



# Reform of the Stability and Growth Pact: Which changes for the governments?

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## ABSTRACT

In 2020, in the context of the COVID-19 health crisis, the rules of the Stability and Growth Pact were temporarily suspended in the European Union. Nevertheless, the European Council and the European Parliament reached an agreement for the reactivation of these rules in 2024. A simple analytical modeling then shows that the empirical implications of the new rules suggested for a reformed Stability and Growth Pact would not be very different from those derived from the rules previously applied. Regarding highly indebted countries, the new debt sustainability safeguard of the reformed SGP could be slightly less binding than the previous rule of the Six Pack requiring to reduce 1/20th of the excess of the public debt each year. However, this criterion as well as those related to the structural budget deficit would not change much the conclusions and the recommendations of the reformed Stability and Growth Pact in comparison with former European fiscal rules. So, reactivated fiscal rules should remain difficult to comply with for many European countries.

## 1. Introduction

The Stability and Growth Pact rules, established in 1997 and reformed during the Eurozone crisis of the 2010s, were suspended in 2020 to allow countries to spend as much money as needed to fight the crisis. In March 2020, the European Council activated for the first time the escape clause and suspended the Stability and Growth Pact (SGP). Indeed, in the context of the COVID-19 crisis, extraordinary measures had to be taken by European governments in order to avoid the collapse of global demand, which implied an out-bidding of budget deficits and public debts in the European Union countries. So, the frame of the SGP was considered as too rigid, and had to be loosen in such an exceptional context, in order to give leeway to European countries to conduct extraordinary measures. However, from December 2023, the Pact has to be reactivated. Then, the European Council and the European Parliament made proposals for a renewed and more appropriate Stability and Growth Pact, for a revision of the Pact, intended to frame fiscal policies in the European Union. Therefore, the current paper questions the adequacy of the new framework proposed by the European authorities to carry out both goals of debt sustainability and economic stabilization assigned to the fiscal authorities, as well as similarities and differences

between this new framework and the previous rules.

In the European Economic and Monetary Union (EMU), the fiscal framework must be constraining enough to avoid a 'deficit bias' and to allow public debt sustainability in the long run. However, fiscal policies must also keep enough room of manoeuvre and must have enough flexibility to play an efficient role in macroeconomic stabilization, in particular in case of a large economic crisis. Both goals are interdependent, as without being sound and sustainable in normal times, fiscal policy risks to be pro-cyclical, and to be deprived from a large part of its shock-absorbing role regarding demand management. In this framework, according to the economic literature on the advantages of expenditure rules (see Section 3, and for example: Ayuso-i-Casals (2012), Eyraud et al. 2018), the revision of the Stability and Growth Pact suggested in December 2023 seems to have some benefits: a rule based on nominal public expenditure appears quite well adapted to both goals previously mentioned. Indeed, balanced budget rules are very well suited to the goal of fiscal discipline. However, they have the drawback to be mostly pro-cyclical, and to be detrimental to growth friendly public expenditure: research and development, productive investment, infrastructure. On the contrary, public expenditure rules are less pro-cyclical, and they are therefore better adapted to the appropriate combination

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between macroeconomic stabilization and fiscal discipline. They target a variable fully under the control of the governments, and they can promote fiscal discipline and limit the deficit bias due to overspending. Furthermore, usually, they do not prevent automatic stabilizers from working on the revenue side of the budget; they do not contravene to the tax-smoothing argument, and they are growth friendly.

Therefore, the reform of the SGP would have the advantage to preserve a country specific debt sustainability analysis, and to highlight the criterion of a net expenditure path as main operational target, whose advantages have often been underlined in the economic literature (see [Section 3](#)), instead of relying on a hypothetical 'structural deficit'. Besides, nationally financed public investments are encouraged. The unique indicator of public expenditure has a good predictability. However, it is not clear whether the assessment of European authorities should be based on real and observed public expenditure and economic growth, or on anticipated expenditure and potential GDP. Besides, the new rule is quite complicated; it does not fit the necessity to promote simple and flexible rules. Safeguards multiply control variables and reduce the simplicity of potential recommendations (see [Section 4](#)). Furthermore, debt sustainability remains the major goal of fiscal rules in the reformed SGP, even if public investment is theoretically mentioned as an important goal to be promoted. In this context, our paper finds that the new debt sustainability safeguard of the reformed SGP could be slightly less binding than the previous rule of the Six Pack requiring to reduce 1/20th of the excess of the public debt each year. However, the adjustment of the structural deficit required for some European countries could remain very strong and difficult to comply with.

The current paper analyses the reform of the Stability and Growth Pact adopted in 2024. The second section describes the characteristics of this reform in comparison with previous rules mentioned in the Six Pack. The third section provides a review of economic literature underlying in particular the advantages of a rule in terms of public expenditure. The fourth section describes a simple analytical modelling used in order to evaluate the situation of European countries regarding past and reformed rules of the SGP. It also compares the conditions of the previous rules of the Six Pack with the reform of these rules adopted in 2024. The fifth section analyses the empirical implications of these new rules for three moderately indebted countries: Germany, Austria and Slovakia, and for three highly indebted countries: France, Spain and Italy. The sixth section concludes the paper.

## 2. The reform in 2024 of the Stability and Growth Pact

The reform of the Stability and Growth Pact (SGP) was adopted in April 2024, published in the official journal on 29 April 2024,<sup>1</sup> and it will be effective in January 2025. The goal of this reform is to advance towards more sustainable public finances in Europe, but also to preserve investment in a growth-friendly manner and the flexibility of fiscal policies to retain a stabilization role in macroeconomic stabilization. Indeed, according to the [European Parliament \(2023\)](#), the revised fiscal rules will contribute to attaining common long-term policy objectives such as achieving a fair digital and green transition, ensuring energy security, supporting open strategic autonomy, addressing demographic change, strengthening social and economic resilience and sustained convergence, and implementing the strategic compass for security and defence. What are the main characteristics of this proposal?

### 2.1. The expenditure benchmark of the Six Pack

In the European Union, since 2011, with the Six Pack complementing the Stability and Growth Pact, an 'expenditure benchmark' has been required: spending should not increase faster than a country's medium

term potential economic growth rate, except in case of additional discretionary revenue measures. The targeted aggregate of expenditure excluded the following items: interest spending, expenditure on EU programs fully matched by EU funds revenue, and cyclical elements of unemployment benefit expenditure.

Besides, the preventive arm of the Stability and Growth Pact guided Member States towards a country-specific Medium-Term budgetary Objective (MTO), a budget balance target defined on a structural basis, aimed at ensuring public finance sustainability. EMU member countries should have as MTO a global structural balance between  $-1\%$  of GDP and a surplus, and even a structural deficit smaller than  $0.5\%$  of GDP when their public debt is over  $60\%$  of GDP. Furthermore, countries should make an annual improvement of  $0.5\%$  of GDP in their structural balance throughout the adjustment path towards these MTOs. For Member States that had not yet reached their MTOs, the annual growth of nominal primary public expenditure should be below the medium-term economic growth rate in order to ensure adequate progress.

This instrument aimed at improving the budgetary planning and outcomes of European Union member countries, by ensuring that expenditure plans were adequately resourced by equivalent permanent revenues. However, it did not constrain the level of public expenditure as long as it was financed effectively by discretionary revenue measures, or if the MTO has been overachieved. This benchmark was not a strict expenditure rule, but only a simple expenditure benchmark providing policy guidelines for the management of expenditure policy.

Furthermore, another constraint was also introduced in the Six Pack: if the public debt of a European Union member country was higher than  $60\%$  of GDP, its annual debt reduction target should be at least of one twentieth of the debt in excess of this  $60\%$  threshold.

### 2.2. A differentiated approach to fiscal requirements based on net public expenditure

In the formulation of the reform of the Stability and Growth Pact adopted in 2024, the operational indicator is net primary expenditure, expenditure net of discretionary revenue measures and excluding interest expenditure, cyclical unemployment expenditure (which are not fully under the control of governments), one-offs and other temporary measures. The indicator should take into account structural factors such as long-term growth estimates and expected demographic changes. Then, this operational indicator is related to a final goal in terms of primary structural budget balance, whereas in the Six Pack, the MTO was defined in terms of overall structural balance. This is a first point of evolution.

Furthermore, member states are asked to provide national medium-term fiscal structural plans that spans over 4–5 years, depending on the length of the national legislature. These plans would ensure that by the end of the fiscal adjustment period, government debt is put or remains on a plausibly downward path or stays at prudent levels (i.e.: below  $60\%$  of GDP) over the medium-term. The projected global government deficit should also be brought and maintained below  $3\%$  of GDP over the medium-term. The European Commission will then submit a multi-year 'reference trajectory' for net public expenditure developments to member states exceeding one of the above mentioned reference value. This expenditure path takes into account each country's specific sustainability challenges; it explains how each country should deliver investments and reforms that respond to the main challenges identified in the context of the European Semester, in particular in the country-specific recommendations.

The [European Parliament \(2023\)](#) also mentions that national net primary expenditure growth should remain below medium-term output growth, on average, as a rule over the horizon of the plan. We can underline that this rule is mentioned in terms of growth of global public expenditure, and not of share of public expenditure in GDP. Indeed, a rule in terms of ratio to GDP would imply the risk to be pro-cyclical, and to limit the effort of expenditure control when economic growth is

<sup>1</sup> Link to the legal text: [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L\\_20240126](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L_20240126)

sustained. Nevertheless, if the growth of public expenditure can be limited by this public expenditure trajectory, nothing is said about the limitation of the absolute level of public expenditure. We can wonder whether a country like France, where public expenditure excluding interest rates is the highest in the European Union and around 55 % of GDP, is hampered by the excessive absolute weight of its public spending.

A major novelty, with the reform of the Stability and Growth Pact, is the adoption of a differentiated approach towards each member country, to take into account the heterogeneity of fiscal positions, public debts and economic challenges across the EU (European Parliament, 2023). Therefore, the new framework will allow multi-annual country-specific fiscal trajectories for each country, while ensuring effective multilateral surveillance and respecting the principle of equal treatment. Each member State will prepare a medium-term fiscal-structural plan, spanning over four or five years, where it commits to a fiscal trajectory as well as public investments and reforms that together ensure sustained and gradual debt reduction and sustainable and inclusive growth, also favourable to job creation. So, as previously required by Blanchard et al. (2021), the discretionary analysis of the specific dynamic of the public debt in each country, and not only the application of rigid budget rules, is taken into account.

The New Preventive Arm of the Stability and Growth Pact consists on a Net Expenditure Trajectory, based on a Debt Sustainability Analysis. The Commission would transmit a risk-based and differentiated technical trajectory expressed in terms of multiannual net expenditure to member States where government debt exceeds the 60 % of GDP reference value or where the government deficit exceeds the 3 % of GDP reference value. Therefore, the Pact would evolve from a previously rule-based approach to a more risk-based approach. Furthermore, member States could benefit from longer adjustment paths if they commit to reforms and investments for sustainability and growth. Indeed, member states would be allowed to ask for an extension of the fiscal adjustment period by up to seven years if they carry out reforms and investments that improve potential growth and support fiscal sustainability.

### 2.3. Additional safeguards

Two safeguards are also mentioned in the reformed Stability and Growth Pact. Firstly, the debt sustainability safeguard requires the technical trajectory to “ensure that the projected general government debt-to-GDP ratio decreases by a minimum annual average amount”: 1 % of GDP for member states with public debt above 90 %, and 0.5 % of GDP for member states with a public debt ratio between 60 % and 90 %. This safeguard aims at ensuring the adjustment path and the sustainability of the public debt level; however, it will apply only when the deficit has fallen below 3 % of GDP. Furthermore, the problem of this safeguard is to be very sensitive to anticipations about future interest rates and growth rates.

Secondly, the deficit resilience safeguard requires the technical trajectory to “ensure that fiscal adjustment continues, where needed, until the Member State reaches a deficit level that provides a common resilience margin in structural terms of 1.5 % of GDP relative to the 3 % of GDP deficit Treaty reference value”. The annual pace of improvement to achieve this 1.5 % structural deficit rule is set at 0.4 % of GDP (slightly lower than the 0.5 % structural deficit improvement of the previous European fiscal framework) but can be reduced to 0.25 % when making use of the new extension clause (public investments). Nevertheless, the existing requirement to reduce public deficits above the 3 % nominal deficit rule by an annual structural improvement of 0.5 % of GDP will persist whenever a country is in a deficit-based EDP.

Therefore, as long as member States stay below a public debt level of 60 % and a budget deficit of 3 % of GDP, no additional rules would restrict their fiscal policy-making, in contrast to the previous SGP, in which even member States with low public debt levels should not run

structural deficits higher than 1 % of GDP. Nevertheless, countries with weak budget deficits and public debt levels must provide the trajectory for their net public expenditure, and discuss with the European Commission of the appropriateness of this trajectory.

### 3. Economic literature

The previous Section 2 has shown that the reformed SGP gives a major weight to the level of public net primary expenditure. The European Fiscal Board (2019) already proposed a reform of the European fiscal framework organized around a medium-term debt anchor and an expenditure rule as the main policy instrument. Indeed, instead of relying on an unobservable ‘structural deficit’ and on a hypothetical ‘output gap’, such a criterion has many advantages according to the economic literature.

Ayuso-i-Casals (2012) precisely analyses various fiscal rules. He finds that expenditure rules have many advantages. They target the part of the budget that the government controls most directly. The government commits to an intermediate visible and operational target. The government also targets the main source of the deficit bias: frequent spending overruns compared to initial targets, difficulty to stick to planned reforms. They are more transparent in their formulation and monitoring. They hardly prevent automatic stabilizers from operating, particularly on the revenue side, and may also help to control spending pressures in good times. Besides, the exclusion of cyclical-sensitive items (such as unemployment benefits) may be justified in order to measure more accurately the government effort to control spending developments. For a sample of eleven EU countries over the period 1980–2005, Turrini (2008) finds that the pro-cyclical bias of fiscal policy would be mostly an expenditure-driven phenomenon: expenditure appears as strongly raised in good times and slightly reduced in bad times. However, the pro-cyclical dynamic of primary cyclically-adjusted expenditure in good times tends to be less pronounced in countries with strong expenditure rules.

In the same way, Holm-Hadulla et al. (2012) study expenditure outcomes relative to previously formulated expenditure plans. They show that for EU countries, between 1998 and 2005, numerical expenditure rules have reduced the pro-cyclical spending bias. Belu Manescu and Bova (2020) also precisely analyse various budget rules in the European Union member countries, between 1999 and 2016. They underline that expenditure rules help to mitigate the pro-cyclical bias of fiscal policy; they are also associated with lower expenditure volatility and higher investment efficiency. Hauptmeier et al. (2011) compare, for Euro Area countries between 1999 and 2009, actual expenditure trends with those that would have prevailed if countries had followed neutral policies based on expenditure rules since the start of EMU. They find that, all sample countries except Germany applied expansionary and too pro-cyclical expenditure policies; this was particularly the case for imbalances countries (Ireland, Greece, Portugal and Spain). That is why the authors recommended the introduction of an expenditure rule: annual public expenditure should grow 0.5 % less than nominal potential GDP growth. Moulin and Wierts (2006) also underline the incapacity of European countries (particularly those with high budget deficits) to stick to the reduction of nominal public expenditure planned in their convergence programs, between 1998 and 2005. These difficulties were not due to particularly unfavourable economic developments.

Examining 15 countries over the period 1998–2005, Wierts (2008) shows that national well-designed expenditure rules can limit the pro-cyclicality of public expenditure, especially at times of revenue shortfalls, and only if political and institutional costs of non-compliance are sufficiently high. Cordes et al. (2015) analyse a huge set of 29 countries with national and supranational fiscal rules, including 33 expenditure rules, between 1985 and 2013. They find that expenditure rules are associated with spending control, counter-cyclical fiscal policy, and improved fiscal discipline. The introduction of expenditure rules is associated with a decrease in public investment only in emerging

economies. Besides, expenditure rules reduce the volatility of expenditure, thus imparting a degree of predictability to fiscal policy and making it less destabilizing, and they are associated with higher public investment efficiency. Heinemann (2018) suggests a debt anchor, reflecting the fundamental long term solvability criterion, and net public expenditure as operational target, as variation of the public debt is not directly controllable by governments, and cannot reflect the current fiscal effort. Andrieu et al. (2015) also argue for moving to a two-pillar approach with a single fiscal anchor (the public debt-to-GDP ratio) and a single operational target (an expenditure growth rule, possibly with an explicit debt-correction mechanism) linked to the anchor. In the same way, Eyraud et al. (2018) underline that combining simultaneously the criteria of simplicity, flexibility and enforceability is difficult for fiscal rules. However, they consider that a debt anchor establishing a medium-term objective, combined with an operational rule as a ceiling on public expenditure, could be efficient. A spending rule has the advantage to be less counter-cyclical, and to allow more stable anticipations of budgetary trajectories in a multi-year framework.

Indeed, in the past European fiscal framework, too much attention was given to annual rather than to longer-term performance indicators. Ayuso i Casals (2012) mentions that a multi-annual rule is always superior to a rule setting a target for only one year. Indeed, a rule for several years avoid the possibility to postpone expenditure or structural adjustments (or to delay important investment expenditure) to the future to circumvent the rule. Multi-annual rules are superior, as compliance is then increased if a time dimension and the dynamic of a trajectory are considered. A fiscal strategy embedded in a multi-term framework can better adapt to economic and country specific circumstances, while making stabilization and consolidation objectives more compatible. Structural and long lasting deviations from the budgetary target must be corrected, while short term adaptations can be accommodated. Claeys et al. (2016) also propose to introduce a new public expenditure rule with debt-correction feedback, embodied in a multi-annual framework, which would also support the central bank's inflation target. In the same way, Belu Manescu and Bova (2020) assess that among expenditure rules, multiannual expenditure ceilings tend to be better complied with than rules specified as growth rates. For example, Darvas and Anderson (2020) propose an expenditure rule as operational target, a multi-year ahead expenditure rule anchored in an appropriate public debt target (five-year ahead or seven-year ahead debt ratio change objective), augmented with an asymmetric golden rule that provides extra fiscal space only in times of a recession.

Therefore, the reformed Stability and Growth Pact presented in the previous Section 2 complies with the recommendation of the economic literature: promoting a net public expenditure rule, within a multi-annual framework. The above mentioned economic literature is unbalanced, mostly underlying the advantages of such rules, hardly mentioning their drawbacks. However, what elements of the fiscal rules in place before the COVID-19 crisis should be modified? Coelho and Duarte (2023) study empirical data from 1995 until 2022, and they make a contra-factual analysis to the compliance of European fiscal rules in 2020–2022 in a hypothetical scenario without the Covid-19 pandemic. They conclude that the budget deficit rule should be maintained to prevent dangerous indebtedness dynamics. In absence of the COVID-19 crisis, most countries would currently succeed to comply with this rule, with the exception of France. On the contrary, they assume that the public debt rule should be partially restructured, as highly indebted (and major) countries could not succeed to comply with this rule. In the same way, Darvas et al. (2023) underline that the debt sustainability criterion was the main target to modify in the reformed SGP. They find that the reformed SGP would require ambitious fiscal adjustment: on average, more than 2 % of GDP over the medium term, in addition to the adjustment that is already planned for 2023–24. However, for most high-debt countries, these requirements would be below those implied by the previous framework. The medium term adjustment in the structural balance needed under the new framework would be nearly 1 %

below the adjustment required by former MTOs.

In the following sections of the paper, with the help of a simple analytical modelling, applied to calculations based on empirical data for some European countries, we are now going to compare the implications of the recommendations of the previous fiscal rules of the Stability and Growth Pact and of the Six Pack with those derived from the reformed SGP.

## 4. Analytical modelling

### 4.1. Structural deficit, global deficit and public debt

We use a simple analytical modelling of the budgetary /fiscal situation of a given country. In this modelling, capital letters indicate levels of the variables, lowercase letters indicate variables in percentage of GDP, and a dot indicates a change with respect to time.

The primary budget surplus of a country in a given period (t) is:

$$PS_t = T_t - G_t \quad (1)$$

and in percentage of GDP ( $Y_t$ ):

$$ps_t = \tau_t - g_t \quad (2)$$

With: ( $T_t$ ): fiscal resources; ( $G_t$ ): primary public expenditure; ( $PS_t$ ): primary budget surplus; ( $Y_t$ ): economic activity; all variables expressed in nominal terms.

If we consider that ( $\varepsilon_T$ ) is the cyclical sensitivity of revenue and ( $\varepsilon_G$ ) the cyclical sensitivity of public expenditure to the output-gap, we have:

$$T_t = T_t^s \left( \frac{Y_t}{Y_t^p} \right)^{\varepsilon_T} \quad G_t = G_t^s \left( \frac{Y_t}{Y_t^p} \right)^{\varepsilon_G} \quad (3)$$

Where the superscript 's' indicates structural values of revenues and expenditure, and ( $Y_t^p$ ) indicates potential economic activity.

Besides, revenue elasticity is close to one ( $\varepsilon_T = 1$ ) in the European Union, as revenues are quite perfectly correlated with the cycle. On the contrary, expenditure elasticity is close to zero, and expenditures are hardly affected by the cycle ( $\varepsilon_G = 0$ ). Therefore, we obtain the following average taxation rate:

$$T_t = T_t^s \left( \frac{Y_t}{Y_t^p} \right) \quad \tau = \tau_t = \frac{T_t}{Y_t} = \frac{T_t^s}{Y_t^p} \quad (4)$$

And the following primary budget surplus, according to Eqs. (1), (3) and (5):

$$PS_t = T_t^s \left( \frac{Y_t}{Y_t^p} \right) - G_t^s = (T_t^s - G_t^s) + T_t^s \left( \frac{Y_t}{Y_t^p} - 1 \right) \quad (5)$$

In Eq. (5), the first term ( $T_t^s - G_t^s$ ) is the structural primary surplus, whereas the second term is the conjectural primary surplus.

So, in percentage of GDP, the primary budget surplus is:

$$ps_t = \frac{PS_t}{Y_t} = \frac{T_t^s}{Y_t^p} - \frac{G_t^s}{Y_t} = \frac{(T_t^s - G_t^s)}{Y_t^p} + \frac{G_t^s}{Y_t^p} \left( 1 - \frac{Y_t^p}{Y_t} \right) \quad (6)$$

The institutional framework can then target the variation of the structural part of the budget surplus in terms of GDP. This change is as follows:

$$ps_t^s = \left( \frac{\dot{T}_t^s}{Y_t^p} \right) - \left( \frac{\dot{G}_t^s}{Y_t^p} \right) = - \left( \frac{\dot{G}_t^s}{G_t^s} - \frac{\dot{Y}_t^p}{Y_t^p} \right) \frac{G_t^s}{Y_t^p} \quad (7)$$

So, with an expenditure rule aiming at stabilizing the structural part of the budget deficit, according to Eq. (7), potential output and public expenditure should increase at the same pace. Indeed, with higher potential output, higher fiscal resources, and thus higher public expenditure is allowed. Spending growth is then assessed with respect to a reference GDP growth rate, while revenues fluctuate according to economic activity. However, in case public expenditure grows faster than

the medium-term economic growth, an expansionary fiscal policy is taking place. Conversely, if public spending grows less than the economic growth rate, then a restrictive fiscal policy is being implemented.

Expenditure rules can also concern the public debt level. The global budget surplus ( $S_t$ ) is the primary budget surplus minus interest rates on the former public debt. So, we obtain:

$$S_t = PS_t - r_{t-1}B_{t-1} \quad (8)$$

With: ( $r_t$ ): interest rate defined in period (t) on the public debt of period (t + 1); ( $B_t$ ): public debt.

Therefore, in percentage of GDP, by combining Eqs. (6) and (8), we obtain:

$$s_t = \tau - \frac{G_t^s}{Y_t^p} + \frac{G_t^s}{Y_t^p} \left(1 - \frac{Y_t^p}{Y_t}\right) - \frac{r_{t-1}}{(1 + \gamma_t)} b_{t-1} \quad (9)$$

With: ( $\gamma_t = \frac{Y_t - Y_{t-1}}{Y_{t-1}}$ ): growth rate of nominal GDP.

The variation of this global budget surplus is the same as the variation of the primary budget surplus ( $\dot{s}_t = p\dot{s}_t$ ), as interest rates and the public debt are fixed and formerly defined in the previous period (t-1). Furthermore, the public debt is as follows:

$$B_t = B_{t-1} - S_t = (1 + r_{t-1})B_{t-1} - PS_t \quad (10)$$

Therefore, the public debt in percentage of GDP is:

$$b_t = \frac{(1 + r_{t-1})}{(1 + \gamma_t)} b_{t-1} - ps_t \quad (11)$$

Regarding the variation of this public debt, Eq. (11) implies:

$$\dot{b}_t = \frac{(1 + \gamma_t)(b_t + ps_t)^2}{(1 + \gamma_t)b_t} - ps_t \frac{ps_t}{b_t} \quad (12)$$

Therefore, the public debt can decrease if economic growth increases, or in case of a higher primary surplus. Finally, according to the primary budget surplus in Eqs. (6) and (7), we obtain the following necessary variation of public expenditure, where the index 'n' indicates desired or necessary values of the variables:<sup>2</sup>

$$\left(\frac{\dot{G}_t^s}{G_t^s}\right)^n = \left(\frac{\dot{G}_t^s}{G_t^s}\right) - \frac{(\dot{b}_t - \dot{b}_t^n) b_t}{\frac{G_t^s}{Y_t} \left(\frac{G_t^s}{Y_t} - \tau\right)} \quad (13)$$

#### 4.2. Fiscal rules in the European Union

Fiscal rules in the European Union mentioned in Section 2 imply the following analytical conditions, according to the simple modelling presented in Section 4.1:-The Six Pack (2011–2020):

As mentioned in Section 2, the goal was to reach a MTO, a global structural deficit between -1 % for virtuous and -0.5 % of GDP for indebted countries. So, it implies:

$$\text{if } b_t \leq 0.6 \quad s_t^s \geq \bar{s}_t^s = -0.01$$

$$\text{if } b_t > 0.6 \quad s_t^s \geq \bar{s}_t^s - 0.005 \quad (14)$$

For countries which have not reached their MTO, the growth of nominal primary structural public expenditure should be below medium term potential economic growth.

$$\text{if } s_t^s < \bar{s}_t^s \quad \left(\frac{\dot{G}_t^s}{G_t^s}\right) \leq \left(\frac{\dot{Y}_t^p}{Y_t^p}\right) \quad (15)$$

Besides, these countries should also attain an annual improvement of

$$^2 \dot{b}_t = \frac{1}{b_t} \frac{G_t^s}{Y_t^p} \left(\tau - \frac{G_t^s}{Y_t^p}\right) \left(\frac{\dot{G}_t^s}{G_t^s}\right) - \frac{(\gamma_t - \gamma_{t-1})b_t}{(1 + \gamma_t)} - \frac{(\gamma_t - \gamma_{t-1})}{(1 + \gamma_t)} \left(\tau - \frac{G_t^s}{Y_t^p}\right) \left(2 + \frac{\tau}{b_t}\right) - \frac{(\gamma_{t-1} + \gamma_t^2)}{(1 + \gamma_t)b_t} \frac{G_t^s}{Y_t^p} \left(\tau - \frac{G_t^s}{Y_t^p}\right)$$

0.5 % of GDP in their structural balance. So, according to Eq. (8), we have.

$$\text{if } s_t^s < \bar{s}_t^s \quad s_t^s = ps_t^s = - \left(\frac{\dot{G}_t^s}{G_t^s} - \frac{\dot{Y}_t^p}{Y_t^p}\right) \frac{G_t^s}{Y_t^p} \geq 0.005 \quad (16)$$

This implies:

$$\text{if } s_t^s < \bar{s}_t^s \quad \left(\frac{\dot{G}_t^s}{G_t^s}\right) \leq \left(\frac{\dot{Y}_t^p}{Y_t^p}\right) - 0.005 \left(\frac{Y_t^p}{G_t^s}\right) \quad (17)$$

So, Eq. (17) is slightly more restrictive than Eq. (15), as the allowed variation of public expenditure is still reduced. And it is more reduced if  $\left(\frac{Y_t^p}{G_t^s}\right)$  is high, if the size of the government is important. For example, if the size of the government is around  $\left(\frac{G_t^s}{Y_t^p} = 0.5\right)$ , the structural deficit improves by 0.5 % of GDP if  $\left(\frac{\dot{G}_t^s}{G_t^s} - \frac{\dot{Y}_t^p}{Y_t^p}\right) \leq -0.01$ . The growth of public expenditure should then be around 1 % lower than potential growth.

Besides, the annual reduction of 1/20th of the excessive public debt level implies:

$$\text{if } b_{t-1} \geq 0.6 \quad \dot{b}_t \leq -0.05(b_{t-1} - 0.6) \quad (18)$$

Therefore, using Eqs. (13) and (18), the desired variation of public expenditure in order to verify this condition of the Six Pack is as follows:

$$\text{if } b_{t-1} \geq 0.6 \quad \left(\frac{\dot{G}_t^s}{G_t^s}\right)^n \leq \left(\frac{\dot{G}_t^s}{G_t^s}\right) - \frac{[\dot{b}_t + 0.05(b_{t-1} - 0.6)]b_t}{\frac{G_t^s}{Y_t} \left(\frac{G_t^s}{Y_t} - \tau\right)} \quad (19)$$

-Reformed Stability and Growth Pact (2024):

As mentioned in Section 2, net primary expenditure growth should remain below potential output growth. Furthermore, according to the deficit resilience safeguard, the structural deficit should reach 1.5 % of GDP. The annual pace of improvement to achieve this 1.5 % structural deficit is set at 0.4 % of GDP (slightly lower than the 0.5 % structural deficit improvement of the previous European fiscal framework). So, the limit on the structural budget balance implies a constraint on the structural part of public expenditure:

$$\frac{G_t^s}{Y_t^p} \leq \tau - \frac{r_{t-1}}{(1 + \gamma_t)} b_{t-1} + 0.015 \quad (20)$$

Furthermore, the limits on the variation of public expenditure are as follows:

$$\text{if } s_t^s > -0.015 \quad \left(\frac{\dot{G}_t^s}{G_t^s}\right) \leq \left(\frac{\dot{Y}_t^p}{Y_t^p}\right) \quad (21)$$

$$\text{if } s_t^s < -0.015 \quad \left(\frac{\dot{G}_t^s}{G_t^s}\right) \leq \left(\frac{\dot{Y}_t^p}{Y_t^p}\right) - 0.004 \left(\frac{Y_t^p}{G_t^s}\right) \quad (22)$$

Besides, if the public debt is below 60 % of GDP, it should not increase and it should remain below this reference level at the end of the planning horizon.

$$\text{if } b_t \leq 0.6 : b_{t+4} \leq b_t \quad (23)$$

But if the public debt is above 60 % of GDP, according to the debt sustainability safeguard, the debt-to-GDP ratio should decrease by 1 % (0.5 %) of GDP for member states with public debt above 90 % (between 60 % and 90 %) of GDP. So, using Eq. (13):

$$\text{if } 0.6 \leq b_{t-1} \leq 0.9 : \left(\frac{\dot{G}_t^s}{G_t^s}\right)^n \leq \left(\frac{\dot{G}_t^s}{G_t^s}\right) - \frac{(\dot{b}_t + 0.005) b_t}{\frac{G_t^s}{Y_t} \left(\frac{G_t^s}{Y_t} - \tau\right)} \quad (24)$$

$$\text{if } b_{t-1} \geq 0.9 : \left(\frac{G_t^s}{G_t^s}\right)^n \leq \left(\frac{G_t^s}{G_t^s}\right) - \frac{(b_t + 0.01) b_t}{\frac{G_t^s}{Y_t} \left(\frac{G_t^s}{Y_t} - \tau\right)} \quad (25)$$

Therefore, for governments which had initially high debt-to-GDP ratios, the fiscal adjustment requirement is smaller under the new rules than it was under the previous framework. Indeed, for Greece or Italy, which have debt-to GDP ratios more than double the reference value, reducing this indebtedness by 1/20th each year is a huge effort (see Fig. 1). On the contrary, the reformed SGP requires a less important annualized fiscal adjustment, which appears as more realistic. Nevertheless, this effort of adjustment is more linear, and it does not vanish as the country approaches the reference value of 60 % of GDP. So, the reformed SGP encourages to make a sustained adjustment effort until reaching a ratio for which there would be no danger of sustainability of the public debt, whatever the macroeconomic situation.

### 5. Empirical implications

Projections to anticipate the consequences of the new version of the Stability and Growth Pact put back on the agenda in 2024 are necessarily based on uncertain future interest rates, growth rates and fiscal variables. Instead of risking such anticipations, in this paper, we only consider the situation of some European countries regarding the fiscal constraints of the reformed SGP in comparison with those of the Six Pack during the past twenty years.

First, the fiscal situation of some European countries can be considered as sane. For example, in the Netherlands, the structural primary deficit is below 1.5 % of GDP since 2012; there was even a structural primary surplus of 2.12 % in 2017. So, the Netherlands is not concerned by the deficit resilience safeguard, even if during the last decades, the growth of public expenditure could have been excessively high in comparison with the one of potential GDP. Besides, even if the public debt was above 60 % of GDP between 2011 and 2016, it has afterwards remained below this reference value. On the contrary, most European countries can be considered as moderately or highly indebted regarding the Stability and Growth Pact.

#### 5.1. Example of some moderately indebted European countries

First, we can analyse the example of three moderately indebted European countries; we would consider as such countries whose public debt is between 60 % and 90 % of GDP. For the future, Darvas et al. (2023) assume that the need of adjustment of the structural balance with the reformed SGP, in comparison with previous rules, would be (-0.8

%) smaller for Slovakia, whereas the strength of the fiscal constraints would not be much altered for Austria or for Germany. What can bring the analysis of the past twenty years?

In Germany, the structural budget deficit seems efficiently limited. Therefore, even if between 2013 and 2021, regarding the constraints of the six Pack, the growth of public expenditure was too high in comparison with the one of potential GDP, Germany had a structural surplus between 2013 and 2019, and then it was not concerned by this constraint. Nevertheless, the reformed SGP mentions that even when the structural deficit is below 1.5 % of GDP (between 2011 and 2019), according to Eq. (22), the growth of public expenditure can be considered as excessive regarding potential GDP growth in 2008–2010, in 2013, or between 2016 and 2021 (see Fig. 2). Furthermore, with the huge COVID-19 health crisis, the structural primary surplus of 2.36 % of GDP in 2018 turned into a structural primary deficit. In 2020, the structural deficit represented 2.67 % of GDP, and the global budget deficit even reached 4.3 % of GDP. For the first time since 2010, Germany was concerned by an excessive structural deficit above 1.5 % of GDP between 2020 and 2023; and the growth of public expenditure could then be considered as excessive according to the deficit resilience safeguard in Eq. (22). Nevertheless, as soon as 2022, German public expenditure was reduced below the targeted level necessary to sufficiently reduce the structural deficit according to the deficit resilience safeguard. The structural deficit could be brought back below 1.5 % of GDP as soon as 2024, and the global budget deficit was reduced to 2.2 % of GDP in 2023. The growth of nationally financed net primary expenditure in 2024 should be around the maximal value of 2.5 % recommended by the European Commission (2024).

Furthermore, regarding public indebtedness, since 2003, the public debt in Germany exceeds the Maastricht reference value but it remains between 60 % and 90 % of GDP; it was 64.8 % of GDP in 2023. Conclusions are then very similar regarding the old rule of the Six Pack to reduce the excess of the public debt by 1/20th each year in Eq. (19) and for the debt sustainability safeguard of the reformed SGP in Eq. (24). The German public debt increased in 2003–2005, in 2008–2010 (financial crisis), in 2012, or in 2020–2021 (COVID-19 crisis). Nevertheless, according to Eqs. (19) or (24), the public debt sufficiently decreased in 2006–2007, in 2011, in 2013–2019, or in 2022–2023 (see Fig. 2). Therefore, since 2012, the growth rate of German public expenditure was usually sufficiently limited regarding a public debt sustainability criterion (except during the COVID-19 crisis). Besides, in Germany, the fiscal constraint related to debt sustainability was usually less restrictive than the one related to the structural deficit. However, since 2022, the fiscal constraint related to the debt sustainability safeguard seems to have become the most binding (see Fig. 2).

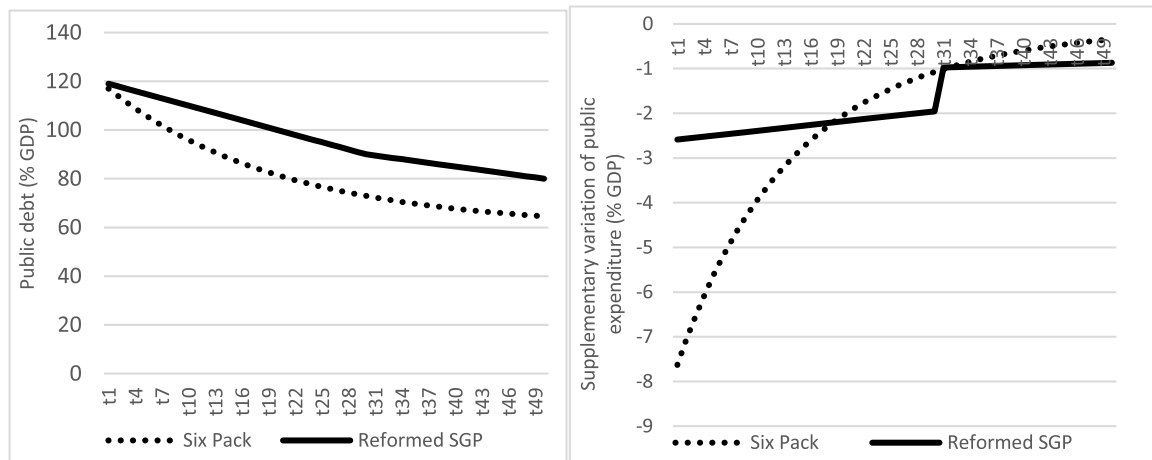
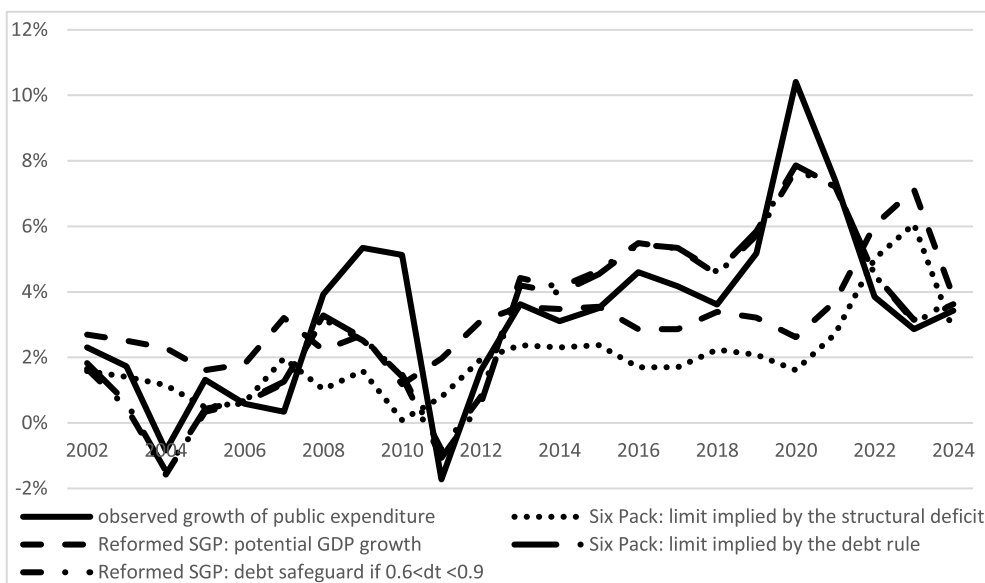


Fig. 1. Fiscal adjustment with the Six Pack and the reformed SGP. Calibration:  $(b_{t-1} = 120\%)$ ,  $(\frac{G_t^s}{Y_t} = 46\%)$ ,  $(\tau = 45\%)$ .

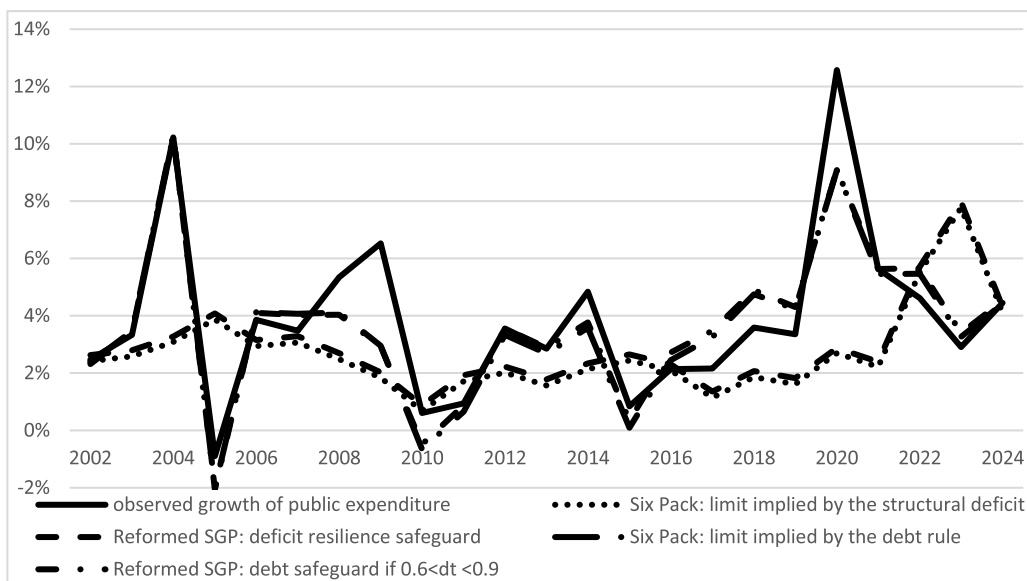


**Fig. 2.** Germany: Limits on the growth of public expenditure implied by the Six Pack and the reformed SGP. Source: AMECO Database data, and author’s own calculations.

In Austria, during the last two decades, the conformity of the evolution path of public expenditure with fiscal rules can be mixed. For example, regarding the Six Pack, the growth rate of primary public expenditure was often too high in comparison with the one of potential GDP (see Fig. 3). Austria had an important structural deficit between 2004 and 2014, but this deficit remained limited (even if above 0.5 % of GDP) between 2015 and 2019. The structural primary balance worsened from a surplus of 1.92 % in 2015 to a deficit of 3.72 % of GDP in 2020. Besides, the reformed SGP mentions that even when the structural deficit is below 1.5 % of GDP (between 2015 and 2019), according to Eq. (22), the growth of public expenditure in Austria could be considered as excessive regarding potential GDP growth in 2018 and 2019 (see Fig. 3). Therefore, obviously, the structural deficit also wasn’t sufficiently diminishing when this structural deficit was above 1.5 % of GDP: until 2009, in 2012–2014, or in 2020–2021. Therefore, according to the Six Pack in Eq. (17) or to the deficit resilience safeguard in Eq. (22),

Austrian public expenditure growth was sufficiently limited in comparison with potential economic growth only in 2010–2011, in 2015–2017, or in 2022–2023. Furthermore, with the huge COVID-19 health crisis, the structural deficit reached 5.12 % of GDP, and the global budget deficit 8 % of GDP in 2020. Nevertheless, as soon as 2022, Austrian public expenditure growth was reduced below potential GDP growth, and in conformity with the deficit resilience safeguard (see Fig. 3). Even if the structural deficit was still 2.41 % of GDP in 2023, the global budget deficit was reduced to 2.6 % of GDP in 2023, again below the reference value of the Maastricht Treaty. The nominal increase in nationally financed primary expenditure in 2024 should just and hardly remain below the maximal value of 4.6 % recommended by the European Commission (2024).

Besides, in Austria, the public debt varied between 65.2 % of GDP in 2004 and 84.9 % of GDP in 2015. The Austrian public debt increased in 2005, in 2008–2010 (financial crisis), in 2014–2015, or in 2020



**Fig. 3.** Austria: Limits on the growth of public expenditure implied by the Six Pack and the reformed SGP. Source: AMECO Database data, and author’s own calculations.

(COVID-19 crisis). The public debt also too slightly decreased in 2011. Nevertheless, according to Eqs. (19) of the Six Pack or (24) of the debt sustainability safeguard of the reformed SGP, the public debt sufficiently decreased in 2003–2004, in 2006–2007, in 2016–2019, or in 2022–2023 (see Fig. 3). This decrease was also sufficient according to Eq. (24) in 2012–2013 or in 2021. Therefore, regarding the debt sustainability safeguard in Eq. (24), as soon as 2021, public expenditure was again compatible with a sufficient decrease (0.5 % each year) of the public debt to GDP ratio (see Fig. 3). Besides, in Austria, the fiscal constraint related to debt sustainability was usually less restrictive than the one related to the structural deficit. However, since 2022, the fiscal constraint related to the public debt seems to have become the most binding for Austria (see Fig. 3).

For a long time, the structural deficit has been excessively high in Slovakia: it was 7.56 % of GDP in 2010, and it was limited to 1.15 % of GDP only in 2017. In these conditions, according to Eq. (17), this structural deficit was sufficiently decreasing in 2007, in 2010–2012, in 2016–2017, or in 2022 (see Fig. 4). On the contrary, the growth of public expenditure was too excessive to reduce the structural deficit in 2005–2006, in 2008–2009 (financial crisis), in 2013–2015, in 2018–2021 or in 2023. In the same way, regarding the reformed SGP, the Slovak structural primary budget deficit was particularly high between 2008 and 2010; and the structural deficit has been above 1.5 % of GDP since 2000 (except in 2013 and in 2017). Besides, in Slovakia, the structural primary balance worsened from equilibrium in 2014 to a structural primary deficit of 4.51 % of GDP in 2023. Therefore, Slovakia is concerned by the deficit resilience safeguard of the reformed SGP; and according to Eq. (22), the growth of public expenditure was then excessive in 2008–2009, in 2013–2015, or in 2018–2021 (see Fig. 4). In 2023, the structural deficit was even 5.51 % of GDP, the global budget deficit was 5.7 % of GDP, and it was projected to increase even more and to remain excessive in 2024.

For the moment, Slovakia is not concerned by the debt sustainability safeguard of the reformed SGP, as its public debt level (56.7 % of GDP in 2023) is below the reference value of 60 % of GDP. Nevertheless, as soon as 2025, the Slovak public debt could be above 60 % of GDP. On the contrary, in the reformed SGP, the condition related to the structural deficit is much more binding. Indeed, on 14 July 2023, the European Council recommended that Slovakia limited the nominal increase of its nationally financed net primary expenditure in 2024 to no more than 5.7 %. However, net primary expenditure was projected to increase by 6.7 %

in 2024, above this maximum growth rate (European Commission, 2024). Therefore, according to the reformed SGP, Slovakia could be asked to urge the control of the excess increase of its public expenditure.

## 5.2. Example of some highly indebted European countries

We would consider as highly indebted countries whose public debt is above 60 % of GDP. For the future, Darvas et al. (2023) assume that the need of adjustment of the structural balance in the reformed SGP, in comparison with previous rules, would only be (−0.3 %) lower for France, whereas it would be (−1.4 %) lower for Spain, and even (−2 %) lower for Italy. What can bring the analysis of the past twenty years?

In France, the growth rate of public expenditure appears as excessively high in comparison with the one of potential GDP during the last decades (see Fig. 5). Indeed, the structural budget deficit was the smallest in 2015, where it already represented 2.79 % of GDP; so, it has been excessively high for a long time. Between 2002 and 2021, the growth rate of public expenditure was higher than the one of potential GDP, except in 2007–2008, in 2011, or in 2018. Regarding Eq. (17) of the Six Pack, public expenditure growth was then excessive to sufficiently reduce the structural deficit. Besides, we can mention that the share of primary public expenditure in GDP is very high in France, around 55 % of GDP, and it was even above 60 % of GDP in 2020 because of the COVID-19 crisis. The structural primary deficit worsened from 0.79 % in 2015 to 4.46 % of GDP in 2021. Therefore, French public expenditure growth was also excessive according to the deficit resilience safeguard of the reformed SGP in Eq. (22). Nevertheless, after the huge public spending due to the COVID-19 crisis, the growth of French public expenditure was below the one of potential GDP in 2022–2023. According to Eq. (22), for the first time, the structural deficit was then sufficiently diminishing, in conformity with the deficit resilience safeguard (see Fig. 5). However, the French global budget deficit was still very high: 4.8 % of GDP in 2023. On 14 July 2023, the European Council recommended that France ensure a prudent fiscal policy, in particular by limiting the nominal increase in nationally financed net primary expenditure in 2024 to not more than 2.3 %. Nevertheless, France's net nationally financed primary expenditure is projected to increase by 2.8 % of GDP in 2024, above this maximal value (European Commission, 2024).

Besides, the French public debt is also particularly high: it is above 60 % of GDP since 2002, even above 90 % of GDP since 2012, and it

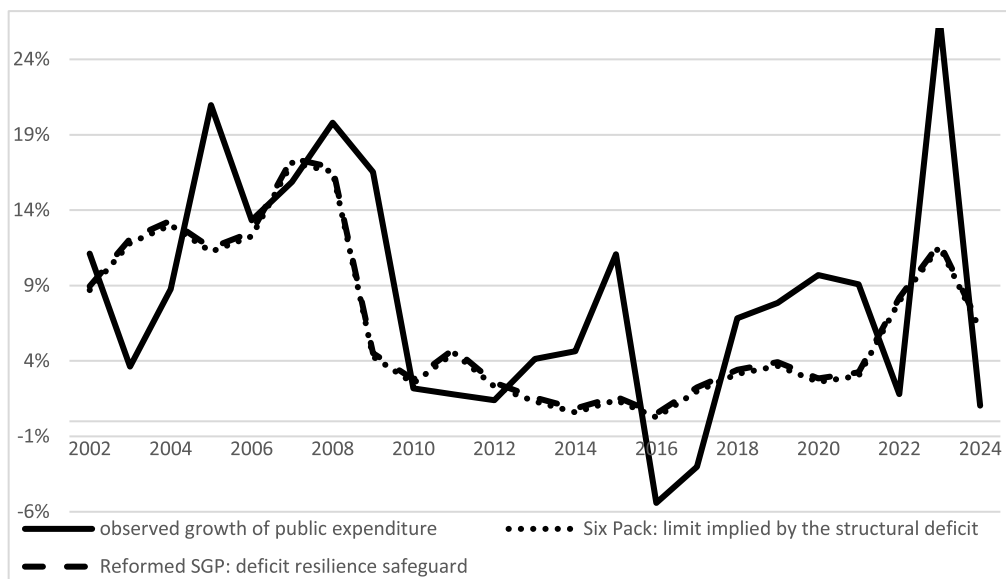
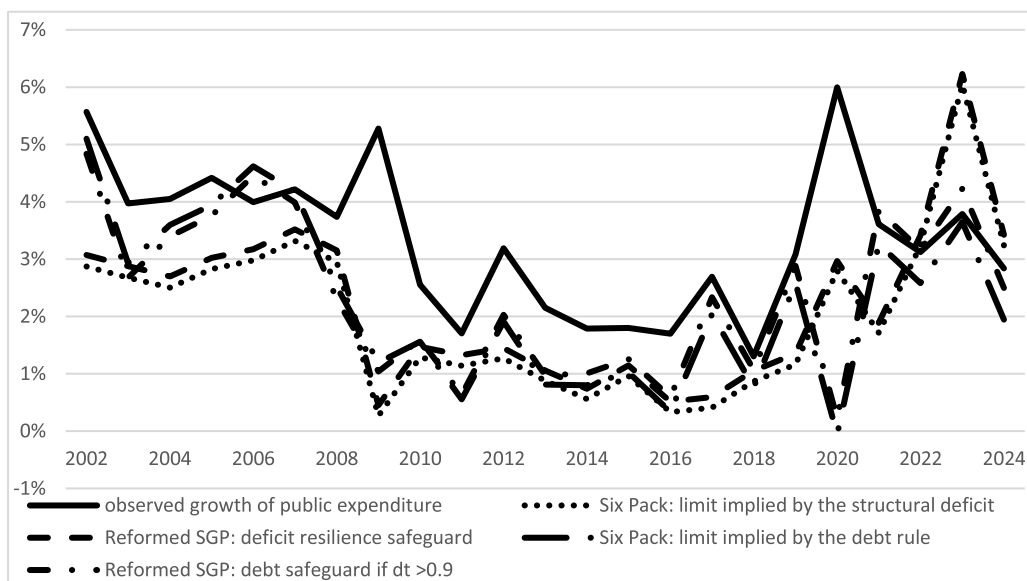


Fig. 4. Slovakia: Limits on the growth of public expenditure implied by the Six Pack and the reformed SGP. Source: AMECO database data, and author's own calculations.



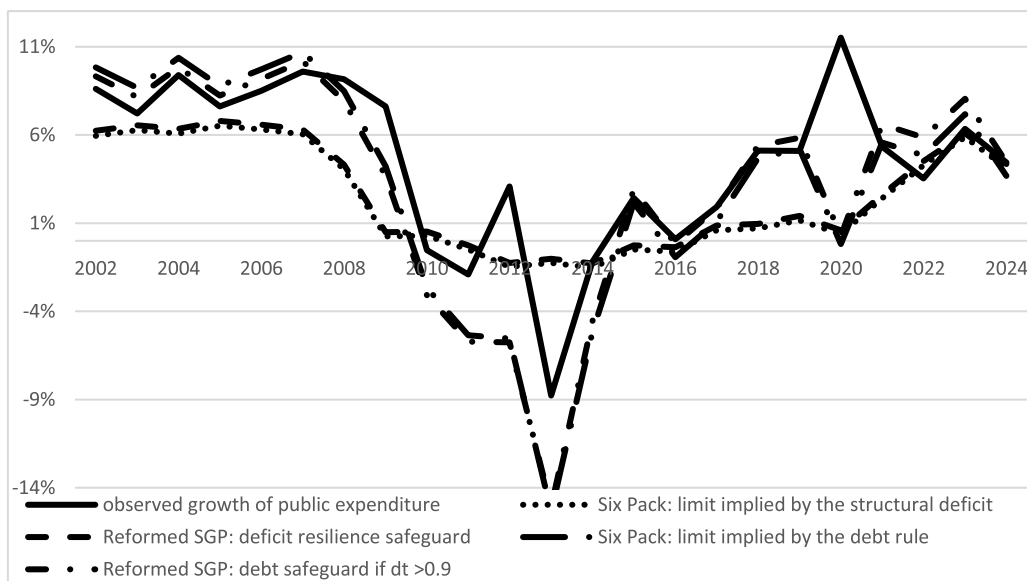


**Fig. 5.** France: Limits on the growth of public expenditure implied by the Six Pack and the reformed SGP. Source: AMECO database data, and author’s own calculations.

reached 109.6 % of GDP in 2023. The French public debt increased in 2002–2005, in 2008–2017, and it mainly very strongly increased in 2020 (COVID-19 crisis). Besides, according to Eq. (19) of the Six Pack or (25) of the debt sustainability safeguard of the reformed SGP, the decrease of the public debt was insufficient in 2007 or in 2018–2019. Therefore, according to both equations, the growth rate of French public expenditure was sufficiently limited only for scarce years: in 2006, or in 2021–2023 regarding Eq. (25) (see Fig. 5). So, the evolution path of the French public debt was usually not compliant with European fiscal rules. Nevertheless, regarding the debt sustainability safeguard in Eq. (25), after 2021, French public expenditure became compatible with a sufficient decrease (1 % each year) of the public debt to GDP ratio. Besides, for France, the conditions of the reformed SGP appear as slightly less constraining than those of the previous Six Pack (see Fig. 5). However, even if the deficit resilience safeguard could have been the most binding constraint in 2021, the debt sustainability safeguard could become the

most binding from 2022. This is in conformity with Darvas et al. (2023), who assume that for France, the ‘debt safeguard’ imposes much higher fiscal adjustment than the Debt Sustainability Analysis. They mention that regarding projections for 2028, France would be the only European country, with Bulgaria, for which the debt safeguard is the most binding criterion. Indeed, its fundamentals are relatively favourable: interest rates are supposed to remain below the growth rate, and costs of ageing are projected to begin to fall within ten years. This mitigates the adjustment required by the deficit benchmark adjustment, whereas the latter would not be sufficient to allow a decrease of the public debt.

In Spain, the public expenditure growth rate appears as excessively high in comparison with the one of potential GDP during the last decades (see Fig. 6). Spain had a structural surplus between 2004 and 2007. However, since 2008, the Spanish structural budget deficit is particularly high and well above 1.5 % of GDP, even reaching 9.41 % of GDP in 2009 (financial crisis), and 5.42 % of GDP in 2020 (COVID-19



**Fig. 6.** Spain: Limits on the growth of public expenditure implied by the Six Pack and the reformed SGP. Source: AMECO database data, and author’s own calculations.

crisis). Besides, since 2008, this structural deficit is sufficiently decreasing, neither regarding Eq. (17) of the Six Pack, nor regarding the deficit resilience safeguard and Eq. (22) of the reformed SGP. Regarding both equations, the growth rate of public expenditure was too high; the structural deficit could have been considered as sufficiently decreasing only in 2010–2011, in 2013 or in 2022 (see Fig. 6). The Spanish global budget deficit is still very high: 4.1 % of GDP in 2023. Besides, on 14 July 2023, the European Council recommended that Spain ensure a prudent fiscal policy, in particular by limiting the nominal increase in nationally financed net primary expenditure in 2024 below 2.6 % (European Commission, 2024). So, Spain's net nationally financed primary expenditure is projected to increase by less than this maximal value. The country verified the deficit resilience safeguard criterion in 2022, and the public expenditure growth rate only slightly exceeded this reference value in 2023. Nevertheless, it appears as much more difficult for Spain to verify the debt sustainability safeguard criterion.

Indeed, the Spanish public debt quickly and strongly increased, and it became particularly high: it is above 60 % of GDP since 2010, above 90 % of GDP since 2013, and it even reached 120.3 % of GDP in 2020. This public debt increased between 2010 and 2014, and it mainly very strongly increased in 2020 (COVID-19 crisis). Besides, according to Eq. (19) of the Six Pack or (25) of the debt sustainability safeguard of the reformed SGP, the decrease of the public debt was insufficient in 2016–2017. Therefore, according to both equations, the growth rate of Spanish public expenditure was sufficiently limited in comparison with economic growth only for scarce years: in 2015 or in 2018, but only regarding Eq. (25) of the reformed SGP, and in 2019 or in 2021–2023 regarding both equations (see Fig. 6). So, the evolution path of the Spanish public debt was usually not compliant with European fiscal rules. Nevertheless, regarding the debt sustainability safeguard in Eq. (25), since 2021, Spanish public expenditure became compatible with a sufficient decrease (1 % each year) of the public debt to GDP ratio. The Spanish public debt was then reduced to 107.5 % of GDP in 2023. Furthermore, as mentioned by Darvas et al. (2023), for Spain, the conditions of the reformed SGP appear as slightly less constraining than those of the previous Six Pack (see Fig. 6). Nevertheless, the deficit resilience and the debt sustainability safeguards could hardly be verified and could be equally binding for Spain for the coming years.

In Italy, during the last two decades, public expenditure was excessively high. The structural budget deficit has always been above 1.5 % of GDP, except between 2013 (−0.79 % of GDP) and 2016. Besides,

according to Eq. (17), or to the deficit resilience safeguard in Eq. (22), the decrease of this structural deficit could be considered as insufficient. Indeed, primary public expenditure growth rate was too high in comparison with the one of potential economic growth, except perhaps for some scarce years: 2007, 2011 or 2023 (see Fig. 7). The structural primary balance worsened from a surplus of 4.11 % in 2013 to a deficit of 4.63 % of GDP in 2021. Therefore, in 2023, the Italian global budget deficit reached 5.3 % of GDP, and it was then obviously excessive. So, on 14 July 2023, the European Council recommended that for 2024, Italy reduced the nominal increase in its nationally financed net primary expenditure to no more than 1.3 % (European Commission, 2024). Indeed, the latter should hardly remain below this recommended maximum growth rate. Nevertheless, in 2023, we can notice that the growth rate of Italian public expenditure was again sufficiently limited in comparison with potential GDP growth, regarding the deficit resilience safeguard (see Fig. 7).

Besides, in Italy, the public debt has been excessively high since a long time, and it quickly and strongly increased during the last decades. It was already 109 % of GDP in 2000, and it reached 154.9 % of GDP in 2020. The Italian public debt slightly increased in 2005–2006, but it very strongly increased in 2008–2014 (financial crisis) or in 2020 (COVID-19 crisis). Besides, according to Eqs. (19) of the Six Pack or (25) of the debt sustainability safeguard of the reformed SGP, the decrease of the public debt was insufficient in 2003–2004 or in 2015–2019. Therefore, according to both equations, the growth rate of Italian public expenditure was sufficiently limited in comparison with economic growth only for scarce years: 2002, 2007, or 2021–2023 (see Fig. 7). So, the evolution path of the Italian public debt was usually not compliant with European fiscal rules. Nevertheless, regarding the debt sustainability safeguard in Eq. (25), after 2021, public expenditure became compatible with a sufficient decrease (1 % each year) of the public debt to GDP ratio. As mentioned by Darvas et al. (2023), for Italy, the conditions of the reformed SGP appear as less constraining than those of the previous Six Pack (see Fig. 7). However, even if the deficit resilience safeguard could have been the most binding constraint in 2021–2022, the debt sustainability safeguard could become the most binding from 2023 in Italy. Indeed, the high ratio of Italian public indebtedness should only marginally succeed to be reduced in the short run.

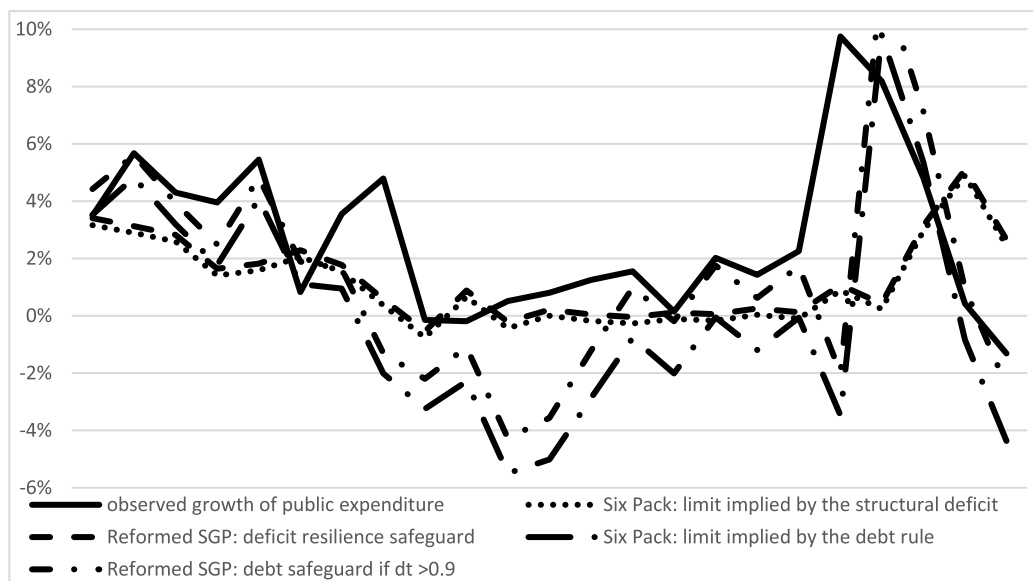


Fig. 7. Italy: Limits on the growth of public expenditure implied by the Six Pack and the reformed SGP. Source: AMECO database data, and author's own calculations.

## 6. Conclusion

In 2020, in the context of the COVID-19 health crisis, the rules of the Stability and Growth Pact were temporarily suspended in the European Union. Nevertheless, the rules were reactivated in 2024, in a revised version, as agreed by the European Parliament and the European Council. Our simple analytical modelling then shows that the empirical implications of the new rules adopted for a reformed Stability and Growth Pact would not be very different from those derived from the rules previously applied in the framework of the Six Pack. In particular, for countries whose public debt remains moderate and between 60 % and 90 % of GDP, as Germany or Austria, our graphs show that the recommendations of the reformed SGP would not really differ from those of the old rules. After an outbidding of public expenditure due to the COVID-19 crisis, since 2022, budget balances and public debts are in conformity with these rules. The Austrian and German global budget deficits were even below the Maastricht reference value of 3 % of GDP in 2023.

Nevertheless, the usefulness of our analytical modelling is to show that regarding highly indebted countries, the reformed SGP could imply slightly different conclusions than the previous rule requiring to reduce 1/20th of the excess of the public debt each year. Indeed, the new rule could be slightly less binding than this rule mentioned in the Six Pack. For example, for France, Spain or Italy, reducing the structural budget deficit remains a challenge. Regarding the budget deficit, compliance with the deficit resilience safeguard of the reformed SGP is not really different from the fiscal discipline implied by the previous Six Pack. Nevertheless, despite their high public debt levels, the debt sustainability safeguard of the reformed SGP could have been verified by these three countries in 2021–2023. And this debt criterion appears as slightly less difficult to comply with than the previous rule.

Therefore, after the large public expenditure due to the exceptional COVID-19 health crisis, even highly indebted European countries have begun to improve the situation of their public finances. Besides, European fiscal objectives seem to concentrate on the long term sustainability of the public debts, instead of a recessionary and constraining short term fiscal discipline. As regards criteria of the reformed SGP, the debt sustainability safeguard in particular appears as easier to comply with than the debt rule of the previous Six Pack. However, this criterion as well as those related to the structural budget deficit would not change much the conclusions and the recommendations of the reformed Stability and Growth Pact in comparison with former European fiscal rules. So, reactivated fiscal rules should remain difficult to comply with for many European countries.

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### CRedit authorship contribution statement

**Séverine Menguy:** Writing – review & editing, Writing – original

draft, Methodology, Investigation, Formal analysis, Data curation, Conceptualization.

### Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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