Annex 1: Public investment in the new fiscal framework

This annex summarises the treatment of public investment in the new framework and explains how this could have been improved.

In the new framework, higher investment may be rewarded by an extension of the adjustment period to seven years, lowering annual adjustment targets by up to 0.5 percent of GDP for a few countries (see Table 1). The bar for receiving such an extension based on investment alone (rather than reforms) is fairly high. Investments that are already promised in national Recovery and Resilience Plans alone are not enough to justify an extension. Instead, countries must *"maintain the nationally financed investment levels realised on average over the period covered by the Recovery and Resilience Plan"* (see Article 36, Transitory Provisions). This sets a high bar, particularly for southern and eastern European countries that received large RRF loans.

At the same time, the new framework imposes restrictions that could make financing the new investment very difficult. The no-backloading condition prevents countries from raising deficit-financed investment early in the adjustment period and offsetting it in later years. In addition, the EDP and the deficit resilience safeguard, if binding, imply that any investment that would lower annual adjustments below the minimum adjustment requirements of 0.5 percent (EDP), or 0.4 percent or 0.25 percent (deficit resilience safeguard, four or seven-year case) of GDP, will need to be offset one-for-one by tax increases or cuts in other spending areas[1]. The DSA and deficit requirements alone would require less consolidation in a single year, because the fiscal adjustment required to offset deficit-financed increases in investment could be spread out over the adjustment period.

Two additional provisions that have received attention are the exclusion of national co-financing of EU funds from the definition of the net-expenditure target and the no-backloading safeguard (see Article 2, Definitions; and Article 36(1)(d), Transitory Provisions):

- Article 36, which applies until 2026, allows countries to exclude RRF loan-financed spending and national co-financing of EU funds from the no-backloading safeguard. This helps countries such as Italy, which have increasing RRF-related deficits during this period, which otherwise would need to be offset through higher upfront fiscal adjustment[2].

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[1] Take the example of a country on which DSA and deficit requirements impose an annual adjustment of 0.6 percent of GDP. Even if the no-backloading condition was ignored, so that deficit-financed investment can be offset in later years, an EDP would impose a minimum adjustment of 0.5 percent, thus restricting the space for deficit-financed investment to just 0.1 percent of GDP, if the EDP lowers the annual adjustment requirement from 0.6 percent to 0.5 percent. If the deficit was not excessive but above 1.5 percent, it would still trigger the deficit resilience safeguard. The safeguard's minimum annual adjustment of 0.4 percent (four-year case) or 0.25 percent (seven-year case) would restrict the investment space to 0.2 percent or 0.35 percent of GDP for a country with a 0.6 percent MTFSP-prescribed adjustment path if the no-backloading safeguard is disregarded.

[2] It does not help countries for which spending funded by EU Recovery and Resilience Fund loans and national co-financing declines from 2025 to 2026 (implying a fiscal consolidation in these items), since exclusion of these spending items would require an equivalent fiscal consolidation in other items of the budget.

- Article 2 implies that an increase in co-financing during the adjustment period has no impact on the net-expenditure path, and hence cannot constitute a violation of the agreed net-expenditure ceiling. This does not help countries avoid fiscal adjustment *ex ante* (in their MTFSP), as the co-financing continues to be part of the deficit and the debt, to which the DSA criteria, the 3 percent deficit requirement and the safeguards are applied. But it would help if national co-financing unexpectedly goes up *after* the MTFSP is approved (for example, if the EU were to decide on a successor arrangement for the RRF which is co-financed), as it would allow countries to run higher deficits than projected in their 2024 MTFSPs. (Note however that this would result in a higher debt ratio at the end of the adjustment period than foreseen in the 2024 MTFSP and therefore would need to be compensated by a larger fiscal consolidation in the next MTFSP).

Crucially, neither of the two provisions allows EU countries to plan for higher deficit-financed public investment over the entire adjustment period beyond what they could plan for without these provisions.

The new fiscal framework could have been made investment-friendlier by introducing a rule that would have exempted Council-approved public investment (public investment justifying an extension of the adjustment period) from the application of the safeguards and the minimum adjustment requirement under the deficit-based EDP. The DSA requirements and the requirement to lower or keep the deficit below 3 percent of GDP would continue to apply (hence, we speak of 'a fiscally responsible public investment rule').

To illustrate, consider Austria, which will have to implement a 0.24 percent of GDP average annual fiscal adjustment over a seven-year adjustment period (Table 1). Because its 2024 structural deficit is much higher than 1.5 percent of GDP, Austria faces a binding deficit resilience safeguard for the first six adjustment years, which requires at least 0.25 percent annual adjustment, followed by an adjustment of 0.16 percent in the last year.

Under the envisaged public investment rule, the Austrian budget would remain subject to the 0.25 percent annual minimum adjustment during 2025-2030, but *additional* investment would be allowed without requiring an offset in the budget. For example, consider a plan to raise investment by 0.5 percent of GDP per year for six years. In the agreed framework, this would need to be offset by savings of 0.5 percent in the first year (to satisfy the minimum adjustment of 0.25 percent). In contrast, the envisaged rule would allow a *negative* overall fiscal adjustment of -0.25 percent (0.25-0.5) in 2025, followed by 0.25 percent per year fiscal adjustment in 2026-2030, and a 0.67 (0.16+0.5+0.01) percent adjustment in 2031. The adjustment in the final year is the sum of the 0.16 percent adjustment to meet the DSA and deficit requirements, the 0.5 percent adjustment marking the end of the temporary investment programme, and 0.01 percent in permanent additional adjustment to repay the higher public debt and interest caused by the additional investment.

We simulate the impact of such temporary 0.5 percent of GDP extra investment for a period of six years (2025-2030) for the twelve EU countries that are expected to have higher than 60 percent of GDP

public debt ratios in 2024 (Figure 1). We present a baseline scenario (without a new public investment programme) and an investment scenario with a temporary new investment programme. The net surplus in investment relative to the baseline scenario in the twelve countries would amount to 2.7 percent of annual GDP or about €407 billion in total over the six-year period. For the entire EU, net additional investment would amount to 2.8 percent of annual GDP or about €566 billion, in total over the six-year period.

Figure 1 shows that the debt ratio trajectories of even high-debt countries do not change much. The debt ratio under the temporary investment scenario is projected to decline a few years later than without the extra investment, yet the pace of debt reduction is almost identical.

These calculations demonstrate that a rule of this type could be instrumental in facilitating the green transition, although it is consistent with the sustainability of public debt.

Figure 1: Budget balance and debt implications of a fiscally responsible public investment rule (% of GDP)
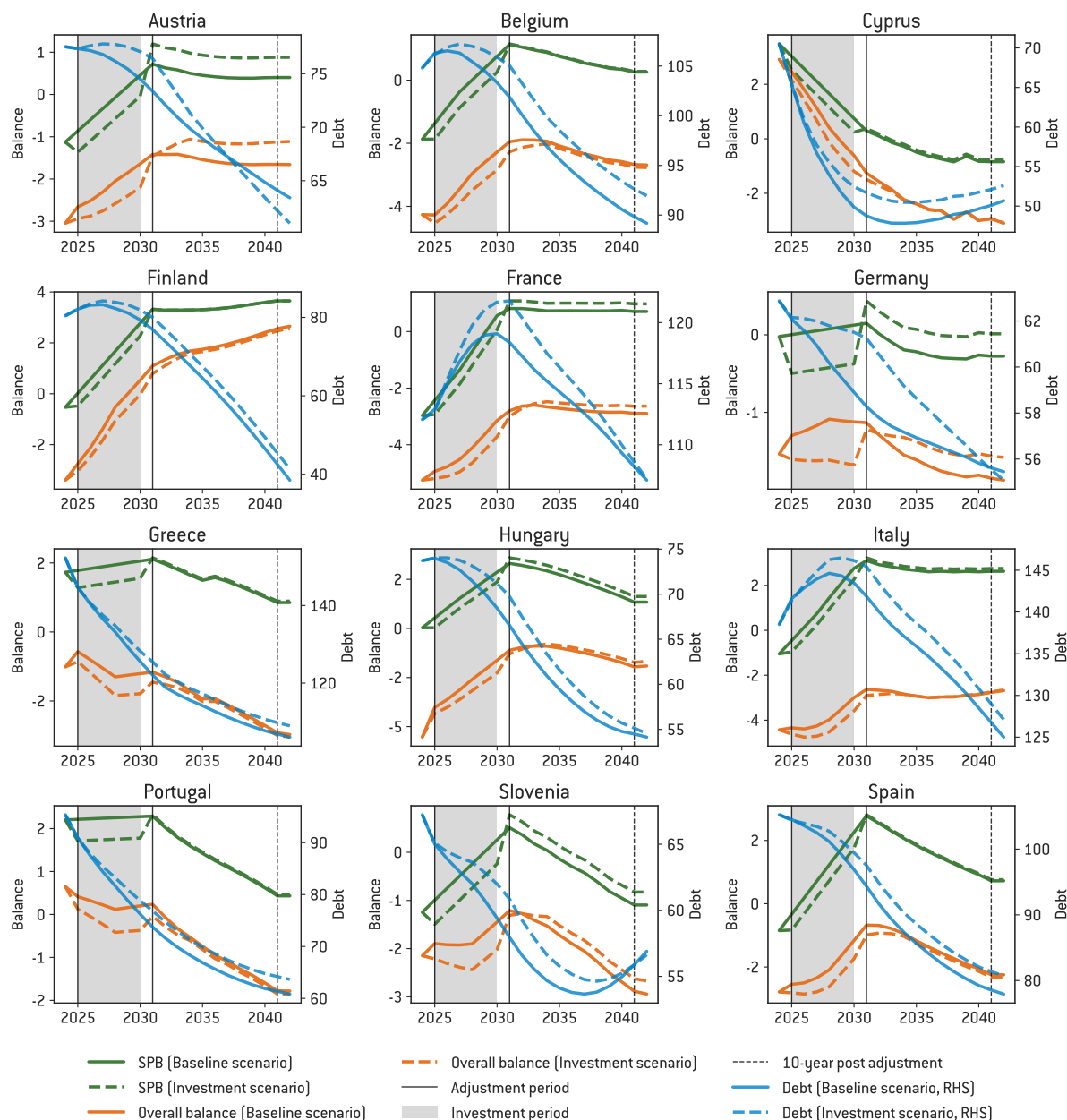
Source: Bruegel based on European Commission May 2024 forecasts, the April 2024 Ageing report (European Commission, 2024b), Bloomberg and ECB. Note: Simulation of an investment scenario with 0.5 percent of GDP investment annually over six years under a fiscally responsible public investment rule (dashed lines) vs. baseline scenario (solid lines). Temporary investments (space between dashed and solid lines) end in the final adjustment year and additional deficits and debts are fully offset to ensure compliance with DSA and deficit requirements.

Annex 2: Methodology and code for implementing the European Commission's DSA in the context of the economic governance review

This annex describes the methodology, data sources and implementation of the debt sustainability analysis. The code and all publicly available data for reproduction of our results are freely available for download from the GitHub repository accompanying this publication[3].

A.2.1 Deterministic debt projections

The starting point for the DSA methodology applied in this paper is the European Commission's Debt Sustainability Monitor (DSM) 2023 (European Commission, 2024a). Annex A3 of the DSM describes debt dynamics and the projection of implicit interest rate on government debt. The debt ratio in a given year, d_t, is calculated as

$$d_t = \alpha^n \cdot d_{t-1} \cdot \frac{(1 + iir_t)}{(1 + g_t)} + \alpha^f \cdot d_{t-1} \cdot \frac{(1 + iir_t)}{(1 + g_t)} \cdot \frac{e_t}{e_{t-1}} - pb_t + f_t,$$

where α^n represents the share of total government debt denominated in domestic currency, α^f represents the share of total government debt denominated in other currencies, iir_t represents the implicit interest rate on government debt (which is total interest payment during a year divided by the stock of debt at the end of the previous year), g_t represents the nominal growth rate of GDP (in national currency), e_t represents the nominal exchange rate (expressed as national currency per foreign currency)[4], pb_t represents the primary balance ratio, and f_t represents stock-flow adjustments over GDP.

Adverse deterministic stress tests. In addition to the baseline deterministic scenario, three alternative deterministic scenarios, or stress tests, are also calculated by the Commission:

- 'Lower SPB' scenario: the SPB is assumed to be reduced by 0.5 pp. of GDP in total, with a reduction of 0.25 pp. each year over the first two years, and to remain at that level afterwards (apart from changes in the cost of ageing – see below).
- 'Adverse r-g' scenario: the interest/growth-rate differential is assumed to be permanently increased by 1 percentage point;
- 'Financial stress' scenario: market interest rates are assumed to temporarily increase for one year by 1 pp., plus a risk premium for high-debt countries.

These adverse scenarios are assumed for ten years after the end of the adjustment period. The DSA criterion requires the public debt to GDP ratio to decline under these adverse scenarios.

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[3] To access the repository, visit https://github.com/lennardwelslau/eu-debt-sustainability-analysis.
[4] More precisely, the Commission's methodology models debt dynamics differently for euro members and non-members, and also for the deterministic and stochastic analysis. Only US dollar debt is considered for euro members, while both euro and US dollar debt are considered for non-euro members.

Data sources. Shares of euro-denominated debt are calculated based on ECB data. Exchange rates are taken from Eurostat. Both variables are assumed to remain constant over the projection horizon. Stock-flow adjustments are taken from the AMECO database and based on projections by the European Commission's DG ECFIN, which are available up to 2025; from 2026, stock-flow adjustments are assumed to be zero for all but three EU countries[5]. Nominal GDP growth, the primary balance and the implicit interest rate on government debt are endogenous model variables. They build on medium-term real growth, output gap and GDP-deflator projections by the European Commission's Output Gap Working Group, long-term growth and ageing-cost projections based on the European Commission's 2024 Ageing Report (European Commission, 2024b), long-term market expectations for inflation from Bloomberg, structural primary balance projections from the AMECO database, fiscal multiplier data based on Carnot and de Castro (2015), and budget balance semi-elasticities based on Mourre *et al* (2019). The projection of the implicit interest rate on government debt further relies on ECB data on government debt stocks, shares of short- and long-term debt issuance, and average annual debt redemption, as well as market expectations for interest rates from Bloomberg. All data sources are described in detail in the 'SOURCES' Excel file found in the data folder of the accompanying GitHub repository.

Projecting nominal growth. The effect of fiscal stimulus and the cyclical dependence of the budget balance makes growth and primary balance projections mutually dependent. These dependencies affect the variables from the beginning of the adjustment period in 2025. Prior to the adjustment period, ie up to 2024, the model relies directly on projections for the primary balance and nominal growth taken from the AMECO database. From 2025, real growth is affected by annual adjustments of the structural primary balance. Specifically, in a given year, the effect of the fiscal multiplier effect is proportional to annual adjustments in the structural primary balance relative to its baseline trajectory:

$$m_t = 0.75 * (\Delta spb_t - \Delta spb_t^{BL})$$

Here, 0.75 is the fiscal multiplier of Carnot and de Castro (2015) and Δspb_t^{BL} denotes the annual change in baseline structural primary balance, which is based on the DG ECFIN projections up to 2024 and held constant thereafter. The multiplier m_t affects real growth via its persistent effect on the output gap, narrowing the output gap by m_t in the year of the adjustment t, and reducing its impact by one-third of its initial effect in the two consecutive periods. Thus, the total impact on the output gap in a particular year is the sum of the impact in that year plus 2/3 of the impact from the previous year plus 1/3 of the impact from two years before. For euro-area countries, Bulgaria, Czechia, Denmark and Sweden, inflation numbers used to compute nominal growth rates are based on the European Commission's forecast up to 2026 (GDP deflator), which are linearly interpolated with market

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[5] Exceptions to this rule are Finland, Luxembourg and Greece. For Finland and Luxembourg, stock-flow adjustment up to 2033 are equal to the public pension system balance, before converging to zero (by 2043 for Finland and by 2047 for Luxembourg). For Greece, stock-flow adjustments are equal to deferred interest on ESM/EFSF loans. The cumulative value of these adjustments is assumed to increase from minus 5.4 percent of GDP in 2022 to 11.1 percent of GDP in 2032, after which they linearly decrease to zero by 2070. For details, see Chapter II.2 in the DSM 2023 (European Commission, 2024a).

expectations for 2034 implied by euro area inflation swaps (HICP)[6], before converging to the 2 percent HICP inflation targets of these countries by 2054, in line with the Commission's methodology[7]. For Hungary, Poland and Romania, where the central banks have higher than 2 percent inflation target, the Commission's methodology assumes that half of the spread vis-à-vis euro-area inflation expected in 2026 remains by 2034, which in turn gradually converges to the national inflation targets by 2054.

Projecting the primary balance. The primary balance ratio is the sum of the structural primary balance ratio, a cyclical component, a property income component, and an ageing cost component[8]. Importantly, the latter component, ageing costs net of pension tax revenues, is not separated out during the adjustment period. After the end of the adjustment period, it is assumed that the structural primary balance without the change in ageing costs remains the same, thus, the change in ageing costs changes the structural primary balance after the end of the adjustment period (see Annex 3 for a graphical illustration). Ageing costs and pension tax revenues are based on European Commission (2024b). The cyclical component is defined as the product of country-specific budget balance elasticities and the output gap.

Projecting the implicit (average) interest rate. The implicit (average) interest rate on the public debt stock, iir_t, is projected as the weighted average of the short-term market interest rate i_t^{ST} and the long-term implicit interest rate iir_t^{LT}:

$$iir_t = \alpha_{t-1} * i_t^{ST} + (1 - \alpha_{t-1}) * iir_t^{LT}.$$

Here, α_{t-1} is the share of short-term debt in the total debt stock in t-1 and iir_t^{LT} is projected as the weighted average of the long-term market rate i_t^{LT} and the long-term implicit market interest rate in t-1:

$$iir_t^{LT} = \beta_{t-1} * i_t^{LT} + (1 - \beta_{t-1}) * iir_{t-1}^{LT},$$

where β_{t-1} is the share of new long-term debt issuance in total long-term debt stock in t-1. Long-term market rates are projected by linearly interpolating from Bloomberg 10-year government bond benchmark rates to 10Y10Y forward rates[9]. Between T+10 and T+30, long-term market rates converge linearly to 2 percent plus national inflation targets, which yields 4.5 percent for Poland and Romania, 5 percent for Hungary and 4 percent for all other countries. Short-term market rates are calculated using 3 months benchmark rates, 3M10Y forward rates, and 0.5 times the country-specific values for the long-term rate in T+30.

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[6] Inflation expectations are based on August 2023 averages of daily data collected from Bloomberg on 1 September 2023.
[7] Beyond the DSM, further details about the inflation projection methodology are presented in Box I.2.1 of European Commission (2024a).
[8] European Commission estimates for property income for 2023 indicate that changes in property income are close to zero and do not significantly affect fiscal trajectories. Because 2024 data is not publicly available, we therefore assume changes in property income to be zero.
[9] Interest rate expectations are based on May 2024 averages of daily data collected from Bloomberg on 1 June 2024.

To project the implicit interest rate forward, we calculate the new issuance and total stock of short-term and long-term debt in each period t. Gross financing needs, i.e. the size of new issuance, are the sum of all interest and amortisation payments, and the primary balance. Here, interest on short-term debt is the product of short-term market rates and the stock of short-term debt in t-1. Interest on long-term debt is the product of the implied interest rate on long-term debt iir_t^{LT} and the long-term debt stock in t-1. Short-term debt is redeemed entirely each period. The share of long-term debt maturing each year is assumed to be equal to the share of long-term debt with maturity below one year in total long-term debt in 2022. By 2033, this share is assumed to converge to the 2016-2021 historical average of redemption shares, like in European Commission (2024a)[10]. Data for the share of maturing debt in 2023 is from the ECB. Given gross financing needs, the share of newly issued short- and long-term debt is calculated such that the share of short-term debt in total debt is held constant. The resulting debt issuances and stocks in period t are then used to calculate the implicit interest rate in t+1[11].

A.2.2 Stochastic debt projections

Stochastic projections of the debt ratio are based on Annex A4 of the DSM[12]. The approach consists in drawing multiple shock series from a joint normal distribution of historical quarterly shocks for the primary balance, nominal short- and long-term interest rates, nominal GDP growth, and the exchange rate. After transforming the shocks to annual frequency and constructing the shocks to the implicit interest rate, each series is combined with the projected deterministic path of the respective variable. Recalculating the debt ratio path for each draw using the equation in Section A.2.1 produces the probability distribution of debt ratio projections. In contrast to the Commission's practice, which is based on 10,000 draws, we calculate the distribution based on one million draws to increase precision.

The Commission's methodology assumes no shocks during the adjustment period. Stochastic shocks are simulated for 5 years after the end of the adjustment period and the DSA criterion requires the public debt to GDP ratio to decline with a 70 percent probability over these five years.

Definition of historical shocks. Quarterly shocks are defined as the first differences in the historical quarterly time series. We correct for outliers by replacing observations that outside the 5th and the 95th percentile with the respective threshold. Historical series are collected from the same sources that are listed in Table A4.1 of the DSM. Quarterly series for exchange rates, nominal GDP growth, short- and long-term interest rates, and primary balance are all sourced from Eurostat. These data sources are described in detail in the 'SOURCES' file referenced above.

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[10] For Cyprus, Greece, Ireland, Portugal and Spain, the amortisation of institutional debt, based on ESM data, are added to the amortisation payments implied by the redemption shares.

[11] In the periods up to 2025, the implicit interest rate is assumed to be equal to DG ECFIN projections from the AMECO database and the implicit long-term interest rate is constructed to be in line with this assumption.

[12] The DSM methodology is in turn based on Berti (2013) and Beynet and Paviot (2012).

Aggregation of shocks. Quarterly shocks for nominal GDP growth, the primary balance, the nominal exchange rate, and the short-term interest rate are transformed to annual frequency by summing the historical shocks in each year. In the first projection year, shocks to the long-term interest rate are transformed in the same way. However, because a change in long-term interest rate in a given quarter will affect overall interest on government debt until the debt issued in that quarter has matured, aggregating quarterly long-term interest rate shocks must account for such persistence. A shock in year t is assumed to carry over to subsequent years, proportionally to the share of maturing debt that is progressively rolled over. Thus, shocks to the implicit long-term interest rate $\varepsilon_t^{i^{LT}}$, from the second projection year onward, are defined as

$$\varepsilon_t^{i^{LT}} = \frac{t}{T} \sum_{q=-4t}^{4} \varepsilon_q^{i^{LT}},$$

where T denotes the average maturity of long-term debt in years, calculated as one over the historical average share of long-term debt maturing, and q denotes the quarters of historical shocks being aggregated. Finally, shocks to the implicit interest rate on government debt are calculated as weighted average of annualized shocks to the short- and long-term interest rates:

$$\varepsilon_t^{iir} = \alpha^{ST} \varepsilon_t^{i^{ST}} + (1 - \alpha^{ST}) \varepsilon_t^{i^{LT}}$$

Here, α^{ST} is the share of short-term debt in total government debt, calculated based on ECB data. The variance-covariance matrix of the resulting annual shock series is then used in a joint normal distribution with zero mean from which the shocks used in the stochastic projection are drawn.

A.2.3 Implementation

The deterministic and stochastic projections described above and methods for optimising structural primary balance paths under the varying assumptions of deterministic scenarios, conditions, and safeguards, are implemented using Python. All scripts needed for the replication of our results, as well as a tutorial for the DSA programme can be found in the accompanying GitHub repository. Additional instructions can be found in the 'README' file.

Annex 3: Graphical representation of economic assumptions and fiscal paths implied by the European Commission proposal

Austria

Ageing costs, interest rate, growth (4-year)

Budget balance (4-year)

Debt simulations (4-year)

Ageing costs, interest rate, growth (7-year)

Budget balance (7-year)

Debt simulations (7-year)

Belgium

Ageing costs, interest rate, growth (4-year)

Budget balance (4-year)

Debt simulations (4-year)

Ageing costs, interest rate, growth (7-year)

Budget balance (7-year)

Debt simulations (7-year)

Bulgaria

Croatia

Cyprus

Ageing costs, interest rate, growth (4-year)

Legend:
- Ageing costs
- Implicit interest rate (right)
- Nominal GDP growth (right)

Budget balance (4-year)

Legend:
- Age-adjusted structural primary balance
- Structural primary balance
- Primary balance
- Overall balance

Debt simulations (4-year)

Legend:
- 10th-90th pct
- 20th-80th pct
- 30th-70th pct
- 40th-60th pct
- Median
- Deterministic

Ageing costs, interest rate, growth (7-year)

Legend:
- Ageing costs
- Implicit interest rate (right)
- Nominal GDP growth (right)

Budget balance (7-year)

Legend:
- Age-adjusted structural primary balance
- Structural primary balance
- Primary balance
- Overall balance

Debt simulations (7-year)

Legend:
- 10th-90th pct
- 20th-80th pct
- 30th-70th pct
- 40th-60th pct
- Median
- Deterministic

Czechia

Ageing costs, interest rate, growth (4-year)

Legend:
- Ageing costs
- Implicit interest rate (right)
- Nominal GDP growth (right)

Budget balance (4-year)

Legend:
- Age-adjusted structural primary balance
- Structural primary balance
- Primary balance
- Overall balance

Debt simulations (4-year)

Legend:
- 10th-90th pct
- 20th-80th pct
- 30th-70th pct
- 40th-60th pct
- Median
- Deterministic

Ageing costs, interest rate, growth (7-year)

Legend:
- Ageing costs
- Implicit interest rate (right)
- Nominal GDP growth (right)

Budget balance (7-year)

Legend:
- Age-adjusted structural primary balance
- Structural primary balance
- Primary balance
- Overall balance

Debt simulations (7-year)

Legend:
- 10th-90th pct
- 20th-80th pct
- 30th-70th pct
- 40th-60th pct
- Median
- Deterministic

Denmark

Ageing costs, interest rate, growth (4-year)

Budget balance (4-year)

Debt simulations (4-year)

Ageing costs, interest rate, growth (7-year)

Budget balance (7-year)

Debt simulations (7-year)

Estonia

Ageing costs, interest rate, growth (4-year)

Budget balance (4-year)

Debt simulations (4-year)

Ageing costs, interest rate, growth (7-year)

Budget balance (7-year)

Debt simulations (7-year)

Finland

Ageing costs, interest rate, growth (4-year)

Legend:
- Ageing costs
- Implicit interest rate (right)
- Nominal GDP growth (right)

Budget balance (4-year)

Legend:
- Age-adjusted structural primary balance
- Structural primary balance
- Primary balance
- Overall balance

Debt simulations (4-year)

Legend:
- 10th-90th pct
- 20th-80th pct
- 30th-70th pct
- 40th-60th pct
- Median
- Deterministic

Ageing costs, interest rate, growth (7-year)

Legend:
- Ageing costs
- Implicit interest rate (right)
- Nominal GDP growth (right)

Budget balance (7-year)

Legend:
- Age-adjusted structural primary balance
- Structural primary balance
- Primary balance
- Overall balance

Debt simulations (7-year)

Legend:
- 10th-90th pct
- 20th-80th pct
- 30th-70th pct
- 40th-60th pct
- Median
- Deterministic

France

Ageing costs, interest rate, growth (4-year)

Legend:
- Ageing costs
- Implicit interest rate (right)
- Nominal GDP growth (right)

Budget balance (4-year)

Legend:
- Age-adjusted structural primary balance
- Structural primary balance
- Primary balance
- Overall balance

Debt simulations (4-year)

Legend:
- 10th-90th pct
- 20th-80th pct
- 30th-70th pct
- 40th-60th pct
- Median
- Deterministic

Ageing costs, interest rate, growth (7-year)

Legend:
- Ageing costs
- Implicit interest rate (right)
- Nominal GDP growth (right)

Budget balance (7-year)

Legend:
- Age-adjusted structural primary balance
- Structural primary balance
- Primary balance
- Overall balance

Debt simulations (7-year)

Legend:
- 10th-90th pct
- 20th-80th pct
- 30th-70th pct
- 40th-60th pct
- Median
- Deterministic

Germany

Greece

Hungary

Ageing costs, interest rate, growth (4-year)

Budget balance (4-year)

Debt simulations (4-year)

Ageing costs, interest rate, growth (7-year)

Budget balance (7-year)

Debt simulations (7-year)

Ireland

Ageing costs, interest rate, growth (4-year)

Budget balance (4-year)

Debt simulations (4-year)

Ageing costs, interest rate, growth (7-year)

Budget balance (7-year)

Debt simulations (7-year)

Italy

Ageing costs, interest rate, growth (4-year)

Budget balance (4-year)

Debt simulations (4-year)

Ageing costs, interest rate, growth (7-year)

Budget balance (7-year)

Debt simulations (7-year)

Latvia

Ageing costs, interest rate, growth (4-year)

Budget balance (4-year)

Debt simulations (4-year)

Ageing costs, interest rate, growth (7-year)

Budget balance (7-year)

Debt simulations (7-year)

Lithuania

Ageing costs, interest rate, growth (4-year)

Budget balance (4-year)

Debt simulations (4-year)

Ageing costs, interest rate, growth (7-year)

Budget balance (7-year)

Debt simulations (7-year)

Luxembourg

Ageing costs, interest rate, growth (4-year)

Budget balance (4-year)

Debt simulations (4-year)

Ageing costs, interest rate, growth (7-year)

Budget balance (7-year)

Debt simulations (7-year)

Malta

Ageing costs, interest rate, growth (4-year)

Budget balance (4-year)

Debt simulations (4-year)

Ageing costs, interest rate, growth (7-year)

Budget balance (7-year)

Debt simulations (7-year)

Netherlands

Ageing costs, interest rate, growth (4-year)

Budget balance (4-year)

Debt simulations (4-year)

Ageing costs, interest rate, growth (7-year)

Budget balance (7-year)

Debt simulations (7-year)

Poland

Portugal

Romania

Slovakia

Slovenia

Ageing costs, interest rate, growth (4-year)

Budget balance (4-year)

Age-adjusted structural primary balance
Structural primary balance
Primary balance
Overall balance

Debt simulations (4-year)

10th-90th pct
20th-80th pct
30th-70th pct
40th-60th pct
Median
Deterministic

Ageing costs, interest rate, growth (7-year)

Budget balance (7-year)

Debt simulations (7-year)

Spain

Ageing costs, interest rate, growth (4-year)

Budget balance (4-year)

Debt simulations (4-year)

Ageing costs, interest rate, growth (7-year)

Budget balance (7-year)

Debt simulations (7-year)

Sweden