

INTRODUCTION

1. PUBLIC FINANCES IN THE EU

The EU economy is at a turning point. The EU economy expanded strongly in the first half of 2022 after having recovered the pre-pandemic output level in the third quarter of 2021. However, Russia's war of aggression against Ukraine has not only caused untold suffering and destruction in Ukraine but also strong repercussions on the global economy. The EU is among the most exposed economies due to its geographical proximity to the war and heavy reliance on imports of fossil fuels. The sharp rise in inflation under the pressure of energy, food and other commodity prices is hitting the EU economy. In particular, it has eroded the purchasing power of households and led to a significant decline in consumer and business sentiment. According to the Commission 2022 autumn forecast, real GDP growth in the EU is estimated at 3.2% in 2022, and is expected to decelerate to 0.3% in 2023 before reaching 1.6% in 2024. The EU HICP inflation rate is projected to decline from 9.3% in 2022, to 7.0% 2023 and 3.0% in 2024. ⁽¹⁰⁾

Fiscal positions still benefited from robust growth in 2022. The EU government deficit is estimated to have declined from 4.6% of GDP in 2021 to 3.4% in 2022 thanks to the economic expansion. New deficit increasing discretionary policy measures, including those adopted to mitigate the impact of higher energy prices on households and firms, are however estimated to have more than offset the phasing out of the pandemic-related measures in 2022. The public debt-to-GDP ratio in the EU as a whole is set to have fallen from the historically high level of 91.5% in 2020 to 86% in 2022. This reduction is driven by strong economic growth, lower primary deficits and inflation. Higher interest rates will only gradually increase the implicit cost of public debt and the favourable interest-rate growth differential is still expected to reduce debt ratios.

⁽¹⁰⁾ The Commission 2023 winter forecast published by the European Commission in February 2023 is an interim forecast, which only provides an update of GDP growth and inflation forecast, and is broadly similar to with the Commission 2022 autumn forecast.

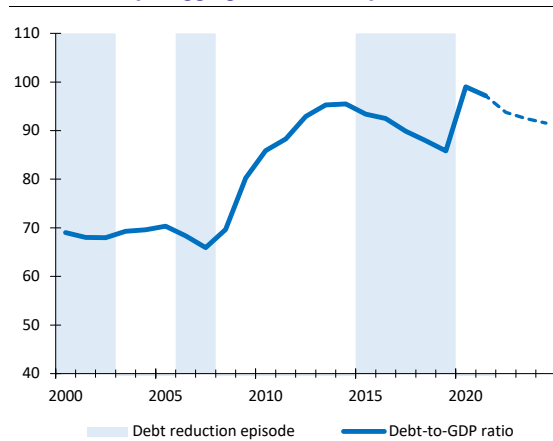
NextGenerationEU (NGEU) is expected to lift potential growth over the short- and medium-term, thus contributing to reducing debt sustainability risks. NextGenerationEU (NGEU) continues to support all Member States, in particular those hardest hit by the COVID-19 pandemic. Its centre piece, the Recovery and Resilience Facility (RRF), provides financing support to reforms and investments in Member States until end 2026. In particular, the RRF aims at making European economies and societies more sustainable, resilient and better prepared for the challenges and opportunities of the green and digital transitions. The RRF is expected to reduce debt sustainability risks by strengthening the quality of public finances and lifting potential growth. The absorption of Recovery and Resilience Facility (RRF) grants is set to increase significantly over the forecast horizon.

However, deficit and debt ratios remain high. As economic activity weakens, the EU deficit is expected to increase to 3.6% of GDP in 2023, before declining to 3.2% of GDP in 2024. Eleven Member States are projected to have a deficit greater than 3% of GDP in 2024. The projected primary deficits and lower growth rates weigh on debt developments in the coming years. The debt-to-GDP ratio is expected to remain elevated at around 85% in 2023 and 84% in 2024 in the EU as a whole (and above 90% of GDP in the euro area, see Graph 1). Half of the Member States are expected to have debt ratios greater than 60% of GDP in 2024, with Belgium, Greece, Spain, France, Italy and Portugal projected to have debt ratios greater than 100% of GDP. In most Member States, debt levels are set to remain above the pre-pandemic levels in 2024. Therefore, monitoring and assessing fiscal sustainability risks is key.

Financing conditions are tightening. In response to the rising inflationary pressures, central banks in the EU have tightened their monetary policy stance. The ECB and most central banks in non-euro area Member States are expected to keep hiking policy rates throughout 2023. Short-term rates should therefore keep increasing over the forecast horizon. Long-term real rates of most Member States are well into positive territory. The spreads of sovereign bonds with respect to the German Bund benchmark have widened since mid-2022.

The uncertainty surrounding the economic outlook is high. The largest downside risk stems from adverse developments on the gas market and the risk of shortages. In addition, the EU remains directly and indirectly exposed to further shocks to other commodity markets reverberating from geopolitical tensions. More persistent inflationary pressures and potential disorderly adjustments on global financial markets to the new high interest rate environment are additional risk factors. These could complicate the definition of an appropriate policy-mix between fiscal and monetary policies. Finally, pandemic related health hazards and the impact of climate change represent additional downside risks to the EU and the global economy.

Graph 1: **Development of general government debt ratio (% of GDP) and debt reduction episodes (EA aggregate, 2000-2024)**



Source: Commission services.

Against this background, this edition of the Debt Sustainability Monitor (DSM) provides an update of fiscal sustainability challenges faced by Member States. This edition of the DSM 2022 provides an updated assessment of fiscal sustainability risks in EU countries compared with the Fiscal Sustainability Report (FSR) 2021. The assessment is based on the latest available Commission macroeconomic and fiscal forecast from autumn 2022. It relies on the Economic Policy Committee (EPC) commonly agreed methodology to project medium-term GDP growth, taking into account the expected impact from NextGenerationEU (NGEU). The DSM also reflects the agreed long-term economic and budgetary projections from the joint European Commission - EPC Ageing Report 2021.

2. THE COMMISSION FISCAL SUSTAINABILITY RISK FRAMEWORK

2.1. Main features

Fiscal sustainability risks in the short, medium and long term are assessed based on a multi-dimensional approach. Fiscal sustainability risks faced by Member States are assessed according to the comprehensive horizontal fiscal sustainability framework used in the previous reports.⁽¹¹⁾ This framework brings together in a synthetic way results on debt sustainability analysis (DSA) and fiscal sustainability indicators. It allows gaining a horizontally consistent overview of fiscal sustainability risks across time horizons (short-, medium- and long-term) and across countries, based on a set of transparent criteria. In particular, key results are summarised in an overall summary heat map of fiscal sustainability risks per time dimension. This framework is meant to allow identifying the scale, nature and timing of fiscal sustainability challenges. Such a comprehensive and multidimensional assessment framework is key to design appropriate policy responses.

This edition of the Debt Sustainability Monitor brings a few methodological improvements as already proposed in the 2021 FSR:⁽¹²⁾

First, fiscal sustainability challenges over *the medium term* are now captured through the sole use of the DSA toolkit and not the joint use of the DSA and the S1 fiscal sustainability indicator. This allows relying on a single tool that is a well-established reference to assess medium-term risks.

Second, fiscal sustainability challenges over *the long term* are now captured through the S2 fiscal sustainability indicator,⁽¹³⁾ complemented by a revised S1 indicator (instead of the DSA). The revised S1 indicator measures the fiscal gap to bring the debt-to-GDP ratio to 60% in the long-term, rather than in 15 years.⁽¹⁴⁾ The joint use of

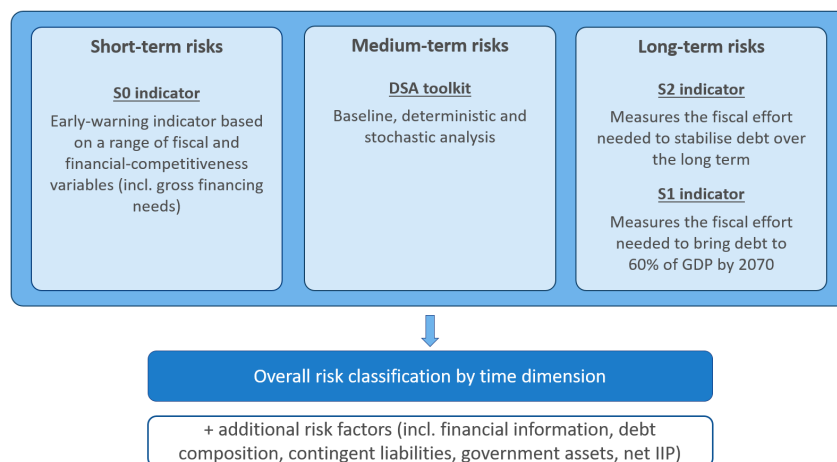
⁽¹¹⁾ This framework was introduced with the FSR 2015.

⁽¹²⁾ See European Commission (2022), Fiscal Sustainability Report 2021, Vol. 1, Institutional Paper 171, Box I.3.3. Possible future methodological revisions, p. 100.

⁽¹³⁾ The S2 indicator shows the required fiscal adjustment (to the government structural primary balance) to stabilise the debt ratio over the infinite horizon.

⁽¹⁴⁾ The revised S1 indicator shows the required fiscal adjustment (to the government structural primary balance)

Graph 2: Key elements of the Commission's fiscal sustainability risk framework



Source: Commission services.

these two indicators, with similar time horizons, allows for an identification of long-term challenges deriving from population ageing, while capturing potential vulnerabilities stemming from high debt levels.⁽¹⁵⁾ Box 3.1 in Chapter 3 of this report further substantiates the rationale and impact of these changes, which were already announced in the Fiscal Sustainability 2021 (see Fiscal Sustainability Report 2021, Chapter 3, Box 3.3).

The Commission's assessment of fiscal sustainability risk focuses on three different time horizons:

- *Short-term risks* are assessed by the S0 indicator, which allows for an early detection of short-term risks of fiscal stress (within the upcoming year) stemming from the fiscal and/or the macro-financial and competitiveness sides of the economy (see Chapter 1).
- *Medium-term risks* are assessed by the well-established Debt Sustainability Analysis (DSA) toolkit, whose features are unchanged compared with the Fiscal Sustainability Report 2021 (see Chapter 2).
- *Long-term risks* are assessed based on two fiscal gap indicators. The S2 indicator measures the fiscal adjustment required to

stabilise government debt in the long term. The revised S1 indicator measures the required fiscal adjustment to bring the government debt-to-GDP ratio to 60% by 2070 (see Chapter 3).

The assessment includes sensitivity tests to reflect for uncertainty. The current significant degree of uncertainty implies that sensitivity tests and alternative scenarios, routinely included in the DSM, are particularly relevant. For the DSA, different deterministic scenarios and stress tests are performed to complement the baseline, including for instance the assumption of reversal to historical averages for fiscal variables, or more stringent macroeconomic and financial conditions. Stochastic projections are an important complement to this analysis, whereby a very large number of shocks are jointly simulated, based on the historical volatility of each economy and correlation of shocks (Chapter 2). Furthermore, some alternative calculations to the baseline are computed for the long-term fiscal sustainability indicators, including stress testing the results to alternative productivity growth developments, or non-demographic drivers of health-care and long-term care spending (see Chapter 3).

Additional aggravating or mitigating risk factors are taken into account to ensure a balanced assessment of overall fiscal sustainability risks. The quantitative results and ensuing risk classification based on this horizontal framework need to be complemented by

to bring the debt-to-GDP ratio to the 60% of GDP reference value in 2070.

⁽¹⁵⁾ A thorough description of the Commission multi-dimensional approach can also be found in Chapters 1-3 and in Annex A1 of the report.

considering complementary qualifying factors. To this end, a number of additional aggravating and mitigating risk factors are also considered, as a complement to model-based quantitative results, and inform the overall assessment of fiscal sustainability challenges (see Chapter 4 and country fiches (see annex A2). The importance of such factors – sometimes more qualitative in nature (such as institutional factors) and / or country specific, and a prudent application of judgment to reach a final assessment of fiscal sustainability risks is a key feature of the Commission DSA framework since 2014, and is in line with other international institutions' practices.

2.2. Role of the Commission's fiscal sustainability analysis in EU surveillance

The Commission analysis of fiscal sustainability challenges presented in this report contributes to the monitoring and coordination of Member States' fiscal policies. It plays a key role in the context of the SGP⁽¹⁶⁾ and of the European Semester, the EU integrated surveillance framework, including for the formulation of structural-fiscal country-specific recommendations and for post-programme surveillance. These results also provide the starting point for the assessment of debt sustainability in the framework of financial assistance.

The debt sustainability analysis could also play a greater role in the future in the EU economic governance framework according to the Commission's orientations for a reformed framework released on 9 November 2022.⁽¹⁷⁾ The orientations seek to ensure that the framework becomes simpler, more transparent and effective, with greater national ownership and better enforcement, while allowing for strategic investment and reducing high public debt ratios in a realistic, gradual and sustained manner.

⁽¹⁶⁾ See European Commission (2019), Fiscal Sustainability Report 2018, *European Economy Institutional Paper*, No. 94 for a detailed description of the multiple roles of this analysis in the context of the SGP. Moreover, according to the 'general escape clause', "in periods of severe economic downturn for the euro area or the Union as a whole, Member States may be allowed temporarily to depart from the adjustment path towards the medium-term budgetary objective, provided that this does not endanger fiscal sustainability in the medium term".

⁽¹⁷⁾ See European Commission (2022), Communication on orientations for a reform of the EU economic governance framework, COM(2022) 583 final 9 November.

The orientations propose to move towards a more risk-based surveillance framework that puts debt sustainability at its core and differentiates between Member States with low, moderate or substantial public debt challenges.

This classification would correspond to the Commission's standard assessment of low, medium or high fiscal sustainability risks over the medium term as assessed based on the debt sustainability analysis and presented in this report. Moreover, the Commission would provide a technical trajectory based on its debt sustainability analysis framework.⁽¹⁸⁾ At the same time, this would mean adhering to a transparent and common EU framework consistent with the 3% of GDP and 60% of GDP reference values of the Treaty. National medium-term plans for Member States with substantial or moderate public debt challenges should ensure that debt is put on a plausibly declining path, or stays at prudent levels, and that the deficit remains credibly below the 3% of GDP reference value over the medium-term. They should outline the medium-term fiscal path, together with reform and investment commitments.

2.3. Outline of this report

The remainder of the report is organised as follows. Chapter 1 presents the short-term fiscal sustainability analysis. Chapter 2 covers the medium-term fiscal sustainability analysis based on the DSA results. Chapter 3 focuses on the long-term fiscal sustainability analysis. Chapter 4 reviews additional aggravating and mitigating risk factors. Finally, the annex includes detailed country analysis and methodological information.

⁽¹⁸⁾ The approach largely draws from the Commission's standard DSA presented in this report with only few adaptations due to the specific application of the DSA to compute the technical fiscal trajectories. The few adaptations refer to (i) the time horizon considered to compute the technical fiscal trajectories (10 years *after the adjustment period*); (ii) the lower SPB scenario to stress test the robustness of the medium-term adjustment path instead of the short-term forecast and (iii) the historical SPB scenario, which is omitted since it is relevant to assess risks, including based on past fiscal performance, that support the differentiation of Member States according to public debt challenges, but not in the context of guiding the preparation of the plans.

Box 1: Deterministic debt projection scenarios: the main assumptions

The Commission's government debt projections provide trajectories for debt over the next 10 years, i.e. until 2033 based on the Commission 2022 autumn forecast. They rely on assumptions about key macroeconomic, financial and fiscal variables. Importantly, the Commission baseline debt projections rest to a large extent on assumptions and methodologies commonly agreed with EU Member States represented in different Council formations.⁽¹⁾ This ensures that the results are comparable across countries and consistent with other EU processes, in particular the European Semester and fiscal surveillance under the Stability and Growth Pact (SGP).

The baseline

The baseline constitutes the starting point for the debt sustainability analysis and the central scenario around which alternative scenarios and sensitivity tests are built. The assumptions under the baseline are as follows:⁽²⁾

- **Real GDP growth rates** are those of the Commission 2022 autumn forecast for the first two years, i.e. until 2024 in this report. Importantly, this forecast period now captures the bulk of the Next Generation EU (NGEU) package, under which spending will end in 2026. Beyond 2024, the EPC/OGWG 'T+10 methodology' projections are used, i.e. between T+3 and T+10.⁽³⁾ Those projections already take into account legislated reforms and

investments, including those made under NGEU.⁽⁴⁾ Actual GDP growth is derived from potential growth and a standard assumption for the closure of the output gap.⁽⁵⁾

- **Inflation (as measured by the GDP deflator)** converges linearly from current country-specific values to market-based euro inflation expectations by T+10.⁽⁶⁾ Beyond T+10, inflation converges to the ECB's 2% target by T+30 at the latest⁽⁷⁾ and remains constant thereafter (for more details see Chapter 2, Box I.2.1 in the FSR 2021).
- The **primary balance** is projected as follows:
 - Assuming 'no-fiscal-policy change', the **structural primary balance (SPB) before costs of ageing** is assumed to remain constant at its value in the last forecast year, i.e. currently 2024, over the remainder of the projection period. **Ageing-related expenditures** (pension, health-care, long-term care and education) projected in the joint Commission - Council *Ageing Report 2021*, as well as **property income** on government financial and non-financial assets,⁽⁸⁾ are added to the former to obtain the overall **SPB**.
 - The **cyclical component** reflecting the effect of automatic stabilisers is calculated as the product of the output gap and country-specific budget

⁽¹⁾ Notably the Economic Policy Committee (EPC)'s technical Output gap working group (OGWG) and Ageing working group (AWG).

⁽²⁾ For a detailed description of the debt dynamic equation and the impact of macro variables on the debt ratio projections, see Annex A3.

⁽³⁾ GDP growth over 10 years is projected in line with the EU commonly agreed methodology. It incorporates to a large extent the expected favourable impact of NextGenerationEU, both in the short-term forecast up to 2024 and in its T+10 extension through persistence effects. The expected impact of structural reforms is reflected insofar as these reforms have already been legislated or are certain and known in sufficient detail. (see Blondeau, F., Planas, C. and Rossi, A. (2021): Output Gap Estimation Using the European Union's Commonly Agreed Methodology: Vade Mecum and Manual for the EUCAM Software, European Commission Discussion Paper 148, October).

⁽⁴⁾ Indeed, since the forecast period already incorporates most of the NGEU timeframe, the effects of NGEU reforms and investment on growth over the forecast mechanically persist over the T+10 period, phasing out only gradually (the 'T+10 methodology' relies on autoregressive models).

⁽⁵⁾ In line with the EPC/OGWG methodology, the output gap is assumed to close 3 years beyond the forecast, i.e. by 2027 this round, after which actual and potential GDP growth coincide.

⁽⁶⁾ For non-euro area countries targeting an inflation rate other than 2% (i.e. Poland, Romania and Hungary), half of the inflation spread vis-à-vis the euro area observed in T+2 is applied to the T+10 target (i.e. the market-based euro inflation expectation).

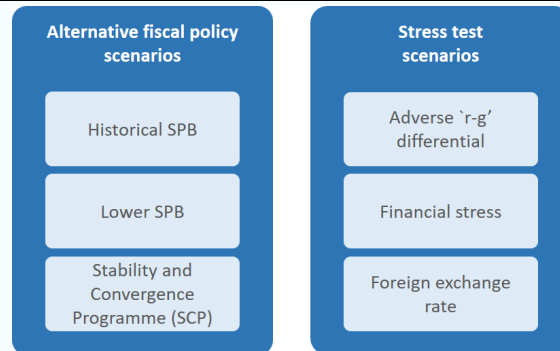
⁽⁷⁾ For non-euro area countries targeting inflation, national central bank targets are used, namely 2% for Czechia and Sweden, 2.5% for Poland and Romania, and 3% for Hungary.

⁽⁸⁾ For details, see Annex A3.4.

(Continued on the next page)

Box (continued)

Map 1: **Deterministic debt projection scenarios: alternative fiscal policy and stress test scenarios**



balance semi-elasticities agreed with the Member States and used for budgetary surveillance under the SGP.⁽⁹⁾ The cyclical component is, by construction, equal to zero once the output gap closes.

- **One-off and other temporary measures** are set to zero beyond T+2.
- **Interest rates** are projected as follows:
 - **Long-term interest rates** on new and rolled-over debt converge linearly from country-specific current values to country-specific market-based forward nominal rates by T+10.⁽¹⁰⁾ Beyond that, they converge to 2% in real terms by T+30 (4% in nominal terms for most EU countries) and remain constant thereafter.⁽¹¹⁾
 - **Short-term interest rates** on new and rolled-over debt converge linearly from current values to market-based forward nominal rates by T+10.⁽¹²⁾ Beyond that, they converge to 2% in nominal terms by T+30, assuming a yield curve coefficient of 0.5.⁽¹³⁾
 - **Implicit interest rates** are derived endogenously in the debt projection model based on the above assumptions on market interest rates, the

maturity structure of government debt and projected financing needs.⁽¹⁴⁾

- **The exchange rate** for non-euro area countries is the Commission forecast for T+2 (currently 2024), with no appreciation or depreciation thereafter.
- The **stock-flow adjustment (SFA)** is set to zero beyond the T+2 forecast horizon.

In addition to the baseline, this report includes six additional deterministic scenarios. They reflect alternative assumptions for two types of factors that affect debt paths, namely discretionary fiscal policy decisions and changes in macroeconomic conditions (see Map 1).

Alternative fiscal policy scenarios

This report includes three fiscal policy scenarios. These scenarios incorporate a feedback effect of fiscal policy on GDP growth via a fiscal multiplier of 0.75, meaning that a fiscal consolidation of 1 pp. of GDP reduces GDP growth by 0.75 pp. in the same year compared to the baseline – and, conversely, a fiscal expansion raises it by 0.75 pp.⁽¹⁵⁾

⁽⁹⁾ The budget semi-elasticities (for taxes and expenditure) are as reported in Mourre, G. and Poissonnier, A. (2019), The semi-elasticities underlying the cyclically-adjusted budget balance: an update and further analysis, European Economy Discussion Paper 98).

⁽¹⁰⁾ In line with the Commission forecast approach.

⁽¹¹⁾ Nominal long-term interest rates converge to 4.5% for Poland and Romania, and 5% for Hungary, given these countries' higher inflation targets.

⁽¹²⁾ For more details, see Box 3.1 in European Commission (2020), Debt Sustainability Monitor 2019, European Economy, Institutional Paper, 120.

⁽¹³⁾ This factor of 0.5 reflects the standard slope of the euro area yield curve.

⁽¹⁴⁾ For a detailed discussion, see Annex A3.2.

⁽¹⁵⁾ Carnot, N. and de Castro, F. (2015), The discretionary fiscal effort: an assessment of fiscal policy and its output effect, European Economy Economic Papers 543.

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