

**FISCAL FEDERALISM
AND THE STABILITY AND GROWTH PACT:
A DIFFICULT UNION**

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1. Introduction

During the Nineties, the degree of fiscal decentralisation in EU member states increased: a process to enlarge the responsibilities of local governments in the management of public expenditure and taxation was set in motion in some countries not organised on a federal basis¹.

During the same years, budget rules aimed at guaranteeing the soundness of the public finances of EU member states and ensuring margins for counter-cyclical policies were defined and introduced at the European level. These rules are based on the consolidated budgets of general governments. The existence of different levels of government is not taken into account.

The interaction between these two developments has not yet been adequately examined. This paper proposes a first analysis of the compatibility between the degree of decentralisation decided at national level and the budget rules introduced at European level.

In highlighting the allocative advantages of local autonomy, traditional theories of fiscal federalism stress the need to guarantee both control of national public finances and the possibility of carrying out counter-cyclical policies at the national level. To that end, the introduction of limits on transfers from the central government and on recourse to market financing by local governments is necessary. These constraints must be flexible, in relation to cyclical events and to the need to spread the burden of public-sector investment over several generations.

* Banca d'Italia. The views expressed in this paper are those of the authors and do not commit the Banca d'Italia.

¹ In this paper, the term federalism has been attributed a broad meaning. With regard to the significance of the term federalism and the classification of the various institutional structures that can be defined federal, see for example Brosio (1996), Forte and Cerioni (1996) and Patrizii (1998).

These theoretical indications have been confirmed by the legislation adopted in many countries. When regulating the activities of local governments, it is unusual to rely solely on market action, i.e. penalisation in terms of higher interest rates, which would affect the most indebted governments. Variations of the so-called golden rule are often applied. Despite placing constraints on indebtedness, the possibility to compensate possible overshoots over several financial years is almost always permitted: on an annual basis the constraints apply *ex ante* but not *ex post*.

The launch of the Monetary Union posed a problem for fiscal regulation at the European level. The solutions adopted in several countries with federal structures are more flexible than the rules defined in the Maastricht Treaty and in the Stability and Growth Pact: the rules are defined in relation to numerical parameters that also have to be observed *ex post*; flexibility is envisaged only in connection with exceptional cyclical events or others beyond the control of governments; a monitoring procedure was introduced that provides for the formulation of multi-year financial programmes and the possibility formally to recommend corrective measures during the course of the year and to impose monetary sanctions in cases of default.

These rules apply to national states; there is no reference to local governments in the Union documents. Although the operations of all levels of government are relevant to compliance with the regulations, which refer to general government, in fact it is the central government that is responsible for compliance and for paying any penalties in the event of violation. Without suitable regulation, local governments that have the possibility to take on debt could free-ride on the back of central governments. More generally, a potential conflict exists between the constraints placed on national public finances and the flexibility allowed to decentralised public finances.

In those countries that are already organised on a federal basis and in those in which reforms are underway to increase the degree of decentralisation, the need to conform national rules to the new European context is strong. The level of domestic flexibility must be made compatible with the lower level envisaged in the Stability and Growth Pact; the asymmetry between the responsibilities assigned to the central government and those assigned to regional and local governments must be corrected.

The analysis conducted in this paper demonstrates the difficulty of reconciling full enjoyment of the allocative benefits of fiscal decentralisation with full utilisation of the margins for counter-cyclical policies offered by compliance with the Pact. In considering possible solutions, particular attention is addressed to the solution outlined in Italy in the Domestic Growth Pact; it is pointed out that such solution will need to be improved.

The second section of this paper briefly examines the propositions which have gained a wide consensus in the literature on fiscal federalism, comparing theoretical precepts with the practical solutions adopted in countries with federal structures. The third section first summarises the European regulations on public-sector budgets and then examines their implications for regulating the relations among the various levels of government at the national level. The fourth section analyses the solution adopted by Italy in the context of increasing decentralisation of responsibility for expenditure and revenue.

2. Fiscal federalism and budget constraints

The current structure of national states is the result of a long process of aggregation and disaggregation of different jurisdictions, which over time have yielded some fiscal prerogatives while maintaining others. In recent decades a clear tendency to decentralise responsibility for expenditure and taxation has emerged in many countries (Ter-Minassian, 1997; Wildasin, 1997).

Economic theory also offers reasons favouring decentralised forms of government. Responsibility for the management of services should be entrusted to that level of government whose jurisdiction comes closer to the area in which the services are provided. In this way, supply could be adjusted to the needs and preferences of the citizens of each region, thus allowing closer monitoring of the conduct of elected representatives and competition among local governments to the benefit of citizens². The expenditure functions assigned to each level of government affect the allocation of sources of tax receipts and financial relations between central and local governments.

² For a critical analysis of these indications, see Fausto (1996 and 1999).

This section examines the implications, in terms of instruments for controlling indebtedness in situations of decentralised finance, of two types of federation: the first type resembles a union of sovereign states (corresponding to the institutional structure of the European Union); the second is closer to the prescriptions of economic theories on fiscal federalism³. The solutions adopted by the leading federally-structured countries are also analysed.

2.1 Budget constraints in a situation of radical federalism

Let us consider a situation in which local governments enjoy absolute autonomy in matters of public expenditure, taxation and recourse to debt. In this context, the stability of monetary and financial conditions represents a public good to which all local governments contribute by maintaining sustainable budget positions. There is an incentive for each local government to exploit the benefits accruing from the discipline of others without itself complying with the rules (free-riding). This creates a double cost for the other entities: the free-rider's excessive indebtedness can put pressure on interest rates to rise; it can also result in bankruptcies requiring bail-outs⁴.

Before all else, we must ask if market regulations can avoid these kinds of situation. For regulations to be effective, certain conditions have to be met (Lane, 1993):

- a) no government body should have privileged access to the market;
- b) the market must have access to all the information necessary to evaluate the financial reliability of each body;
- c) the bailing-out of troubled bodies must not be allowed;
- d) mechanisms to ensure that entities react to market signals must exist.

These conditions are both very strict and unlikely to obtain simultaneously. In particular, the reaction times of decentralised fiscal authorities may be excessively long, for example when administrators work to short time horizons. It is also difficult to ensure absolute

³ The distinction made in this paper is comparable to the more common one between confederations and federations.

⁴ Somewhat similar problems arise with regard to fiscal competition, i.e. the introduction of preferential tax treatment in order to attract tax bases. On this subject, see for example Smith (1996).

credibility of the ban on bail-outs. Finally, evaluation of the financial situation of a body could be hindered by “creative accounting”.

Consequently, it may be useful to supplement market rules with the means to control the overall indebtedness of a federation’s members. Excluding administrative controls, which require local governments to obtain prior approval of their financial strategies from central governments and which by their very nature are incompatible with a federal structure, two solutions may be considered:

- a) collective management of indebtedness;
- b) the introduction of rules (balanced budget, pre-fixed ceiling for the total deficit, golden rule) and sanctions for non-compliance.

With co-operative solutions, all levels of government must be involved in formulating the objectives of economic policy and be responsible for their attainment. However, these solutions do not eliminate the incentive for opportunistic behaviour. Moreover, co-operation may require protracted negotiations, especially when a large number of bodies is involved, to the detriment of the effectiveness of economic policy.

The introduction of rules also raises various problems, such as the credibility of their rigorous application, in particular for the management of bail-outs, and the possibility of efficient monitoring to avoid forms of “creative accounting”.

For these reasons an eclectic approach appears useful, one that combines rules with forms of co-operation based on peer pressure. Such an approach must in any case keep account of the need to allow margins of flexibility in order to offset cyclical effects on the budget without adopting pro-cyclical policies and to deal with exceptional circumstances that impact on the recourse to debt⁵.

Considerations of tax-smoothing and inter-generational equity may justify the funding of certain activities through limited recourse to debt. The problem is especially acute in the case of public-sector investment. The realisation of major projects requires a substantial temporary increase in total expenditure; without recourse to debt, this implies a peak in taxation, the intensity of which may lead to the projects being abandoned. In addition, since the benefits of the project may be spread over a long

⁵ The solution adopted by the European Union includes these features (see Section 3.1).

period of time, financing it through taxation would lead to an unfair division of the burden among generations⁶.

2.2 *The economic theory of fiscal federalism*

The literature on fiscal federalism is very extensive. A complete survey is beyond the scope of this paper and we will therefore limit ourselves to summarising the key propositions on which there seems to be broad agreement.

The main advantage of a federal structure is increased efficiency resulting from the decentralization of allocative functions. On the other hand, a central government can perform the functions of redistribution and macroeconomic stabilisation more efficiently⁷.

The crucial element in the production of public goods is the territorial range of the benefits: each public service should be produced and financed according to the preferences of the citizens residing in the area that enjoys the benefits. This area may coincide with national boundaries or it may be limited to a particular region. The fact that political processes are needed to disclose the citizens' preferences justifies the existence of several administrative jurisdictions⁸.

The redistribution function could also be interpreted as a local public good (Pauly, 1973), with each community being allowed to decide its own level. However, the analogy with the allocative function no longer holds if the effects on the citizens' choice of domicile are considered: where capital and labour are highly mobile, significant differences in redistribution levels may cause "the rich to flee the poor and the poor to chase the rich" (Musgrave and Musgrave, 1984, p. 514).

⁶ See Balassone and Franco (1998) and the references therein. For an analysis of the problems connected with public-sector investment within the framework of the Stability and Growth Pact, see Balassone and Franco (2000).

⁷ The principal bibliographical reference is Musgrave (1959). For an updated discussion of the problem of the allocation of expenditure functions, see Ter-Minassian (1997).

⁸ One difficulty arises from the fact that it is rare for public services to coincide with territorial divisions: theoretically, it could be necessary to provide as many jurisdictions as there are services to be produced. There are also problems in relation to free-riding and the difficulty of expressing preferences (see Olson, 1965, and Arrow, 1951). Solutions to these problems have been suggested (for example, Tiebout's "voting with the feet", 1956). The classic reference on the optimal size of jurisdictions is Buchanan (1965); for an updated analysis, see Cornes and Sandler (1995).

A centralised authority for stabilisation is justified by the risk that the impact of built-in stabilisers and expansionary or restrictive measures decided at local level may be diminished or annulled if jurisdictions are closely integrated in economic terms⁹. The co-ordination of decentralised stabilisation policies may also be hindered by incentives for local authorities to behave as free-riders.

By virtue of the functions assigned to it, the central government should have access to the tax bases that are more mobile, more sensitive to cyclical factors and less uniformly distributed.

A rigorous interpretation of this criterion would allocate the lion's share of tax bases to the central government. Income and capital transfers are adequate tax bases for redistribution policies. Moreover, income tax is particularly sensitive to the cycle, as is sales tax. Finally, corporate income tax should be allocated to the central government so as to avoid distortions in choosing where to locate productive activities¹⁰. Local governments would retain only property tax and public utility charges¹¹: the former affect tax bases that are not very mobile; the latter permit full application of the benefit principle.

This implies that the revenue sources allocated to local governments may be insufficient to finance the expenditure relevant to the functions assigned to them. It may become necessary to make transfers to decentralised bodies or allow them a share of the central government's tax revenues. If qualitative and quantitative standards affecting the local production of public services are imposed at national level, the need for forms of financial support may increase.

Separating the responsibility for expenditure and its financing weakens the cost-benefit relationship associated with public services, reducing the allocative advantages of a decentralised system¹². In addition, transfers not subject to pre-defined limits do not encourage efficient

⁹ The importance of these considerations for the allocation of stabilisation functions in the European Union tends to increase as the markets gradually become more closely integrated.

¹⁰ The assigning of mobile tax bases to decentralised governments also risks encouraging fiscal competition; (see, for example, Smith, 1996).

¹¹ The difficulty of evading taxes on natural resources makes them suitable to decentralised levels of government. However, the fact that the central government is responsible for their allocation among the different jurisdictions argues in favour of their attribution to the latter.

¹² See, for example, Buchanan (1967) and Oates (1972).

management¹³; central governments' financial support to local administrations has often been cited as one of the factors underlying the excessive growth in public expenditure¹⁴. In some circumstances, increases in local government spending can jeopardise macroeconomic stabilisation measures carried out by central governments.

Controls on the managerial efficiency of local authorities and limits on transfers and revenue-sharing are necessary. Just as controlling the indebtedness of local governments in conditions of "radical federalism" cannot be rigid, nor can controls on transfers. There must be margins to offset the effects of cyclical swings or exceptional events on the budget and to permit tax-smoothing measures. One possibility is to allow recourse to debt, but this raises the problems already indicated in Section 2.1.

2.3 *Fiscal federalism in practice*

Reference to western nations provides a wide range of arrangements for the allocation of expenditure and revenue functions and for controls on local government indebtedness.

At the end of the eighties, the share of central government outlays in total public-sector spending ranged from 41 per cent in Canada to 95 per cent in Paraguay (Ahmad *et al.*, 1997). The allocation of expenditure functions among the different levels of government partly reflects theoretical indications: in several cases the territorial range of the benefits seems to be the criterion; (most countries assign defence, foreign affairs and international trade to the central government but local transportation, firefighting and city police services to local governments.) Central governments are generally responsible for redistribution. However, responsibility for particularly important expenditure functions, such as

¹³ The structuring of transfers so as to provide useful incentives is one of the most complex elements in the theory of fiscal federalism. Cullis and Jones (1992) offer a review of the budget constraints determined by different types of transfer. Garcia-Milà *et al.* (1999) stress the risks associated with heavy reliance on central government grants, especially when institutions make it difficult for the central government to avoid a regional government expectation of higher future grants in response to increased borrowing.

¹⁴ King (1984) examines explanations of the so-called "fly-paper effect" (i.e. the fact that an increase in central government transfers causes an increase in local public-sector expenditure that is greater than that which would result from an equivalent increase in personal income); see also Oates, 1979. For the implications of programmes in which the benefits are geographically concentrated and financing is met by general taxation, see Weingast *et al.* (1981).

healthcare and education, is not predominantly assigned to any given level of government.

The contribution of local governments' own revenues to total public-sector revenue also varies greatly: in the early nineties, in the industrialised countries, it ranged from 3 per cent in the Netherlands to 49 per cent in Canada (Norregaard, 1997). The solutions adopted are often based on theoretical indications: in general, property taxes are assigned to local governments, while corporate taxation is assigned to central governments (in relation to the different degree of mobility of the respective tax bases); income and sales taxes are assigned to the central government, on account of their sensitivity to the cycle and of the redistributive function of income tax.

There are three means of covering any imbalances between local governments' revenues and spending: sharing in central governments' tax revenues; transfers; and indebtedness. The importance of controlling local government spending is confirmed by widespread dissatisfaction with the utilisation of funds transferred from central governments (Ter-Minassian, 1997): varying kinds of organisational structures have been criticised, from "conditional" transfers for healthcare and transportation utilised in Italy, to unconditional transfers for Medicaid and support of large families in the United States, to transfers based on full reimbursement of expenses for healthcare and higher education in Canada.

Recourse to debt is generally permitted. The industrialised countries rarely rely on market regulation alone; Canada is the only country that does not have provisions to limit the provinces' debt or other central government controls¹⁵. Brazil had relied on market regulation in the past, but in 1996 it introduced controls following the rapid accumulation of debt by the local governments. The market model was also not effective in Argentina. In Australia and the Scandinavian countries, central and local governments co-operate in defining the objectives for national public finance. Pre-determined regulations are in force in the United States, Spain and Switzerland. Germany utilises a combination of rules and co-

¹⁵ The Canadian experience seems to suggest that there are large lags in the effects of market controls: despite a significant deterioration in its rating and a subsequent increase in risk premium, the debt of the Canadian provinces consistently increased for years before corrective budget policies were introduced (Ter-Minassian and Craig, 1997). For a different view of the issue, see the comments by F. Delorme in this volume.

operation. The rules generally limit the total deficit, permit indebtedness for certain objectives only or set a ceiling on expenditure for interest payable. The constraints on indebtedness generally apply *ex ante*: possible overshoots may be compensated for in subsequent financial years¹⁶. Direct administrative controls are particularly widespread in non-federal states.

3. European tax regulations and their implications for national legislation

3.1 European balance sheet regulations

The model of European Union created by the Treaty of Maastricht is similar to the radical federalist system described in 2.1 above: member states have retained virtually total sovereignty in questions of expenditure and taxation.

A simple formalisation of the no-rules risk

The risk of free-riding posed by a Monetary Union without budgetary rules¹⁷ can be represented in terms of simple games such as “prisoner’s dilemma” or “hawks and doves”.

For the sake of simplicity, let us suppose there are only two member states (I and J) and that the game is perfectly symmetrical. The tax regime of each state produces a benefit (B) and carries a cost (C) - with $B > C$ - and the benefits are divided equally between the two states, so that the outcome for each is $B - C$ provided both are co-operative. If one country is not co-operative it will incur no costs but will continue to receive its part of the benefits produced by the other’s co-operation (with the result $B/2$), while the other country will reap $B/2 - C$ only. If both countries are not co-operative, each will obtain D (Figure 1).

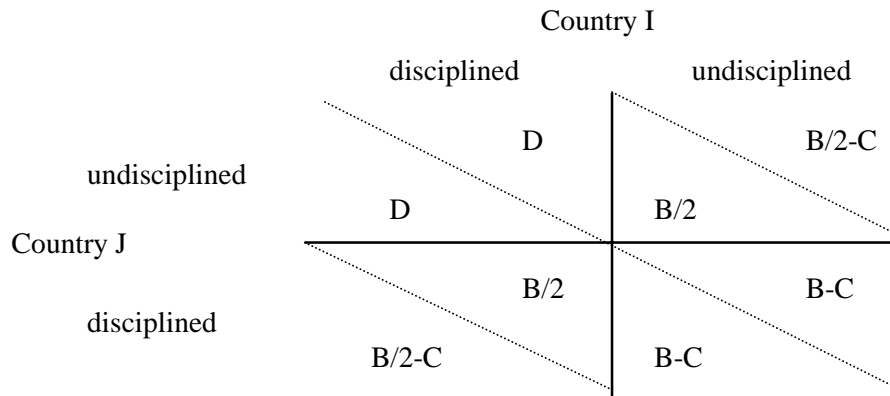
If the order of possible outcomes is $B/2 > B - C > D > B/2 - C$ the game is a prisoner’s dilemma. If the order of possible outcomes is $B/2 > B - C > B/2 - C > D$ the game is hawks and doves.

¹⁶ This, for example, is the case of the United States; for a detailed analysis, see McGranahan (1999).

¹⁷ For references to this risk, see among others: Canzoneri and Diba (1991), Allsopp and Vines (1996), Artis and Winkler (1998), Eichengreen and Wyplosz (1998).

Figure 1

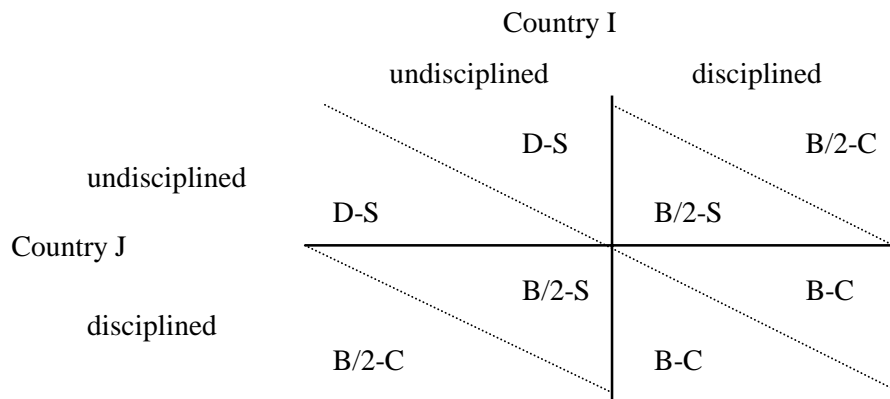
A general game at EU level (1)



(1) The outcome obtained by Country J is shown beneath the diagonal dotted lines; that obtained by Country I is shown above them.

Figure 2

A sanction is introduced



In the prisoner's dilemma the uncooperative strategy wins over the co-operative strategy (by guaranteeing a better outcome regardless of the other player's strategy) so that both countries have an incentive to adopt it. An equilibrium is thus the result of both countries adopting an uncooperative strategy. In hawks and doves there is no dominant strategy (non co-operation gives higher utility when the other player is co-operative but not when he is not); the game yields two equilibria in pure strategies; both imply the defection of one or the other players.

In this context sanctions (S) may change the result to make the co-operative strategy dominant (Figure 2). In the above example the sanction must comply with the stricter of the two restrictions: $S > D - (B/2 - C)$ and $S > -(B/2 - C)$.

The solution adopted

The problem of potential incentives for fiscal disobedience has been addressed at the European level and a series of rules, procedures and sanctions has been identified. Specifically, the Treaty of Maastricht sets quantitative ceilings for the government deficit and the public debt (of respectively 3 and 60 per cent of GDP) and envisages sanctions for wayward states; the Stability and Growth Pact approved in Amsterdam in June 1997 spelled out the objectives, control procedures and sanctions in greater detail¹⁸.

The Pact commits member states to pursue the medium-term objective of "a budget close to balance or in surplus". The European Council later clarified that this objective should be achieved over the duration of the economic cycle¹⁹. The Pact may thus be considered as an attempt to reconcile counter-cyclical policies and sound public finances²⁰.

Each state must define a budgetary target for the neutral phase of the

¹⁸ For a review of the reasons adduced for introducing the Pact and an analysis of its potential macroeconomic implications, see European Commission (1997), Artis and Winkler (1997) and Eichengreen and Wyplosz (1998).

¹⁹ This interpretation is supported by the Resolution of the European Council of 16-17 June 1997, in Council Regulation no. 1466/97 of 7 July 1997 and in the Opinion of the Monetary Committee of 12 October 1998, later adopted by the Council.

²⁰ Balassone and Monacelli (2000) emphasise the risk that the rules concerning the debt hinder the reconciliation proposed in the Pact.

cycle. In practical terms this means defining a cyclically-adjusted budget balance²¹ around which the unadjusted balance fluctuates by virtue of built-in stabilisers and discretionary measures, if any. The further this balance lies below the 3 per cent ceiling, the greater is the margin available for counter-cyclical policies without incurring excessive deficits²².

The choice of a medium-term target for the neutral phase of the cycle is dictated mainly by three factors: a) the depth of expected recessions; b) the elasticity of the budget in relation to the cycle²³; the size of the discretionary measures that may be taken to enhance the impact of built-in stabilisers. Past experience suggests that in the majority of EU countries a cyclically adjusted deficit of between 0 and 1 per cent of GDP should make it possible for built-in stabilizers to become fully operative without incurring a risk of overshooting the 3 per cent ceiling (Buti et al., 1998)²⁴.

Any state with an excessive deficit is required to adopt corrective measures according to a fixed timetable. Failure to comply brings sanctions. Specifically, the country must pay a non-interest-bearing deposit equal to 0.2 per cent of GDP plus one tenth of the difference between the 3 per cent ceiling and the actual deficit (up to a maximum of 0.5 per cent of GDP). For each successive year that the deficit is judged to be excessive only the variable component of the sanction must be paid²⁵. Should the

²¹ We use the definitions given by the IMF, the OECD and the European Commission: budget corrections apply only to automatic reactions (i.e. those determined by current legislation). For a methodological review of the methods for estimating structural balances, see Banca d'Italia (1999).

²² The Treaty establishes that the deficit may not exceed 3 per cent of GDP unless (a) exceptional circumstances obtain (these may include a recession leading to a reduction in real GDP of at least 2 per cent; (b) it is close to 3 per cent; (c) the overshoot is absorbed in the short term. These three conditions render the 3 per cent ceiling particularly strict (see Buti et al., 1997).

²³ The term 'elasticity' is commonly used in preference to the term 'semi-elasticity' to indicate the ratio between the absolute change in the deficit/GDP ratio and the percentage change in GDP.

²⁴ These figures are based on European Commission estimates for the period 1960-1997 (a maximum output gap averaging 4 percentage points; average budget elasticity equal to 0.6). The choice of medium-term target should reflect the need to cover adverse circumstances other than those connected with the economic cycle (e.g. increases in interest rates), to reduce the public debt and to deflect pressures on spending generated by demographic trends. On this point, see the Opinion of the Monetary Committee of 12 October 1998, later adopted by the European Council.

²⁵ The fixed component is intended to discourage excessive deficits, while the variable component is an incentive to limit their amount. The German Finance Minister, Theo Waigel, had initially proposed a deposit equal to 0.25 per cent of GDP for each point - or fraction thereof - between the actual deficit and the 3 per cent ceiling. This would have produced discontinuities in the (continues)

excessive deficit persist, the deposit is converted into a fine after two years²⁶.

To the monetary costs of sanctions must be added their consequences in terms of loss of reputation, which could translate into the inclusion of a higher risk premium in yields on government securities.

The approach taken is therefore actually less flexible than the solutions adopted in some federally structured countries:

- a) the rules are defined on the basis of established numerical parameters;
- b) *ex post* compliance with the parameters is required each year;
- c) margins of flexibility are envisaged only in connection with exceptional cyclical events (established *ex ante* as a decline in GDP) or in any case events beyond the governments' control;
- d) no margin of deficit is specifically reserved for investment expenditure²⁷;
- e) monitoring procedures are envisaged, starting with an announcement of targets in special multi-year programmes (whose consistency with the rules is evaluated) and continuing with a mid-year examination of public finances and *ex post* verification of results;
- f) peer pressure is strengthened by the European Council's power to make formal representations to governments of the need to adopt corrective measures during the year;
- g) non-compliance triggers the application of pre-established monetary sanctions;
- h) overshoots must be rapidly dealt with; sanctions increase as situations of excessive deficit persist.

The public nature of the whole procedure can contribute to the efficacy of the control exerted by the market on governments' budgetary policies.

application of sanctions and could, furthermore, have pushed the latter to politically unacceptable heights.

²⁶ If no corrective measures are adopted, the sanctions can be applied in the same year in which the deficit is judged to be excessive.

²⁷ No distinction is made in the Treaty between current and capital expenditure for the purposes of determining the deficit. The volume of capital expenditure is included only among the relevant factors to be borne in mind when deciding whether there is excessive debt.

3.2 *Implications of national legislative frameworks*

The above rules apply to national governments. More specifically, compliance with budgetary rules is evaluated in respect of general government as defined in the European System of Accounts (ESA), i.e. including central government, local governments and social security funds²⁸. EU documents do not assign specific responsibilities to local governments.

While compliance with the rules involves the behaviour of all levels of government, it is effectively the central government that is held responsible and that bears the costs of non-compliance. It is, in fact, the European Council that ensures co-ordination of the general economic policies of the Member States and it is a representative of each Member State at ministerial level, authorised to commit the government of that Member State to sit in the Council²⁹. Obviously, each Member State is free to define the necessary procedures and regulations to ensure co-ordination between different levels of government.

To understand the consequences of this asymmetry in a scenario in which decentralised levels of government enjoy some measure of independence in their budgetary policies, another example based on games may be helpful. Let us suppose that there is only one local government agency (LG) and that fiscal compliance by both local (LG) and central (CG) governments produces a benefit B at cost C , which is split equally between the two levels of government. Let us then suppose that the same benefit can be produced by CG's fiscal compliance alone, in which case, while the benefit is split equally between CG and LG, the cost C is borne wholly by CG. Lastly, let us suppose that LG's compliance does not produce any benefit by itself (the cost C of this fruitless effort is borne entirely by LG) and that the outcome when CG is non-compliant is D .

The table of outcomes for this game is shown in Figure 3. LG's dominant strategy is undisciplined (as $D > D - C$ and $B/2 > B/2 - C/2$). This situation can be interpreted as an extreme example of the incentive problem encountered in a federation in which the responsibilities for expenditure and taxation are separated. According to the arrangement of

²⁸ See Article 2 of the Protocol on procedures for excessive debt.

²⁹ See Articles 145 and 146 of the Treaty establishing the European Community, as amended by the Treaty on European Union of 7 February 1992.

Figure 3

The federal game at national level

		Local Government	
		undisciplined	disciplined
Central Gov.	undisciplined	D	$D-C$
	disciplined	$B/2$	$B/2-C/2$

Figure 4

The effects of control over local deficits

		Local Government	
		undisciplined	disciplined
Central Gov.	undisciplined	D	$D-C$
	disciplined	$B/2-H$	$B/2-C/2$

outcomes, CG may find it expedient either to comply or not to comply (the outcomes of the two equilibria resulting from CG's choice are indicated in bold type): the general government may turn out undisciplined, or CG may ensure compliance while LG plays the free-rider. If $D < [(B/2) - (C/2)]$, in other words if CG achieves a better outcome when both governments are disciplined than it would by being uncooperative, the situation is one in which some form of control over local government deficits could usefully be introduced. The introduction of a sanction H ($H > C$) in the event of LG being undisciplined would alter the matrix, as shown in Figure 4, making LG's dominant strategy to co-operate (as $D - H < D - C$ and $B/2 - H < B/2 - C/2$) and shifting the equilibrium to one of full co-operation (in bold type).

Monetary Union introduces two modifications with respect to the matrices in Figures 3 and 4:

- a) the cost of fiscal co-operation increases because the definition of co-operation is narrower than that used at the national level (in terms of both sanctions and the reference period for defining co-operation);
- b) the pay-off of strategies change, on account of the externality generated by the choices of other Member States.

Let us suppose that the new cost level is K ($K > C$) and that the externality is such as to determine an expected increase in the outcome achieved by CG in the event of non co-operation (from D to $D + E$) while leaving unchanged the outcome achieved by CG in the event of co-operation³⁰. The new game table is shown in Figure 5.

In this environment the effect of national controls (the sanction H) may be cancelled by the higher cost of discipline (if $K > 2H$, LG's dominant strategy becomes "undisciplined"). Moreover, the combined effect of the higher cost of co-operation and of the changed outcome determined by externalities may render undisciplined the dominant strategy for CG too (if $D + E > B/2 - K/2$). Again there are two possible equilibria (in bold type in Figure 5): general government may turn out to be undisciplined (a situation consistent with that described in Figure 1 in Section 3.1 above), or CG may ensure overall discipline while LG free-rides.

³⁰ In other words it is assumed that an uncooperative state will benefit from other states' co-operation while not being penalised by their defection, whereas a co-operative state will not only benefit from other states' co-operation but also bear the cost of other states' defection.

Figure 5

**The federal game at national level after EMU
(without “European” sanctions)**

		Local Government	
		undisciplined	disciplined
Central Gov.	undisciplined	$D-H+E$ $D+E$	$D-K+E$ $D+E$
	disciplined	$B/2-H$ $B/2-K$	$B/2-K/2$ $B/2-K/2$

Figure 6

**The federal game at national level after EMU
(with “European” sanctions)**

		Local Government	
		undisciplined	disciplined
Central Gov.	undisciplined	$D-H+E$ $D+E-S$	$D-K+E$ $D+E-S$
	disciplined	$B/2-H$ $B/2-K$	$B/2-K/2$ $B/2-K/2$

The sanctions envisaged in the Pact can be explained as a means of preventing some states (those where the equilibrium of the federal game at national level implies non co-operation) from free-riding at the expense of others. If sanctions are borne only by CG, the prevention of free-riding at EU level will not solve the problem at national level: a review of national controls is also needed (sanction H). This outcome is shown in Figure 6, in which the sanction introduced in the Pact ($S, S > D+E+K-B/2$) affects only the outcome that can be achieved by CG, which is obliged to allow LG to free-ride in order to ensure overall co-operation.

To conclude, the Pact increases the need for mechanisms to control decentralised governments. Two considerations, in particular, could render national rules inadequate:

- a) European regulations are generally speaking more restrictive than those adopted at national level; the resulting higher costs of co-operation could lead to national penalty systems becoming inadequate and to a conflict between the constraints on national public finances at the European level and the flexibility allowed to decentralised institutions at the national level. For example, the level of local government investment prior to the Pact in countries applying the *golden rule* may determine excessive deficits;
- b) the allocation of responsibility for compliance with EMU fiscal rules among central and local governments and of the possible costs incurred because of non compliance is asymmetrical; in the absence of adequate national rules, local governments that are able to contract debts could act as free-riders on the back of the central government.

3.3 Possible solutions

In principle three strategies appear possible: the duplication of European rules at the national level; the amendment of existing legislative frameworks; the introduction of a market for “deficit permits”.

Extending the Stability and Growth Pact to the national level

This solution poses several problems:

- a) if the bodies to be disciplined are too small in economic terms, it could be difficult to measure GDP and in any case the meaningfulness of available data (in regard to mobility of factors of production, for example) would be affected;
- b) the high number of bodies involved could make monitoring particularly costly. The evaluations needed for the cyclical adjustment of budgetary data could be especially problematic, as could those necessary for a case-by-case examination of “exceptional” circumstances to justify excessive deficits;
- c) the financing of local investment expenditure through local taxation could pose particular problems, especially where unusually costly projects could lead to expenditure peaks.

The extension of European rules to the larger decentralised governments only (i.e. in Italy, the Regions) could be a solution provided smaller decentralised governments have only limited autonomy; otherwise the cost of adjustment would merely be shifted from the central government to the larger local governments.

Adapting existing regulations at the national level

This approach cannot take the form of an introduction of administrative controls on the indebtedness of decentralised governments. As stated earlier, this solution would be in clear conflict with the spirit of a federal set-up.

Amendments would have to be aimed at allowing recourse to debt financing for both structural reasons (e.g. public-sector investment) and cyclical reasons (e.g. the absorption of cyclical effects on the budget).

Control systems in place in some states address these two aspects by setting flexible ceilings to the deficit: on the one hand the ceilings exclude capital expenditure (the golden rule); on the other hand they are applied only on an *ex ante* basis and if the deficit overshoots the ceiling the overshoot can be compensated in subsequent financial years: in some cases (e.g. some American states) the deficit overshoot must be financed through

recourse to specially constituted ‘rainy day funds’, without recourse to the market³¹.

In the new scenario created by European regulations, these solutions appear most easily adaptable to structural aspects, in other words the financing of investment, while the cyclical aspect appears more complex. In both cases credible sanctions would have to be established to deal with non-compliance.

With regard to the structural aspect, adoption of the golden rule would have to be flanked by an overall ceiling on investment expenditure by local governments. When setting this limit, the need for the overall cyclically adjusted general government budget to be in balance or close to it would have to be taken into account: any deficits allowed to decentralised units would have to be compensated by a general government surplus with a generous enough margin to allow for the counter-cyclical measures.

Moreover, rules would have to be drawn up to define the criteria for allocating among decentralised bodies the overall deficit allowed for investment programmes. To this end, given the difficulties of defining an adequate reference parameter (population, amount of infrastructure, overall receipts, etc.) a co-operative approach could be contemplated. By involving decentralised governments in the process of defining overall budgetary targets, they would acquire greater responsibility for behaving consistently with the pursuit of the targets set and reaching agreement on the allocation of resources. The peer-pressure incentive for compliance generated in a co-operative framework could be strengthened by allocating any sanctions handed down by the EU among those agencies responsible for overshooting.

With regard to the absorption of cyclical effects on the budget, the application of ceilings that are valid only *ex ante* is clearly in contrast with European legislation, which as we have seen is based on *ex post* limits. On the other hand, the introduction of strict budgetary constraints that are valid *ex post* is problematic, since it would distort the allocation of resources (to the detriment of the more flexible expenses) and force decentralised units to adopt pro-cyclical policies.

³¹ See McGranahan (1999) for the US experience.

The establishment of rainy day funds could be a solution, though it would imply a review of the ESA accounting rules for calculating budgetary indicators. Under current rules transfers of resources to such funds are not included among the disbursements that comprise net indebtedness, nor is the use of such resources included among receipts; in neither case do movements of money through these funds alter the size of the deficit. The accumulation and use of these funds would have to be entered respectively under expenditure and receipts in the General government account; only in this way would their use avoid overshooting the 3 per cent threshold³².

A market in deficit permits

The thesis that the problems of externalities might be solved by creating appropriate ownership rights and allowing free trade in them was first put forward by Coase (1960). Casella (1999) suggested taking this approach to the question of fiscal discipline within the EMU. Comparing the negative externality produced by members running excessive deficits to that of pollution, this article suggested using the machinery developed in environmental economics³³. With reference to the Italian domestic stability pact (Section 4), the Commissione Tecnica per la Spesa Pubblica (an experts' committee on public expenditure) raised the possibility of introducing a system of deficit permits for local and regional governments in its 1998 paper.

Once the overall ceiling³⁴ on permits and their initial allotment is set, market incentives would produce, through free trade, the most efficient allocation in relation to the financial needs of the various governments in any given year. The total volume of permits issued could be related to the national economic cycle, so as to allow both a "structural" margin for investment and a variable margin to absorb the cyclical impact on the budget. Deficits above the amount fundable by the permits would result in

³² These operations would nevertheless have to be excluded when evaluating cyclically adjusted budgetary positions.

³³ An early suggestion of a market in pollution permits is Dales (1968); later a vast literature has developed; for a discussion of the benefits and limitations of the approach see Baumol and Oates (1988).

³⁴ The ceiling is needed to prevent the sort of problems cited in Sections 2.1 and 2.3 in relation to the possibility that financial markets can prevent excessive build-up of debt.

a cut in the permits assigned the following year. The financial market could also be involved in the discipline by prohibiting borrowing or bond issues lacking debt permit coverage.

The system described is subject to three main difficulties. First, efficacy requires that the deficits of the various governments generate the same externality and are thus perfect substitutes. But the risk of triggering a financial crisis is not uniform across governments. If this risk were the function of a single variable, e.g. the level of debt, then one would merely have to make the value of the deficit permits of the governments inversely proportional to their stock of debt. However, the risk depends on a number of factors³⁵, and determining the value of the permits held by each government is complicated.

Second, the efficiency of the market in permits depends on how competitive it is. This makes the mechanism ill-suited to situations in which the number of governments is small (within the EMU there would be just eleven players, and vastly different in size at that)³⁶.

Finally, there is no easy solution to the problem of determining the initial allotment of permits. The possible criteria (GDP, population, etc.) would produce greatly differing allocations. If the demand for permits exceeded the supply, then the countries with an allotment greater than their requirement would enjoy positional rents.

The first two objections appear more cogent for a permit market among Member States at EMU level than for one among local governments within each country. Presumably the risk connected with each entity's deficit is more uniform within than between countries: the size of the governments is smaller, and in many cases they have only recently acquired the power to issue their own debt. The number of market operators would be vastly greater. Of course, so extensive a market could entail higher administrative costs.

The third difficulty, which is strictly political, would be encountered at the national level as well. It would be compounded, at least initially, by

³⁵ For instance, the risk may depend on the degree of exposure of the banking system, the degree of international openness, and so on. See among others Eichengreen and Portes (1986), Kharas (1984) and Hernandez-Trillo (1995).

³⁶ The problem could be attenuated by a continuous double auction market (a system used in many financial markets); see Friedman and Rust (1993).

local governments' problems in adapting to the new machinery for the allotment of resources.

Apart from these difficulties, the permit system seems better suited to financing investments than to buffering the budgetary effects of the business cycle. In the investment area, trading in permits could certainly contribute to greater efficiency in resource allocation. The financial needs connected with investment projects could be planned, and the realisation of works modulated, as a function of available resources. As to the cyclical effects, however, the initial allotment would necessarily be based on forecasts of national economic developments; the emergence of a discrepancy in the course of the year could result in over demand for permits, which would penalise the governments of areas where cyclical performance was especially poor.

An overview

Each of the three solutions has drawbacks. Replicating the Stability Pact at national level is impeded by lack of the necessary data. Leaving room to buffer cyclical effects on local government budgets without compensating action by the central government (which would give local governments an incentive for opportunistic behaviour) requires solutions that are inconsistent with the ESA95 accounting rules. The formation of a deficit permit market faces the difficulty of finding an equitable criterion for the initial allotment of permits and that of the dubious ability of local governments to adapt to the new context.

In light of these problems, a combination of actions could usefully be evaluated.

- a) A domestic stability pact would appear to be feasible for the larger local government bodies (in Italy, the Regions), for which the problem of lack of data is solvable.
- b) The need to spread investment costs over a number of years could be addressed (albeit with the difficulties recalled above) by recourse to either market mechanisms or the application of rules.
- c) To buffer cyclical effects, the best solution appears to be the institution of reserve funds. As noted, however, this would require the revision of the European rules for national accounts.

4. Italy: the domestic stability pact

Some EU countries are faced with the necessity of adjusting relations between central and local government to the new European framework. Measures for budgetary co-ordination between the various levels of government are under study in Austria, Belgium and Germany.

Italy has taken a first step in this direction with the domestic stability pact introduced with the 1999 budget. This action was all the more necessary as a result of the decentralisation begun in the early nineties. Decentralisation has brought a gradual transition from “derived” regional finances, in which virtually the entire regional budget consisted of rigidly earmarked central government transfers, to fundamentally “autonomous” financing, with revenues derived from regional taxes and percentage shares in certain central government taxes and their allocation increasingly left to regional decision.

Decentralisation

The main steps in regional decentralisation have been: the attribution to the Regions of health service contributions and automobile taxes in 1992; the abolition of state transfers (except for those for the health fund, for natural disasters and for purposes of major national interest), offset by the assignment to the Regions of a share of the excise tax on petrol and the institution of an equalisation fund (1995); the attribution to the regions of a new tax (the regional tax on productive activities, IRAP) and of a personal income tax surcharge (1997); the assignment of additional responsibilities under the “Bassanini” Law (1997-98). Finally, Law 133/1999 envisages the abolition of health fund transfers, the assignment to the Regions of new shares and surcharges in central government taxes (petrol excises, VAT, personal income tax) and the redefinition of the financing and utilisation of the equalisation fund³⁷.

³⁷ The resources should come from shares in central taxes and be distributed, after a transitional period in which allotments are to be based on past spending, according to fiscal capacity. The system of earmarking is to be phased out after a transitional period in which the Regions will be required to allocate to health an amount consistent with their per capita share in the financing of the health service established at national level.

Local government autonomy has also been enhanced. The main changes have been: the institution of the municipal real estate tax (1992); the reorganisation of minor local taxes (1993); the abolition of the municipal tax on professional activities and those on municipal concessions, offset by a share in IRAP (1997); the reorganisation of the system of central government transfers (enacted in 1996, with implementation however postponed to 2000); and the institution of a municipal surcharge on personal income tax (1998).

The transition to more pronounced forms of decentralisation has become a major political issue. The possibility of a federal reform of the Constitution has been broached by a number of observers³⁸.

Within this general framework, before the domestic stability pact, the limits on local authorities' borrowing were set by a "golden rule" (borrowing to finance current expenditure was prohibited) with an indirect ceiling (debt service could not exceed 25 per cent of own revenues). Frequently, however, there was unlimited year-end coverage of deficits (in the health and transport sectors, for instance) by the central government.

The emerging trend in institutional arrangements implied:

- a) a comparatively high degree of decentralisation;
- b) high sensitivity of local government revenues to the economic cycle;
- c) relatively lax constraints on indebtedness.

The analysis set forth earlier shows the risks that such arrangements entail for the observance of European budget rules.

The domestic stability pact

The domestic stability pact is designed to involve the Regions and other local authorities in the effort to attain the objectives for general government budget under the European Stability and Growth Pact³⁹. The domestic pact requires local bodies to reduce deficits and their stock of

³⁸ See for example Buglione (1998), Fausto (1996), Forte and Cerioni (1996), Giarda (1996), Forum CEIS (1995).

³⁹ See Ferro and Salvemini (1999).

debt⁴⁰. The deficit referred to (DI) is the difference between total revenues (E) net of state transfers (T) and total expenditure (S) net of investment (K) and interest payments (I)⁴¹:

$$DI = (E - T) - (S - K - I)$$

The definition differs widely from the European definition (DE), which is simply the difference between total revenue and total expenditure:

$$DE = E - S$$

The two definitions also differ in accounting rules. The domestic stability pact adopts a cash basis, while European rules, based on ESA95, refer to the accruals principle.

The target for the first three years of the domestic pact, beginning in 1999, is an annual reduction in the total deficit of local governments equal to at least 0.1 per cent of GDP. In the absence of data on local GDP, the contribution of each district is proportional to the level of primary current expenditure (S - K - I)⁴².

The local governments' accounts will be monitored in the course of the year for consistency with the annual target. However, no sanctions for non-compliance are provided. The State-Region and State-Commune conferences will decide on any corrective measures. In 1999 the only consequence of detection of a potential overshoot was the proposal to increase the size of the reduction planned for 2000.

⁴⁰ Pica (1999) notes "the anomalous use of the word 'pact': the word assumes the existence of a forum in which local governments can agree (have the power to agree) on their conduct, bargaining with the central government. [Actually, however] ... state law ... constitutes [a] concrete means of coercion in the desired direction, not consent freely decided" (pp. 1-2; our translation).

⁴¹ Revenues are net of the proceeds of sales of financial assets and gross of the proceeds of sales of real estate assets. The same standard is used to calculate the deficit for European purposes.

⁴² The total correction, estimated at about 2.2 trillion lire, was divided among levels of government in proportion to total expenditure (S). The resulting targets for the individual categories of government were translated into specific objectives for each entity. For the Regions, the reduction was set at 1 per cent of primary current expenditure in 1998. For municipalities and provinces it was put at the larger between 1.1 per cent of primary current expenditure in 1998 and 3 per cent of the current-programmes deficit for the year. The latter was calculated by each government body by augmenting the 1998 deficit by 80 per cent of the nominal GDP growth forecast for 1999.

If Italy is sanctioned under the excessive deficit procedure, the fines will be levied on the entities that failed to meet their targets, in proportion to the part of the overshoot for which they are responsible.

An evaluation

The domestic stability pact is essentially a rule imposing deficit reduction on local authorities. It is based on an extended version of the “golden rule” (interest payments too are excluded from the deficit⁴³) with an indirect ceiling (the previous law limited the deficit to a level that would produce debt service payments not exceeding 25 per cent of own revenue⁴⁴). In practice, carrying annual deficits forward appears possible. The eventual correction of yearly budget overshoots is entrusted to a co-operative mechanism (the conferences).

This set of rules is marked by a series of inconsistencies and lacunae:

- a) while the objective is deficit reduction, each government’s contribution is correlated not with the deficit but with primary current expenditure. Thus if one region’s budget is balanced or in surplus while another’s is in deficit but the primary expenditure of the former is greater than the latter’s, it would paradoxically have to make a larger contribution to the adjustment;
- b) ultimately, the aim of the pact is to contain the relevant deficit for European purposes (DE). Taking a different budget variable (DI) as an intermediate objective makes it impossible to estimate the implications of local government targets for observance of the European rules. Specifically, it could be that the difference between the two balances ($K + I - T$) records an increase that more than offsets the reduction in the pact’s reference balance (DI);
- c) usually the golden rule excludes only investment spending from the reference deficit. Interest expenditure always forms part of the balance, the aim being to amortise the cost of public works over a number of

⁴³ However, the rule restricting market borrowing to cover only investment spending remains; consistency between the two rules would have to be ensured by state transfers.

⁴⁴ Another limit is implied by the need to reduce the stock of debt. But no sanctions are provided if the debt increases. Moreover, the relevant definition of debt is not sufficiently well defined, increasing the scope for “creative accounting”.

years and thus share the burden among the generations that enjoy the benefits;

- d) though the pact sets the objective of reducing local government debt, it introduces no machinery to assure its attainment. Reduction of the pact's reference deficit (which excludes major budget items, including interest expenditure) does not actually guarantee that net new borrowing will diminish. Furthermore, the debt ceiling imposed by the previous legislation based on the ratio between debt service and own revenue seems a weak instrument given increasing local taxation powers and relatively low interest rates;
- e) the pact divides a possible European sanction among the various government authorities in proportion to the share of the overshoot for which each is responsible. This formulation does strengthen the incentive for deficit reduction, but it also has certain undesirable characteristics. It would be better to impose sanctions for failure to achieve the deficit objective even if Italy is not fined at the European level. Apart from the fact that such conduct constitutes free-riding, failure to punish it could narrow the scope for national counter-cyclical measures within the 3 per cent ceiling. Moreover, if the overshoot is confined to a small number of governments, the size of the fine could be too large for credibility.

Certain features of the pact, moreover, appear ill-suited to strengthen Italian discipline consistently with the observance of European rules:

- a) even if recouped in the years following, any local government budget overshoots must be made good immediately by the central government;
- b) the problem of cyclical effects on local budgets is not dealt with (at a time when the devolution of tax base makes local government budgets more sensitive to macroeconomic conditions).

5. Conclusion

Our analysis underscores the problems inherent in the combination of increasing fiscal decentralisation within the EU Member States with rules set at European level to guarantee sound public finances at national level and leave scope for counter-cyclical policy measures.

Specifically, we highlight the difficulty of reconciling full achievement of the allocative advantages of fiscal decentralisation with full exploitation of the scope for counter-cyclical policy action offered by compliance with the Stability and Growth Pact.

We have noted: a) the reduced flexibility of the European approach compared with solutions adopted in federally structured states; b) the asymmetry between the responsibilities laid on national and local governments by European rules (compliance with the rules depends on the conduct of all levels of government, but *de facto* it is the central government that is answerable to the EU and that must pay the price of non-compliance); c) the consequent need for stricter controls over local governments to prevent free-riding; d) the difficulty of finding fully satisfactory solutions.

Devising appropriate solutions is hard for a number of reasons: a) the mechanical extension of the Stability and Growth Pact is feasible only for the larger local bodies; b) allowing local bodies to amortise investment expenditure over a number of years entails significant problems, whether market mechanisms or predetermined rules are used; c) the best way of buffering the effect of the economic cycle on local government budgets, i.e. the use of a reserve fund, requires revision of the EU's rules for national accounts.

In the course of the nineties, Italian institutional arrangements moved to a relatively high degree of decentralisation, marked cyclical sensitivity of local government revenues and lax constraints on indebtedness. This set of arrangements could impede compliance with European budgetary rules.

The domestic stability pact is a first step towards a solution. Essentially, it is a rule requiring local governments to reduce their deficits. Our examination has revealed a number of problems that require some fine-tuning of the mechanism:

- a) while the objective is deficit reduction, individual contributions are not correlated with that variable but with primary current expenditure;
- b) the adoption of a different budget variable as an intermediate objective precludes prior estimation of the implications of local government targets for the observance of European rules;

- c) the pact has an anomalous golden rule that excludes interest spending from the reference deficit;
- d) while setting the objective of reducing local government debt, the pact introduces no machinery to assure its attainment;
- e) a local authority's failure to achieve its objective is punished only if Italy is subjected to a European sanction, which could narrow the scope for counter-cyclical measures within the 3 per cent ceiling;
- f) local government budget overshoots, even if recouped in subsequent years, must be made good by the central government in the year they are incurred;
- g) the problem of cyclical effects on local budgets is not addressed.

At the time of its introduction the EU Stability and Growth Pact gave rise to a wide debate. Many participants stressed that it provides no "reward" for countries that are "virtuous" during cyclical expansions, achieving budget balance or surplus. Bean (1998) observes that "The problem with the pact as presently framed is that it is all stick and no carrot; rewarding good fiscal behaviour in booms rather than, or in addition to, punishing bad behaviour in slumps would surely make better sense" (p. 106). Paraphrasing this critique, one might say that Italy's domestic pact as it presently stands is "neither stick nor carrot".

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