

■ On the need to focus more on the asymmetry problem within the EU Fiscal Policy Framework

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The cornerstone of the EU Fiscal Policy Framework is the requirement that budget deficits are not allowed to exceed 3 per cent of GDP. The regulations state that Euro countries which do not adhere to this requirement can be penalised. In this paper it is argued that from the viewpoint of stabilisation policy, the 3 per cent rule might penalise the wrong countries; instead it is high-debt countries with a slow pace of debt reduction and countries contributing to an asymmetric and pro-cyclical fiscal policy that should be criticised. The European Commission's recent proposal to focus more on debt is therefore welcome. However, there have been fewer suggestions about how to deal with the problem of asymmetry and pro-cyclicality. This article discusses and compares three different budgetary rules addressing the latter problem: (i) a rule that makes the deficit ceiling a function of the debt, (ii) an expenditure ceiling based on cyclically adjusted revenue, and (iii) a budget device that imposes appropriate targets for the annual actual budget balance in both good and bad times, given a pre-determined medium-term objective.

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The ongoing discussion on the EU Fiscal Policy Framework

There is an ongoing economic-policy debate on the EU Fiscal Policy Framework. The ambition behind this framework is to promote a stable macro-economic environment, characterised by low and stable inflation and sustainable public finances. The framework consists of numerical rules as well as procedures and mechanisms for implementation and surveillance.¹ Some argue that the numerical rules should be changed, others

The EU Fiscal Policy Framework aims to promote a stable macro-economic environment, with low and stable inflation and sustainable public finances.

¹ In the monetary policy literature it is customary to interpret a "rule" as a behavioural reaction function for the central bank. In this paper (and the consulted literature) the rule concept is broader; here a rule can, for example, be interpreted as a numerical fiscal constraint.

that it is the mechanisms for implementation and surveillance that should be improved. Those who argue for new numerical rules do so from different points of departure. Some consider that the rules should be more flexible, for instance to allow for country-specific characteristics (for example, structural conditions such as the need to borrow for infrastructure investments) as well as for fiscal stabilisation measures in the event of very asymmetrical cyclical developments in individual euro countries. Those who argue instead that the rules and/or the mechanisms for implementation and surveillance should be strengthened do so in the light of current budgetary problems in several euro countries and the failure to apply the framework as originally intended. This paper's focus is on the numerical rules/constraints.

The numerical constraints in the EU Fiscal Policy Framework

It has three numerical fiscal rules or constraints; the 3 per cent deficit ceiling, the 60 per cent debt constraint and the "close-to-balance" criteria.

There are, in principle, three numerical fiscal rules or constraints in the EU Policy Framework:²

- Under normal circumstances the budget deficit is not to exceed 3 per cent of GDP. A persistent excessive deficit is supposed to lead to a fine.
- The general government gross debt should not be above 60 per cent of GDP but, if it is, it must be decreased towards 60 per cent of GDP at a "satisfactory pace". However, in practice this rule has been interpreted as not allowing debt to grow if it exceeds 60 per cent of GDP. Violation of this rule does not incur sanctions. The deficit and the debt ceilings are strongly linked. If the nominal GDP growth rate is 5 per cent and the average deficit is 3 per cent, the debt-to-GDP ratio will move towards 60 per cent.³ Both ceilings are evaluated by means of the Excessive Deficit Procedure (EDP).
- The EDP has been supplemented with the Stability and Growth Pact (SGP). A key element in the SGP is the requirement that member countries *should achieve* a budgetary position that over the cycle is "close to balance or in surplus". One purpose of this rule is to provide a safety margin to the 3 per cent deficit ceiling so as to allow for

² See, for example, Brunila et al. (2001) and Fischer (2004) for a more detailed overview of these rules and how they have developed.

³ Given that positive and negative stock-flow adjustments cancel out over time, debt development can be described by $\dot{d} = -b - gd$ where \dot{d} is the change in the debt-to-GDP ratio from the previous year, b is the budget balance-to-GDP ratio and g is nominal GDP growth. A constant debt-to-GDP ratio (that is, $\dot{d} = 0$) gives $d = -b/g$. Thus, if the average deficit is 3 per cent and nominal GDP growth is 5 per cent, we get $d = -(-0.03/0.05) = 0.6$.

fiscal stabilisation (by automatic stabilisers and discretionary measures) without going into excessive deficit. The member states have now agreed on that the close to balance or in surplus criteria should be evaluated in terms of the estimated structural budget balance. However, there are no penalties if the rule is not observed.

Although the EU fiscal framework consists in theory of several numerical rules, in practice it is the 3 per cent deficit ceiling that is its cornerstone.

The need for fiscal rules in the EMU

There are several arguments for the necessity of fiscal constraints in the EMU system:

Several arguments favour fiscal constraints in the EMU system.

- (i) There may be concern that high-debt member countries will lobby for lower interest rates.⁴
- (ii) Fiscally irresponsible member countries may ask the ECB for financial bail-outs.
- (iii) With autonomous national monetary policies, fiscal stimuli will be met by appropriate monetary policy responses. With a single monetary policy conducted by the ECB, fiscal stimuli in a single euro country will have a diluted impact on the euro area as a whole and will be met by a less contractive monetary policy than would have been the case if monetary policy had been nationally autonomous. Consequently there might be a strong temptation for a single euro country to “free ride” by expanding its budget at the expense of the other euro area countries. If a few sizeable euro countries or a majority were to behave like this, it would be rational for a country that initially did not intend to “free ride” to behave in the same manner. Otherwise it might end up among a minority of countries that do not expand but are still subjected to the correspondingly tighter monetary policy.⁵

There are also some additional arguments in favour of fiscal constraint from a monetary policy perspective as well as from a stabilisation policy viewpoint in a wider sense, no matter whether monetary policy is nationally autonomous or conducted by a common central bank within a monetary union:

⁴ This will only be a problem if members of the Governing Council of the ECB allow national considerations to sway their monetary policy decisions.

⁵ Of course, countries that observe the sustainability restriction may not, even in such situations, follow the behaviour of other countries.

- (iv) If the debt level is high and a large part is financed with domestic (or intra-union) loans, the positive (negative) income effect for people holding government bonds of an increase (decrease) in the interest rate caused by an increase (decrease) in the central bank's key interest rate will partly counteract the intended stabilisation effect. That is, high debt levels may make monetary policy less effective.⁶
- (v) There is a possibility that unsustainable public finances, represented by high debt, will influence inflation expectations. If it does, it will affect the effectiveness and possibly also the credibility of monetary policy.⁷
- (vi) Experience shows that governments tend to use additional revenue in good times for permanent reforms. This is a problem for both sustainability and stabilisation policy. An asymmetric fiscal policy where public saving in good times fails to balance the corresponding deficits in bad times results, on average, in an unduly expansive fiscal policy and rising debt. Monetary policy then has to be more contractive than otherwise, leading to unnecessarily high interest rates. Such a policy mix is clearly suboptimal.⁸ A government that cares about sustainable public finances can, of course, compensate "inadequate" saving in good times by running a contractive fiscal policy in downturns, but such pro-cyclical behaviour accentuates the swings in real GDP and unemployment. Furthermore, severe recessions might, in such cases, require substantial monetary policy stimuli. However, the central bank's key interest rate cannot go below zero per cent and in a severe recession a cut to zero per cent might not suffice to generate a recovery. In such a case, the combination of a contractive fiscal policy and an impotent monetary policy can result in a prolonged recession.⁹ In what follows, such government behaviour will be referred to as the "asymmetry problem".

Obviously, all these arguments call for a fiscal framework that promotes fiscal discipline. In the academic literature, however, some argue that, from a theoretical point of view, fiscal constraints may not be necessary at all, at least not to ensure price stability [see, for example, Canzoneri et al. (2002)]. While this is still an open question in the theoretical literature, most policy makers would probably agree that fiscal constraints should

⁶ See, for example, Taylor (1995). An empirical study by Fair (1994) indicates that this problem weakened the ability of monetary policy to affect GDP in the US between 1980 and 1990.

⁷ In the academic literature a new theory has been developed which shows that under certain circumstances it is fiscal policy, not monetary policy, that determines inflation. See, for example, Christiano & Fitzgerald (2000) and Gordon & Leeper (2002) for a discussion of the issue.

⁸ See, for example, Blinder (2002).

⁹ See, for example, Taylor (2000) for a discussion of the zero bound on interest rates and the role for discretionary fiscal policy.

make it easier to maintain price stability and would help to avoid policy-induced economic disturbances due, for example, to an asymmetric fiscal policy. Experience shows that unsustainable public finances tend to trigger periods of high inflation. There are also empirical studies which indicate that a regime with a properly defined fiscal and monetary policy mix provides a better explanation of actual inflation during periods of low fiscal discipline (see, for example, Favero & Monacelli, 2003). The basis for the discussion in the remainder of this paper is that arguments (i)–(vi) are important for stabilisation policy.

Fiscal constraints that contribute to sound fiscal policy behaviour should also be important from other perspectives. For example, optimal taxation should warrant fiscal rules that contribute to a stable tax ratio over time. However, from such a perspective, fiscal rules should primarily be a concern for individual member countries, not for the ECB.

Criticism of the current EU fiscal framework from a stabilisation policy perspective

The design of appropriate fiscal rules does, of course, have to meet a variety of criteria, such as consistency with the desired policy goals, transparency, operational simplicity and comprehensibility.¹⁰ This note is mainly concerned with the question of whether the current EU *numerical fiscal rules* are appropriately designed with regard their implications for stabilisation policy as described by (i)–(vi) above.

Arguments (i)–(ii) and (iv)–(v) are directly linked to the level of debt, not to deficits. Thus, rules for debt development appear to be more appropriate than deficit limits for achieving the objectives. Of course, some would argue that a restraint on the deficit should prevent the accumulation of future debt and would also penalize high-debt countries because large interest payments would make it difficult to comply with the deficit limit. However, the main concern should be whether a country (or group of countries; members of a monetary union) is able to service its debt. That is, rules directed towards debt development are likely to be more efficient.¹¹

Argument (vi) calls in the first place for a rule that supports a symmetric fiscal policy over the cycle. Argument (iii) might favour a deficit ceiling, like the current 3 per cent constraint. On the other hand, fiscal rules that are capable of handling the other arguments would most likely

Are the current EU numerical fiscal rules appropriately designed as regards their implications for stabilisation policy?

¹⁰ See, for example, Kopits (2001) and European Commission (2001, 2003).

¹¹ See also Beetsma (2001) and Canzoneri, Cumby & Diba (2002).

No, the focus should rather be on fiscal rules that do more to reduce high debt levels and contribute to a symmetric fiscal policy.

also satisfy the third argument. The 3 per cent deficit ceiling, the 60 per cent debt constraint and the “close to balance” requirement in the SGP have obviously not managed to achieve sufficiently fast debt reduction by high-debt countries or a symmetric fiscal policy over the cycle. Thus, the focus should be on how to define fiscal rules that put more weight on the need to reduce high debt levels and that contribute to a symmetric fiscal policy over the business cycle.

Fiscal rules that focus more on debt

One suggestion in the general debate and from the European Commission is that relatively low-debt countries should be allowed less demanding medium term objectives.

One of the suggestions put forward in the general debate as well as by the European Commission is that countries with relatively low debt levels should be allowed to have less demanding medium-term objectives (measured in terms of the structural budget balance) than high-debt countries. Another suggestion is to impose more demanding requirements on high-debt countries in terms of the medium-term objective with the purpose of speeding up debt reduction.¹² Since not just current debt but also expected future debt is a cause for concern, rules have also been suggested that take implicit liabilities (for example, future pension expenditures) into account when defining the medium-term objective. This means that countries that have not yet reformed, or do not intend to reform, their social security systems to cope with adverse future demographic developments should rapidly reduce their debt to avoid large future increases in expenditure and tax levels, with consequences for both the intergenerational distribution of income and the functioning of the economy.

From a stabilisation policy perspective, these suggestions deserve to be supported. However, while they are helpful in reducing debt levels, they are not likely to contribute to the solution of the asymmetry problem. The remainder of this note is therefore devoted to the latter problem. Three different “rules” will be discussed that address, directly or indirectly, the asymmetry problem as defined by argument (vi) above.

Making the deficit ceiling a function of debt

Calmfors et al. (2003) argue that loosening the medium-term objective for low-debt countries (as suggested by the European Commission) without amending the deficit ceiling reduces the safety margin and therefore increases the risk that the 3 per cent ceiling will be breached. They also

¹² For a discussion and survey of rules focusing on debt development, see, for example, European Commission (2002 a, b, 2003 and 2004).

argue that low-debt countries should have the benefit of more room for manoeuvre in recessions.¹³ Their solution to both those problems is to make the deficit ceiling a function of the debt level.¹⁴ Instead of a continuous function, they suggest that different deficit ceilings could apply to different debt intervals. They argue that this could be done in various ways. One could be to leave the present deficit ceiling unchanged for high-debt countries and raise it for low-debt countries. An alternative would be to have higher ceilings for low-debt countries and correspondingly lower ceilings for high-debt countries. Low-debt countries would then be allowed to run budget deficits above 3 per cent of GDP. They argue that “A major advantage of such discontinuous “ladders” of deficit ceilings ... is that they provide a strong incentive for fiscal discipline in normal times as well as in booms by allowing countries to move to categories with a higher ‘status’. Even if it is future governments that would get the advantage of a greater scope for stabilisation policy in recessions, it becomes much more visible to the general public that the incumbent government has made an investment that represents a future gain”, Calmfors et al. (2003), page 63.

Calmfors et al. suggest that low-debt countries should have the benefit of more room for manoeuvre in recessions and that this can be done by making the deficit ceiling a function of debt.

The suggestion by Calmfors et al. is reasonable in the sense that low-debt countries should have the benefit of a higher deficit ceiling than high-debt countries and that this extra margin could be used for fiscal stabilisation in the event of large country-specific disturbances in which they are not helped by the common monetary policy. For the asymmetry problem, however, the effect of such a rule would be very indirect. From a public choice perspective it could be argued that this rule may not greatly influence the incumbent government's behaviour in good times, when the next recession may seem to be a long way off; it may even occur under another government. A rule that addresses the asymmetry problem more directly is probably needed.

Expenditure ceilings

Expenditure ceilings, properly defined and applied, should contribute to a symmetrical fiscal policy. One way to define an expenditure ceiling for the entire public sector – given the ambition to keep the overall tax ratio constant on average over time – is to make it a constant fraction of potential GDP. If actual GDP happens to be below the potential, which defines a recession, the expenditure ceiling provides room to manoeuvre for fiscal stabilisation. In a boom, the ceiling, constructed in this way, prevents

Expenditure ceilings should contribute to a symmetrical fiscal policy.

¹³ See also Pisani-Ferry (2002).

¹⁴ See also Calmfors & Corsetti (2002, 2003).

expenditures from rising with actual revenues. In this sense, an expenditure ceiling, constructed in this way, would also help to achieve a symmetric fiscal policy over the cycle.

However, there are some potential application problems. Defined as above, the expenditure ceiling can be circumvented by replacing new expenditures with tax reductions. This has happened in, for example, Sweden. Besides undermining the purpose of the expenditure ceiling, such behaviour is liable to contribute to an asymmetric fiscal policy. In principle, this problem could be handled by adjusting the expenditure ceiling when new "tax expenditures" are introduced.¹⁵ Moreover, there are alternative definitions of the expenditure ceiling that eliminate the incentives to circumvent it through tax reductions.

In Switzerland a rule has been suggested whereby the expenditure ceiling is a function of cyclically adjusted revenue.

In Switzerland a rule has been suggested that makes the expenditure ceiling, one year ahead, a function of the predicted revenue adjusted for the cyclical position of the economy, see Danninger (2002). Such a construction removes the incentive to circumvent the expenditure ceiling because any (planned) tax cut will lower tax revenue and therefore also the expenditure ceiling. Formally, the suggested rule can be expressed by

$$(1) \quad E_{t+1}^C = R_{t+1}^e \cdot C_{t+1}^e + A_{t+1},$$

where E_{t+1}^C is the expenditure ceiling for period t+1, R_{t+1}^e is expected revenue at time t for period t+1 and C_{t+1}^e is a measure of the cyclical position of the economy at time t for period t+1. A_{t+1} is an adjustment factor to correct for past differences between budget targets and outcomes. It will prevent a systematic increase in debt due to *consciously* overly optimistic revenue forecasts. In principle, the rule is intended to maintain a balanced structural budget balance while allowing the actual balance to vary with the business cycle. Clearly, this is a step in the right direction if one wants to apply formal rules that contribute to a symmetric fiscal policy. However, the rule as defined by equation (1) has a drawback: the adjustment factor A_{t+1} can contribute to a pro-cyclical policy in certain cases; for example, in a prolonged recession when overspending is likely to result from *unconsciously* overly optimistic revenue forecasts.

Targets for the annual actual budget balance

Much of the debate on the SGP has focused on how to force countries to achieve medium-term budget balances that are close-to-balance or in surplus. It has been agreed that countries which have not yet reached this

¹⁵ See Boije (2002).

target should gradually improve their structural budget balance. It has also been agreed that the structural budget balance should be estimated with the production function method provided by the European Commission.

A relevant question is how to define the “close-to-balance” criterion and how to maintain the balance once it has been achieved. One definition holds that the budget should be approximately balanced on average over the business cycle. However, this target can be met with a combination of low surpluses in good times and a contractive fiscal policy during economic downturns. Such a policy works pro-cyclically and will not contribute to an appropriate monetary and fiscal policy mix. Fortunately, given the close-to-balance requirement or some other predetermined medium-term objective, the information used to calculate the structural budget balance can also serve to construct a budget rule that will support the achievement of a symmetric fiscal policy over the cycle. In what follows, such a rule is described in more formal terms. The likelihood of governments being willing to commit to such a rule and whether it would be suitable for surveillance within the EU fiscal policy framework will be discussed in the latter part of this article.

The SGP debate has focused on forcing countries to achieve medium-term budgets that are close-to-balance or in surplus.

A relevant question is how to define and uphold the “close-to-balance” criterion.

STRUCTURAL BUDGET BALANCES

The estimated structural budget balance indicates what the actual budget balance would be if the utilisation of production factors were at a “normal” level.¹⁶ In other words, it represents the difference between revenue and expenditure in a notional cyclically normal situation. To estimate it, one has to estimate the business cycle's impact on the budget balance. This is usually done with a measure of the output gap and the budget elasticity. The output gap is usually defined as a percentage of (potential) GDP. The budget elasticity indicates the budget balance's average estimated response, expressed as a percentage of GDP, to a one percentage point change in the output gap.¹⁷ The structural budget balance (b^*) can then be estimated as

The estimated structural budget balance indicates what the actual balance would be if production factors were being utilised at a “normal” level.

$$(2) \quad b^* = b - \beta \left(\frac{Y - Y^*}{Y^*} \right),$$

where b is the actual budget balance, β is the budget elasticity, Y^* is trend (or potential) GDP and $(Y - Y^*)$ is the output gap. The structural budget balance is thus obtained by subtracting the cyclical component of the

¹⁶ Here I do not distinguish between the structural and the cyclically-adjusted budget balance.

¹⁷ See, for example, Boije (2004) for a survey of methods for estimating the structural budget balance.

budget balance from the actual balance. If β is estimated with econometric methods, without controlling for discretionary fiscal measures, it may contain the effect of regular discretionary measures of stabilisation policy as well as automatic stabilisers. By controlling for discretionary measures (which is likely to be extremely burdensome due to long time series) or by using macro models with a rich description of the public sector or micro data models, it is, in principle, possible to estimate the effect on the budget balance of just the automatic stabilisers. In what follows, it will be assumed that β captures only the effect of the automatic stabilisers on the budget balance.

A BUDGETARY DEVICE INDICATING THE APPROPRIATE ANNUAL BUDGET BALANCE

Given a predetermined medium-term target, the targets for the annual actual budget balance can be defined as a function of the estimated output gap and the budget elasticity.

Given a predetermined medium-term target, the appropriate targets for the annual actual budget balance can simply be defined as a function of the estimated output gap and the budget elasticity. This can be expressed formally as

$$(3) \quad b = \theta + \beta \left(\frac{Y - Y^*}{Y^*} \right) \text{ where } \beta > 0,$$

where θ denotes the country's medium-term objective. That is, the actual budget balance (net lending) must be equal to the medium-term objective plus the budget elasticity times the output gap.

Of course, this rule is equivalent to stating that the structural budget balance *each year* should match the medium-term objective. However, pedagogic, budget transparency and stabilisation policy reasons speak in favour of translating the medium-term objective into yearly targets for the annual actual budget balance. The following may make this point clearer.

As the rule is defined by expression (3), fiscal stabilisation depends entirely on the symmetric work of the automatic stabilisers. Thus, it does not admit discretionary fiscal stabilisation policy. This problem could, of course, be solved by accepting temporary deviations from the medium-term objective if they are a consequence of stabilisation policy actions. However, such a loose rule is likely to be rather arbitrary. A better alternative would probably be an *ex ante* definition of a "room to manoeuvre" for fiscal stabilisation. Suppose that the government is entitled by the parliament (or by law) to use discretionary measures to stabilise the economy, corresponding to the share γ of the output gap. Then the budget rule can be defined as

$$(4) \quad b = \theta + \beta \left(\frac{Y - Y^*}{Y^*} \right) + \gamma \left(\frac{Y - Y^*}{Y^*} \right) = \theta + (\beta + \gamma) \left(\frac{Y - Y^*}{Y^*} \right),$$

where $\beta, \gamma > 0$.

Some would argue that a rule like that provided by equation (4) is nothing but a reaction function for fiscal policy and that, as such, it would encourage fiscal fine-tuning. Firstly, however, equation (4) is not a reaction function as defined in the theoretical literature, since b is not fully controllable by the government. The equation indicates instead what each year's ideal budget balance should be to satisfy the medium-term objective and avoid a pro-cyclical fiscal policy. Secondly, given that the rule is based on a predetermined medium-term objective for the entire public sector, it constitutes a budget balance restriction for the total public sector rather than a reaction function for the central government, although responsibility for adhering to it should rest with the central government.¹⁸ To decrease the risk of fiscal fine-tuning, the rule could be combined with a restriction whereby active fiscal stabilisation measures may be taken only in the event of large country-specific disturbances, for example when the output gap exceeds $\omega \times 100$ per cent of GDP.¹⁹ With such a restriction, equation (4) can be written as

$$(5) \quad b = \theta + (\beta + j\gamma) \left(\frac{Y - Y^*}{Y^*} \right),$$

where $\beta, \gamma > 0$ and $j = 1$ if $(|Y - Y^*|/Y^* > \omega)$, otherwise $j = 0$.

THE MEDIUM-TERM OBJECTIVE

The rule as defined by equation (5) says nothing about the appropriate level of the medium-term objective, which is also beyond the scope of this paper. However, since the rule is based on a pre-determined medium-term objective, a few words about it are perhaps in place. In the debate some have argued that the medium-term objective should be a function of both the initial debt and implicit liabilities. From a sustainability perspective, this seems to be appropriate. Equation (5) could then be written as

$$(6) \quad b = \theta(D, IL) + (\beta + j\gamma) \left(\frac{Y - Y^*}{Y^*} \right),$$

For stabilisation policy it seems reasonable that in a prolonged recession, low-debt countries which observe their medium-term objectives should be allowed to have deficits above 3 per cent of GDP.

¹⁸ The central government could, of course, impose budget constraints on lower levels of government that would support the achievement of the overall balance.

¹⁹ See *Stabilisation Policy in the Monetary Union – A Summary of the Report, 2002*, for a similar argument.

where D denotes the initial debt and IL implicit liabilities. For a country with little debt and limited implicit liabilities, the medium-term objective could be allowed to be negative, given the requirement of a stable debt-to-GDP ratio over the cycle and appropriate assumptions about nominal GDP growth. For example, a country with an initial debt level of 40 per cent of GDP, limited implicit liabilities and a nominal GDP growth rate of 5 per cent would be able to keep the debt-to-GDP ratio stable over the business cycle if the medium-term objective is set to -2 per cent of GDP.²⁰ Obviously, the margin to the 3 per cent deficit ceiling in a recession would then be very small, especially for a country where budget elasticity is high. This might mean that the automatic stabilisers would not be allowed to work freely and there would be no room for fiscal stabilisation. From a stabilisation policy perspective it therefore seems reasonable for a low-debt country, as far as its medium-term objective is concerned, to be allowed to have deficits of more than 3 per cent of GDP in a prolonged recession. At the same time, high-debt countries should be forced to have positive medium-term objectives in order to speed up debt reduction. For such countries the medium-term objective could be determined by a simple function relating it to the debt (see European Commission 2004 for examples).

THE RULE APPLIED TO THE SWEDISH CASE

In 2000 the Swedish government adopted the medium-term goal of a budget surplus that averages 2 per cent over the business cycle.

In 2000 the Swedish government, with the approval of the parliament, adopted a medium-term goal to the effect that the actual budget balance is to be 2 per cent on average over the business cycle. Adherence to the goal is intended to last up to 2015. Its main aim is to reduce debt rather quickly to pave the way for a future increase when the budget balance deteriorates on account of adverse demographic prospects. That would also lessen the risk of having to introduce dramatic tax increases in the future.²¹ Another aim is to provide room to manoeuvre for fiscal stabilisation without incurring an excessive deficit. The Swedish surplus target, as presently defined, does not preclude the use of an asymmetric fiscal policy. The target can be met even with small surpluses when times are good, but fiscal policy would then have to be contractive during economic downturns. However, such a policy works pro-cyclically and will not lead to an appropriate fiscal and monetary mix in terms of stabilisation policy. Aware of this problem, in its 1999 Convergence Programme the Swedish government stated (pages 4–5):

²⁰ See formula in footnote 3.

²¹ This rule is thus somewhat more ambitious than the medium-term objective stipulated by the SGP.

“As the medium-term goal refers to the public sector fiscal balance seen over the business cycle, the actual budget surplus could fall below 2 per cent of GDP in a phase of the business cycle with relatively high idle capacity in the economy, but conversely exceed 2 per cent of GDP in the peak phase of the business cycle. Thus, the level that the budget surplus will reach in an individual year is dependent on the phase of the business cycle, which provides scope for the automatic stabilisers to work. In this way it is possible to refrain from a pro-cyclical policy. A medium-term goal of a public sector surplus equivalent to 2 per cent of GDP should also be compatible to some extent with conducting an active fiscal policy, with the aim of moderating swings in the business cycle without risking excessive deficits during down-turns.”

Obviously, the Swedish government aimed to avoid a pro-cyclical fiscal policy using some measure of the automatic stabilisers. Rather than translating this view into a formal rule similar to equation (3) or (6), it chose instead to refer to the use of the nominal expenditure ceiling for the central government as a means of supporting a symmetric fiscal policy.

TABLE 1. A COMPARISON OF REQUIRED AND EXPECTED BUDGET BALANCE

	2004	2005	2006	2007
(1) Budget balance	0.7	0.6	0.4	0.9
(2) GDP gap	-1.3	-0.5	-0.2	0.0
(3) Automatic stabilisers	0.9	0.4	0.1	0.0
(4) Annual target for budget balance (required by equation (3))	1.1	1.6	1.9	2.0
(5) Under/overshooting, (1)-(4)	-0.4	-1.0	-1.5	-1.1

Sources: 2005 Budget Bill, Swedish Ministry of Finance, and own calculations.

Given the forecast of the automatic stabilisers and the annual budget balance as provided by the Swedish government in the 2005 Budget Bill, Table 1 shows the difference between the expected actual budget balances and those that would have been required if equation (3) had applied (the Swedish government is using a budget elasticity of 0.70). During the relevant forecast period the annual target would, ex ante, have been missed for every year. The government must have been aware that the forecasts of the annual budget balances were not in line with the medium-term objective. The government's ex-post defence has been that a labour market upswing has been delayed despite strong GDP growth and that this has motivated some stabilisation measures which weaken the actual and the structural budget balances. However, a closer look at the recent reforms indicates that most of them are intended to be permanent. Thus, they cannot be regarded as stabilisation measures. One

However, an asymmetric fiscal policy and the introduction of new tax expenditures mean that the annual budget balances are not in line with the medium-term target.

explanation for the non-adherence to the medium-term objective is rather that the government has circumvented the expenditure ceiling to a large extent by introducing new tax expenditures.

A comparison of the three rules

As noted earlier, a variety of aspects clearly have to be taken into account when designing fiscal rules. This section presents a brief comparison of the three rules as regards (i) their ability to solve the asymmetry problem, (ii) the likelihood of government commitment, (iii) implementation and their suitability as an instrument for surveillance within the EU fiscal policy framework.

RELATIVE STRENGTH FOR SOLVING THE ASYMMETRY PROBLEM

Targeting the annual budget balance in terms of the medium-term objective, the budget elasticity and the expected output gap is the most straightforward approach to the asymmetry problem.

Obviously, targeting the annual budget balance as a function of the medium-term objective, the budget elasticity and the expected output gap is the most straightforward way of dealing with the asymmetry problem. An expenditure ceiling defined as a function of potential GDP is also helpful, but suffers from the possibility of being circumvented by tax expenditures. Making the expenditure ceiling a function of cyclically adjusted revenue and defining it so as to be consistent with an overall medium-term objective avoids the latter problem. Like the other two rules, making the deficit ceiling a function of the debt has the advantage of providing room for stabilisation measures but its ability to contribute to the solution of the asymmetry problem is questionable.

RELATIVE STRENGTH AS REGARDS COMMITMENT

It is probably easier for a government to commit to a rule where the deficit ceiling is a function of debt.

It is probably easier for a government to commit to a rule that makes the deficit ceiling a function of the debt, than to ex ante requirements on the annual budget balance or to an expenditure ceiling based on cyclically adjusted revenue. The reason, of course, is that such a "distant limit" provides more "political freedom". Precise annual targets are also sensitive to forecast errors, especially if they involve non-observable variables such as the output gap (we return to the latter issue in the discussion of implementation issues).

RELATIVE STRENGTH AS REGARDS IMPLEMENTATION AND
SUITABILITY AS AN INSTRUMENT FOR SURVEILLANCE WITHIN
THE EU FISCAL POLICY FRAMEWORK

Targeting the annual budget balance as a function of the medium-term objective, the budget elasticity and the expected output gap obviously has some attractive features for EU surveillance. No matter how the medium-term objective is determined (it can, for example, be determined by an arbitrary linear requirement on the pace of debt reduction for high-debt countries and also take into account implicit liabilities), this rule works symmetrically and can be applied to both high- and low-debt countries. Two countries with equivalent medium-term objectives but different budget elasticities could be allowed to have different budget balances even if they happen to have equal output gaps. The rule is also attractive in that, basically, it does not require any information apart from what is already needed to calculate structural budget balances with the European Commission's current method for evaluating the "close-to-balance" criteria of the SGP. This method has been agreed on by the euro countries.

However, there are some drawbacks. Although the euro countries have accepted the European Commission's method to calculate structural budget balances, the debate on the appropriate measures of the output gap and budget elasticity would probably be sharper if the same measures were to be used for precise annual targets.

Some would argue that a budget rule based on an uncertain and unobservable variable such as the output gap should be avoided (in that case, the same criticism should apply to an expenditure ceiling based on potential output or cyclically adjusted revenue).²² However, solving the asymmetry problem without a rule based on a measure of the output gap seems to be difficult. If governments have to adhere to a properly defined medium-term objective at the same time as they should avoid a pro-cyclical fiscal policy, they obviously need to have some idea about the economy's cyclical position. However, since the estimation of the output gap entails uncertainty, the rule should not be too strict, neither should non-adherence lead to monetary penalties. Thus, a rule based on an uncertain measure of the output gap is most likely unsuitable for the stringent EDP. The same problem is associated with the "close-to-balance" criteria as currently defined in the SGP. The value of rules based on the output gap lies instead in their use as a preventive tool. If such fiscal rules are well established, understood by the public and properly evaluated, they should serve in the first place to exert "peer pressure".

Targeting the annual budget balance as above has some attractive features for EU surveillance.

However, there are some drawbacks.

Rules based on the output gap are of value as a preventive tool; if they are well established, generally understood and properly evaluated, they could be used for "peer pressure".

²² See, for example, Calmfors et al. (2003).

There are, of course, further objections to applying a rule that requires precise targets for the actual budget balance, similar to the one for structural budget balances.²³ For example, the budget elasticity represents an average of the effects of the automatic stabilisers and therefore may not accurately capture the actual effects if a disturbance is not of an average nature. For example, a shock in export demand is likely to affect taxes differently from a shock in private consumption. In other words, the aggregated budget elasticity does not capture so-called composition effects. In principle, however, this problem can be handled by estimating different gaps for the different tax and expenditure bases, while the aggregate output gap could still be used for the discretionary fiscal stabilisation component. The appendix to this note briefly describes how this can be done and what it would imply for the budget rule.

There are also some other practical issues connected with a rule requiring precise targets for the actual budget balance. Even if the government does everything it can to adhere to the rule, there might be circumstances beyond its control that lead to the yearly required budget balance being missed. One such situation arises if the outcome of the output gap (the ex post gap) deviates from the predicted (ex ante) gap. This must, of course, be taken into account in the ex post evaluation of target fulfilment. Provided the forecast is unbiased, the calculations are transparent and there is an open evaluation of target fulfilment by the European Commission or a national politically independent fiscal body, such an ex post clause should not provide scope for undetected manipulation of the rule.

Another relevant question is how the rule should be applied if, due to forecasting errors, the government during a boom runs higher surpluses than the rule requires. Some would argue that the government should then be allowed to run somewhat higher deficits than required by the rule during the following economic downturn. However, since the forecasts for the coming years are also uncertain, such a strategy would probably not be optimal. Instead, it would increase the risk of the target not being met at all. If forecasts are unbiased, positive and negative random forecasting errors will cancel out over time. Thus, unconscious forecasting errors that cannot be allowed for during the ongoing budget year should be treated as bygones.

A further question is what a government should be required to do if it consciously deviates from the annual targets. In the Swiss expenditure rule described above, this problem was handled by the adjustment factor A_{t+1} , which corrects for past differences between budget targets and out-

²³ See, for example, Boije (2004) for a discussion of the problems associated with estimating structural budget balances.

comes. A similar adjustment factor could, in principle, be included in a rule requiring precise annual targets for the actual budget balance. However, as noted earlier, such adjustment factors might themselves contribute to a pro-cyclical policy.

The rule suggested by Calmfors et al. (2003), which is based solely on the actual deficit and the debt level, does not require calculations of the output gap and the budget elasticity. Consequently it would probably be easier to reach political agreement on such a rule. In addition, for the same reasons, it would be more suitable than the other two rules for the stringent EDP. However, as noted above, the rule primarily provides more room to manoeuvre in recessions for low-debt countries. It will probably not contribute to the solution of the asymmetry problem. In addition, even such a rule would entail some practical problems. One is how to account for stock flow adjustments when defining the deficit ceiling for a specific country.

A rule based solely on the actual deficit and debt level does not require calculations of the output gap and the budget elasticity.

Some concluding comments

The conclusion above was that it seems to be difficult to handle the asymmetry problem without a rule based on a measure of the output gap. At the same time, however, the measurement problems and the risk of a critical political discussion about the "right" measure of the output gap and the budget elasticity make it unlikely to be politically feasible to agree on a common formal EU rule that imposes restrictions on the annual actual budget balances in both good and bad times. This problem highlights the need to strengthen national fiscal frameworks. Introducing fiscal rules at the national level that directly address the asymmetry problem (as a rule providing targets for the annual actual budget balance or an expenditure ceiling based on cyclically adjusted revenue) would clearly be a step in the right direction. If such rules were, moreover, to be evaluated by supervisory fiscal bodies that are politically independent, departure from them would not be possible without a public debate. A budget rule linked to the measure of the output gap should be a relevant device for such bodies when evaluating fiscal policy's consistency with a symmetrical fiscal policy, irrespective of whether or not the government has undertaken to follow such rules.

Introducing national fiscal rules that directly address the asymmetry problem would clearly be an advantage; such rules, evaluated by politically independent supervisory bodies, could not be broken without a public debate.

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Appendix

In the main text it was argued that in some cases the aggregated budget elasticity will not accurately capture the automatic stabilisers' impact on the budget balance. This may occur when the economy is hit by shocks that affect the relative sizes of the different tax and expenditure bases. This appendix describes how the impact of the automatic stabilisers on the budget balance (i.e. the cyclical component of this balance) can be measured by a method that takes into account such composition effects.²⁴

To keep expressions simple, we assume that there is a single type of tax revenue (T) and only one type of public expenditure (E_U) that depends on the business cycle. There are also other expenditures that we assume are independent of the business cycle (E_O). To give this example "life", let us assume that T denotes revenue from personal labour income taxes and E_U represents the government's outlays for unemployment benefits and expenditure on active labour-market programs.

THE STRUCTURAL COMPONENT OF TAX REVENUE

Revenues from a particular tax can be written as the product of the implicit tax rate and the relevant tax base (X):

$$(A:1) \quad T = \left(\frac{T}{X}\right) X.$$

In this example, X denotes taxable labour incomes.

If both sides of equation (A:1) are multiplied by (Y/Y) , where Y denotes actual GDP, we get

$$(A:2) \quad T = \left(\frac{T}{X}\right) \left(\frac{X}{Y}\right) Y.$$

This expression shows that revenue depends on three variables: the implicit tax rate, the base-to-GDP ratio and GDP.

Now let us assume that, for a given set of policy rules, the tax is proportional to the tax base. This should be a reasonable assumption for a proportional tax system and, given other uncertainties, should probably also result in a decent approximation of a slightly progressive (or regressive) tax system. Given this assumption, the cyclically adjusted revenue can be defined as

²⁴ This exposé follows closely Braconier & Forsfält (2004). They also discuss some pros and cons of this method.

$$(A:3) \quad T^* = \left(\frac{T}{X}\right) \left(\frac{X}{Y}\right)^* Y^*,$$

where $(T/X) = (T^*/X^*)$, Y^* denotes potential GDP and $(X/Y)^*$ is the normal (trend) base-to-GDP ratio.

THE STRUCTURAL COMPONENT OF EXPENDITURES

Let us now assume that the government's outlays for unemployment benefits and expenditure on active labour-market programs, at given policy rules, are proportional to the number of unemployed persons (U). The cyclically adjusted (or trend) unemployed-related expenditures can then be defined as:

$$(A:4) \quad E_U^* = \frac{E_U}{U} U^* + E_0,$$

where U^* denotes the equilibrium or trend number of unemployed.

THE CYCLICAL COMPONENT OF THE BUDGET BALANCE

The structural (or the cyclically adjusted) budget balance can now be written as

$$(A:5) \quad B^* = \left(\frac{T}{X}\right) \left(\frac{X}{Y}\right)^* Y^* - \frac{E_U}{U} U^* - E_0.$$

The corresponding expression for the actual budget balance is

$$(A:6) \quad B = \left(\frac{T}{X}\right) \left(\frac{X}{Y}\right) Y - \frac{E_U}{U} U - E_0.$$

The cyclical component of the budget balance, which thus is assumed to capture the effects of the automatic stabilisers on the budget balance, can then be written as

$$(A:7) \quad B - B^* = \frac{T}{X} \left(\left(\frac{X}{Y}\right) Y - \left(\frac{X}{Y}\right)^* Y^* \right) - \frac{E_U}{U} (U - U^*).$$

This equation shows that the difference between the actual and the structural budget balance depends on the output gap, the deviations of the tax base-to-GDP ratio from its trend level and on the unemployment gap (the deviation of unemployment from its trend value). This equation can also be written as