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Europe's New Fiscal Rules

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EUROPE'S NEW FISCAL RULES

ECONOMICS DEPARTMENT WORKING PAPER No. 972

by Sebastian Barnes, David Davidsson and Łukasz Rawdanowicz

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ABSTRACT/RÉSUMÉ

Europe's new fiscal rules

Europe is putting in place a new system of fiscal rules following the euro area sovereign debt crisis and decades of rising government to debt-to-GDP ratios. These include the so-called "six pack" to upgrade the Stability and Growth Pact to a new Treaty incorporating the "fiscal compact". Much of the discussion about the new rules has been procedural or theoretical. This paper shows what the rules will mean in practice under a realistic medium-term scenario developed by the OECD. In the short term, fiscal consolidation will largely be driven by the current wave of Excessive Deficit Procedures. Only once these commitments are fulfilled will the new system of rules come into action. Although the rules are complex, the central pillar of the new fiscal rules will be the requirement to balance budgets in structural terms. These imply a tight fiscal stance over the coming years for many European countries by comparison with the performance achieved in past decades: almost all countries will have to be as disciplined as the few countries that managed to make meaningful progress in tackling high debt levels in the past. A further tightening of budgetary Medium-Term Objectives is likely in 2012, which will in many cases make the required fiscal stance even tighter. Over the very long term, the rules imply very low levels of debt. The requirements can thus not be considered to be a permanent approach. The methodology to calculate the structural balance has a number of weaknesses and discretion will be needed in implementing the rules.

JEL Classification: E61; E62; H6; H8
Keywords: Fiscal rules; government budget balance; fiscal consolidation; European Union; euro area

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Les nouvelles règles budgétaires européennes

En réaction à la crise de la dette souveraine de la zone euro et après des décennies de progression du taux d'endettement public par rapport au PIB, l'UE met en place un nouvel ensemble de règles budgétaires. Parmi ces nouvelles règles figure le train de six mesures (« *six pack* ») destinées à faire évoluer le Pacte de Stabilité et de Croissance vers un nouveau Traité intégrant le « Pacte budgétaire ». Le débat sur ces nouvelles règles a essentiellement porté sur des questions procédurales ou théoriques. Ce document montre ce qu'impliquent concrètement ces nouvelles règles, dans le cadre d'un scénario de moyen terme réaliste élaboré par l'OCDE. Dans un premier temps, l'assainissement budgétaire sera essentiellement motivé par la vague actuelle de procédures pour déficits excessifs. Ce n'est qu'à l'issue de ces procédures que les nouvelles règles entreront en vigueur. Le point d'ancrage de ces règles complexes réside dans l'exigence d'un équilibre budgétaire structurel. Bon nombre de pays européens devront donc, au cours des prochaines années, adopter une politique budgétaire plus rigoureuse que lors des décennies précédentes : la quasi-totalité des pays devront se montrer aussi disciplinés que ceux, peu nombreux, ayant réussi par le passé à réduire significativement leur dette publique. Un nouveau durcissement des objectifs budgétaires à moyen terme est probable en 2012, ce qui dans de nombreux cas donnera lieu à des politiques budgétaires encore plus rigoureuses. À très long terme, les règles impliquent un très faible niveau d'endettement. Les conditions imposées ne pourront donc pas être considérées comme permanentes. La méthodologie mise en œuvre pour calculer le solde structurel présente certaines faiblesses et il faudra faire preuve de discernement dans la mise en œuvre des règles budgétaires.

Classification JEL : E61 ; E62 ; H6 ; H8
Mots-clés : Règles budgétaires ; solde budgétaire des administrations publiques ; assainissement budgétaire ; Union européenne ; zone euro

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EUROPE'S NEW FISCAL RULES

by Sebastian Barnes, David Davidsson and Łukasz Rawdanowicz[1]

Introduction

The sharp deterioration in the public finances in Europe since the financial crisis erupted, combined with a trend increase in the debt-to-GDP ratio in many countries, has left the public finances in poor shape. The sovereign debt crisis in the euro area has further underlined and contributed to the fragility of the public finances. Both the recent and longer-term trends led to a substantial and necessary upgrading of EU fiscal institutions, notably aimed at dealing with the risks of moral hazard within the euro area.

The main elements of these reforms are a strengthening of the Stability and Growth Pact (SGP) around the so-called "six pack" of legislative measures and a new Treaty incorporating the "fiscal compact", which requires that there must be a rule in national law that the budget position shall be balanced or in surplus in structural terms.

Much of the discussion about the new rules has been procedural or theoretical. The debate has been further obscured by the complexity of the system based on multiple fiscal rules, and their sometimes subtle interaction with basic debt dynamics.

The main contribution of this paper is to simulate the implications of the rules in practice under a realistic medium-term scenario developed by the OECD. The first section briefly sets out the new and revised rules. The second section sets out the simulation framework and the baseline scenario, showing the path of key fiscal variables for EU countries under the medium-term scenario and assuming that countries exactly adhere to the minimum requirement of the most binding of the fiscal rules. This shows that balanced budget commitments in structural terms would likely be central to the new regime.

The final section assesses the system of rules in the light of the scenario. In the long run, the implied steady-state debt levels are extremely low, although this problem emerges pretty far in the future. In the near term, the post-crisis fiscal consolidation would largely be guided by the existing Excessive Deficit Procedures (EDP) and the rules would only require modest incremental improvements in the underlying budget balances. However, in both headline and primary terms, the fiscal stance will have to be restrictive for a long time. What the rules imply for the budget balances is not out of line with what some countries have managed to achieve, but others will have to show much greater discipline than in the past to deliver

1. Economists at the OECD Economics Department. David Davidsson is economist at the Ministry of Finance, Iceland. We would like to thank Peter Hoeller, Piritta Sorsa, Douglas Sutherland and Eckhard Wurzel for valuable comments, and Susan Gascard for help in the final document preparation. This paper was prepared as background for the *Economic Survey* of the Euro Area 2012. The views expressed in this paper are those of the authors and do not necessarily represent those of the OECD or its member countries.

this performance. The revision of the Medium-Term Objectives (MTOs) for the budget balance will need to ensure that the required policies are realistic and sensible. The methodology for measuring the cyclically-adjusted budget balance has serious weaknesses and its implications will need to be carefully assessed. The complexity of the system of rules and their design hamper transparency and could jeopardise the buy-in at national and European level. This could have been reduced by not introducing the debt convergence rule, which the simulations show rarely binds.

The new and revised rules

The EU fiscal framework is based on a system of fiscal rules, enforcement mechanisms and procedural requirements. The Stability and Growth Pact (SGP) has been at the core of these arrangements since its adoption in 1997. It was revised in 2005. Following the crisis and against the background of a persistent failure to apply these rules effectively (OECD, 2010), the EU fiscal framework is being strengthened.

The two main pillars of recent reforms are the so-called "six pack" of five regulations and one directive and a new Treaty, including the "fiscal compact". The "six pack" upgrades and revises the SGP, as well as covering other issues including macroeconomic governance (OJ, 2011a-f). It also introduces new legal requirements for national budgetary frameworks through a directive. The "fiscal compact" contained in the new Treaty requires that a rule that the budget position shall be "balanced or in surplus" be included in national law and be of "binding force and permanent character, preferably constitutional". Two proposed additional EU regulations largely focussing on procedures around the core requirements, the "two pack", are currently being examined (EC, 2011a, 2011b).

Most of the reforms are aimed at improving enforcement of budgetary discipline through mechanisms and procedures, which are intended to be more binding than in the past. There are new procedures for both the "corrective arm" of the SGP and the "preventive arm" (Box 1). An important change is that many decisions by the Council on enforcing budgetary discipline will be taken by Reverse Qualified Majority Voting, which other things equal would make it harder to form blocking majority against the assessment of the Commission by requiring more actual votes against (OECD, 2012a). There also is a wider range of sanctions, including for the first time financial measures under the "preventive arm" of the SGP. The possibility of earlier and more graduated sanctions is intended to increase their credibility, compared with the earlier system where the few financial sanctions were envisaged to apply late in the process when a country would already be facing problems. Much stricter requirements for statistical reporting will bring a significant change in the collection and publication of budgetary data.

Box 1. **Key reforms to Stability and Growth Pact**

Faster and clearer implementation of the Excessive Deficit Procedure (EDP)

- A numerical **benchmark** for reducing the debt-to-GDP ratio when it is above 60% of GDP: on average over three years, the debt ratio must fall by an amount approximately one-twentieth of the debt excess over the 60% ceiling taking into account the effect of the cycle. For three years following the correction of excessive deficits at the time of the entry into force of the new rule, the benchmark does not apply in full, but sufficient progress towards compliance is necessary (see also Box 2).
- The previous definition of **"exceptional"** circumstances as a major "unusual event outside the control" of the government is augmented by a "severe economic downturn for the euro area or the European Union as a whole".
- There is a stronger economic assessment of compliance, including implicit liabilities, up-front costs of pension reforms, excessive macroeconomic imbalances and potential growth.
- Corrective action can be requested within **three months**, compared with the standard deadline of up to six months, if an urgent need for action is identified.

Clearer requirements under the preventive arm

- The country-specific budgetary **Medium-Term Objectives** (MTOs) for the cyclically-adjusted budget balance (net of one-offs) remain in place together with the required 0.5 percentage point consolidation to reach the MTO. "Windfall revenues" and the impact of structural reforms are taken into account.
- The **benchmark** for a "significant" deviation from MTOs is set at 0.5% of GDP in one year or 0.25% in two, while compliance with an expenditure benchmark, windfall revenues, up-front costs of pension reforms and events outside a country's control should also be taken into account. For countries with debt above 60% of GDP or "pronounced sustainability risks", an improvement of *more* than the existing 0.5% benchmark improvement in the balance will be considered.
- The **procedure** for determining non-compliance is expected to take six months at the most. The European Commission should formally report its recommendations to the Council. If a Commission recommendation is not taken up by the Council, the recommendation is subject to approval on a reverse *simple* majority votes.
- Assessment of the progress towards MTOs will include the **path of expenditure (net of discretionary revenue measures),** which will be expected to grow below a medium-term growth rate of potential GDP until the MTO is achieved. Expenditure excludes interest, unemployment benefits and EU matching payments.

Effective enforcement of budgetary discipline for euro area countries

- An ***interest bearing deposit*** of up to 0.2% of GDP, where a country fails to take action in response to a Council recommendation to correct a "significant deviation" from the MTO. The Council's decision is subject to reverse qualified-majority voting, although it can amend the proposal by qualified-majority voting.
- A ***non-interest bearing deposit*** of up to 0.2% of GDP can be required, if the Council identifies an excessive deficit and a country is already subject to an interest bearing deposit or non-compliance is "particularly serious".
- A ***fine*** of up to 0.2% of GDP if the Council, acting under Article 126(8) of the EU Treaty, decides that a country has not taken effective action to correct its excessive deficit. Outstanding non-interest bearing deposits will be converted to a fine. The fine under Article 126(11) of the Treaty remains available.
- The European Commission will have the power to investigate where there are "serious indications" of possible ***manipulation of statistics***, which may be sanctioned with a fine of up to 0.2% of GDP.

Source: OECD *Economic Survey of the Euro Area* (OECD, 2012a).

Table 1. **Stylised overview of the EU fiscal rules**

Enforcement mechanism	Fiscal rule[1]
Corrective arm of the SGP	3% of GDP ceiling for the general government (GG) deficit
	60% of GDP ceiling for the GG gross debt
	Reduce debt by 1/20th of excess over 60% ceiling
Preventive arm of the SGP	Medium-Term Objective (MTO) for the structural GG budget balance
	Improve the structural budget balance by 0.5 percentage point of GDP if MTO not met
	Benchmark for expenditure to grow in line with trend GDP
"Fiscal Compact"	GG structural budget balance as MTO
	Improve structural budget balance by 0.5 percentage point of GDP if MTO not met

Note: Shaded areas indicate new requirements.

1. Simplified description of the rules.

Source: Author's compilation.

From an economic perspective, the new fiscal framework is largely based on the same set of budgetary rules as the 2005 Revised SGP. There are two new rules (Table 1): a debt convergence rule under the "corrective arm" and a benchmark for expenditure growth under the "preventive arm". Furthermore, proper enforcement of the structural budget balance rule (MTO) would effectively bring a third new rule to the fiscal framework: compliance with this element of the Revised SGP was very patchy at best in the past (OECD, 2010). The strengthening of enforcement under the "preventive arm" and the putting in place of parallel national rules in the "fiscal compact" is likely to make the MTOs' requirements apply in the future.

How will the new fiscal rules work?

From an economic perspective, the functioning of the new EU fiscal framework is complicated and opaque. There are four target/ceiling measures: the headline deficit, the debt-to-GDP ratio, the structural budget balance and expenditure. There are explicit convergence rules for the debt-to-GDP ratio, and the structural budget balance. There is a mix of headline and cyclically-adjusted measures. The implications of the rules are thus not obvious and state contingent.

Since there are no published official projections or scenarios of the rules' implications, this section presents stylised simulations of fiscal policy for the OECD countries in the European Union under a set of fiscal rules – excluding the expenditure rule – based on the *OECD Economic Outlook* No. 91 and the OECD long-term projections, which largely incorporate fiscal adjustment under current EDPs and EU-IMF programmes (OECD, 2012c) (Box 2). These scenarios assume that countries strictly follow the minimum requirement of the most stringent rule in terms of the level of the underlying budget balance.[2] This excludes the possibility of countries running tighter than required fiscal policy or not fulfilling the rules. The focus is on a 10-year period starting in 2014, *i.e.* after the end of the *OECD Economic Outlook*'s projections.

2. When MTOs and debt convergence/transition rules imply the same level of the underlying budget balance (rounded to one decimal point), the MTO is chosen (see Table A1.2 for such cases).

Box 2. **Assumptions underlying fiscal simulations**

The most binding rule in terms of the required underlying budget balance is assumed to apply between 2014 and 2023. Prior to 2014 the fiscal projections of the *OECD Economic Outlook* No. 91 are taken. They largely incorporate fiscal adjustment under current EDPs and EU-IMF programmes, implying that for most countries EDPs are ended by 2013. The following rules are analysed:

- **The 3% deficit ceiling**: the headline deficit should not exceed 3% of GDP. If it does, the structural balance in the following year is reduced by 0.5% of potential GDP. Structural consolidation in Ireland and the United Kingdom is forced to be higher due to the assumption that they correct the Excessive Deficit Procedure (EDP) within the current deadlines – 2015 and 2014, respectively. It is assumed that the 3% deficit ceiling rule takes precedence over the other rules during the current EDPs (*i.e.* the deficit is narrowed even if this is not sufficient to meet the debt rule or comply with MTO requirements).

- **Debt convergence rule**: if the debt-to-GDP ratio (Maastricht definition) exceeds 60% of GDP, the debt ratio should be reduced over three years at an average rate of 1/20th of the excess over 60% of GDP. According to the European Commission guidelines (EFC, 2012), this implies achieving the backward-looking benchmark debt target ($d^*_t = 60+0.95/3(d_{t-1}-60)+0.95^2/3(d_{t-2}-60)+0.95^3/3(d_{t-3}-60)$, where d_t is the debt-to-GDP ratio in year *t*). This benchmark has also to be met in a forward-looking manner over two following years under unchanged policies[1]. For countries that were in the EDP in November 2011, the rule will start applying in the fourth year after the correction of the EDP. During this transition period, the debt ratio has to decline at a sufficient pace, approximated in the scenario by a constant adjustment of the underlying balance between year *t* and *t+4* which ensures meeting the backward-looking part of the debt convergence rule in year *t+4*. The required annual structural adjustment during this transition period cannot exceed 0.75% of GDP.

- **The Medium-Term Objective (MTO)***:* the structural balance objective agreed for each country must be met (Table 3) and, if not, progress towards it should be made by consolidating 0.5% of potential GDP each year. Countries that have met their MTOs are assumed to retain that stance in terms of the underlying budget balance. MTOs do not vary over the simulation period.

The **benchmark for expenditure** is not modelled as it is equivalent in the context of this exercise to maintaining the structural balance at a constant level.

The calculations are based on the following economic assumptions:

- Growth and interest rate are exogenous – in particular, they are assumed to be independent of the fiscal policy stance. Both are based on OECD long-term projections, derived from a growth convergence framework. Long-term interest rates reflect economic growth and a fiscal risk premium. Projected negative output gaps in 2013 are assumed to close gradually – in most countries by 2018 – implying real GDP growth above potential during this period. Interest rates paid on debt are derived from the long-term projections of market interest rates and historic ratios of debt turnover. These rates increase over the projection simulations, largely owing to convergence from current cyclical lows. Risk premia are projected to be lower than implied by levels prevailing in the first half of 2012.

- Debt dynamics assumes that financial assets are kept unchanged as a share of GDP from their 2013 levels and that the statistical discrepancy is zero.

- The semi-elasticities of the budget balance with respect to GDP are consistent with the OECD estimates (Girouard and André, 2005).

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1. This condition is tested by keeping the underlying primary balance unchanged at its level in year *t* under baseline macroeconomic projections. It could result in a tighter fiscal policy than resulting from the backward-looking criterion.

Table 2. **Binding rules in baseline simulation**

	current deadline for EDP correction	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Austria	2013	..	..	..	->MTO	debt	=	=	=	=	=	=	=	=
Belgium	2012	3%	..	..	->MTO	->MTO	->MTO	->MTO	=	=	=	=	=	=
Estonia	..	..	..	..	=	=	=	=	=	=	=	=	=	=
Finland	..	..	..	..	=	=	=	=	=	debt	=	debt	debt	debt
France	2013	3%	3%	..	->MTO	->MTO	=	=	=	=	=	=	=	=
Germany	2013	..	..	..	=	debt	=	=	=	=	=	=	=	debt
Greece	2014	3%	3%	3%	3%	trans.	trans.	=	=	=	=	=	=	=
Ireland	2015	3%	3%	3%	3%	3%	trans.	->MTO	->MTO	=	=	=	=	=
Italy	2012	3%	..	..	trans.	trans.	debt	debt	debt	=	=	=	=	=
Luxembourg	..	..	..	..	=	=	=	=	=	=	=	=	=	=
Netherlands	2013	3%	3%	..	->MTO	trans.	=	=	=	=	=	=	=	=
Portugal	2013	3%	3%	3%	3%	trans.	trans.	trans.	debt	=	=	=	=	=
Slovak Rep.	2013	3%	3%	..	->MTO	->MTO	->MTO	->MTO	->MTO	->MTO	=	=	=	=
Slovenia	2013	3%	3%	..	->MTO	=	=	=	=	=	=	=	=	=
Spain	2013	3%	3%	3%	3%	trans.	=	=	=	=	=	=	=	=
Czech Rep.	2013	3%	..	..	=	=	=	=	=	=	=	=	=	=
Denmark	2013	..	3%	..	=	=	=	=	=	=	=	=	=	=
Hungary	2011	..	..	..	trans.	debt	=	=	=	=	=	=	=	=
Poland	2012	3%	..	..	->MTO	->MTO	=	=	=	=	=	=	=	=
Sweden	..	..	..	..	=	=	=	=	=	=	=	=	=	=
United Kingdom	2014	3%	3%	3%	3%	trans.	->MTO	->MTO	=	=	=	=	=	=

Notes: "3%" is the 3% deficit ceiling under the current EDP, "trans." is the transition rule, "debt" is the debt convergence rule, "->MTO" stands for the transition to the MTO, "=" marks that the MTO is reached and maintained. Calculations start in 2014, following the end of the *OECD Economic Outlook* No. 91 projections. See Box 2 for further details.

Source: Authors' calculations.

Under the baseline scenario, after current EDPs are closed, the MTO is almost always the binding rule with brief instances of the debt rule dominance. Given already large projected consolidation before 2014, the underlying balances will be at or above MTOs levels in half of the countries already in 2014 and in most countries by 2018. The debt rule and its transition variant will bind only in few cases and over short spells, particularly in Italy and Portugal.[3] Moreover, in several cases when the transition or debt reduction rules bind, the implied underlying balances are very close to the levels required by the MTOs or transition to MTOs (Table A1.2 in Annex 1). The near-irrelevance of this rule, despite high debt levels, is the result of the MTOs, implying large enough primary surpluses that – given assumed GDP growth and interest rates – the debt-to-GDP ratio falls at a more than sufficient pace to meet it. Moreover, as explained below, for those countries with debt is in a range immediately above 60% of GDP, the required debt reduction is very small and easily dominated by the MTO requirements. The assumed dominance of the EDP adjustment path and the transition rule avoid the more brutal front-loaded adjustment that the debt convergence rule by itself implies (Fioramanti and Vicarelli, 2011; Table A1.2 in Annex 1).

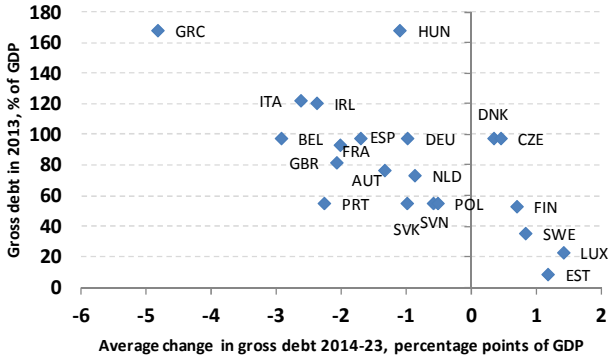
Initial consolidation combined with sustained balanced budgets – in terms of the MTOs – would lead to a substantial reduction of gross debt to GDP ratios in most countries over the coming decade (Figure 1). The average annual debt decline will be generally larger for countries with higher initial debt levels (between 2 and 5 percentage points of GDP over 2014-23). Nevertheless, for more than half of the countries gross debt will be still above 60% of GDP by 2023. For a few countries (the Czech Republic, Denmark, Estonia, Finland, Luxembourg and Sweden), maintaining budget balances at the minimum required level would result in rising debt. This largely stems from the fact that with net financial assets and

3. In Hungary, the MTO is very low (-1.5 % of GDP); if it were at -0.5% of GDP, then the transition and debt rule would not be binding. In Finland, despite the low gross debt level, the debt rule binds occasionally between 2018 and 2023 as maintaining the structural balance at the MTO results in breaching the 60% of GDP gross debt ceiling. Since Finland has a net asset position and assets as a share of GDP are assumed to be constant, it must run high budget surpluses to keep the gross debt-to-GDP ratio stable (see Annex 2).

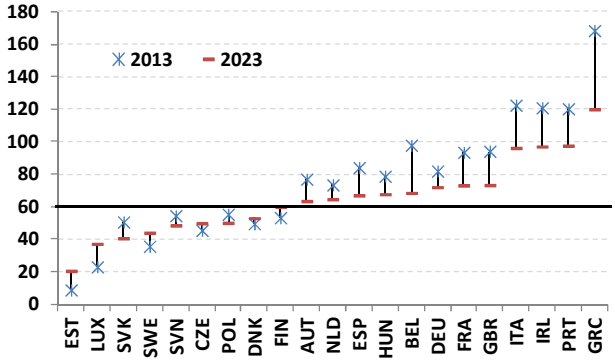
under the assumption of an unchanged gross asset-to-GDP ratio, stabilising gross debt requires budget surpluses (Annex 2).

Figure 1. **Gross debt reduction under the EU fiscal rules**

A. Correlation between initial debt and average annual pace of debt reduction



B. Gross debt levels (% of GDP)[1]



Note: Gross debt refers to the Maastricht definition.
1. Countries are sorted according to the debt-to-GDP ratio in 2023.
Source: OECD Economic Outlook No. 91 database and authors' calculations.

The baseline scenario for the sequence of the binding fiscal rules and their implications for the fiscal policy stance are sensitive to the underlying economic assumptions. Results should be treated as indicative only. There are five main caveats. *First*, the scenarios assume that countries follow the rules exactly. This has not been the experience in the past and there may be over or under-performance relative to the rules. In addition, sticking mechanically to the minimum fiscal rule requirements could imply abrupt annual changes in the fiscal stance or a fiscal loosening compared to unchanged policy assumptions. Concerning the latter, structural fiscal positions in Estonia, Denmark and Sweden in 2013 are tighter than required by the MTOs; if they were sustained, debt dynamics would be more favourable. *Second*, the simulations are sensitive to interest rate and GDP growth assumptions. These do not allow for a feedback from fiscal policy. If, however, GDP growth reacted to consolidation, the ensuing weaker growth dynamics would require more structural consolidation for attaining debt and deficit targets. *Third*, the simulations are sensitive to the starting point in terms of the current data and forecast growth and public finances up to 2013. Slippage relative to current plans would, for example, imply greater fiscal effort in future years. *Fourth*, it assumed that the MTOs remain at their current levels. However, the MTOs can be revised every three years and a revision is due in 2012. For some countries, the revisions could imply tighter deficit ceilings and thus more consolidation and faster debt decline (Box 3). *Fifth*, due to differences between the OECD and European Commission concerning estimates of output gaps, automatic stabilisers and one-offs, the assessment of structural balances may diverge from the official EU estimates, implying different structural consolidation paths.[4]

4. European Commission (D'Auria *et al.*, 2010) and the OECD (Johansson *et al.*, 2012) calculate potential output in a similar way, using a Cobb-Douglas production function with labour and capital inputs, but implementation details differ, resulting in non-negligible differences in growth rates for some countries (1-2 percentage points on average for 2008-13). The cyclical adjustment of budget balances of this paper is the same as the one adopted by the European Commission (Larch and Turrini, 2009), though the elasticities of budget balances to the output gap differ slightly.

Assessment of the new fiscal rules

The new rules can be assessed in terms of the budgetary and wider implications, in the light of the analysis of how they are likely to work over the medium term as set out above. This section considers the balanced budget in structural terms rules that are central to the new framework, both in terms of their steady-state and dynamic implications. In addition, the rules are assessed in terms of their implementation.

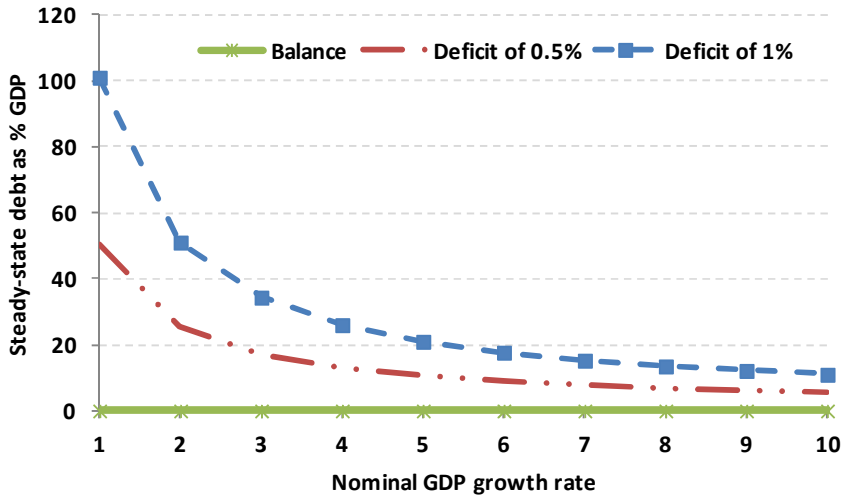
Balanced budget rules in structural terms

As the scenario shows, the MTOs and structural balanced budget requirements will be the key fiscal rule, once headline deficits have been brought back below 3% of GDP. Such rules are intuitively appealing because of their apparent simplicity and closeness to the concept of "balancing the books". However, the implications can be strong in terms of the pace of debt reduction, notably where the requirement is specified in overall rather than primary (excluding interest payment) terms and the debt-to-GDP ratio is high.

The rules imply very low steady-state debt

A well-known implication of balanced budget rules is that overall budget balances close to zero will typically imply very low steady-state debt-to-GDP ratios (except at very low nominal growth rates). The calculation of the MTO and the requirements of the "fiscal compact" partially recognise this problem, under the formula used for deriving the MTO and through an override in the new Treaty's balance budget requirements in cases where debt is low and there are no other long-run sustainability issues. However, this crucial leeway is bounded from below by a deficit of 1% of GDP. Even this requirement implies very low steady-state debt-to-GDP ratios over the range of nominal growth rates relevant to most EU countries (Figure 2).

Figure 2. **Steady-state net debt-to-GDP ratio**



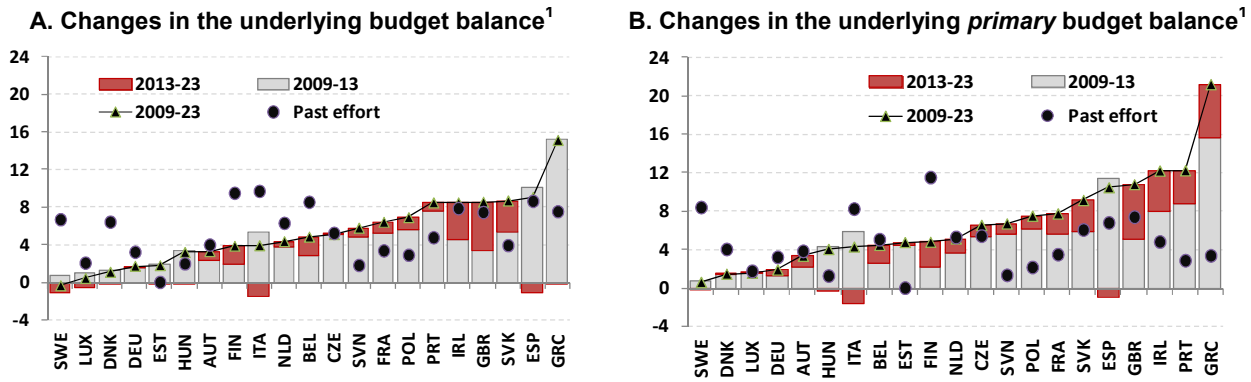
Notes: The figure indicates the level of net debt as % of GDP at which debt would stabilise if the budget deficit would be indefinitely sustained at 0, 0.5 and 1% of GDP and nominal GDP would grow at the rate indicated on the horizontal axis. The level is calculated as $nd^* = -(1+g)/g*b$, where g is growth rate and nd^* is the steady-state debt ratio, b is the overall budget balance-to-GDP ratio (see Annex 2).
Source: Authors' calculations.

This steady-state problem is not a major concern for most countries for the foreseeable future given the high starting levels of debt-to-GDP ratios, which make reaching such low levels of debt a far off prospect. For example, it would take around 20 years for a country with an initial net debt-to-GDP ratio of 90% to reach a ratio of 40% under plausible assumptions.[5] This is confirmed by the scenario calculations showing that debt will remain high in most countries even by 2023. Furthermore, in the coming years, pushing explicit liabilities down to a very low level may be warranted where there are large implicit liabilities (such as unfunded pension commitments)[6] that can partly be accommodated by holding debt below an otherwise appropriate level. Nevertheless, it is a weakness that the "fiscal compact" seeks to put in place rules of a "permanent" character that are unlikely to be tenable on a permanent basis. This also suggests that inserting a numerical value of the "budget balance" in the constitution – as proposed by the "fiscal compact" – may not be a good idea.

The appropriate policy stance during a phase of debt reduction must balance consolidation requirements with the effects of fiscal retrenchment on aggregate demand and the need to signal a credible commitment to fiscal discipline (OECD, 2012b). However, there is no clear quantitative benchmark for the appropriate pace of consolidation or the appropriate budget balance or pace of debt reduction. Past experience may nevertheless reveal something about revealed preferences and what is feasible.

Figure 3. **Consolidation under the EU fiscal rules**

Per cent of potential GDP



Notes: Past effort relates to biggest consolidation since 1987. The sample 2014-23 refers to the baseline simulations of the EU fiscal rules.

1. For Finland, Germany, Hungary, Poland, the Slovak Republic and Sweden, the 2009-13 sample begins in 2010/11, reflecting the actual start of consolidation.

Source: OECD Economic Outlook No. 91 database and authors' calculations.

The consolidation pace will be demanding

The current consolidation process will be large and sustained by historical standards. The length and depth of the total consolidation effort since 2010/11 would be around 6% of GDP or more in half of the countries, which is high by historical OECD standards (Guichard *et al.*, 2007; OECD, 2012c; Figure 3). However, this will largely be guided by the existing EDP and EU-IMF programmes – incorporated in the *OECD Economic Outlook* projections (OECD, 2012c) – with only modest post-EDP consolidation guided

5. This assumes *inter alia* that the budget is held at balance, the nominal interest rate is 5% and nominal growth is 4% on an annual basis.

6. See Rawdanowicz *et al.* (2011) for evidence for G10 countries.

by the rules (Figure 3).[7] This underlines the centrality of the current EDPs and EU-IMF programme in guiding the current consolidation process: the new system of rules will essentially only come into play once the fiscal position has been rebuilt through the current measures. Given the large scale of the required consolidation in many countries, the outcome under current EDPs will be a key test of the renewed commitment to greater fiscal discipline in the euro area and the credibility of the governance regime. The pace of consolidation of 0.5% of GDP in the underlying position under the balanced budget requirements is fairly modest compared with what some countries have already undertaken since the crisis started.

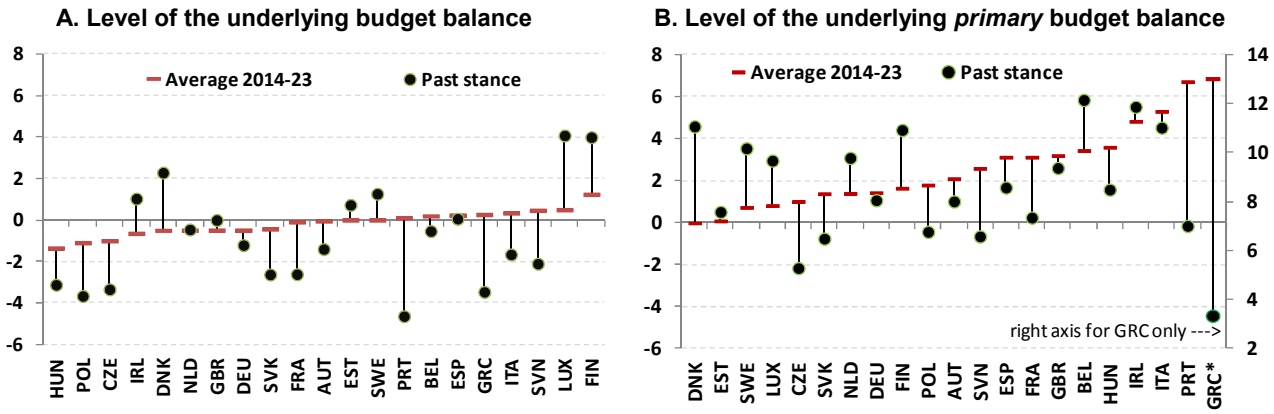
The fiscal stance will need to be tight for many years

The post-consolidation budget balance stance in terms of the *level* of the required balance under the rules would be tighter in both overall and primary terms (Box 3) than over any five-year period on average during the past three decades in most euro area countries where data are available (Figure 4). This is particularly true for terms of the required primary balance.

But, the differences with past performance are arguably not enormous: the additional annual effort under the rules compared with past experience in terms of the maintained budget balance is typically of the order of 1 percentage point. Given that some countries have achieved such a performance in the past, the EU fiscal rules can therefore be seen as requiring almost all countries to move closer to what countries that reduced the debt-to-GDP ratio in the past were able to do. This is desirable bearing in mind the trend increase in indebtedness in most countries since the 1970s and high current debt levels.

Figure 4. **Fiscal policy stance under the EU fiscal rules**

Per cent of potential GDP



Notes: * – in panel B Greece is on the right-hand side axis. Past stance relates to the country-specific 5-year period since 1987 (depending on data availability) with the highest level of underlying budget balances. The sample 2014-23 refers to the baseline simulations of the EU fiscal rules.

Source: OECD Economic Outlook No. 91 database and authors' calculations.

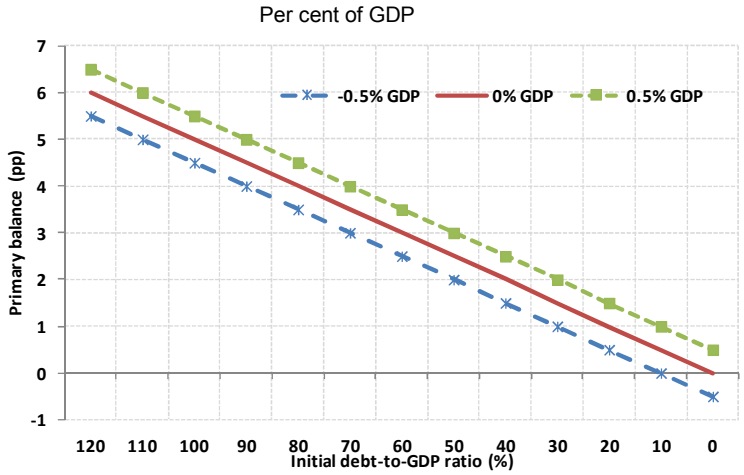
7. For Austria, Greece, Hungary, Italy, Portugal and Spain, the rules – if only just followed – would even allow some modest easing of the underlying budget balance from 2014 as the current consolidation plans until 2013 result in a fiscal stance that is tighter than required minimum of the EU fiscal rules.

Box 3. **The difference between overall and primary balances, and measuring the fiscal stance**

The EU fiscal rules focus on achieving and maintaining a specific level of the overall budget balance, which combines the primary balance and net interest payments. For a given and constant overall budget balance, the primary balance evolves as the mirror image of net interest payments. Provided that the debt-to-GDP ratio is on a downward path, interest payments will tend to fall over time as a share of GDP as the debt ratio falls. Consequently, the primary balance will tend to be high when the debt-to-GDP ratio is high and fall. Should this be a concern?

There is some ambiguity from an economic perspective about the appropriate benchmark for the fiscal stance. From an aggregate demand perspective, the effect depends on who owns the debt and receives the interest income. If debt is entirely in foreign hands, interest payments represent a clear drag on domestic purchasing power and demand. By contrast, domestically held debt transfers income from taxpayers to debt holders. This does not directly affect national income, although it may not be neutral in terms of demand because of differences in the propensity to save. From a supply side perspective, what matters is smoothing the tax burden over time (Lucas and Stokey, 1983), irrespective of what it finances. In practice, this may need to be balanced against smoothing of non-interest government expenditure, which argues for allowing the overall budget balance to adjust to accommodate interest payments.

Figure 5. **Primary balance at different levels of the overall balance**



Note: Primary balance is calculated assuming the cost of debt of 5%.

Source: Authors' calculations.

The distinction between the two balances can be relevant also from a political economy perspective: it may be more difficult to sustain a policy under which there is a large difference at a point in time between what people pay in taxes and what they receive in social transfers and public services or, put another way, where a large share of tax revenues is being used to finance interest payments.

In principle, the primary budget balance under a constant overall budget balance target can be large at high debt-to-GDP ratios (Figure 5), which implies that many countries will need initially to run large primary surpluses under the EU fiscal rules. At the same time, current elevated debt-to-GDP ratios warrant aggressive action to bring them down to more sustainable and prudent levels. This means that there is little alternative for countries but to run large primary surpluses. Any front-loading of the required primary balance in this context is therefore of second-order importance.

In most countries, the best performance in terms of the budget balance was immediately prior to the financial crisis beginning in 2008. This reflects the general, if insufficient, improvement in budget balances in the run-up to and during monetary union compared with earlier experience. These budget balances were maintained in the context of nominal GDP growth that is similar to that forecast for 2014 to 2023, except for those economies that built up large current account imbalances which are forecast to face a much more difficult environment. However, while nominal growth may have been similar, many governments benefited from "revenue buoyancy" over this period which led to strong tax receipts due to the financial

market and housing boom. This clearly helped improve budget balances and is unlikely to be a supporting factor in the future. Furthermore, there is likely to be an important difference in terms of imbalances and savings as compared with the past situation, where the fiscal stance was only tight in a small number of countries at any given time, and the situation under the new rules. With many countries having budget balances over many years at levels that have been rarely achieved in the past, this could keep overall demand weak and reduces the ability of export demand to offset the restrictive stance of domestic fiscal policies.

Resetting the MTOs could push the tightness of policy further beyond previous norms

As the baseline scenario shows, the main effect of the EU fiscal rules – once the consolidation is completed – would be to maintain structural budget balances at the MTOs for a long period. MTOs will be revised in 2012. The methodology for setting MTOs would appear to demand an even stricter budget balance for high debt countries (Box 4). Given the frontloading of consolidation, this "belt and braces" approach could be viewed as being excessive in requiring a further front-loading of the fiscal adjustment.

Cyclical adjustment is difficult in practice

The structural balance is an attractive concept for the setting of fiscal rules as it abstracts from the cycle, providing a clearer measure of the "no change" policy stance and should allow for the automatic stabilisers to work. However, it is a very difficult concept to operationalise due to the difficulty of assessing accurately both the output gap and the sensitivity of the public finances to the output gap. The EU uses a common methodology (European Commission, 2005, 2006). Although a common methodology ensures some consistency, it makes it difficult to fully reflect diverse circumstances across countries. Furthermore, constant elasticities of tax revenues applied to the output gap at a high level of aggregation do not provide a precise picture of the role of cyclical factors in driving actual revenues. During the upswing of the credit cycle, estimates of the structural budget balance failed to account for the revenue buoyancy generated by the asset price and housing and construction booms (Price and Dang, 2011). One difficulty is that the structural balance is derived from the headline figure by subtracting the estimated cyclical effect, so that all errors in estimating the cyclical effect are attributed to structural factors.

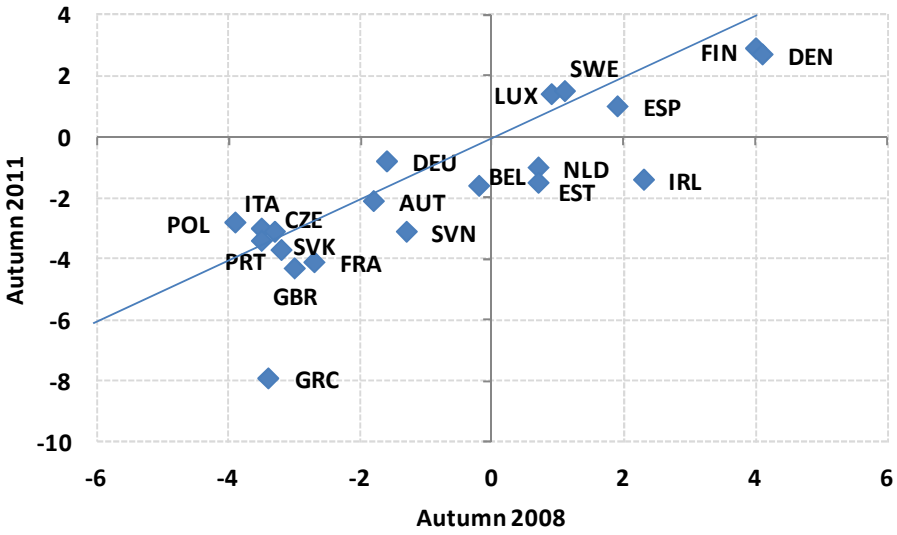
Errors in the estimation of the output gap and structural revenues have led to large revisions in the estimates of structural budget balances: for 2007, the unweighted average absolute revision between the Commission's Autumn 2008 and its Autumn 2011 forecasts is 1.3 percentage points (Figure 6). These methodological limitations make it difficult to assess the stance of fiscal policy accurately and for the enforcement of the rules to achieve the underlying objective, which could undermine the credibility of the rules. These problems are inherent to the estimation of the – unobservable – output gap and structural fiscal position and there have also been large revisions over time in the long-term OECD projections that underpin the simulations used here. Furthermore, there is a risk that the objective of cyclical neutrality of the underlying balances will not be achieved, either because estimates of potential output or the structural fiscal effects will vary pro-cyclically. If the estimated structural balance declines with the cycle, this would force pro-cyclical consolidation for a country that was just aiming to achieve the minimum structural budget balance. Moreover, methods of estimating output gaps and calculating cyclically-adjusted balances tend to be revised periodically. This and the difficulties mentioned above caution against including such measures in constitutional documents.

The expenditure benchmark rule, which is also based on a trend concept, partly avoids the difficulties in assessing the structural fiscal position. By requiring spending to grow by no more than trend nominal GDP, revenues should – in the absence of discretionary measures – evolve according to the cycle, thereby

maintaining a constant budget balance in structural terms.[8] While the expenditure benchmark avoids making an estimate of the cyclical component of revenues and estimating the level of potential output, it does nevertheless continue to rely on the same estimates of trend output that have the methodological problems and inaccuracies set out above. However, the estimates of potential GDP growth are subject to smaller revisions than the level of potential output and the output gaps (Koske and Pain, 2008; Cournède *et al*., 2012). In addition, it only sidesteps the issue of setting expenditure at the right *level* to achieve the desired budget balance over the cycle.

Figure 6. **EC structural balance estimates for 2007 estimated in 2008 and 2011**

Per cent of potential GDP



Source: European Commission *European Economic Forecasts*.

Box 4. **The setting of the MTOs**

The Medium-Term Objectives (MTOs) are revised every three years. For most countries, the MTOs are now set according to a common agreed formula. The SGP sets a lower bound on the MTO of a structural budget balance of -0.5% of GDP, although this can be lowered to a balance of -1% where the debt-to-GDP ratio is significantly below 60% and risks to the long-term sustainability of the public finances are assessed to be low. These limits also apply in the "fiscal compact". The next revision of the MTOs is due in 2012.

The formula used to determine the MTOs has never been officially published. However, the Code of Conduct (Economic and Financial Committee, 2012) sets out three specific components that should be taken into account:

- The debt-stabilising balance for a debt ratio equal to 60% of GDP.
- A supplementary debt-reduction effort for countries with debt in excess of 60% of GDP.
- A fraction of the adjustment needed to cover the present value of the future increase in age-related government expenditure.

8. This assumes that revenues would grow in line with GDP and ignores possible nominal and real fiscal drag. In practice, it may be difficult to identify the "no change" revenue stance.

Based on the analysis of the 2009 MTO updates, Biraschi *et al*. (2010) suggest the actual formula is likely to be:

MTO = -(60 * g)/(1 + g) + 0.033 * (d - 60) + 0.33 * S2E

where *g* is annual nominal growth of GDP, *d* is the debt-to-GDP ratio, and *S2E* is an indicator of the permanent adjustment in the structural primary balance as a share of GDP that would allow financing the costing of ageing calculated over an infinite horizon and based on the estimates of the Ageing Working Group.

This formula implies that MTOs in 2012 for some countries should be revised up from the 2009 objectives, most importantly in Germany, Greece, Ireland, Portugal and the United Kingdom (revisions of close to or about one percentage point of GDP). These estimates are broadly in line with those of Biraschi *et al.* (2010), although current debt-to-GDP ratios are larger than they assumed in many cases. The main reason is the large increase in the debt-to-GDP ratios in most countries during that period. In addition, slower medium-term nominal growth would increase the required budget balance by worsening debt dynamics. In some cases, recent pension reforms may have improved (reduced) the S2E indicator thereby tending to lower the required budget balance.

The size of the required increase in the MTO target may be undesirable in terms of the implied tightness of the fiscal stance and risks requiring an excessively tight fiscal stance. This relates especially to the impact of the term related to the debt-to-GDP ratio, which increases the MTO substantially in a number of cases. The estimated coefficient of 0.033 is arbitrary and below what the $1/20^{th}$ debt convergence rule would imply for the overall budget balance. In addition, for the same level of overall budget balance and nominal GDP growth, the gross debt-to-GDP ratio will decline faster in countries with higher debt in any case as a consequence of the debt dynamics relationship. There is no clear reason to accelerate this process further. As debt-to-GDP ratios fall in future years, the current formula would allow for an eventual easing of the required MTOs.

The formula-based approach of the MTO could in principle be used to set a well-designed structural balance objective across countries. As discussed, the specific formulation has some weaknesses. In addition, the SGP and the "fiscal compact" both impose lower bounds on the size of the budget balance (-0.5% or -1% of GDP), thereby largely ruling out the flexibility a formula could offer.

Table 3. **Sources of implied revisions in MTOs under the formula**

Percentage points, changes from 2008 to 2011

	Debt-to-GDP ratio over 60%		Long-term growth		Implied revision in MTO	Current MTOs	Memorandum
Country	Change	Contribution to revision in MTO	Change	Contribution to revision in MTO			Pension reform
Austria	12.0	0.4	-0.2	0.1	0.5	0.0	
Belgium	9.6	0.3	-0.1	0.1	0.4	0.5	
Czech Republic	0.0	0.0	0.3	-0.2	-0.2	-1.0	
Denmark	0.0	0.0	0.1	-0.1	-0.1	-0.5	
Estonia	0.0	0.0	0.1	-0.1	-0.1	0.0	
Finland	0.0	0.0	-0.2	0.1	0.1	0.5	
France	19.7	0.7	0.1	-0.1	0.6	0.0	
Germany	17.0	0.6	-0.6	0.3	0.9	-0.5	
Greece	72.4	2.4	-0.1	0.1	2.5	0.0	*
Hungary	14.6	0.5	-0.2	0.1	0.6	-1.5	
Ireland	48.2	1.6	1.1	-0.6	1.0	0.0	
Italy	16.2	0.5	0.5	-0.3	0.3	0.0	
Luxembourg	0.0	0.0	-0.3	0.1	0.1	0.5	
Netherlands	5.1	0.2	-0.1	0.1	0.2	-0.5	
Poland	0.0	0.0	-0.4	0.2	0.2	-1.0	
Portugal	43.3	1.4	-0.5	0.3	1.7	0.0	*
Slovak Republic	0.0	0.0	0.5	-0.3	-0.3	0.5	
Slovenia	0.0	0.0	0.8	-0.4	-0.4	0.5	
Spain	8.5	0.3	1.0	-0.6	-0.3	0.0	
Sweden	0.0	0.0	0.1	-0.1	-0.1	0.0	
United Kingdom	22.9	0.8	-0.2	0.1	0.9	0.0	

Note: * means that a country has recently undertaken pension reforms.

1. Long-term potential growth revision measured as change in 2025 GDP growth rate between 2012 and 2009 EU *Ageing Report* (EC, 2012).

Source: Author's calculations based on OECD Economic Outlook No. 91 database and Biraschi *et al.* (2010).

Overall design of the rules

The multiple rules add considerably to the complexity of the system without yielding clear gains. This may make it difficult to achieve political or public "buy-in" around the framework and severely curtails the options to develop fiscal rules at the national level. This partly reflects the different institutional status of the different rules, but again such a distinction does not appear a necessary part of having fiscal rules at the EU level. Furthermore, poorly designed rules without solid foundations can undermine the credibility of the framework as a whole.

One way to reduce the complexity at little cost would have been not to introduce the new debt convergence rule. As shown in the baseline scenario, this adds very little from a substantive economic perspective to the EU fiscal framework. This is because the MTOs are essentially more demanding in terms of the fiscal stance and the required pace of consolidation. Adding a rule that is close to redundant has a high cost in terms of complexity relative to the gains its imposition achieves. In addition, the debt convergence rule lacks a sound economic rationale and could imply very high budget surpluses for countries with very high debt, while having very little impact on countries where debt is nevertheless well above 60% of GDP. The specification of the rule using three-year averages has some awkward features too, including when the debt-to-GDP ratio is peaking.[9] The main justification of this rule is procedural - the debt convergence rule is subject to the stricter enforcement requirements of the "corrective arm" of the SGP, while the MTO is part of the "preventive arm" (which was strengthened during the recent reforms).

Conclusion

The baseline simulation results suggests that balanced budget requirements in structural terms will - in practice – be at the heart of the new EU fiscal rules if the framework is applied. In terms of the current phase of consolidation, additional efforts after 2013 guided by the rules will in most cases be modest relative to the consolidation that has already taken place or that is programmed under the current EDPs. This underlines the importance of successfully implementing the current EDPs in shoring up credibility: if consolidation is not successfully achieved during the coming years, the new framework will have much more work to do in terms of achieving consolidation and the credibility of the whole system may already have been compromised even before it has started.

The role of the rules will be, in essence, to ensure that the fiscal stance is sufficiently tight to bring down debt-to-GDP ratios to more prudent levels. This kind of constraint on policy in "good times" is exactly where fiscal rules are needed to deal with political economy pressure to spend rather than save. Both in overall and primary balance terms, the implied fiscal stance under the new EU fiscal rules can be thought of as requiring all countries to meet the standards of those that managed to make meaningful progress in tackling high debt levels in the past.

However, the system of rules carries some risks. This includes their complexity. The revision of the MTOs could require much tighter budget balances that could go well beyond past pace of fiscal consolidation. In addition, the measurement of the structural budget balance is likely to create problems. Mechanical rules are never able to cover all contingencies and may thus become suboptimal (Wyplosz, 2012). For this reason, it is essential that the new EU fiscal rules are applied with appropriate discretion (OECD, 2012a): the rules need to be enforced tightly where this is necessary, but it would be harmful and

9. In addition, this approach arguably further increases the emphasis on gross, rather than net, debt and could create incentives for an unjustified sale or transfer of assets. Furthermore, the role of the cycle is not well articulated in the rules, which make reference to the evaluation of the position and progress made based on movements that cannot be attributed to the influence of the cycle using on a common methodology (EFC, 2012) that has yet to be published by the European Commission.

counterproductive in terms of the credibility of the fiscal framework to apply them too mechanistically. This highlights the importance of national and EU efforts to put in place independent expert fiscal councils at the national level.

BIBLIOGRAPHY

Biraschi, P., M. Cacciotti, D. Iacovoni, and J. Pradelli (2010), "The New Medium-Term Budgetary Objectives and the Problem of Fiscal Sustainability after the Crisis", *MEF Working Papers*, No. 8, October, Rome.

Cournède, B., R. Bouis and A.K. Christensen (2012), "Potential Output, Output Gaps and their Policy Implications", *OECD Economics Department Working Papers*, forthcoming.

D'Auria, F., C. Denis, K. Havik, K. Mc Morrow, C. Planas, R. Raciborski, W. Röger and A. Rossi (2010), "The Production Function Methodology for Calculating Potential Growth Rates and Output Gaps", *European Economy Economic Papers*, No. 420.

Economic and Financial Committee (EFC) (2012), Specifications on the Implementation of the Stability and Growth Pact and Guidelines on the Format and Content of Stability and Convergence Programmes, 24 January.

European Commission (2005), *New and Updated Budgetary Sensitivities for the EU Budgetary Surveillance*, 30 September.

European Commission (2006), "Commonly agreed methodology for the estimation of potential output and CABs", *European Economy Economic Papers*, No. 247, March.

European Commission (EC) (2011a), Proposal for a Regulation on Common Provisions for Monitoring and Assessing Draft Budgetary Plans and Ensuring the Correction of Excessive Deficit of the Member States in the Euro Area (COM(2011)821 final).

EC (2011b), Proposal for a Regulation on the Strengthening of Economic and Budgetary Surveillance of Member States Experiencing or Threatened with Serious Difficulties with Respect to their Financial Stability in the Euro Area (COM(2011)819 final).

EC (2012), "The 2012 Ageing Report: Economic and budgetary projections for the 27 EU Member States (2010-2060)", *European Economy*, No. 2, May.

Fioramanti, M. and C.Vicarelli (2011), "The New Stability and Growth Pact: Primum Non Nocere", *CEPS Working Document,* No 344, March.

Girouard, N. and C. André (2005), "Measuring Cyclically-Adjusted Budget Balances for OECD Countries", *OECD Economics Department Working Papers*, No. 434, OECD Publishing.

Guichard, S., M. Kennedy, E. Wurzel, and C. André (2007), "What Promotes Fiscal Consolidation: OECD Country Experiences", *OECD Economics Department Working Papers*, No. 553, OECD Publishing.

Johansson, A. *et al.* (2012), "Long-Term Growth Scenarios", *OECD Economics Department Working Papers*, forthcoming.

Koske, I. and N. Pain (2008),"The Usefulness of Output Gaps for Policy Analysis", *OECD Economics Department Working Papers*, No. 621, OECD Publishing.

Larch, M. and A. Turrini (2010), "The Cyclically Adjusted Budget Balance in EU Fiscal Policymaking", *Intereconomics: Review of European Economic Policy*, Springer, Vol. 45(1), pages 48-60.

Lucas, R. and N. Stokey (1983), "Optimal Fiscal and Monetary Policy in an Economy Without Capital", *Journal of Monetary Economics*, Vol. 12 (1).

OECD (2010), *OECD Economic Surveys: Euro Area*, OECD Publishing.

OECD (2012a), *OECD Economic Surveys: Euro Area*, OECD Publishing.

OECD (2012b), "Fiscal Consolidation: How Much, How Fast and by What Means?", *OECD Economic Policy Papers*, No. 1, OECD Publishing.

OECD (2012c), *OECD Economic Outlook*, Vol. 2012/1, No. 91, May, OECD Publishing.

Official Journal (OJ) (2011a), Regulation (EU) No 1175/2011 of the European Parliament and of the Council of 16 November 2011 amending Council Regulation (EC) No 1466/97 on the Strengthening of the Surveillance of Budgetary Positions and the Surveillance and Co-ordination of Economic Policies.

OJ (2011b), Regulation (EU) No 1173/2011 of the European Parliament and of the Council of 16 November 2011 on the Effective Enforcement of Budgetary Surveillance in the Euro Area.

OJ (2011c), Regulation (EU) No 1174/2011 of the European Parliament and of the Council of 16 November 2011 on Enforcement Measures to Correct Excessive Macroeconomic Imbalances in the Euro Area.

OJ (2011d), Regulation (EU) No 1176/2011 of the European Parliament and of the Council of 16 November 2011 on the Prevention and Correction of Macroeconomic Imbalances.

OJ (2011e), Council Regulation (EU) No 1177/2011 of 8 November 2011 amending Regulation (EC) No 1467/97 on Speeding Up and Clarifying the Implementation of the Excessive Deficit Procedure.

OJ (2011f), Council Directive 2011/85/EU of 8 November 2011 on Requirements for Budgetary Frameworks of the Member States.

Price, R. and T. Dang (2011), "Adjusting Fiscal Balances for Asset Price Cycles", *OECD Economics Department Working Papers*, No. 868, OECD Publishing.

Rawdanowicz, Ł., E. Wurzel and P. Ollivaud (2011), "Issues in Government Debt and Asset Management", *OECD Economics Department Working Papers*, No. 923, OECD Publishing.

Wyplosz, C. (2012), "Fiscal Rules: Theoretical Issues and Historical Experiences", *NBER Working Papers*, No. w17884.

ANNEX 1. TABLES AND CHARTS

Table A1.1. **Fiscal positions under EU fiscal rules**

	Underlying budget balance					Underlying primary budget balance					Gross debt (Maastricht definition)				
	average					average					average				
	1998-07	2014-23	2007	2013	2023	1998-07	2014-23	2007	2013	2023	1998-07	2014-23	2007	2013	2023
Austria	-1.9	0.0	-2.0	-1.0	0.0	0.6	2.1	0.1	1.0	2.2	65	70	60	77	63
Belgium	-0.7	0.2	-1.5	-1.5	0.5	4.6	3.4	2.3	1.7	3.5	100	82	84	98	68
Estonia	0.4	0.0	-1.2	0.1	0.0	0.2	0.1	-1.5	0.1	0.4	5	16	4	9	20
Finland	3.1	1.2	2.9	0.1	2.0	3.4	1.6	2.3	0.2	2.7	43	59	35	53	60
France	-3.5	-0.1	-4.2	-1.2	0.0	-0.8	3.1	-1.6	1.3	3.5	61	83	64	93	73
Germany	-2.4	-0.5	-0.7	-0.7	-0.4	0.3	1.4	1.8	1.1	1.7	63	76	65	82	72
Ireland	-0.9	-0.6	-3.6	-3.9	0.0	0.6	4.8	-2.9	0.9	5.0	34	111	25	121	97
Italy	-3.8	0.3	-3.1	1.5	0.0	1.8	5.3	1.7	6.2	4.6	107	108	103	123	96
Luxembourg	1.9	0.5	1.5	1.1	0.5	0.9	0.8	0.5	1.1	1.1	6	33	7	23	37
Netherlands	-0.9	-0.5	-0.9	-1.1	-0.5	1.5	1.4	0.7	0.3	1.7	53	69	45	73	65
Portugal	-5.1	0.1	-3.7	-0.8	0.0	-2.5	6.7	-1.1	2.9	6.3	56	109	68	120	98
Slovak Rep.	-3.4	-0.4	-4.0	-2.8	0.5	-1.4	1.4	-2.9	-1.1	2.1	40	47	30	51	41
Slovenia	-2.5	0.5	-3.2	-0.4	0.5	-1.0	2.6	-2.1	1.4	2.5	26	52	23	54	48
Spain	-1.0	0.2	0.3	1.1	0.0	1.4	3.1	1.4	3.7	2.7	51	75	36	84	67
Czech Rep.	-4.3	-1.0	-3.4	-1.1	-1.0	-3.8	1.0	-2.7	0.2	1.4	24	49	28	45	50
Denmark	0.7	-0.5	2.1	-0.3	-0.5	2.3	0.0	2.5	0.1	0.2	46	52	28	50	53
Hungary	-6.6	-1.4	-6.3	-1.2	-1.5	-2.2	3.6	-2.4	3.3	3.0	60	73	66	79	68
Poland	-3.9	-1.1	-2.3	-2.2	-1.0	-1.5	1.8	-0.6	0.5	1.8	43	52	45	55	50
Sweden	0.6	0.0	1.4	1.1	0.0	2.2	0.7	2.1	1.3	1.2	53	41	40	36	44
United Kingdom	-2.0	-0.5	-4.5	-5.2	0.0	0.1	3.2	-2.6	-1.9	3.7	42	84	44	94	73

Source: OECD Economic Outlook No. 91 database and authors' calculations.

Table A1.2. **Underlying budget balances under MTO, transition and debt rules for selected EU countries**

Per cent of potential GDP

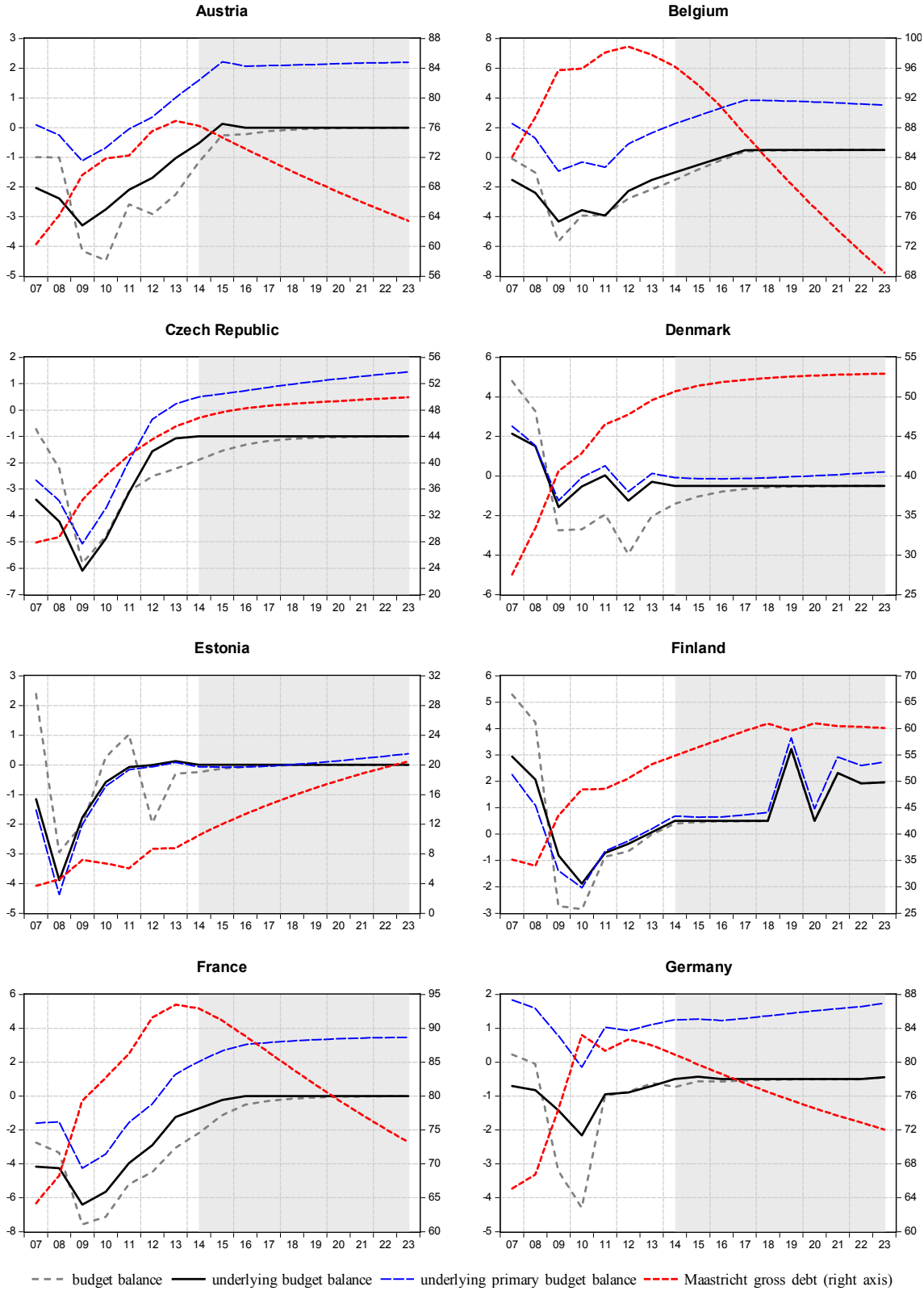
		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Austria	MTO	-0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	trans.	-0.5	..	..	..	..	..	..	..	..	..
	debt	2.2	0.1	-0.6	-0.8	-0.9	-0.9	-0.9	-1.0	-1.0	-1.0
Finland	MTO	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	trans.	..	..	..	..	..	..	..	..	..	..
	debt	..	..	..	..	..	3.2	3.2	2.3	1.9	2.0
Germany	MTO	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	trans.	-0.5	..	..	..	..	..	..	..	..	..
	debt	0.5	-0.4	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.4
Greece	MTO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	trans.	..	1.1	0.3	-0.3	..	..	..	..	..	..
	debt	10.8	5.9	0.9	-0.7	-1.3	-1.9	-2.2	-2.2	-2.1	-1.9
Hungary	MTO	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5
	trans.	-0.8	..	..	..	..	..	..	..	..	..
	debt	-0.1	-0.7	-1.7	-2.1	-2.3	-2.2	-2.2	-2.2	-2.1	-2.1
Ireland	MTO	-3.4	-2.4	-1.3	-0.6	-0.1	0.0	0.0	0.0	0.0	0.0
	trans.	..	..	-1.1	-0.6	-0.5	..	..	..	..	..
	debt	8.8	5.3	2.6	1.0	0.0	-0.9	-1.1	-1.2	-1.2	-1.3
Italy	MTO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	trans.	1.3	1.1	..	..	..	..	..	..	..	..
	debt	5.5	2.4	0.9	0.1	0.1	-0.1	-0.4	-0.6	-0.7	-0.8
Netherlands	MTO	-0.6	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	trans.	-0.8	-0.4	-0.6	..	..	..	..	..	..	..
	debt	4.0	1.1	-0.5	-0.8	-0.9	-1.0	-1.0	-1.1	-1.1	-1.1
Portugal	MTO	-0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	trans.	..	0.4	0.6	0.4	..	..	..	..	..	..
	debt	10.4	5.8	2.2	0.7	0.1	-0.1	-0.2	-0.4	-0.6	-0.8
Spain	MTO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	trans.	..	0.7	-0.1	-0.5	..	..	..	..	..	..
	debt	7.8	1.7	-0.5	-1.0	-1.2	-1.3	-1.4	-1.4	-1.4	-1.5
United Kingdom	MTO	-4.7	-1.7	-0.9	-0.4	0.0	0.0	0.0	0.0	0.0	0.0
	trans.	..	-1.4	-1.1	-1.1	..	..	..	..	..	..
	debt	5.5	2.0	-0.3	-1.1	-1.3	-1.4	-1.4	-1.5	-1.5	-1.6

Notes: "trans." is the transition rule, "debt" is the debt convergence rule, "MTO" stands for the transition to the MTO or marks that the MTO is reached and maintained. See Box 2 for further details.

Source: Authors' calculations.

Figure A1.1. **Fiscal stance under EU fiscal rules**

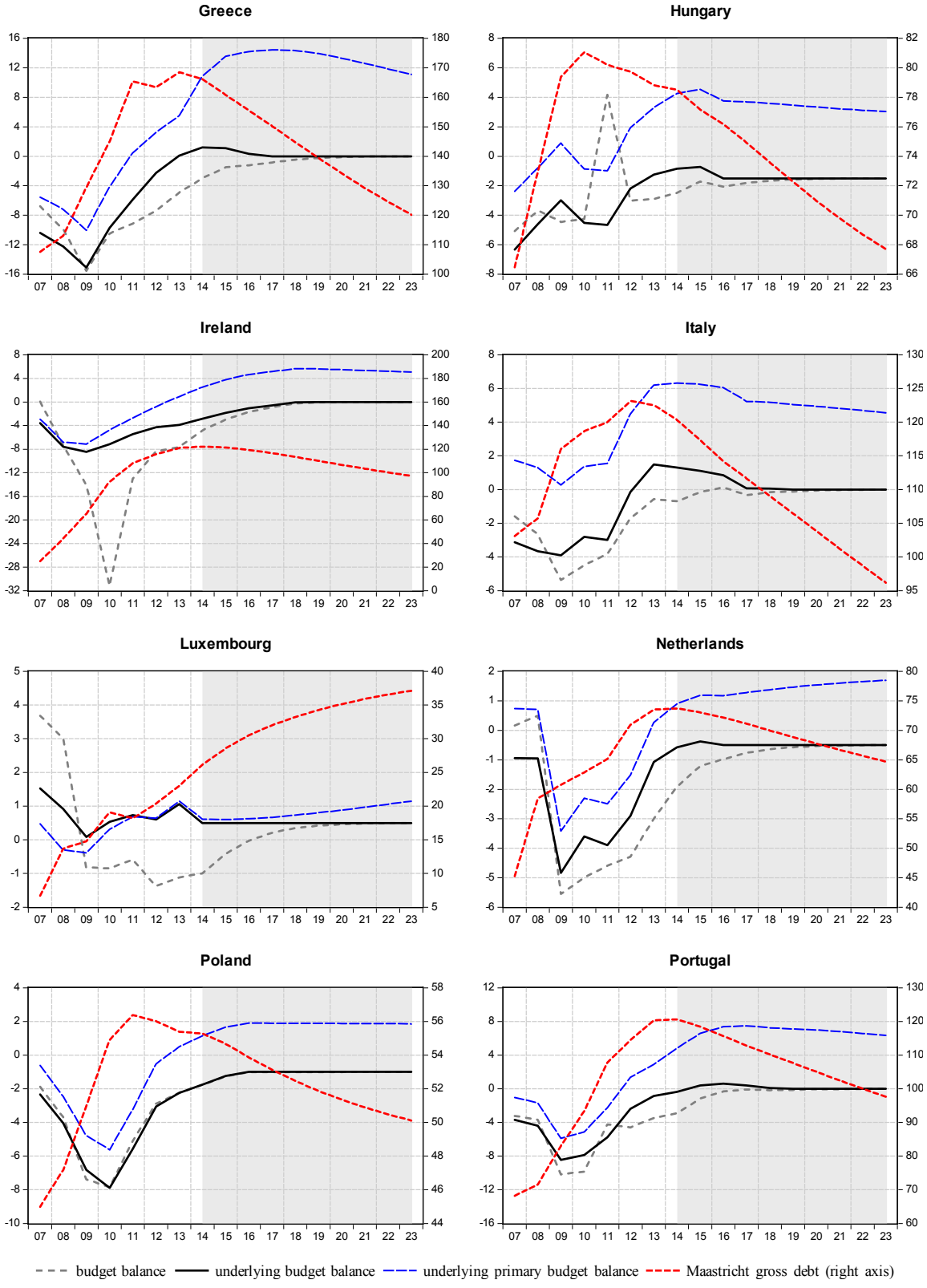
Per cent of actual/potential GDP



Source: OECD Economic Outlook No. 91 database and authors' calculations.

Figure A1.1. **Fiscal stance under EU fiscal rules** (continued)

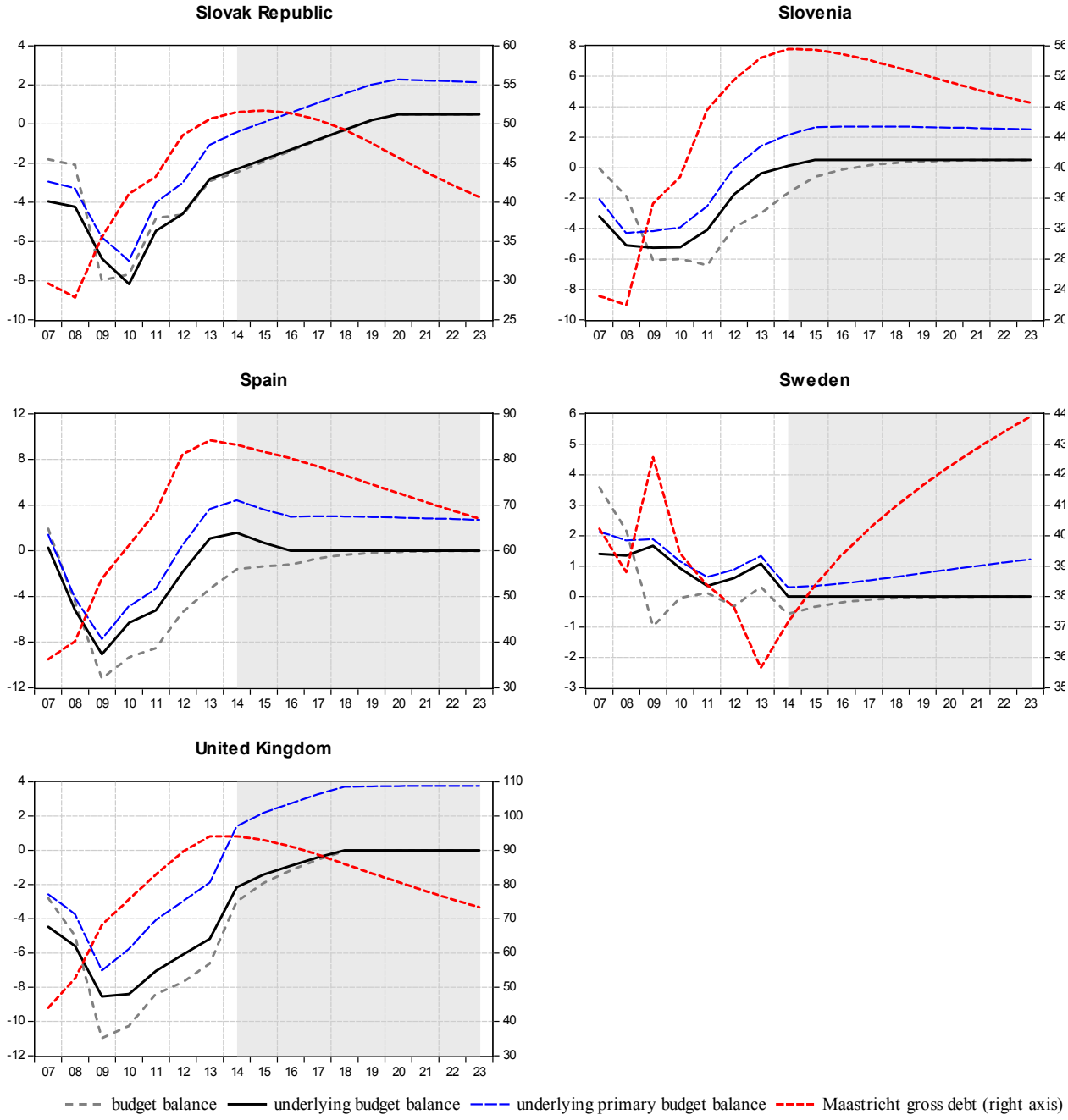
Per cent of actual/potential GDP



Source: OECD Economic Outlook No. 91 database and authors' calculations.

Figure A1.1. **Fiscal stance under EU fiscal rules** (continued)

Per cent of actual/potential GDP



Source: OECD Economic Outlook No. 91 database and authors' calculations.

ANNEX 2. GROSS AND NET DEBT DYNAMICS

A distinction between gross and net debt along with the assumption about financial assets is important for debt dynamics analysis. Net debt (net financial liabilities of the general government sector) is gross debt (gross financial liabilities) less financial assets.

Debt accounting

Abstracting from valuation effects and statistical discrepancies, net debt dynamics is given by:

$$ND_t = ND_{t-1} - B_t \quad (1)$$

where ND_t is nominal net debt, B_t is overall nominal budget balance and t is time index. When expressed as a share in GDP, equation (2) becomes:

$$nd_t = nd_{t-1}/(1+g_t) - b_t \quad (2)$$

where g_t is the growth rate of nominal GDP. From equation (2), it can be shown that the change in the net debt ratio is given by:

$$\Delta nd_t = -g_t/(1+g_t) * nd_{t-1} - b_t \quad (3)$$

Equation (3) implies that net debt ratio declines when the budget balance exceeds the so-called snow-ball effect (*i.e.* the erosion of nominal debt due to GDP growth). Consequently, if GDP growth and net debt are positive (*i.e.* the snow-ball effect is negative), the net debt ratio falls even for a certain range of budget deficits.[10]

Given the definition of net debt ($nd_t = gd_t - a_t$), equations (2) and (3) have the following equivalents for gross debt (gd_t):

$$gd_t = nd_{t-1}/(1+g_t) + a_t - b_t \quad (2')$$

$$\Delta gd_t = -g_t/(1+g_t) * nd_{t-1} + \Delta a_t - b_t \quad (3')$$

where a_t stands for financial assets. Equation (3') implies that changes in gross debt are not only driven by the snow-ball effect and the level of budget balance, but also by changes in assets – an aspect frequently omitted in debt dynamics analysis. Adding assets is needed to account, for instance, for a situation when a country issues more debt than needed to finance the budget deficit or when it sells financial assets to reduce gross debt via buying back debt or financing current deficit.[11]

10. In contrast, when GDP growth is positive and net debt is negative (assets exceed gross debt) – *i.e.* the snow-ball effect is negative, a country has to run a sufficient budget surplus to reduce its net debt.

11. Also when gross debt is driven to zero, any budget surplus must result in asset accumulation.

Implications

Financial assets drive a wedge between net and gross debt and thus have implications for the size of the snow-ball effect and consequently for the level of the budget balance required to stabilise debt ($b_t = -g_t/(1+g_t) * nd_{t-1}$). This is important as financial assets in the EU OECD countries are generally large but diverse (they range from around 20% of GDP in the Slovak Republic to around 110% of GDP in Finland). As a simple illustration, Table A2.1 shows that for the gross debt-to-GDP ratio of 60% and 4% nominal GDP growth, the budget balance needed to stabilise net debt varies enormously with the asset position. In particular, the budget balance shifts from the deficit of 2.3% of GDP with no assets to the surplus of the same size when assets are at 120% of GDP. Under the assumption of no changes in the asset-to-GDP ratio, these levels of budget balance would also stabilise gross debt (see below).

Table A2.1. **Debt-stabilising budget balances for various asset positions**

Per cent of GDP

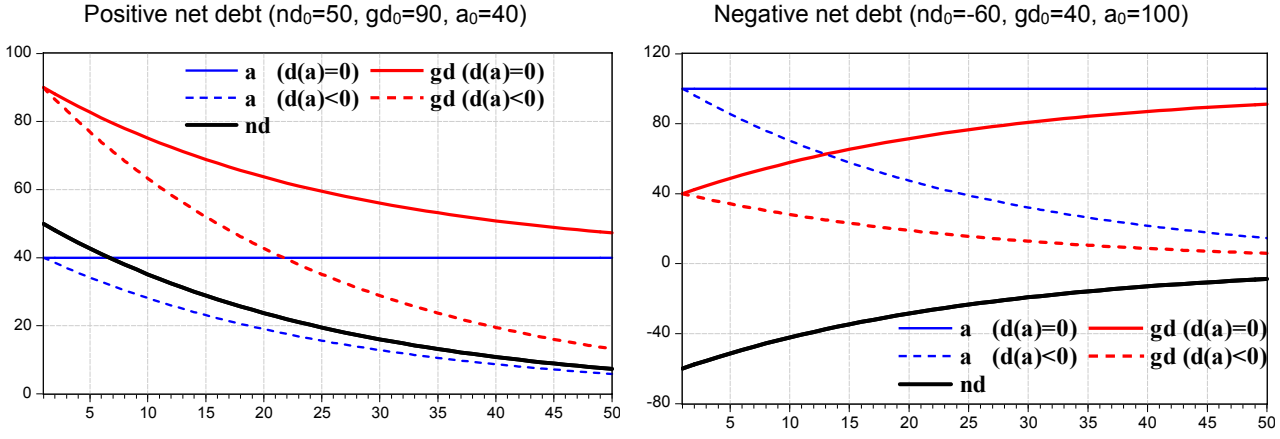
Gross debt	60	60	60	60	60	60	60
Assets	0	20	40	60	80	100	120
Net debt	60	40	20	0	-20	-40	-60
Budget balance to stabilise net debt	-2.3	-1.5	-0.8	0.0	0.8	1.5	2.3

Source: Authors' calculations.

Assets' evolution is crucial for gross debt dynamics for a given net debt path, especially in the long run. One possibility is that the asset-to-GDP ratio remains constant at its initial level. This implies that the asset position is not allowed to be eroded by nominal GDP growth and the changes in net debt are fully translated into changes of gross debt. Another possibility is that the asset-to-GDP ratio declines in line with nominal GDP growth ($\Delta a_t = -g_t/(1+g_t)*a_{t-1}$). Figure A2.1 illustrates the implications of these two possibilities for the debt path given a permanent balanced budget, nominal GDP growth of 4% and starting values of net and gross debts at the averages for the OECD countries with positive and negative net debts, respectively. Under constant asset ratio, gross debt convergences to higher level than when assets are allowed to be eroded by nominal growth. This difference is especially important for countries with negative net debt, as under the first assumption gross debt increases, whereas under the second it declines. The net debt path is unaffected by the evolution of assets.

Figure A2.1. **Gross and net debt dynamics under different assumptions on assets**

Per cent of GDP



Source: Authors' calculations.

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