fossil fuels. To this end, two additional funding sources are proposed: part of the

revenues from carbon Emissions Trading System auctions; and the transfer to other Member States of the available RRF loans not requested by the countries.

RRP are subject to evaluation by the Commission. This evaluation takes into account criteria such as compliance with the Country Specific Recommendations (CSRs) set for 2019 and 2020 and the allocation of 37% and 20% of funds to investments to enhance the climate and digital transitions, respectively. Upon approval of the RRP by the EU Council, Member States received in the second half of 2021 pre-financing equivalent to 13% of the total estimated cost of implementation. From 2022 onwards, countries will be able to request up to two disbursements per year, their payment being conditional on the achievement of the objectives set out, identified through milestones and targets to be met.[2] So far, the Commission has disbursed around €100 billion, of which €66 billion are grants. Most disbursements relate to pre-financing, but Spain, France, Greece, Italy and Portugal have already received a first payment of regular funding upon the achievement of milestones and targets.

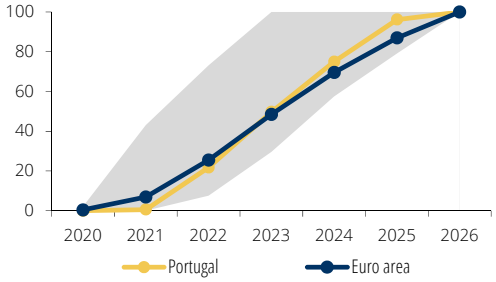
Member States have committed to the swift implementation of RRF funds. On average, half of the expenditure should be executed by 2023 (Chart 3). Nevertheless, a high dispersion in the absorption rate across countries is expected. Progress in the implementation of the plans and the contribution to the RRF objectives will be assessed twice a year using 14 common indicators (European Commission, 2021a).

Chart 2 • RRF: maximum and requested amounts per country | Percentage of 2019 GDP



Source: European Commission (calculations by Banco de Portugal). | Notes: The available amounts correspond to the maximum allocation excluding the funds already requested. In the case of loans, the maximum amounts correspond to 6.8% of 2019 GNI. For grants, the maximum amounts reflect the allocation key defined by the Commission. "EA" refers to the simple euro area average. The RRP of the Netherlands is yet to be submitted to the Commission.

Chart 3 • Cumulative execution rate | Percentage of total requested amounts



Source: European System of Central Banks (ESCB). | Notes: The shaded area corresponds to the maximum and minimum cumulative execution rates across euro area countries, in each year. The information underlying the chart was collected by the ESCB Working Group on Public Finance (WGPF) and is based on the national RRP, government announcements and assumptions by WGPF experts. The RRP of the Netherlands is yet to be submitted to the Commission.

The Portuguese RRP

The implementation of the Portuguese RRP has an estimated cost of €16.4 billion, about 8% of 2019 GDP, providing for 83 investment projects and 32 reforms. The RRP was submitted to the Commission in April 2021 and was approved by the EU Council in July following a positive assessment by the Commission. The funding includes €13.9 billion grants, around 1% of GDP per year on average

2. To monitor the milestones and targets already achieved by the countries, see the Commission's scoreboard: https://ec.europa.eu/economy_finance/recovery-and-resilience-scoreboard.

(against 0.5% of GDP per year in the euro area), and the remainder is loans (around 20% of the maximum amount allowed). Investments and reforms are structured around three dimensions — Resilience, Climate Transition and Digital Transition — and can contribute to one or more key pillars of European policy.

The "Resilience" dimension mobilises the most resources, two thirds of the total. The bulk of the allocation is intended for capitalisation and innovation projects in firms, and for building up human resources' qualifications and skills. All the loans requested so far will be used to finance investments in this dimension. Part of these loans is intended to capitalise firms and will be intermediated by Banco Português de Fomento. Reforms in this dimension span the health and social policy fields, the implementation of the National Plan for Urgent and Temporary Accommodation and the implementation of policies to promote business innovation and corporate capitalisation.

Investments and reforms that contribute to the European Green Deal and European Climate Law commitments fall under the "Climate Transition" dimension, which mobilises 18% of the funds. Sustainability projects in the transport sector and the decarbonisation of industry play a prominent role. Furthermore, energy efficiency investments in residential and service buildings, as well as the strengthening of sustainable energy sources are included.

Investments and reforms in the "Digital Transition" dimension address the challenges of the economy's digitalisation, mobilising 15% of the funds. The projects foster digital skills development through education and specific training and contribute to the digital transformation of firms and public administration. Particularly noteworthy are the reform of public administration functioning and internal organisation and the implementation of improvements in economic justice and business environment, especially as regards licensing and insolvency settlement.

The Commission considers that the proposed measures adequately tackle several of the CSRs addressed to Portugal in 2019 and 2020. The Commission highlights reforms and investments to enhance the quality and sustainability of public finances, as well as the accessibility and resilience of the health system (European Commission, 2021b). Also noteworthy are the employment, education and training initiatives, the focus on digital and climate transitions, and the expected improvements in regulatory costs and the functioning of the judicial system.

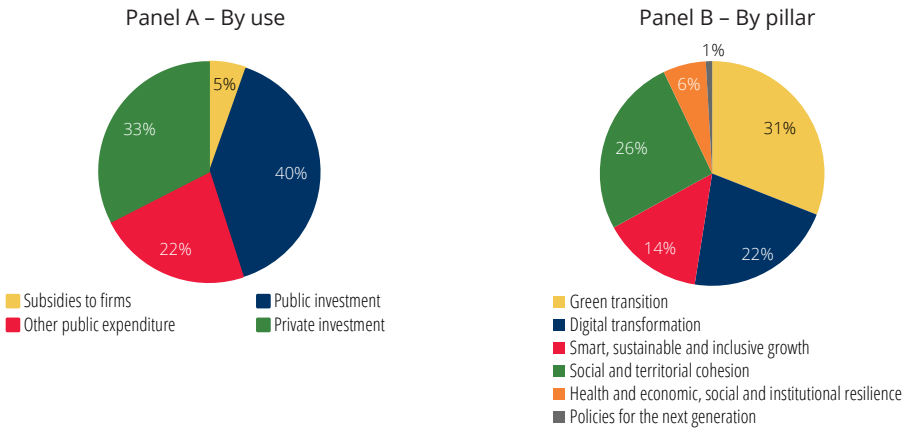
As in the euro area, Portuguese RRP projects will be largely implemented by public entities (Chart 4 – Panel A). Public entities are expected to carry out 62% of expenditure, below the 68% expected in the euro area. The weight of public investment (40%) is lower than planned, on average, in the RRP of other countries (55%).

The Portuguese plan focuses more on the "social and territorial cohesion" pillar (26%) than the euro area average (7%). On the other hand, despite the large number of projects that directly or indirectly contribute to the green and digital transition pillars, they represent a smaller share (53%) than in the euro area average (68%) (Chart 4 – Panel B).

The implementation of reforms should take place before the investments. The adoption of reforms concerning the "Resilience" and "Climate Transition" dimensions will be particularly frontloaded (Chart 5 – Panel A). This includes reforms that have already been implemented, such as the creation of the Banco de Fomento or the establishment of the National Plan for Urgent and Temporary Accommodation and the National Hydrogen Strategy. Early implementation of reforms (80% of which to be completed by 2023) could create conditions for a more efficient implementation of investments, by catalysing their results. In the case of investments, the implementation pace is smoother, with expenditure execution rates around 20% between 2021 and 2025 (Chart 5 – Panel B). In the latest

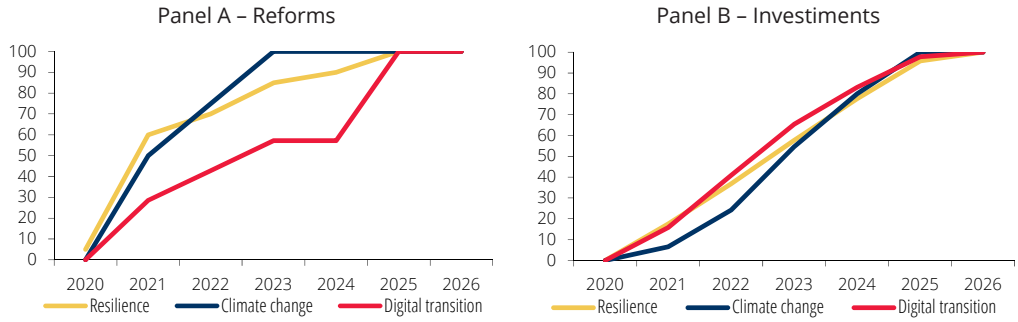
update of the Stability Programme, the under-execution in 2021 resulted in a readjustment of the projected profile and an acceleration of the implementation rate forecast in 2022-25.

Chart 4 • Distribution of RRF grants and loans in Portugal | Percentage of total



Sources: European Commission and Stability Programme for 2022-26 (calculations by Banco de Portugal). | Note: The distribution across the EU policy pillars in Panel B reflets the pillar to which each measure primarily contributes, in line with the categorisation made by the Commission.

Chart 5 • Cumulative execution rates | Percentage of total

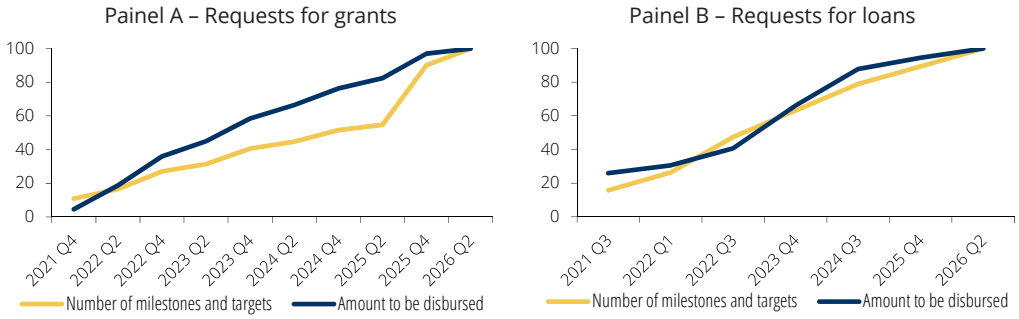


Sources: Annex to the Council Implementing Decision on the approval of the assessment of the RRP for Portugal and *PRR – Recuperar Portugal, Construindo o Futuro* (calculations by Banco de Portugal). | Notes: In the case of reforms, the execution rate corresponds to the number of reforms expected to be implemented in each year, as a percentage of total reforms. Regarding investments, the execution rate is based on the expected costs in each year as a percentage of total expenditure, considering both grants and loans.

The RRP has 341 milestones and targets. Milestones are mainly associated with reforms and refer to regulatory amendments or the formal approval of certain programmes. Approximately half of the milestones are to be achieved by the end of 2022. Some refer to changes that came into force in 2020 and 2021, in some cases before the RRP presentation. Targets correspond to quantitative objectives and are more related to the investments. Their achievement is more spread out over time.

Each disbursement of grants and loans is conditional on the fulfilment of specific milestones and targets. Disbursement requests follow the timeline of the objectives and involve a process of assessment of their fulfilment (Chart 6). In January 2022, Portugal submitted its first disbursement request to the Commission, corresponding to €1.16 billion (of which €553.4 million in grants and €609 million in loans), by reporting progress on 34 milestones and 4 targets. Following a positive assessment of the achievement of the objectives, the payment took place in early May. Milestones and targets concerning the second request are expected to be met by the end of the second quarter of 2022.

Chart 6 • Fulfillment of milestones and targets over time and disbursement requests
| Percentage of total



Source: Annex to the Council Implementing Decision on the approval of the assessment of the RRP for Portugal (calculations by Banco de Portugal). | Notes: The horizontal axis refers to the deadlines for the fulfillment of milestones and targets associated with each disbursement request. The reporting to the Commission and the actual disbursement request may occur later in time.

Macroeconomic and fiscal implications

Macroeconomic implications

The analysis of NGEU's macroeconomic impact on the Portuguese economy contemplates the projects financed by grants related to the RRF and REACT-EU, and RRP reforms. Loans made available through the RRF are excluded as their amount can still be changed. It is assumed that the total amount of grants will be taken-up in the period 2021-26 as scheduled (Chart 5). NGEU-funded projects are deemed to be new and additional to public and private investment plans that existed prior to the creation of this instrument.

Grants are channelled towards the economy via four ways: public and private investment, transfers to households and firms and public consumption (Chart 4). In the short term, these grants will lead to increases in public and private investment and consumption, triggering an increase in domestic demand, imports and employment. Exports may also rise, given that this is a European programme, but the spillover effect from trade is not considered in this exercise. The initial demand stimulus has a positive impact on the output gap, defined as the differential between GDP and potential output, and on inflation. However, the impact of increased demand on inflation is expected to be temporary.

In the medium term, the economic productive capacity increases, reflecting the accumulation of physical and human capital stocks, the increase in their quality and the decrease in the unemployment rate. The positive impact on supply will sustain the more persistent and productive component of the demand stimulus. Furthermore, the capital stock modernisation, the adoption of new technologies and the implementation of reforms lead to a more efficient use of the productive factors, i.e. a higher total factor productivity (TFP), which also contributes to the increase in supply. Once temporary impacts have faded away, a permanent increase in GDP and potential output is anticipated in the long run, compared to a scenario without NGEU.

To simulate NGEU's macroeconomic impact on GDP, three complementary exercises are considered, and the first (A) is based on instruments underlying the Banco de Portugal's projection exercises. The main element in this exercise is the medium-term model that mainly captures demand-side effects. NGEU's impact on GDP is calculated by comparing current projections and a counterfactual scenario without NGEU. The counterfactual scenario for GDP

is a stylised exercise, where the effects of investment shocks, public consumption and current transfers, as well as a TFP shock, are removed from the projections.

The second exercise (B) uses a structural general equilibrium model for the Portuguese economy – the PESSOA model. This model allows to identify macroeconomic effects of exogenous shocks on the demand or supply side (Júlio and Maria, 2017). The exercise is inspired by the analysis carried out for the euro area with the EAGLE model (Gomes et al., 2011) in Bańkowski et al. (2021, 2022). In PESSOA model, NGEU's impact on GDP in the short and medium term is obtained through temporary shocks in channels similar to those detailed in exercise A. Although the nature of these shocks entails a null impact in the long run, the estimated effects show some persistence in the medium term.

The final simulation (C) is a sectoral growth accounting exercise. This exercise, presented in Banco de Portugal (2021), corresponds to an assessment of the RRP based on a breakdown by activity sector, on the back of assumptions relating to capital accumulation, changes in technological coefficients of sectoral production functions and to an increase in TFP. The impact on the TFP is used to calibrate the shocks on this variable in the previous exercises.

Compared to a situation without NGEU, real GDP in Portugal is around 1.4% higher on average between 2022 and 2024 (Table 1). In the same horizon, the annual GDP growth rate is, on average, 0.5 p.p. higher. Furthermore, results indicate that GDP's short-term dynamics are higher than longer-term evolution (2026 and 2030). Other estimates released by national and international institutions are also presented. Against a still shifting background, a word of caution is warranted when comparing estimates for NGEU's macroeconomic impact, as the scopes and the instruments used are not entirely homogeneous and comparable.

Table 1 • Estimates for the macroeconomic impact of NGEU on GDP | Percentual change vis-à-vis the level corresponding to the absence of NGEU

	Average 2022-24	2026	2030
Banco de Portugal			
Portugal			
Exercise A	1.4	1.1	0.9
Exercise B	1.3	1.2	0.8
Exercise C	–	2.0	–
Ministry of Planning (2021)			
Portugal	–	3.5	–
Bańkowski et al. (2022)			
Euro area	1.1	1.5	–
Pfeiffer et al. (2021)			
Portugal	1.6	2.0	1.1
EU-27	0.8	1.0	0.5
IMF (2020)			
EU-27	1.4	–	–

Sources: Banco de Portugal, Bańkowski et al. (2022), IMF (2020), Ministry of Planning (2021) and Pfeiffer et al. (2021). | Notes: Regarding Banco de Portugal simulations, exercise A is based on the instruments used in its projection exercises, whereas exercise B uses the PESSOA model (Júlio and Maria, 2017). Exercise C corresponds to an assessment of the RRP relying on a sectoral growth accounting approach, based on assumptions for capital accumulation, for changes in technological coefficients of sectoral production functions, and for the increase in TFP. This exercise is presented in Banco de Portugal (2021). The official RRP document (Ministry of Planning, 2021) presents an assessment for the impact of RRP investments based on the macroeconometric model used by the Planning, Strategy, Evaluation and International Relations Office (GPEARI) of the Ministry of Finance for macroeconomic and fiscal forecasts and simulations for short and medium-run budget planning. The figure reported in the table refers to 2025. In Bańkowski et al. (2022), the impacts of NGEU on GDP correspond to adding up contributions from (i) a risk premium channel, based on the ECB-MC model, (ii) a fiscal sttimulus channel, obtainded as the average impact obtainded from the ECB-MC and EAGLE models, and (iii) a reform channel, computed on the basis of the EAGLE model. Results from Pfeiffer et al. (2021) correspond to the average of the alternative scenarios assuming high and low productivity of public investment, obtained under the assumption of a uniform distribution of expenditure in the 2021-26 period. The simulations encompass indirect effects from increased comercial exchanges and assume that the overall resourses will be channeled towards public investment. The impact of reforms complementing expenditure financed by grants is not taken into account. Investment financed by grants is assumed to be entirely new and additive vis-à-vis pre-existing plans. In turn, only 50% of investment financed by loans is assumed to be additive. Results presented in IMF (2020) exclusively refer to RRF grants. The simulations based on the EUROMOD model (Andrle et al., 2015) assume that, over 2021-24, 2/3 of the grants are channeled towards additional public spending, while the remaining 1/3 refers to previously planned expenses.

To gauge the long-term implications, the macroeconomic impact of the NGEU on potential output was simulated. These simulations focus on exercises A and B. Estimates were obtained in the context of the participation in the Working Group on Forecasting of the European System of Central Banks (ESCB), within a team made up of 7 countries, namely Germany, Spain, France, Greece, Italy, Malta and Portugal. Exercise A uses the method for estimating potential output described in Braz, Campos and Sazedj (2019).

In exercise B, the assessment of NGEU's impact on potential output requires the implementation of permanent shocks in the PESSOA model. The long-term impact, which can be interpreted as a change in potential output, is calculated as the change in the GDP level between the moment prior to the programme and the final steady state. In light of the channels available in the PESSOA model, NGEU's impact through permanent shocks was mapped across three dimensions, which the literature suggests are predominantly affected by reforms. In particular, the following is considered: (i) a 5% cut in price and wage mark-ups in product and labour markets, reflecting greater efficiency in their operation, (ii) a 5% cut in the degree of financial frictions, reflecting an increase in efficiency in the process of intermediation of funds in the economy, and (iii) a permanent increase in TFP. For the calibration of the first two shocks the results presented in Gomes et al. were considered. (2011). In the case of the TFP shock, the aim is to encompass the remaining initiatives that cannot be mapped directly into the model's channels, and their calibration is inspired in exercise C.

In the long run, potential output is around 1% higher (Chart 7 – Panel A). By definition, the impact on the long-term growth rate is null in both exercises, given that the models used are exogenous and predetermined growth models (such as the EAGLE model). Nevertheless, results suggest that the NGEU will have a major contribution to the economic recovery from the pandemic crisis and to the strengthening of the Portuguese economy in the long term.

The increase by around 1% in the potential output in the long run reflects the contributions of capital stock (0.4 to 0.5 p.p.) and, to a lesser extent, of trend hours worked and trend TFP. Based on the results of exercise A, the capital stock is 0.6% higher on average over the projection horizon and 1.3% higher in the long term. This reflects the stimulus to investment (public and private), with a share in GDP 1.1 p.p. higher on average over the projection horizon. NGEU's impact on capital stock to potential output ratio is 0.1 p.p. on average over the projection horizon and 1 p.p. in the long run. In particular, the public capital stock stabilises as a potential output ratio over the projection horizon, which otherwise would not be the case without the NGEU.

The increase in potential output in the long term is accompanied by a positive response in the labour market. The contribution of trend hours worked is around 0.3 p.p., reflecting trends that are higher in employment and lower in the unemployment rate.

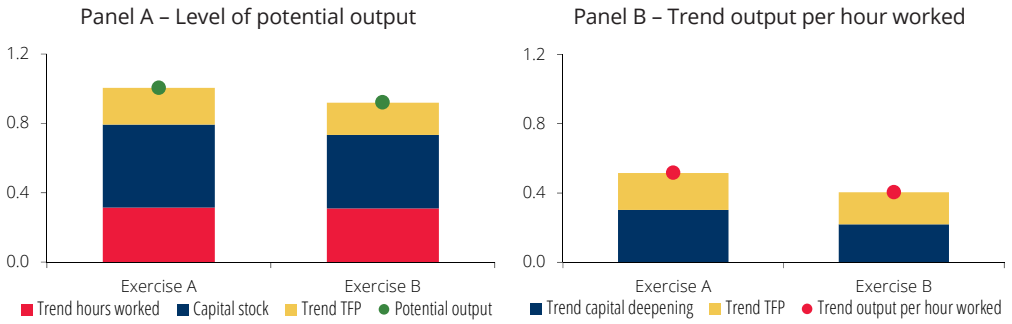
Trend output per worker, measured as the ratio between potential output and trend hours worked, increases by 0.4 to 0.5 p.p. (Chart 7 – Panel B). This positive impact reflects the combined effect of the impacts on trend capital deepening (0.3 to 0.4 p.p.) and on trend TFP (0.2 p.p.). Results suggest that NGEU-related investments and reforms contribute to the technological modernisation of the Portuguese economy and to the increase of efficiency in institutions and in labour, product and financial markets.

NGEU's impact estimates are surrounded by high uncertainty. The evaluation of this impact is based on stylised exercises, anchored on several assumptions and conditional on the analytical instruments used and their limitations.

The quantification of reforms is subjective. There is an important component of informed expert judgment and challenges in terms of sources and methods, being conditional on each country's starting point. For example, in the official RRP document (Ministry of Planning, 2021) an assessment

of RRP's long-term impact based on the QUEST III R&D model (Roeger, Varga and in't Veld, 2022) is presented, suggesting a 2.2% impact on GDP in 2030. Results obtained using the EAGLE model (Bańkowski et al., 2022) suggest that reforms may have a long-term impact of around 1% on euro area GDP similar to that obtained for Portugal using the PESSOA model (exercise B). Using an alternative methodology, the estimate produced by the ESCB expert team (Bańkowski et al., 2022) suggests an impact of NGEU on potential euro area output of 1.4% in 2030.

Chart 7 • Breakdown of NGEU's long term impact | Contributions in percentage points



Source: Banco de Portugal. | Notes: Trend output per hour worked is measured as the ratio between potential output and trend hours worked. Trend capital deepening is measured as the ratio between capital stock and trend hours worked. Exercise A is based on the instruments used in Banco de Portugal projection exercises, whereas exercise B uses the PESSOA model (Júlio and Maria, 2017). In the case of exercise A, the long run refers to 2030, while in exercise B it refers to the change in steady states.

Fiscal implications

The NGEU is financed through common European debt issuance. Exceptionally, the EU Council has authorised the Commission to borrow these funds on capital markets on behalf of the Union (EU Council, 2020). With maturities ranging from 3 months to 30 years, the planned issues build a full yield curve and 30% of the funding will be with green bonds.

NGEU's immediate impacts on the budget balance are limited. Grants received are only recorded in the general government accounts when the expenditure is made, contemporaneously affecting both revenue and expenditure in the same magnitude.[3] Loans finance public expenditure, with a negative impact on the budget balance, and constitute a financial operation that increases the stock of Member States' public debt. Loans requested by Portugal give rise to a cumulative impact of 0.5% and 1.3% of GDP, respectively on the balance and debt, in 2021-26. Their repayment is to be concluded within 30 years, in annual payments of 5% of the overall amounts and following a 10-year grace period. Impacts on the refinancing profile of the Portuguese public debt and interest payments are also limited.

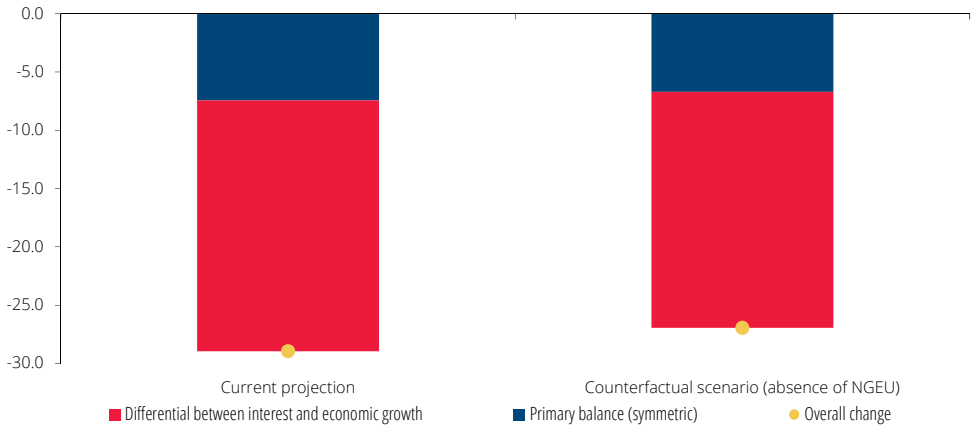
The repayment of grants will require higher national contributions to the EU budget in the future. The financing sources of the EU budget are expected to be broadened. In addition to the recent creation of the plastic-based own resource, the introduction of additional GNI-based

3. The fact that the moment the expenditure is recorded differs from the moment funds are transferred by the Commission gives rise to deficit-debt adjustments, as it causes a difference between the change in debt and the deficit. These adjustments are positive when the amounts are transferred and not spent, and negative when expenditure is made.

contributions and new components in the own resources system are currently under discussion.[4] Considering Portugal's current share in EU GNI, the additional grant-related contributions could amount to around 2% of 2019 GDP, to be transferred to the EU budget over an extended period of time.

The implementation of the NGEU contributes to reducing the debt ratio by about 2 p.p. of GDP over 2022-30 (Chart 8).[5] Initially, the inclusion of loans results in a higher stock of public debt than in the counterfactual scenario without NGEU, while the expenditure they finance lowers the structural primary balance. However, the positive NGEU-related macroeconomic effects contribute favourably to budgetary developments through automatic stabilisers. Therefore, over the horizon, the primary balance is above that in the counterfactual scenario. With a similar implicit interest rate on debt in the two scenarios (around 2.5% on average in 2022-30), the positive temporary impact on economic growth leads to a more favourable effect of the differential between interest and GDP growth. Considering lower financing costs due to NGEU over the horizon, as suggested in Bańkowski et al. (2022), would lead to a more pronounced debt-reduction effect.

Chart 8 • Impact of the implementation of NGEU on the evolution of the debt ratio up to 2030: current projection vs. scenario of absence of NGEU | Percentage points of GDP



Source: Banco de Portugal. | Notes: In 2022-24, the current projection coincides with that underlying this Bulletin. Between 2025 and 2030, the current projection assumes the stabilisation of the structural primary balance, while the other variables follow the dynamics underlying the benchmark scenario of the Eurosystem DSA. For further details, see Bouabdallah et al. (2017) and Braz and Campos (2019). The counterfactual scenario excludes NGEU and the DSA assumptions prevail as of 2022. The impact of implementing the NGEU corresponds to the difference between the current projection and the counterfactual scenario.

4. The plastics own resource (whose contributions depend on the amount of non-recycled plastic packages in each Member-State) is a new revenue source for 2021-27. In late 2021, the Commission suggested three additional revenue sources: an Emissions Trading Systems own resource (directing 25% of the revenues from emissions trading to the EU budget); directing 75% of revenue collected under a carbon border adjustment mechanism (foreseeing a levy on imports from countries lacking a carbon pricing system); an own resource equivalent to 15% of residual profits of multinational firms under the reform of the international corporate income tax framework.

5. This stylised exercise of comparing current projections and a counterfactual scenario without NGEU assumes that: (i) the implementation of the NGEU occurs in line with official assumptions, incorporating the macroeconomic effects quantified in the foregoing section; (ii) the current projections correspond to those underlying this *Economic Bulletin* in 2022-24, while in 2025-30 the structural primary balance is assumed to stabilise at the value projected for 2024, given the uncertainty about the future functioning of the European fiscal rules; (iii) the remaining variables evolve in line with the dynamics underlying the baseline scenario of the Eurosystem's debt sustainability analysis (DSA) tool (Bouabdallah et al. , 2017; Braz and Campos, 2019); (iv) the exercise does not consider loan repayments, as they are scheduled to take place only after 2030, or any additional contributions to the European budget, as these are still under discussion; (v) in the counterfactual scenario, the dynamics underlying the DSA prevail from 2022 onwards; and (vi) the financing costs are the same as in a scenario including the NGEU.

Challenges and opportunities

The implementation of the NGEU in Portugal increases activity in the short and long term, but its measurement is uncertain. REACT-EU and RRF resources make it possible to implement measures without burdening public finances in the short and medium term. The envisaged reforms should also contribute to ease some of the constraints to productivity growth in Portugal, described in the Banco de Portugal (2019). However, long-term effects depend on the use of resources to finance productive investment and the implementation of reforms capable of catalysing their impacts and thus contributing to sustained growth.

The conditionality underlying the RRF may favour the actual implementation of the RRP, but risks remain. The conditionality approach establishes a gradual payment schedule, which depends on targets being achieved and reforms being adopted. This conditionality encourages a timely implementation of the plans and a proper coordination between investments and reforms. It is crucial that Portugal proves to be able to absorb the available resources. The timeline set out in the RRP is ambitious and calls for a rapid implementation of a large number of projects in a short time frame. The under-execution in 2021 shows optimism about the kick-off of the process, but also its demanding nature and the risks involved. The persistence of supply-side disruptions and inflationary pressures in commodity markets add to the challenges in carrying out investment projects in the short term. Also as regard reforms, the timeframe is ambitious and will require significant efforts for their timely implementation.

The NGEU aims to contribute to the European convergence process. The main beneficiaries of the instrument are countries with lower GDP *per capita* and most affected by the pandemic, thus NGEU may contribute to mitigate existing asymmetries. However, given the macroeconomic impacts estimated for Portugal and for the euro area, it is not expected that Portugal's relative position will change significantly. On the fiscal front, NGEU's main beneficiaries are also countries with greater vulnerability to adverse shocks, and this instrument may contribute to a faster reduction of debt sustainability risks. In the case of Portugal, accomplishing this objective requires the pursuit of a prudent fiscal policy.

The NGEU has implications for the future of the European architecture. The creation of this instrument was an important milestone in reinforcing risk-sharing mechanisms in the EU. The ongoing common debt issuance strengthens the European architecture, showing that it is politically possible to broaden the range of tools for responding to future crises. The NGEU increases the supply of safe assets denominated in euro and will make the EU the leading issuer of green debt, strengthening the role of the euro in capital markets. However, these benefits stem from an exceptional and temporary situation that will only last until 2026. The success of the NGEU is key for the creation of mechanisms of a more permanent nature in the future.

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