GORDIAN KNOT OR ARIADNE'S BALL OF THREAD?
SEARCHING FOR A WAY OUT OF THE EUROPEAN FISCAL LABYRINTH

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A proper fiscal framework should ensure long-term sustainability while avoiding pro-cyclicality of fiscal policy. As a prerequisite, fiscal rules should be based on numerical indicators that are conducive to both of these basic objectives and rest on best practices. In this paper, we discuss problems that the existing European fiscal architecture fails to address, even as it becomes increasingly more complex and rule-based. In our view, a decentralised framework would be better suited to fight against the deficit bias in Europe. Accordingly, we propose that the first line of defence against irresponsible fiscal policy be provided by national, country-specific rules, with active monitoring of local fiscal councils using more robust fiscal indicators. This solution can help to design much better long-term fiscal anchors and by greater involvement of independent institutions it can also ensure the much needed medium-term flexibility. In this model, the community level would be responsible for checking compliance with minimum standards defined for local fiscal frameworks, enforcing strict programs for countries over pre-agreed limits and ensuring counter-cyclicality of EU budgets. No yearly fine-tuning of national budgets would be necessary.

1   Introduction

Fiscal policy remains an area where there continue to be substantial gaps between theory and practice. Although significant progress has been made since the crisis, the European fiscal framework itself has become overly complicated, non-transparent and almost unenforceable over the years. As Ódor (2014a) points out, comparing the end result with a well-known set of criteria (Kopits and Symansky, 1998) the European fiscal architecture scores relatively low on simplicity, consistency, definition and enforceability. The latter weakness has been demonstrated also by the current application of the new fiscal legislation: granting arbitrary number of years for correction of excessive deficits (instead of "one year as a rule"), introducing the "investment clause" and defining more space for flexibility in the application of the Stability and Growth Pact (SGP). Especially worrisome is the treatment of structural reform *plans*. *Ex ante* proposals can qualify for extension of deadlines (European Commission, 2015).

We argue that the theoretical sub-optimality and low practical enforceability can easily create another crisis of the SGP in the future. Fine-tuning the already complex system is not a viable alternative; one has to design a fundamentally new institutional set-up. Burocratic processes under political influence should be eliminated and international best practices implemented as far as fiscal indicators are concerned.

This article proposes a framework that is not only better aligned with theory, but also benefits more from synergies between fiscal rules and independent fiscal institutions (both at the European and national level). In addition, it offers a more efficient division of labour between the community and the national level with regards to fiscal responsibility. The new structure will achieve its objectives only if it takes into account country-specific conditions and is based on better

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fiscal indicators. This article therefore focuses on issues of methodology, theory and institutional set-up that must be resolved in order to design an efficiently functioning fiscal architecture in Europe.

Depending on the time horizon available for reform, strength of resolution mechanisms and potential legal obstacles, we see two possible strategies to pursue. The first is a "quick-and-dirty" approach, when radical action is necessary to cut the complex Gordian knot. In that solution, clearly defined and very limited bail-out options would be implemented at the level of the sovereign.[1] In exchange for it, big part of the current list of European fiscal rules would be simply eliminated and/or replaced by minimum standards for local fiscal frameworks. In this scenario also the definition of minimum standards would be relatively loose. The second approach is a more gradual one. Instead of cutting the problem right away,[2] lengthy discussions would be necessary to define detailed requirements for local fiscal frameworks based on best international practices. Moreover, the sovereignty principle should be substantially curbed down. It is like using Ariadne´s thread to find the way out of the labyrinth. However it should be noted that whichever strategy we choose, a fundamental redefinition of accountability between the centre and national authorities would be necessary in any case.

Our motivation is threefold. First, in our view it is necessary to better align theory and actual design of fiscal rules and institutions. The fundamental conflict between using one-size-fits-all approaches and at the same taking into account country specificities has often led to reliance on escape clauses, special regimes and "other factors". As a result, Europe ended up with a complex web of sometimes contradicting rules and procedures (Ódor, 2014a). Paradoxically the system is relying on so many rules that the final verdict is in fact a discretionary decision of the European Commission/Council in many cases. Second, the division of labour between the community and national level is blurred. There is no clear separation of accountability and responsibility. The European framework mixes together a non-credible no bail-out principle, sovereignty of Member States in budgetary issues, the SGP and resolution mechanism like the ESM or EFSF. It is necessary in our view to define when and under what conditions the intervention from the centre is warranted. Moreover, current discussions about a stronger fiscal union will add another layer of challenges, namely, the question of a proper design of fiscal rules and institutions at the community level. It is also important to limit political influence in applying rules and procedures as much as possible. Third, fiscal indicators allow fiscal gimmickry, and real time evaluation of structural budget balances is too important part of the system given the huge uncertainty surrounding the estimates. More appropriate methodological tools are available, but their application is hampered by the current institutional set-up (Ódor, L. and G.P. Kiss, 2014).

The solution to these three fundamental problems we propose in this paper is the following. The first line of defence against irresponsible fiscal policy behaviour should be at the local level, using home-grown fiscal rules and independent fiscal institutions. Their design however should fulfil commonly agreed minimum standards. If a Member State operates with no significant fiscal risks and if spill-over effects are unlikely, no yearly intervention from the community level would be needed. These institutions should in our view focus more on avoiding pro-cyclicality at level of the whole union and managing countries breaching European limits. As far as the choice of appropriate indicators is concerned, the definition of minimum standards for local fiscal rules should prescribe a wider use of stock indicators covering the whole public sector, not just the level of general government. It should be noted that the definition of minimum standards will heavily depend on the strength of resolution mechanisms.

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[1]   Introduction of several facilities by the ECB (*i.e.*, OMT) can make the original idea of limited or no bail-out more credible, since spill-over effects can be mitigated.

[2]   For example if far-reaching changes to Treaty are not realistic in a short time horizon.

<div align="right">**Table 1**</div>

<div align="center">**Deficit Decomposition**</div>

	Permanent	**Temporary**
Exogenous	part of structural deficit (P1)	medium-term cyclical component (T1) revenue windfall/shortfall (T2) surprise inflation/disinflation (T3) volatility of yields + lagged effects on interest expenditure (T4) long-term volatility (T5)
Endogenous (discretionary)	part of structural deficit (P2)	creative accounting and one-offs (T6) deviations from necessary investment level (T7)

The paper is organised as follows. The second section looks at possible improvements of fiscal indicators based on international best practices. The third part contains our proposed solution for a more transparent and efficient European fiscal framework. The last section concludes and discusses possible avenues for further research.

2   Better fiscal indicators

For fiscal policy to operate properly, it needs to rely on a fiscal framework that keeps debt on an optimal path and at the same time avoids fiscal policy that is pro-cyclical (*i.e.*, intensifies economic volatility). A fiscal framework is comprised of numerical fiscal rules, fiscal councils, and the planning, procedural and accounting rules of the budget. In this section we look at fiscal indicators, basic building blocks of efficient local fiscal frameworks.

We argue that improvements in 3 areas are necessary to place fiscal architectures on a more solid ground. First, a numerical fiscal rule will function properly and be enforceable only if it covers the full scope of discretionary fiscal policy. Second, a numerical rule should exclude impacts of all exogenous factors. As we will see, there is potential for significant methodological progress in this respect as well, although the uncertainty surrounding the potential GDP level and growth rate will nevertheless persist. Third, countries should put more emphasis also on optimal composition of public debt, cash flow and other medium-run solvency indicators. Independent fiscal institutions might play a very important role in all three areas.

In international practice a large number of fiscal indicators are used for setting targets, monitor compliance and analyse developments. They are created for different purposes and their definitions reflect the differences in questions they are intended to answer. It is important to make distinction between permanent and temporary components of the deficit. Similarly, the impacts of discretionary fiscal policy and exogenous factors should be separated. This is demonstrated in Table 1.

The table appears relatively simple, yet it raises difficult questions. First, what time horizon is consistent with the definition of the "permanent" component? For instance, cyclical adjustment considers the economic cycle to be temporary, and thus it does not eliminate the "volatility" experienced on longer time horizons (T_5). As a result, convergence periods, absorption cycles, financial cycles and demographic volatility are partly included in the permanent component. In practice, cyclical adjustment captures only part (T_1) of medium-term volatility, since revenue windfall/shortfall unexplained by the cycle (T_2), effects of the surprise inflation (or disinflation) on

the primary deficit (T_3) and volatility of interest expenditure (T_4) are not included in the cyclical component.

The second question is how are temporary measures defined? It is possible to find here a deliberate confusion of one-off and individual items, the alternative to which would be addressing this issue at the most aggregated level (level of the budget balance). Practically, only self-reversing measures may be considered temporary (*i.e.*, the average of the actual balances and the (structural) balances, excluding temporary impacts, will be equal). The time horizon of self-reversal may be very long (a typical example is the outsourcing of government investments under PPP arrangements, the impact of which is reversed through repayments over decades). Self-reversing measures are often referred to as creative accounting (T_6), since they temporarily improve statistical indicators at the costs of the future deterioration. Deficit can be temporarily adjusted by delaying investment spending and reducing the fixed capital stock, even if maintaining its level is necessary (T_7). This measure is not automatically reversed; lower fixed capital stock can be maintained over a longer horizon.

Now we turn to a more detailed discussion of stock and flow indicators. We argue that one needs a comprehensive analysis of stock, flow and cash-flow data in order to achieve complete understanding of fiscal trends.

2.1   Stock indicators

The most used (by far) stock indicator is the level of gross public debt. A conceptual problem however is that it represents only one component of the balance sheet of the government. Net debt is a key indicator for assessing medium-term solvency, but longer term debt trajectories cannot be determined independently of the desirable level of other items in the balance sheet of the sovereign (*i.e.*, capital stock). Therefore changes to the inter-temporal net worth of the public sector might play an important role in aligning theory and practice in fiscal policy.

A practical problem is, however, that non-debt components of the balance sheet cannot be easily measured. Valuation difficulties are well known in this respect, since most of the assets and liabilities are, with the exception of quoted shares, not marketable:

- The value of a public company will be properly measured only when it is sold, generating privatisation revenue; this is not irrespective of how the government regulates the prices of services provided by these companies.

- It is also difficult to measure the value of loans and guarantees granted by the government; the simple cash-flow accounting employed the practical solution of considering both to be zero (Wattleworth, 1993). Consequently, lending for policy purpose is an item that increases debt and deficit, whereas guarantees are recognised only when called.

- The stock of government arrears is easier to measure, but was nevertheless omitted from the debt statistics, making it possible to rely on arrears to manipulate both the debt and the corresponding cash-flow financing requirement (Diamond and Schiller, 1993).

- Valuing the stock of public real assets is more difficult, since they are not marketable: have no secondary market or market value.[3] In the absence of such information, their stock can be calculated through estimates of their service life and by using various methodologies to calculate depreciation (e.g. linear or geometric depreciation assumptions) (Boskin et al., 1987). The stock of the fixed capital is not comparable across countries and their desirable level is also difficult to measure.

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[3]   There may, of course, exist country-specific differences; a common example, however, is a road network that is not marketable, due to which which the government will be the only potential buyer in the event of bankruptcy of a road built in a PPP contract.

- Augmenting the statistical indicator of the net worth, the net present value of future taxes and expenditure can be also measured in order to capture the impact of aging (Buiter, 1993). In spite of its theoretical advantages, this has a number of methodological issues that hinder its practical application. For example, the horizon for projecting revenues and expenditures may be subject to debate. Another question concerns realistic ways of considering parameters that limit expenditure growth (e.g. pension indexation, caps on entitlements). These may contribute to deficit and debt improvements, while the real value of certain expenditures may gradually diverge from economic performance and the distribution of this divergence at the level of individuals may be considerable.

As we have seen, the projection of net worth raises a large number of measurement and methodological questions. First initiatives have appeared in this area (Ódor, 2011 and 2014c), but introduction across all the EU Member States is not possible for the time being. Nevertheless, many of these criteria can be considered when setting the medium-term balance objectives (MTOs). As an additional country-specific criterion, the outstanding stock and the projection of financial and non-financial assets may be used. Admittedly, this would represent a deviation from the current weight of one third for the different factors; this question also requires further deliberation. FCs[4] could be relied on extensively in this respect, particularly as their independence and country-specific knowledge may be coupled with an interest in designing meaningful indicators, since they are in charge of checking that the objectives are set and delivered.

The market may of course consider that the desired level of debt would not be financeable. There are significant differences between countries in terms of the extent to which the markets are ready to finance them. Experience shows that sudden financing problems may lead to serious liquidity crises. One method of prevention is fiscal discipline, and another is transparency. Maturing debts and planned issuance should be continuously monitored to avoid surprises (more in 2.2.1), and it is also very important to constantly analyse contingent liabilities (including government bailouts in the financial system). For example, European Commission (2014) estimates potential bank bail-out costs to be covered by tax-payers of individual countries.

Our last point is that when legislating optimal debt trajectories, one has to consider also the political economy aspects of the problem. It is much better strategy to work together with all relevant political players than to impose fiscal rules from the centre. Intensive public discussions are also necessary to design long-lasting and strong domestic fiscal rules.

2.2 Flow indicators

2.2.1 Cash-flow financing requirement

Like in the case of private companies, basic stock and flow indicators are not sufficient to gain a complete picture of financial health. Cash-flow financing requirement and financing conditions can be used as starting point for identifying and managing fiscal risks. Basic cash data, debt redemption profiles or interest expenditure sensitivities can reveal information not available through gross debt figures or structural budget balances. Ódor (2014d) includes regular analysis of these variables in the risk assessment framework of the Council for Budget Responsibility. The new European fiscal framework goes in this direction when asking Member States to provide detailed debt issuance calendars.

Recent research at the intersection of macroeconomics and finance has brought a lot of dynamism into the analysis of the term structure of interest rates. Following Diebold and Li (2006)

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[4]   In this paper we use the expressions "independent fiscal institutions" (IFIs) and "fiscal councils" (FCs) somewhat interchangeably.

it is relatively straightforward to link small scale yield factors model with parsimonious macroeconomic models. These approaches might be also helpful in analysing permanent and temporary components of interest expenditures consistent with equilibrium path of macroeconomic variables. For example independent fiscal institutions could develop these relatively simple tools. It is especially important in periods of "abnormally" low market interest rates or in situations, when creditors has agreed to grant grace periods or accepted terms and conditions much below the market level.

2.2.2 Statistical deficit

The System of National Accounts (SNA93, ESA95, SNA2008, and ESA2010) records stocks and flows within a consistent framework. Consequently, it defines a deficit (b_{ESA}) as equal to the change in the stock of financial assets and liabilities, excluding effects from revaluation. Thus, the proceeds of privatisation and the government's acquisitions of financial assets are financing items, excluded from the calculation of the deficit. On the other hand it includes all the temporary components shown in Table 1.

$$b_{ESA} = P_1 + P_2 + T_1 + T_2 + T_3 + T_4 + T_5 + T_6 + T_7$$

The first important step in designing better measures of the deficit would be to filter out creative accounting (T_6) in order to eliminate bad incentives in the conduct of fiscal policy.

2.2.3 Adjusted headline deficit

There are two possible solutions to replace the statistical approach, which is ineffective against creative accounting. One would be adoption of international public sector accounting standards (IPSAS Board).[5] The other would be the use of practical analytical indicators, such as those generated in the past by the Congressional Budget Office (CBO) in the United States.

A potential direction would be for the flow indicators calculated by independent institutions to eliminate creative accounting by identifying them from the stock side. The CBO's methodology defines creative accounting as "operations without significant economic impact" (Congressional Budget Office, 2002). The practical approach to this is a "standardisation" of the budget deficit. A Hungarian body of experts (KESZT, 2010) has proposed a similar solution. In essence, the proposal is to generate with - simple adjustments - a "normalised" cash-flow indicator that excludes any creative accounting.[6] This involves expanding the coverage of public finances to include public companies[7] (T_{6a}) and investments to include PPP projects as if the private partners in those projects were involved merely as the financing partner (T_{6b}), and spreading over time the capital revenues from sources other than the disposal of fixed assets, e.g., over the whole concession period (T_{6c}). It should be noted here that Magyar Nemzeti Bank has regularly published such an analytical

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[5] The advantages of the accounting approach include the fact that it is a harmonised methodology, it is compiled by an independent institution, and the principle of substance over legal form may be an efficient tool against creative accounting, which seeks to take advantage of regulatory loopholes (partly successfully in the case of statistics). This raises the problem, however, that a focus on substance may not be altogether simple in practice, as it can take forms that might appear arbitrary. It has a further advantage in that it would be possible to turn to the international accounting standards to adopt their solutions to the creative accounting methods imported from the corporate sector, to which the standards react relatively quickly.

[6] Cash-based accounting will provide sufficient information on the budgetary situation if: 1) the spending on public functions is included in the budget (there is no quasi-fiscal section); 2) the capital expenditures and revenues are related solely to fixed assets (there are no early lump-sum receipts of concession income); 3) expenditure and tax-reimbursement scheduling is adjusted to the customary deadlines (no delays); and 4) the real cost of state loans and guarantees is booked (as provisions raised) when they are granted.

[7] Quasi-fiscal activities are not recorded in deficit and debt figures; but they settled as capital transfers subsequently (much later, when the government assume the debt of the public company) (Stella, 1993).

indicator since 1998 (P. Kiss, 2011). This approach requires significantly fewer data and imposes fewer methodological requirements than the previous solution and therefore it would be more practical and more transparent for some of the countries.[8]

While it may not be optimal in terms of accuracy of the indicator, the approach has an advantage in its balance between robustness/stability and simplicity. There are clear trade-offs between accuracy and subsequent revisions (revealing skeletons in the closet.) This approach can be successful only if it employs "quick and dirty" solutions. If all PPP-investment appears in the deficit in real time and the deficit covers the financing need of the total public sector (PSBR), including state-owned companies, the room for creative accounting is limited. However, this simple measure cannot indicate and exclude the temporary savings related to insufficiently low levels of public investment, which should be done at the level of the underlying deficit (T_7).

$$b_{ADJ1} = P_1 + P_2 + T_1 + T_2 + T_3 + T_4 + T_5 + T_7$$

An alternative approach coincides with the OECD definition of creative accounting, which states that these operations have no effect on the net worth of the government (Koen & Van den Noord, 2005). As seen above, the projection of net worth has appeared among the proposals (Ódor, 2011) and in the practice of the Council for Budget Responsibility. It has the advantage of being comprehensive: besides eliminating distortions that result from creative accounting, it is also able to identify the effects of changes in parameters affecting long-term expenditures (T_6), such as increasing retirement age. However, it may also have disadvantages, specifically the aforementioned valuation problem and the absence of the definition of a desired level of financial and non-financial assets. For this reason, it is unclear how capital spending should relate to the depreciation of the stock of fixed assets (T_7).[9] It may be useful to redefine boundaries of sectors, since some of the financial assets consist of assets of corporations providing public services, underlying which there may be public fixed assets or, just as likely, quasi-fiscal debt.

$$b_{ADJ2} = P_1 + P_2 + T_1 + T_2 + T_3 + T_4 + T_7$$

It should be noted that while b_{ADJ1} is a cash-based concept, b_{ADJ2} rests on accrual data.

2.2.4 Structural deficit – EU definition

Structural budget balances are designed to filter out cyclical fluctuations and one-off and temporary measures.

In the EU approach, the impact of each temporary measure is eliminated one-by-one from the structural deficit on the basis of consensus between the particular Member State and the Commission, although there are practical guidelines (Larch and Turrini, 2009). One criterion is that of size: only measures impacting over 0.1 per cent of GDP may be filtered out. Another criterion concerns the time horizon: measures may apply to one year or a few years at most. A third one requires that the focus should be placed on current items rather than capital expenditures. Finally, for reasons of prudence, items that increase the deficit should be omitted from the filtering exercise, or else they will be classified as "temporary" by the Member States. Clearly, these practical considerations are not suitable for filtering out the self-reversing measures and do not fulfil the requirements of theoretically sound principles, and as a consequence confusion of individual (I) and one-off measures could not have been avoided. In principle, distortive effects of

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[8] This method, however, does not filter out capital spending that falls short of the depreciation of fixed assets; that would be possible only at the structural deficit level.

[9] If the stock of fixed assets is at the desired level, then investments must be equal to depreciation. The latter estimate should be reliable, however.

creative accounting could have been corrected, but the criteria applied were only partly successful, if at all; the methodology does not treat quasi-fiscal activities properly, even though experience suggests that their impacts can be "outsourced" only temporarily. Some capital revenue, for example concession payments were filtered out from the deficit, but it was not spread over the whole concession period (T_{6c}).

$$s_{COM} = P_1 + P_2 + T_2 + T_3 + T_4 + T_5 + T_{6a} + T_{6b} + T_7 + I$$

An even more serious problem is that the cyclical component (T_1) is estimated with a weak and unstable methodology. The methodology to calculate structural budget balances - officially adopted on 12 July 2002 - remained unchanged as a production function-based output-gap approach (Denis, Mc Morrow and Roeger, 2002). Its components are:

- Cobb-Douglas production function,[10]
- NAIRU estimates based upon multivariate Kalman filter,
- total factor productivity estimated with a HP filter in the past and with Kalman filter currently.

The first step in the commonly agreed methodology is to estimate the output gap. A tendency observed here is that potential GDP estimates subsequently proved to be overly optimistic (Larch and Turrini, 2009). Most Member States experienced a high rate of growth in the late 1990s that was not sustainable, since it was partly linked to the dot-com bubble. The key problem is to separate the trend from the cycle in real time. As a result of the erroneous estimates, several countries followed fiscal policies between 1994 and 2006 that were intended to be counter-cyclical, but often proved to be pro-cyclical subsequently – after downward revisions of growth (Forni and Momigliano, 2004; Cimadomo, 2008). The 2007–2012 crisis, in part correlated with the housing market bubble, also led to a significant downward revision of GDP and potential output. The methodology for estimating the output gap has remained unchanged; therefore, the same scenario could easily happen in the future. As Ódor (2014a) show in many cases the uncertainty around the estimates of the change in structural balance in Europe is higher than 0.5 per cent of GDP, which is the benchmark against to which it should be evaluated. Moreover as we mentioned earlier, financial cycles, absorption cycles or for example commodity price cycles can all have important effects on budget balances over and above the impact of traditional business cycles.

The other pillar of the methodology – or, in Larch and Turrini's words, its other Achilles' heel – is the constant overall budgetary sensitivity. As early as 2000, the Commission identified that the elasticity between GDP and the tax bases was fundamentally determined by the nature of the shock in the economy, and it even prepared an estimate for this (European Commission, 2000). This was against a background of tax-rich economic growth in many countries in the late 1990s, with booming private consumption as an underlying factor.

Another problem is the inability of the commonly agreed methodology to filter out all exogenous effects. This even exists with the ECB method (Bouthevillain et al, 2001), which takes composition effects into account. If tax changes are adjusted to changes in discretionary measures as well as to the cyclical component estimated with the ECB method, there remains an unexplained (*windfall/shortfall*) component (T_2) (Morris et al., 2009). In Germany, Spain, France, Italy and the Netherlands, profit taxes proved volatile; this was attributable partly to the changes in revaluation profits and write-offs.[11] In Ireland and Spain, the housing market bubble resulted in fluctuations in indirect taxes, which were more volatile than the household consumption taken into account by the ECB for cyclical adjustments. Two proposals were put forward to resolve this, but neither was used in practice. One would have eliminated the "dividend" effect of inflation, which may have

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[10]   Methodological problems and consequences on fiscal policy are discussed in Godin and Kinsella, 2013.

[11]   All this generated tax windfalls in 1999-2000 and 2004-2007, as well as tax shortfalls in 2004-2007.

contributed to the fact that tax revenues differed from the forecasts (Buti and Van den Noord, 2003). This was computed as the difference between the officially projected rate of inflation and the rate of inflation that is consistent with normal capacity utilisation. This, however, would not have eliminated the effects of the housing market bubble nor would it have estimated the short-term impacts of surprise inflation (T_3). By contrast, the other proposal suggested adjusting the absorption cycle itself (T_5) (Lendvai et al., 2011). It used a somewhat arbitrary definition of absorption gap, although in theory it interpreted potential absorption as an indicator that is in line with potential output and the external position consistent with the fundamentals (the balance of payments). The disadvantage of this approach is that it determined the absorption gap as a deviation with respect to norms rather than deviations from trends, as a result of which the correction lacked a zero mean. Moreover, the norms are period- and country-specific (Langenus, 2013).

In spite of cyclical adjustment being considered one of the Achilles' heels of the framework, as seen above, the methodology was not modified. Instead of improvements to the indicators, the rules were changed. The "Six-pack", in effect since 2012, requires that the analysis of expenditure net of discretionary revenue measures be included in the assessments carried out by the preventive arm. Until the MTO is reached, the growth rate of primary expenditures must not exceed the medium-term reference rate of potential GDP growth.[12] The extent to which the growth rate of government expenditures must remain below the medium-term reference rate of potential GDP growth should be defined so that it can ensure sufficient progress towards the medium-term objective. Expenditure growth in excess of the rate thus defined must be offset by the discretionary increase in revenues, whereas discretionary revenue cuts must be compensated for with cuts in expenditures. Since the tax revenue changes are calculated "bottom up", this can be a complementary solution for cyclical adjustment shortcomings regarding the composition effect of tax bases and the volatility of taxes (windfall/shortfall). Nevertheless, the estimation of potential GDP remains an unsolvable problem in this framework as well.

2.2.5 Structural deficit – medium term orientation

We have seen above, how adjusted headline indicators are able to eliminate the effects of creative accounting. However, adjustments to other factors may be needed as well. Factors exogenous to fiscal policy include natural disasters and the budgetary effects of court rulings. A backward-looking moving average may be proposed here; it will filter out only genuinely significant impacts and will not deviate the structural deficit from the actual deficits across the period as a whole (Hoffmann and P. Kiss, 2010). However, a deliberate confusion of individual and one-off measures should be avoided. Below a certain level of aggregation, every item may be deemed arbitrarily as "individual", whereas in the more aggregated approach they may be mutually offsetting (Hoffmann and P. Kiss, 2010).

Cyclical adjustment has an inherent problem in that potential GDP is an unobservable variable, and its estimate may be revised at any time, in light of new GDP figures, due to endpoint uncertainty. The IMF methodology represents one kind of solution: it takes into consideration the historical correlation between short-term GDP revisions and long-term revisions in potential output to reduce the estimation error in potential GDP (Tereanu et al., 2014). Another possible solution is to find a method that minimises the joint uncertainty coming from the choice of model and from parameter updates with new data. Cheremukhin's (2013) method in the United States is an

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[12] Eligible for deduction from the primary balance are expenditures on EU programmes that are fully offset by revenues from EU funds; furthermore, unemployment benefit expenditures exclude the non-discretionary changes (which are taken into account in cyclical adjustment). The assessment must consider the potentially very high variability of investments, especially in the case of small Member States.

example. Nevertheless, since the possibility of significant revisions cannot be fully excluded, this could be managed with an escape clause to the fiscal rule.

P. Kiss and Vadas (2006) proposed solutions for other problems of cyclical adjustment.

- Similar to the Commission's methodology, the starting point is the Cobb–Douglas production function. Since the aggregate output gap equals the weighted sum of income gaps from labour and capital, it can be disaggregated into tax bases related to capital and labour. A standard consumption function may then be used to connect wages and potential consumption values on a theoretical basis. The authors have proposed a multivariate HP filter to link the above equations, with an aggregation limit added. Besides the theoretical foundations, this is more advantageous than the ECB's HP-filtering because it does not rely on extending the time series to close the gaps. Instead it uses the information included in the output gap as regards the cyclical situation.

- However, the composition effect of different tax bases will have an automatic distortion effect as different deflators are used to generate the corresponding real variables. This composition effect is easy to adjust for with the price gap between the consumer price index (CPI) and the GDP deflator, which is applied to adjust labour and consumption-related revenues. The price gap can also partly removes fluctuations in taxes caused by surprise inflation or disinflation (T_3).

- The private and the government part of labour and consumption tax bases and revenues must be disaggregated. As in the ECB method, it is assumed that the indirect taxes and contributions paid by the government and the direct taxes and contributions paid by public employees have zero elasticity (just as these government expenditures consistently have); in other words, they are not dependent on the cycle. This considerably reduces the budgetary impact of the cycle.

- A number of biases in elasticity between taxes and tax bases are highlighted. Note, for example, the effect of the nominal parameters of the tax regime (minimum values, tier boundaries, caps) and regulations causing asymmetry (e.g. carry-forward losses). All this necessitates updating the calculation/estimation of the elasticities each year. It may also partly reduce the volatility of taxes (windfall/shortfall) still remaining after cyclical adjustment.[13]

$$b_{ALT} = P_1 + P_2 + T_6 + T_7$$

The Council for Budget Responsibility currently uses the methodology developed by Kiss and Vadas (2006) to cyclically adjust budgetary figures. The aggregate output gap used is a result of an "estimate combination" (Ódor, 2014d) utilising various methods and information sets. Robustness is very important when the final estimate can have substantial welfare implications (by triggering correction mechanisms).

Finally, some part of interest expenditures can also be regarded as temporary (T4). Especially after large shocks or regime changes. In order to estimate the transitory component, one can use the methodology mentioned in 2.2.1.

2.2.6 Underlying deficit – longer term approaches

The long-term orientation of the fiscal policy can use b_{ADJ2} indicator as a starting point, since it adjust the deficit with the future costs of ageing (T_5). However, long-term volatility cannot be properly filtered out by using any cyclical adjustment methods. Convergence periods, absorption and financial cycles should also be taken into account.

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[13] Since EU Member States have to calculate the tax revenue changes in a "bottom up" approach, this can be a complementary solution for reducing unexplained windfall or shortfall.

Table 2

Better Flow Indicators

	Current Methodology	Alternative 1	Alternative 2
Headline deficit	$b_{ESA}= P_1+P_2+T_1+T_2+T_3+T_4+T_5+T_6+T_7$	$b_{ADJ1}=b_{CASH}-T_6$	$b_{ADJ1}=$ $b_{ESA}-T_6-T_5$
Structural deficit	$s_{COM}= P_1+P_2+T_2+T_3+T_4+T_5+T_{6a}+T_{6b}+T_7+I$	$s_{ALT}=$ $P_1+P_2+T_5+T_7$	
Underlying deficit			$u_{ALT}=$ P_1+P_2

$$u_{ALT} = P_1 + P_2$$

The last temporary item unfiltered so far is the difference between actual and "desirable" optimal level of investment (T_7).[14] It is a difficult exercise, but international comparisons, analysis of amortisation or calculation of marginal products of capital might shed some light on this issue. A less ambitious approach would be to take into account only changes to the "usual" level of maintenance costs in the budget.

After proposing better fiscal indicators and methodologies, now we turn to the description of a more de-centralized system of fiscal responsibility in the euro area.

3   Proposal for a new fiscal framework

The current benchmark methodology to identify structural budget balances in the European Union have the following main shortcomings (Marčanová and Ódor, 2014):

- no role for financial or absorption cycles,
- output composition does not matter,
- no clear and consistent definition of one-offs; actually it is not possible to get detailed information about one-offs based on the methodology of the EC ,
- no time-varying budgetary elasticities (important if there are legislative changes),
- high sensitivity to data revisions, since are based on GDP data,
- no adjustments to interest expenditures (as indicated in 2.2.1),
- end-point problems of the HP filter.

Instead of introducing more and more new rules, suitable fiscal indicators should once again be defined; this can result in much simpler and more consistent rules. The following section offers an overview of a comprehensive set of indicators suitable for introduction and the role that the independent FCs could play at this juncture. After all, not even a decade and a half has been sufficient to find the right solutions for certain fundamental problems at the community level.

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[14]   Currently there are discussions at the EU level to exclude part of co-financing to European investments from the application of the SGP.

Weaknesses of Currently Used Indicators

Main Problems	Possible Remedies
Partial coverage of discretionary action	- use of public sector balance sheets - international accounting standards (substance over form) - analytical indicators covering quasi-fiscal activities
Over-reliance on (extremely uncertain) real-time estimates of the output gap	- robust estimates: battery of methods - *ex ante* evaluation mainly or longer *ex post* horizons - disaggregated methodology for CAB - bottom-up crosschecks
Not consistent and transparent identification of one-off and temporary measures	- full disclosure of one-off items - consistent methodology (only self-reversing measures are considered)
No adequate focus on cash-flow figures	- more emphasis on medium-term solvency - sensitivity analysis of interest expenditures

3.1   Pillars of the new framework

This section presents a framework that is based on theoretical considerations, covers the whole scope of fiscal policy, and takes advantage of the synergies between fiscal rules and independent fiscal institutions both at the national and European level. Before presenting the main building blocks of the proposal, it is important to stress that country-specific rules are superior to one-size-fits-all approaches.

As far as the optimal theoretical level of public debt is concerned, the literature does not offer clear-cut recommendations for policy makers. It is however clear from theory that optimal sovereign debt trajectories are country-specific and depend on a complex array of variables. Higher public debt, on the one hand, can bring the economy to the optimal capital level and increase welfare. Further, it allows consumption smoothing by lifting liquidity constraints on some households, which are subject to idiosyncratic shocks. Another benefit from higher debt is the deepening of domestic capital markets by facilitating precautionary savings. Both short-run and long-run welfare effects of debt depends on the income inequality (Röhrs and Winter, 2014). On the other hand, increasing levels of government debt are obviously not without costs. Higher market interest rates can crowd out private investments, distortionary taxation used to finance debt is lowering welfare and lower wages in equilibrium can be also mentioned as a cost. As Vogel (2014) illustrates, wealth inequality can also be an important factor affecting optimal debt levels. It is thus not surprising, that optimal values of debt in strictly theoretical models vary between a substantial negative amount (accumulation of assets) and a large positive value, for instance, 60 per cent of GDP in Aiyagari and McGrattan (1998).

Another very important theoretical lesson is that after a shock to the debt level, it is not optimal to make immediate and complete adjustment. Instead, efforts should be made to achieve tax smoothing (Barro, 1979). Kirsanova et al. (2007) show that in many models, optimal fiscal policy would involve steady-state debt following a random walk in response to shocks. A

prerequisite for this, however, is a benevolent policy maker and a pre-shock debt level that is not excessively high and market expectations that are well anchored even after the shock. Otherwise, a sudden increase in risk premia may easily lead to a loss of confidence in the government debt markets. In other words, designing optimal consolidation paths is also a difficult exercise, where strict fiscal rules are unlikely to help.

The International Monetary Fund has collected some evidence concerning "excessive" debt levels over the years. A debt-to-GDP ratio of 60 per cent is quite often noted as a prudential limit for developed countries. For developing and emerging economies, 40 per cent is the suggested debt-to-GDP ratio that should not be breached on a long-term basis. A strand of the literature also focuses more on debt sustainability and government defaults rather than on optimal debt levels. For example Bi and Leeper (2013) calculate "fiscal limits" as probabilistic distributions (instead of fixed debt-to-GDP ratios) dependent on Laffer curves and economic shocks.

From a purely practical point of view, we know that countries often have persistent deficits and rapidly increasing debt levels even in normal times. The literature calls this phenomenon as "deficit bias". There can be many reasons for such a behaviour (Calmfors and Wren-Lewis, 2011): myopia, informational asymmetries, impatience, electoral competition or for example common-pool theory. The important point here is that the most important reasons for "fiscal alcoholism" are often country specific or even time-varying. For example, different degree of credibility, forms of governance and political set-ups all require tailor-made solutions.

To sum up, both theoretical (optimal debt trajectories and speed of debt adjustments) and practical (source of deficit bias) considerations point toward a need for country-specific fiscal rules. One-size-fits-all solutions can easily be sub-optimal at individual country level. The discussion above illustrates that there can be significant synergies between fiscal rules more aligned with theory and independent fiscal institutions. Optimal debt trajectories, consolidation paths or elimination of information asymmetries are all areas, where fiscal councils can have high value added.

Believed to guarantee a better division of labour between the national and the community levels, our proposed framework has the following main components:
- country-specific "optimal" stock indicators as long-term targets,
- analytical flow indicators, consistent with the above, as medium-term objectives,
- expenditure rules as instruments to achieve those targets,
- independent national fiscal institutions as the first-line supervisors of these indicators and rules,
- second-line supervision at the community level,
- simple EU fiscal rules,
- independent European fiscal watchdog.

This framework avoids the community-level dilemma between international comparability and an economic policy tailored to a particular country, which frequently led to the unenforceability of the rules.

3.2   Country-specific targets and instruments

While the design of local fiscal frameworks depend very much on country-specific circumstances, including basic institutional characteristics and pre-defined politically-decided objectives, it might be useful to characterize the potential main building blocks. Here we describe three important elements in more details: long-term debt trajectories, medium-term objectives and yearly expenditure limits as instruments.

Figure 1

**Alternative Fiscal Framework for the Euro Area**
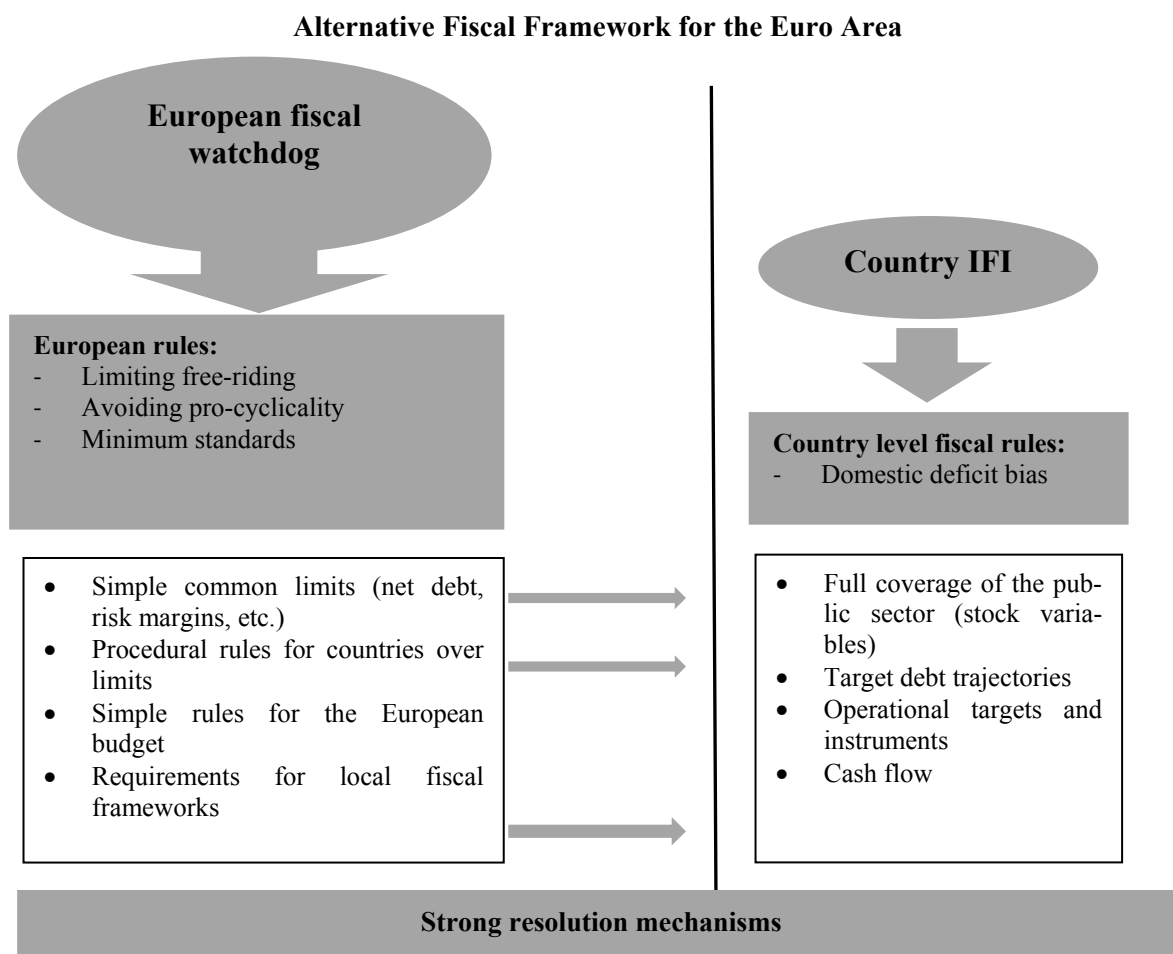
3.2.1 Debt trajectories

"Optimal" debt trajectories should be based on analytical work (with an active participation of FCs), but also have to take into account political economy considerations. It is far from easy to combine long-term stability (anchor) with medium-term flexibility to avoid sub-optimal fiscal policy.

When designing fiscal rules with debt trajectories, the following seems to be necessary:

- analysis of the whole inter-temporal balance sheet of the public sector (including contingent liabilities),
- calculation of country-specific fiscal limits, sound debt levels,
- investment needs of the country,
- definition of escape clauses, automatic correction mechanisms, monitored by FCs,
- high legal power of the law.

The basic function of debt trajectories is to have a clear and commonly agreed long-term anchor for fiscal policy, written preferably in a constitutional law. To avoid medium-term pro-cyclicality, well-defined escape clauses are necessary, but with an active participation of independent fiscal institutions to ensure counter-cyclicality also in good times.

Figure 2

Selection of Country-level Fiscal Indicators
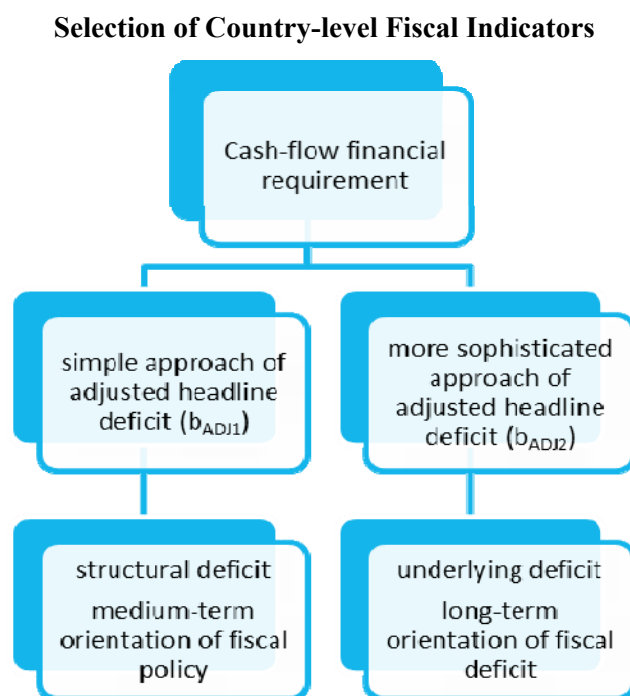
3.2.2 Medium-term objectives

The debt trajectories should *not* be used as medium-term operational targets for fiscal policy. They should be "translated" into the level of the structural/underlying deficit. Fiscal councils have to check to what extent are these objectives in line with debt trajectories embedded in higher level legislation.

However, while structural or underlying deficits are easy to construct *ex ante*, the *ex post* evaluation is problematic. It can be done only on a longer time horizon (at least a full business cycle), drawing conclusions in real-time is almost impossible. That is the reason, why we recommend using expenditure limits as operational instruments. In good times they limit over-spending, while in bad times allow deficit to increase. It is important to stress at the outset that expenditure ceilings should take into account discretionary revenue measures to avoid politicization of the concept. Of course, appropriate escape clause should be defined, again with a monitoring role of fiscal councils. To avoid unpleasant surprises, the best practice would be to include also non-allocated buffers in expenditure limits with a size of tenths of percent of GDP.

3.2.3 Expenditure rules

Expenditure rules should cover multiple years by regulating the annual rate of growth in primary expenditures (excluding interest expenditure) or setting a spending cap for every year (Ódor and P. Kiss, 2011).

If applied in a credible framework, the expenditure rule (Ódor and P. Kiss, 2011) may also eliminate the distortions originating from tax volatility, as it adjusts the expenditure growth rate, not with the change of cyclically adjusted revenue but the estimated effects of discretionary tax measures. The FCs may play an especially important role here, as they have appropriate

information at their disposal to perform this task. As mentioned before, estimating potential GDP will also remain an unresolvable problem in this framework, even though it is the benchmark for expenditure growth. Its minor revisions may be solved with a spending reserve[15] and major revisions with an escape clause. Further investigations will be necessary to decide whether the rule should apply to the total primary expenditure or should handle intra-governmental transfers to municipalities and investments separately (Ódor and P. Kiss, 2011).

As has been seen, investments represent a special category, since they are closely related to a specific stock indicator and can be directly compared to the rate of depreciation. Savings in investments may be feasible on the short term, but this will not be acceptable for the purposes of either the structural deficit as a medium-term target indicator or the expenditure rule as instrument. If the objective is, for instance, to prevent the stock of fixed assets from decreasing, then a shortfall of investment spending compared to the level necessitated by depreciation may be interpreted as temporary, and cannot be used for increasing current expenditure.

The treatment of inflation may nevertheless pose a problem in the case of the expenditure rule. In principle, inflation volatility may affect the primary balance as well. An example is the so-called inflation dividend, which is the budget revenue impact of the "inflation gap", defined as the difference between the actual and the ECB target for the Eurozone countries (Buti and Van den Noord, 2003). An expected rise in inflation would, in fact, have an impact on the primary balance only if the government were to decide that it would not compensate for the loss in real value of expenditures from its extra revenues (P. Kiss, 2007). This, however, is not permitted under the expenditure rule, since it automatically increases the expenditure budget with the expected rate of inflation. The case of surprise inflation is different. The question here is whether the expenditure reserves are sufficient to offset the effect of the higher inflation and whether its compensation is obligatory. Another question is whether expenditures should be reduced in the event of, and consistently with, lower inflation, and thus the reserves increased.

3.3   The role of fiscal councils

Today it is recognised almost universally that independent central banks, simple rules and a high degree of transparency play an essential role in monetary policy. In spite of the fact that the crisis has engendered new problems in monetary policy as well, Ódor (2014b) considers it important that synergies between independent institutions and simple rules should have a stronger role also within fiscal policy. However, as fiscal policy has greater distribution effects than monetary policy, the scope of the role assigned to the independent FCs should be carefully considered. For example, it is not recommended to authorise an FC to legislate.

The following presents areas where independent fiscal institutions might help to reduce the deficit bias to a significant degree. One of the most important lessons from the recent years has been the recognition that the FCs are able to mitigate several of the trade-offs created when fiscal rules are defined. Three such trade-offs should be mentioned here. The first is the tension between flexibility and enforceability. If the rules are too flexible, they will never be enforced. If they are too inflexible, however, they may trigger a number of situations in which compliance with them would require pro-cyclical fiscal policy. Independent institutions acting as referees may provide a solution to this problem. The second trade-off lies between simplicity and electoral support. While simple rules are easy to circumvent, voters are unlikely to understand the complex ones. Fiscal council may have a role here as well: if adequate fiscal indicators are defined, no loopholes will be found, even if the rules are simple rather than complicated. Portes and Wren-Lewis (2014)

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[15]   Its size may be determined in a country-specific way, similarly to the estimated safety margin for the MTO.

emphasise a third trade-off, one between optimality and efficiency. As in the above, an independent institution will be able to mitigate this problem as well.

The FC's theoretical role is normally subdivided into three specific areas (Ódor, 2014b):

1) the interpretation and communication of fiscal policy,

2) the evaluation and monitoring of the fiscal rules,

3) an analytical (expert) role.

The model proposed in this article covers each of those three areas. The FC fills the first function by estimating public sector net worth and evaluating the escape clauses. It performs the second role as it carries out *ex ante* and *ex post* assessments of compliance with the proposed fiscal rules. And it fulfils the third function when it calculates the structural or underlying balance, estimates the effects of discretionary measures, or, as the case may be, defines the optimal debt path.

This issue become more complicated when we consider reforming the community level instead of the national level. Ódor (2014a) criticises the fiscal framework operated at the community level. One considerable problem is that the loss of credibility due to disregard of the "no bail-out" clause cannot be restored by creating an overly complex system with an increasing number of rules. Although independent fiscal institutions have been given a more important role, there remain a large number of country-specific issues where the focus is (more or less successfully) on comparability among countries rather than the provision of the best possible estimates.

3.4   Local vs community level

The problem of a deficit bias in currency unions can pop up both at the local level and the level of the whole area ("common-pool problem squared"). In our view the obvious approach would be to build a hierarchical system of responsibilities. When there is no sign of free-riding behaviour with a potential contagion effects, the national level should be responsible for fighting against the local deficit bias. In that case country-specific, tailor-made solution should be designed (also more in line with theory).

Area level rules and institutions should primarily focus on problems concerning common interest. High on this list is possible contagion, free-riding behaviour or for example counter-cyclical aggregate fiscal policy. In order to have an efficient division of accountability, one has to have a clear view on three important ingredients: i) resolution mechanisms, ii) area-wide fiscal rules and iii) fiscal institutions. In turn we discuss all three of them, including possible inter-linkages and synergic effects.

Resolution mechanisms, limiting moral hazard, are one of the most important cornerstones of a well-functioning currency union. The degree of central control varies considerably within existing federations. One extreme possibility is a reliance purely on market discipline, *i.e.*, having a credible no bail-out policy (like in the US). The other extreme is full solidarity between Member States, when bail-out is widely expected. It should be noted that the design of area-wide fiscal rules is heavily dependent on the approach chosen. In the former case almost no monitoring from the centre is necessary, while if one chooses the latter approach, very detailed rules and coordinated fiscal policy are necessary to avoid moral hazard. The current situation in the euro area is somewhere between these two extremes. Europe is balancing between the low credibility of the no bail-out clause in the Treaty and the need to avoid free-riding. As Ódor (2014a) argues, since the sovereignty principle is still in place, it would be a better strategy to move closer to a more de-centralised system through instituting bail-ins, clear resolution mechanisms and *ex ante* rules for

sovereign debt restructuring. One should however note that strengthening the no bail-out clause is not possible without sound macro-prudential policies and an effective banking union. Even if it is unlikely to achieve full credibility of the no bail-out principle like in the US (at least in the medium-run), the more losses are absorbed by creditors, the easier is the design of fiscal rules at the community level.

In the case of a fully credible no bail-out clause, centrally imposed fiscal rules on Member States are not even necessary. If the euro area is successful in putting in place clear rules for burden sharing, banking union, debt restructuring with a strong backstop mechanism, the current trend of legislating more and more complex fiscal rules can be reversed. In our view, in that case it would be sufficient to operate with one or two simple rules. These rules should *not* target yearly balances in national budgets. Instead, they should fight against deficit bias occurring at the area level. One can imagine various possibilities suitable for this purpose: debt levels, sustainability indicators or, for example, sovereign risk indicators. It is important, however, to design rules not with a target level, but rather as a maximum value tolerated by the community. Countries operating below these thresholds would be free to conduct their fiscal policy if respecting minimum benchmarks (the universal 3 per cent deficit limit can be abolished). However, after breaching the limits, oversight from the centre should step in. The sovereignty principle should be significantly reduced above the agreed limits. This is a price Members States should pay for possible bail-outs.

In case of the institutional set-up, important changes are necessary to make the framework more credible. As it was indicated above, the failure of the one-size-fits-all approach in a currency union calls for a more de-centralised system of fiscal responsibility.

Under such potential division of labour, the community level would serve three important functions. One would be the supervision of national frameworks. Rather than analysing national budgets every year, this would involve the defining of minimum standards applicable to national fiscal frameworks. An EU-level process would be triggered only in the case of gross policy errors at the national level. Minimum standards should include:[16]

- rules for transparency,
- requirements to present indicators covering the whole public sector,
- basic remit of local IFIs, including long-term sustainability reports,
- professional requirements for IFI council members,
- independent financing of IFIs.

Second, the community level should have the power and the capacity to start a program for those countries breaching maximum limits set by the EU, *i.e.*, operating with gross policy errors. Here the sovereignty principle should be relaxed substantially.

Third, the community level would have an additional role if and when fiscal rules were to be extended to the EU budget in the course of further integration.

Last but not least, such a change would raise the question of who should exercise oversight over the supervisory institution. As mentioned before, one option is to involve the community level. Of course, there are other solutions as well: for instance, national parliaments or international networks (an organisation of FCs), or perhaps one of the EU institutions. The best solution would most likely entail an independent fiscal institution at the community level, one that is not subject to the sort of political pressure that the Commission is. This institution would monitor the national FCs and would itself report to a committee appointed by the European Parliament.

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[16]   The OECD Principles for Independent Fiscal Institutions (2014) can serve as an excellent starting point.

3.5   *European fiscal rules*

Depending on the strength of the resolution mechanisms and the future design of a fiscal union, the euro area needs two types of fiscal rules. The first set should tackle potential free-riding behaviour in a monetary union. The second set should ensure counter-cyclical policy of the common European budget.

The last changes to the European fiscal architecture have brought unnecessary complexity to the landscape of fiscal rules. Instead of focusing on gross policy errors (the initial objective of the SGP), the community level is now involved in fine-tuning national budgets. This is in our view not a sustainable solution. Rather, our proposal is to have a clear division of responsibilities between the centre and national authorities. The European level should focus on deficit-bias arising at the community level (free-riding), while the primary role of national fiscal frameworks should be fight against deficit-bias at local level.

The stronger and more efficient are the resolution mechanisms, the less need is to interfere with national budgets. The prime example is the US, where the strong and credible no bail-out rule eliminates free-riding, so there are no fiscal rules imposed at individual states from the federal level. However, it seems to us that this solution is not feasible in the medium-run in Europe, so we see some role for SGP-type of agreements with an aim to correct gross policy errors. On the other hand, the current overregulation with fiscal rules is clearly sub-optimal.

What kind of indicators can signal free-riding? We see three possible avenues. The first option is to use some kind of stock variable. The current limit on nominal gross debt is a good starting point. One can imagine various improvements by adding more assets and liabilities, however only if clear valuation principles and independent reporting are available. Various forms of net debt can serve this purpose relatively well. The main problem however is in the definition of "dangerous" limits. As we argued earlier, one-size-fits-all rules in a diverse monetary union are sub-optimal. On the other hand, the status quo with a 60 per cent ceiling for gross debt shows that from a political point of view, equal treatment is very important.

The second possibility we see is using sustainability gaps as limits. Since these are expressed in relative terms, the problem of different optimal thresholds for different countries is mitigated. On the other hand, calculating infinite horizon fiscal gaps is a tricky exercise. Fortunately there is an agreed methodology at the European level and countries are routinely evaluated based on this indicator. Its level is used with a 1/3 weight in the calculation of the medium-term objective (MTO).

The third possibility is a reliance on market valuation of debt instruments. It should be expressed as a margin over safe bonds, preferably European bonds issued by the central authority. It of course requires stronger integration – some form of fiscal union.

To sum up, with strong resolution schemes in place, European fiscal rules targeting free-riding behaviour can be radically simplified. All what is needed is a limit over which community level authorities step in to interfere with the national budgetary process. Below these thresholds, national parliaments are free to choose their fiscal targets; however above those limits national sovereignty should be substantially curbed. The European-wide limit should be set on some form of net debt, fiscal gap or risk margin on debt instruments.

Sustainability is just one goal of fiscal policy in a monetary union. One also needs counter-cyclical fiscal policy and risk sharing mechanisms. Currently there is an ongoing debate about delegating more fiscal power to the centre. The size of the European budget is small (1 per cent of GDP) and focuses mainly on structural issues and the common agricultural policy (CAP). The budget is always balanced. In order to allow for more risk-sharing between countries, one can imagine a stronger role for central redistribution of funds and use of European level automatic

stabilizers or discretionary fiscal policy. According to Allard et al. (2013), a central budget with few percentage points of EU GDP would be capable of much better risk-sharing. The obvious candidates for central expenditures are: defence spending, R&D, infrastructure investment or for example common unemployment insurance or pension system. It would be financed by EU taxes.

If a stronger fiscal union is created, there will be room for counter-cyclical fiscal policy. Either via automatic stabilizers or discretionary policy action. The central authority would be able to issue debt against its revenues in bad times and pay it back in good times. One positive side-effect would be the creation of safe assets for the financial sector. One or two simple fiscal rules and an independent EU fiscal watchdog would be in our view enough to ensure sustainability and counter-cyclicality. Balanced budgets over the cycle or a low debt limit are the most obvious options to consider.

4   Conclusions

This paper offers three main conclusions. Firstly, a well-functioning currency area needs a clear separation of accountability. The complex set of hardly-enforceable rules and procedures and overlapping responsibilities of various institutions in Europe is far from optimal. One needs to eliminate path-dependency with a radical cut. It will be necessary to build – alongside with discussions about resolution mechanisms and a stronger fiscal union – a fiscal architecture, which is not only more in line with theory, but also maximizes synergies between fiscal rules and fiscal institutions. We argue for a decentralized fiscal framework with different objectives and instruments for the national and the community level.

Secondly, the importance of the one-size-fits-all approach should be significantly scaled down. Optimal debt trajectories, sources of local deficit bias are all country-specific and also time-varying. No single methodology can do justice in a diverse currency union.

The third point is that, in order to design more effective fiscal frameworks, we need to go back to the basic question of measuring fiscal performance. No fiscal rule can operate well without measuring the true fiscal position. The appropriately corrected headline indicators are expected to eliminate the effects of creative accounting, while more precise structural or underlying balances are necessary to filter out all exogenous factors. In both cases, independent fiscal institutions might play an important role. However, the estimation of potential output will still remain inherently uncertain, so the focus should be on employing methods which require fewer revisions or creating budgetary reserves to deal with the uncertainty.

This paper should be viewed only as a conceptual starting point for a more de-centralized fiscal framework in Europe. More work needs to be done to design a fully-fledged proposal. Obviously the solution will depend on a final agreement about resolution mechanism or risk sharing mechanisms through the European budget. Deeper analysis of the following elements will be also crucial in our view: i) designing a realistic transition phase from one regime to the other (including an analysis of potential legal obstacles), ii) empirical research on optimal debt levels and fiscal limits, iii) improvements in accounting standards and their actual implementation and iv) relaxation of the sovereignty principle in case of gross policy errors.

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