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REFORMING THE FISCAL RULEBOOK FOR THE EURO AREA – AND THE CHALLENGE OF OLD AND NEW PUBLIC DEBT

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ABSTRACT

Upholding the EU fiscal rules at the elevated public debt level due to the Corona crisis would trigger a phase of long-standing austerity in the euro area. In this study, major proposals for reforms are reviewed, with a critical focus on the expenditure rule, which is central in many think-tanks' and academic researchers' advice. A different reform based on a fiscal analogue to the well-known Taylor-rule for monetary policy is designed here. It is argued that under a low-interest environment growth rates exceed interest rates, a fact not compatible with the present ruleset and with far-reaching consequences. This requires redefining debt sustainability. The proposal chooses as the operational variable for fiscal policy primary balances rather than structural balances. The anchor for fiscal stability, until know the 60% cap on public debt, should be replaced by a cap on the interest payments on public debt at roughly 3% of GDP. This allows higher fiscal space for investment and innovations. The fact that the interest rate burden of all Member States in the euro area stands at the lowest level ever experienced, although the debt level is at an all-time high, clarifies that the focus on the debt ratio is misleading. Change could be possible in the secondary law of the EU without change of the Treaties.

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Reforming the Fiscal Rulebook for the Euro Area – and the Challenge of Old and New Public Debt

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Abstract

There is widespread consensus that the euro area's fiscal rules need to be reformed for the following reasons. The old ones from the Stability and Growth Pact (SGP) and the "Fiscal Compact" (TSCG) have not worked well in the past. What is more, they do not meet the challenges ahead: being suitable for a low-interest rate monetary environment in which monetary policy is less effective, avoiding deflation risks, reducing high public debt levels post-Corona and help too little in light of the enormous necessity for more public investment. The transition to a greener and digitalised economy is on the agenda, to be managed in all parts of the EU. Moreover, a common critique of the present rules is that they have become too complex and tend to be procyclical.

In this study, major proposals for reforms are reviewed, with a critical focus on the expenditure rule, which is central in many think-tanks' and academic researchers' advice. A different reform proposal based on the work of Evsay Domar is developed, which elaborates a fiscal analogue to the well-known Taylor-rule for monetary policy. The present ruleset is based on the implicit assumption that interest rates on public debt exceed the nominal growth of GDP. Under this assumption primary surpluses are needed permanently for a stable debt ratio no matter what the level of debt is. Temporarily very high primary surpluses are required to reduce debt levels above 60% of GDP toward the 60% limit or below. It is believed that debt above 60% puts State solvency at risk and breaches debt sustainability rules. However, the reality of higher debt ratios and higher growth rates (g) than interest rates (r) in recent years stands in contrast to the rules. Debt sustainability needs to be redefined.

The constellation with $g > r$ – as a possible framework for extended periods – has pervasive consequences for the entire fiscal policy package of rules. Therefore, the operational target of fiscal policy should be the *primary* structural balance rather than the structural balance, and the anchor for debt sustainability should no longer be the ratio of gross public debt to nominal GDP, but the *net interest rate burden* as a share of GDP. The latter should be considered an alarm signal if it exceeds 3% of GDP. This new ruleset could allow for permanently higher structural budget deficits at constant levels of debt, making public investment and other urgent expenditure easier to finance.

The fact that the interest rate burden of Member States is at the lowest level ever experienced, although the debt level is at an all-time high, clarifies that the sole focus on the debt is too narrow. Growing out of high debt with low interest rates on public debt and moderate growth rates in all Member States is proposed, avoiding the return to severe fiscal austerity after the pandemic. Austerity would be inevitable if the Member States had to return to the old rules once the suspension of the rules is lifted.

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Kurzbeschreibung

Es besteht breiter Konsens darüber, dass die Budgetregeln im Euroraum aus folgenden Gründen reformiert werden müssen. Die alten Regeln, die auf dem Stabilitäts- und Wachstumspakt (SGP) und dem Fiskalpakt (TSCG) beruhen, haben in der Vergangenheit nicht gut funktioniert und erfüllen die vor uns liegenden Herausforderungen nicht: Sie eignen sich nicht für ein Niedrigzins-Umfeld mit einer Geldpolitik, die an Wirksamkeit einbüßt; sie sind unzureichend bei der Vermeidung von Deflationsrisiken, problematisch angesichts der hohen Staatsverschuldung nach der Corona-Krise und helfen zu wenig bei der Finanzierung öffentlicher Investitionen. Der Übergang zu einer grüneren und digitalisierten Wirtschaft steht auf der Tagesordnung, die in allen Teilen der EU zu bewältigen ist und von aktiver Fiskalpolitik Unterstützung benötigt.

In dieser Studie werden wichtige Reformvorschläge geprüft, wobei der Schwerpunkt auf der Ausgabenregel liegt, die von vielen Think Tanks und akademischen Forschern empfohlen wird. Hier wird jedoch ein anderer, auf Analysen von Evsay Domar basierender Reformvorschlag entwickelt, der der bekannten Taylor-Regel für die Geldpolitik ähnlich ist. Die derzeitigen Regeln basieren auf der impliziten Annahme, dass die Zinssätze auf öffentliche Schulden (r) das nominale Wachstum des Bruttoinlandsprodukts (g) übersteigen. In diesem Fall werden dauerhaft Primärüberschüsse bei jedweder Schuldenhöhe und vorübergehend auch sehr hohe Primärüberschüsse benötigt, um die Verschuldung auf 60% oder weniger zu senken. Es wird dabei angenommen, dass eine Verschuldung von mehr als 60% die Solvenz der Staaten gefährdet und die Tragfähigkeit der Verschuldung verletzt. Die Realität höherer Schuldenquoten sowie höherer Wachstumsraten als Zinssätze entspricht jedoch nicht diesen Regeln. Die Tragfähigkeit der Schulden muss neu definiert werden.

Die Einbeziehung der seit einigen Jahren geltenden Konstellation g > r als eine zweite Option neben der traditionellen Variante gemäß r > g hat weitreichende Konsequenzen für das gesamte Regelwerk der Finanzpolitik. Das operative Ziel der Finanzpolitik sollte den *primären* strukturellen Haushaltssaldo und nicht den strukturellen Haushaltssaldo wie bisher betreffen, und der Anker für die Tragfähigkeit der Schulden sollte nicht länger das Verhältnis der Bruttoschulden zum BIP sein, sondern die Nettozinsbelastung als Anteil am BIP. Letzteres sollte 3% des BIP nicht übersteigen. Durch diese Neuregelung könnten dauerhaft höhere strukturelle Haushaltsdefizite bei konstantem Schuldenstand zugelassen werden, wodurch öffentliche Investitionen und andere dringliche Aufgaben leichter finanzierbar würden. Die Tatsache, dass die Zinsbelastung der Mitgliedstaaten derzeit das niedrigste Niveau aufweist, dass es je gab, obwohl die Verschuldung auf einem Allzeithoch liegt, macht deutlich, dass die alleinige Betrachtung der Schuldenquote zu eng ist. Es wird vorgeschlagen, aus der hohen Verschuldung mit niedrigen Zinssätzen und moderaten Wachstumsraten in allen Mitgliedstaaten langsam herauszuwachsen, ohne auf strenge Sparmaßnahmen zurückzugreifen. Letztere wären unvermeidlich, wenn die Mitgliedstaaten nach Aufhebung des Ausnahmezustands zu den alten Vorschriften zurückkehren müssten.

Contents

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Keywords: Fiscal rules, public debt, deficit bias, austerity, fiscal policy

List of acronyms

BICC Budgetary Instruments for Convergence and Competitiveness
EA euro area
EFB EU Fiscal Board
EMU European Monetary Union
FC Fiscal Compact (see also TSCG)
GCEE German Council of Economic Experts
IMF International Monetary Fund
LoLR Lender of Last Resort
MIP Macroeconomic Imbalance Procedure
MS Member State
MTO Medium-term budgetary objective
ppt percentage point
SGP Stability and Growth Pact
SDSA Stochastic debt sustainability analysis
TFEU Treaty on the Functioning of the European Union
TSCG Treaty on Stability, Coordination and Governance (Fiscal Compact)
U.S. United States of America

List of graphs and tables

1. Introduction

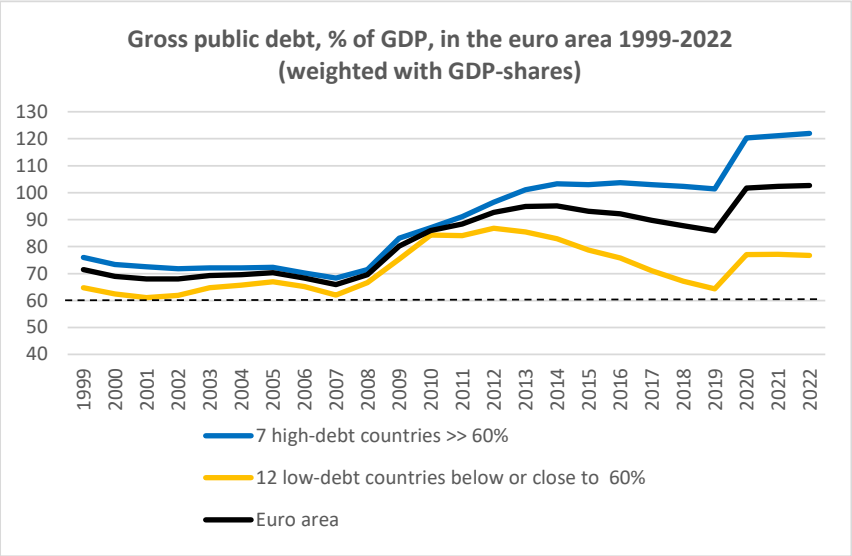
The European fiscal policy rulebook is in a messy state that needs reforms. The status quo is built on the reformed Stability and Growth Pact (SGP) of 2011, based on the Six-Pack and the Two-Pack, and the Fiscal Compact of 2013, plus a number of flexibilization rules made in 2015 (EU Commission 2015). A communication of the Commission (EU Commission 2020, 5 February) titled "Economic governance review" summarises the open issues and reviews some reform proposals. In January 2020, the European Parliament published a report on the implementation of the SGP (EP 2020). Moreover, the European Fiscal Board (EFB) summarised a reform proposal in 2019, commissioned by Juncker. Many other reform proposals have been submitted by academic researchers or European Think Tanks close to policy consultancy and by authors from the IMF. Most policy proposals call for an overhaul of the old rules; at centre of the new ideas is an *expenditure rule* which should replace the structural balance targets that have prevailed since the SGP reform of 2005 and predominated the nominal deficit and gross debt targets since then ("reference values" in Protocol 12 of the Treaty on the Functioning of the European Union (TFEU). The expenditure rule should avoid the often criticised procyclicality of the old rules and be combined with a debt-reducing rule for the Member States (MS) with debt above 60% of GDP. The set of rules should be more binding and better enforceable than before. These proposals are analysed in this paper. The basic tenets are rejected here and new rules are proposed, based on Evsay Domar's (1944) analysis of public debt, described in chapters 5 and 6. Following Domar, the average primary balance over a longer spell, similar to the structural primary balance, is the key operational target, not the structural balance in the SGP. As a substitute for a debt anchor, we propose the net interest payments on public debt as a share of GDP, adjusted for seigniorage and tax revenues from bondholders. Furthermore, the proposal embraces flexible rules adjusted to both constellations regarding the difference between the interest rate on debt (r) and the GDP growth rate (g). The current ruleset implicitly assumes only the traditional $r > g$ constellation, not $g > r$.

The present challenges (1-4) and new opportunities (5-7) at the time of writing (November - 2020) are as follows:

(1) There is a significant polarisation in the public debt performance regarding the gross debt-GDP-relation between 7 high debt MS (Belgium, Cyprus, France, Greece, Italy, Portugal, and Spain) and the other 12 MS. The polarisation has increased in the course of the Corona-crisis (see Graph 1). It seems highly unrealistic that sticking to the old debt threshold of 60% is a sensible and feasible goal in the future.

(2) It is questionable whether coping with the Corona-debt and the related economic crisis can be achieved with the old rulebook.
(3) Green transition ("Green Deal") and digitalisation require more public spending, both fixed investment and current expenditures, and all MS have to be included in this process to avoid further polarisation. The transition, that partially requires deficit-financing, will boost public goods provision and is in stark contrast to promoting contractionary fiscal policies over an extended spell.
(4) Monetary policy was - despite vigorous unconventional measures - not able to return to the target inflation rate, not least because of the reduced effectiveness of monetary policy at the zero-lower-bound. Yet, absent a euro area (EA) fiscal capacity, the ECB had *de facto* taken over some functions of fiscal policy to maintain the functioning of the monetary union.
(5) Despite a big leap in deficits and debt in 2020, spreads in interest rates have been successfully suppressed by asset purchases of the ECB on secondary markets, which has led to significant ownership of sovereign bonds by the central bank. Interest rates on 10 years' sovereign bonds are contained in the range of -0.6 and +0.5% in the EA (December 2020, worldgovernmentbonds.com 2020).
(6) The relationship between interest rates on public debt and nominal growth has fundamentally changed, as the differential became negative for almost all MS, apart from the crisis-year 2020, and will probably remain negative at least for the medium-term. This allows carrying higher debt loads and eases debt reduction.
(7) The decisions of the EU Council in July 2020 on the Multi-Year Budgetary Framework of the EU and the Recovery Plan ("Next Generation EU") have opened the door to a centralised fiscal capacity at the EU-level and loosened the ban on borrowing within the EU budget.

Graph 1



AMECO, January 28, 2021. Own calculations. Estimations for 2020-2022 by EU-Commission. Note: Country groups defined by debt ratios in 2019. Low-debt countries include Austria and Slovenia with 70 and 66%. High debt countries are Belgium, Cyprus, France, Greece, Italy, Portugal and Spain.

All these factors underline the urgency of a regime change in fiscal policy for the EA.

In the next section, an overview of fiscal policy reform proposals is provided. The third section discusses and criticises the expenditure rule. What fiscal austerity is and means, and when it successfully reduces the debt level and when not, is discussed in the fourth part. Based on the theoretical Domar-framework, the basic ideas for a fiscal policy reform proposal are rolled out in chapter 5. The last part presents the key policy conclusions.

2. The status quo fiscal rules and the reform proposals

2.1 Status quo rulebook

The status quo basic EA fiscal rules are as follows.

- The reference values for deficits and debt of the general government are 3 and 60% of GDP, respectively. If one or both of them is exceeded, an excessive deficit procedure can be initiated under the rules of the "corrective arm" of the SGP. If the reference values are not breached, the MS are subject to the "preventive arm" of the SGP.
- The *Fiscal Compact* (TSCG), an intergovernmental treaty coming into force 2013, similar to primary law, requires MS to have a structural, i.e., cyclically-adjusted budget balance, in surplus or small deficit. The requirement is considered fulfilled if the structural budget balance stands at -0.5% or higher in MS whose debt is close to 60%. However, if the debt is significantly below 60%, a structural deficit up to 1.0% is allowed. MS with debt above 60% have to reduce

the difference to 60 by 1/20 p.a. as a benchmark, which generally implies a significant primary budget surplus or even a structural surplus.

A key ingredient of the EU fiscal rules is the methodology for calculating potential output and structural (i.e. non-cyclical) budget balances (EU Commission 2014). The Commission is in charge of selecting the methodology. Over the years the latter has changed several times. Presently the so-called production function approach is used, based on estimating the "non-accelerating-wage-rate of unemployment" (NAWRU), a rate of "structural unemployment" below which nominal wages tend to rise and the inflation pressure increases. The measurement is highly sensitive to changes of assumptions and is rooted in a predominantly neoclassical conceptual framework (cp. Heimberger et al. 2020).

- EU secondary law, such as the SGP and regulations by EU institutions, defines many detailed requirements for MS, among them:
    - a *Medium-Term Budgetary Objective* (MTO) for the structural budget balance (calculated by the methodology mentioned above). The calculation of the MTO include several criteria such as the 60% debt cap, implicit future liabilities, debts from ageing and numerical goals defining minimum efforts for reducing debt;
    - if the MTO is not yet reached, a *matrix of adjustment requirements* is prescribed, which defines goals for normal, good, and bad times in terms of the Commission's output gap. The minimum adjustment of the structural balance is 0.5 ppt per year in "normal times".
    - *"expenditure benchmark"*: primary government expenditures, net of discretionary spending and discretionary revenue changes, adjusted for some other items, must not rise faster than potential output growth if the MTO is reached; otherwise, this expenditure aggregate must grow less than potential output, determined by the so-called convergence rule. Potential output growth is measured for a 10-year-period, based on both past data and forecasts and current or forecasted prices (EU Commission 2019, 27-29). This is the expenditure rule of the Commission.
- The EU regulation on the flexibility of the fiscal rules allows escape clauses in case of unusual events outside the control of the MS's government (disasters or severe economic downturns, either in the country or in the EA). The flexibility clause also allows for five temporary exceptions, which are defined in detail, but still give the Commission and MS room for discretion.
- Since the fiscal rules in the preventive arm of SGP are integrated in the "European Semester", a process of coordination before national budgetary decisions are made, national fiscal policy is partially shifted from the nation states to the supranational level; due to the complexity of the

rules, their enforcement mechanism can be described as "fine-tuning" for countries with deficits and debt above or close to the critical levels.

- The fiscal rulebook is not connected to the "*Macroeconomic Imbalances Procedure*" (MIP) which also entails rules for limiting current account and competitiveness imbalances. Furthermore, the rulebook does not foresee a supranational fiscal stabilisation capacity beyond the ESM.

At the end of its term, the Juncker-Commission took stock of what had been achieved and which issues remain unaccomplished (EU-Commission 2020). Procyclicality of fiscal policy remains unsolved, too little emphasis is put on public investment, too much focus is on national fiscal and economic policies in both the SGP and the MIP rather than on EU or EA specific policies. Furthermore, the EU needs a fiscal stabilisation capacity and provides at best for only weak enforcement of rules, despite the European Semester. Lastly, the EU has succeeded in reducing fiscal deficits below 3% (until the pandemic) but has not achieved its debt sustainability goals for all MS. The assessment is mixed despite the Commission's blanket appraisal: "Overall, the governance arrangements have worked well." (16)

2.2 Eight proposals for reform

Eyraud et al. (IMF) 2015 and 2018

The IMF researchers Eyraud/Wu (2015) and Eyraud et al. (2018) have presented detailed analyses of the fiscal rules, including reform proposals. The authors criticise the EU fiscal rules adopted since 2005 heavily, especially the ones after the financial crisis. They make three points in this regard in the study. First, they see a trend of rising public debt in many EA countries since the 1980s, caused by a "*deficit bias*" of fiscal policymakers. In cyclical upswings, deficits, especially structural ones, are too high due to massive budgetary indiscipline; while expansionary countercyclical measures in downturns should be stronger. Deficits linger longer, meaning good times, i.e. spells of increasing fiscal balances, are too short or too weak, which causes an asymmetric debt dynamic as the authors contend. They hold that the main reasons are rooted in political economy: too much appetite for public goods, the "*common pool problem*" (shifting social costs to others or future generations), or re-election concerns of politicians. Second, they complain about too much discretion with too many inscrutable rules – exceptions have become the rule, triggered by a plethora of targets. They identify not less than nine different rules which target five different fiscal aggregates. With the turn from the 3% nominal deficit rule to structural balances since the SGP-reform of 2005, many different operational targets were introduced. These are not always aligned and therefore tend to weaken

fiscal governance. Third, sanctions seemingly do not work, absent a centralised fiscal government in the EA.

Unfortunately, the assertion of "deficit bias" as the key fiscal policy problem in the EMU, while widely held, lacks deep empirical and analytical backing Their critique of non-compliance ignores the fact that the EA is not a fiscal or federal union of subordinated local governments with little fiscal leeway and a central fiscal authority. Instead, MS are (still) nation-states with almost full fiscal authority, a core prerogative of parliamentary democracies. The premise of negative and positive symmetrical output gaps around trend growth buttresses the call for buffers to be built-up in "good times" but lacks analysis of what good times are. There is uncertainty about their duration, why they are scarce and short and why they are not always linked to inflation, which contradicts the definition of output gaps.

The authors plea for a simple hierarchy of rules. The debt rule should be a long-term "debt anchor". Without reasoning, the 60% target is implicitly accepted, but it is mentioned that having only one debt target for all EU MS lacks an economic basis (Eyraud/Wu 2015, 30). Furthermore, there should only be one operational rule, preferably a medium-term expenditure rule linked to the debt target. It is not clear which expenditures should be focussed on; from an analytical point of view, it could only be *primary* structural spending which excludes interest payments which cannot be influenced by governments. They are fixed costs for the MS. Connecting the expenditure rule to debt requires a link to the *level* of expenditure – and not only the growth rate – when the rule starts, which implies a norm for the size of structural deficits. The authors remain mute on this issue what can be interpreted as consent to the present limits on structural balances. An expenditure rule would avoid difficult measuring problems and strengthen automatic stabilisers, weaken discretion and might impress financial markets, thus reducing risk spreads on interest rates. The authors make reference to multi-year expenditure rules in several European countries rooted in coalition agreements (Cordes et al. 2015).

Furthermore, for securing a certain degree of flexibility, a correction mechanism in case of deviation or unintended side effects should be built-in as well as an escape clause for severe crises. The key guiding idea is to combine the preventive and the corrective arm of the SGP and put more emphasis on prevention, decrease complexity and have clearer rules and targets. Lastly, autonomous fiscal boards should be strengthened. Yet, the whole exercise Eyraud et al. strive for is supposed to implement more contractionary fiscal policy over the economic cycle, hence following a "contraction bias" as a response to the alleged "deficit bias". That this leaves growth unscathed (or even strengthened) is implicitly assumed.

Claeys et al.2016

A group of authors from the Bruegel think-tank proposed a plan to "revive" the EU fiscal framework. Later other authors from Bruegel and other academics outside followed their main ideas. The authors would prefer to re-write the fiscal rules from scratch, but they follow another line to avoid changes of the TFEU. However, changes of the Fiscal Compact and the SGP are deemed necessary. Their core ideas are simple:

- The main shortcoming of the present fiscal framework is seen in its procyclicality, especially in "good years": too high expenditure growth in cyclical upswings is asserted, leading to too little debt reduction after debt has increased in recessions. In some cases, they admit, the fiscal stance was too contractionary in "good years". In general, they call for a stronger contractionary stance in high-debt countries with a focus on curbing expenditure. In other words, the present fiscal framework was not strict enough.
- An expenditure rule should replace the focus on structural balances and the 1/20th rule of the Fiscal Compact. The adjusted expenditure aggregate is supposed to grow in line with potential output growth as the benchmark. This aggregate is defined as primary spending, excluding labour-market related spending, one-off spending and smoothed public investment spending. This aggregate should not grow faster than potential output, allowing for ECB target inflation, in nominal terms. The benchmark is the average growth in the past 5 years and in the current year, hence it is backward-looking.
- MS with debt above 60% are subject to a debt-reduction term. The adjusted expenditure aggregate must grow less than potential output, by a factor of 0.02 times the difference between the actual debt ratio and the 60% cap. For a country with debt at 110% of GDP, the expenditure growth rate would be 1 ppt less than potential output growth. The problem that a gap in aggregate demand would emerge and increase with time is not addressed.
- MS with debt below 60% would not be obliged to spend more under the proposal. Overall, the 60% cap is considered a political decision without sufficient academic underpinning, but it has to be accepted.
- The expenditure rule is connected with an "overrun correction" mechanism. If actual expenditure growth was above the limit or below, the difference has to be corrected *ex-post*.
- Increases in expenditure above the rule are bound to revenue increases while any tax reductions must be made in tandem with expenditure cuts.
- Rule surveillance is to be done by national Fiscal Councils and by a supranational EU Fiscal Council similar to the Governing Council of the ECB. This would hollow out the traditional

rights of national parliaments. An EU Fiscal Council would even shift decision making away from political institutions to technocrats.

The authors are mute on the structural balances which link expenditures and revenues. The 0.5% and 1% structural deficit limits from the SGP are not questioned.

For steering the EA fiscal stance, a European unemployment insurance is proposed and/or an EU investment agency. These ideas remain vague.

In a later but similar proposal Darvas, Martin and Ragot (2018, 2018a) have renewed these ideas, putting forward a simple expenditure-rule formula: $\hat{A} = y_r + \pi_e - \delta(b\text{-}60)$. $\hat{A}$ is the growth rate of the adjusted primary spending aggregate A, y_r is real potential output growth, π_e is expected inflation and the last term is the debt reduction mechanism with the parameter δ as 0.02 or similar. b is the actual debt ratio.

EU Fiscal Board (2019)

The EU Fiscal Board (EFB 2019) was commissioned by Jean-Claude Juncker, the former President of the EU Commission, to assess the EU fiscal rules with a focus on the Two- and Six-Pack legislation and the revised SGP from 2011. The EFB comes up with four major proposals.

- The first one is to simplify the current set of rules ("unnecessary complexity") and instead concentrate on a medium-term goal for debt sustainability and a short-term operational target. All flexibility clauses allowed by the Commission since 2015 should be rescinded.
- Second, regarding debt sustainability, the EFB argues that the 60% reference value in the Maastricht Treaty lacks economic justification and is, to some extent, arbitrary. Either the reference value should be abandoned by Treaty change, which can be done in a simplified manner if the Council decides with unanimity. Although no other numerical goal is proposed, the authors seem to favour flexible country-specific goals for the medium-term. The alternative to abandoning the reference value would be to clarify the speed of adjustment to 60% in high-debt countries. In this case, these countries should be obliged to resolutely reduce their debt levels with the help of a new operational target, while the low-debt countries would have to promote growth-enhancing public spending. Since there is no political will to institute a central fiscal capacity at the EU- or EA level, this two-pronged rule for high- and low-debt countries would be second best.
- The third and most important reform would be to replace the calculation of structural balances by an expenditure rule. In countries at or below the debt goal, the growth of primary expenditures excluding unemployment benefits should be limited by potential output growth,

absent discretionary revenue changes. In countries with higher debt, public spending should grow at a reduced country-specific rate. These dynamic ceilings should be fixed for the medium term. Even though the Board is in principle in favour of a Golden Rule to protect public investment against crowding-out, they hesitate to come up with a concrete proposal.
- Instead of fines in case of non-compliance, compliance should be incentivised by access to new central EU Funds.

The authors are mute regarding the speed of adjustment for high-debt countries to the 60% goal. Moreover, although this goal is considered arbitrary, they seem to stick to it. It is therefore quite likely that massive fiscal austerity[2] is necessary for countries with high debt, even more so after the Corona crisis. That reduced growth of primary spending in high-debt countries might affect potential output growth negatively is implicitly ruled out. This risk is not even addressed apart from the hope that spreads on interest rates could drop. If primary spending growth remains subdued until the debt threshold is reached, ever-increasing primary budget balances follow, given that potential output growth remains unaffected. In other words, the difference to targeting structural balances as in the present MTO is that primary balances increase slowly but to very high levels so that it is unlikely for output growth to stay unaffected. The EFB holds that the 3% deficit rule has only historical value, but it should remain, in conjunction with the escape clauses for severe crises. With the unchanged deficit cap, the expenditure rule implicitly incorporates a maximum structural deficit. With cyclical leeway of 3% needed, headline deficits from the expenditure rule are subject to this cap, hence there is no space for structural deficits in recessions which likely means that investment is crowded out. The proposed fiscal rule for countries with low debt remains vague. This shows that the EFB proposal is inconsistent and/or incomplete.

Benassy-Quéré et al. 2018

The group of 14 French and German authors has proposed broad-based reforms for the EMU, comprising six packages of which only one deals with new fiscal rules. The main tenets of the analysis conclude that the present fiscal rules have not worked well, because of design faults and lacking enforcement. Without discussion, the starting point is the assertion of prodigal fiscal spending in "good times", hence again the "deficit bias" caused by opportunistic

[2] The term austerity is used in this paper synonymously for a contractionary fiscal policy stance over a medium-term period to reduce the public debt ratio. A contractionary stance means that aggregate demand growth is subdued compared to nominal trend growth with target inflation. This implies that primary public expenditures grow slower and/or revenues faster than nominal GDP. It causes subduing real output growth by contractionary fiscal policy in cyclical upswings and in most cases also procyclical fiscal policy in recessions so that a negative output gap is deepened and likely maintained over a longer spell. See chapter 4 for further details.

behaviour, including moral hazard. Complaints of procyclicality of fiscal rules pertain mainly to the neglect of saving in good times. A more contractionary fiscal stance over the entire economic cycle is seen as the answer. The focus on structural balances since the 2005 reform of the SGP should be overcome with the new expenditure rule backed by a debt anchor with the 60% debt cap of the Maastricht Treaty not being worth reconsidering. The expenditure rule proposed is similar to the ones mentioned by other authors, but it is not defined as a formula. It is embedded in a system of national fiscal boards and a supranational "watchdog". These technocratic institutions are assigned important tasks, apparently taken out of the hands of national governments and parliaments, at least to some extent, meaning they ought to be de-politicised. Such a reform would shatter key pillars of nation-states which have always incorporated budgetary rights as one of the key responsibilities of parliaments.

The authors refrain from stipulating any numbers regarding the speed of debt reduction in high debt countries or limits for structural deficits in countries with debt below the ceiling. For the high-debt-countries, the only imperative is that debt ratios must be reduced by lower growth of expenditure than potential growth – no mention of the size of δ. The focus is instead on sanctions and incentives. Governments that violate the expenditure rule have to finance excess expenditure by issuing Junior Bonds (second-tier bonds) with a risk premium. Such bonds are not usable as risk-free bank capital, as if they were "unsafe assets". Such rules should be enshrined in national law. There is no mention that when interest rates on debt should rise, the debt ratio increases too, *ceteris paribus* (following the Domar-equation). Yet, the authors believe that higher fiscal discipline will be rewarded by lower interest rates. Instead of sanctions against violating rules, carrots rather than sticks are recommended, such as preferential access to ESM funds.

Interestingly, the recommendation is embedded in proposals for completing the banking union with concentration charges for banks if they do not diversify their holdings of sovereign bonds, proposals for the orderly restructuring of public debt in case of insolvency, creation of synthetic safe bonds with tranches of Senior and Junior debt, etc.

Feld et al. (2018), Christofzik et al. (2018)

A team around Lars Feld, the head of the German Council of Economic Experts (GCEE), proposes an expenditure rule in combination with the medium-term structural balance targets of the SGP and a long-term debt-anchor. The exemptions introduced by the Commission in order to allow for more flexibility should be abandoned, except for the two escape clauses (in case of severe economic crises and natural disasters). Due to the real-time measurement

problems of potential output and hence structural budget balances, the 0.5% and 1.0% limits for structural deficits should tie expenditure close to revenues in the medium-term. The measurement issue is implicitly seen as solely a short-term problem. With 3% nominal growth, this would lead to around 33% debt, which is considered the long-term goal. Significant distance to the 60% margin, below which the 1% cap on structural deficits applies, should be achieved at debt ratios below 40%. All these numbers come without economic justification. Ostry et al. (2015) had warned against over-cautiousness and over-insurance against risks. For Christofzik et al., none of the critical SGP rules or Treaty reference values need change.

Feld et al. (2018) and Christofzik et al. (2018a) follow the option in the reformed SGP which connects an expenditure rule (see above) with the structural balance concept for the short-term, whereby the MTO in the Fiscal Compact is upheld. This combination defines the speed in the debt-reduction term of the expenditure rule. An addition to the debt reduction mechanism, a *multi-purpose correction account* is proposed (similar to the German constitutional debt brake) by which deviations resulting from measurement errors and discretional changes in revenues are booked. The resulting account has to be cleared in a prescribed period. The authors call for quasi-automatic sanctions against MS which do not abide by the rules. It should be added that the expenditure rule is bound to a 10-years-potential growth estimate and includes the actual nominal expenditure, hence the actual or the forecasted inflation rate rather than the target inflation of ECB is used. Public investment spending is not deducted; only interest payments and unemployment benefits are deductible.

Overall, this concept is coherent, stringent and returns to the status-quo-ante of the Fiscal Compact before the Juncker-Commission proposed the flexibilization. This concept has failed already since it directly led into the double-dip recession after the Greek sovereign debt crisis. It is an austerity ruleset, even though the term “austerity” is not in the authors’ dictionary.

European Trade Unions Institute (2019)

The authors (Álvarez et al. 2019, a team of 11 authors with links to the *European Trade Union Institute*) demand fundamental changes of the SGP and related rules in order to implement a more active role for fiscal policy (understood here as more expansionary). Their main critique of the SGP is complemented by the request for safer government bonds, better coordination of fiscal policy with other policy areas and more democratic participation of stakeholders, civil society and of the European Parliament. Their main concerns are about the procyclicality of the fiscal rules, the lack of an unconditional Lender of Last Resort (LoLR) for sovereign bonds of MS, thus adding to the well-established LoLR function for banks, and the lack of common

economic policy in the face of having no common government in the currency union. The fiscal rulebook has become too complex after the Financial Crisis and is in many aspects dysfunctional regarding growth and employment in MS and the EMU as a whole.

The authors propose a package of "pragmatic" reforms, complemented by a few more far-reaching measures:

- Implementing better methods of measuring cyclical balances and output gaps. The prevailing techniques tend to underestimate cyclical deficits in recessions and potential output in upswings. The latter could induce spending cuts which dampen upswings. False measurement could over-estimate structural deficits.
- Using a realistic fiscal multiplier in budgetary analysis *ex-ante*, especially for public investment. As public investment seems to have multipliers well above 1 in recessions, the deficit caused by them might be rather small and deficit to GDP ratios might fall.
- An expenditure rule should replace measuring structural deficits. A return to targeting headline deficits is rejected as this would likely increase procyclicality. The expenditure rule should be based on the growth rate of potential output.
- Increasing flexibility for cyclical conditions. More fiscal leeway would be gained if discretional temporary spending were accepted, which is presently interpreted as increasing structural deficits. Similarly, the EU escape clause for severe (EU-wide) downturns could be extended and used for more public investment.
- By using the balanced-budget-multiplier, increased expenditures and tax revenue in tandem could stimulate growth.

Less pragmatic are the following further reaching proposals:

- Creating an EA stabilisation facility beyond the minuscule special budget within the EU budget, as agreed in Meseberg (2018) between France and Germany (Budgetary Instruments for Convergence and Competitiveness (BICC)). This facility could empower countercyclical policy. They envisage a "Green New Deal" by an additional investment budget of 1.5-2.0% of EU GDP, financed by the emission of EU bonds as safe assets and/or by increased EU own resources. This proposal came unexpectedly onto the agenda in the course of the Corona-crisis.

In general, the authors argue for implementing the Golden Rule for deficit-financed public net-investment, which should be exempted from evaluating structural deficits.

The pragmatic focus of the proposal intends to increase countercyclical spending in recessions. The use of fiscal rules in cyclical upswings is less clear (is fiscal tightening necessary in upswings? Wouldn't this dampen upswings and under which conditions is this the case?). If a general increase in structural deficits is on the agenda, even if in part not counted as

violating the prescriptions for structural balances in the SGP, the impact on public debt, especially in high debt countries, would be accepted or tolerated, but with the risks mitigated by the ECB or the ESM as lenders of last resort.

Dullien et al. 2020 (IMK)

Authors from the German *Macroeconomic Policy Institute* (IMK) also propose an expenditure rule, however, combined with a Golden Rule for public investment. Because of the procyclicality of the structural balance approach in the SGP, caused by the well-known measurement problems, an expenditure rule is preferred. Similar to other proposals, the aggregate A comprising primary expenditure of the general government, net of non-discretionary spending for unemployment benefits and similar expenditure, and in this proposal also without public investment, should not grow faster than the growth rate of nominal potential output y; both A and potential output are counted in real terms plus the *target inflation* of 2 percent; we denote this growth rate as y*. y* is seen as easier to estimate than the *level* of potential output. Discretionary changes in revenues allow for higher or lower levels of public expenditure. This makes unfunded tax cuts or additional unfunded spending impossible. Deficits in recessions are fully or partially offset in upswings even though a cyclically balanced budget (be it in absolute terms or as the debt-GDP-ratio) is not mentioned explicitly. Also not addressed is the difference between the *level* of expenditure and the *level* of revenues. This is also neglected in most of the other proposals for expenditure rules. If expenditure grows with the same rate as potential output, no matter whether the initial budget balance is zero, in deep deficit or in surplus, the rule would not be connected to deficits (it is a spending rule not a deficit rule) and has no connection to the level of debt. Without targets on *levels*, targets only on *growth rates* of spending are incomplete, unless the level of debt is considered irrelevant. From a Domar-based perspective, the primary balance is the critical point (see below), hence primary spending relative to revenues.

MS with high debt above a threshold should have a slightly lower ceiling for the growth rate of A, Â', depending on the difference between actual debt and the debt threshold so that country-specific $\hat{A}_i$ (i denotes a specific MS) are prescribed. Instead of the 60% margin of the Treaty, Dullien et al. propose 90% of GDP as cap for debt since in a foreseeable low-interest-environment in at least the medium-term countries can carry a higher debt load than under higher interest rates in the past. Â' should be slightly below y* in high-debt countries, perhaps with $\delta = 0.01$ (hence lower than in Claeys et al. (2016)). They mention that Â' should not become negative in real terms (12, note 7). Nevertheless, the expenditure rule would be similar

to the other authors (see above). Â is in this proposal the growth of public expenditure without several items *and* without public investment. Any expenditure path with Â' < y* over the medium-term (or even longer) causes severe problems, as y is dampened under realistic conditions (see the critique below).

A significant element in this proposal is that net investment – as a normative target share of GDP, namely 1.5% – would grow as fast as potential output, no matter where the debt ratio stands. In other words, net investment is exempted from the debt brake. Of course, the downside is that budget deficits in high debt countries might be higher, perhaps preventing debt reduction and neutralising the debt brake. Again, it is the primary balance that counts. However, the implicit rationale is that public investment spurs potential growth sufficiently so that the debt ratio would indeed decline. The authors, like other writers on the expenditure rule, are mute on budget balances, be it the headline or the structural one, or primary balances; if the debt level is relevant, be it 60% or 90% as in this proposal, the debt reduction term replaces prescribing norms for structural or primary balances. Yet it remains open whether high debt MS can use the 1.5%-Golden Rule for investment without jeopardizing the debt reduction path. Once the debt cap is reached or undershot, it is not clear which structural or primary deficit is permitted. Perhaps it is meant that the Golden-Rule-based structural deficit cap of -1.5% is allowed for all MS at or below the threshold. Since -1.0% is presently allowed if the debt level is "significantly" below 60%, the change from -1.0 to -1.5% is small, but the increase of the debt limit to 90% is a major change. That would require changing the Fiscal Compact and/or the respective national basic law, mainly the "debt brakes". The proposal is not yet clear on these issues.

As in other proposals, in case of severe economic crises, an escape clause should allow discretionary expenditure and suspend the expenditure rule temporarily.

All authors reviewed so far prefer some kind of expenditure rule rather than following the structural balances as intermediate goals. The expenditure rule included in the current set of rules of the EU Commission differs somewhat from the proposals, but not very much (see the comparison of Claeys et al. 2016, 10). The idea is to restrict expenditure growth in "good times", but this likely backfires on aggregate demand and the growth of actual and later on also on potential output, unless there is an inflationary positive output gap in "good times". Then (and only then) restrictions on aggregate demand make sense. The inclusion of a Golden Rule in two proposals is a point of difference; Feld et al. (2018) intend to leave almost all SGP rules unscathed. Only one proposal (Dullien et al. 2020) really questions the 60% debt ceiling; the EFB (2019) does but without making a clear recommendation. Benassy-Quéré et al. embed

their ideas in a broader scenario of reforms, some call for a combined reform of the MIP and the SGP, such as Dullien et al. (2020). The "deficit bias" is an idea that most authors follow, more or less explicitly. Since this is a crucial analytical part of most proposals, its validity needs to be examined. If this concept does not hold, many proposals likely fail to tackle the challenges mentioned above.

Blanchard et al. (2020)

A much-discussed draft paper in several versions from Blanchard, Leandro and Zettelmeyer (30 August 2020, BLZ in the following) differs from all other proposals. The analytical part draws on functional finance and a special interpretation of the Domar equation. It is argued that under a constellation of $r > g$ public debt dynamics could be explosive if the primary surplus is not adjusted to limit the level of the debt ratio to a finite number to which debt converges gradually. BLZ reject Bohn's (1998) notion that in principle, there is no objective limit for debt sustainability if the primary surplus is appropriately adjusted – as it was all throughout U.S. history. BLZ argue that there can be certain limits to the increase of primary surpluses, according to the EU performance history, perhaps at 3%. Beyond this margin, debt sustainability would be at risk, simply because of political resentment against raising the primary surplus. However, with a constellation of debt dynamics at $r < g$, debt explosion is impossible. The debt will always converge to some finite number. They state that the entire fiscal policy framework of the SGP and the FC (TSCG) is based implicitly on the traditional view that $r > g$ which requires a primary surplus. If the low-interest-rate environment is longer lasting, the framework must be changed fundamentally since "debt sustainability is just not an issue" (8).

Under the present fiscal rules, the authors see a potential conflict between debt sustainability and the stabilisation function of fiscal policy (12). They see incentives in the EMU to underuse fiscal policy due to "demand externalities". Erstwhile, Joan Robinson called this "beggar thy neighbour policy".

However, the authors immediately step back, arguing that there are risks of interest rate hikes. They point to high uncertainty regarding sovereign debt risks, especially on three counts. First, "capital" might be crowded out, leading to an increase of the marginal productivity of capital and subsequently to higher (long-term) interest rates; this would occur independently from the specificities of national currencies; hence it would be a global increase. Second, country-specific reasons related to particular currencies or country risks could trigger interest rate hikes. Third, debt shocks may occur, which can change the sign of the $r - g$ differential.

This argumentation is very brief, seemingly based on antiquated economic theory and it ignores the role of central banks. Yet, it is likely that the nominal and also real long-term interest rate, at least in the EMU, will rise again to some extent. This expected rise does not necessarily lead to a return to r > g, though.

Due to these uncertainties, BLZ plea for replacing the EU fiscal rules by "*fiscal standards*". The latter is not more than a "statement of general objectives" like in Article 126 TFEU: "Member States shall avoid excessive fiscal deficits." In addition, "stochastic debt sustainability analysis" (SDSA) with probabilities of default depicted in fan charts, is recommended. In our opinion, such analyses are not new. They are already used in the "Debt Sustainability Monitor" of the European Commission (EU-Commission 2020a). In order to give this generic "standard" sufficient clout for political implementation, the authors call for the European Court of Justice (ECJ) and a special Fiscal Board of technocrats. Apparently, lawyers or other technocrats shall take over when economists give up. Which would mean abandoning a fundamental prerogative of democratically elected parliaments. While BLZ's political conclusion is a confession of failure, their analytical assessment is sharp and highly valuable.

The latter is summarised in five points: (i) there is no magic number for sustainable debt; (ii) the three-zone-approach of the IMF should be endorsed: debt may be unsustainable, or sustainable with low probability, or sustainable with high probability. Debt sustainability is about probability and potential debt dynamics. iii) Key is the focus on the primary balance. (iv) The primary balance depends on the r - g differential. (v) Too low primary balances can risk debt sustainability. These statements, with which we fully agree, are a fundamental critique of the fiscal policy framework of the EU. We attempt to spell out the full consequences in chapters 5 and 6.

Besides the eight proposals reviewed here, hints to a few other – contrasting – proposals are necessary. The German Bundesbank (2017) has been concerned about too lax fiscal rules since the flexibility clauses were introduced in 2015 by the European Commission. The authors plea for a return to the pre-2015 rules of SGP and Fiscal Compact and call for stricter enforcement rather than changing the rules. A team of authors from the ECB (Kamps et al. 2019) have a more critical view of the EU fiscal framework. Procyclicality and complexity of the rules are criticised, and the heterogeneity of MS is precisely recognised, yet proposals remain vague.

Some authors seem to believe that the shortcomings of the measurement of potential output and structural balances could be solved by technical reforms using different measurement methodology deviating from the production function approach used by the

Commission (representative for several authors cp. Heimberger/Kapeller 2017, Heimberger et al. 2020). Via realistic changes in assumptions, the cyclical deficits in recessions would be more significant, and they would fade away later in upswings. This way, structural balances are, in essence, lower and cyclical balances are as well. Thus, the scope for countercyclical action is bigger than calculated by the Commission. Even if this critique is correct and alternative measurement superior, the level of debt would not be addressed and neither would the primary balances. Moreover, the expenditure rule was precisely proposed to overcome such shortcomings of measurement, but it incorporates the problems mentioned above in the review of the proposals.

Finally, we mention a recent draft paper from Furman and Summers (2020) which came too late to be integrated in this study. It deals with U.S. public debt after the Corona crisis but can be generalised. The authors hold that the reduction of real long-term interest rates in the U.S. by more than 4 ppt in the last 20 years has significantly changed the role of both fiscal and monetary policy so that a new mix becomes necessary with greater scope for fiscal policy. This holds despite uncertainty of future "neutral" (i.e. natural) interest rates, analysed in the tradition of Wicksell and the loanable funds theory. Under lower interest rates, g tends to exceed r which requires a redefinition of fiscal sustainability. The traditional metric of gross debt relative to GDP should be replaced by the interest payments on debt; they propose that the U.S. real interest service on debt should not move above 2% of GDP. The concept of balanced cyclical budgets is rejected. Many of these ideas are similar to our own proposals in chapters 5 and 6 although based on a different theoretical background.

Furthermore, many authors call for a central fiscal capacity as central bank monetary policy runs out of steam. Also, the Director of the Fiscal Affairs Department of the IMF calls for establishing a centralised fiscal policy in the EMU (cp. Gaspar 2020) as one of three major reforms (besides completing the banking and the capital market union). Similar quests for a central stabilisation capacity in the EA come from other IMF-authors (Arnold et al. 2018, Buti/Carnot 2018, Carnot et al. 2017, Sims 2019, De Grauwe 2015, Berger et al. 2018, Carnot/Kizior/Mourre 2017).

Before we turn to our proposals, we analyse the key pillars of the expenditure rule proposals.

3. Critique of the expenditure rule proposals

3.1 The "deficit bias" hypothesis

Although there seems to be broad consensus that expenditure rules will likely perform better than the SGP with its focus on structural balance targets, there are several shortcomings with both concepts. so the focus here is on expenditure rules.

The key pillar is the assertion that the "deficit bias", especially in "good times", is at the root of too high general government deficits and debt, in other words, fiscal profligacy rather than "sound finance" with "fiscal discipline". These terms are vague and often misleading. The basic underpinning comes from public choice theory. As Wyplosz (2012), standing in for many other authors, puts it, it is the *"common pool problem"* which leads democracies to postpone taxation and spend too much in the present period, so that public debt is shifted to future generations. Thus, fiscal profligacy or systemic myopia is seen as a defect of democracies, leading to too soft budget constraints, unless mitigated by rules and institutions. This basic presumption is more an axiom than convincingly evidence-based (cp. Imbeau 2005 for an overview of some empirical findings). If democracies do indeed tend to too high deficits, either inflationary or expansionary, it could be concluded that rules and institutions should ensure a more contractionary stance. From this angle, rising debt levels in the EA reflect too lax fiscal policy.

The implicit logic is the notion of a *cyclically balanced budget*. One understanding of this term is *absolute* balance, so that the sum of cumulated deficits equals precisely the sum of surpluses. This implies long-term fiscal balances of zero and a trend toward a zero-debt ratio, or close to it in the long run. Another version allows permanent deficits but intends to keep the debt-to-GDP-ratio constant over the cycle. The latter version seems to be the main implicit concept in the SGP fiscal rulebook. Most EU-MS and most OECD countries have faced increasing debt ratios since the mid-1970s, even in some of the most disciplined countries in this regard like Germany. It seems that other reasons than the "debt bias" are categorically ruled out.

First, it needs to be clarified what "good times", during which debt ratios should be cut toward the pre-recession level, are. The traditional understanding of positive output gaps is that if aggregate demand increases when the gap approaches zero, inflation above target inflation occurs. Indeed, then curbing public expenditure might not harm real output and employment. Yet, this requires a common inflation target in all MS; yet the ECB defines the target for the EMU as a whole, but not necessarily for each MS. If it applies to every MS as well, fiscal policy or other policies would need an institutional assignment which does not exist. Questions might

be raised whether core or headline inflation is targeted and whether nominal wage coordination among MS might be better suited for this task. Inflation could also have other roots than too strong aggregate demand. Factually, there is an apparent disconnect between measured output gaps and inflation, especially since the financial crisis, and even more with deflation. For instance, since the global financial crisis inflation in EMU was clearly below the target, but since 2012, growth of revenues more and more exceeded growth of expenditures on average in the EA until 2018. Contractionary fiscal policy prevailed despite inflation below target, in contrast to the period 1999-2008. Strictly speaking, there were no good times in this period.

Second, if "good times" are considered as "relatively good" compared to the recession times, irrespective of the inflation rate, the term "output gap" is inappropriate. Then the only goal might be to reduce the debt level, even at the expense of real growth in an upswing. If this dampens growth or shortens the upswing, the task would be calibrating fiscal retrenchment and growth in a way that sacrifices some growth (probably also employment) without jeopardising the debt-reduction attempt. Such a calibration would require fiscal fine-tuning and is not a very promising endeavour. It could turn out that in presumably "good times" target inflation and debt reduction are conflicting goals (2012-2019 in the EA as a whole) or that both goals remain unachieved, as in most high-debt countries in the same period.

Third, a quick historical look at the evolution of rising debt ratios in Europe, following the simple arithmetic of Evsay Domar (see section 4), could debunk the generic deficit bias approach. Let's take Germany as a case in point, facing an almost secular rise of the public debt, relative to GDP, since the 1970s until 2012 (Priewe 2020a). The 1980s were overshadowed by high interest rates due to disinflation by monetary policy, relative to modest GDP growth, combined with restrictive fiscal policy ("austerity"). A leap in debt came with the German unification with enormous additional primary spending and with the German-German currency union, which triggered inflation and subsequent excessive monetary tightening. With the wisdom of hindsight, it was a shock which could trigger an escape clause. Subsuming this as fiscal profligacy or indiscipline due to a lack of political will to raise taxes or cut expenditure is misleading, even though a grain of truth should not be excluded. The next shock came in the early 2000s with 13 quarters of real zero growth, in the aftermath of the dot.com bubble and the 9/11 global shock. These years did not include a "technical" recession, but their economic impact was like a full-blown recession when looking at the loss of GDP. Technically, they were neither "good" nor "bad" years. Only 3 "good years" remained until the next shock hit, the global financial crisis, which pushed debt almost 20 ppts upward.

Said bluntly, if there are so many adverse shocks, good times are rare and short. Times that were good enough to constrain expenditures, even though inflation was unambiguously below target, triggered strong monetary easing. In other words, the imperative to save in good times ignores history (shocks, legacy debt), and it ignores inflation below target, hence monetary policy. Similar narratives could be told regarding European high-debt countries like Italy. Key for understanding Italy's debt is understanding its historical legacy. Attempting to reverse historical developments by fiscal frugality can lead, under certain circumstances, to self-defeating fiscal constraint. This is a phenomenon ignored by almost all authors following the deficit-bias hypothesis (cp. Fatás/Summers 2018).

Fourth, the standard arguments against our three objections are unlikely to hold or only work in special cases, requiring rational expectations based on the Ricardian equivalence theorem (judged empirically weak, cp. Stanley 1998, Holtfrerich et al. 2015), or for austerity to be expansionary (Giavazzi/Pagano 1990, critiques from many authors, e.g. Guajardo et al. 2014, Blyth 2013, 212-216; Breuer 2019). Expansionary effects in this view are due to shrinking interest rates, reduced interest payments in case of debt reduction and improved trust in debt sustainability, among other factors. In most advanced countries with high debt, interest rate spreads in case of rising debt are small or negligible, while rising spreads in EMU depend on a specific monetary policy which is incapable of protecting sovereign bonds, in contrast to countries with stand-alone currency (De Grauwe/Ji 2013). Indeed, the interest burden of governments drops if the debt ratio drops, but only if austerity is successful. This case will be analysed in more detail below.

The bottom line of these four objections is that bad times can be (and often have been) longer and more severe, while good times may be shorter and weaker than a fiscally balanced cycle implies, especially if adverse shocks are frequent. Then rising debt levels could be second best, especially if there is no clear debt threshold beyond which illiquidity and subsequent state-bankruptcy compellingly ensue. Furthermore, carrying legacy debt may be less of a burden than endless fiscal austerity. All this has nothing to do with the allegation of ubiquitous preferences for fiscal deficits. Besides this, history is full of episodes of postponing highly productive public spending and burdening future generations with the costs of neglect and forbearance.

Nonetheless, in case of pending inflation, contractionary fiscal policy is advised. Albeit this was not envisaged in EMU, due to an ill-designed mix of centralized monetary and national fiscal policies, absent central fiscal policy.

3.2 Curbing expenditures rather than raising tax revenues?

The deficit-bias proposition is often linked to the expenditure rule proposals because austerity imposed on spending is considered less contractionary (or even expansionary in some cases) than austerity by tax increases. This argument is put forward prominently by Alesina, Favero and Giavazzi (2019 and elsewhere), and adopted by many others, for instance, by Turrini (2008). The reasoning is as follows: If budget deficits and debt are too high, spending and/or tax revenues need to be cut or increased, respectively, for a long-lasting period or forever. The impact on private investment is considered key for long-run effects on growth. A spending cut will be interpreted as expected future tax cuts with positive effects on current spending, especially by firms.

Households might increase their propensity to consume following their expected future net income. By contrast, tax increases are perceived – rightly – as permanent, with a negative impact on private investment. Moreover, tax increases tend to cause more allocative tax distortions of a different kind, both for labour and for capital. Thus, multipliers are assumed to be higher for tax increases compared to spending cuts. Hence spending-austerity should be distinguished from tax-austerity, the latter being likely self-defeating, the former not or only mildly contractionary. Evidence is asserted to be found across many countries, recently especially in Ireland and the UK after the Great Recession, when Ireland applied solely spending cuts, and the UK focussed mainly on spending cuts. It is clear that in both countries, corporate tax rates are critical for attracting foreign capital, especially direct investment. The evidence depends largely on expectations which are difficult to measure. The analysis does not distinguish different kinds of spending cuts and taxes. Often public investment is the first choice for spending cuts, and consumer and wealth taxes may differ from income taxes.

However, apart from questionable evidence, the prime point of objection is that public goods are seen as some sort of luxury consumption that can be squeezed with innocuous consequences. That structural reforms in many debt-ridden countries with urgent need of infrastructure, public goods and redistributive transfers require permanently higher tax revenues is implicitly ruled out; indirectly, such reforms are rejected or de-prioritised, and neo-liberal "small government" is preferred to a modern welfare state. It is well-known that many countries with too high deficits suffer from poor tax administration, laxity in enforcing tax laws and business models based on tax dumping. It seems that ruling out tax increases as an option to reduce excessive deficits can be akin to downright fiscal indiscipline. Hence, giving generic priority to expenditure rules ignores the need of reforming the tax system and rules out reducing fiscal deficits with more revenues.

Another critique is the neglect of the fact that expenditure reduction has a direct negative effect of reducing tax revenues, without reducing tax rates, in economies with a public sector of some 40-50 per cent of GDP. This reduced public expenditure permanently reduces revenues in the magnitude of the marginal tax rate, often around 50%. Since public expenditure is private revenue, private spending growth is reduced unless some compensation from other sources evolves that offset the adverse aggregate demand effects.

3.3 Critique of the expenditure rule when debt is at or below the ceiling

The basic form of expenditure rules in all variations is straightforward if the debt-reduction term is excluded:

$\hat{A} = y^* - \delta\,(b_t - b^*) \quad \rightarrow \quad \hat{A} = y^* \qquad \text{if } b_t = b^*$

Government spending of a precisely defined aggregate (A, with a growth rate of $\hat{A}$) that can be steered by the government, meaning that is subject to discretion, shall rise not faster and not slower than nominal potential output growth y*, unless revenues are changed by discretion. A comprises mainly primary spending in all proposals, minus non-discretionary labour-market related expenditures and one-off spending, perhaps also minus other items such as net public investment. Taking potential output growth as the benchmark, most measurement problems of structural balances are avoided, since potential output growth is less prone to mismeasurement than the absolute value of the potential output in a specific year. Countercyclicality seems to improve significantly, especially if the inflation target rather than the expected inflation rate is used in estimating $\hat{A}$ and y*.

However, four problems stand out:

- y is estimated mainly by *looking backwards*, using the trend of potential output in the last 4 years plus the current year, or similar. This can lead to either under- or overshooting forecasts with a certain probability of self-fulfilling consequences. Countries at the end of a long upswing may be overoptimistic in their expenditure rule, countries with a long phase of stagnation or negative shocks may suffer hysteresis. A new wave of growth could be stalled or choked-off. The rule is intrinsically conservative or, put differently, excluding evolutionary change. If potential output is taken as the output beyond which inflation is above the target, then an inflation forecast, similar to monetary policy, is a necessity. What is called potential output growth might not be the true potential output for the next year or years, given a backwards-looking approach. Then y interpreted as potential output growth would simply be a misnomer; it is more or less the past trend. Monetary policy would never accept this, why should fiscal

policy differ? Future potential output growth is uncertain, in the face of all the medium-term forecast errors for the business-cycle.

- The aggregate A does not permit discretionary fiscal spending of the type "temporary, targeted and timely", or allows this only if an escape clause is activated or taxes are raised. The idea of a rule is to minimise exceptions. Hence expansionary fiscal policy is only possible via automatic stabilisers. Thus, the expenditure rule might be superior in countercyclicality, but the magnitude of the countercyclical impulse might be subdued.
- Without the debt-reduction term, the rule is by no means neutral regarding the *level* of public debt. If the initial deficit is considered "normal", debt below the debt target might increase above the target, depending on the r – g differential and the primary balance necessary to stabilise debt. The debt level could also decrease on and on, or a balanced structural budget rule might evolve if the initial "normal" balance is zero. Since the expenditure rule is mute on structural balances, everything is possible. It is very likely that the proposals recur to prescriptions of the SGP and the Fiscal Compact, i.e. to structural balances, with the goal of a cyclically-balanced structural balance or close to it.
- In the majority of proposals, the nexus between budget balances and *external balances* is not even addressed. Then the rule lacks a grounding in basic macroeconomics as it constrains the analysis to only one sector – the public sector, similar to the Maastricht criteria and the SGP. There should be little doubt that a built-in trend towards low debt ratios of 33% increases or sustains a current account surpluses at a high level, forcing other countries to real devaluation or incurring budget deficits. Continuous low fiscal deficits or surpluses can be linked to excessive external imbalances and trigger negative spillover-effects for other MS.

3.4 Critique of the debt-reduction mechanism in expenditure rules

In all expenditure rules a debt-reduction or debt-brake term of the kind $-\delta(b - b^*)$ is included, applied to countries with debt above the cap of 60% (or 90% in Dullien et al. 2020). This term leads to a reduced growth rate of A, i.e. for the adjusted primary expenditure. The initial *level* of A is not determined, except in Christofzik et al. (2018). Revenues grow, following the assumption, at the same or very similar rates as nominal GDP. This implies that A is supposed to grow slower than potential output as long as the debt level is considered too high. The aggregate A probably comprises more than 90% of government spending or around 45% of GDP if the share of general government spending is close to 50% of GDP, as in most EU countries. What happens if the growth of total government expenditure is continuously below the growth rate of potential output until debt is at target? Either nominal GDP growth falters

due to lack of domestic aggregate demand with unchanged real GDP growth, or both real GDP grows less and the inflation rate falls as well. In the latter more likely case, the output gap shrinks, and/or the level of potential output drops with a delay, diminishing potential output growth y.

Is then the debt-brake term in effect a recipe for reducing growth, thus – unintentionally – increasing the r - g differential, hence increasing the debt-GDP-ratio? Unless the aggregate demand shortfall is completely and immediately offset by higher private sector growth, the answer is 'yes, very likely'. The contractionary effects on output and y might be attenuated if they take place primarily in "good times" when the multiplier is smaller than in recessions, and when the country is small and open so that the public expenditure multiplier with regard to domestic demand is smaller than in large countries with a lesser propensity to import.

Why should the private sector grow faster and compensate public demand? Either the acceleration is caused by (i) changes in expectations in accordance with Ricardian equivalence, or (ii) due to increased confidence of investors in the face of visible "fiscal discipline", or (iii) by reduced imports and hence increased net exports, or (iv) by falling interest rate spreads if the debt is expected to shrink.

Ad (i), even if Ricardian equivalence is at work, it is required that such expectations offset Keynesian expectations, leading to less spending, or that the latter simply do not exist at all. If reduced private sector growth materialises due to the expenditure rule, since less public spending is less private revenue and with less private spending, imports grow slower given a constant propensity to import. This effect could indeed attenuate somewhat the shortfall in aggregate demand, especially in small countries with high import-to-GDP ratios. In the EMU, negative growth effects spill over to neighbouring countries. If this occurs at a large scale by several sizable MS, EMU growth falters and likely inflation rates as well, given that other variables remain unchanged. *Ad (ii),* authors, who believe in "expansionary austerity" point to positive confidence effects triggered by new fiscal action such as reducing expenditure. Often the crisis of debt is understood as a *"confidence crisis"*, caused by too high debt and the perception of debt by private investors. Krugman has criticised the "*confidence fairy*" forcefully (Krugman 2012, 195-199). *Ad (iii),* should interest rate spreads shrink, i.e. risk premia on benchmark rates, only interest on newly issued debt drops immediately. The impact on the implicit interest rate r on public debt is negligible in the short- and medium-term, so that r – g differential increases due to reduced growth prospects of GDP. In advanced countries outside the EMU, changes of risk premia on rising or falling public debt are minuscule (cp. the overview on estimations in Priewe 2020, 35-37). In brief, it is mainly the reduced imports argument (ii)

that has a relevant impact in small open economies but is questionable for EMU as a whole or a larger number of small and medium-sized countries.

A simple simulation, with hypothetical though realistic assumptions, shows the problems of the debt reduction term of the expenditure rule. Assume GDP growth g, as well as potential GDP growth y, is 3%, but primary public expenditures – a proxy for A as explained above – grows only by 2% p.a. The r - g differential is highly favourable (-1.0) with r at 2% and g at 3%. The initial headline deficit is assumed at -1.5%, the initial primary balance at 0.5% surplus. Public debt stands initially at 100% of GDP and should be reduced to 60%. A constant average headline balance of -1.5% with 3.0% growth of GDP and also potential GDP would bring about a trend towards halving debt to 50% of GDP, without a debt brake term so that primary spending grows by 3% p.a. like y and g. Under these assumptions, the 60% debt target would be reached, but it takes 59 years.

Table 1: Simulation of the expenditure rule over 15 years

	growth rate	t 0	t 1	t 5	t 10	t 15
potential output (abs.)	3%	100.0	103.0	115.9	134.4	155.8
actual nominal GDP (abs.)	3%	100.0	103.0	115.9	134.4	155.8
revenues (abs.)	3%	48.5	50.0	56.2	65.2	75.6
primary expenditure (abs.)	2%	48.0	49.0	53.0	58.5	64.6
primary expenditure, % of GDP		48.0	47.5	45.7	43.5	41.5
total current public spending (abs.)		50.0	51.0	55.1	60.4	65.9
total current public spending, % of GDP		50.0	49.5	47.5	44.9	42.3
headline balance (abs.)		-1.5	-1.0	1.2	4.8	9.7
headline balance, % of GDP		-1.5	-1.0	1.0	3.6	6.2
primary balance (abs.)		0.5	1.0	3.2	6.7	11.0
primary balance, % of GDP		0.5	1.0	2.8	5.0	7.0
interest payment,. 2% of debt in t-1 (abs)		2.0	2.0	2.1	1.9	1.3
interest payment,. % of GDP		2.0	1.9	1.8	1.4	0.8
debt (abs.)		100.0	101.5	102.4	89.8	56.7
debt, % of GDP		100.0	98.5	88.4	66.8	36.4
private spending, % of GDP		50.0	50.5	52.6	55.1	57.5
required growth of private spending			4.1	4.0	4.0	4.0

Source: own calculation. Note: italics: exogenous in first period. Growth rates in first 4 lines and interest rate on public debt are constant over the whole period.

Public expenditure is roughly 50% of GDP in the outset, but the share shrinks now with the debt brake in the expenditure rule. After only 11 years, the debt ratio would fall from 100 to below 60% and trends to fall further, due to a continuous increase in the primary surplus to very high levels. The key implicit precondition is that private spending grows – after the debt brake is implemented – by 4%, i.e. 1.0 ppt above potential output growth. If this would not

occur, growth falters, and debt may not shrink. Due to the lower growth rate of A, the primary balance will increase from 0.5% to 5.0% after 10 years, and the headline balance will reach a surplus of 3.7% after 10 years. The simulation results are displayed in Table 1.

The proponents of the expenditure rule do not address the problem of compensating reduced aggregate demand because potential output and GDP are solely determined by supply-side factors. This is the case in the before mentioned Cobb-Douglas-function or is done implicitly by a certain type of expectations. Even if the rule were changed so that A is allowed to grow by 2.5% rather than 2.0%, the critique applies in slightly attenuated form. The ever-rising primary surplus as a share of GDP with a constant r - g differential of -1.0 ppt leads to very swift debt reduction following the Domar equation: even a *constant* primary surplus of 0.5%, assumed as the starting point in t_0, would lead to debt reduction, if primary spending would rise with the *same* rate as GDP, hence without the debt-brake term, though with a somewhat slower speed (86% would be reached after 10 years). If the interest rate on debt were 3.0%, hence the r - g differential 0, the debt ratio would fall below 60% after 13 years, rather than 11 years. The debt-reduction term $\delta(b-b^*)$ ignores the constellation of r and g, a fatal defect, as well as the initial deficit and debt.

Our critique does not apply to those versions of the expenditure rule, which exclude net public investment from the A-aggregate. If the Golden Rule is implemented so that an investment target of 1.5% of GDP is allowed to be debt-financed, public investment could perhaps partly compensate for the reduced growth of A, especially if productivity spinoffs materialise. Yet, since A grows *continuously* less than GDP, a growing aggregate-demand-gap emerges while the investment share is fixed, hence grows with the same rate as GDP – unless the Golden Rule raises the potential output growth. In this case, the induced technical progress increases the growth rate of private spending, so that the compensation would work. In section 4, we analyse in more detail when fiscal austerity can be successful and when not.

This critique shows that the expenditure rules with a debt brake will only work in a scenario of a turnaround to higher growth in the private sector. Since no reasoning is provided why this should occur, the rule is not only inconsistent but it is also hazardous in practice as it tends to lower growth and employment and could even increase the debt ratio. Despite plenty of downsides, the status quo of the Juncker-Commission with all the exemptions and escape clauses would be superior, though not very efficient for reducing the debt level in high-debt MS.

Bottom lines

The review of the different proposals for new fiscal rules to replace the SGP in EMU, together with four critiques of the basic thrust of the proposals, leads to the following conclusions. The implicit deficit bias hypothesis as the key theoretical underpinning for explaining rising debt levels in many EMU countries is insufficient; at best, it captures one reason while neglecting many others. Focusing only on public expenditure dynamics and neglecting government revenues ignores one half of the debt story. The expenditure rule proposals without the debt reduction term for countries with debt above the EMU cap tend to improve countercyclicality of government spending compared to focusing on structural balances, but involve many downsides, especially using a backwards-looking method to assess future potential output growth by ousting uncertainty of growth perspectives. Without an addendum related to normal (or structural) deficits, the rule would be unconnected to a long-term debt anchor. The debt-reduction term of the debt rule likely has a strong contractionary effect, which leads very likely to self-defeating results since the primary balance is tuned to rise on and on.

In most proposals, it remains unassessed when fiscal austerity can work (and when not) to achieve debt reduction. This shortcoming is addressed in the next section.

4. When is fiscal austerity (not) successful?

Let us assume high debt levels shall be reduced, regardless of what the target level or cap should be (cp. Priewe 2020 and 2020b for an assessment of the 60% cap). The most important reason for debt reduction is reducing the interest burden in the public budget; other reasons could be to reduce inflation, if demand-pull inflation exists, and avoiding interest rate spreads that could trigger expectations of insolvency risk. Successful reduction means in this context that it materialises to some extent at least in the medium-term (no self-defeat), that it has no or very light negative consequences on economic growth as well as employment and that deflation (inflation significantly below target over a longer spell) is avoided or at least not aggravated.

4.1 The Domar-approach

The starting point is the well-known Domar-equation (equation 1) which emanates from national accounting. In the broad-based debates about fiscal rules and fiscal austerity, this theoretical approach is not heeded sufficiently. b is gross debt as a share of GDP in period t (end of the previous year t-1), g is nominal output growth in t relative to t-1, r the nominal interest payment in per cent of gross public debt, hence the implicit interest rate on debt; to be more precise, r is net interest on debt since taxes on interest revenues of bondholders and

seigniorage should be deducted. p_t is the primary balance in per cent of GDP in period t. If nominal output growth is equal to nominal potential output growth y (see section 3.3), g = y. The debt level, relative to GDP, rises the higher r and the lower p and it falls the higher GDP-growth, other variables constant (for the derivation see Priewe 2020, 20-22).

(1) $b_t - b_{t-1} = \frac{r-g}{1+g}\, b_{t-1} - p_t$

If b remains constant over time, equation (2) applies with p* as the equilibrium primary balance.

(2) $(r_t - g_t)b_{t-1} \approx p_t^*$ if $\frac{1}{1+g}$ is close to 1 for small g.

In order to account for inflation, g could be split into the growth rate of real output g_r and the GDP-deflator, π, hence $g = g_r + \pi$, thus:

(2a) $(r_t - g_r - \pi)\, b_{t-1} \approx p_t^*$ if $\frac{1}{1+g}$ is close to 1 for small g.

Deflation, interpreted as inflation below target, as is often a result of fiscal austerity and wage restraint, can aggravate the r - g differential.

When r = g, a primary balance of zero maintains the level of debt. Is r > g, a positive p* is necessary, and if r < g a negative p* is possible with a constant debt ratio. The higher the level of debt, the heavier the weight of the r - g differential. High debt can be reduced more easily if g > r. Normally, the r - g differential is positive in recessions, and more or less negative in better times. The average long-term differential in EMU as a whole was positive with around 1.4 ppt in the period 1999-2014, but fluctuated cyclically. Since 2015 the differential has turned negative for most MS (note that r is the *average* interest rate on public debt, not the one for new issuance of debt or the yield of bonds at market prices on a certain day).

How about the nominal headline balance, denoted here as h? It is by definition p minus z; z is net interest payments on debt as a share of GDP: $z_t = rD_{t-1}/GDP_t$: $h = p_t - z_t$. Equation (2) can be re-written as

(3) $(r_t - g_r - \pi_t)b_{t-1} \approx h^* + z^*$ with h* and nominal g* and z* as those average values which keep b constant (again an approximation for small g).

Assume h and g are given, and b_c is the convergence value of the debt ratio. The relationship is as follows: $h = gb_c$, in other words, in the long run b trends to $b_c = \frac{h}{g}$ if h and g are average values over time. This simple formula was often used to demonstrate a stable debt ratio in the EA if an average 3.0% deficit ratio with average 5.0% nominal growth of GDP are sustained. If h is split in p and z, we come to $b_c = \frac{p-z}{g}$ in which the three key variables on the right side are visible.

Debt reduction

If the debt ratio is to fall and r and g are given, the condition is

(4) $p' > (r_t - g_r - \pi_t) \frac{bt-1}{1+g}$

or $p' > p^*$

for a longer period so that again values for p, r and g have to be used. p' is the medium-term average primary balance during an adjustment period. If b* is to shrink toward a lower convergence value, either h must fall once and then remain stable, or g has to increase once and stay stable. If h falls but induces a reduced g, b shrinks only if h falls more than g falls. To account for cyclical fluctuations, cyclically adjusted values for r and g are relevant. Yet, for the debt level dynamic p' is the key policy target if g and r are given. p' could differ somewhat from the medium-term primary structural balance. However, since we focus here on the medium- to long-term trends, we neglect cyclical adjustments.

So, for reducing the debt level, we need to forecast g and r, at least for the medium term. Forecasting r is relatively easy, since changes are slow the longer the time to maturity of the debt. For g, a rough estimate may suffice for the medium term. For p the medium-term average could be used, while excluding countercyclical expenditure for unemployment benefits, as in the expenditure rule. If cutting primary expenditure lowers inflation, r might fall only slightly (for old debt, the yield is given) while lower inflation would reduce nominal growth and might increase the r - g differential. Vice versa if the long-term inflation rate rises and g as well.

p reflects both primary spending P and tax revenues T (in absolute terms); both are interdependent. Changes of P directly impact T in modern economies with around 50% public spending as a share of GDP and a corresponding marginal tax rate of similar size. The larger the economy, the stronger the connection between expenditures and revenues. Hence trajectories for both primary spending *and* revenues have to be targeted over a medium-term period. Having the right initial *levels* of primary spending and of revenues allows calculating a growth rate of future primary expenditure A (net of unemployment benefits, one-off spending or tax rate changes) equal to potential output growth g*: $\hat{A} = g^*$, in contrast to the debt-reducing term in the expenditure rule approach with $\hat{A} < g^*$. p' is the debt-reducing primary balance, hence it is above the debt-maintaining p*, given the r - g differential and the share of revenues in GDP:

(5) if $p_t' > p_t^* \rightarrow \hat{A} = g^*$

The higher p_t' relative to p*, the quicker the decline of the debt ratio – if the r - g term is constant and unaffected by p. Since austerity always harms the level of output (public spending is revenue for the private sector), g might drop and require a higher p so that g drops

once more. Then austerity makes debt, growth and employment worse and is self-defeating, a vicious circle. A slight increase of the primary balance p_t', just a bit above p* might suffice to more or less maintain output growth, but debt reduction would be prolonged.

The private sector

A narrow look at the public sector obscures the private sector, comprising households, financial and non-financial firms and also the central bank. If private sector growth is high, r - g is a sizable number with a negative sign, offsetting fiscal austerity. This is why growing out of debt should occur in good times, as the expenditure rule postulates even though "good times" are defined as those with a positive output gap, not as those when g > r. However, debt level reduction may be required not only for a few good years but for a more extended adjustment period until the targeted debt level is reached. Afterwards, the economy can return to the lower p*. What is needed in the transition to a lower debt level is temporary higher private sector growth if the r - g differential is constant and p is increased via fewer expenditures or higher tax revenues. Alternatively, the r - g differential falls, and p remains constant.

Parallel to the public sector, the private sector's debt is exposed to the same constraints as the public sector in equation (2). r may be a bit higher for firms than for the sovereign, due to a risk premium, while g is the overall growth of GDP, comprising both sectors. The level of private debt usually is not a matter of concern, since it is under private accountability and management, including the possibility of insolvency and bankruptcy. To achieve higher growth of GDP, the private sector could leverage or grow faster without higher debt, while the public sector deleverages. This could be achieved, in principle, by real devaluation of the currency against the rest of the world (if Marshall-Lerner conditions apply) – this is no option for an MS in EMU, but for the EMU as a whole, albeit a problematic one, since it might trigger global trade conflicts. Imports could drop, and net exports could rise, as mentioned above. Higher wages and/or higher propensity to consume and invest domestically might spur domestic growth, especially if the inflation rate is below target, but is diminished by rising imports. Technical progress and structural change might dynamize GDP growth too, but these processes take a long time and may even have partially destructive effects on the capital stock. So, possibilities for higher growth in an economy in austerity mode are quite limited if a real devaluation is excluded. The latter will likely have negative consequences in EMU if deflation is looming, especially if fiscal austerity and wage austerity move in tandem. However, in small open economies, real internal devaluation can be growth-enhancing, with deflationary spillover effects for the other MS. Excluding effects on net exports by wage deflation, lower inflation

reduces nominal growth and aggravates the r - g differential since r is relatively rigid due to higher interest rates from old vintages of debt issued when interest rates were higher.

Achieving a lower or even a negative r - g differential is much more efficient for debt reduction than raising p, particularly for high-debt countries whose r - g differential has a much heavier weight than in low-debt countries. Lower implicit interest rates have an immediate bearing on the interest burden which a government has to shoulder. Therefore, monetary policy close to the zero lower bound and asset purchases of sovereign bonds which reduce long-term rates are helpful and have no negative consequences on g, excluding potential adverse side effects on asset prices. A higher g could also, among other ways, be achieved with somewhat higher inflation. For instance, Italy's low nominal growth is partly due to far too low inflation after the financial crisis, to some extent a result of fiscal austerity and eroding wage tariffs under the condition of high unemployment. Raising p has a negative repercussion on g, as mentioned, and on the effective tax rate which requires a second round of expenditure cutting. It also reduces the provision of public goods. By contrast, raising taxes, by better tax law enforcement or higher rates, has no direct impact on spending, and the tax multiplier is smaller than the one on spending.

4.2 Short-term pain, long-term gain? Or always pain?

Some politicians and advisers believe that a heavy one-off cut in spending or a significant unflinching rise in tax rates might suffice for austerity to be effective ("short-term pain, long-term gain"). In most cases, it is in vain. For instance, a country with a long-term average deficit of, say, 2.5% of GDP and a nominal growth trend of only 1.5% (partly caused by low inflation), has a debt ratio of 100% which trends toward a debt level of 167%, considered untenable. Now authorities opt for harsh short-term austerity by cutting the headline deficit significantly, which means raising p since z is given. Fiscal retrenchment reduces aggregate demand and triggers a recession in which the deficit rises and the debt level as well; the latter stands now at 110%. Austerity is accepted as an unavoidable pain. After the fall of output, growth shall return to the old trend, which is the same for expenditures and tax revenues, but the budget balance is worse than before due to the induced recession. Either a higher p or higher g is necessary for debt reduction if r is given. Suppose long-run g is considered hard to change, raising p (cutting h again) sparks a second round of austerity. However one twists it the outcome is always the same. The key point is that p and g are interdependent. Internal devaluation by reducing unit labour costs is a drag on domestic demand and output, except in small open economies.

The conventional or orthodox answer after public debt hikes, so to speak the silver bullet, is raising the primary and the structural balance in tandem, to be augmented by "structural reforms" (GCEE 2020, #296). The choice is based on the Barro-Ricardo equivalence theorem, or on an increase in credibility by bondholders, or on increased net exports or on real currency devaluation due to lower wage costs or lower interest rates. In all these cases, the private sector would pull the economy upward and compensate for the reduced public sector demand. It is, however, conceded, that in the first phase of increased primary balances, a recession is likely, as mentioned in chapter 4. Private dynamic comes with a time lag – short-term pain, long term gain. From this angle, there is only a one-off restrictive fiscal policy impulse, no long-term fiscal austerity. Or: if austerity is *de facto* expansionary, it is in truth no austerity. Hence the term fiscal austerity, understood as a longer period, is not used in economic orthodoxy; the term is ousted, since austerity simply cannot happen. Instead, we hold that fiscal austerity can be a long, painful process which is likely if raising primary balances to a significant extent is implemented - similar to the Greek performance after 2012 and the Italian one since the mid-1990s, respectively, with continuously significant primary surpluses.[3]

Long-term fiscal austerity differs from short-term austerity. The latter means a one-off reduction of aggregate demand to a lower level, the former follows from upholding significant primary surpluses for several years. Compared to the previous year, demand does not drop further; but demand remains at a lower level, either due to reduced real expenditure or via increased taxes with less private spending, depending on the marginal propensity to save and no compensating additional public spending. If the headline budget surplus is to be used for debt redemption, the demand effect depends on bondholders' marginal propensity for consumption or investment which is normally lower than 1.0 (while government revenues are fully spent). Lasting fiscal austerity usually also has two negative supply-side effects. First, potential output is reduced, the capital stock shrinks. Second, fewer public goods are offered, often public investment is curtailed, and unemployment or poverty is maintained with losses in human capital, which are often irreversible. The second effect can be summarised as hysteresis, short-term effects cause long-term effects. Of course, these outcomes only occur if the promised private dynamics do not come to be or have an insufficient magnitude to compensate for austerity. For all these reasons, most countries do not manage to keep high primary surpluses via austerity over a longer period.

[3] Italy prepared itself for access to the euro area since around the mid-1990s. The average primary surplus from 1995 until 2019 was 2.3% of GDP, with only one year with a small deficit. The average growth rate of real output was 0.6%, and the debt ratio fell slightly from 119% (1995) to a low of 104% and rose again to 135% by 2019 (AMECO). This dire performance certainly has many reasons but excluding fiscal policy would be improvident.

If however private growth acceleration is triggered, be it due to expansionary austerity or for other exogenous reasons, such as a fiscal recovery programme or a New Deal, GDP rises, tax revenues do as well (without higher tax rates); now the primary surplus indicates a flourishing economy, capable of reducing the debt-GDP ratio via the denominator. This is the ambiguous face of the primary balance, which needs scrutiny.

Our analysis has shown so far that fiscal austerity in a MS of the EMU has limited leeway to reduce too high debt by national policies. There are some avenues, but with negative spillover effects on other MS. This is a handicap peculiar for a country within a monetary union – nominal devaluation of the currency is impossible, expansionary monetary policy and support from a national central bank are impossible too. Sovereign bonds of high-debt MS face a stronger exposure to international bond markets and their inherent sentiments. High debt countries seem trapped in an impasse. Incurring more debt for higher growth is a risky undertaking.

However, the common central bank could, in principle, offer support against looming multiple equilibria regarding the prevention of adverse expectations of some groups of market players. In principle, a supranational agency could provide support in debt management, especially in the case of rollover at maturity in order to mitigate rollover risks. Regarding fiscal policy, a central fiscal capacity could activate expansionary policy measures if one or several MS have to embark on deleveraging in order maintain sufficient aggregate demand according to union-wide potential output growth, parallel to the actions of the common central bank. This does not necessarily imply transfers to the country facing fiscal austerity; an environment of low interest rates and high union-wide growth helps debt-reducing countries to export more and compensate to some extent ailing domestic demand. MS with high current account surpluses could be obliged to strengthen domestic demand. This is the agenda of the MIP, which is *de facto* unconnected to the EMU fiscal rulebook, as mentioned above. In other words, new fiscal rules in the EMU geared to pressure high-debt MS into a more restrictive fiscal stance are likely to be unsuccessful if not embedded in new fiscal governance of the whole EMU. Simply assigning the task of adjustment to the MS involved in fiscal retrenchment is a doubtful recipe. Again, it might only work in special cases and in a special international environment, but often with negative spillover effects. It may also depend on idiosyncratic features of a country, such as tax havens or country-specific growth accelerations for special reasons, such as fortuitous positive shocks.

4.3 When was debt reduction successful?

The crucial question is whether or not fiscal austerity, aka long-standing contractionary fiscal policy, can reduce the debt ratio. The first answer is "expansionary austerity", meaning procyclical fiscal policy in a recession. There is widespread consensus that this answer is a special case, mainly for small open economies with the option to devalue the national currency, (Guajardo et al. 2014). Besides, the causality might run from growth to debt reduction and austerity, rather than from austerity to growth (Breuer 2019). Especially if debt reduction is seen as necessary for several or many countries, after a regional or global crisis, the evaluation is negative (e.g. Blyth 2013). In the EU fiscal framework, it is generally acknowledged that outright procyclical policy in recessions should be avoided with automatic stabilisers while discretionary measures should be reserved for extreme crises. One of the earliest critiques of procyclical fiscal policy was written by Gestrich (1944) after the German experience of fiscal tightening under Chancellor Brüning during the Great Depression, which provides answers that are still valid today.

Others hold that austerity can work in "good times" which are often not well defined, as mentioned above. Yet, there is a wide consensus that too early switching to austerity can be self-defeating, such as after the Great Depression under Roosevelt 1937, in Japan in 1997 when the consumption tax was raised and the economy plunged again into recession, and also in 2010 when in the euro area - and the UK as well – fell in a second recession, with a marked switch from deficit spending during the Great Recession to fiscal tightening.

These experiences raise the question when the time is good (enough) for shrinking the debt ratio. It seems that a robust growth episode is necessary, or at least conducive. To approach this question, one has to exclude countries with public debt in foreign currency from the analysis, as well as distinguish countries with stand-alone currency and a devaluation option from members of a monetary union. Within the EMU, small and large countries have to be distinguished too, furthermore debt reduction in one country or by a group of MS needs to be differentiated. The classical case is debt reduction in a long spell of growth acceleration, so that a country can grow out of debt – the r - g differential turns negative then. In the optimal case, a real depreciation goes in tandem with expansionary monetary policy, mild restrictions on expenditures and a strong rise in revenues, even without raising tax rates. Catching-up growth after the Second World War is the showcase for this success story, e.g. in the U.S. financial repression, i.e. keeping interest rates administratively low, added to the success. In other countries, idiosyncratic reasons for growth acceleration – e.g. reduction of interest rates on debt – may prevail. Smaller decreases of debt may be achieved if fiscal austerity dampens economic

growth only to a small extent, so that debt reduction succeeds. Institutional reforms or "structural reforms", a black-box term, might be instituted. In some cases, harsh fiscal austerity coupled with wage-austerity, allowed creeping slowly out of debt with broad-based belt-tightening and beggar-thy-neighbour policy. Often success fails to appear - much pain, no gain. The fact that many of the high-debt advanced countries are located in the EMU demonstrates that countries with high legacy debt hoped to have better chances to live with their debt in a hard-currency union, but also that opportunities for growth acceleration, absent devaluation, absent trade protectionism and absent national monetary policy, are slim.

Despite several cross-country studies on successful episodes of debt reduction in recent years, there are only a few on EMU members, apart from small ones. There were only 4 MS which could reduce their debt ratios remarkably since the inception of the Euro in 1999 until the eve of the financial crisis 2007: Belgium, Ireland, Spain and Netherlands. Especially the latter three experienced above EMU-average growth due to country-specific structural features which allowed them to have primary surpluses and a very favourable r – g differential, particularly in Ireland and Spain, to a lesser extent in Netherlands and Belgium.

For an overview of studies on successful debt reduction episodes, see Nickel et al. (2019), Baldacci et al. (2012), Bernardini et al. (2019) and Eichengreen et al. (2019). Often the methodology of these analyses is unclear. We comment on Bernadine et al. to highlight the shortcomings that also occur in the other studies. The authors analyse 30 episodes of massive debt reduction from 1945 until 2017 in OECD countries. The majority of episodes occurred after World War II via catching up growth with strongly negative r - g differentials, often driven by inflation or "repressed finance", i.e., regulatory caps on interest rates. Since the 1980s, with financial deregulation, reduced capital controls and strengthening of the independence of central banks, debt reduction occurred via "orthodox fiscal adjustment" as the authors coin it. This method relies primarily on raising the primary balance. The authors ignore the fact that in most cases after 1980 g exceeded r and that among the successful countries, small open economies predominate. Indeed, the primary balances turned positive – but the authors did not even try to analyse whether this was driven by contractionary fiscal policy or by the private sector. Causality regarding the change of the primary balance is not analysed at all. As is well known, in a number of cases, the key factors were soaring net exports, devaluation, prolonged upswings, increased propensity to consume or other fortuitous factors.

We briefly review two strong episodes of successful debt reduction here, namely the U.S. 1994-2002 (not covered by Bernardini et al.) and Germany 2010-2019. In the U.S., the debt ratio fell by 16 ppt from 60.8% to 44.9%, mainly under both Clinton administrations (data

in this paragraph are from Priewe 2020a, based on U.S. sources). The average r - g differential was -1.7 ppt, due to reduced interest rates and buoyant real GDP growth of 3.4% p.a. in this 8-year episode with 1.8% average inflation. Although a stable debt ratio had not required a primary surplus, the average surplus in these years was 1.8%, with restrictions on expenditures and rising taxes. Strongly reduced interest payments on debt from 3.3 to 1.4% enlarged fiscal space [4]; the growth of spending was moderately limited besides cuts in military spending. However, the planned health reforms were cancelled. In two years, 2000 and 2001, a small budget surplus contributed marginally to the debt reduction. The main political reason for Clinton debt policy was the aversion of the balanced budget legislation propagated by the Republicans, which led to a political compromise of debt reduction, tax increases and sacrificed welfare reforms (cp. Priewe 2001). Clinton's austerity came on the back of the growth dynamic of the "Roaring 1990s" (Stiglitz) and would not have been possible without it, driven in part by expansionary monetary policy. Clinton did not follow the idea of curbing solely expenditure as advocated by the expenditure rule, but intended to combine decisions on spending with decisions on taxes (PAYGO approach).

Germany managed to reduce its debt level from 82.4% 2010, a record high, to 59.6% in 2019, i.e., by 22.8 ppt in ten years (the data used in this paragraph are from AMECO, 9 February 2021, "government" is general government including social security institutions). This reduction came along with an average r - g differential of -1.1%, with a moderate growth rate of real output of 1.7% with a mean inflation rate of 1.6% (GDP-deflator). The favourable r–g differential was mainly driven by the fall of the interest payments on debt from 3.5% to 1.3% of GDP, so that the interest burden fell by 2.2 ppt. The structural balance improved by 3 pts, from -2.1 to +0.9%, similarly the structural primary balance. Also, the countercyclical fiscal policy right after the financial crisis in 2009-2010, which stimulated domestic growth and net exports, contributed to a relatively quick recovery (in 2011 the pre-crises GDP was surpassed). At the same time, the initial structural primary deficit of -1.7% was transformed into a small surplus of 0.9%. This was caused mainly by soaring tax revenues (+4.1% p.a.) driven strongly by rising employment (the flip-side of low productivity increases) while total expenditure grew on average not more than 2.6% p.a., significantly less than nominal GDP (3.3% p.a.), but primary spending grew by 3.0% p.a. in nominal terms. Since 2012 rising budget surpluses showed up, which contributed around 25% to the total debt reduction of 22.6 ppt. The contributions to the budget surplus and the falling debt ratio came from four sources: moderate

[4] Although the interest payments as a share of GDP were 3.3% in 1994, seemingly not extreme, this amounted to a considerable share in total government expenditures.

growth of GDP, buoyant tax revenues without tax increases, strong relief in interest payments and from moderately subdued spending over a long upswing period of 9 years. Without the expansionary monetary policy of the ECB, which reduced r in Germany, the debt reduction would not have worked (cp. Rietzler/Truger 2020).

Both episodes, the U.S. and the German one, demonstrate that postulating the simple solution of raising primary balances via less expenditure growth as a universal success formula is only a small part of the real story.

4.4 Bottom lines

The bottom line of this approach based on Domar's public debt analysis is that debt reduction depends on the four variables, namely p, r, g_r and π. In other words, the structural headline balance, which has been *the* main operational variable in the SGP since 2005 and is engraved in the Fiscal Compact, is irrelevant for the debt level. It is a misleading target, a ghost light. As shown above, the headline deficit comprises the difference of the primary balance and the interest burden: h = p – z, similar if all components are cyclically adjusted. In the past since 1999, the major part was the interest burden while the primary balance was small.[5] The interest burden is fixed costs, not subject to fiscal policy, at least not in the short term. Hence, the goal of a balanced structural budget over the economic cycle with a maximum deviation of -0,5 or -1.0% in the TSCG Article 2, the basis of the MTOs, is misleading. What counts for the debt level, is the (structural) primary balance, as shown by Domar. Interestingly, there is widespread consensus among all proponents of the expenditure rule (despite many other differences) that primary cyclically adjusted expenditure should be the operational target of fiscal policy, as it can potentially be influenced by governments. Our proposal is taking the primary structural (or long-term) *balance* as the operational target, not just primary expenditure. The difference between the structural balance and the primary structural balance, the interest payment on debt, is especially significant in high debt countries. Furthermore, the proper primary balance needed for a constant debt ratio or debt reduction depends crucially on the r – g differential and not on fixed magic numbers like -0.5 or -1.0 with little economic justification. If the differential changes, the target primary balance must change too. Eternal caps or floors for deficits and debt are not sensible from this perspective.

[5] To give an example: on average in the EA from 1999 to 2019, the headline balance (h) was -1.1% of GDP, the interest payments relative to GDP (z) was 2.3% and the primary balance (p) was +1.1% (calculated with AMECO data from 9 February 2021). The structural values are not available for the entire period but likely do not differ very much. The figures show that the size of z is dominant but beyond the reach of fiscal policy.

Particularly in high-debt countries, an expenditure rule with a debt-reduction term likely leads to self-defeating austerity, via reduced growth of domestic demand and lower inflation. Only if the negative demand effect can be compensated by domestic growth or a growth-enhancing international environment, can austerity be successful. Therefore, the main fiscal policy variable should be the primary (structural) balance (which includes expenditure and revenues as well); but also g and r can be influenced, in principle, by monetary policy, including central bank purchases of sovereign bonds of the high debt country and also by making sovereign bonds safe assets (or increases the degree of safety) in order to reduce risk premia. g can be influenced, apart from monetary policy, by public investment and a more growth-enhancing composition of spending and taxation as proposed by Domar. Taxing wealthy citizens as well as interest on public debt, can support debt reduction. Higher propensity to consume is, of course, welcome as well. The most important external support for alleviating fiscal retrenchment in an MS could also come from a supranational fiscal stabilisation facility, absent exchange rate devaluation and unfavourable effects from deflationary internal devaluation within EMU. The central fiscal capacity is even more important if countries with comparatively low debt and ample fiscal space and/or high external surpluses have no incentives for using their fiscal space but free-ride on demand generation from deficit countries inside and outside the EMU.

5. Policy options

5.1 The general idea for fiscal policy reform

As a consequence of the above analysis, two *Fiscal Taylor Rules* (FTR) are proposed here, one for the individual MS, one for a supra-national EU fiscal capacity which should be established (and which might emerge in a nascent stage with the envisaged EU-Recovery Plan). Both FTR are similar. Central fiscal policy looks only at the EA average of the aggregates. p_T is the medium-term, forward-looking primary budget balance target. If $p_T = p^*$, the present debt level would be maintained, given the r - g differential. The debt ratio falls if $p_T > p$. If the r - g differential changes, p* changes.

(6) $p_T = \lambda(h + z) + \alpha(\pi - \pi') - \beta(u - u') - \gamma(\frac{CAB - CAB'}{CAB'})$

The first term on the right-hand-side is the headline balance h (as a share of GDP), z is the interest payment on public debt, as a per cent of GDP; hence h+z is the primary balance. If $\lambda >$ 1 and the other three terms are zero, a contractionary stance is chosen to reduce the debt level over the medium range. If $\lambda = 1$ and the other right-hand terms are zero, the debt level is at the medium-term target and remains stable. The second term is the inflation gap and the third the

unemployment gap with u' as structural or equilibrium unemployment, meaning it is neutral relative to changes in aggregate demand. The last term represents an adjustment-mechanism for a severe current account imbalance if CAB > CAB' or CAB < 0, respectively, with CAB' as a threshold for caps or floors of CAB beyond which an excessive external imbalance exists. At roundabout +/-3.0% of GDP the thresholds should be set symmetrically, requiring a change of the MIP. This term links the MIP framework with the fiscal policy framework, as proposed by Dullien et al. 2020 and also considered necessary by EFB (2019). Excessive current account surpluses or deficits have a bearing on fiscal balances, even though other factors, especially the real exchange rate, approximated by unit labour costs, play a role too (Priewe 2020, 70-72). The FTR of the central fiscal capacity should respond to an excessive external imbalance of the entire EA. The threshold needs to be fixed since the MIP addresses only imbalances within EMU. $\alpha, ß$ and γ are weights attached to the corresponding variables.

In contrast to the monetary Taylor-rule, the output gap is not explicitly addressed, but replaced by the unemployment gap and the inflation gap. Thus, the output gap is re-linked to inflation, as should be the case by definition of potential output and hence the output gap.[6] This way, fiscal policy supports the ECB in fighting inflation and deflation and allows the ECB to avoid extreme monetary stances, with very high or very low interest rates. The medium-term fiscal stance would be neutral if the output gap, approximated by the inflation and the unemployment gap, and the current account are zero and the debt ratio remains constant with the respective p_T, depending on the r - g differential. If the latter were zero, equilibrium p_T is zero as well. There is no explicit gross debt target or debt cap, neither for the MS nor the entire EMU, since there is no optimal debt level and no generic threshold level for debt. As a substitute, we propose the interest payments on debt as a share of GDP (z), as explained below in section 5.2. If the level of debt is considered too high, the medium-term deficit target has to be changed. This should be done according to the medium-term forecasts for r and g. The approach gives MS room for discretion to carry their debt or to reduce or increase it, as long as the deficit target requirements are followed. This discretion requires a monetary policy that protects against unfavourable expectations by bondholders, as practised de facto by central banks in all countries with their own currency and debt in their currency. This way, the level of debt could be targeted variably via the primary balance (i.e., by the sum of h and z), relative to the r - g differential.

[6] The EFB 2019 defines potential output as follows: "The level of real GDP in a given year that is consistent with a stable rate of inflation. If actual output rises above its potential level, constraints on capacity begin to show and inflationary pressures build. If output falls below potential, resources are lying idle and inflationary pressures abate …" (96)

The fiscal target p_T of MS should respond to their national inflation rate if the latter deviates from the target of the ECB, and it should respond to national unemployment since monetary policy disregards employment issues, both for the EA and single MS. If unemployment is above u', fiscal policy should be expansionary unless inflation is above target. In the latter case, unemployment and price stability are conflicting goals, and a political compromise has to be found, both on the national and the EA level. This way, macroeconomic asymmetries, as well as asymmetric shocks among MS, can be addressed. A balanced policy mix is set on the agenda.

p_T is a country specific medium-term target, as mentioned, depending on both expenditures *and* revenues relative to GDP. In a way, it is similar to the MTO in the SGP but aims at the primary balance, not the structural balance. The medium-target should be set jointly by the MS and the EU Commission and/or the Eurogroup. p_T changes with the r - g differential, in contrast to the MTO. The $1/20^{th}$-rule and the minimum benchmark have to be abandoned. A contractionary p_T should only be set as a target for one or more MS if other MS or the central fiscal capacity are in an expansionary stance. "Eternal" targets for the debt ratio should not be set, neither for single MS nor a uniform cap for all (Priewe 2020b). If the 60% cap could remain in the treaty (if treaty change is infeasible), but it should no longer have binding power for the medium-term targets. The use of the operational target p_T should be set cooperatively by MS and the Commission as long as the EMU has not yet established fiscal federalism with a federal budget and a Treasury. Setting p_T should be embedded in national parliamentary procedures, an essential part of budgetary autonomy in the democracy of nation-states. Fiscal boards are helpful, but decision making should remain in the hands of political bodies. Fiscal fine-tuning should be avoided. Sanctions in case of national disregard of agreed medium-term goals with negative spillover-effects on other MS are needed. With an increased EU-budget, it is easier to use sticks and grant carrots in cases of (non-) compliance.

5.2 Focus on the r - g constellation and caps on the interest burden

As shown above, the main focus in the FTR is on the primary balance, the first term on the right-hand side, assuming that the other right-hand terms do not deviate very much from zero in the long run. So, the primary balance, even better the structural primary balance should be the key operative variable of fiscal policy. The SGP rulebook focuses on the structural balance (since the reform 2005), even though there is a consensus that only the primary balance is subject to policy (with a bearing on the structural balance). The difference is the interest

payment on sovereign debt, which cannot be influenced by fiscal policy, and only gradually by monetary policy. Hence it is sensible to define MTOs in terms of primary balances.

r and g are forward-looking estimates for the medium term, but might change in the next medium-term period in size and also in the sign of the differential, so the target p_T would become variable – if g > r, p_T would turn negative and h could fall to a lower level if the debt ratio is considered stabilised, vice versa if r > g. The SGP and the FC (i.e. TSCG) assume that r is always bigger than g[7], *always* requiring a sizable primary surplus and a structural balance close to zero. If g > r, the primary balance can be negative with a constant debt ratio, hence sustainable structural deficits can be significantly bigger than under r > g.

Hence, the rules laid down in Article 2 (1) and (3) TSCG – the 0.5 and 1.0% caps on structural deficits – do not fit the g > r constellation and lead to a systematically too restrictive fiscal stance and under-use of fiscal policy, as stated by Blanchard et al. 2020 (also Furman/Summers 2020). Therefore, the caps on the structural deficits of -0.5 and -1.0% need to be made flexible, not cast in the stone of the semi-primary law of the TSCG[8], depending on the expected medium-term r - g differential. Note, we do not assume a permanent g > r constellation for the future but hold that the sign of the differential could be negative for extended periods. g > r is not considered a pathological aberration or a "theoretical curiosum" as formerly in Blanchard et al. (1991).

This has the following implication. The gross debt to GDP ratio is a misleading indicator for assessing the burden of debt, such as the 60% cap or any other number. Hence, the gross debt should no longer be the alleged fundamental anchor for fiscal policy sustainability. Rather, the proper anchor has to be broader, namely include the interest rate on debt *and* the debt ratio. Therefore, the expected medium-term interest payments on sovereign debt as a share of GDP, i.e. z in equation (6), is the right indicator for the carrying capacity of public debt. This could become the fundamental anchor for fiscal policy. This includes forecasts of potential changes of r. Let us assume, a national alarm line for z is set by fiscal authorities, reflecting the willingness of taxpayers to use debt rather than tax revenues and the commitment to service debt. We assume debt can always be rolled over at maturity, at least for the medium term, so that there is no final – i.e. debt reducing – redemption to be paid. Given z and p_T, the medium-term headline balance, similar to the structural balance, can be derived ($h = p_T - z$). If r - g were

[7] In the Euro area, the r-g differential was around 0.8 ppt from 1999 until 2008 on average, in Germany even above 2 ppt. After 2010, the differential shrank. Cp Priewe 2020, p. 57, and chapter 5.3

[8] The TSCG was intended to become European Law. Since full unanimity could not be achieved, it became an intergovernmental treaty among 25 EU MS with the provision to be integrated later on in European law (Article 16 TSCG). Since the content of the Treaty had to be integrated in national basic (or similar high-ranking) law, it has a massive judicial impact in all MS and hence in the entire EA.

1.5-2.5 = -1.0, p_T* would be -1.0%, the debt ratio 100% and z 1.5%, then the sustainable headline deficit h* would be -2.5%, with cyclical variations summing up more or less to zero in the long run.[9] The debt level would be stable at 100%, and the interest burden were kept stable at a decent level of 1.5%. A debt load of even 200% could be carried if the margin of 3% interest service were fully utilised (given the r - g values mentioned); we could even run very high structural deficits and a primary deficit of -2.0% if the debt level is to be upheld[10], or decide to have a smaller primary deficit if we want to reduce the high debt level. The fiscal leeway in a regime g > r allows countries to carry much or all of their legacy debt for a longer period.

What would happen if the expected r would return to 3%, due to a real interest rate of only 1% plus target inflation of 2%? Most likely the nominal GDP trend would rise a bit, let us assume to 3% with a r - g differential of zero. If the debt level were 100%, the interest burden would be 3%, i.e. at the limit mentioned, p* stood at zero and h* at -3%. Reducing the interest burden would require lowering the debt ratio, hence increasing p into positive territory, if r and g seem unchangeable. The same holds if the expected r exceeds g or negative shocks jack up debt. One must have in mind that a 3% margin for interest payments implies in modern European welfare states interest payments up to 6-6.7% of revenues (with revenues of 45-50% of GDP), much less than in many EU countries stuck in high debt in the 1980s or 1990s.

Choosing the interest burden as the fiscal policy anchor rather than the debt ratio, as proposed here, is a simplification as it neglects a few factors which need to be added. First, *taxation* of interest earnings should be factored in, which reduces the implicit r in the U.S. considerably as calculated by Blanchard (2019). Unfortunately, there is a lack of reliable data in the EU. For Germany for instance, tax revenues are likely small since a large part of sovereign bonds is owned by foreigners. Second, *seigniorage* has to be deducted from the interest payments paid by the State, including interest earned by central banks as far as they own government bonds. For instance, in the UK presently the Bank of England holds 44% of government bonds (FT November 3, 2020); the GCEE (2020 #292) reports 10.6% in Germany, for France 22.6% for Italy and 17.9% in Spain for 2019. In the euro area, seigniorage received by the treasuries in MS seems to be small in general (cp. Bibow 2018, Chiacchio et al. 2018). For Germany for instance, seigniorage amounted on average in the period 1999-2019 to 0.15% of GDP but reduced the low interest payments in 2019 by 27% (Deutsche Bundesbank 2020,

[9] For simplicity, we have omitted the term $\frac{1}{1+g}$ in equation (1) assuming it is close to 1 for small g.

[10] The higher the debt level, relative to GDP, the bigger (smaller) the sustainable headline deficit that maintains the debt ratio: h* = gD, if g is given. However, the interest burden on public debt - rD/GDP - rises with higher debt with given interest rates.

AMECO, own calculation). A cautious estimate could be that taxing interest incomes and seigniorage together could be in the order of 0.3% of GDP. This could lift the alarm line to around 3.3% of GDP but may have to be set country-specifically. Therefore, the anchor for fiscal policy should be the *net* payments on public debt. Since r depends also on monetary policy, both on conventional policy targeting the short-term interest rate and non-conventional policy targeting the long-term rate, responsibility for debt sustainability is shared by the ECB and MS's fiscal policy. We leave it as an open question to what extent the alarm lines should be set country-specific.

Since r is the average interest rate on public debt, old and new bonds alike, hence with different maturities, the yield i on new bonds differs from r. With the recent trend to ever lower yields, even in negative territory, r tends to exceed i. Yet, for newly issued sovereign bonds, the relevant interest rate is i, not r. So, if a government or parliament considers tax-financed expenditure compared to debt-financed expenditure, i is relevant. If r is 1.5%, as presently (2020) on average in the euro area, new projects may be financed with zero or negative interest rates. This would increase the stock of debt, but decrease r slightly, and the burden of interest payments would be unchanged (or fall if output rises). Hence, marginal decisions on debt differ from the issue of debt sustainability.

For measuring the burden of interest payments on public debt, the *real* interest is decisive. If r rose in tandem with the GDP deflator, real interest payments would not rise. Yet, r on existing bonds is fixed (assume fixed-rate bonds) and cannot adjust to expected inflation, while newly issued bonds which replace maturing bonds can (and do). So, with a time lag r adjusts to inflation. When it comes to the repayment of the face value of the bond to the bondholder at maturity, the real value of the redemption may be smaller than face value, so the rollover of old debt can reduce the stock of debt. For example, if a bond was issued 10 years ago at face value of 100 euro with a 3% coupon, the real value of redemption after 10 years of inflation at 2.0% is 21.9% smaller. The annual coupon of 3%, of course, compensates this loss for the bondholder. Saving 21.9% of the face value of gross debt is a benefit for the Treasury. Normally and also in our proposal, this benefit is neglected, so to speak an add-on for the taxpayers. Redemption shrinks with inflation (and rises with deflation).

So far, our proposal started with the FTR and focused first on the operational target for fiscal deficits, then on the debt anchor. The structural balance as the core of the MTO should be replaced by the cyclically adjusted primary balance, the debt cap by an alarm line for the net debt service at 3 (or 3.3%). If r rose in the euro area from 1.7% (2020) to 3.0%, a debt ratio of 100% would be at the static alarm line; assuming g were also 3%, the primary balance zero and

the headline structural deficit 3.0%. This implies that any surplus of the primary balance (and hence any structural balance > -3%) would tend to reduce the debt level and the interest burden.

Countercyclical policy should not follow the problematic measurement of structural balances and potential output, neither should it follow the expenditure rule proposals which we criticised in chapter 3. Following the FTR, the guiding principle is the unemployment gap and the inflation gap. As long as non-inflationary deficits – with target inflation as the benchmark – can increase output, they should not be curtailed. This is in line with the original definition of output gaps. Our approach assigns national fiscal policy an important role in inflation and deflation control. This way the divergent inflation rates in MS prior to the euro crisis – too low in the "North", too high in the "South" – could have been addressed, complementing monetary policy that can only take care of average inflation in the union.

It is worth noting in this context, that relying solely on national *automatic stabilisers* in recessions, which is built-in in the SGP-rules by excluding one-off measures from cyclical deficits, is not in line with the genuine idea of countercyclical policy. Fiscal deficits caused by reduced output and unemployment, i.e. losses in tax revenues and unemployment benefits, do compensate cyclical losses but are not enough to fully counter a cyclical downturn; it is only a *passive* and partial countercyclical response as shown by Oberhauser in many (almost forgotten) publications (Oberhauser 1985, 1996). He called for active, i.e., discretionary temporary responses to cyclical downfalls (later coined by IMF-authors "temporary, timely, targeted"), to be reversed in upswings. From this angle, an expenditure rule would not be truly countercyclical since the cyclical dent in private output would not be fully countered by fiscal policy; only fiscal spending would be smoothed. Countercyclical policy should be practised by all MS, even if their national multipliers are small, so that the – higher – multi-country multiplier is reinforced. Strict limits to cyclical deficits – as in the 3% cap of the Maastricht Treaty – are not necessary if the limitation of the medium-term debt service cap at 3% is abided to. If primary deficits are sustainable in regimes r > g, cyclical leeway in the order of up to 3 ppt is needed in addition to structural deficits.

Active fiscal policy requires some kind of mutual coordination with monetary policy, mainly in two areas. First, when monetary policy runs out of steam at the zero lower bound in situations of recession and pending deflationary depression, fiscal policy is indispensable. Prolonged ultra-expansionary monetary policy with negative policy rates is not a good replacement for a passive fiscal policy. In severe crises, both policies need to be expansionary. Without central fiscal policy by a euro area Treasury, based on a stabilisation budget, such policy is unlikely to succeed by mere coordination of MS.

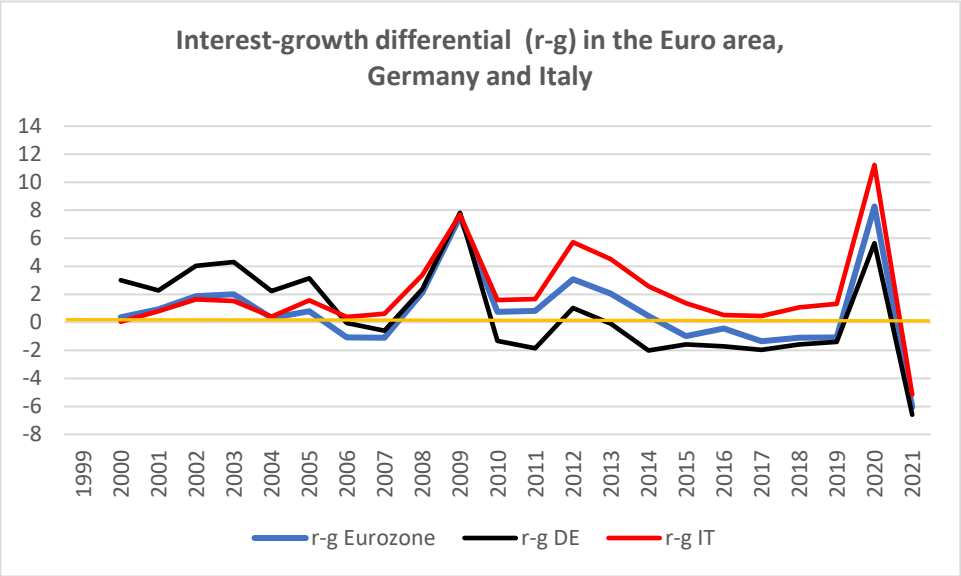
Second, in a heterogeneous monetary union with MS with highly different legacy debt, also hit differently by asymmetric shocks in severe crises and natural disasters, their exposure to bond markets faces different risks for which incumbent governments are not responsible. The narrative that financial markets are needed to enforce "fiscal discipline" in all MS assumes that the cause of risks is the lack of fiscal discipline and that financial markets are neutral and reliable adjudicators. If these assumptions are doubtful, central banks have to intervene when interest rate spreads shoot up by accommodating country-specific measures. Financial system stability is assigned to the ECB and cannot be practised sufficiently by national central banks. The peculiarity of a monetary union with semi-nation states is that without such a market-maker-of-last resort (others call it a lender of last resort for sovereign bonds), MS would be exposed to risks which can more easily be coped with by sovereign states with stand-alone currency. If such policy is classified as "monetary financing" of States and prohibited, such rules should be changed. The term "monetary financing" can be stretched so far that the key functions of central banks are undermined. The higher the debt level after severe crises and disasters, the more important it is that overreactions of bond markets can be curbed. In other words, if there is a very high degree of financial uncertainty due to crises, central banks have to prevent turmoil. The ECB's response to the pandemic is exemplary, much in contrast to its response during the early years of the financial crisis and the subsequent EMU crisis.

Before we come to a brief discussion of potential objections to the proposal, a rough empirical overview of the r - g differential and the interest burden in the euro area is provided.

5.3 Empirical evidence on the r - g differential and the interest burden

The r - g differential hovers up and down with the business cycle (Graph 2). In the euro area until 2014, g exceeded r only in a few boom years, later continuously. When GDP plummets in recessions or crises, the differential jumps upwards and increases the mean. Italy's differential is above the euro area mean; Germany's is below, but only since 2006. Germany reached the regime change a few years before the euro area. The change came predominantly from the interest rate on debt, not from g.

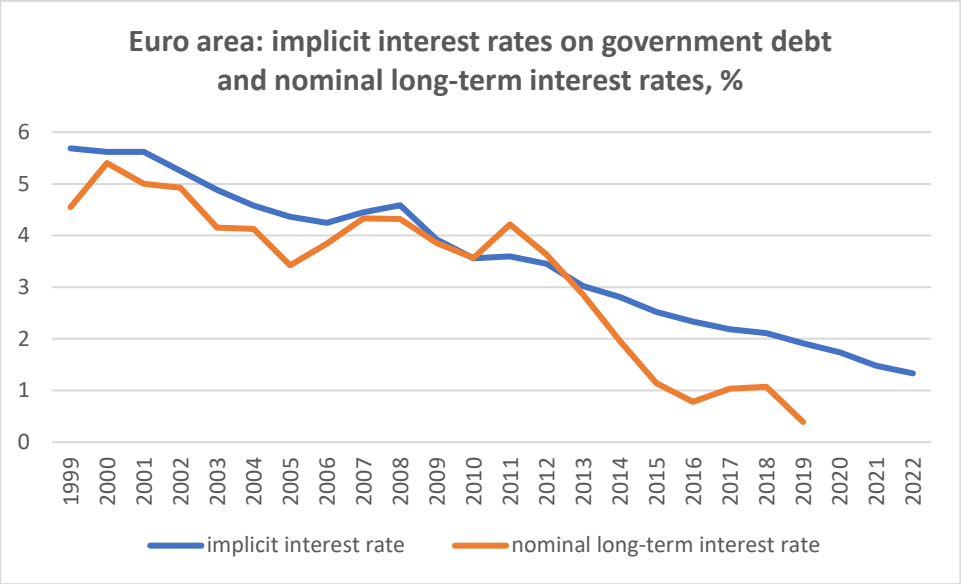
Graph 2



Source: AMECO: lines AYIGD and UVGD, December 6, 2020. Note: data for 2020 and 2021 are estimates of the European Commission.

The implicit interest rate (r) on public debt differs from the *yield* of long-term bonds, as shown in Graph 3. Until 2012, r was above the yield for bonds, which fluctuates with demand and supply, while the gap widened afterwards to more than 100 basis points. For Germany, the yield turned negative, and it became the world champion in negative interest rates, similar to Switzerland.

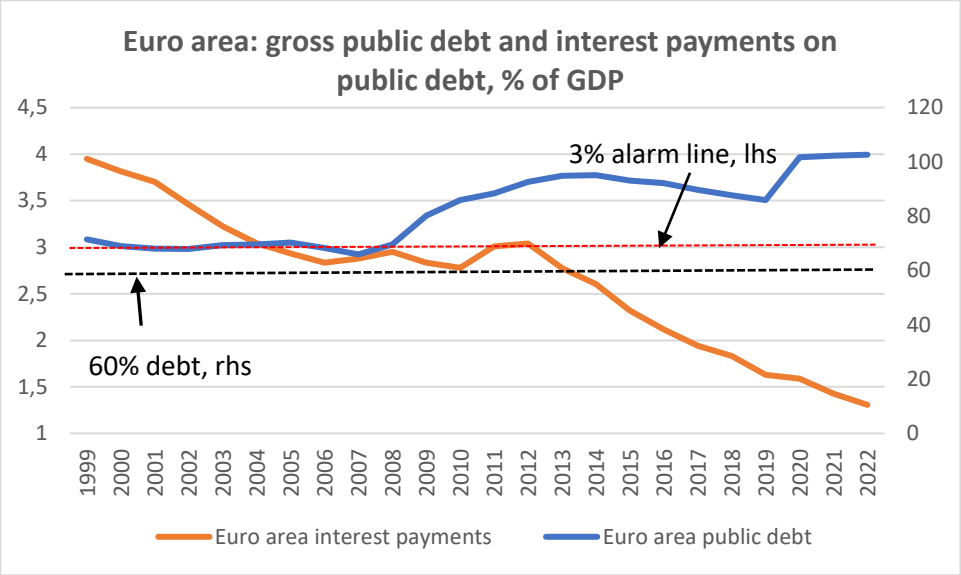
Graph 3



Source: AMECO, lines AYIGD and ILN, December 6, 2020. Note: Estimates for 2020-2022 by the European Commission.

Despite the hike in gross debt as a share of GDP in the Corona crisis, the average interest burden in the euro area reached a record low with 1.7% in 2020. In a few countries, it was above the alarm-line of 3% (Italy 3.4% in 2019), while in Germany the burden came down to 0.8% in 2019.[11] In all four large EU MS, the average term-to-maturity lengthened in recent years to 7-8 years, similar to the trend in all OECD countries (OECD 2019). Graph 4 shows that despite the record-high debt due to the Corona-shock, costs of interest payments have reached an all-time low. The capacity to carry debt has never been so favourable. This judgement applies to all MS and corroborates the view that the gross debt to GDP ratio is a misleading indicator of debt sustainability.

Graph 4

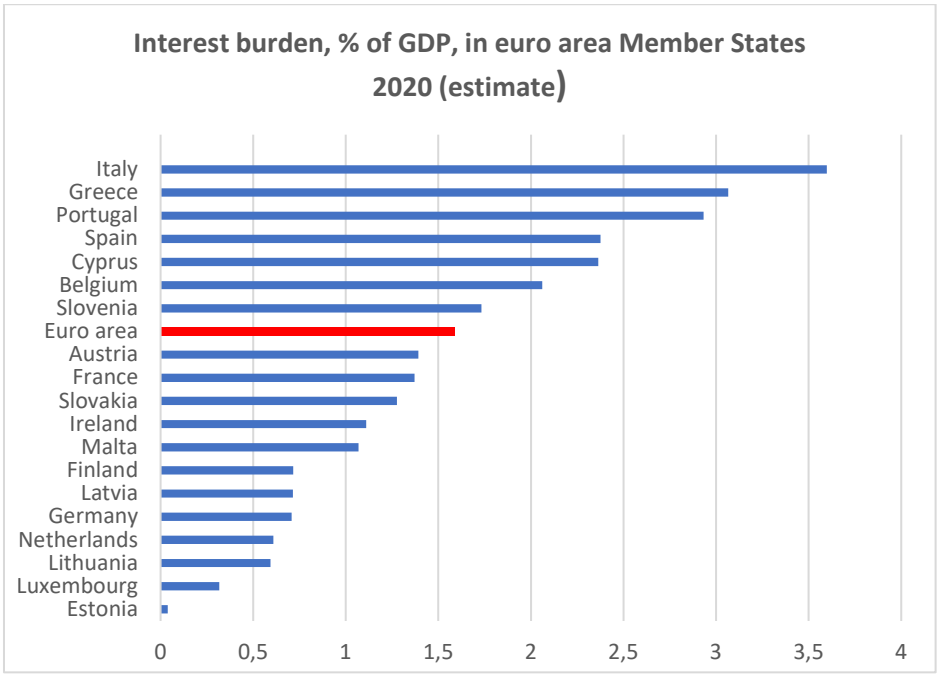


Source: AMECO, lines UYIG, UVGD, UDGG. 28 January, 2021. Note: Estimates for 2020 and 2021 by the EU Commission.

Estimates for 2020 show Italy, Greece and Portugal with the highest burden of gross interest payments, in % of GDP (Graph 4). When the euro was launched in 1999, 4 MS had a burden above 6% and 12 above 3%. Also, Italy, Greece and Portugal improved enormously.

[11] Of course, the burden of interest payments should be calculated in real terms. Since z = rD/Y, nominal values, increased by inflation, show up in the numerator and the denominator. So, z indicates the burden of real debt service.

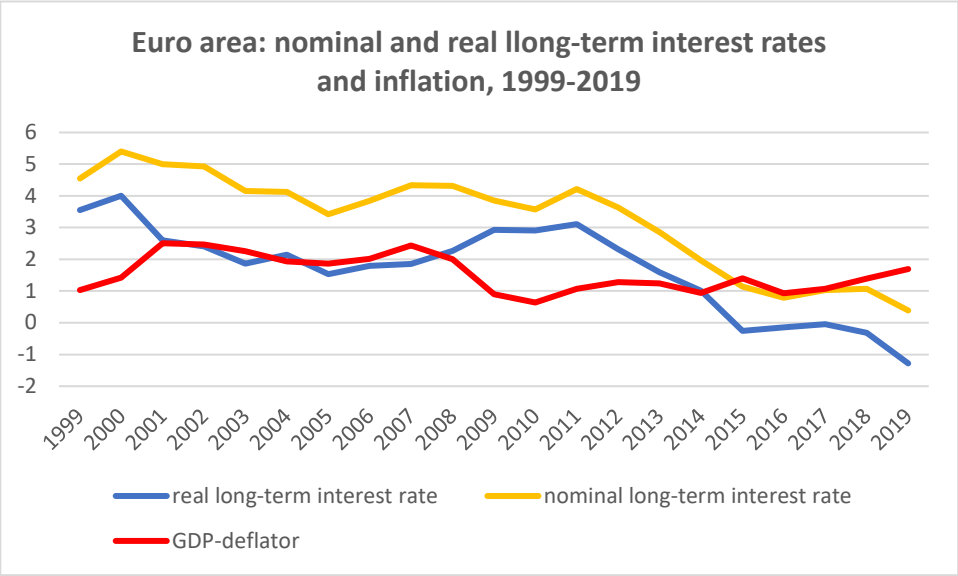
Graph 5



Source: AMECO, December 7, 2020

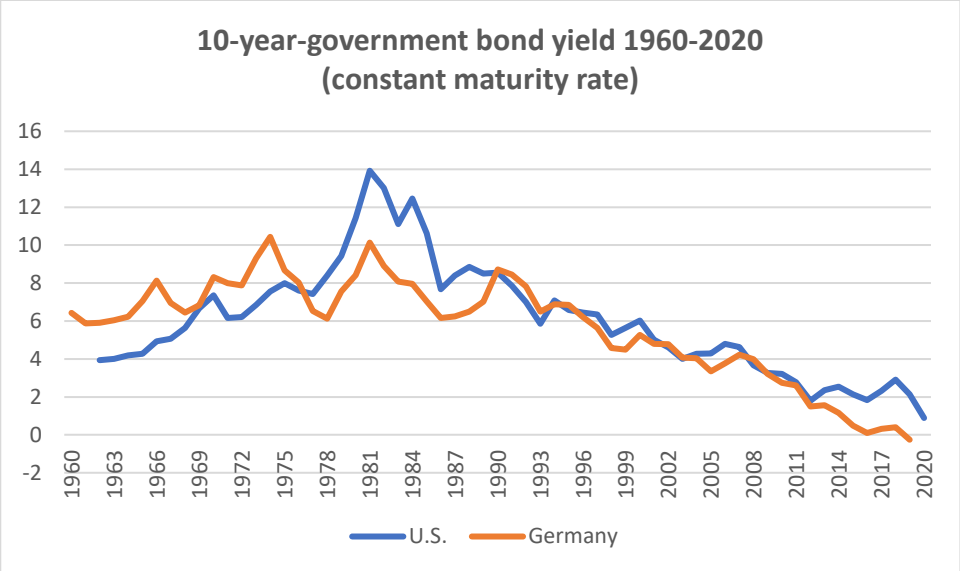
What has driven the fall in interest rates? The reduction came overwhelmingly from lower *real* interest rates and to a much lesser degree from less inflation ("great moderation"), as depicted in Graph 6. Real rates came down from 4% in the year 2000 to -1.3% in 2019; the slightly diminishing spread of nominal rates vis à vis real rates may reflect lower inflation expectations. The long-run tendency of diminishing nominal long-run yields after the Volcker-shock in the early 1980s can be seen for the U.S. and Germany in Graph 7. Germany was the bellwether at the time. Since the 1990s, the amplitude of nominal interest rate changes narrowed, both in the U.S. and in Germany. In the paper we cannot delve deeper into the broad debates about the determination of interest rates, especially those in the tradition of Wicksell.

Graph 6



AMECO: lines ILN, ILRV, PVGD, December 7, 2020. Note: real rates deflated with GDP deflator.

Graph 7



Source: Federal Reserve Bank Economic Data (FRED), 7 December 2020. Note: Annual values refer to data for January in each year.

Now we turn to a brief discussion of potential objections against our fiscal policy reform proposal with the primary structural deficit as the operational target, rather than the structural balance as in the SGP and the TSCG – and the interest service ratio as the fiscal anchor instead of the debt ratio.

5.4 Potential objections to the proposal

Risks of increasing interest rates?

The point made here is that authorities should be prepared for both options (r > g and r < g) and that the fiscal policy regime should be capable of responding to both regimes differently. The entire present ruleset rests on r > g. How long will the current low interest rates prevail?

First, it has to be emphasised again that the implicit interest rates on public debt differ from the yield on sovereign bonds. Since they simply reflect total net interest payments on gross public debt, they adjust to rising yields gradually, depending on the average residual maturity. The latter has been lengthened in recent years to 7-8 years in most MS of the euro area, similarly in other OECD countries, except for the UK with 17 years. Debt management should go in the direction of the UK. Rollover risks, especially in periods of high gross refinancing rates, should be mitigated by the ECB to avoid multiple unfavourable equilibria.

Second, if nominal interest rates rise, say due to returning to target inflation in the euro area or to rising inflation above target, nominal GDP growth rises too, so that the impact on the r - g differential remains small or negligible.

Third, interest rates on debt differ in the euro area, and real interest rates differ even more, with Germany at the lowest level. Raising interest rates at the low end should be welcome, to avoid negative side effects and to improve the transmission of monetary policy similarly in all MS. If nominal GDP would rise at a trend growth rate of 3%, alongside target inflation, nominal implicit interest rates would likely remain below g or close to g.

Fourth, there is a long global trend towards lower real interest rates, as shown in Graph 6, which is unlikely to be reversed to the level prevailing in the 1990s when the rule-book for the euro was designed.

Fifth, overcoming procyclical fiscal policy and turning to decisive countercyclicality, improves the r - g differential. This requires not only expansionary fiscal impulses in all MS in recessions, that could partly be complemented by a central fiscal capacity, but also prolonged upswings and prevention of negative shocks, especially from global financial markets. The average positive r - g differential in the euro area prior to the financial crisis, compared to the U.S. with a decade-long trend of a negative differential, was partly due to a flawed or at least unfavourable macroeconomic policy regime (cp. Priewe 2020a, 2020b).

The German Council of Economic Experts (GCEE) has attempted to show that sudden interest hikes can occur which make rollover of debt at maturity impossible and lead to illiquidity and insolvency, similar to what happened in Greece in 2011 (GCEE 2020, #295, based on GCEE 2017, Box 16). The underlying model estimates “fiscal limits” beyond which

spreads explode. The model chosen is one of many, resting on concepts of intertemporal budget constraints and the highly controversial Laffer curves. There are many such models with quite different results. These models assume that r > g, that bondholders behave uniformly and follow a specific rationality that is well known beforehand and in which the role of central banks is ignored (cp. Ostry et al. 2010 and the review in Priewe 2020, 29-34). In general, spreads on interest rates are very small when debt levels rise in countries with stand-alone currency, even in case of high debt (Priewe 2020 with a brief overview on studies, 36).

The GCEE (2019, Box 13) has estimated the probability of a change in the sign of the r - g differential and concludes that the probability has been relatively high (for the four large EU countries) in the periods 1870-2016 and 1946-2016. They do not look at the implicit interest rates, but at long-term bond yields which are more volatile and use per-capita GDP, which is not sensible since we do not look at debt per capita, neither does the EU fiscal policy framework. The average maturity is not mentioned. Even if there was a probability of a sign-change of 16% to 55%, depending on assumptions, and if the long historical trend were guiding the future, it would make sense to design fiscal rules that are adequate for both regimes. Again, the U.S. is a case in point, as mentioned. It seems that the basic bias behind these analyses is that r > g is seen as the rule, backed by neoclassical theory, not by reality.

Don't we need "debt consolidation" post-Corona?

Many observers agree that we need debt consolidation after the hike of public debt due to the pandemic. But the term consolidation can mean different things: reducing public debt in absolute terms, or relative to GDP, or reducing headline deficits or primary deficits by shrinking net expenditure or reduced growth of net expenditure, or having budget surpluses to repay debt. First of all, a sober analysis after the debt shock raises the question of whether the level of the debt ratio – only the ratio is relevant – is too high or not. Above we have shown that despite the record-high debt level in the euro area, the costs of public debt as a share of GDP have never been so low as they are now. Since this may change, we have to gauge the medium-term perspective. If there is a recovery to the pre-crisis output level, the debt ratio falls immediately (via the denominator), perhaps a little less if the recovery is supported by a debt-financed programme. Interest rates on public debt seem to continue to fall further if the maturing debt is replaced by bonds with lower yields; even better if the average maturity can be increased. If the recovery is strong, inflation might increase toward target inflation, or beyond. Then we could kill three birds with one stone, namely too low inflation or deflation risks, very low interest rates with negative repercussions on asset prices, and the economic crisis due to the pandemic.

If the long-desired exit from extremely low policy interest rates emerges, r would rise and g as well. In this case, the private sector would be boosted, growth and increased tax revenues would pull the primary balance up, and budget deficits could shrink. Debt consolidation without austerity would lead to economies growing out of high debt, with g exceeding r. Even in the long-run real growth of 1.0% plus target inflation could yield a 3% nominal growth trend, sufficient for gradually growing out of debt as long as r does not exceed 3%.[12] Less optimistic scenarios regarding real growth would suggest that interest rates are unlikely to rise if monetary policy remains accommodating. So, the medium-term outlook is more sanguine than popular debt- and inflation-fears suggest. But the outlook depends heavily on the strength of the recovery, which has to be linked to structural change and related structural reforms. Here lie the biggest challenges, especially in high-debt MS, with a backlog in innovation and growth potential. High-debt countries need flank protection by the ECB against risks of rising spreads possibly induced by unstable sentiments of some groups of bondholders and lacking stabilisation of others.

If consolidation means lowering budget deficits, it goes without saying that this *is* necessary post-Corona. But if output picks up once the pandemic is overcome, deficits shrink automatically, driven both by the decreasing numerator and the rising denominator. Shrinking headline deficits and rising primary balances look at first glance like austerity, but they aren't since the contractionary impact can be more than offset by private output and subsequent recovery of tax revenues. However, post-Corona budget surpluses are not needed for debt repayment. Prescriptions for the redemption of Corona debt are senseless. Primary surpluses suffice to bring the debt ratio down; with extremely few exceptions in economic history, episodes of debt ratio reductions came without budget surpluses. Hence the old debt in absolute numbers was rolled over. Looking at the absolute amount of debt is meaningless. Nevertheless, under full employment and balanced current accounts, budget surpluses do no harm but could be inferior to the option of tax reduction.

Another challenge is the risk of deflation if the pandemic lingers on and the recovery remains weak or is dampened by contractionary fiscal policy. Even worse, when a financial crisis ensues due to the bankruptcies of firms and financial institutions. Then another debt hike is likely.

[12] For instance, if Germany has a debt ratio of 71% in 2021 (AMECO forecast August 2020) and faces an r-g differential of -2 ppts (3% growth and 1% interest on debt), the debt level could be reduced with a primary balance of zero by around 1.3 ppts p.a., if maturing debt were rolled over.

Why not a Golden Rule for debt-financed public investment?

Such proposals recommend balanced structural balances or small deficit caps following the 0.5/1.0% rules in the Fiscal Compact and the SGP, but allow additional structural deficits for net investment (e.g., 1.5% of potential GDP in the proposal of Dullien et al. 2020). This is in line with traditional concepts to which also Keynes adhered (Kregel 1985), namely capital budgeting: public investment may be debt-financed, not current expenditure besides cyclical deficits. Such a rule also existed in the German basic law until 2009, however without a cap and not restricted to net investment. Such proposals require a distinction of current (i.e. consumptive) and investment expenditure, including a definition of public investment and the calculation of depreciation of public investment. The implicit understanding is that current expenditure is not (or less) growth-enhancing, investment however is. The rule is still caught in the traditional "object-oriented view" of public credit-financing (analogical to private credit), although understood as a broad aggregate. Some authors redefine investment by including parts of human capital or research & development, but the demarcation leads to more discussions than solutions.

Our proposal avoids these distinctions and simply defines the margin for debt financing of the government budget without linking spending categories to financing modes. The general idea, following Domar, is to structure expenditures in a growth-oriented manner, without privileging specific categories. Public investment and current expenditures are often inherently linked.[13] The budget as a whole must be financed, not item by item. The core idea is functional finance with debt management that controls public expenses and public debt on non-explosive trajectories, contributing to full employment and price stability. If the r - g differential is -1% (or 0% or +1%), a stable 100% debt level with a 3% growth trend (r being 2% or 3% or 4%, respectively) allows permanent deficits of 3% in all three cases; but primary balances differ (-1.0%, 0%, +1.0%). There is plenty of room for debt-financed investment without earmarking issues. Therefore, there is no explicit but an *implicit* Golden Rule in the Domar ruleset and in our proposal.

It should be mentioned that both in the Golden Rule and the Domar-based proposal, in contrast to balanced budgets, inter-generational equity is possible, so that future users of public

[13] Buiter, Corsetti and Roubini (1993) harshly criticised Golden Rules which they believed is included in the 3% deficit margin in the Maastricht Treaty; they interpreted the margin at the time as an average balance, not a cap. Their judgement was grounded on the blurred distinction of consumption and investment in public spending. They rightly argued that there is nothing wrong in incurring debt for public consumption if prudent restrictions for public debt are followed (p. 75). They do not explicitly refer to Domar, but the logic is part of the Domar equation. Overall, Buiter et al. held that the Maastricht fiscal rules have an inherent fiscal contractionary bias. This is even more true for the SGP and the TSCG.

capital of whatever kind participate in the financing burden by paying interest on debt. So that there is no moral hazard of present generations to postpone public investment.

Do high-debt MS have fiscal space to complement monetary policy? Or do we need centralised fiscal policy in the monetary union?

The concept of fiscal space, as developed by Blanchard et al. (1990) and Ostry et al. (2010), holds that countries which have reached a critical debt level should focus on debt reduction by tightening fiscal deficits. Otherwise, interest rate spreads would rise and eventually fiscal sustainability could get out of control. However, there are no firm thresholds for a critical level. By contrast, it makes sense that countries with underutilised capacities, i.e. negative output gaps, high unemployment and below-target inflation, turn to expansionary fiscal policy, especially absent a national monetary policy and the option to devalue the currency. The alternative would mean to embark on unionwide fiscal austerity after corona, since almost all MS overshoot the 60% threshold. As mentioned already, collective austerity would directly lead to deflation. The concept of fiscal space is one of the key reasons why there is no or too little countercyclical fiscal policy in the monetary union as a whole, as criticised often by the European Commission and other observers. Collective expansionary fiscal policy is more forceful and works with a higher multi-country multiplier.

Is there a conflict of goals for high-debt countries regarding stabilisation and reduction of the interest payment burden and debt? Such a conflict can likely occur if interest rate spreads rise, due to a lack of flank support of the central bank, if inflation is above target in the country, and if the expansionary fiscal stance is a solo attempt.

Better than a concerted effort of all MS, which is not easy to achieve due to moral hazard for free-riding on demand creation by neighbours, would be establishing an EU Treasury with a budget, own resources and the ability to issue debt. First, mutually issued bonds would be cheaper than the sum of nationally issued bonds (at the time of writing, there are only three MS in the euro area with triple-A rating, Italy and Cyprus stand as low as triple-B and Greece is below investment grade). Second, the need for the ECB to accommodate specific countries could be relaxed or dispensed. Third, the economic thrust of a joint initiative is stronger, and fiscal policy gains effectiveness. Fourth, the reliance on the ECB as an expansionary engine is reduced somewhat. Fifth, the cohesion of the euro area is improved, especially if targeted and temporary support is given to weaker members. We find that the counter-arguments put forward to defend the status quo of purely national fiscal policy as put forward by the GCEE (2017),

among others, are weak and unconvincing (GCEE 2017, Box 17). Here is not the place to delve deeper into this debate.

Lastly, some authors ponder on debt relief to some extent for Italy, Greece or other MS. Given the low burden of debt servicing in recent years, i.e. the strongly improved capacity to carry their high post-Corona debt, there is no need for outright debt relief even though it would be possible for the ECB to write down its claims (cp. Vihriälä 2020). The key issue is that some MS carry high legacy debt from the pre-euro era, while others were lucky to enter the union with low or almost no debt. A diverse union like the EMU should accept different histories and legacies and enable high-debt countries to carry their burden and not penalise them for their history. In this regard, the euro did a good job for these countries as the decline in the debt service costs over the last two decades shows.

6. Key conclusions

Most proposals for a reform of the fiscal policy rules in the euro area focus on some kind of expenditure rule with adjusted primary expenditure growth as the operational variable; a debt reduction term in the form of expenditure growth below potential output growth is added. With this rule, the problem of measuring structural balances based on potential output can be circumvented. Most proposals are not so different from the "expenditure benchmark" in the present SGP. The 60% debt cap remains the debt anchor. Flexibility clauses should be scrapped, the rulebook simplified, and rule enforcement hardened. Despite significant differences, most proposals would lead to harsh austerity after the Corona pandemic, especially for high debt countries. The main flaws and deficiencies of the SGP and TSCG rulebook would not be addressed.

Instead, we propose some fundamental changes. The proposal emanates from the following critique of the SGP. Since 2005, the SGP defines "medium-term objectives" for fiscal policy in terms of structural balances. The TSCG has engraved the targets of -0.5 and -1.0% as caps for structural deficits. This is meant as a debt brake once countries are close to or significantly below 60%, and the $1/20^{th}$ rule is designed in the SGP and TSCG to reduce excessive debt above 60%. The notion of balanced structural balances with a maximum tolerance of 1.0 ppt would require significant permanent primary surpluses in the order of 2-3% on average in the euro area if the interest burden has the same magnitude as in years prior to the financial crisis. This has continuous contractionary consequences. The implicit logic is that interest rates on public debt r tend to be higher than output growth g. Implicitly the debt brake has a debt anchor goal way below 60% as a point of convergence (under a 3%-growth

trend at 33% of GDP). The case of r < g is missing from the rulebook. But it occurs in reality and is likely to continue for extended periods. Under such conditions, the explicit and implicit goals of the SGP and the TSCG are systematically too contractionary. They lead to under-using fiscal policy, as Blanchard et al. (2020) contend, even when monetary policy is close to the zero lower bound and runs out of steam, although inflation is below target and might turn into deflation.

The rulebook should embrace both fundamental constellations, r > g and r < g. In the latter case, primary deficits are sustainable, which implies that the debt service (interest payments on public debt) is lower and that also higher structural deficits are affordable and sustainable. Therefore, the key operational variable of fiscal policy of MS should be primary structural balances (following Domar), no longer structural balances. The difference is the interest burden on debt. Hence, the proper debt anchor cannot be the gross debt to GDP ratio, but instead the net interest payments on debt. We propose an alarm line at around 3% of GDP with room for cyclical fluctuations reflected by countercyclical fiscal balances. Such a rule should not be a new magic number usable forever. The operational target, the debt-stabilising primary balance, depends on the r - g differential, which can change. For the medium term, say 4-5 years, the target numbers should be relatively stable (or foreseeable) and set as medium-term goals in secondary EU law. In the next period, they may change. They should not be engraved in primary EU law or national basic law which makes change extremely difficult.

The need to change the current rules becomes evident when the record-high public debt after the Corona crisis – seemingly a signal of excessive deficits and debt beyond all traditional criteria for debt sustainability in the old fiscal policy framework of the EU – is compared to the lowest ever achieved net interest burden of all MS. The carrying capacity of the new high debt is more favourable than ever, at least for the time being. The average interest payments on debt stand at around 1.7% of euro area GDP, on average across members (2020). Only Italy and Greece perform slightly above the 3% alarm line. Gross payments should be corrected by seigniorage and tax revenues from taxation of interest incomes. A ballpark estimate arrives at 0.3% of GDP on average. Certainly, probabilities of interest rate hikes on debt have to be assessed. If such hikes come with higher inflation, nominal growth rates would rise with no or only a small effect on r - g differentials. Due to the increasing average maturity of the stock of bonds, the probability of interest rate shocks is small for the medium term. However, rollover of debt in some MS may require support from the ECB in the face of unforeseeable behaviour of bondholders. In reality, all central banks of OECD countries with stand-alone currency would likely be willing to give such support to secure financial system stability if such a need existed.

Bondholders are aware of this and feed it into their expectations regarding sovereign bonds as safe assets.

Under realistic assumptions there is a good chance that all MS can grow out of high Corona debt in a g > r constellation when g reaches around 3% p.a. (1% real growth plus target inflation) and r stays below 3%. There is no need for a new wave of fiscal austerity. There should be no return to the old rules. The rules could be suspended until the end of the pandemic or a bit longer, while in the meantime the rulebook is reconsidered and redesigned. In the long run, a central fiscal capacity is indispensable for the functioning of the euro area. Monetary unions need a minimum degree of federalism, with a well-defined stabilisation, allocation and redistribution capacity. This would also mean a change of the fiscal rulebook for national fiscal policy. This issue is beyond this paper.

Our proposal implies that the SGP – which is secondary law of the EU – has to be changed with regard to the structural balance targets. Whether the TSCG also needs to be changed regarding the goals of a balanced structural budget with a tolerated deviation of not more 0.5 or 1.0%, set in Art. 3 paragraph 1 b and 1 d, is difficult to decide for economists. These numbers make no sense under a r < g regime, but the Commission typically has a wide range for interpretation, even more, if backed by the Eurogroup. Also, the 1/20th rule should be abandoned (it is set in Article 4 of TSCG). Since the TSCG followed the change of the SGP, it should be possible that another change in the SGP can trigger a reconsideration of the TSCG. Changing the TSCG would require the consent of the Heads of State of the contracting partners. The ratification follows the constitutional rules in each MS. There is no compelling need to change the TFEU although it is desirable regarding Protocol 12 with the quantitative limits on deficits and debt. Of course, also the Treaty could be changed, which integrates revised rules into European Law, as stipulated in Article 16 TSCG.

A simple way to open the door for revising the SGP, hence the secondary European law, without any change in the TFEU or the TSCG is re-interpreting Article 3 in the latter (paragraph 2b) which defines the escape clause in Protocol 12 of the Treaty, based on “exceptional circumstances”. The TSCG defines the latter as follows:

> *"'exceptional circumstances' refers to the case of an unusual event outside the control of the Contracting Party concerned which has a major impact on the financial position of the general government or to periods of severe economic downturn as set out in the revised Stability and Growth Pact, provided that the temporary deviation of the Contracting Party concerned does not endanger fiscal sustainability in the medium-term."*

The wording refers to two cases: unusual events outside the control of the contracting partners, and severe economic crises, both conditional on fiscal sustainability. Periods with g > r can be considered as unusual events of the first category. For the EMU it is new and unusual. We do not know for sure that g > r constellations become the new normal for the EMU. The wording does not restrict "unusual events" solely to negative or disastrous events such as natural catastrophes. If periods of g > r were integrated in the reform of the SGP, the limits on structural balances have to be lifted which triggers a number of subsequent reforms of the SGP (such as focus on primary balances and redefining MTOs); flexibility clauses could be dropped, and a thorough simplification of rules with more national discretion could be reached, and much fine tuning avoided. Using the escape clause should not mean that there are no rules. New rules for such episodes are needed.

If such a re-interpretation is rejected, the legal hurdle to changes of the TFEU Protocol 12 and/or the TSCG are high; in the latter case, national law has to be changed which requires in three MS qualified majority of two thirds (Germany, Latvia, Luxembourg) and in 16 MS absolute majority. The scope for substantial changes in secondary European law without any changes in one or both Treaties is limited, besides the re-interpretation of the escape clause. Perhaps lawyers find other options.

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