

Session 1

THE PROS AND CONS OF FISCAL RULES

EMU FISCAL RULES: A NEW ANSWER TO AN OLD QUESTION?

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1. Introduction

Fiscal sustainability is a central tenet of European Monetary Union (EMU); it is a precondition for financial and monetary stability. Budgetary flexibility is needed for stabilisation policy; it has become more important in EMU as member states can no longer rely on a monetary policy tailored on national needs nor on exchange rate adjustments. EMU fiscal rules have been designed with the goal to ensure that national policies keep a sound fiscal stance while allowing sufficient margins for budgetary flexibility in bad times¹.

The Stability and Growth Pact commits EMU member states to a medium term objective of budgetary position close to balance or in surplus. The main rationale for such a target is that its attainment will allow member states to deal with normal cyclical fluctuations while keeping the government deficit within the value of 3% of GDP set in the Treaty of Maastricht². Compliance with this threshold, and with the 60 per cent ceiling for the debt to GDP ratio, will prevent the public finances of EMU member states from taking unsustainable paths.

In this paper we try to assess to what extent the issue facing the founders of EMU was a new one in the field of public finance and to what extent the solution chosen can be regarded as innovative. To this end, we review the literature on budgetary rules from its very beginning to the years immediately before the Treaty of Maastricht (section 2). The review is largely based on quotations drawn from economists and policy makers. On the basis of this review, in section 3 we argue that the bulk of EMU fiscal

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¹ The economic policy framework of EMU is extensively examined in Buti and Sapir (1998) and in Buti, Brunila and Franco (2001). The theory of fiscal sustainability and its links with EMU fiscal rules are reviewed in Balassone and Franco (2000a); see also the papers in Banca d'Italia (2000). On the flexibility allowed by EMU fiscal rules see Buti *et al.* (1997) and Balassone and Monacelli (2000).

² The actual definition of this medium term objective requires several factors to be taken into account; see section 3.1.

regulation does not qualify as innovative; however, the interaction between the multinational nature of EMU and the lack of a federal political authority (a truly innovative feature) shaped the solution chosen. The highly decentralised setting of fiscal policy in EMU gave prominence to moral hazard issues and EMU fiscal rules, while drawing heavily on ideas that are central to the long lasting debate on fiscal rules, are innovative in the way in which different approaches are blended and complemented by innovative and pragmatic choices.

2. The balanced budget rule and its amendments

Mankind has always displayed a certain degree of awareness of the potential negative effects of excessive borrowing. Exhortation to sound fiscal behaviour can be found as early as in the Bible: “And thou shalt lend unto many nations, but thou shalt not borrow” (Deuteronomy 15:6).

Several centuries later, as Hansen (1941) reminds us: “Scholastic theologians, like Thomas Aquinas, were bitterly opposed to loans... Political philosophers of the early modern period continued to regard the prior accumulation of treasures as superior to borrowing... [For] Jean Bodin ... emergencies should be met by accumulated hoards, and only war provided justification for extraordinary levies or loans. Thomas Hobbes was more realistic ... [allowing] the monarch [to resort] occasionally even to the public credit... [but] Adam Smith reverted to the older tradition ... Hume likewise wrote ... [that] to mortgage the public revenues ... [is] a practice that appears ruinous” (p. 110).

Burkhead (1954) notes that there is a common body of doctrine that may be characterised as the classical view of debt and deficits that goes from Smith to Mill. These writers recognised that there are productive uses to which borrowed resources may be put; however, they feared that unproductive use was more likely and strongly opposed deficit finance when giving policy advice. They noted that interest payments would pose a burden on future taxpayers, but their main concern was the loss of wealth borne when the deficit was incurred in the first place.

Smith opposed unbalanced budget on the ground that government borrowing would deprive society of resources which could be invested more productively. He also noted that beyond a certain threshold debt inevitably leads to national bankruptcy.

Say argued that the possibility of borrowing allows governments "... to conceive gigantic projects that lead sometimes to disgrace, sometimes to glory, but always to a state of financial exhaustion; to make war themselves and stir up others to do the like; to subsidize every mercenary agent and deal in the blood and the consciences of mankind; making capital which should be the fruit of industry and virtue, the prize of ambition, pride, and wickedness³".

Ricardo refers to the debt as "... one of the most terrible scourges which was ever invented to afflict a nation⁴", as "... a system which tends to make us less thrifty, to blind us to our real situation". He feared that the citizen initially "deludes himself with the belief, that he is as rich as before" and then, faced with the taxes levied to pay for the debt, is tempted "... to remove himself and his capital to another country, where he will be exempted from such burthens⁵".

In short, for a long time the only budgetary rule was that of a balanced budget. This rule was probably based on an analogy between government and family finance drawn when the budget of the State was the budget of a monarch and it was separate from the finances of his subjects. The precept was therefore to avoid living beyond one's means. "As Adam Smith put it, 'what is prudence in the conduct of every private family, can scarcely be folly in that of a great kingdom'"⁶ or, following Dickens' Mr. Micawber: "... if a man had twenty pounds a year for his income, and spent nineteen pound nineteen shillings and sixpence, he would be happy, but ... if he spent twenty pounds one he would be miserable⁷".

In the second part of the XIX century, the precept of a balanced budget still found a widespread endorsement. Ursula Hicks notes that "Gladstonian budgeting is inextricably bound up with the theory of the ever-balanced (or even over-balanced) budget" (1953, p. 25) and quotes the following statement by Lowe, a disciple of Gladstone, "I would define a Chancellor of the Exchequer as an animal who ought to have a surplus; if

³ Say (1853), p. 483.

⁴ The Works and Correspondence of David Ricardo, P. Sraffa, ed., (1952-73), vol. IV, p. 197.

⁵ The Works and Correspondence of David Ricardo, P. Sraffa, ed., (1952-73), vol. IV, p. 247-8.

⁶ Premchand (1983), p.4.

⁷ Charles Dickens, *David Copperfield*.

under extraordinary conditions he has not a surplus he fails to fulfil the very end and object of his being” (p. 25)⁸.

Deficit and debt drew less attention from economists. For instance, as Burkhead (1954) notes, Marshall’s *Principles* devote no attention to these issues. Noticeably, Puviani (1903) devotes most of its analysis of fiscal illusion to public expenditure and revenue. While he notes that politicians may prefer borrowing to extraordinary levies because citizens underestimate future interest burdens, this argument remains relatively unimportant in his analysis of the methods employed by governments to influence citizens’ perception of fiscal policy.

The consensus on the balanced budget is witnessed by Pigou’s 1929 writing: “in normal times the main part of a government’s revenue is required to meet regular expenditure that recurs year after year. There can be no question that in a well-ordered State all such expenditure will be provided for out of taxation, and not by borrowing. To meet it by borrowing ... would involve an ever-growing government debt and a corresponding ever-growing obligation of interest. ... The national credit would suffer heavy damage; ... This thesis is universally accepted” (1929, p. 233).

Even after the keynesian revolution the virtue of a balanced budget kept being praised. Truman’s 1951 *Economic Report of the President* stated that “... we should make it the first principle of economic and fiscal policy in these times to maintain a balanced budget, and to finance the cost of national defence on a ‘pay-as-we-go’ basis”.

As Schumacher noted in 1946, the precepts of sound public finance were grounded in the opinion that the economy is self-equilibrating⁹. “The logical corollary of orthodox economics is orthodox finance. If it is believed that all factors of production are normally and inevitably utilised by private business, it follows that the State can obtain the use of such factors only by preventing private business from using them. ... From this it follows that the first principle of ‘sound’ public finance is that the budget should be balanced” (p. 86).

⁸ U. Hicks relates this view to the objective of reducing the debt and taxation, to the prevailing favourable economic conditions and also to some difficulties in managing the budget. She notes the growth of administrative expertise in budgeting contributed to the development of a different approach in the 1930s.

⁹ Schumacher, while reporting these views, did not share them.

Almost seventy years later than Pigou, Buchanan echoes his words: “the first century and one-half of our national political history did, indeed, embody a norm of budget balance. This rule was not written in the constitution document, as such, but rather it was part of an accepted set of attitudes about how government should, and must, carry on its fiscal affairs” (1997, p. 119).

However, even in family finance borrowing is not necessarily evil. Even classical advocates of the balanced budget were aware of the necessity of allowing borrowing in certain circumstances and of its usefulness in others. Therefore economists have had a hard job in trying to specify under what circumstances exception to the balanced budget rule were to be allowed, caught between the Scylla of missed opportunities as a consequence of the constraint and the Charybdis of waste and instability caused by its removal.

The need for exceptions as well as the need for tight rules to deal with them was clearly recognised by Pigou (1929). He deemed it to be plain that when “non-remunerative government expenditures *on a wholly abnormal scale* have to be undertaken, as in combating the consequences of an earthquake or to meet an imminent threat of war ... to collect what is required, and required at a very short notice in these conditions, through the machinery of taxation is politically and administratively impracticable” (p. 39; italics ours). He also argued that concerning “government expenditure devoted to producing capital equipment ... *the fruits of which will subsequently be sold to purchasers for fees* ... it is generally agreed that the required funds ought to be raised by loans. ... Upon this matter ... there is no room for controversy” (p. 36; italics ours). Finally, he notes that “...since changes in taxation always involve disturbance, to keep the rates of taxation as nearly as possible constant from year to year ... it may be desirable ... to arrange a budget so that good and bad years make up for one another, *a deficit in one balancing a surplus in another*” (p. 35; italics ours).

2.1 Ordinary vs. extraordinary finance

One first exception was thus found in the distinction between ordinary and extraordinary finance: the former dealt with recurrent expenditures, to be financed by recurrent revenues so as to avoid the depletion of non-renewable assets; the latter dealt with one-off outlays to be backed also by borrowed funds. Also the rationale for this exception

was found by way of analogy to family finance. De Viti de Marco (1953) points out that "...if an individual has to face an expense which he reckons to exceed his annual income ... he will either have to sell his assets or raise a loan" (p. 390, our translation) and applies the same line of reasoning to public finances¹⁰.

De Viti de Marco is very much aware of classification problems as the extraordinariness of an outlay is a matter for subjective assessment both at the individual and at the collective level: "this subjective element does not allow to define a rigorous and objective rule that draws the line ... between ordinary and extraordinary finance" (p. 390, our translation). Margins for moral hazard and opportunistic behaviour arise as "the distinction between 'ordinary' and 'extraordinary' receipts and expenditure is admittedly not clear-cut, depending ultimately on the judgement of the classifying authority as to whether the receipts and expenditure in question are to continue indefinitely in the future" (United Nations, 1951, p. 61).

While extreme cases were easily identified (on the one hand, interest outlays and salaries; on the other, the cost of a war), in some cases it is not straightforward to see what is ordinary and what is not. "It is impossible to define *ex ante* what is an extraordinary outlay. Building a school may be an extraordinary effort for a small town, an ordinary one for a big city" (Einaudi, 1948, p. 318; our translation). Ultimately, "there is no great technical difficulty in producing for a series of years budgets which are balanced at the end of the year to the nearest penny ... Perhaps half a dozen financial writers in the country would understand from the published accounts what was happening, but I doubt if any one of the half dozen is capable of making the position clear to the public¹¹".

National experiences did not differ much. "In the case of France, the extraordinary budget was proverbially the dumping place for all expenditures which could not be balanced by tax receipts" (Hansen, 1941, p. 199). In 1945 Keynes notes that in the United Kingdom "the present criterion leads to meaningless anomalies. A new G.P.O. is charged 'below', a new Somerset House 'above'. A Capital contribution to school buildings is 'above' in the Exchequer Accounts and is paid for out of Revenues, and is 'below' in the Local Authority Accounts and is paid for

¹⁰ De Viti de Marco goes on to justify deficit finance as a less painful alternative to extraordinary taxation which may penalise liquidity constrained taxpayers.

¹¹ Sir F. Phillips, writing in 1936, quoted in Middleton (1985), p. 82.

out of loans. The cost of a road is ‘above’, of a railway ‘below’. And so on¹²”. “In Canada, although not always realised even by Canadians, a budgetary distinction between ordinary and capital expenditures has been made ever since the confederation in 1867. The official reports show surpluses in fifty of the sixty-six years following 1867; but if the accounting were made on the United States basis, surpluses would appear in only fifteen of the sixty-six years” (Hansen, 1941, p. 199)¹³.

2.2 The double budget

The double budget is a refinement of the ordinary/extraordinary distinction which reduces the degree of arbitrariness of the decision concerning which expenditures can be deficit-financed. The budget is split into a current and a capital account. While the former must be balanced or in surplus, the latter can run a deficit (the so-called *golden rule*) and thus allows to spread the cost of durables over all the financial years in which they will be in use rather than charging it entirely on one year. It can be a powerful instrument in overcoming liquidity constraints and fostering economic development structurally.

Arguments along these lines can be found earlier than the dual budget debate per se. The productive character of a large part of public outlays was noted by German scholars in the second part of the XIX century. They also argued that government can borrow to finance undertakings that are expected to improve the income of future generations (Cohn, 1895). Bastable (1927) argues that “non-economic (i.e. non-remunerative) expenditure is primarily to be met out of income, and, unless it can be so dealt with, ought not to be incurred...[and] ... that borrowing

¹² Memorandum by Keynes for the National Debt Enquiry, 21 June 1945, in D. Moggridge and A. Robinson, eds., (1971-89), vol. XXVII, pp. 406-7. On the UK experience, Clarke (1998) also notes that “in the best Gladstonian tradition On the expenditure side, what mattered was expenditure above the famous ‘line’ in the Exchequer accounts, dating from the Sinking Fund Act of 1875, broadly ... distinguishing a revenue account from a capital account – but by no means unambiguously ... Only an old Treasury hand could be expected to know the difference within this hybrid accounting framework therefore, the simple moral imperative of balancing the budget was in practice wrapped in the esoteric conventions of the public accounts” (p. 64).

¹³ In Italy, in the late 19th Century and the early 20th Century revenues and expenditures related to the construction of railways were included in a special balance sheet and separated from other ordinary and extra-ordinary items. Revenues were represented by the proceeds of the sale of bonds, expenditures by the outlays for investment projects (see Nitti, 1903). De facto, an item specific golden rule was implemented.

should hardly ever be adopted except for strictly economic expenditure, and then only when the extension of the State domain is clearly advisable” (pp. 670-1).

The usefulness of a dual budget has been long debated¹⁴. It is still an unsettled issue, which has been tackled in different ways in different countries and at different times. Sweden, introduced the dual budget in 1937 and suppressed it in 1980.

First of all, the distinction between current and capital items retains a certain degree of ambiguity which can be used opportunistically. “The classification procedures which are to be followed in separating “current” and “capital” transactions are among the most controversial and difficult questions in budgetary procedure, especially in view of the frequent abuses of so-called “capital budgets” in hiding deficits which otherwise would have become apparent” (United Nations, 1951, p. 11).

According to Lindbeck (1968), this distinction “facilitated tactical political manoeuvres and hampered the fiscal policy debate for many years [in Sweden] by focusing it on complicated bookkeeping issues understood by very few and of very little economic relevance” (p. 34).

In principle, one can distinguish between durable goods producing a direct revenue, durable goods producing an indirect revenue as, respectively, investments by publicly owned enterprises and public infrastructures that reduce the costs borne by private producers and/or consumers and durable goods with pure consumption functions. It may be argued that the latter should be excluded from the capital account as they do not affect growth and thus do not imply a future financial benefit for the public sector; therefore they worsen the sector’s net worth.

In practice, however, the divide between the second and the third category is very unclear. In the case of infrastructures, for example, there is the issue of the treatment of expenditures determined by the attempt to reduce the impact on the environment. If the overall costs increase should these expenditures be considered as producing an indirect revenue or as pure consumption? If for this reason we include in the capital account all durables, we end up creating a distortion in allocation only based on duration, rather than on contribution to growth, thus “the analogy with

¹⁴ See the accounts in Premchand (1983) and Poterba (1995). For a recent discussion in the context of EMU, see Balassone and Franco (2000b).

private accounting may be conducive to an irrational preference for capital expenditures over current expenditures" (Goode and Birnbaum, 1955, p. 1)¹⁵.

Clearly there are current expenditures, such as those increasing human capital, that can give a relevant contribution to growth as "indirect revenue need not come through a durable good" (Steve, 1972, p. 164; our translation). If one is not careful about the expenditures to be included in the capital section, the dual budget may result "...in a preference for expenditures on physical assets rather than greater spending for intangibles such as health or education" (Colm and Wagner, 1963, p. 125). Thus, "the need for a return, either in the limited financial sense or in the broader context of the social return, is a view that needs to be applied over a wider spectrum of public expenditures and not confined to capital budget only" (Premchand, 1983, p. 296).

However, the inclusion in the capital account (which can be financed through debt) of all expenditures contributing to human capital would imply high levels of deficits and pose serious problems of classification¹⁶. One should also take into account that a part of expenditures replaces existing capital.

Furthermore, the possibility to borrow, without strict limits, in order to finance investments can lower the attention paid when evaluating the costs and benefits of each project. In a way with the double budget the analogy between government and private finance moves from the household to the business sector where the distinction between current and capital budget is customary. But the analogy between public sector accounts and those of private enterprises overlooks the absence of mechanisms that would penalise the public body investing in low revenue projects.

¹⁵ For a discussion along these lines see also Steve (1972; pp. 163-5). Steve also notes that drawing the line between durable goods with direct and indirect revenue would pose similar problems.

¹⁶ Bastable (1927) already acknowledged the usefulness of non-remunerative expenditures such as those on education, improved housing and the like, however he also pointed out that there is a "... difficulty of application. The results of expenditure of the kind are hard to trace or measure, and any of statement respecting them must rest in a great degree of conjecture". (pp. 621-2).

2.3 *Stabilisation policy*

Another attempt at justifying deviations from the balanced budget rule came from Keynesian theory where the budget plays a crucial role in cushioning the effects of cyclical downswings in the economy compensating for insufficient private demand. Therefore a balanced budget was no longer to be achieved in each financial year but to be attained over the whole length of the economic cycle.

On April the 5th of 1933 Keynes wrote on *The Times*: “The next budget should be divided into two parts, one of which shall include those items of expenditure which it would be proper to treat as loan-expenditure in the present circumstances”. Later he sharpens the distinction between the government’s own current expenditure and a capital budget to provide for sufficient national investment. In 1942 he writes: “I should aim at having a surplus on the ordinary budget, which would be transferred to the Capital Budget, thus gradually replacing dead-weight debt by productive or semi-productive debt... I should not aim at attempting to compensate cyclical fluctuations by means of the ordinary budget, I should leave this duty to the capital budget¹⁷”.

Fiscal policy in Sweden and in the USA moved along these lines¹⁸. In 1937 Sweden reformed its budget rules and abandoned the annual balancing. In Lindbeck’s account, the Swedish reform was based on the idea that “in normal times the capital budget should be financed by loans whereas the current budget should be financed by taxes. In boom periods the current budget should, however, be overbalanced, hence part of the capital budget would be financed by taxes; in recession the current budget should be underbalanced, hence partly financed by loans” (1968, p. 33).

Hansen explains how in the USA, “President Roosevelt ... divided federal expenditures into ‘ordinary’ and ‘extraordinary’. The former relate to the ‘operating expenditure for the normal and continuing functions of government’ ... [and] ... should be met out of current revenues’... He expressed the hope that in times of prosperity current revenues would so

¹⁷ ‘Budgetary Policy’, 15 May 1942, in D. Moggridge and A. Robinson, eds., (1971-89), vol. XXVII, pp. 277-8.

¹⁸ These developments reflected common problems but were to a large extent unrelated. On the relationship between Swedish fiscal policy and Keynesian theories see Lundberg (1996). He recalls that in 1929 Lindhal considered the use of fiscal policies to affect the level and composition of demand and that Myrdal was asked to write an appendix to the government budget proposal of January 1933 on the issue of the feasibility of active fiscal policies.

far exceed ordinary expenditures as to produce ‘a surplus that can be applied against the public debt’... The extraordinary expenditures, which are concerned with loans, capital expenditure and relief of need, he deemed to be sufficiently flexible in character as to permit their contraction and expansion as a ‘partial offset for the rise and fall in the national income’ (1941, p. 219).

However, the idea of balancing the government accounts over the course of the business cycle had an exceptionally brief life span. Blinder and Solow (1974) point out that while it “... had considerable appeal... in the immediate post-Keynesian years, when the balanced budget was [still] influential, it is almost never discussed nowadays” (p. 37). It was the turn of functional finance to take the lead.

“Functional finance rejects completely the traditional doctrines of ‘sound finance’ and the principle of trying to balance the budget over the solar year or any other arbitrary period ... government fiscal policy ... shall all be undertaken with an eye only to the results of these actions on the economy” (Lerner, 1943, p. 41).

Hansen noted that “if one adopts wholeheartedly the principle that government financial operations should be regarded exclusively as instruments of economic and public policy, the concept of a balanced budget, however defined, can play no role in the determination of that policy” (1941, p. 188).

The way in which these ideas were first met is exemplified in the following passage by Chamberlain in 1933¹⁹: “If I were to pretend I could lay out a programme under which what I borrowed this year would be met by a surplus at the end of three years, everyone would soon perceive that I was only resorting to the rather transparent device of making an unbalanced budget look respectable²⁰”.

¹⁹ Middleton (1985) reviews the debate about budgetary policy in the United Kingdom in the 1930s. In 1933 the Treasury stressed the risks related to unbalanced budgets: “Would not the ordinary taxpayer and the business man very soon begin to have a feeling of uneasiness and apprehension? After all people will realise that the bill must be paid if not this year next year or the year after. Uncertainty and apprehension about the future would very quickly cancel out any immediate psychological benefit which the reduction of taxation by unbalancing the Budget would promote” (1985, p. 88).

²⁰ Neville Chamberlain (Chancellor of the Exchequer), quoted in Sabine (1970, p. 15).

It was also pointed out that “the requirement of a balanced budget was and still is the simplest and clearest rule to impose ‘fiscal discipline’ and to hold government functions and expenditure to a minimum... Even an avowedly counter cyclical policy is believed to give rise to an upward trend in expenditures that might not otherwise occur. The expenditures undertaken to counteract a depression are unlikely to be discounted in the succeeding boom. If the boom is countered at all, the measures taken will be credit restriction or increased taxation” (Smithies, 1960).

The obstacles posed by politics to a symmetric and timely reaction of the budget to cyclical developments were stressed. Agreement over the appropriate budgetary items to use may take too long; it may prove difficult to reduce expenditures once they have been increased. Drees (1955) and Steve (1972) provide early discussions of the relevance of the balance of powers between the Parliament and the Government and of the relationship between the Government and its Parliamentary majority: budgetary rules cannot be evaluated *per se* but need to be set in the overall institutional context.

Among the remedies suggested to the political problem described, an enhanced reliance on automatic stabilisers and the so-called formula flexibility were suggested. The latter consisted in the introduction of a predetermined relationship between tax rates (or benefits levels) and the level of economic activity²¹.

But support in favour of functional finance was strong. “Even if stability in the budget has something to recommend it, stability in the economy is surely better... Who makes the rule? Who decides when to abide to it and when to countermand it? Furthermore, within the framework of a political democracy, the case for taking stabilisation policy out of the hands of politicians is an uneasy one: into whose hands shall it be placed?... No budgetary rule can be provided with a solid intellectual foundation. This will hardly be new to economists. The best that can be said for rules is that some of them may be better than incompetently

²¹ Biehl, in summarising several papers on fiscal policy issues, notes that “It is strange to see that, e.g., the old-fashioned concept of the simple budget balance rule is still widely used in many countries and that the full employment budget concept, the structural margin of fiscal impact concept, and the concept of the cyclically adjusted neutral budget ... are only known to a small circle of specialists.” (1973, p. 6).

managed discretionary policy...” (Blinder and Solow, 1974, pp. 43 and 45). This view was broadly accepted in some public finance textbooks²².

Along the same lines, though less aggressively, Steve (1972) notes that “budgetary policy cannot be reduced to simple rules, it should take into account the overall effects of the budget on private demand components and national income” (p. 170; our translation)²³.

The stagflation in the 70s; the difficulties concerning the estimate of the actual impact of budget changes on the economy; the risks of fine tuning given the lags between the decision to change the budget and its implementation; the development of theoretical models questioning the possibility for the Government to influence the level of government activity all contributed to a decline of interest in the theory of functional finance.

Advocates of the balanced budget regained the fore. “The balanced-budget principle played a crucial role in holding the pre-keynesian fiscal constitution together, and constraining the otherwise inherent biases of that system to over-expenditure and deficit finance. Once the balanced-budget had been bowled over by the Keynesian revolution, those biases were unleashed” (Buchanan, Wagner and Burton, 1978, p. 47)²⁴.

Politicians praised again the virtues of balanced budgets: “At one time, it was regarded as the hallmark of good government to maintain a balanced-budget; to ensure that, in time of peace, Government spending was fully financed by revenues from taxation, with no need for Government borrowing. Over the years, this simple and beneficent rule was increasingly disregarded ... And I have balanced the budget” (Nigel Lawson, Budget Statement, 1988).

²² See, for instance, Johansen (1965), in which the use of budgetary items for stabilisation policy is unquestioned, the focus of the analysis being on the choice of the most appropriate instruments.

²³ Steve stresses that the budget balance cannot be considered in isolation: the level and composition of public revenue and expenditure are extremely important.

²⁴ Keynes’ own views about active fiscal policy were rather prudent. He stressed the need to control inflation and retain appropriate market incentives. In evaluating the UK budget in 1940, he noted “The importance of a war budget is not because it will ‘finance’ the war. The goods ordered by the supply department will be financed anyway. Its importance is *social*: to prevent the social evils of inflation now and later; to do this in a way which satisfies the popular sense of social justice; whilst maintaining adequate incentives to work and economy”. (‘Notes on the Budget’, 21 September 1940, in Moggridge and Robinson, eds., 1971-89, vol. XXII, p. 218).

The recent policy debate has largely recognised that in normal circumstances automatic stabilisers ought to be allowed to operate freely²⁵. On the contrary, discretionary fiscal action is generally considered problematic in view of irreversibility and timing problems and of the uncertainty about its effects²⁶.

3. EMU fiscal rules: a new answer to an old question?

European Monetary Union represents a new historical development. For the first time a number of sovereign countries adopt a common currency while retaining independent fiscal policies. The need for fiscal rules complementing monetary union has been at the core of the debate on EMU since the early nineties²⁷.

Some arguments were put forward against the introduction of fiscal rules at the European level. It was noted that fiscal rules may have costs in terms of stabilisation policies and may hamper the achievement of allocative and distributive objectives. It was also noted that excessively stringent rules may be counter-productive. If the Pact leads to an unduly tight fiscal stance in one or more countries, pressure may mount on the ECB to deliver a monetary offsetting²⁸. Otherwise, the credibility of the Pact may be endangered²⁹.

However, the prevailing view in the policy debate was clearly in favour of the introduction of formal rules. It was argued that procedural or fiscal rules are necessary because the factors that in recent decades have

²⁵ The issue is extensively discussed in OECD (1999). OECD notes that "in the future governments should guard against the asymmetric use of automatic stabilisers, although this obviously does not preclude all discretionary action, particularly for structural reasons." (p. 145).

²⁶ See European Commission (2001), Kilpatrick (2001), Taylor (2000) and Wren-Lewis (2000).

²⁷ For a review of the justifications put forward for the Pact and for an analysis of its potential macroeconomic implications see European Commission (1997), Artis and Winkler (1997) and Eichengreen and Wyplosz (1998).

²⁸ Canzoneri and Diba (2001).

²⁹ It was also noted that the multiplicity of fiscal authorities does not provide strong arguments in favour of permanent constraints on the deficit as it may actually dilute the pressure on the central bank. According to Canzoneri and Diba (2001), a more relevant reason to have fiscal rules is to underpin the 'functional', as opposed to the 'legal', independence of the central bank. Without a credible deficit criterion ensuring government fiscal solvency, the central bank would not be able to keep control of the price level.

determined fiscal profligacy in several countries have not disappeared. Moreover, the multinational dimension of EMU is likely to increase the need for such rules.

Stark (2001) describes the genesis and the rationale of the Stability and Growth Pact³⁰; he stresses how in Europe, up to the early nineties, lax fiscal policy "... occurred although it is indisputable that unsound fiscal policy practices have adverse effects on price stability, growth and employment: large deficits and large public debt place constraints on the ability of a country ... to act during different stages of the business cycle...; the State's absorption of resources which would otherwise have found their way into private investments results in higher long term interest rates ...; ... a stifling government debt ratio impair(s) the overall efficiency of an economy and create(s) risks to price stability...; these problems are especially pronounced in monetary union since ... the policy of a single country might have adverse consequences for all the other participating countries". These arguments combine the two main strands of opinion about the budgetary balance: the one stressing the importance of stabilisation policies and budgetary flexibility and the other maintaining that unbalanced budgets imply distortions in the allocation of resources³¹.

It was also pointed out that, without strong rules, the legal independence of the European Central Bank (ECB) may turn out to be an empty shell because of pressure by high-debt countries for ex ante bail-out (refraining from raising interest rates in conditions of inflationary tensions) or ex post bail-out (debt relief through unanticipated inflation). EMU can induce unilateral fiscal expansions since governments may feel less inclined to preserve fiscal rectitude, as they individually face a less steep interest rate schedule in a monetary union than under flexible exchange rates.

The debate on fiscal rules in EMU was grounded on the wider debate that took place in the nineties about the role of fiscal institutions and procedures in shaping budgetary outcomes³². While certain political configurations, such as weak coalition governments, have been recognised as conducive to budgetary misbehaviour or to hampering attempts to

³⁰ See also Costello (2001).

³¹ See Buti *et al.* (1998).

³² See Kopits and Symansky (1998).

redress the budgetary situation³³, inadequate budgetary institutions and procedures may also contribute to a lack of fiscal discipline³⁴.

In this context, institutional reforms in the fiscal domain have been discussed and introduced in several countries. As noted by Beetsma (2001), these reforms come in two main categories: (a) the introduction of procedural rules conducive to a responsible fiscal behaviour and (b) the introduction of a fiscal rule, i.e. a permanent constraint on domestic fiscal policy in terms of an indicator of the overall fiscal performance (budget balance, borrowing, debt, reserves) of central and/or local government.

In national experiences, both types of measures have proved to be effective tools in containing political biases in fiscal policy-making and in achieving and sustaining fiscal discipline. In a multinational context, the adoption of harmonised tight budgetary procedures may lead to fundamental problems from the point of view of national sovereignty (Beetsma, 2001). Moreover, institutional reforms are more difficult to monitor centrally, compared to numerical targets. The latter are also simpler to evaluate and easier to grasp by public opinion and policy-makers. In the end a clear consensus emerged about the introduction of common numerical rules and an elaborated multilateral surveillance mechanism³⁵.

The fiscal framework of EMU was developed gradually. The Treaty of Maastricht in 1992 set the fiscal criteria to be met for joining Monetary Union. The Stability and Growth Pact (SGP), adopted by the European Council in Amsterdam in June 1997, developed these criteria with a view to permanently restraining deficit and debt levels while allowing room for fiscal stabilisation. The Pact also strengthened the monitoring procedures complementing the quantitative rules.

³³ See, e.g., Roubini and Sachs (1989), Alesina and Drazen (1991), Alt and Lowry (1994), Alesina and Perotti (1995) and Balassone and Giordano (2001).

³⁴ See, e.g., von Hagen and Harden (1994) and the essays in Strauch and von Hagen (2000).

³⁵ See Buti and Sapir (1998) and Stark (2001).

3.1 *A description*³⁶

As we have anticipated in the introduction, EMU fiscal rules have been designed with the goal to ensure that national policies keep a sound fiscal stance while allowing sufficient margins for budgetary flexibility in bad times.

The Treaty of Maastricht stated that budget deficits cannot be larger than 3 per cent of GDP unless (a) under exceptional circumstances, such as deep recessions, (b) they remain close to 3 per cent, (c) the excess only lasts for a limited period of time³⁷. If the deficit exceeds the 3 per cent limit when the above three conditions are not met, the deficit is deemed “excessive” and it sets off a procedure intended to force corrective measures by the deviating country. If such measures are not taken the Treaty foresees monetary sanctions which increase as situations of excessive deficit persist³⁸.

The Stability and Growth Pact specified what is meant by “exceptional” and “limited period” in the clauses allowing a deficit greater than 3 per cent of GDP not to be considered “excessive”. A recession is considered exceptional if real GDP diminishes by 2 per cent. Milder recession (where the reduction in real GDP is of at least 0.75 per cent) may also be considered exceptional if, for example, they are abrupt. The excess above 3 per cent must be reabsorbed as soon as the “exceptional circumstances” allowing it are over.

The Pact also specified that each country should aim for a medium term objective of a budgetary position “close to balance or in surplus”. According to the guidelines provided by the European Council³⁹, the choice of the medium term target should take into account both the budgetary risks of recessions and those linked to fluctuations of other economic factors (e.g. interest rates). Countries with debt ratios above 60 per cent of GDP should also take into account the need to decrease such ratio, at a satisfactory pace, towards the threshold. Moreover, an increase in the debt

³⁶ A more detailed description of the rules is provided in Buti and Sapir (1997) and in Cabral (2001).

³⁷ The three conditions make the 3 per cent threshold extremely binding (see Buti *et al.*, 1997).

³⁸ See Cabral (2001) for a description.

³⁹ Council Resolution on the Stability and Growth Pact, 17 June, 1997; Council Regulation n. 1466/97, 7 July 1997; Council Declaration, 1 May 1998; Opinion of the Monetary Committee, 12 October 1998 as approved by the Council.

ratio during recessions should be avoided⁴⁰. Finally, other risk factors, such as the effects of demographic trends, ought to be taken into account⁴¹.

According to the European Council, compliance with the Pact should be assessed considering the cyclical position of the economy. In practice, EMU fiscal rules require that each member state choose a budgetary target in cyclically adjusted terms and let automatic stabilisers or discretionary action operate symmetrically around it. The lower this budget balance with respect to the 3 per cent threshold, the wider the margins for counter cyclical policy without running the risk of an excessive deficit.

Each member state must submit its budgetary targets officially in multi-year budgetary documents (Stability Programmes); these documents are updated annually and are subject to a review by the European Commission aimed at assessing their consistency with EMU fiscal rules.

Overall, the approach taken by the EU can be characterised as less flexible than the solutions adopted in some federally structured countries⁴²:

- a) the rules are defined on the basis of established numerical parameters;
- b) *ex post* compliance with the parameters is required each year; overshoots must be rapidly dealt with;
- 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 special provision is made for investment expenditure⁴³;
- e) monitoring procedures are envisaged, whereby 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 and by the application of pre-established monetary sanctions.

⁴⁰ Art. 104C of the Treaty says that when the ratio is above 60 per cent of GDP it must "diminish sufficiently" and approach 60 per cent "at a satisfactory pace". If the ratio increases, the excessive deficit procedure begins. It should be noted that, while the Treaty allows exceptions to the 3 per cent deficit criterion, it does not for the criterion concerning the debt ratio. See Balassone and Monacelli (2000).

⁴¹ The choice of the medium term fiscal target is examined in Artis and Buti (2001), Dalgaard and de Serres (2001) and Barrel and Dury (2001).

⁴² See Balassone and Franco (1999).

⁴³ 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 *A new answer to an old question?*

With European Monetary Union for the first time the need for fiscal rules arises in a multinational context. The review in the previous section shows how the arrangements adopted are deeply embedded in the long-lasting debate on budgetary rules. The novel features of EMU guided the choice between alternative solutions and required the introduction of some innovations.

The need to reconcile fiscal soundness and budgetary flexibility led to combine different approaches:

- a) setting a predetermined upper bound for the deficit is a new pragmatic solution⁴⁴;
- b) balancing the budget over the cycle is a precept derived from the keynesian approach. In 1951 a report by the United Nations, commenting the 1937 Swedish reform, points out that “while counter – cyclical budgeting introduced an element of flexibility in the fiscal policy of Government, the concept of ‘financial soundness’ has been retained” (p. 69);
- c) prudence when fixing the average target to be achieved over the cycle (“close to balance or in surplus”) has a classical flavour. In 1927 Bastable argued that “the safest rule for practice is that which lays down the expedience of estimating for a moderate surplus, by which the possibility of a deficit will be reduced to a minimum” (p. 611).

The stress on fiscal soundness motivates the rejection of a dual budget approach and of any distinction between ordinary and extraordinary finance. However, pragmatism called for the allowance of margins for exceptional circumstances, this rests on the idea that “in some circumstances, indeed, a balanced budget is a pedantic luxury, which a community, hard pressed by sudden and exceptional misfortune, can ill afford” Dalton (1934, p. 12).

A broadly balanced budget, like that required by the SGP, may negatively affect the public investment level; this effect can be especially relevant during the transition to the low debt levels consistent with the chosen structural balance. The double burden determined by this transition

⁴⁴ The deficit ceiling, although arbitrary, is reminiscent of the results obtained by Domar (1944) in the analysis of fiscal sustainability assuming a constant deficit. Perhaps conscious of the partial equilibrium nature of Domar’s results, the introduction of a debt ceiling as well avoids convergence at high levels of debt. See Balassone and Franco (2000a).

can be assimilated to that arising from the transition from a pay-as-you-go to a funded pension system. However, besides the criticism to the double budget system examined in the previous sections, in the context of EMU the golden rule would be an obstacle to deficit and debt reduction. In particular, given the ratio of public investment as a percentage of GDP, the long-run equilibrium level of government debt could be very high, especially in an environment of low inflation. This could imply that the debt ratio would rise in low-debt countries, while in high-debt countries there would be a very slow pace of debt re-absorption. The golden rule would also meet with practical difficulties, such as the evaluation of amortisation, and would make the multilateral surveillance process more complex, by providing leeway for opportunistic behaviour. Governments would have an incentive to classify current expenditure as capital spending⁴⁵.

The asymmetry in EMU between the monetary regime, with the single currency and a single monetary authority, and the political landscape, lacking an authority of federal rank, gave prominence to moral hazard issues. It is probably at the roots of the rejection of both the dual budget and the distinction between ordinary and extra-ordinary finance. It motivated the adoption of a detailed multilateral surveillance procedure and the introduction of a predetermined limit for the annual deficit in a framework that envisages the targeting of a balanced budget over the cycle⁴⁶.

EMU may be termed a “radical federation”, where in the absence of fiscal rules member states enjoy absolute autonomy in matters of public expenditure and 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. This creates a double cost for the other entities: the free-rider’s

⁴⁵ See Balassone and Franco (2000b).

⁴⁶ EMU fiscal rules are targeted at national governments while many EMU member states have a federal or highly decentralised structure. A free riding problem can re-emerge at national level. This problem is analysed in Balassone and Franco (1999).

excessive indebtedness can put pressure on interest rates to rise; it can also result in bankruptcies requiring bail-outs⁴⁷.

The need for monitoring was felt also in earlier days. For instance, Durrell (1917) argues that: “the public and the Parliament should be satisfied that ... there is some authority which ... will give timely warning if that expenditure or those obligations are either outrunning the revenue provided for the year or engaging the nation too deeply in the future” (p. 242). However the monitoring procedure adopted for EMU is novel with respect to its scale, complexity and tightness.

Until now the chosen mix of approaches has been successful in securing a reduction in budget deficits and debt across EMU member states. It remains to be seen whether it will also be successful in maintaining fiscal discipline once at regime. Unfavourable economic developments will put to test EMU’s fiscal constitution and the issue of legitimacy of rules in a democracy pointed out by Blinder and Solow may come to the fore again.

Fiscal rules can be successfully implemented over a long period of time only if public opinion considers them a valuable contribution to policy making. In the words of Bastable (1927): “it but remains to again lay emphasis on the fact that good finance cannot be attained without intelligent care on the part of the citizens. The rules of budgetary legislation are serviceable in keeping administration within limits; but prudent expenditure, productive and equitable taxation, and due equilibrium between income and outlay will only be found where responsibility is enforced by the public opinion of an active and enlightened community (p. 761).

⁴⁷ The risks clearly increase if member states are asymmetric in some relevant respect (e.g. accumulated public debt). These considerations are likely to have motivated the inclusion of a “rule” concerning not only deficits but also debt.

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FISCAL RULES: USEFUL POLICY FRAMEWORK OR UNNECESSARY ORNAMENT?

*George Kopits**

*The budget should be balanced,
the treasury should be refilled,
public debt should be reduced...*

M. T. CICERO (63 B.C.)

1. Introduction

Rules-based macroeconomic policies are in fashion. In the monetary area, since the early nineties, an increasing number of countries have adopted inflation targeting. The latter has displaced the targeting of monetary aggregates, or of the exchange rate, as the rule of choice in advanced economies. In the fiscal area, a parallel trend is under way, as rules to eliminate or to contain budget deficits and to reduce the public debt are gaining considerable popularity in various parts of the world¹.

All these rules share at least one feature in common: they seek to confer credibility to the conduct of macroeconomic policies by removing discretionary intervention. Their goal is to achieve trust by guaranteeing that fundamentals will remain predictable and robust regardless of the government in charge. There are, however, obvious differences; for one thing, credibility is not built at a uniform speed. Whereas an exchange rate rule may provide immediate credibility following its introduction—and equally, may be vulnerable to a sharp and sudden loss in credibility in the event of an erosion in competitiveness or perception of misaligned fundamentals—inflation targeting may take longer to establish credibility, and balanced-budget rules usually become credible only after an extended track record.

* International Monetary Fund. Robert Hagemann, Geert Langenus, Ludger Schuknecht, and other workshop participants provided useful comments. The author alone is responsible for the views expressed, which do not necessarily reflect those of the International Monetary Fund.

¹ Following the definition in Kopits and Symansky (1998), a fiscal policy rule is a permanent constraint on fiscal policy, expressed in terms of a summary indicator of fiscal performance, such as the government budget deficit, borrowing, debt, or a major component thereof.

Perhaps partly because of the long gestation period and partly because of the particular experience of some countries, occasionally fiscal rules are characterized as a fig leaf. According to this view, governments either do not need rules since they apply discipline on a discretionary basis anyway, or alternatively, if they adopt rules, they are not likely to follow them seriously.

The purpose of this paper is to examine the merits of these arguments, though without attempting to refute the truism that some governments do in fact follow prudent countercyclical fiscal policy on a discretionary basis, in a manner that is observationally-equivalent to a well-designed set of fiscal rules. This point applies equally to prudent discretionary monetary policy that obviates reliance on inflation targeting. Specifically, an attempt is made here to find support for a rules-based fiscal policy framework. As part of this endeavour, much of the paper is devoted—drawing on international experience—to a discussion of the attributes that such a framework must have in order to maximize its usefulness.

In weighing the pros and cons of fiscal policy rules, the paper ventures beyond the mainly Eurocentric focus of this workshop and takes a broader view, since much of the recent popularity of fiscal rules can be found in emerging market economies, as they seek to establish credibility in financial markets. Also, wherever relevant, the discussion is cast in the broader setting of rules-based macroeconomic policies, that is, including references to monetary rules as well.

2. Evolution of fiscal policy rules

The virtue of fiscal discipline has been heralded for a long time—during at least two millennia, as attested by the opening citation. However, occasionally, departures from discipline have been justified politically and conferred analytical respectability—most notably, in the aftermath of the Great Depression. In many advanced economies, discretionary demand management, instead of remaining broadly neutral or of offsetting the effect of the cycle, has led to a nearly continuous increase in government spending that outpaced revenue capacity. In other words, fiscal policy

exhibited a procyclical stance and a deficit bias². A similar process can be detected in some less developed countries, where the deficit bias emerged with the pursuit of developmental objectives, against the background of swings in capital flows and primary commodity prices³. Starting in the 1980s, recognition of this bias and its contribution to public indebtedness, as well as of its potential adverse repercussions on private investment, prompted some governments to introduce medium-term fiscal consolidation programs to restore macroeconomic stability and fiscal sustainability. More recently, this was increasingly followed by a shift to fiscal policy rules.

Formal attempts at casting the virtue of fiscal discipline into permanent rules, through constitutional or legal provisions, at various levels of government, span over a century and a half. During this period, we can identify three fairly distinct waves. In the first wave, subnational governments in some federal systems adopted autonomously the golden rule. Under this rule, most states in the U.S. since the mid-19th century and several cantons in Switzerland since the 1920s assumed an obligation to maintain current budget balance. In essence, their goal was to gain access to market-based financing of capital expenditure, absent a precedent of bailouts by the national government.

In the second wave, after World War II, several industrial countries (Germany, Italy, Japan, Netherlands) introduced balanced-budget rules that underpinned their stabilization programs, following monetary reform. Most of these were of the golden rule type. Other rules, limiting or prohibiting the financing of budget deficits from specified domestic sources (mainly central banks), were assumed in the 1960s, including in some developing countries (Indonesia, CFA franc zone). Under all these rules, considerable scope remained for creative accounting and other nontransparent practices that could undermine compliance.

The current wave, starting with New Zealand's Fiscal Responsibility Act of 1994—shortly after the pioneering introduction of inflation targeting in that country—has seen an increasing number of industrial and emerging market economies introduce fiscal rules (Table 1). These rules

² For evidence of a procyclical fiscal stance since the 1970s in the euro area, see European Commission (2000). Similarly, Taylor (2000) found that during much of the last four decades the U.S. has followed a procyclical (or at best ineffective) discretionary fiscal policy.

³ Procyclical fiscal policy has been documented for Latin America in 1970-95, in Gavin and others (1996).

encompass a range of balanced-budget obligations, debt limits, and expenditure limits, at various levels of government. In contrast to the previous waves, a common denominator of the recent rules is that they are supported by more or less strict transparency standards consisting of generally accepted accounting conventions, timely and regular reporting requirements, and a medium-term macro-budgetary framework. Generally, all these elements are enshrined in broad legislation or international treaty, with carefully spelled out accountability obligations. By analogy, inflation targeting is usually set in an institutional context characterized by transparency, central bank independence, and accountability.

Present fiscal policy rules are fairly diverse in both design and implementation. Whereas Anglo-Saxon countries place primary emphasis on transparency (Australia, Canadian provinces, New Zealand, United Kingdom), in continental Europe (EMU Stability and Growth Pact, Switzerland's proposal) and emerging market economies (Argentina, Brazil, Colombia, Peru, India's proposal) rely far more on a set of numerical reference values (targets, limits) on performance indicators. In federal systems with strong subnational autonomy, the rules are assumed only by the central government (Argentina, India's proposal); in other federal systems with concern about potential bailouts and external spillovers of fiscal misbehaviour across jurisdictions, the rules are imposed on each government level in a coordinated fashion (Brazil, EMU).

Most rules allow for escape clauses in the event of unforeseen exogenous shocks. Objectively determined escape clauses may take various forms: simply a medium-term target balance or surplus, without explicit margins around it (New Zealand); explicit margins around a target balanced-budget or surplus requirement, calibrated on cyclical deviations in output growth (EMU, Swiss proposal); or alternatively, operation of a contingency fund (Argentina, Peru). In other cases, the escape clause is to be invoked in a discretionary manner, in the event of an international crisis, a national calamity, or other loosely defined shocks (Brazil, India's proposal, U.S. proposal).

An independent arbitration authority is clearly defined in some countries (Brazil, EMU), while at most a monitoring agency has been appointed in others (Argentina). In some instances, the government is subject to financial or judicial sanctions for noncompliance with the rules (Brazil, Canadian provinces, EMU, CFA franc zone). For the most part, the authorities are exposed to loss of reputation upon noncompliance.

3. Unnecessary ornament?

Skepticism about the usefulness or effectiveness of fiscal rules is grounded on several arguments, ranging from theoretical to practical ones. From a theoretical perspective, neither traditional macroeconomic analysis, nor any principles of public finance are predicated on a rules-based fiscal policy. Indeed, a discretionary approach has been widely viewed as instrumental for the achievement of conventional fiscal goals or functions—namely, stabilization, distributional fairness, and allocative efficiency. Likewise, monetary rules were not deemed to be superior to discretionary monetary policy. In all, the main virtue of discretionary demand management was that it afforded short-run flexibility to offset large exogenous disturbances, especially those that could lead to a prolonged and significant unemployment. In the postwar period very few authors (Friedman, 1948) questioned this conventional wisdom⁴.

Another source of skepticism (or at least agnosticism) about rules is that a government can commit credibly to fiscal discipline without any permanent rules. This observation finds support in a few practical illustrations. In this regard, U.S. fiscal and monetary discipline in recent years has been viewed as an example of prudent discretionary policymaking. Since the mid-1990s, high growth and low inflation, accompanied by budget surpluses, can be taken as evidence of the redundancy of formal balanced-budget requirements and inflation targeting⁵. In a similar vein, it has been argued that rules do not really matter in the conduct of fiscal policy, and further, that policy credibility is formed regardless of actual adherence to rules. The example of Germany suggests that public confidence (at home or abroad) in policy management has not been altered by the authorities' more than occasional failure to meet, since the 1970s, the golden rule or the M3 target. Likewise, in Japan, suspension of the rule since 1975 has had no effect in this regard. An alternative interpretation of these examples is that a reputation of prudent macroeconomic management acquired through a prolonged period of good

⁴ In a departure from the mainstream, Friedman (1948) recommended a cyclically-adjusted balanced-budget rule as a long-run policy guideline, with the purpose of eliminating the uncertainty and undesirable political implications of discretionary action, including a procyclical fiscal stance. However, he qualified the proposal with the caveat that such a rule may be insufficient to offset stubborn and strong cyclical fluctuations, which would warrant discretionary intervention.

⁵ Incidentally, the extended application of the Budget Enforcement Act of 1990 can be characterized as a procedural rule—to support the discretionary approach—rather than a policy rule.

performance, often in a rules-based context, obviates further adherence to fiscal rules. Of course, conversely, absence of such reputation would argue for the adoption of rules⁶.

Occasionally, rules are criticized for imposing unnecessary bureaucratic requirements. Why not, instead, just let the market forces exert discipline on misbehaving governments⁷? There is, however, considerable evidence that financial markets—as typified by credit rating agencies—tend to react with considerable lag to either a deterioration or an improvement in fundamentals. It can be argued that, if well designed, fiscal rules can mimic market pressures in a more rapid and efficient manner, and, above all, without the heavy penalty (namely, sudden capital outflow, high risk premium) imposed by perceptions of fiscal misbehaviour.

A much more common objection to fiscal rules is that, by their very nature, they invite abuse and are doomed to be ineffective. Typically, they induce nontransparent behaviour, largely through creative accounting practices to circumvent the rules. Perhaps the most graphic illustration is close to home, namely, the rule embodied in Article 81 of the Italian Constitution, which is wide open to interpretation to the point of rendering it meaningless⁸. Also, creative accounting and other forms of opaque application of fiscal rules have been found, for example, in some U.S. states and the Netherlands⁹. A similar criticism has been leveled at medium-term fiscal adjustment plans adopted in a number of industrial countries in the 1980s, most notably, under the Gramm-Rudman-Hollings Act in the United States. These cases simply demonstrate that fiscal targets, whether set in the context of permanent rules or of medium-term adjustment programs (including Fund-supported programs) heighten the

⁶ Drazen (2000) indicates that policy credibility is built through two alternative routes: reputation or rules.

⁷ Most recently, this criticism was leveled at Brazil's rules by the outgoing Finance Secretary of the State of Sao Paulo.

⁸ According to Article 81, no new taxes or expenditures can be introduced through the annual budget law, and legislation on new or increased outlays must indicate their sources of financing. It is probably against the background of this experience that Italian economists (Alberto Alesina, Franco Reviglio, Vito Tanzi, to name a few) tend to be particularly critical of fiscal rules.

⁹ Nontransparent application of fiscal rules has been documented in Suits and Fisher (1985) for the states of Michigan and New York, and in Wellink (1996) for the Netherlands.

temptation to resort to nontransparent practices, much like with monetary targeting¹⁰.

However, far from being an inherent flaw that invalidates rules, the proliferation of loopholes must be recognized and dealt with through appropriate design and implementation—as discussed below. These episodes underscore the overarching importance of strict transparency requirements not only for discretionary policymaking, but more important, as an integral component of any set of rules. It is for this reason, that, unlike in the previous historical waves, practically all recently established rules include standards of transparency and other features—often under so-called fiscal responsibility legislation—intended to strengthen the effectiveness of the rules.

4. Useful policy framework?

The strongest case for rules is rooted in political economy. In a democratic society, rules are necessary to restrain politically rational policymakers who conduct discretionary policies with a deficit bias when facing an electorate that fails to understand, or is indifferent to, the intertemporal budget constraint (Buchanan and Wagner, 1977). More formally, it has been demonstrated that rules-based policies are superior to a discretionary approach, since the latter is time inconsistent, given a democratic government's tendency to abandon previously announced policy commitments (Kydland and Prescott, 1977).

From a somewhat different angle, it can be shown that rational governments are prone to use suboptimal discretionary policies to enhance their chances for re-election, rather than maximize social welfare, by exploiting an information advantage vis-à-vis the electorate (Cukierman and Meltzer, 1986). This observation underscores that rules can prevent such an outcome if they are accompanied by transparency requirements to reduce or eliminate information asymmetry.

Following these arguments, the primary usefulness of a well-designed and appropriately implemented set of permanent fiscal rules, that prevents a deficit bias, consists of establishing a depoliticized framework

¹⁰ Charles Goodhart's observation (made in connection with targeting monetary aggregates) that a statistical or accounting measure ceases to be a reliable performance indicator once it is declared an official target provides a strong argument for transparency in the application of fiscal rules.

for fiscal policy—much like the depoliticization of monetary policy under inflation targeting. Accordingly, with widely available information about macroeconomic developments and prospects, only the relative spending priorities and the tax structure that are subject to legislative and public debate, but not the budget balance or the level of expenditures which are predetermined by rules.

At a practical level, the above case for rules-*cum*-transparency is probably strongest for emerging market economies; at the other end of the spectrum, the argument tends to vanish for advanced economies with a solid reputation of fiscal rectitude, as noted above. This spectrum can be viewed in a dynamic sense: over a prolonged period of time, as a country successfully applies fiscal rules, it gradually gains an ever stronger reputation that eventually permits abandonment of the rules, without loss of credibility (Germany and Japan).

However, even governments enjoying a solid reputation may want to refrain from pursuing discretionary countercyclical fiscal policy in view of the associated implementation lags, irreversibility, and political constraints. Accumulated evidence on the ineffectiveness of discretionary activism suggests adoption of a simple budget balance rule that allows for the operation of automatic stabilizers; discretionary action should be applied, though much less frequently, only for longer-term structural objectives—such as social security reform or tax reform, aimed at fiscal sustainability, intergenerational equity, or efficiency (Taylor, 2000).

For emerging market economies, including for those that have reached the last stage of post-socialist transition, the potential usefulness of rules cannot be overstated. As they open up, while experiencing fiscal stress, these economies are exposed to considerable and rapid shifts in capital movements that can result in a currency crisis. This is reflected in a relatively high risk premium that raises the cost of capital, with a depressing effect on much-needed investment. Thus, as part of an effort to reduce vulnerability to speculative attacks (including from contagion or other exogenous shocks) and to promote stability and growth, these countries are well advised in considering the adoption of fiscal rules (Kopits, 2000).

For similar reasons, in a federal system, rules can be usefully applied at the subnational level of government. Largely because of the need to build good reputation in financial markets, subnational governments may choose to adopt fiscal rules in the absence of a potential bailout (in the

U.S., Switzerland, Canada). Otherwise, these governments may be subject to centrally imposed rules to prevent moral hazard (as in Brazil, or in EU member countries under EMU), particularly given a relatively small portion of fiscal activity under central (or supranational) control. In this case, adherence to rules generally helps lower the individual government's default risk premium, as well as the country risk premium faced by the entire federal (or supranational) government¹¹.

In what follows, we shall examine the design and implementation characteristics that make fiscal rules a useful policy framework—thereby countering the above argument that fiscal rules are inherently flawed and thus doomed to failure. These attributes involve both technical infrastructure and institutional infrastructure. On the technical side, fiscal rules must be designed taking into account, for example, the interaction between the public sector and the economy, including estimates of the response of the fiscal position to exogenous shocks. In addition, the rules must be based on a set of institutional building blocks, including transparency standards, an arbitration authority to oversee compliance, and sanctions for noncompliance.

In the monetary area, these considerations apply in an analogous manner to inflation targeting. Technically, inflation targeting must be supported by sufficient information on the transmission mechanism and by reliable inflation forecasts. On the institutional side, it is necessary to establish an independent central bank that operates transparently, including through publication of inflation reports, and is accountable to the government and the public at large.

5. Designing a useful framework

5.1 Rules at the national level

In countries that face a large public debt burden, a major objective of fiscal policy rules is to reduce the public debt ratio and then to stabilize it at a prudent level. Whereas in Brazil and New Zealand the government of

¹¹ The decline in interest rates experienced by highly indebted EMU participant countries cannot, however, be ascribed unambiguously to the adoption of the rules. Given the identification problem arising from having simultaneously joined the currency union and adopted the fiscal rules, it is difficult to determine what proportion of the interest rate decline in Italy represents a fall in default risk or the disappearance of the currency risk.

the day is required to set a target or ceiling for the debt ratio, under EMU, governments are obliged to reduce the gross debt ratio to 60 percent of GDP.

In general, the outstanding liabilities of the consolidated public sector are seen as a summary measure (among many others) of a country's vulnerability. Financial markets tend to assess default risk on the outstanding debt of the public sector as a whole, rather than just the central government, given the implicit guarantee provided by the central government to the rest of the public sector¹². Also, a measure of gross debt, rather than net debt or net worth, is preferred since the marketability and valuation of government assets—with the notable exception of foreign exchange reserves—usually are open to question.

While a medium-term limit on the gross debt-to-GDP ratio can be interpreted as a broad gauge of fiscal rectitude and sustainability, year-to-year debt ceilings are less likely to be credible or operationally effective. Indeed, as measures of public indebtedness (especially as a proportion of GDP) may be exposed to valuation changes and other factors beyond the control of the authorities, they are difficult to treat as an annual operational target.

A more common rule is defined in reference to a comprehensive flow indicator of fiscal performance, such as the budget balance or government borrowing. To enhance its effectiveness, the indicator needs to be operationally simple, flexible, and growth-oriented — with obvious tradeoffs among these criteria. *Operational simplicity* requires that the indicator, while possibly consistent with a medium-term debt limit, be amenable to monitoring and control during budget execution. This criterion is met by the overall balanced-budget requirement in Argentina and by the overall deficit limit in Peru. It can be argued that, operationally, even more useful would be an obligation to maintain a minimum primary surplus (excluding interest expenses, beyond the immediate control of the authorities) that could be calibrated to the desired reduction in the debt ratio¹³.

¹² Again, possible exceptions are countries without the precedent of bailouts of defaulting subnational governments by the central government. In such cases, credit rating agencies assess risk separately for each borrowing government jurisdiction.

¹³ See the relationship between a primary surplus rule and the debt target in the Annex.

Ideally, the *flexibility* criterion can be realized with carefully designed escape clauses that are triggered objectively by exogenous shocks. The preferred option—along the lines envisaged initially by Friedman—would be based on an indicator of cyclically-adjusted balance that accommodates the effect of automatic stabilizers around a trend GDP growth rate, *allowing* for overall budget deficits during below-trend growth, but *requiring* surpluses during above-trend growth, as had been proposed for the federal government in Switzerland¹⁴. A more practical solution (albeit not necessarily neutral with respect to the cycle) consists of targeting overall balance or surplus over the cycle but subject to a preset deficit limit, as required under the Stability and Growth Pact, sufficient to accommodate the impact of a significant recession¹⁵. An alternative approach is to require balance or surplus over the cycle, as in New Zealand, without any limits, thus allowing not only for the operation of automatic stabilizers, but also for discretionary countercyclical action. An advantage of this approach is that it provides flexibility even with low output elasticities of tax revenue.

Another escape clause for mitigating the effect of exogenous shocks consists of accumulation (drawdown) of reserves in (from) a contingency fund in the event of an upturn (downturn) in activity, as envisaged under the fiscal rules recently promulgated in Argentina and Peru, much like with the “rainy day funds” in the case of some state governments in the United States. The least desirable approach would be simply to leave to the authorities discretion to interpret events, such as a national calamity or a threat to national security (as proposed, for instance, in India), for invoking the escape clause.

A *growth-oriented* indicator seeks to avoid placing an undue burden of compliance with the rule on cuts in government investment spending—a damaging outcome, given generally high expected social rates of return on infrastructure projects. This can be accomplished by requiring current

¹⁴ Assuming an annual trend growth rate of 2 percent, the Swiss proposal would require the government to generate excess revenue when actual GDP growth exceeds 1.8 percent and would allow for excess expenditure when it declines below 0.5 percent a year. The excess revenue (expenditure) was specified in reference to increments in excess (shortfall) in GDP growth. Although not strictly speaking a permanent rule, Chile’s structural surplus target for the central government is a comparable approach.

¹⁵ On the basis of historically estimated fiscal parameters, a 1 percent decline in output is estimated to result, on average, in a 0.6 percent budget deficit in the EU. Therefore, the 3 percent deficit reference value under EMU is compatible with a 5 percent below-trend deviation in GDP—which should be quite sufficient for countries on a 2 to 3 percent trend growth path.

balance, under the so-called golden rule, applied in the majority of U.S. states, and in Germany and Brazil at both the federal and state levels. More appropriately, consistent with the golden rule, New Zealand prescribes observance of operating balance¹⁶.

Whereas cash-based current balance permits borrowing to finance gross investment expenditures, accrual-based operating balance allows borrowing only for investment net of depreciation. An additional rule that can buttress the growth objective is a limit on the proportion of a major component of current expenditures in total expenditures. Along these lines, Brazil has introduced a limit on the share of the government wage bill (including government pension payments).

However, caution is needed to prevent the leakages (by financing camouflaged current expenditure) associated with the golden rule, which have been so prevalent in Germany and in some U.S. states. Specifically, it would be necessary to follow a transparent and unambiguous, yet operationally sensible, definition of what constitutes capital expenditure. The operating balance requirement, followed in New Zealand, obviates measurement refinements and has a smoothing effect on the fiscal outcome.

Subject to these caveats, fiscal rules should preclude overidentification. Accordingly, the balanced budget rule should operate when the limit on the debt ratio has been met. Otherwise, as suggested earlier, in periods when the actual debt ratio exceeds the limit, the government would be expected to generate a primary surplus consistent with convergence to the prescribed debt ratio limit.

5.2 *Rules at the subnational level*

A key issue to be addressed in a decentralized system is the application of fiscal rules at subnational levels of government. The case for subnational rules is particularly strong when a country, such as Argentina or Brazil, is confronted with a major fiscal adjustment task that cannot be met by the central government alone. In fact, the smaller the share of the

¹⁶ From the perspective of intergenerational equity, the golden rule should be defined in terms of the operating balance, so that taxpayers in each time period pay for the costs (depreciation plus interest), of existing capital assets from which they derive benefits in that period; see Robinson (1998). Furthermore, these costs could be reduced by capital gains accrued in that period.

central or supranational government, as in the EU, greater is the need for applying subnational rules to counter the moral hazard that may arise among subnational governments (or national governments in the EU) to incur fiscal imbalances with repercussions on the borrowing costs of the rest of the federal system. The fundamental principle underlying these arguments is that rules—and more broadly, fiscal responsibility legislation—need to be imposed on the corresponding government level, that is, the *locus of accountability* for policymaking. Stated differently, whereas in a unitary system policy formulation and decisions take place only at the national or central level, in a federal system they are dispersed among the national and subnational levels.

An additional critical condition for well-functioning subnational rules is that underlying vertical (regional) imbalances be broadly offset through an adequate mechanism of intergovernmental compensatory transfers. These transfers should be determined, if possible, by objective indicators of expenditure needs and taxing capacity in each subnational jurisdiction¹⁷, consistent with a clear assignment of spending functions and revenue sources. Budget or debt rules should be viewed as complementary rather than as substitutes for such a mechanism.

In federal systems, there are two basic approaches to fiscal responsibility, and in particular, to designing fiscal rules¹⁸. Although usually only one approach is present, in a few countries (Germany) both are followed. Under the *autonomous approach*, the initiative for establishing rules arises from individual subnational governments. Following this bottom-up approach, in Canada, Switzerland and the United States, many subnational governments have adopted the golden rule, enforced with varying degrees of stringency¹⁹, while others retained discretionary policymaking. By and large, in these countries, subnational

¹⁷ The determination of intergovernmental transfers in several Scandinavian countries can be regarded as exemplary in this respect; see Rattso (1998).

¹⁸ For a review of the international experience with fiscal policy rules at subnational levels of government under each approach, and lessons for Argentina and Brazil, see Kopits, Jiménez, and Manoel (2000).

¹⁹ For example, while in some U.S. states the golden rule is applied only *ex ante*, in others it is applied on an *ex post* basis as well; a number of states do not permit carryover of unspent appropriations from year to year; some states have contingency funds; and the scope for creative accounting varies among states. In Canada, there are differences in the design of rules across provinces, including in the nature of the penalties for noncompliance; for example, in one province, the penalty consists of salary cuts for cabinet members unless the overrun in the budget deficit is caused by exogenous shocks.

governments have direct access to financial markets to meet their borrowing requirements, and there is rarely a precedent of bailouts of insolvent subnational governments by the national government; hence, their desire to maintain a favourable credit rating in the markets. More recently, in deference to subnational autonomy, Argentina sought to follow this approach—notwithstanding a trail of bailout operations—by adopting rules at the federal level and inviting provinces to follow suit on a voluntary basis.

By contrast, under the *coordinated approach*, all subnational governments are subject to uniform rules to ensure a degree of fiscal discipline under the surveillance of a central authority. For the most part, this top-down approach is introduced against the background of past bailouts or under some form of implicit or explicit guarantees to rescue subnational governments in distress. Coordination also becomes necessary in federations (or confederations) where lower levels of government are responsible for the bulk of fiscal activity, with considerable potential spillovers from the misbehaviour of one government on the risk premium of another government within the federal system. Perhaps the strongest argument for this approach is the need to bring about a lasting fiscal adjustment encompassing the entire general government or consolidated public sector, in the face of a possible sustainability problem with likely repercussions on countrywide risk premium.

An early example of this approach—that resulted from a major bailout episode—was the informal agreement among the Australian states, later formalized under the authority of the Loan Council, setting borrowing limits on the states²⁰. Other examples where lower-level governments are subject to statutory debt limits include Brazil, Colombia, EU members, and CFA franc zone members (the limit being set as a proportion of government revenue, or GDP, of the jurisdiction). In an interesting variant of this practice, in Brazil, consistent with an overall target debt-GDP ratio (set by the Senate, upon recommendation of the President) for the public sector as a whole, each level of government is assigned a uniform limit for its debt-revenue ratio, implying a fiscal adjustment—to be completed over a specified number of years—for state governments whose ratio exceeds the limit set for all state governments. In addition, all Brazilian states and

²⁰ This arrangement, which operated in different forms during 1923-92, was increasingly circumvented through ingenious financing techniques (sales, leaseback operations, etc.); hence, it was finally replaced with transparent reporting requirements on the states' fiscal policy intentions and performance—in line with the requirements of the Charter of Budget Honesty Act of 1998.

German *Länder* are required to follow the golden rule, and EU member countries (as well as implicitly lower-level governments within the EU) are committed to maintain overall balance, subject to the deficit limit²¹.

An important distinction between the two approaches—arising mainly from the implicit or explicit bailout provision, present in the coordinated approach²²—is that, while under the autonomous approach each subnational government seeks to gain credibility for its own fiscal policy, under the coordinated approach the goal is to establish collective credibility for overall macroeconomic policy—that is, also the monetary policy stance of the federation. Given the diffusion of effort among subnational jurisdictions to achieve collective credibility, as opposed to individual credibility for each jurisdiction, the incentive for free-rider behaviour by circumventing the rules has been far stronger under the coordinated approach. Therefore, under the latter, there is greater need to introduce sanctions for noncompliance (see below) and to create a mechanism for enforcing corrective action by the delinquent government—in exchange for assistance or waiver of fines by the central or supranational authority—as envisaged in Brazil, Colombia, the EU, or the CFA franc zone.

The flexibility criterion is also relevant for the design of subnational fiscal rules, especially as regards the treatment of asymmetric shocks. Shocks that are concentrated in certain regions could be compensated with cyclically-adjusted rules and contingency funds at the subnational level, or with intergovernmental transfers. For instance, within the EU, besides the provision of waivers from the deficit reference value in case of a significant recession, Structural and Cohesion Funds are made available to member countries on the basis of regional need as well as vulnerability to shocks.

²¹ Within the EU, federal governments (Austria, Germany, Italy, Spain) have endeavored to design derivative EMU rules for subnational levels of government. For an analysis of the Italian case, see Balassone and Franco (1999).

²² See the discussion of the relevance of an implicit bailout clause with regard to the EMU fiscal reference values, in Eichengreen and von Hagen (1995) and McKinnon (1996).

6. Implementing a useful framework

6.1 *Transparency*

It is widely recognized that transparency is conducive to successful fiscal policy²³ whether in the context of rules-based or of discretionary policymaking²⁴. But, as indicated, the need for transparency is exacerbated in the application of fiscal policy rules in the face of mounting pressures for engaging in creative accounting and operating procedures to comply formally, but not in fact, with preset performance indicators.

Specifically, the usefulness of fiscal rules hinges on *transparency in institutional structure and functions*, that is, in the relations within the public sector, as well as the relations between the government and private sector entities. Transparency serves to contain or reduce quasi-fiscal activities through covert subsidies at below-cost pricing or government guarantees — often used as a substitute for explicit budgetary operations. Equally important is *transparency in fiscal reporting* through comprehensive, timely, frequent, and detailed government reporting (based on appropriate accounting standards), as mandated for compliance with fiscal rules in New Zealand, Brazil, and the EU²⁵.

6.2 *Budget process*

Over the past decade, an increasing number of countries, especially developed ones, have been preparing a multiyear macro-budgetary framework as part of the annual budget exercise. Although procedures (in terms of the degree of detail, realism of underlying macroeconomic forecasts and policy assumptions, etc.) tend to vary among countries, such

²³ See Kopits and Craig (1998), which forms the basis of the International Monetary Fund's Code of Good Practices in Fiscal Transparency.

²⁴ Much like in New Zealand (though without a balanced-budget rule) Australia's Charter of Budget Honesty Act 1998 requires the national authorities to publish: fiscal strategy statements; annual reports on budget and fiscal outlook (including mid-year reports), and final budget outcome; intergenerational reports; and pre-election economic and fiscal outlook reports.

²⁵ This is illustrated, for example, by the requirements under EMU to follow accrual-based accounting; to classify privatization receipts as financing in the calculation of the budget balance; to measure debt on a gross basis; and to expand coverage to the general government.

a medium-term process is an important prerequisite for a well-informed policy debate²⁶.

In particular, a rolling multiyear macro-budgetary process is an essential ingredient of effective fiscal rules, since it alerts the authorities and financial markets alike as to the policy adjustments or reform measures that may be necessary for compliance with the rule. More generally, it disciplines policymakers and ensures that they are accountable for adhering to budget targets. For these reasons, the preparation of medium-term budget forecasts is an integral part of fiscal policy rules and of associated reporting requirements in Argentina, Brazil, New Zealand, Peru, and EU members.

In addition, to ensure compliance in the near term, it is useful to establish a mechanism to enforce a mid-course correction for unanticipated deviations from target, unless they stem from cyclical fluctuations covered by escape clauses or are offset with recourse to a contingency fund. Revenue shortfalls or expenditure overruns that are generated by the executive or legislative branches would have to be met with automatic measures specified to offset the budgetary effect of the deviation (Brazil).

6.3 *Statutes, surveillance, and sanctions*

Largely dictated by judicial precedent or tradition, the statutory basis of fiscal policy rules differs from country to country. In general, the rules are enshrined in a law or in the constitution, and in rare cases they are contained in an administrative or policy guideline. If the rules affect a group of countries (as in a currency union), they are prescribed as an international treaty obligation (Table 1).

Another key institutional element is the authority responsible for the surveillance and enforcement of the rules, as well as of the associated transparency requirements. In most cases, this responsibility is exercised by the audit office that reports to the legislature, while ultimate arbitration and judgement usually rests with the courts. The question remains, however, as to the technical competence of these entities in assessing compliance with the rules (including accounting procedures, multiyear framework, etc.). For example, in Peru, the central bank provides some

²⁶ For an overview of multiyear budgets and fiscal targets in OECD countries, see OECD (1995).

technical support for this purpose. Under a more comprehensive approach, in the EU, the Council of Ministers responsible for Economy and Finance (ECOFIN) exercises the surveillance authority, with the support of the Commission and with specialized monitoring (of compliance with accounting standards) by Eurostat.

In a related matter, it is necessary to determine the nature and the extent of sanctions for noncompliance with the rules. At the national level, sanctions usually consist of loss in reputation or adverse judicial decision—in some countries, including penalties borne by the responsible elected or appointed officials. However, in federal systems, financial sanctions are levied on the delinquent government (noninterest-earning deposits under the EMU or the CFA franc zone, outright fines in Canada and Colombia, suspension of transfers in Brazil) or personal sanctions are imposed on chief financial officials (criminal proceedings in Brazil, salary cuts for cabinet members in a Canadian province).

6.4 *Preconditions and convergence*

From the very outset, successful implementation of fiscal policy rules is predicated on three preconditions. The first is a *concerted outreach campaign*, including education and media coverage—which may take a couple of years—to generate sufficient public understanding of the need for rules and eventually support for their implementation (Argentina, Brazil, New Zealand, EU). Second, this campaign must be accompanied by a political debate that will lead to a *broad legislative consensus* for the introduction of fiscal policy rules. Such consensus has been fundamental particularly where fiscal rules need passage of a constitutional amendment (Germany, Switzerland, and U.S.). Third, it is necessary to map out carefully a *convergence path*. This, in essence, calls for an initial medium-term adjustment program (Argentina, New Zealand, Peru, Switzerland, EU) that includes a preannounced path for key performance indicators (overall balance, current balance, etc.) in the run-up to the effective date of implementation²⁷. The corresponding annual budgets are then bound by the preannounced values. The convergence path must provide, insofar as

²⁷ In the EU compliance with the EMU deficit reference value was to be achieved over a five-year period (ending in 1997) albeit without specifying the profile of the convergence. In Argentina and Peru, declining annual budget deficit limits have been specified in the fiscal responsibility laws, over a three- and two-year period, respectively, prior to full compliance with the rule. By contrast, in the Brazilian legislation, the rule entered into effect immediately following enactment.

possible, for the explicit treatment of deviations from these values in the event of exogenous shocks during that period²⁸. Overall, adequate preparation and convergence are likely to be more important in the implementation of fiscal rules than of monetary rules.

These preconditions, to be met in the first place with respect to fiscal rules at the central level, should be accompanied or followed by a similar effort at the subnational level. Overall, the introduction of fiscal rules is greatly facilitated by progress in a number of areas that are equally relevant for effective discretionary fiscal management. Indeed, transparency in institutional arrangements and in accounting and reporting requirements should be expedited, even without legislative action on rules. Of course, these steps need to be followed up with further technical work and an active public dialogue at all levels.

Finally, in most countries an important prerequisite for successful implementation of fiscal rules is the phase-in of structural reforms that ensure sustainability of the rules—in the face of fragility in the financial system, rigidities in the public sector employment, demographic pressures, or regional imbalances. These reform measures often encompass a number of areas such as intergovernmental fiscal relations, tax structure, and public pensions²⁹.

7. Concluding remarks

With the primary objective of conferring credibility on macroeconomic policies, while correcting the public sector deficit bias and containing public indebtedness, an increasing number of advanced and emerging market economies have adopted various forms of fiscal rules. In contrast to previous types of fiscal rules, which were characterized by ambiguities and by overall lack of transparency, recently introduced rules have the potential of serving as a useful depoliticized policy framework. However, an examination of the arguments for and against fiscal rules, as well as the accumulated experience, confirms that rules are by no means a universal panacea.

²⁸ For an analysis of the importance of starting with a strong initial budgetary position, with simulations for EMU, see Eichengreen and Wyplosz (1998).

²⁹ See Kopits (1997) on the need for social security reform for compliance with EMU fiscal reference values.

To conclude, three broad lessons emerge. First, governments with a strong reputation of fiscal prudence do not need to be constrained by rules. Second, in countries where such a reputation is lacking, fiscal rules can provide a useful policy framework and, over time, contribute to stability and growth. Third, to enhance their usefulness, fiscal rules need to be well designed at national and subnational levels of government, combining simplicity, flexibility, and growth-oriented criteria; furthermore, they must be implemented in a transparent manner, with the support of an appropriate institutional infrastructure (especially as regards the budgetary process and surveillance mechanism), and following careful preparation and convergence.

Table 1**Selected countries: Summary of fiscal policy rules¹**

Rule/ Country	Effective Date	Coverage ²	Basic Rules ³	Escape Clause ³	Additional Rule ³	Statute ⁴	Sanction ⁵
Budget rule							
Argentina	2000	NG	OB/DL	CF	EL	L	J
Brazil	2001	NG, SG	CB		WL	L	J
Canada	various	SG	CB			L	J
EU members	1997	GG	OB/DL	MY		T	F
Germany	1969 ⁶	NG, SG	CB			C	J
New Zealand	1994	GG	PB	MY		L	R
Peru	2000	NG	OB/DL	CF	EL	L	J
Switzerland	various	SG	CB			C	J
United States	various	SG	CB	CF		C,	J
Debt rule							
Brazil	2001	NG, SG	SL			L	J
Colombia	1997	SG	PL			L	J
EU members	1997	GG	PL			T	J
New Zealand	1994	GG	SL			L	R

- 1) Excluding prohibition or limits on financing from specific sources.
- 2) General government (GG), national (central, federal) government (NG) or subnational (including local) government (SG).
- 3) Budget rules consist of overall balance (OB), operating balance (PB), or current balance (CB), subject to a prescribed limit on deficit (DL) as a proportion of GDP, applied on an annual basis, except if specified on a multiyear (MY) basis. Also, a contingency fund (CF) is provided in some cases. Additional rules consist of limits on primary expenditure (EL) or wage bill (WL). Debt rules are specified as a limit for a given year (SL) or permanently (PL), as a proportion of GDP or of government revenue.
- 4) Constitution (C), legal provision (L), or international treaty (T).
- 5) Sanctions for noncompliance: reputational (R), judicial (J), or financial (F).
- 6) The origins of the present rule can be traced to the Constitution of 1871, subject to modifications in 1919, 1949, and 1969.

ANNEX

SIMPLE ARITHMETIC OF FISCAL RULES

A fiscal policy rule can be specified in terms of a gradual reduction in the public sector debt to (or maintenance at) a prudent level or ratio to GDP. At the same time, this objective may be sufficiently flexible to accommodate the effect of automatic stabilizers.

The intertemporal determination of public debt can be expressed as:

$$d_t = [(1 + i)/(1 + g)] d_{t-1} - b_t$$

where (as a proportion of GDP, unless otherwise indicated):

d = stock of public sector debt
 i = average nominal interest rate on public debt
 g = nominal GDP growth rate
 b = primary budget surplus.

In a highly indebted country, the authorities will target:

$$d_{t+n}^* < d_t$$

which is to be met within n years, with a *minimum* annual reduction of x in the debt ratio, by means of an operational rule expressed in terms of the structural primary surplus:

$$b_t^* = (i - g) d_{t-1} + x \quad (1)$$

Further, the operational target is defined in reference to trend growth:

$$b_t^* \equiv r_t (1 + \alpha GAP_t) - c_t (1 - \beta GAP_t) - k_t$$

where:

r = government revenue
 c = primary current expenditure
 k = capital expenditure
 α = revenue elasticity with respect to GAP
 β = expenditure elasticity with respect to GAP
 GAP = difference between trend GDP and actual GDP.

Therefore,

$$b_t < b_t^* \text{ is allowed when } GAP_t > 0$$

and

$$b_t \geq b_t^* \text{ is required when } GAP_t < 0.$$

Compliance with rule (1) may be accompanied by variations in the debt ratio that reflect deviations from trend growth rate: the debt ratio falls (increases) with positive (negative) deviations and remains unchanged when the economy is on the trend growth path.

Rule (1) implies that if the targeted reduction in the debt ratio is set equal to the growth rate, $x = gd_{t-1}$, then the target primary surplus becomes

$$b_t^* = id_{t-1} \quad (2)$$

which implies structural *overall balance*. In the event, the balanced-budget rule (2) leads to a fall in the debt ratio equivalent to the growth rate.

As an alternative, of particular relevance for a country in need of infrastructure expenditure with a high expected social rate of return, the target may be reset according to the golden rule, requiring structural *current balance*,

$$b_t^* + k_t = id_{t-1} \quad (3)$$

Rule (3) should be, of course, easier to meet than either (1) or (2), though it still results in a fall in the debt ratio to the extent that $k_t < gd_{t-1}$.

However, a preferable approach would be to redefine the golden rule in terms of an *operating balance* requirement (i.e., equivalence between current revenue and current expenditure, including depreciation allowances δ), following accrual-based accounting,

$$b_t^* + k_t - \delta_t = id_{t-1} \quad (4)$$

In addition, the balanced-budget rule may be supplemented with an expenditure limit, set on primary spending or a major component thereof, such as the wage bill. To safeguard it from cyclical fluctuations in output or prices, this limit can be set in proportion to trend GDP.

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MANAGING PUBLIC EXPENDITURE: SOME EMERGING POLICY ISSUES AND A FRAMEWORK FOR ANALYSIS

*Paul Atkinson and Paul van den Noord**

1. Introduction

Most OECD countries have experienced improvements in overall fiscal positions in recent years. In terms of the general government finance balance, the OECD area as a whole has achieved a surplus in 2000 for the first time since 1969, which is projected to be maintained in 2001-02 (see *Economic Outlook* 68, December 2000). As a result, there has been a widespread tendency to reduce taxes in many countries, including in Europe, and there are also signs that restraint in public expenditure is being relaxed. At this stage these trends can be easily accommodated without seriously weakening underlying fiscal positions in many countries, as potential economic growth is considered to have picked up and interest rates are low. However, uncertainty about the true underlying strength of fiscal positions remains, as the surprisingly strong revenue growth in recent years may incorporate a larger cyclical component (and a correspondingly smaller structural component) than assumed¹. Therefore, while tax reductions are welcome in view of the scope they provide for improving incentive structures in the economy, in a longer-term perspective, with population ageing, public expenditure restraint to match these tax cuts is called for.

Obviously, in a fiscal surplus environment expenditure restraint is a delicate issue and not easily achieved. After a relatively long episode of fiscal rigour, pent-up demand for public goods and services in many countries may result into more calls for increased government spending. With fiscal positions strong, these calls may be met without a sufficiently careful trade-off between alternatives or without a sufficient evaluation of

* OECD. This paper is based on documentation originally prepared for the semi-annual meeting of Working Party No. 1 of the OECD's Economic Policy Committee on 16 and 17 October 2000. However, the authors are writing in a personal capacity and it does not necessarily reflect the view of the Organisation or its Member countries. They are indebted to Thomas Liebig for his contribution, to Jon Blöndal and several colleagues in the Economics Department for comments and to Anne Eggimann and Chantal Nicq for technical assistance.

¹ See Van den Noord (2000).

the possible consequences (economic, social, environmental or other) of spending choices. To the extent an assessment of such choices involves normative judgements, economic analysis has little to say. However, where there is scope for a given set of policy objectives to be achieved in more cost-effective ways, there is a role for economic analysis. Public expenditure is often examined in three dimensions. The first dimension refers to the macroeconomic costs of public expenditure, which include the economic distortions stemming from the tax burden and fiscal sustainability risks associated with a growing debt burden. The second dimension refers to allocative efficiency, or the outcomes achieved for a marginal unit of public expenditure, and the third one to technical efficiency, or the resource inputs for a marginal unit of output of public goods and services.

The purpose of this paper is to highlight the main policy issues related to public expenditure in OECD countries and to provide an analytical framework for its assessment. After a brief review of public expenditure developments in Section 2, Section 3 discusses the three-pronged analytical concept referred to above. Section 4 examines the various policy options that might be considered and that have been experimented with in some countries with a view to raising the performance of public expenditure. Section 5 concludes with an inventory of assessment criteria that might serve to facilitate further analysis for individual countries.

2. Trends in public expenditure and forces shaping them

This section identifies recent trends in public expenditure in aggregate and by economic or functional category, and highlights their distinguishing features, as well as the factors that have shaped these trends and that are likely to operate in the future². These factors include demographics, macroeconomic conditions and policy requirements, regulatory reform, the design of entitlement programmes, income effects and cost developments.

² For a review covering a longer time span, see Tanzi and Schuknecht (2000).

2.1 Trends in general government expenditure

Although institutional arrangements and the boundaries of the public sector vary both over time and widely across countries, national accounts data for the general government provide a reasonable basis for examining the main trends in public expenditure on a cross-country basis. The totals, as well as a breakdown by economic category for most OECD countries since 1965, are reported in Figure 1, Table 1 and Table 2. A more detailed breakdown can be found in the Annex. The main features of these trends are:

- Total spending as a share of GDP rose rapidly nearly everywhere until the early 1980s. Since then most countries have given greater weight to expenditure restraint, often in the context of medium-term fiscal strategies, and growth of spending generally slowed. Since the early 1990s most countries, with Japan being the most notable exception, have achieved reductions to levels below those of the early 1980s.
- Government spending displays a clear counter-cyclical pattern in most OECD countries, rising sharply at the time of recessions around 1975, 1982 and the early 1990s. Given that each successive cyclical spending peak has exceeded previous peaks it is probably too early to be certain that the long-term upward spending trend has been broken. The test will come during a future downturn.
- There are marked differences in spending levels across major OECD regions, and these differences have changed substantially over time. In 1965, spending in the United States was around 26 per cent of GDP, just below the OECD average, some 7 percentage points higher than in Japan and some 7 percentage points lower than in the euro area. During the 35 years since then, the rise in spending in the United States, around 4 percentage points, has been far less than in the euro area (12 percentage points) and in Japan (19 percentage points). The result is that it is now Japan where spending, at 38 per cent of GDP, is close to the OECD average (37 per cent of GDP), while in the United States it is some 7 percentage points below average, and in the euro area it is nearly 9 percentage points above average.
- The major factor that has put upward pressure on spending over this period in nearly all countries has been the establishment and expansion

Figure 1

**Trends in general government total outlays
by economic category
(percent of GDP)**

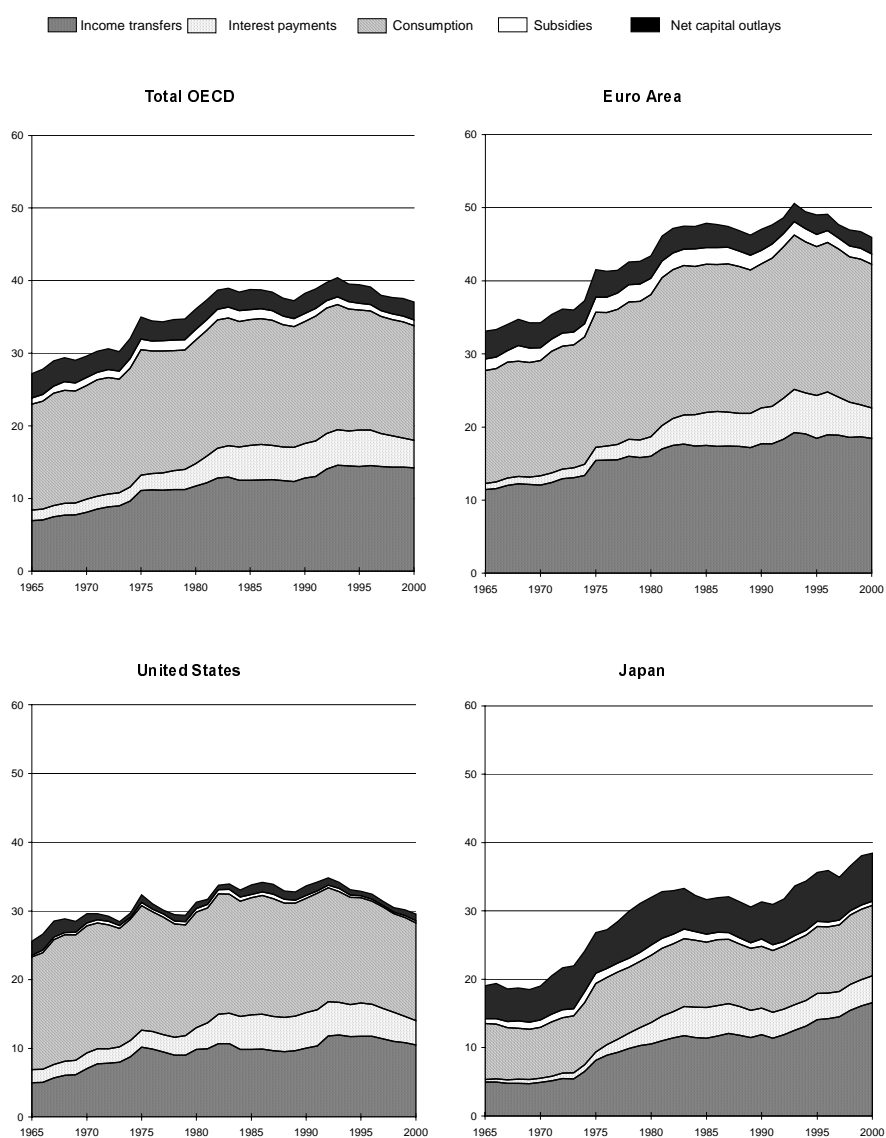


Table 1

General government outlays, by country
(percent of GDP)

	1965	1970	1975	1980	1985	1990	1995	2000 ¹
Australia	24.6	25.2	31.3	32.3	37.8	33.0	35.4	31.4
Austria	36.6	38.0	44.4	47.2	50.1	48.5	52.4	48.8
Belgium	35.0	39.7	47.6	53.4	57.3	50.8	50.3	46.7
Canada	27.8	33.8	38.9	39.1	45.4	46.0	45.3	37.8
Denmark ²	31.8	40.1	47.1	55.0	58.0	53.6	56.6	51.3
Finland	30.3	29.7	37.0	37.1	42.3	44.4	54.3	44.8
France	37.6	37.6	42.3	45.4	51.9	49.6	53.6	51.2
Germany	35.3	37.2	47.1	46.5	45.6	43.8	46.3	43.0
Greece	22.0	23.3	27.1	29.6	42.3	47.8	46.6	43.7
Ireland	36.0	37.7	40.7	47.6	50.5	39.5	37.6	27.7
Italy	32.8	32.7	41.0	41.8	50.6	53.1	52.3	46.7
Japan	19.0	19.0	26.8	32.0	31.6	31.3	35.6	38.2
Korea	14.5	14.8	16.9	19.2	17.6	18.3	19.3	23.4
Mexico	..	..	..	..	..	..	21.4	..
Netherlands	34.7	37.0	45.7	50.9	51.9	49.4	47.7	41.5
Norway	29.1	34.9	39.8	43.9	41.5	49.7	47.6	40.6
Portugal ²	18.1	18.0	25.2	28.1	42.9	44.2	41.2	42.1
Spain	19.5	21.7	24.1	31.3	39.4	41.4	44.0	38.5
Sweden	33.5	41.7	47.3	56.9	59.9	55.8	62.1	53.9
United Kingdom ²	33.5	36.7	44.4	43.0	44.0	41.9	44.4	38.4
United States	25.6	29.6	32.3	31.3	33.8	33.6	32.9	29.3
Euro area	33.1	33.9	40.9	43.0	47.2	46.3	49.1	45.1
OECD	26.9	29.2	34.4	35.5	38.1	38.0	39.4	36.5

1. Estimates.

2. Prior to 1988 in the case of Denmark, 1995 for Portugal and 1987 for the United Kingdom data are backward extrapolations based on earlier National Accounts series.

Source: OECD Economic Outlook 68, December 2000, OECD National Accounts and OECD calculations.

Table 2. Estimated general government outlays by economic category for the year 2000
(*percent of GDP*)

	Income transfers	Subsidies	Interest payments	Consumption	Net capital outlays ¹	Total outlays
Australia	8.3	1.2	2.0	18.5	1.4	31.4
Austria	18.3	2.5	3.5	19.4	5.1	48.8
Belgium	14.4	1.5	6.7	21.0	3.1	46.7
Canada	10.9	1.1	7.4	18.4	0.0	37.8
Denmark	17.2	2.3	4.5	25.3	2.0	51.3
Finland	12.6	1.5	3.1	20.8	6.7	44.8
France	18.1	1.3	3.3	23.4	5.1	51.2
Germany	18.6	1.7	3.4	18.8	0.4	43.0
Greece	16.1	0.2	7.2	15.0	5.2	43.7
Ireland	9.7	0.7	2.2	11.8	3.2	27.7
Italy	17.3	1.2	6.5	17.9	3.7	46.7
Japan	15.7	0.6	4.0	10.1	7.8	38.2
Korea	3.3	0.3	1.6	9.7	8.6	23.4
Netherlands	11.8	1.6	3.9	22.6	1.5	41.5
Norway	13.7	2.5	1.6	18.8	4.1	40.6
Portugal	12.5	1.2	3.2	21.0	4.2	42.1
Spain	12.4	1.0	3.6	16.9	4.6	38.5
Sweden	18.3	1.8	4.1	26.5	3.2	53.9
United Kingdom	13.1	0.5	2.7	18.3	3.8	38.4
United States	10.5	0.2	3.6	14.1	0.9	29.3
Euro area	16.7	1.4	4.2	19.7	3.0	45.1
OECD	12.8	0.8	3.8	15.7	3.4	36.5

1. Net fixed investment plus net capital transfers.

Source: OECD Analytical Database figures underlying OECD Economic Outlook 68, December 2000.

of programmes and provision of services in the social policy domain (public pensions, income support, health care, education and other public services)³. The income support element of these entitlements is reflected in a persistent rise in income transfer payments until the mid-1990s. While these payments are no longer rising at the area-wide level, they have not fallen much and have made little contribution to the overall spending decline since the early 1990s.

- A second factor that contributed importantly to upward pressure on spending until the mid-1990s was debt interest. This reflected a combination of rising public indebtedness, as large and sustained budget deficits became common after the first oil price shock in 1974, and rising interest rates. As interest rates have declined and budget positions have improved during the 1990s, these forces have reversed and debt interest payments have declined, accounting for half of the overall decline in spending at the area-wide level since 1995⁴.
- Other major categories of spending, i.e. subsidies, government consumption and net government capital outlays, have displayed few general patterns and little overall trend. Net capital outlays and subsidies have made modest contributions to the recent declines in total spending in many countries (capital spending in Japan is the major exception, although even there net capital outlays are now only at their 1980 level as a share of GDP). While only a few countries have significantly reduced government consumption (the United States, Italy and, especially, Canada stand out during the past decade), such spending has not been a source of significant pressure in most countries since the trend toward spending restraint began in the early 1980s.

Upward pressure on spending is likely to re-emerge in the decades ahead. The major force behind this pressure would be the ageing of populations and consequent demands this implies on social spending, notably on pensions, health care and associated personal services. Other forces may include the need to restore spending in areas where restraint

³ See for example Oxley and Martin (1991), MacFarlan and Oxley (1996) and OECD (1998a).

⁴ It should be noted that recorded data overstate the importance of debt interest payments because the part that reflects the inflation compensation component in nominal interest rates has a counterpart in the erosion of the real value of outstanding debt, *i.e.* an inflation tax, which is never recorded in the budgetary accounts. This was significant when inflation was high, but at this stage, with inflation low in most countries, the bulk of interest payments imply a real burden on taxpayers.

has been applied and could prove to have gone too far, and the likelihood of rising interest rates in countries where these have fallen to low levels but public indebtedness remains high.

2.2 *Breaking down public expenditure by function*

For policy purposes it is important to focus on expenditures in terms of their functions, each of which may involve a mix of economic categories, since measures to affect spending must be justified in terms of their concrete purpose. The breakdown in Table 3 attempts to group government spending in line with basic concepts of public economics. Four major types of government functions which call for expenditure (over and above debt servicing, which is obligatory) are distinguished, each referring to different cases where markets and prices will fail to result in efficient outcomes, and therefore call for government intervention⁵:

- *Public goods and services.* This category comprises the provision of essential “pure” public goods and services that cannot be rationed by the price mechanism and therefore would not be supplied in efficient amounts if markets were used to make them available. Examples are national defence and general public services such as administration, legislation and regulation.
- *Merit goods and services.* These are public goods that in principle could be (and in most countries to some extent are) made available through markets. In many cases, government provision of such goods and services is justified because of a conviction that they would otherwise be provided in less than the efficient amount, because a significant number of consumers lack the required purchasing power, while externalities give these goods and services a public goods element. For example, government provision of education is common because citizens may ignore the social return of human capital investment, or are unable to fund it. Usually informational asymmetry is mentioned as an important additional economic motive for the government to be engaged in the delivery or provision of merit goods and services. These asymmetries limit the ability of the consumer to identify the quality of the goods and services fully and therefore distort

⁵ This breakdown has been introduced by Oxley and Martin (1991).

prices and the quantities delivered. Health care is an important example in this regard.

- *Economic services.* This refers to the provision or co-funding of private goods or services by the government. Intervention has often been felt to be desirable in markets for goods and services that are prone to natural monopolies, where externalities are judged to result in inefficient supply if provision is left to the market, or where particular groups of providers are felt to warrant assistance. Prominent examples include public utilities (where entry barriers are associated with the sunk cost of distribution networks) and financial support for specific activities such as research and development, small and medium-sized enterprises and agriculture. It should be noted that where these services are provided by public enterprises their cost is not consolidated with the general government accounts. Hence their operations will only be reflected in public expenditure to the extent that the government subsidises them.
- *Social transfers.* These are transfers that provide support for income and living standards. Beneficiaries may include those whose market income is low or has declined sharply, or who face exceptional expenses due to old age, disability, sickness, unemployment, etc.⁶.

Unfortunately, the functional breakdown in Table 3 covers a narrower range of countries and a shorter period than the breakdown by economic categories due to data constraints. In particular, the series only start in 1980 and, for most countries, the latest year for which data are available is 1995, due to problems associated with the adoption of the new national accounting standards, SNA93 and ESA95. Moreover, as the data are drawn from a range of sources aside from the national accounts, they are not always comparable across countries. Nevertheless, a few broad patterns emerge from Table 3. First, the share of “pure” public goods in GDP has remained fairly stable in most countries in the sample during both the 1980s and the first half of the 1990s. Major exceptions are the United Kingdom, where the expenditure share of public goods sharply declined during the 1980s, and the United States, where a marked drop in

⁶ Obviously, this functional category largely overlaps with the economic category of income transfers. However, there are differences; the latter category includes income transfers to other countries (for example contributions to international institutions and development aid), whereas the former includes both cash transfers and imputed transfers in kind.

defence spending after the end of the cold war led to a fall in public goods expenditure in the 1990s. In most countries the share of economic services in GDP has remained broadly constant as well, although significant falls were recorded in Japan and Norway in the 1980s and in Germany, Italy, the United Kingdom and Australia in the 1990s. By contrast, the main spending hikes have been registered in the social policy area (merit goods and social transfers), both in the 1980s and 1990s.

Although functional spending patterns have thus been subject to change in the past two decades, the overall picture has remained that in those countries with large amounts of government spending relative to GDP, much of that spending is on social transfer and merit goods (Figure 2). Most European countries are in the upper range of total expenditures, as well as merit goods and social transfer expenditures, whereas the United States, Japan, Australia, Korea and New Zealand are in the lower range. On average public spending on social transfers and merit goods in the countries in the sample in 1995 amounted to nearly 30 per cent of their GDP. Moreover, the range from 7½ per cent of GDP in Korea to nearly 40 per cent of GDP in Sweden was wide (but see below for a comparison which includes private spending). Meanwhile, public goods on average represented around 7 per cent of GDP in 1995, with the Netherlands, France and Spain being at the upper end of the scale. Economic services spending is relatively small and varies little across countries.

2.3 Some measurement issues: the limits to general government data

Notwithstanding the advantages of general government data drawn from national accounts in terms of availability and cross-country comparability, classification and measurement issues are likely to make it necessary to draw on other data sources. Institutional arrangements and the borders of the public sector do not always correspond well to the general government. In particular, financial relationships with state-owned enterprises are an important element of public finances in some countries. Moreover, the assessment of policies that motivate government spending may not be possible without reference to any private spending that supplements or accompanies it. Two issues stand out.

Table 3
Structure of government outlays by function
(percent of GDP¹)

	Total expenditure	Public goods			Merit goods				Income transfers							Economic services	Public debt interest	
		Total	Defence	General public services	Other functions	Total	Education	Health	Other social services	Total	Pensions	Disability	Sickness	Family cash benefits	Unemploy-ment			Housing and other benefits
Australia																		
1980	34.8	7.8	2.5	3.0	2.3	10.5	5.9	4.4	0.2	6.8	3.8	0.8	0.1	0.9	0.7	0.4	5.9	3.1
1990	36.4	8.1	2.0	2.9	3.2	10.4	4.3	5.3	0.8	7.8	3.2	1.2	0.2	1.3	1.4	0.6	6.4	3.7
1995	37.7	8.2	1.9	3.0	3.3	10.5	4.5	5.5	0.5	9.0	3.2	1.2	0.1	2.2	2.0	0.3	5.6	4.1
Austria																		
1990	48.3	3.9	1.0	2.9	0.0	11.0	5.2	5.2	0.6	17.9	12.3	1.7	0.2	2.1	1.2	0.4	3.1	4.0
1995	52.2	4.5	0.9	3.6	0.0	11.9	5.3	5.7	0.8	19.2	13.1	1.7	0.2	1.9	1.8	0.4	3.1	4.4
Canada																		
1980	39.6	4.0	1.6	2.4	0.0	10.5	5.0	5.4	0.1	8.1	3.1	0.7	0.0	0.7	1.6	2.0	2.6	5.4
1990	46.7	3.2	1.7	1.5	0.0	12.2	5.4	6.7	0.1	10.8	4.3	1.0	0.1	0.5	2.4	2.5	2.6	9.5
1995	46.3	2.9	1.4	1.5	0.0	12.3	5.8	6.5	0.0	11.5	4.8	1.0	0.1	0.8	1.8	3.1	2.4	9.6
Denmark																		
1980	55.6	7.4	2.5	4.1	0.8	17.8	7.7	5.7	4.5	16.8	6.0	1.9	2.0	1.1	5.3	0.4	6.0	3.9
1990	57.4	6.1	2.0	4.1	0.0	15.7	6.2	5.1	4.4	17.7	6.3	1.8	1.2	1.5	5.4	1.5	5.9	7.3
1995	59.9	6.0	1.7	4.3	0.0	16.5	6.5	5.1	4.9	20.8	7.4	2.2	0.6	1.9	6.3	2.3	5.6	6.4
Finland																		
1980	35.4	3.3	1.4	1.8	0.1	11.5	4.8	5.0	1.7	11.7	5.5	2.9	0.2	1.1	1.6	0.4	0.9	1.0
1990	44.4	3.4	1.4	1.9	0.1	15.2	6.4	6.4	2.5	15.9	7.4	3.3	0.6	1.9	2.1	0.6	1.0	1.4
1995	54.3	3.3	1.6	1.6	0.1	15.2	6.6	5.6	3.0	22.5	8.9	3.9	0.5	2.7	5.5	1.1	1.1	4.0
France																		
1990	50.2	10.1	3.1	3.9	3.1	12.6	5.1	6.5	1.0	18.7	10.9	1.5	0.5	2.1	2.6	1.1	3.3	2.9
1993	55.4	9.2	2.9	4.5	1.8	14.1	5.9	7.1	1.1	20.9	12.0	1.5	0.6	2.2	3.3	1.3	3.1	3.5
Germany																		
1991	47.4	6.4	1.9	4.6	0.0	12.7	4.4	7.1	1.2	16.3	9.7	1.2	0.4	1.3	3.0	0.6	5.3	2.9
1995	49.7	5.2	1.4	3.9	0.0	13.9	4.5	8.0	1.3	18.2	10.7	1.4	0.5	1.2	3.7	0.8	4.5	3.7

1. Expenditure by function may not add up to total expenditure as these are derived from different sources. In particular, expenditures by function refers to fiscal years and total expenditure to calendar year; moreover, total expenditure is net of capital transfers received.

Source: OECD National Accounts, Social Expenditure Database, *Education at a Glance*, OECD; and *Survey of Current Business*.

Table 3 (continued)
Structure of government outlays by function
(percent of GDP¹)

	Total expenditure	Public goods			Merit goods			Income transfers						Economic services	Public debt interest				
		Total	Defence	General public services	Other functions	Total	Education	Health	Other social services	Total	Pensions	Disability	Sickness			Family cash benefits	Unemployment	Housing and other benefits	
Italy	1980	42.3	5.3	1.7	3.4	0.2	10.7	4.8	5.6	0.3	12.4	9.0	1.5	0.3	1.0	0.6	0.0	6.4	5.0
	1990	53.2	6.5	1.9	4.2	0.4	12.4	5.8	6.3	0.3	16.3	11.9	1.9	0.2	0.6	1.5	0.0	6.2	9.4
	1995	52.2	6.5	1.7	4.5	0.3	10.2	4.5	5.3	0.3	17.9	13.5	1.8	0.1	0.4	2.0	0.0	4.6	11.5
Japan	1980	32.8	4.1	0.9	3.3	0.0	9.9	4.9	4.6	0.4	9.6	4.0	0.4	0.1	0.2	0.0	2.4	6.0	3.2
	1990	31.6	4.4	0.9	3.4	0.0	8.9	3.7	4.7	0.5	10.0	5.0	0.5	0.1	0.2	0.3	2.2	4.3	3.9
	1995	36.5	4.5	0.9	3.6	0.0	10.1	3.8	5.6	0.6	12.8	6.2	0.5	0.1	0.2	0.5	2.9	5.3	3.8
Korea	1990	18.3	6.7	3.9	2.0	0.8	1.8	m	1.7	0.1	1.3	0.8	0.3	..	0.0	0.1	0.2	2.8	0.5
	1995	19.2	5.7	2.9	2.0	0.8	5.6	3.6	1.8	0.2	1.8	1.3	0.3	..	0.0	0.1	0.1	3.7	0.5
Netherlands	1980	57.6	12.6	2.9	9.7	..	13.0	6.3	5.7	1.1	20.6	7.6	4.4	3.3	2.0	2.3	1.0	6.1	3.8
	1990	54.9	11.7	2.4	9.2	..	11.4	4.6	5.8	1.0	21.7	8.4	4.6	2.9	1.2	3.4	1.2	6.3	5.9
	1995	52.2	11.6	1.8	9.8	..	12.0	4.6	6.5	1.0	19.2	7.5	3.9	1.9	1.0	4.0	1.0	6.4	5.9
New Zealand	1990	46.2	6.5	1.8	4.7	0.0	11.4	5.5	5.8	0.1	16.3	7.6	2.0	0.9	2.6	2.8	0.3	0.0	8.5
	1994	38.9	5.3	1.1	4.2	0.0	10.6	5.2	5.3	0.1	13.5	6.0	1.7	1.1	2.0	2.0	0.7	0.0	4.8
Norway	1980	45.0	4.9	2.6	2.2	0.1	13.5	5.9	5.9	1.7	10.9	5.1	1.9	1.5	1.3	0.4	0.8	9.1	3.1
	1990	50.6	6.2	3.1	3.0	0.2	17.1	6.4	6.5	4.2	15.8	6.3	2.8	1.6	1.9	2.1	1.1	7.6	3.6
	1993	52.0	6.3	2.6	3.1	0.6	18.4	6.8	6.6	5.1	15.9	6.2	2.7	1.2	2.3	2.4	1.1	7.2	2.8
Portugal	1990	45.0	8.0	2.3	2.7	3.1	8.8	4.3	4.2	0.3	9.5	5.3	1.9	0.6	0.7	1.0	0.1	5.7	8.1
	1995	49.9	8.3	2.2	2.0	4.1	10.6	5.4	4.7	0.5	12.1	7.3	1.7	0.6	0.7	1.7	0.1	6.3	6.3

1. Expenditure by function may not add up to total expenditure as these are derived from different sources. In particular, expenditures by function refers to fiscal years and total expenditure to calendar year; moreover, total expenditure is net of capital transfers received.

Source: OECD National Accounts, Social Expenditure Database, *Education at a Glance*, OECD; and *Survey of Current Business*.

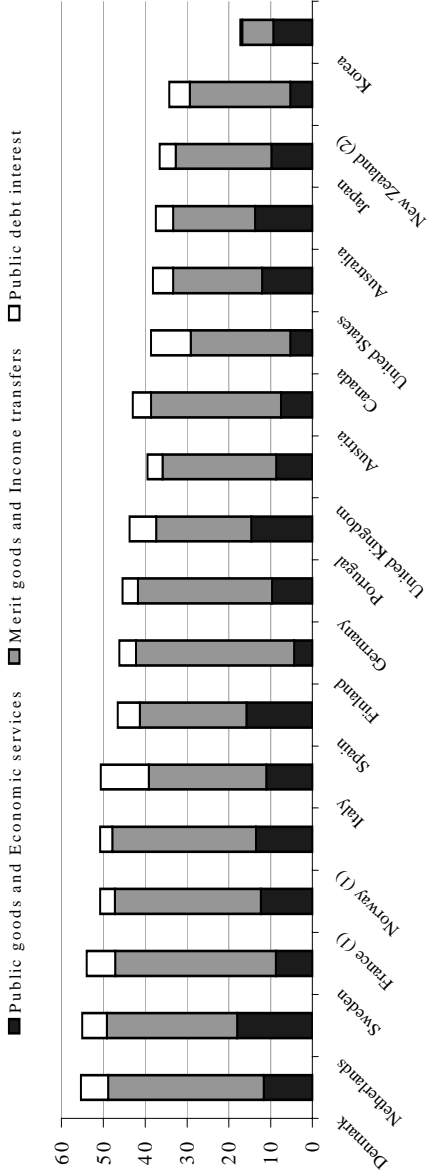
Table 3 (continued)
Structure of government outlays by function
(percent of GDP¹)

	Total expenditure	Public goods			Merit goods			Income transfers							Economic services	Public debt interest			
		Total	Defence	General public services	Other functions	Total	Education	Health	Other social services	Total	Pensions	Disability	Sickness	Family cash benefits			Unemployment	Housing and other benefits	
Spain	1990	41.8	8.6	1.5	1.7	5.3	9.7	4.2	5.2	0.3	13.4	7.8	1.3	0.9	0.2	3.0	0.2	5.5	3.8
	1995	45.2	9.9	1.4	1.8	6.7	10.6	4.8	5.5	0.3	14.9	8.9	1.3	1.1	0.3	3.2	0.2	5.9	5.2
Sweden	1980	60.0	6.9	3.3	2.9	0.7	20.0	7.6	8.4	3.9	16.5	7.2	2.1	2.3	1.7	1.6	1.5	na	3.9
	1990	59.1	5.6	2.6	2.9	0.1	18.8	6.8	7.6	4.4	19.2	7.9	2.8	2.5	2.2	2.6	1.2	2.8	4.9
United Kingdom	1995	64.5	5.4	2.3	3.0	0.1	17.2	6.6	5.7	4.9	21.2	8.6	2.7	1.1	2.0	4.5	2.1	3.4	6.8
United States	1980	45.3	8.1	5.0	1.9	1.3	10.8	4.6	5.1	1.1	12.8	7.1	1.1	0.3	1.8	1.7	1.0	4.0	4.7
	1990	41.4	6.5	4.1	1.9	0.5	10.2	4.3	5.0	0.9	13.7	7.1	1.8	0.4	1.6	1.3	1.5	4.1	3.4
	1995	43.6	5.4	3.2	1.9	0.2	11.5	4.6	5.7	1.2	15.6	7.3	2.8	0.2	1.9	1.3	2.1	3.3	3.6
	1980	32.5	10.6	7.1	2.5	1.0	9.7	5.3	4.0	0.5	9.3	6.3	0.9	0.3	0.5	0.9	0.5	3.7	3.2
	1990	34.9	10.9	7.0	2.8	1.0	10.8	5.3	5.2	0.3	8.5	6.2	0.8	0.3	0.2	0.7	0.4	3.1	5.1
	1995	34.3	9.2	5.2	2.9	1.0	11.9	5.0	6.5	0.4	9.4	6.5	1.0	0.3	0.3	0.6	0.6	2.8	4.8

1. Expenditure by function may not add up to total expenditure as these are derived from different sources. In particular, expenditures by function refers to fiscal years and total expenditure to calendar year; moreover, total expenditure is net of capital transfers received.

Source: OECD National Accounts, Social Expenditure Database, *Education at a Glance*, OECD; and *Survey of Current Business*.

Figure 2
Structure of government outlays by function, 1995
(percent of GDP)



1. Data are for 1993.
2. Data are for 1994.
Source: OECD National Accounts, Social Expenditure Database; *Education at a Glance*, OECD; and *Survey of Current Business*.

First, obtaining comparative data on public employment, an item which may importantly influence public spending, proves to be problematic. Given the range of employment statuses, activities in which the public sector is engaged as provider, and institutional arrangements for doing so within and across countries, not to mention the changes that have taken place over time, there are many obstacles to constructing a consistent data set. In particular, the new national accounts system (SNA93/ESA95) classifies employment by activity and not by employer, and does not (at least at this stage) allow large parts of public employment in sectors such as health and social work, education and other community social and personal services to be identified. The Public Management Service (PUMA) in OECD has devoted considerable effort to addressing these problems and has constructed a database for 21 countries on the basis of responses to a regular questionnaire. The figures reported in Table 4, which are in terms of full-time equivalents for all levels of government, *i.e.* the general government sector as defined in the national accounts but excluding social security administrations, indicate that a wide range exists across countries. Trends over time during the past decade have in most cases been either steady or slightly declining, suggesting that public employment restraint has made some contribution to the success most countries have had in holding down spending⁷.

Second, public expenditure may not be the only way to deliver certain services or to achieve particular objectives. Private spending may have a role to play and, if government intervention is felt to be warranted, a mix of regulatory arrangements, mandates and tax incentives may be used to encourage such spending. Social policy areas in particular are managed in ways that differ substantially across countries so that international comparisons of resources devoted to achieving policy objectives in these areas will be highly misleading if no account is taken of private spending. Furthermore, the extent to which social benefits are taxed varies across countries, distorting comparisons. The OECD has recently addressed these problems by estimating the amount of social expenditure covering social transfers (net of taxation of benefits) and merit good expenditures but excluding those on education, by the private sector in response to regulations, mandates and tax incentives (Table 5). Overall

⁷ PUMA has also on occasion collected data for a wider definition of the public sector, including state-owned enterprises (whose financial performance impinges on the government's overall financial position), but these are not maintained on a continuing basis.

the data suggest that while public social expenditure as a share of GDP, as reported in national accounts, varies widely across countries (in the range of 15 to 40 per cent) differences in total social expenditure, including policy-induced private expenditure, are much smaller (they range from 18 to 28 per cent)⁸.

3. Assessing public expenditure

The purpose of this section is to provide broad criteria for the assessment of public expenditure in OECD countries. Since government expenditure reflects collective choices that emerge from the political process and vary across countries, there will be limits to what economic analysis alone can provide. However, it should be possible to evaluate the economic consequences of the way these choices interact with institutional arrangements and other elements of the economic environment and to make judgements about the extent to which the apparent objectives which underlie these choices are in fact being achieved in a cost-effective way. This can be done at three levels *(i)* its macroeconomic consequences; *(ii)* the allocation of resources within the economy; and *(iii)* the technical or operational efficiency with which it is carried out.

3.1 The macroeconomic consequences

High or rising public expenditure raises two major issues from a macroeconomic perspective:

- First, it poses financing problems that make it difficult to ensure fiscal discipline and thus tends to make macroeconomic policy management difficult, depending on how well the processes of budget formulation and implementation operate. A lack of adequate planning and evaluation procedures incorporated in the formulation process, such as safeguards against the use of unrealistic economic assumptions, have often led countries to overestimate how much spending could be afforded. Insufficient controls at the implementation stage have had

⁸ These estimates also correct for the fact that in some countries (*e.g.* Germany) social transfers are not subject to taxation whereas in others they are. To make numbers comparable, tax payments by social security recipients have been netted out in the latter group of countries.

Table 4

Public employment as a percentage of total employment

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Australia	14.8	15.4	15.3	14.9	14.6	14.3	14.2	14.3	14.0	15.
Austria	10.6	10.5	10.6	10.8	11.0	11.0	11.0	10.1	10.0	..
Canada	20.3	21.1	21.4	21.1	20.4	19.8	19.3	18.5	17.9	17.
Czech Republic	..	..	..	..	13.8	14.6	14.7	..	..	..
Denmark	26.6	26.4	26.6	27.3	27.8	27.5	26.5	26.6	..	..
Finland	23.2	24.3	25.3	25.5	25.7	24.7	25.0	25.0	24.3	..
France	20.4	20.7	21.0	21.5	21.6	21.6	21.7	21.4	21.7	..
Germany	15.1	..	14.1	13.8	13.5	13.2	13.0	12.9	12.6	12.
Hungary	0.0	0.0	0.0	0.0	24.8	24.6	23.4	22.8	22.5	..
Iceland	14.6	15.2	15.4	15.6	..	..	..	..	..	..
Ireland	17.4	17.7	17.6	17.7	17.3	16.8	16.4	15.9	14.6	14.
Italy	17.3	17.2	17.5	18.0	17.5	17.5	17.3	17.0	..	..
Korea	4.5	4.6	4.7	4.7	4.6	4.4	4.5	4.4	4.5	..
Luxembourg	8.1	8.1	8.0	6.9	..	..	..	..	..	..
Netherlands	12.9	12.2	12.9	12.7	12.4	11.8	..	..	..	..
New Zealand	14.2	14.5	14.1	13.9	13.4	12.4	12.2	11.9	12.2	..
Portugal	0.0	11.9	15.1	15.0	14.8	15.2	15.3	15.5	15.2	..
Spain	14.0	14.3	14.9	15.6	16.0	16.2	16.0	15.7	..	..
Sweden	28.4	28.9	28.8	28.6	26.8	26.2	..	..	..	..
United Kingdom	16.1	16.2	15.9	14.0	12.5	11.6	10.9	10.4	10.2	10.
United States	14.9	15.2	15.2	15.1	15.0	14.9	14.8	14.4	14.4	..

Notes: Public employment in general covers all individuals paid by government funds at all levels of government, and corresponds to the general government excluding public enterprises and social security administrations.

Australia Excludes financial and trading government enterprises. Full-time + Part-time

Austria Excludes public corporations. Full-time Equivalent

Canada Does not include government business enterprises. Full-time + Part-time + Casual

Does not include First Nations and Inuits Government.

Czech Republic Full-time Equivalent

Denmark Full-time Equivalent

Finland Excluding state enterprises. Full-time + Part-time

France Excluding public operators of the Posts and telecommunication since 1991. Full-time Equivalent

Germany Includes military. This total does not match with the summation of the 3 levels (federal + Länder + municipalities), but this is the total sent by the country. The total may include the indirect public sector. Full-time + Part-time

Hungary Excludes military. Headcount

Ireland The public service comprises Civil Service, Garda Síochána (Police Force), Education Sector, Defence Forces, Health Sector, non-commercial State-sponsored Bodies and Local Authorities. Actual Members

Italy Post and telecommunication services have been excluded since 1994. Full-time Equivalent

Korea Provisional data.

Netherlands Data are low in comparison to other countries as there are many individuals working part-time. Full-time Equivalent

New Zealand Excludes public enterprises. Full-time Equivalent

Portugal Includes public and other employees in central administration and only public employees in Local and Regional administrations. Full-time + Part-time Excludes Social security. Before 1994, data do not include Regional autonomous administrations.

Spain Includes social security employment managed at the central level.

Sweden Full-time Equivalent

United Kingdom Excludes NHS Trusts and public corporations. Full-time Equivalent

United States Annual averages. Includes part-time and season workers. Actual Members

Source: OECD/PUMA PSPE- Public Sector Pay and Employment Database (2000).

Table 5

Net social expenditure by source¹, 1995
(per cent of GDP)

	Private				Memorandum item:
	Total ²	Net Public ³	Mandatory	Voluntary	Gross public social expenditure ⁴
Australia	21.6	18.7	0.3	2.7	20.3
Belgium	..	..	..	..	30.1
Canada	21.2	17.9	..	3.5	20.8
Denmark	24.4	23.6	0.3	0.5	37.6
Finland	25.7	25.1	0.0	0.7	35.7
Germany	27.7	25.9	1.0	0.8	30.4
Ireland	18.7	17.4	..	1.5	21.8
Italy	22.3	20.9	..	1.4	21.8
Netherlands	25.0	21.2	0.5	3.4	30.1
Norway	..	21.9	0.6	..	31.5
Sweden	27.0	25.4	0.2	1.4	36.4
United Kingdom	26.0	22.3	0.3	3.6	25.9
United States	24.5	17.5	0.5	7.8	17.1

1. Social expenditure covers: cash-benefits for old age, disability, occupational injury and disease and sickness; services for the elderly and disabled; survivors' pensions; family cash benefits; family services; active labour market programmes; unemployment benefits; health care expenditure; housing benefits.

2. The total is a consolidated figure and may be less than the sum of the components.

3. Calculated as gross public social expenditure less direct taxes and social security contributions levied on social transfers and benefit income claimed back through taxes on consumption, plus tax breaks for social purposes.

4. General government social expenditure (for definition, see note 1).

Source: Adema (2000).

similar effects. Another element is processes that work to encourage the reversal of any spending increases designed to mitigate cyclical downswings, either via automatic stabilisers or of a discretionary nature, once the cycle turns up. But it is also an issue of relationships between various government entities. These include both horizontal relationships, *i.e.* between finance ministries and sectoral, or spending, ministries and agencies, and vertical ones, *i.e.* between central and lower levels of government.

- Second, the disincentives and distortions created by the tax burden required to meet the government's financing needs may carry high economic cost. To some degree this can be seen as an issue of resource allocation and income distribution. But since the tax burden is largely driven by the overall level of government spending and often impinges on overall economic performance, it also has a macroeconomic dimension.

At this stage, the fiscal situation and outlook in most OECD countries is better than for many years, implying that financing expenditure without heavy recourse to borrowing has generally been achieved. This has been facilitated by the expenditure restraint that most countries have been able to exercise during the 1990s and contrasts with the persistent budgetary problems which emerged during the 1970s, at a time when public expenditure was rising rapidly. Nonetheless, tax burdens are now very high in many countries, especially in Europe, and have led to concerns about the fairness of their incidence, their impact on economic behaviour (particularly in labour markets) and the sustainability of potentially mobile tax bases. Importantly, public expenditure control will become more challenging now that fiscal positions are improving throughout the area. In a surplus environment political pressures could lead to uncoordinated tax cuts and spending increases, which might eliminate options of financing structural reforms or retiring debt. Indeed, countries with budget surpluses are already showing signs that fiscal management can be difficult in these situations. If government expenditure starts to rise from current levels, the tax implications and the associated distortions further down the road may prove very problematic, the more so since demands from spending and pressures on the revenue base may continue to increase in the future as populations in most OECD countries age.

Against this backdrop the assessment of the macroeconomic impact of public expenditure needs to consider the following questions:

- Are processes of evaluation and planning in place to ensure that public expenditure decisions are based on a realistic view of their cost and overall affordability? Do these processes work to encourage the reversal of spending increases to mitigate cyclical downturns, whether discretionary or arising from the operation of automatic stabilisers, once cyclical conditions improve?

- Is public expenditure sufficiently well controlled so that the implementation of budgetary plans is not frequently undermined by unpleasant “surprises” on the spending side?
- Is spending by lower levels of government either adequately overseen and controlled by the Finance Ministry or dependent on their ability to finance it without recourse to the central government?
- Is the tax burden needed to finance expenditure likely to be (1) acceptable in terms of its consequences for economic behaviour and (2) sustainable in terms of the ability to avoid the erosion of major tax bases?
- Do periods of buoyant revenues and strong fiscal positions encourage rises in expenditure that are difficult to reverse?

3.2 *Allocative efficiency*

Government spending is an important vehicle for implementing collective choices about resource allocation and income distribution that emerge from the political process. Several objectives behind decisions to intervene in the market economy and their rationale can be identified. These include the need to provide public goods, a view that merit goods should be made more widely available than would result without intervention, concern to influence income distribution in some way, environmental considerations, the desire to limit the exercise of monopoly power or to address other forms of market failure.

However, where government intervention of some kind is warranted, reliance does not necessarily have to fall exclusively on public expenditure, which should be reserved for cases in which it has advantages in terms of simplicity, transparency, fairness or cost-effectiveness. As noted earlier, intervention often involves a mix of expenditure, regulatory arrangements, mandates and tax incentives. In addition, the government engages in bilateral or tri-partite agreements and acts through the provision of information and moral suasion. Such instruments may, in turn, be reinforced by or replaced with self-regulatory codes of conduct and standards in the private sector⁹. For example, whereas in many countries

⁹ See for examples and case studies OECD (1997a) and OECD (1997b).

government agencies (often converted into state-owned enterprises) have been widely created to provide services that are prone to abuse of monopoly power or to ensure universal service, in others that objective has been pursued more through regulatory mandates or administrative guidance. Moreover, in some countries, notably the United States, regulatory mandates and tax incentives have been designed to prompt the private sector to provide social protection such as pensions and health care coverage in the government's place. The estimates described earlier (Table 5) suggest that, at least in the area of social protection, the degree to which public and private spending act as substitutes is substantial: while total, *i.e.* public and private, policy-induced social expenditure in Denmark, the Netherlands and the United States is essentially identical, at around 25 per cent of GDP, the private share ranges from less than 1 per cent of GDP in Denmark to 4 per cent in the Netherlands and more than 8 per cent in the United States.

Intervention is not always necessary or desirable and simply ensuring that private markets work well is often the best way to pursue objectives. Spending and other policy measures are too often undertaken without an adequate and objective assessment of their costs and impact¹⁰. In some cases this may reflect inadequate evaluation systems embedded in the policy formulation process. But it may also reflect the tendency for benefits of policy action to create significant political constituencies in their support while the costs -- in terms of, say, higher taxes, interest rates or regulatory compliance burdens -- are spread thinly over a large number of people without impinging enough on any to generate real opposition. Moreover, even if the balance of costs and benefits shifts over time as economic and social conditions change, beneficiaries may still be able to protect their interests through political action policies and programmes¹¹.

On the other hand, in assessing the mix of public expenditure, regulatory arrangements, mandates and tax incentives, it should be recognised that regulation and tax measures are not costless alternatives to public expenditure since these affect economic incentives and behaviour. Indeed, a risk associated with tightened spending control is that more of the policy agenda shifts onto off-budget mandates and other instruments

¹⁰ See Martin (2000).

¹¹ See Persson and Tabellini (2000) for a survey of normative theories of the determinants of public expenditure.

whose incidence and effects are difficult to identify and to assess. This shifting reliance away from spending risks reducing the transparency of the overall set of policy interventions. Tax incentive schemes are less transparent than expenditures and may give rise to tax planning activities, especially if the overall tax burden is high. Government regulations that are poorly designed impede innovation or create unnecessary barriers to trade, investment and innovation and may have considerable costs in terms of the capability of markets to adjust to changing circumstances.

Where public expenditure appears to be warranted as a way of achieving objectives, evidence needs to be sought of not only over-provision but also evidence of failure to deliver due to under-provision. Some forces which encourage over-provision in the form of programmes that are unnecessary or that fail to adapt to changing circumstances are noted above. But there are also reasons why public expenditure may be insufficient even in essential areas. The adoption of top-down cash limits or failure to prioritise in the face of fiscal austerity may have led to unintended rationing. In less mature market economies tax bases may not be sufficiently exploited, or may be underdeveloped, due to a large informal economy; the economy may have experienced a major financing crisis with important and long-lasting social effects; or it may be in transition from a centrally planned system. In some cases, improvements in the framework conditions in which the private sector operates, tax incentives, mandates or regulatory changes may be helpful. But in areas where the government has assumed responsibility for certain activities -- *e.g.* publicly-run education and health care, or public goods such as police protection and administration of justice -- there may be no alternative to an adequate level of public spending.

In view of these considerations the following questions are relevant for the assessment of allocational efficiency of public expenditure:

- Is government intervention warranted in all areas where public expenditure is taking place? Is there significant scope for increasing the role of the private sector?
- Where it is warranted, is the mix of public expenditure, regulation and tax incentives appropriate?
- Is a country's performance in achieving public policy goals such as an appropriate level and equitable distribution of income, health status,

school enrolment, quality of the environment and safety commensurate with the resources allocated to them across government functions and programmes?

- Are there domains of economic activity or social policy where performance is clearly below par, and is a lack of public expenditure at the root of this problem? If so, what is the reason for any under-funding and how can such problems be eased?

3.3 *Technical efficiency*

The discussion so far has focused on the extent to which public expenditure is consistent with satisfactory macroeconomic management and performance and whether its role has been properly identified. However, countries also have a clear interest in ensuring that public expenditure is “technically efficient”, *i.e.* avoids waste. While conceptually different from allocational efficiency, technical efficiency has important implications for many of the issues raised above: avoiding technical inefficiencies will free up available resources to help achieve public policy goals by promoting the efficient allocation of resources across programmes and items. At the same time, it will facilitate macroeconomic policy management by making expenditure easier to control. With fiscal discipline heightening, technical efficiency in the production of public goods and services has received growing attention among budget officials in OECD Member countries.

Unfortunately, there are many obstacles to achieving higher levels of operational efficiency. Particularly where bureaucratic structures are complex or responsibility for decisions is highly centralised, managers may lack the authority to take measures that would improve performance. In addition, entrenched work and management habits, rigid seniority-based pay scales and strong union power in the public service may operate to limit flexibility, for example to make the most cost-effective use of new technology. Furthermore, the incentives for managers in the public administration to enhance efficiency may be weak since efficiency gains risk leading to less, rather than more, resources being available to them or may not translate into improved pay or other advantages.

The following questions are relevant for the assessment of technical efficiency of public expenditure:

- What evidence is available on the technical efficiency of public spending? Is comparative information concerning technical efficiency (benchmarking) available and is it used as an input to policy changes?
- Can areas be identified where there is significant scope for efficiency gains?

4. Main areas of reform

This part of the paper sets out a number of broad areas in which reforms designed to improve the cost-effectiveness of public expenditure have been considered or implemented in several countries. It must be recognised that many policy initiatives are unlikely to be easily transferable across countries in view of differing political contexts. But countries' experience may offer a useful starting point for international benchmarking and peer reviews. The various reform areas considered here have been grouped under four main headings: (i) budgetary processes and control; (ii) fiscal relations between central and lower levels of government; (iii) market-based provision and other allocation mechanisms; and (iv) flexible incentive and control mechanisms.

4.1 Budgetary processes and control

Three main aspects of budgetary processes and control are being considered here: fiscal transparency, the adoption of medium term frameworks and fiscal rules, and fiscal risks of financial transactions and the wider public sector.

4.1.1 Fiscal transparency

A high level of transparency in budgetary matters -- involving accurate and objective information on how government money is used, the cost of government programmes and, to the extent possible, their benefits -- provides a basis for informed debate about budgetary policy among the public and within the government resources. By increasing the chances that sound policy options will be identified and strengthening political support for them, fiscal transparency is therefore likely to

encourage fiscal discipline and a more satisfactory allocation. Furthermore, it also improves the basis for households, business and financial market participants to make wise consumption, saving and investment decisions. To encourage transparency, the IMF has developed its *Code on Good Practices on Fiscal Transparency*, and the OECD's Working Party of Senior Budget Officials is now in the process of finalising a reference document to assist governments in making improvements, *OECD Best Practices for Budget Transparency* (See Box 1). Three OECD countries which have undertaken significant reforms in many aspects of their budgetary process and management systems -- the United Kingdom, Australia and New Zealand -- have published self-evaluation reports under the IMF Code¹². These reports, together with the guidance offered by the *OECD Best Practices* will be used as benchmarks in assessing practices in the country under review and in motivating proposals for improvement.

A number of countries have moved to increase the amount and quality of information they make widely available, facilitating better public analysis and debate. Fiscal policy statements have been introduced in some countries in order to prompt the legislature to discuss aggregate government finances (often in a medium-term framework, see below) prior to the presentation of the budget itself, while Annual Reports or Performance Reports that are separate from the Budget offer improved outcome and output information by reporting expected and actual performance. For example, "Value for money" reports like those prepared by the National Audit Office in the United Kingdom have an important role in increasing the transparency of public spending and enhancing parliamentary oversight of the budget process. Generational accounts, which typically show that older generations benefit at the expense of younger ones, were introduced in the United States in 1993, followed by Germany, New Zealand, Norway, Sweden and the United Kingdom. These provide important supplementary information, even if many of the assumptions which underpin them raise questions about their overall value. Finally, greater resources (e.g. in the form of supporting secretariats) are

¹² Greece has also completed a report and is expected to publish it soon.

Box 1. Best Practices on Fiscal Transparency

The IMF's *Code on Good Practices on Fiscal Transparency* is based on four principles:

- *Clarity of roles and responsibilities*: establishing clear boundaries between the public and private sectors; and within the public sector between fiscal, monetary and government business enterprise activities.
- *Public availability of information* -- i.e. a commitment to publish comprehensive financial information at clearly specified intervals.
- *Open budget preparation*, execution and reporting, according to published statistical and accounting standards for government reporting.
- *Independent assurances of integrity* -- e.g. through external audit and statistical independence.

The draft list of *OECD best practices* includes the following items:

- Governments should publish a pre-budget statement outlining the aggregate levels of revenues, expenditure, surplus or deficit and debt several months prior to the release of the government's budget proposal. The objective is to cast budget policy in a macroeconomic and medium-term setting, thereby establishing a top-down fiscal policy anchor.
- The budget should contain explicit detail on the economic assumptions used and statements of tax expenditures, financial liabilities and financial assets, non-financial assets, employee pension obligations and contingent liabilities. Several tracking and update reports should be available. These could include monthly out-turn reports and mid-year updates.
- The annual financial statements (or government accounts) serves as a compliance report for parliamentary and wider accountability purposes and should be certified by the auditor. Transparent financial statements should include information on the budgetary out-turn, debt structure and borrowing, commitments, contingent liabilities, trust moneys held by the government and accounting policies.

Table 6
Accounting systems in OECD countries' central governments

Full cash basis		Full accrual basis		Accrual basis except for capital expenditure		Both full cash basis and full accrual basis		Cash basis except for certain transactions	
Budgeting	Reporting	Budgeting	Reporting	Budgeting	Reporting	Budgeting	Reporting	Budgeting	Reporting
Austria Czech Rep.	Austria Czech Rep.	Australia New Zealand	Australia Greece	Canada ¹ Denmark ⁴	Canada Denmark ⁴	Italy	Italy	United States ² Sweden ³	Finland ³ France ⁶
France	Germany		New Zealand Sweden United States ⁷	Iceland	Iceland			Finland ³	Poland ⁵
Germany Greece	Hungary Ireland								
Hungary Ireland	Japan Korea								
Japan Korea	Mexico Netherlands								
Mexico Netherlands	Norway Portugal								
Norway Poland	Spain Switzerland								
Portugal ¹ Spain	Turkey United Kingdom								
Switzerland Turkey United Kingdom ¹									

1. Moving to full accrual budgeting.

2. Interest on government debt, certain civil service pension plans, loan and guarantee programmes are on an accrual basis.

3. Salaries and wages are on an accrual basis.

4. And certain other minor exceptions to full accruals.

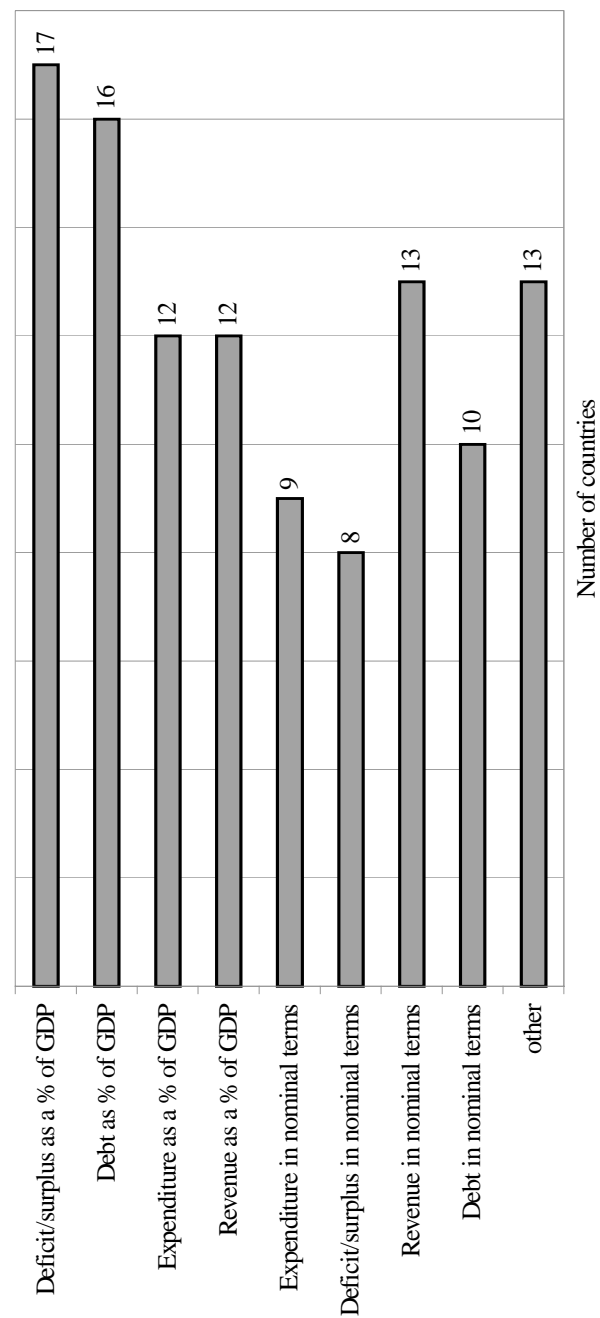
5. Civil service pensions are on an accrual basis.

6. Interest on government debt is on an accrual basis.

7. "Non-exchange revenue", most of which is taxes, is recognised on a modified cash basis.

Source: OECD, based on country submissions.

Figure 3
Number of OECD countries that spell out their medium-term fiscal objectives



Source: OECD, based on country submissions.

being devoted by the legislature to evaluation of the budget (e.g. as France, Italy, Mexico and Sweden; the United States has for many years devoted large resources in this area). Other aspects of transparency are the publication of rules on the granting of subsidies and transfers (e.g. as required by EU rules), and the disclosure of public procurement practices (e.g. as in the United Kingdom).

An important element of fiscal transparency is an accounting system that delivers as fair and accurate a picture, on a consistent basis at both budgeting and reporting stages, of the impact of the government's activities on its overall financial positions as is possible. This has led several countries -- Australia and New Zealand have moved furthest (Table 6) -- to make increased use of accrual accounting methods¹³. Accrual accounting recognises the financial implications of transactions when they occur, irrespective of when cash is paid or received. Traditional cash accounting, in contrast, can more easily lead to a misleading picture of commitments undertaken when payments can be accelerated or deferred. This makes it an unsatisfactory basis, at least by itself, for monitoring recent developments or for the assessment of long-term sustainability of public finances. Important differences include the recognition under accruals systems of (i) capital costs through charging for depreciation; (ii) accruing interest obligations on discounted or zero coupon debt instruments; and (iii) future commitments accrued under pay-as-you-go civil service pension plans.

4.1.2 Medium-term frameworks and fiscal rules

Many OECD member countries (Japan is an important exception) have adopted medium-term frameworks for aggregate government spending, usually covering three to five years, and support this with medium-term objectives for one or more fiscal variables (Figure 3). This development stems from the recognition that annual budgeting may exacerbate the natural short-term focus of political decision-makers and cause authorities to lose sight of future costs of decisions, the best

¹³ As budgetary management philosophy has shifted towards encouraging decentralisation of day-to-day decision-making, accrual accounting has also served as a management tool by providing a better basis for accountability than cash accounting. More is said about this in Part 4.3 below. Greater budget transparency therefore is likely to support improved technical efficiency in addition to its benefits in terms of fiscal discipline and allocative efficiency.

allocation mix and the appropriate timing of expenditures. Medium-term frameworks, moreover, aim to anchor annual expenditure appropriations in medium-term projections. They oblige governments to recognise the implications of current budgetary decisions for government finances in the future and to take account of changes in structural and demographic factors and rising government debt levels, as well as the evolving cyclical situation. At the same time, they limit inefficiencies that arise from annual appropriations for multi-year capital projects. To be successful in facilitating expenditure control and fiscal discipline, it is important that these frameworks be supported by systems for evaluating spending programmes objectively and they are carried out on the basis of realistic economic assumptions, as these are a major determinant of the overall “affordability” envelope.

In several countries rules have been adopted that automatically trigger sanctions when certain targets or ceilings set by the medium-term framework are breached. The best-known example is the Budget Enforcement Act (BEA) of 1990 in the United States, which formulates caps on spending which, once they have been accepted by elected officials, are enforced by requiring any extra spending to be offset by spending cuts without reference to the overall fiscal position. This is widely seen as having contributed significantly to improved fiscal discipline, although spending caps are proving more difficult to enforce now that surpluses are mounting. An earlier, and somewhat different, rules-based approach in the United States was incorporated in the Gramm-Rudman-Hollings (GRH) laws of 1985 and 1987. These specified deficit targets, rather than expenditure targets, which were to be enforced by “sequestration” (uniform percentage reductions) in selected spending programmes. GRH was ultimately discredited because the objective of declining deficits was repeatedly deferred, as it was not reinforced by agreements about where the necessary adjustments should take place and the violations of deficits targets were substantially influenced by factors outside the control or influence of the political process (*e.g.* recession). As a result sequesters required to eliminate deficit increases were very large and politically unfeasible. Another example of a rules-based fiscal framework, also formulated in terms of budget balances and not expenditure alone, is the Stability and Growth Pact (SGP) in the European Union. This has a distinguishing feature in that it uniformly applies to several countries at once, which may encourage compliance since failure to meet an international commitment is more difficult than just announcing a change

in domestic policies. Like the GRH laws, the SGP's focus on budget balances makes compliance vulnerable to unexpected changes in the cyclical position of the economy, so its success requires that policies in most times be designed to achieve positions significantly better than the deficit ceilings that lead to sanctions (ultimately, in this case, fines).

A limitation of rules-based approaches is that unless a Parliament is constrained by constitutional limits, a government cannot commit either itself or a successor to a future course of action. The persistent deferral of action under the Gramm-Rudman-Hollings laws, without bringing the sequestration provisions into effect, is a case in point. This has led some countries to a less ambitious alternative which legislates principles rather than rules, emphasises transparency and relies on these to frame public debate and encourage market discipline in a way that pushes government to respect legislated principles. The most comprehensive effort in this direction has been made in New Zealand, where the Fiscal Responsibility Act sets out "principles of responsible fiscal management". No specific targets are set in the Act, but it obliges the government to explain any departures from legislated principles, how long they will persist and how it intends to return to these principles. Similar legislation has been introduced in the United Kingdom (Code for Fiscal Stability) and in Australia (Charter of Budget Honesty).

4.1.3 Fiscal risks of financial transactions and the wider public sector

The operations of public sector entities not subject to the constraints that arise in the normal budget processes affect public finances and resource allocation in the economy more widely. Many countries, at one time or another, have had bad experiences with these as poor performance has led problems to build up over time whose consequences eventually had to be recognised on the budget, if only in terms of higher debt servicing costs. Prudent management of public finances therefore requires comprehensive attention to the whole public sector.

There are a number of operations which usually fall outside the budget process that entail risks to public finances¹⁴, but five in particular stand out:

¹⁴ See Blejer and Cheasty (1991) for an overview.

- First, *extra-budgetary funds* may be created to circumvent the ordinary budget process, say to implement financial support quickly. These tend to reduce fiscal transparency and it may be difficult to exercise oversight over their expenditures. A well-known example is the complex build up of unification-related funds in Germany before they were taken on-budget in 1995.
- Second, *state-owned enterprises* (SOEs) have often performed badly and proved to be a drain on public finances. Sometimes the problems have been reflected merely in poor returns on capital but there have been many instances of SOEs requiring subsidies (often disguised as a “capital injection”), or the need to take over debts as part of financial restructuring (the assumption in Japan of the debt of the Japan Railway Settlement Corporation and the National Forest Special Account in 1998, amounting to 5.4 per cent of GDP, is an example). Many countries have made progress --the United Kingdom and New Zealand stand out but Mexico, Australia and many euro area countries have also made important advances -- reorganising and changing governance arrangements to improve the operations of SOEs by subjecting them more fully to market disciplines by privatising them wholly or partially. Nevertheless, improving the management of SOEs remains an important challenge in Turkey, the European transition countries and some EU countries, while much of the restructuring that has occurred, for example in the airline industry, has yet to be tested by a recession.
- Third, *state-owned financial institutions* are normally off-budget but generally come under government direction. This may result in lending at reduced interest rates or investment in assets not selected on the basis of sound market considerations. Even where the government avoids applying direct pressure, disciplines on management are often weak. In a number of countries state ownership has often led to fiscal problems. In countries as diverse as France and New Zealand, the insulation from market disciplines that arises with state ownership and difficulties ensuring effective supervision led to the collapse of major banks (Crédit Lyonnais, Bank of New Zealand) with ultimately large fiscal consequences. The trend in OECD countries has been almost universally toward greater reliance on market forces and disciplines in financial markets, which should limit the risks in the future, but state ownership is still significant in some countries and, in some, provides a vehicle for circumventing normal budgetary processes. In Mexico,

notably during the run-up to the 1994 election and the subsequent financial crisis, and in Turkey state-owned financial institutions have effectively been used as instruments for fiscal expansion. In Japan, the channelling of retail savings deposits from the Post Office through the Trust Fund Bureau to state-owned enterprises -- although subject to Parliamentary approval -- is not transparent in terms of its impact on public finances and questions exist as to the quality of the resulting allocation of resources.

- Fourth, *contingent liabilities associated with guarantees* normally affect the budget only when cash payments are required. The variety of these liabilities is wide. Examples include: insolvent or under-funded deposit insurance systems (the Savings and Loan collapse in the United States); the programme of guarantees in Japan for lending to small and medium-sized enterprises; the commitment in the United Kingdom in the late 1960s and 1970s to guarantee the dollar value of certain sterling liabilities; and New Zealand government guarantees on international loans to finance a series of major projects designed to cope with high oil prices that were expected to rise further in the early 1980s. Some have proved very costly.
- Fifth, the *management of official financial assets and liabilities* may result in capital losses or gains. This primarily concerns foreign exchange reserves and government debt. However, financial asset portfolios may also be established to cover specific obligations such as public employee pension reserves (Canada) or catastrophic losses (New Zealand), and various lending programmes may also generate financial assets of considerable value. Since the amounts involved are large, the financial risks they entail -- particularly in the areas of foreign currency exposure for countries with large foreign reserves or substantial government debt raised in foreign currencies -- are also large. Two general principles have been proposed in this area. First, financial management should be determined in the context of the government's overall financial position. This should involve taking account of reasonably expected future cash flows, and requiring that any subsidy element in government lending programmes be identified and taken into account. Second, the government should construct its overall financial asset and liability portfolio to hedge permanent shocks to its financial position, *i.e.* pursue an "insurance" objective rather than an independent return objective. Implementing such a strategy require a

centralised policy-setting function, although centralising operational functions is not likely to be appropriate.

4.2 Fiscal relations between central and lower levels of government

The public sector of nearly all countries includes more than one level of government and there is a wide variation across countries in relations between the different levels, both in terms of allocation of responsibilities and financing arrangements. Achieving effective management of total public expenditure is greatly facilitated if these responsibilities ensure that decision-making authority rests where it can best be exercised and if these financing arrangements ensure that spending decisions take account of the full costs that they entail.

A number of OECD countries have either confronted the need for change in their arrangements in the recent past or are now doing so. In the United States longstanding federal entitlement programmes entailing detailed rules and matching grants have recently been replaced with a system of block grants to enable the states to provide a number of social services and develop social transfer programmes on a local basis. While there are risks of migration and a “race to the bottom” undermining this policy, it represents an effort to deal with the widely-recognised failure of previous federal programmes¹⁵. Considerable experimentation is involved here, but it is hoped that innovative programmes at local levels may prove to offer models that operate more effectively, and as such contribute to enhance the efficiency of social policy. In the United Kingdom, Scotland and Wales have recently opted for their own local parliaments; and in Spain the regional financing system was revised in 1997 with a view to better matching spending responsibilities with revenue raising powers of the regions. In both cases, it is too early to assess the effects. The European Union incorporated the “principle of subsidiarity”, *i.e.* that public policy and its implementation should be assigned to the lowest level with the capacity to achieve objectives, in the Maastricht Treaty as a guide for future integration efforts. Nevertheless, debate has continued on the extent to which defence and social policy should be moved from national governments to the EU, or federal, level.

¹⁵ Oates (1999).

According to the basic principles of fiscal federalism, the central governments should have the responsibility for the macroeconomic stabilisation and income redistribution functions. Local governments simply lack the means for macroeconomic control while the spatial mobility of economic units limits the scope for regions to redistribute income -- as greater ambition in this field would risk encouraging an exodus of wealthy citizens and an influx of poorer ones. In addition to the stabilisation and redistribution functions, it is natural for the central government to provide certain “national” public goods (like national defence) that provide services to the entire population of the country. In contrast, local governments are often well placed to ensure the provision of certain merit goods and services, particularly where consumption is limited to their own jurisdictions. By matching the supply of such goods and services with the particular preferences and circumstances of their constituencies, local provision may raise economic welfare above that which results from more uniform levels of such services that are likely under national provision. The empirical record broadly confirms these patterns of vertical distribution of tasks (Table 7).

So long as any significant decision-making responsibility for expenditure is devolved to lower levels of government it is important that they face a hard budget constraint. Otherwise, the incentives could well be for them to spend excessively, and overall fiscal discipline may be difficult to ensure. Since they do not have access to monetary instruments of public financing, in principle they do face a hard budget constraint¹⁶. However, for this constraint to be binding, lower level governments should not be able to rely on transfers from above to bail them out of fiscal difficulties and, at the margin, they should be required to fund their own expenditures fully through local taxes or by borrowings whose debt servicing they have to ensure themselves. Where it is not deemed possible to make lower governments responsible for their own relations with financial markets or to allow them to suffer the consequences of mismanagement without being rescued, there is little alternative to retaining tight control at the central level over their spending and borrowing¹⁷. Efficient exercise of such tight control at the central level, in turn, requires good provision of information to the central authorities and strong financial reporting systems.

¹⁶ See Eichengreen and Von Haagen (1996).

¹⁷ See for this argument OECD (1996), pp. 12-8.

The desirability of ensuring that lower levels of government face a hard budget constraint to the extent that they have decision-making authority over expenditures does not preclude providing central government financial support for activities carried out by other levels of government. Several rationales for such support exist:

- *The internalisation of spillover benefits to other jurisdictions.* Conditional, or “matching”, grants are best employed to fund the provision of local services, which generate benefits for residents of other jurisdictions. It is important that these be structured with clear limits in order that they not turn into entitlements that undermine the hard budget constraint. A possible alternative way to deal with spillover effects, but which may be politically difficult, is to enlarge the geographical extent of local jurisdictions to internalise all the benefits and costs, *e.g.* by bringing central cities and suburbs into a single jurisdiction (Toronto provides a recent example).
- *Fiscal equalisation across jurisdictions.* Unconditional or “block” grants are typically the appropriate vehicle for purposes of fiscal equalisation -- *i.e.* to channel funds from relatively wealthy jurisdictions to poorer ones. Such transfers, which are often based on an equalisation formula that measures the “fiscal need” or “fiscal capacity” of each jurisdiction, play a major role in countries such as Germany, Canada and Australia, and can be justified by equity considerations. From an efficiency perspective they raise questions, however, since they may impede changes in cost differentials and flows of resources that regional adjustment requires.
- *A more equitable and efficient overall tax system.* Central government general taxes with a single (progressive) rate structure applying to the whole nation are less likely to create fiscal incentives for relocation. This would thus argue for “tax sharing”, as in countries such as Germany, Austria, Mexico and Norway, under which tax bases and rate schedules are defined on a nation-wide basis while the proceeds are split between the central government and local constituencies.

Table 7

Functional distribution of public expenditure by level of government¹

	General administration		Law and order		Security		Education		Health		Welfare		Housing		Leisure		Transport and communication	
	Central	Local	Central	Local	Central	Local	Central	Local	Central	Local	Central	Local	Central	Local	Central	Local	Central	Local
Federal countries:																		
Australia	52	48	15	85	100	0	28	72	51	49	91	9	32	68	29	71	22	78
Canada	59	41	0	100	100	0	8	92	17	83	66	34	19	81	16	84	31	69
Germany	46	54	0	100	100	0	5	95	71	29	77	23	5	95	4	96	50	50
United States	70	30	16	84	100	0	6	94	55	45	73	27	67	33	16	84	29	71
Switzerland	40	60	0	100	84	16	10	90	43	57	82	18	8	92	7	93	37	63
Average ²	53	47	6	96	99	1	11	89	47	53	78	28	26	74	14	86	34	66
Unitary Countries: ²																		
Denmark	64	36	86	14	99	1	51	49	8	92	47	53	41	59	42	58	52	48
France	70	30	76	24	100	0	63	37	97	3	92	8	20	80	27	73	60	40
Norway	67	33	82	18	100	0	49	51	44	56	81	19	40	60	38	62	64	36
Netherlands	69	31	67	33	100	0	80	20	85	15	82	18	38	62	14	86	55	45
United Kingdom	78	22	58	42	100	0	0	100	100	0	91	9	0	100	0	100	67	33
Average ³	70	30	74	26	100	0	49	51	67	33	78	22	27	73	24	76	60	40

1. 1992, or latest available. In all countries, central government includes the social security system while local expenditure shares do not always reflect local decision making power.

2. Local includes sub-central (state) levels.

3. Unweighted.

Source: Pola (1999).

4.3 Market-based provision and other allocation mechanisms

One way to support efforts to keep aggregate expenditure in, is to enhance the allocative efficiency of public expenditure. This raises a number of issues that are covered below, notably the choice between targeting or universal provision, the greater use of market mechanisms for provision and funding, and a market-based approach towards public infrastructure investment.

4.3.1 Targeting versus universal provision

As noted, social spending in the form of transfer payments and provision of merit goods, mainly in the areas of income support, health and education, is a very large share of government expenditure in most countries. Issues of the desirability of targeting versus wider free or subsidised provision of benefits or services arise in virtually all domains of social policy. Targeting has the advantage of ensuring that the funds used are provided cost-effectively since it allows the most serious problems arising from low income or lack of access to be addressed at reasonably modest cost. In countries such as Australia and New Zealand, where social security systems give priority to assistance schemes designed to protect the poorest groups, targeting plays an important role in an effort to reconcile fiscal discipline and equity objectives. Targeting, however, is not without problems. The means testing that it often involves implies high marginal effective tax rates, especially on labour income, as the withdrawal of benefits may proceed rapidly and limit the gains from work once income rises beyond the means threshold. Where targeting is applied, therefore, care must be taken to minimise the extent to which it discourages work effort and creates poverty traps.

While there is considerable variation across programmes and across countries, most income transfer programmes and other forms of social services are based more along general insurance lines, with eligibility for benefits widespread or even universal. When building programmes along insurance lines and widespread access is an important objective, reducing intended population coverage is not a feasible approach to controlling costs. However, there may be scope for reducing moral hazard associated with the programmes and for better monitoring of beneficiaries and their

fulfilment of eligibility criteria¹⁸.

Although the general case for public intervention in the financing of merit goods is clear, the boundary between where this intervention should end and where users should bear the full costs themselves is not. The issues may vary across different types of merit goods (Box 2 illustrates some of the issues that arise in the case of tertiary education), and different countries will draw the boundaries differently. Many of the issues involved come down to the extent to which users can pay for these services and appropriate the benefits but attitudes towards different concepts of equity are also important. In this regard, many of the considerations are similar to those influencing attitudes to the targeting of benefits. The demand for goods and services which fall close to the boundary in many countries, such as cosmetic and lifestyle-enhancing medical care, child care, long-term care for the disabled and personal services for the elderly may prove to be highly elastic as societies age, labour force participation rises and technology advances. Assessments of where the limits to public financing of merit goods should be will have to be founded on hard evaluations of their costs and their impacts on government finances.

Fourth, where merit goods and services are to be publicly financed, governments must address the issue of how the delivery of the goods and services can be achieved most cost-effectively. The major areas are health and education, but similar issues arise with other merit goods. One general consideration is the need to ensure that the design of the eligibility conditions corresponds to equity concepts influencing the decision to provide public financing. However broadly or narrowly these conditions are defined they need to be maintained and enforced. Beyond this the main issues are similar to many of those raised elsewhere in Part 4 of this paper.

4.3.2 Enhancing the role of market mechanisms

Many governments have found it increasingly useful to test the boundaries of government provision. They question whether certain goods and services are so distinctive that their provision must remain in the public sector and, where provision remains public, have developed rationing mechanisms which allow targeting the provision of such goods

¹⁸ For a thorough discussion of possible reforms of social transfer programmes see MacFarlan and Oxley (1996).

and services within a commercial setting without compromising fundamental policy goals. A number of examples follow.

Contracting-out has been tried both in the provision of local consumer goods and services (e.g. operating city bus services, waste collection and child-care services) and in the purchase of inputs for public sector agencies (e.g. maintenance and cleaning of public buildings, information technology and financial services). It is not always easy to write the contract and manage it effectively, but where these difficulties can be overcome contracting it has often led to substantial savings to the public purse and an improvement in the quality of the services provided.¹⁹ Even when production ends up being retained in-house, the efficiency of public sector agencies is likely to improve through an effective “threat” of competition outside.

OECD Member countries are coming under increased pressure to liberalise *public procurement* markets²⁰. While some countries have become more receptive, many others are still restrictive in opening their public procurement market to foreign suppliers. Moreover, since goods and services purchased by the government often cannot be delivered “off-the-shelf”, cost-plus contracts tend to prevail. This weakens the incentives for producers to prevent cost over-runs and delays. In the key area of defence procurement there has been a movement away from cost-plus contracts towards competition among a selected number of suppliers and contracts where suppliers take some part of the risk of cost over-runs. There has also been some move away from preferential purchasing arrangements. However, complicated and opaque procedures for tendering persist, which give rise to serious entry barriers and raise the bargaining position of “insider” suppliers. In order to level the playing field both among (potential) suppliers and between suppliers and the

¹⁹ Examples surveyed in OECD (1997e) range from social policy functions such as residential treatment homes for children with behavioural and emotional problems (Iceland) and case management services for the unemployed (Australia) to skilled professional services such as audit functions (New Zealand Audit Office), information technology functions (Inland Revenue Department, in the United Kingdom) and airport management (City of Indianapolis), to low technology operations such as cleaning services (National Hospital, Copenhagen) and catering operation (Turkish Ministry of Finance). Since evidence is accumulating that contracting out can lead to efficiency gains while service quality levels are maintained or improved, its use is generally increasing.

²⁰ For example, the European Union has already issued directives that have formally liberalised public procurement and made tendering transparent, although import penetration of publicly procured goods generally remains low. In addition, the international framework regarding public procurement has also been strengthened in the WTO.

government, best practice principles as those for contracting out also apply to public procurement. In particular, the team responsible for the purchase should maintain careful scrutiny of cost, possess the technical skills for overseeing the quality of goods or services delivered, and be held accountable²¹.

User charging has become widespread with the objective of reducing excess demand and improving public services through the introduction of market signals²². User charges aim to create a sustainable basis for revenue raising to finance certain services, while relieving the general taxpayer of costs properly born by the users who benefit directly from them. The discipline this imposes on users promotes allocational efficiency and, by subjecting the government organisations providing services to a market test user charging is expected to encourage customer-oriented management and improve the financial and service performance of the public supplier. However, social considerations may limit the extent to which setting user charges in line with costs is acceptable and user charging will be viable only if the transaction costs of collection of charges are lower than the efficiency gains that result from market-type provision.

Vouchers constitute an emerging instrument for the distribution of merit goods and services in a number of OECD countries (Box 3). They aim to remove undesirable distributional effects associated with user charging and/or private provision. Through vouchers individuals receive entitlements to a good or service which they may “cash in” at some specified set of suppliers, which redeem them for cash from a funding body. The value of vouchers can be varied in order to pursue distributional objectives and/or to target the aid to specific groups. Designation of the recipient ensures that they are not tradable across consumers and designation of the services that they are not equivalent to cash.

²¹ OECD (1994).

²² The range of government services which can be subject to user charging that covers all or part of the costs of providing them is wide, and several case studies are reported in OECD (1998*d*). The United States Nuclear Regulatory Commission is now fully financed by user charges. In Barcelona, the Fire Department charges for its services. Its motivation is to increase public awareness of the need to maintain facilities and buildings properly, and in fact it only levies charges when there is evidence of negligence. When the Attorney-General’s legal practice in Australia moved to a user charging regime client service improved dramatically. Other examples are numerous, usually for services which for one reason or another full commercialisation of the activity, say by creating a state-owned enterprise or by privatising it altogether, is not feasible.

Box 2. Who should pay for tertiary education?

The part of educational expenses on tertiary education covered by individuals or other private sources varies widely throughout the OECD -- from negligible amounts in many European countries (*e.g.* in Denmark, Sweden and Austria) to more than 50 per cent in Korea and Japan.

A priori, those who benefit from higher education¹ should and, financial markets permitting, could pay for it. Therefore, a high share of private financing does not necessarily lead to low investment in tertiary education. On the contrary, in some OECD countries with high spending on tertiary education relative to GDP, the share of private finance is among the highest (*e.g.* in the United States and in Korea; see OECD, 1998*b*). Tertiary education does not have the characteristics of a public good, as there is some rivalry in consumption and consumers are excludable. The fact that the bulk of tertiary education is nevertheless publicly financed in most OECD countries therefore seems to be motivated by the existence of substantial externalities, (other) market imperfections or certain policy objectives associated with higher education.

Positive externalities of tertiary education? If tertiary education leads to positive externalities, the market would provide less than efficient amounts. However, the degree of these externalities is controversial. Some have emphasised a positive impact on productivity. Johnson (1984) argued, for example, that even the low-skilled might benefit from subsidising higher education if high- and low-skilled work are complementary². Others have stressed externalities beyond potential increases in GDP, such as greater social cohesion, reduced crime rates and more appreciation for cultural goods. Furthermore, it is often suggested that investment in tertiary education would alleviate employment problems and contribute to a necessary increase in the qualification of the workforce. Nevertheless, it is relatively difficult to identify (or even measure) “pure” externalities that would neither accrue to the individual nor to its current or future employers and that could therefore not be reflected in present or prospective wages.

Correcting (other) market failure? While wage negotiations could in principle internalise the benefits -- and thus achieve

efficient levels of provision if no pure externalities are present -- market imperfections might inhibit these outcomes³. Among these obstacles are the risk and uncertainty that surround human capital investment, liquidity constraints for low-income households⁴ and information asymmetries (e.g. hidden knowledge). Many of these impediments are particularly pronounced for high-cost studies (e.g. sciences, engineering, medicine). Furthermore, certain forms of non-university education that require co-operation with employers might not be provided in an optimal amount, as employers could refrain from training in skills that would benefit the employee or future employers in case of a workplace change. Labour market restrictions (e.g. limited scope for productivity-based pay or for individual contracts) could also prevent efficient levels in the absence of public support⁵.

Contribution to achieving equity goals? The impact of public support for tertiary education on various concepts of equity is ambiguous⁶. On the one hand, it facilitates the access of low-income households, which might otherwise not be able to afford higher education, thereby promoting social mobility. On the other hand, those who tend to profit most from post-secondary education have already a relatively high level of education. Furthermore, the average recipient can expect an above average lifetime income. In addition, low social and income groups tend to participate under-proportionally⁷. However, empirical evidence indicates that increases in net private post-secondary education cost lead to decreases in enrolment rates for lower income students (for the United States, see e.g. McPherson/Schapiro, 2000). Finally, financing of public expenditure on education through general taxation leads to a transfer from those having no children to families. It could be argued that this contributes to equity if the cost of raising children is not fully compensated by other family/children support, though not all families profit from tertiary education.

Tertiary education as a merit good? The merit good argument is often seen as justifying the generally free and compulsory provision of primary and secondary education. While it seems reasonable to argue that children might not be fully aware of the benefits, it is much less clear why this argument should apply to higher education as well. After all, the choice of whether or not to pursue post-secondary education is *per se* only open to people with

considerable prior education, some of which might have already experienced the benefits of education in general. Furthermore, even if higher education is considered to be a merit good, it is not clear whether high levels of government support lead to an increase in the aggregate consumption of this good⁸.

The impact of taxes and unemployment benefits. Taxes in general, and progressive income taxation in particular, introduce a wedge between private and fiscal rates of return⁹. Higher education leads to higher income and, thus, net additional tax revenue. This might, even when discounted, outweigh the public costs of financing tertiary education. Thus, financing tertiary education could be an acceptable investment from a pure budgetary point of view, even in the absence of externalities¹⁰. As higher education enhances the opportunity cost of not working, it could furthermore lower the adverse effects associated with unemployment benefits.

The above analysis indicates that some government expenditure on tertiary education seems to be warranted, though it is questionable whether the current high levels in many OECD countries can be justified by these arguments. In addition, public support is often not targeted to the above-mentioned failures that could justify intervention. Furthermore, public financing also entails inefficiencies, particularly in the case of generally free provision. In particular, the signalling function of the tertiary education market is severely undermined and neither the study combinations desired by students nor those demanded by the labour market nor those that provide the most externalities are reflected in the price to the students. This also entails the danger that part of the support for tertiary education might be captured by the education institutions and that flexibility in the tertiary education market is severely hampered.

OECD member countries have responded to these challenges by introducing new financing approaches that move from free provision and grants towards tuition and loans, while trying to influence student behaviour to make tertiary education more cost-effective and ensuring that the participation of low-income households is not discouraged. These approaches include *inter alia* the time-limiting of student aid (e.g. the Netherlands, Finland), means tested tuition fees (e.g. the United Kingdom), income-contingent student loan repayment (e.g. New Zealand) and

differentiated student contributions by field (*e.g.* Australia)¹¹. Nevertheless, most of these approaches also entail inefficiencies (*e.g.* they might lead to high marginal effective tax rates), and may not be equally apt for other countries. In any case, the policy implications vary with the type of imperfection that public support is intended to correct. If, for example, capital market access of low-income households is the primary problem, providing student loans would be a better remedy than free provision for all groups (see *e.g.* Creedy, 1995).

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1. The terms “higher education”, “tertiary education” and “post-secondary education” are used interchangeably in this box. For a definition and distinction of the latter two terms see OECD (2000).
 2. The increase in productivity would then normally lead to higher wages for both high- and low-skilled workers.
 3. For an overview of the discussion, see *e.g.* Stern and Ritzen (1991).
 4. Financial institutions might be particularly reluctant to lend to these households since the building of human capital is not separable from the effort of the individual and not well observable.
 5. Furthermore, minimum wage restrictions might inhibit contracts in which low-skilled workers pay for the benefits of their training through reduced pay.
 6. Tsakloglou and Antoninis (1999), for example, provide empirical evidence for Greece, where tertiary education is provided free of charge (according to the Greek constitution). They conclude that the distributional impact of providing free tertiary education is negligible and could even be regressive.
 7. See OECD (1997d) and OECD (1999d) for a discussion of access and equity issues in tertiary education.
 8. Testing whether or not public support meets the merit objective, Becker (1974) assumes a reciprocal interdependence between taxpayers and tertiary education recipients (*i.e.* the behaviour of each actor influences the decision of the other) and concludes that public spending could even lead to a decrease in overall spending and consumption of higher education. However, Arcelus and Levine (1986) assume reciprocal interdependence and arrive at the opposite conclusion.
 9. Fiscal rates of return are calculated on the “life-time value of additional income-tax receipts and employee social-security contributions less social transfers, for those who complete university education, compared with the public costs of educating of a university student and the taxes lost on earnings forgone during the time of study” (OECD, 1998c).
 10. This however would not be socially optimal. OECD (1998c) provides estimates of fiscal rates of return to university level education for males and females in seven OECD countries, ranging from four per cent for women in Sweden to 13 per cent for their Belgian counterparts. Still, government spending on tertiary education does not per se lead to higher net fiscal revenue, as at least a part of tertiary education might have been undertaken as well in the absence of financial support.
 11. For an overview, see OECD (1998b).

Box 3. Vouchers as a means of distributing public services

Voucher systems are regimes in which individuals receive entitlements to a good or service which they “cash in” at some specified set of suppliers, which then redeem them from a funding body. They may be explicit or implicit, but must provide a margin of choice to some or all consumers. They potentially have considerable flexibility as a device for allocating public services as they can be made universally available, means-tested, or structured to permit or prohibit top-ups for particular recipients. Moreover, by providing targeted groups of consumers with purchasing power, vouchers facilitate and complement the introduction of user charges. However, concerns exist that they may work against the objective of co-ordinated provision since they encourage competitive behaviour by suppliers. Furthermore, because they increase the choice they allow users of public services, vouchers often elicit resistance from established providers. Given these considerations, voucher schemes are often controversial and experience with them has been limited. Most of the concrete examples come from the United States and the United Kingdom. These cover areas such as primary and secondary schooling (several experiments in US municipalities; widespread reforms in England and Wales culminating in the 1988 Education Reform Act), non-compulsory education and training (“Youth Credits” in England and Wales, later replaced by “Learning Credits” in the United Kingdom), higher education (the introduction of competitive tendering into the allocation of block grants in the United Kingdom in the 1980s), food stamps (United States) and social care (the Independent Living Fund for the severely disabled in the United Kingdom). Overall the results have been mixed and further experimentation will be needed to separate what works well from what does not. But some conditions for vouchers to realise efficiency gains appear to be the following:

- Some degree of competition between providers should exist. If not, the rationale for vouchers disappears. Therefore, vouchers are less suited for public services that by their nature must be provided in the geographical vicinity of the consumer as this entails a risk of local monopoly.
- Since capacity constraints create a “sellers market” that may prompt providers to adopt or maintain non-price-rationing mechanisms, the authorities need to make sure that the provision capacity is adequate.
- It may be useful in some cases to allow vouchers to be topped up with out of pocket payments. This may be efficient to the extent it allows price differentiation and competition among providers and facilitates a mix of private and public provision.

4.3.3 Managing public infrastructure projects

Significant amounts of resources, both in budgetary and economy-wide terms, are devoted to capital expenditure by governments (Figure 4) and state-owned enterprises dependent on government financial support. Much of this investment consists of large projects which generate construction and procurement contracts involving large sums of money, in turn creating vested interests in such investment. The benefits, or returns, on such investment are often hard to measure -- indeed the impossibility or inappropriateness of simply applying a market test may explain why the activity is in the public sector -- making objective assessment of proposals for government investment very difficult. An influential paper by Aschauer (1989) argued that benefits from public investment (based on US data) are very high and, by implication, that more spending would be desirable. However, the empirical literature that this paper stimulated is not uniformly supportive of this view and many studies call attention to the fact that investments are costs whose impact is negative unless there is an adequate return.

In view of the difficulties involved, the OECD in 1998 reviewed the main issues involved on the basis of submissions from thirteen countries in response to a questionnaire which led to the following policy conclusions:

- Large-scale, diffuse programmes of infrastructure development cannot be relied upon to increase output or welfare in the long run.
- The key to effective public investment lies in which infrastructure projects are chosen. Proper targeting of public investment requires effective institutions.
- The sectoral policy environment in which physical investment decisions are made is crucial to the effectiveness of government investment.
- Cost-benefit analysis can provide a useful indicative input to the public investment process. Many countries use it in one form or another and its role could be usefully strengthened.
- Effective public investment requires an environment of fiscal discipline.
- Many countries are exploring various forms of public-private partnership for investment projects.

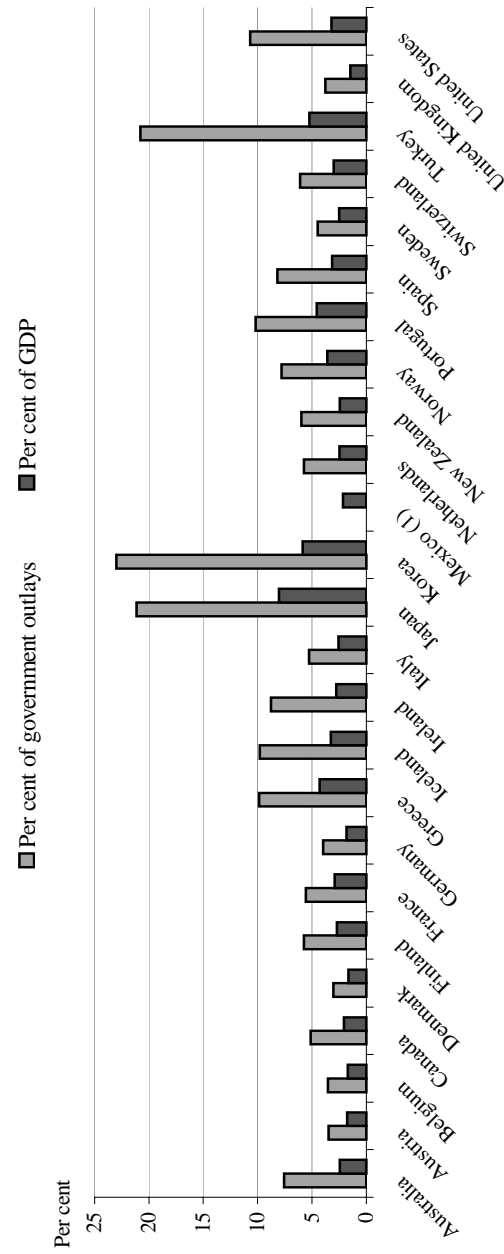
These conclusions point to the need for persuasive evidence that projects are needed, rather than presuming it; the need to find ways to discriminate among projects in order to single out those that will have a high return; the usefulness of cost-benefit analysis in this regard (Table 8); and the desirability of involving the private sector (Table 9).

4.4 Flexible incentives and control mechanisms into management of the government

Maintaining fiscal discipline requires enforcement mechanisms to ensure that budgets are implemented along intended lines. Most countries have traditionally relied on highly centralised financial and personnel control to achieve this and some (*e.g.* Japan and Germany) continue to regard this as the best way to proceed. Such centralised control can be a source of inefficiency by limiting the authority of managers outside the control ministries to exercise their judgement, however, and many OECD countries have sought improvements by allowing these managers more autonomy and flexibility in their day-to-day operations (Box 4 describes several case studies). By empowering and motivating managers to improve performance, this offers scope for efficiency gains reflected in lower staffing levels and reduced operating expenditures, as well as improved public services. But achieving these gains requires strategic controls and the ability to define clear objectives to enable performance assessment that ensures that accountability goes hand-and-hand with greater autonomy. This is substantially more easy where activities can be subjected to a market test than with core government activities such as provision of public goods and in the social policy domain.

Reforms designed to introduce more flexible management systems imply important changes in the relationship between central budget offices and sectoral, or spending, ministries and agencies²³ and in their operations. Initiatives to date have had several main elements. One is the introduction

²³ The new role of the central budget office is reflected in such activities as: *i*) devising a more effective budget system to control the budget total and establish priorities among programmes; *ii*) integrating budgeting with other management processes; *iii*) require spending agencies to measure performance and evaluate results; *iv*) developing new guidelines and methods for holding managers accountable; and *v*) promoting new information and reporting systems.

Figure 4**General Government Investment in OECD countries, 1999**

1. Data for government outlays are not available.

Source: OECD.

Table 8

Use of cost-benefit analysis for public investment

<i>Country</i>	<i>Is cost-benefit analysis used?</i>	<i>Description of cost-benefit analysis</i>
Australia	yes, in some cases	Public enterprises are mainly involved in selling goods and services in markets in order to earn a commercial return. Reflecting the predominantly commercial nature of their operations, investment decisions are made on the basis of commercial viability and expected rate of return. In contrast, investment decisions in the general government sector also take into account the Government's broader expenditure priorities and budget objectives.
Austria	yes, but use is variable	Most ministries have created a number of boards and commissions whose function is to advice on investment decisions. Usually, these advisory commissions are composed of representatives of the employers' and employees' associations and university or research institute experts. The planning procedures are of different quality and depth, ranging from relatively detailed project planning to generally worded declarations of intent.
Finland	yes, for public transport	A socio-economic impact study is the basis for investment evaluation in transport. It includes a cost-benefit calculation as well as an assessment of impacts which cannot be valued in monetary terms. Decisions on transport investment are taken by the Parliament, where these studies provide one input into a long and complicated decision process that is largely political in nature. Cost-benefit analysis is used mainly in order to eliminate poor projects from the selection process.
Greece	yes, in some cases	The EU co-financed projects are subject to special evaluation rules that include an assessment of the socio-economic significance of the project and its compatibility with EU policies. With the exception of subsidies for private investment in less-developed regions, cost-benefit analysis is not required.
Japan	no	Although the Japanese submission recognises a need for cost/benefit analysis, it notes that such assessments pose theoretical and practical difficulties. Recently various levels of governments have initiated studies to evaluate different types of public investment analysis.

Norway	yes	Cost-benefit analysis most extensively used for investment in roads, but is also used elsewhere. In general, ministries are reluctant to quantify benefits from projects on the grounds that the estimations are incomplete. The use of cost-benefit analysis by ministries appears to be increasing. Actual investment decision are made in Parliament; there is some evidence that Parliament uses cost-benefit analyses as a screening device to determine which projects should be considered, but generally the influence of such studies was variable among members of Parliament.
Spain	yes	Cost-benefit analysis is widely used to decide which investment projects are the most appropriate. For instance, for the large public investment projects receiving aid (such as from the European Structural Funds) a cost-benefit analysis is always performed with a view to assessing the socio-economic returns. However, this type of analysis is not done in order to compare public investment projects in different sectors.
Turkey	yes	Cost-benefit analysis is undertaken. Other analytical techniques can be used depending on the nature and the characteristics of the project handled (e.g. technical feasibility, environmental impact analysis, social benefits). Any project that is feasible according to economic or social criteria has to be consistent with the development plans and annual programmes too. The sectoral priorities are based on the results of the project analyses, but political choices may also affect outcomes.
United Kingdom	yes	Under new investment control arrangements, departments receive a set amount of money for investment purposes. They will have to set out in detail how these resources are to be managed so as to provide "best value for money and ensure positive social returns". HM Treasury has shared responsibility (with other departments) for monitoring these plans.
United States	yes, as part of a larger process	Capital assets are not selected on the basis of rate of return. Recently, a process called "capital programming" has been used. This involves the planning, budgeting, procurement and management of an asset. Departments may use analytical procedures that resemble cost-benefit analysis as part of the first two phases, but are not required to do so. More generally, investments are analysed with respect to how they contribute to meeting the agency's "mission, goals and objectives".

Source: OECD, compiled from country submissions.

Table 9

Re-defining the boundaries of public and private investment activity

<i>Country</i>	<i>Definition of private and public roles in investment</i>
Australia	There is a growing realisation in Australia that the private sector is able to play a larger and more effective role in many areas such as electricity generation, telecommunications, the provision of education and hospital services, prisons and road funding. In many cases, this has resulted in the Government's ceasing activity in areas that can be more efficiently undertaken by the private sector and introducing measures to improve efficiency in those activities remaining in the public sector.
Austria	Government intervention is taking on new forms. Less emphasis is placed on financial flows and more on regulation and on providing frameworks and incentive systems. The volume of government activity is shrinking and what is considered to be a government responsibility is changing. This is especially true for infrastructure projects in telecommunications and energy supply, which until recently were an exclusive domain of a public-sector monopoly.
Finland	A debate is taking place about the Government's role in Finnish society. For the time being, this has focused more on the transfer system and not much on public investment (which is comparatively small). There have been some attempts to "privatise" public investment. However, this approach does not extend to decision making: the Government is still responsible for making the investment decision.
Germany	It is customary practice in Germany for private enterprises to be involved in the planning and construction of public infrastructure projects. Over the past few years, greater scope has been made for private enterprise in performing public-sector tasks. This includes greater involvement of private finance and privatisation of telecommunications and postal services.

Japan	Co-operation between public and private actors in implementing investment projects (called “third sector” in the submissions”) is currently being looked at by the Japanese Government. The submission notes that Japan has already used these arrangements during the latter half of the 1980s, but encountered serious problems. Both the private and public sectors found it difficult to co-ordinate their different objectives and responsibilities were often unclear in third sector entities.
Spain	Several new financing techniques have been introduced recently. Private-sector participation in the construction of motorways, rail tracks and hydraulic works have been encouraged through long-term concession contracts (Build-operate-transfer). The turnkey method of payment has been used for several large projects, this shifts the risk of cost over-runs onto private partners and also pushes the public costs onto future budgets. Other public-private partnerships have been created for several new railways and water works.
Turkey	Recent investment projects and plans have encouraged participation of the private sector, even in sectors traditionally dominated by the public investment. In particular, the Build Operate Transfer model has been extensively used in Turkey.
United Kingdom	The Private Finance Initiative (PFI) transforms government departments from being owners and operators of assets into purchasers of services from the private sector, while private firms become long-term providers of services rather than simply up-front asset builders. Privatisation has also re-set the boundaries between private and public investment, leaving postal services and London Transport as the only two state-owned firms with large investment programmes.
United States	The line dividing public and private investment tends to be rather sharply drawn, at least as far as investment by the Federal Government is concerned. Investment partnerships between Federal and private entities are not common in the United States. However, the “capital programming process” asks departments to consider whether private entities can better undertake an activity and, if so, to forego investments related to that activity.

Source: OECD, compiled from country submissions.

Box 4. Enhancing flexibility in public management

In 1997, the Public Management Service reviewed the efforts of five OECD countries -- Australia, France, New Zealand, Sweden and the United Kingdom -- to reform the way they organise and manage the public sector¹. The review found that in all five there is professed consensus within government that the centralised model no longer suits the needs and conditions of public management. Reform has been centred around accountability frameworks in which the government entrusts spending agencies with flexibility in using resources, in exchange for holding them responsible for results. The repertoire of devices for enforcing managerial accountability includes strategic and operational plans, performance measures and targets, contracts for personal and organisational performance, de-coupling service delivery from policy making, new accounting rules and annual reports, more active use of evaluation and auditing, and financial inducements and sanctions.

The five countries have different governing traditions and have approached reform differently. France has a long tradition of detailed supervision by financial controllers, and it has moved cautiously to enlarge the operational discretion of local managers. Sweden is at the other end of the spectrum, for it has a long history of small ministries and relatively autonomous agencies. Sweden gives managers more latitude than is found in some other countries, so that innovations have been less dramatic than elsewhere. By the early 1980s, the United Kingdom had already retreated from the doctrine of Treasury Control that it has practised for more than a century. Its financial management initiative launched in 1982, the Next Steps initiative commenced half a dozen years later, and more recent fundamental expenditure reviews have been spurred by political support at the top of the government for re-shaping the public sector. Australia entered the reform era with highly centralised controls, but it has discarded many personnel and financial restrictions and adopted a variety of political and administrative arrangements to stimulate management improvement. As a small country with an open economy, New Zealand felt its future well-being threatened by powerful international forces, and it responded by creatively adapting commercial practices to public management.

The five countries face similar problems in restructuring national administration. All must establish new relationships between the centre, which is politically accountable for governmental performance, and operating units, where services are provided and most resources are spent. Defining the new relationship has been difficult because strategic controls must be devised in place of the discredited *ex ante* controls.

All of the countries must motivate managers to take initiative and responsibility over what they spend and produce and to accept that the performance of their organisation depends on their personal performance.

There has been an enormous turnover of senior and middle managers in New Zealand and the United Kingdom, as many officials discomfited by the new managerialism have left on their own accord or have been encouraged to depart. The importation of new managers appear to be inconsequential in France and Australia. Each government must determine what is acceptable risk, as operating agencies are given discretion to spend resources and take other actions that may have important political of financial ramifications. This issue is least troublesome in Sweden, where the line between ministries and agencies is well marked, and most pressing in New Zealand and the United Kingdom, where the independence of agencies has called into question the Westminster doctrine of ministerial accountability.

Each government has devised an instrument of choice to assure that performance information influences organisational behaviour. Australia relies on programme evaluation both before policies have been initiated and after they have been funded; France is emphasising responsibility centres as a means of imbuing civil servants with awareness that their actions can make a difference in the quality of service; Sweden has placed increasing reliance on annual reports that are audited for reliability of financial and performance statements; the United Kingdom looks to framework documents and performance targets to concentrate managerial attention on key objectives and results; New Zealand invests considerable resources in negotiating performance agreements for chief executives and purchase agreements for agencies. Every country faces the problem that no matter how much it generates by way of performance information, decisions may be taken and resources allocated in disregard of objectives and results.

Because of the difficulty of implanting a performance culture, every country has had a spate of disappointments; none has accomplished everything it set out to do. The United Kingdom found that the financial management initiative had produced better information, but had done little to liberate managers at operating levels; it subsequently appeared that Next Steps had energised the newly established agencies but had not yet transformed the central departments. Australia has been vexed by the problem of packaging performance information into a useful format, and it has also been disappointed by the less than optimal use of the programme structure. New Zealand has made relatively little headway in measuring outcomes, and the relationship between ministers purchasing services and agencies supplying them has not been sufficiently clarified. Sweden has been disappointed by the failure of the multi-year budget frames to deepen the quality of budget work. France has found that, despite government guidelines, some important ministries have dragged their feet in devolving responsibility to local agencies.

1. This box is a condensed version of the Executive Summary that appears in OECD (1997f).

of top-down spending ceilings, consistent with the medium-term expenditure frameworks (see above), with the elected officials retaining an important role in designing the overall budget and stating spending priorities. Several countries, including the United Kingdom, Australia, New Zealand, the Netherlands and all Nordic countries allow almost complete discretion in spending within cash limits on running costs. Operating units are allowed to shift funds among items of expenditure and between fiscal years. In several countries (Australia, Denmark, the Netherlands, New Zealand and Sweden) agencies notionally earn or pay interest on carried-forward or pre-spent funds, although typically carry-over and pre-spending is limited to a certain percentage of appropriated funds²⁴. This allows increased flexibility to shift funds between fiscal years which reduces incentives for end-of-year spending hikes and poor resource use. An important element of this set-up is that future funding is not reduced by under-expenditure in a previous year.

Second, financial information systems similar to those required to ensure fiscal transparency (*cf.* Part 4.1) are also needed to allow control ministries and elected officials to monitor performance and to ensure overall financial control. These should include: reliance on accrual-based accounting to the extent feasible, in order to identify when, where and how many resources are being used; cost data that are complete; budgets (*i.e.* exact spending plans) and financial reporting (*i.e. ex post* expenditures) that are on the same basis; and auditing to ensure the integrity of the accounts.

Third, several countries have made efforts to reinforce the use of market mechanisms, such as privatisation, contracting out, and exposing activities to private competition, by the development of “internal markets” as a device for enhancing accountability. New Zealand has gone furthest in this direction, making the split between the government’s role as an owner and a purchaser explicit; levying a capital charge for the government’s investment; contracting for the services of chief executives of ministries and agencies along the lines of contractual relationships in the private sector; and negotiating purchase agreements for the “sale” of output from agencies to ministries. The difficulty of defining and measuring the “output” of ministries and government agencies has been a major challenge for this approach, and it has proved difficult in a simulated

²⁴ OECD (1997f).

market to clarify relationships between purchasers and suppliers. Furthermore, performance contracts between public sector agencies are unlike arms-length agreements between unrelated parties. A major dilemma relates to the efficiency dividend. Unlike in real markets, there is no incentive to lower prices when efficiency increases. Taking away the dividend would penalise managers or agencies for being efficient, while allowing them to keep the dividend would enable them to spend on services that were not contracted for in the budget. Overall, developing market-type discipline through contracting and development of quasi-markets remains at an experimental stage.

Finally, some countries have sought more market oriented and flexible approaches to public sector pay determination, conditions of employment and staffing levels (notably the United Kingdom, Australia, New Zealand and the Nordic countries). Growing use is being made of workers under contract rather than permanent civil servants while salary scales and job classifications have been revised to allow greater use of promotions as an incentive and to link pay to performance indicators. In some cases (*e.g.* New Zealand and Sweden) broader reforms include giving each government department autonomy to bargain with its own employees over pay rates, working conditions and other matters. In some instances managers have been given flexibility in staffing -- selection, hiring, deployment and performance management. But in many countries considerable rigidities persist in public sector wage structures and staff management is less flexible than in the private sector. Such reforms, coupled with top-down expenditure ceilings, may be more durable means of increasing productivity and controlling costs than centrally imposed wage restraint²⁵.

5. Monitoring progress: a checklist

Based on the above discussion of main reform areas, a comprehensive checklist of criteria has been compiled to assess the policy efforts to enhance the cost-effectiveness of public expenditure in individual countries. The range of criteria put forward is probably much

²⁵ See for a recent comparison of wage determination in the public sector in two countries, France and Italy, OECD (1998*e*).

too wide to be considered for every single OECD country, and, dependent on the situation, their importance will vary from country to country.

With regard to *budgetary processes and control*, the following questions look relevant:

- How well does the country adhere to principles of transparency put forward in the IMF's Code on Good Practices on Fiscal Transparency and the OECD Best Practices for Budget Transparency?
- What is the scope for improving fiscal transparency? Are budget documents clear and unambiguous? Are contingent liabilities reported? To what degree has accrual accounting been adopted?
- Have medium-term expenditure frameworks been adopted and what has been the experience to date? Have budget targets or spending ceilings been adhered to? If not, what have been the main causes? Have cyclical factors importantly affected the ability to achieve targets?
- Are systems in place to ensure that the economic assumptions that underlie budget plans are realistic and that the future implications of spending programmes are objectively evaluated and reflected in medium-term planning?
- What enforcement mechanisms have been adopted in circumstances where rules-based approaches are in place? Are these deemed to be credible? Do they exert a genuine impact on expenditure discipline?
- What are the risks to public finances from financial operations and from the activities of public sector entities outside the usual budget process?
- Should the mandating and reporting of off budget expenditure and the operations of public entities outside the general government become more transparent and comprehensive? Do they include estimates of any subsidy element that is not appropriated from the budget and gains or losses arising from market risks such as from foreign currency exposures?
- Are the governance arrangements that apply to public entities outside the general government well designed to encourage good performance and to trigger changes when such performance is not delivered? What improvements should be made?

On fiscal relations between central and lower levels of government relevant questions are the following:

- What mechanisms are in place to enforce local governments' spending discipline?
- If local governments have discretion to raise money in financial markets are they required to do so on the basis of their own credit-worthiness? To what extent does such borrowing enjoy an explicit or implicit guarantee from the central government?
- How are intergovernmental grants or transfers determined? Are they designed to ensure that they do not operate as an entitlement which encourages low quality expenditure?

To assess the role of *market-based provision and other rationing mechanisms* the following questions are important:

- Does the design of social programmes in the country under review take account of their interaction with the tax system and their economy-wide impact, notably on the labour market?
- Is there scope for gains to be achieved by more careful targeting of social policies involving income transfers and financing the provision of merit goods?
- Where is the boundary in the country under review between these benefits and social services financed publicly and those left to individuals to cover from their personal resources?
- Are the longer-term financial implications of the balance between targeted assistance and more universally available programmes and services been carefully evaluated and factored into budget planning?
- Are eligibility conditions for social benefit programmes enforced well?
- Are systems for provision and financing health care, education and other social services delivering satisfactory outcomes on a cost-effective basis?
- To what extent are market-type mechanisms of provision, such as contracting-out, user fees and vouchers employed in the country under review? What has been the experience to date and to what extent have the above basic conditions for success been met?

- Has the scope for using market mechanisms without compromising social policy goals been fully exploited? For which areas could the introduction of market mechanisms be considered?
- Is there evidence of large pent-up demand for public infrastructure or important areas where under-provision is hurting economic performance? Alternatively, is there evidence of over-investment in public capital goods?
- Is the decision making process behind public infrastructure investment transparent? How extensive is the use of cost-benefit analysis? To the extent that formal cost-benefit methods are not used, are there ways of ensuring that the full costs of projects are taken into account? Are external effects sufficiently taken into consideration?
- What is the private sector's involvement in public investment policy? Is extensive use made of public-private partnerships and how are these being governed? Is there scope for increased reliance on the private sector and market forces? Is public procurement open to competition and transparent?

Finally, progress in the introduction of *flexible incentives and control mechanisms* into management of the government could be assessed on the basis of the following questions:

- How much progress has been made with devolution of day-to-day decision making to the operational levels of the public administration? Is there scope for further moves in this direction?
- Is there scope for greater use of market mechanisms, contracting or development of simulated markets which might enhance technical efficiency?
- Have modern accounting and reporting systems been introduced to facilitate performance assessment?
- To what degree has market-oriented human resource management been adopted? What are the obstacles for reforms in this area?

ANNEX

Tables

- A1. General government outlays by economic category: income transfers
- A2. General government outlays by economic category: subsidies
- A3. General government outlays by economic category: interest payments
- A4. General government outlays by economic category: consumption
- A5. General government outlays by economic category: net capital outlays

Table A1
General government outlays by economic category: Income transfers
(percent of GDP)

	1965	1970	1975	1980	1985	1990	1995	2000
Australia	4.2	3.9	5.9	6.8	7.4	6.9	8.5	8.3
Austria	12.9	14.1	14.9	16.2	17.9	17.7	19.5	18.3
Belgium	11.9	11.0	14.5	16.1	17.2	15.1	15.5	14.4
Canada	5.2	6.5	8.6	8.3	10.5	11.2	12.6	10.9
Denmark ¹	6.8	10.5	13.5	16.2	16.1	17.8	20.4	17.2
Finland	7.6	5.9	8.7	9.5	11.8	12.6	16.1	12.6
France	11.5	12.0	14.1	15.5	17.7	16.9	18.5	18.1
Germany	13.0	13.0	17.2	16.6	16.0	15.2	18.1	18.6
Greece	6.8	7.6	7.1	8.9	14.4	14.4	15.1	16.1
Ireland	10.0	10.0	10.0	10.7	12.9	11.9	12.6	9.7
Italy	11.9	11.8	14.4	14.2	17.1	18.1	16.7	17.3
Japan	4.7	4.6	7.7	10.1	10.9	11.4	13.4	15.7
Korea	0.9	0.6	0.7	1.3	1.5	2.0	2.1	3.3
Mexico	..	..	..	..	..	..	2.6	..
Netherlands	10.0	10.8	14.3	16.4	15.5	15.5	15.3	11.8
Norway	6.6	9.0	10.0	11.3	11.8	16.0	15.8	13.7
Portugal ¹	2.3	2.1	5.2	7.0	7.8	8.5	11.8	12.5
Spain	4.5	5.9	7.4	10.9	12.7	12.7	13.9	12.4
Sweden	7.7	10.1	13.8	17.1	17.7	19.3	21.3	18.3
United Kingdom ¹	6.9	8.0	10.2	11.6	13.7	11.9	15.4	13.1
United States	5.0	7.1	10.2	9.8	9.8	10.0	11.8	10.5
Euro area	10.9	11.2	14.0	14.7	15.8	15.5	17.0	16.7
OECD	6.5	7.5	10.2	10.7	11.4	11.5	13.2	12.8

1. Prior to 1988 in the case of Denmark, 1995 for Portugal and 1987 for the United Kingdom data are backward extrapolations based on earlier National Accounts series.

Source: OECD Analytical Database figures underlying OECD *Economic Outlook* 68, December 2000 and OECD National Accounts.

Table A2
General government outlays by economic category: Subsidies
(percent of GDP)

	1965	1970	1975	1980	1985	1990	1995	2000
Australia	0.7	0.9	1.1	1.5	1.7	1.3	1.3	1.2
Austria	2.3	1.8	3.0	3.1	3.2	3.1	2.9	2.5
Belgium	2.3	2.3	2.6	2.8	2.4	1.7	1.5	1.5
Canada	0.9	0.9	2.5	2.7	2.5	1.5	1.1	1.1
Denmark ¹	1.8	2.6	2.7	3.1	2.9	2.2	2.5	2.3
Finland	3.2	2.8	3.8	3.3	3.1	2.9	2.8	1.5
France	2.5	2.2	2.2	2.1	2.6	1.8	1.5	1.3
Germany	1.2	1.7	1.9	2.0	2.0	2.0	2.1	1.7
Greece	1.4	1.0	3.2	3.0	3.7	1.2	0.4	0.2
Ireland	2.7	3.4	2.5	2.6	2.3	1.1	1.0	0.7
Italy	1.7	1.9	2.8	2.9	2.6	2.0	1.5	1.2
Japan	0.7	1.1	1.5	1.5	1.1	1.1	0.8	0.6
Korea	0.3	0.3	1.4	0.9	0.6	0.6	0.7	0.3
Mexico	..	..	..	..	..	..	0.7	..
Netherlands	0.9	1.0	1.2	1.7	2.0	1.7	1.1	1.6
Norway	3.4	3.8	4.6	5.2	4.2	4.5	3.7	2.5
Portugal ¹	1.0	1.3	1.7	6.0	4.2	1.8	1.4	1.2
Spain	0.5	0.5	0.7	1.1	1.3	1.1	1.1	1.0
Sweden	1.1	1.3	2.5	3.3	3.9	3.6	3.8	1.8
United Kingdom ¹	1.6	1.7	3.6	2.5	2.0	0.9	0.7	0.5
United States	0.2	0.5	0.5	0.5	0.5	0.4	0.3	0.2
Euro area	1.6	1.7	2.0	2.1	2.2	1.8	1.7	1.4
OECD	0.8	1.0	1.4	1.4	1.4	1.1	0.9	0.8

1. Prior to 1988 in the case of Denmark, 1995 for Portugal and 1987 for the United Kingdom data are backward extrapolations based on earlier National Accounts series.

Source: OECD Analytical Database figures underlying OECD Economic Outlook 68, December 2000 and OECD National Accounts.

Table A3
General government outlays by economic category: Interest payments
(percent of GDP)

	1965	1970	1975	1980	1985	1990	1995	2000
Australia	2.4	2.4	2.3	3.2	4.8	4.0	4.2	2.0
Austria	0.8	1.1	1.3	2.4	3.5	4.0	4.3	3.5
Belgium	2.8	3.6	4.2	6.6	11.1	11.9	9.3	6.7
Canada	2.9	3.7	3.8	5.4	8.4	9.5	9.6	7.4
Denmark ¹	1.1	1.3	1.2	3.9	9.6	7.3	6.4	4.5
Finland	1.0	1.0	0.6	1.0	1.8	1.4	4.0	3.1
France	0.0	1.1	1.2	1.4	2.8	2.9	3.7	3.3
Germany	0.7	0.9	1.3	1.9	2.9	2.5	3.7	3.4
Greece	0.6	0.8	1.1	2.0	4.4	8.7	11.1	7.2
Ireland	5.0	5.0	5.0	6.4	10.0	7.9	5.4	2.2
Italy	1.1	1.5	3.3	5.0	7.8	9.4	11.5	6.5
Japan	0.4	0.6	1.2	3.2	4.5	3.9	3.8	4.0
Korea	0.0	0.3	0.4	0.6	0.7	0.5	0.4	1.6
Mexico	..	..	..	..	..	..	4.9	..
Netherlands	2.7	2.9	3.1	3.8	6.3	5.9	5.9	3.9
Norway	1.4	1.6	1.5	3.1	3.2	3.6	2.8	1.6
Portugal ¹	0.6	0.5	0.6	2.2	6.7	6.6	5.2	3.2
Spain	0.4	0.3	0.3	0.4	1.9	3.8	5.2	3.6
Sweden	1.8	2.0	2.3	4.1	8.4	5.0	7.1	4.1
United Kingdom ¹	3.8	3.9	3.9	4.7	4.9	3.4	3.6	2.7
United States	1.9	2.2	2.4	3.2	5.0	5.1	4.8	3.6
Euro area	0.8	1.3	1.8	2.6	4.5	4.9	5.9	4.2
OECD	1.4	1.8	2.1	3.1	4.7	4.8	5.0	3.8

¹. Prior to 1988 in the case of Denmark, 1995 for Portugal and 1987 for the United Kingdom data are backward extrapolations based on earlier National Accounts series.

Source: OECD Analytical Database figures underlying *OECD Economic Outlook* 68, December 2000 and *OECD National Accounts*.

Table A4
General government outlays by economic category: Consumption
(percent of GDP)

	1965	1970	1975	1980	1985	1990	1995	2000
Australia	13.4	14.4	18.9	18.6	20.0	18.5	18.6	18.5
Austria	14.6	16.1	18.2	18.4	19.5	18.8	20.4	19.4
Belgium	16.7	17.6	21.4	23.0	23.0	20.3	21.5	21.0
Canada	15.6	20.5	21.8	21.3	21.9	22.4	21.4	18.4
Denmark ¹	16.7	20.4	25.1	27.2	25.8	25.6	25.8	25.3
Finland	14.2	15.1	17.8	18.7	20.6	21.6	22.8	20.8
France	16.9	17.4	19.5	21.5	23.7	22.3	23.9	23.4
Germany	15.0	15.5	20.1	19.9	19.7	18.0	19.8	18.8
Greece	8.2	8.8	10.6	11.4	14.2	15.1	15.3	15.0
Ireland	13.3	14.3	18.2	19.4	18.1	15.1	14.9	11.8
Italy	16.2	14.9	16.1	16.8	18.6	20.2	17.9	17.9
Japan	8.2	7.4	10.0	9.8	9.6	9.0	9.8	10.1
Korea	9.5	9.7	11.3	11.9	10.4	10.5	9.7	9.7
Mexico	..	..	..	..	..	..	10.5	..
Netherlands	23.6	24.9	28.2	29.1	26.4	24.3	24.0	22.6
Norway	14.6	16.4	18.7	18.7	18.1	20.8	20.9	18.8
Portugal ¹	11.5	13.3	14.4	14.0	15.0	16.4	18.6	21.0
Spain	9.1	10.2	11.3	14.3	15.9	16.9	18.1	16.9
Sweden	17.9	22.5	25.2	29.6	28.2	27.7	26.3	26.5
United Kingdom ¹	17.2	18.0	22.4	21.6	20.9	19.9	19.8	18.3
United States	16.4	18.5	18.1	16.8	17.1	16.6	15.3	14.1
Euro area	15.4	15.8	18.5	19.5	20.3	19.7	20.4	19.7
OECD	14.6	15.7	17.3	17.0	17.3	16.8	16.6	15.7

¹. Prior to 1988 in the case of Denmark, 1995 for Portugal and 1987 for the United Kingdom data are backward extrapolations based on earlier National Accounts series.

Source: OECD Analytical Database figures underlying *OECD Economic Outlook* 68, December 2000 and *OECD National Accounts*.

Table A5
General government outlays by economic category: Net capital outlays
(percent of GDP)

	1965	1970	1975	1980	1985	1990	1995	2000
Australia	3.8	3.6	3.1	2.3	3.8	2.4	2.8	1.4
Austria	6.0	4.8	7.0	7.0	6.1	4.9	5.3	5.1
Belgium	1.3	5.3	4.9	4.9	3.5	1.8	2.5	3.1
Canada	3.1	2.3	2.2	1.4	2.1	1.4	0.6	0.0
Denmark ²	5.4	5.4	4.7	4.6	3.6	0.7	1.5	2.0
Finland	4.3	4.9	6.1	4.7	5.0	5.8	8.6	6.7
France	6.7	5.0	5.3	4.9	5.1	5.7	6.0	5.1
Germany	5.4	6.0	6.4	6.1	4.9	6.1	2.6	0.4
Greece	5.1	5.1	5.1	4.3	5.5	8.3	4.6	5.2
Ireland	5.0	5.0	5.0	8.5	7.2	3.6	3.7	3.2
Italy	2.0	2.5	4.4	2.9	4.5	3.5	4.7	3.7
Japan	5.0	5.2	6.3	7.5	5.6	6.0	7.9	7.8
Korea	3.8	3.8	2.9	4.6	4.4	4.8	6.4	8.6
Mexico	..	..	..	..	..	..	2.7	..
Netherlands	-2.5	-2.7	-1.0	-0.1	1.8	1.9	1.4	1.5
Norway	3.2	4.1	4.9	5.6	4.2	4.9	4.4	4.1
Portugal ²	2.7	0.8	3.4	-1.2	9.3	10.9	4.3	4.2
Spain	5.0	4.7	4.6	4.6	7.6	6.9	5.7	4.6
Sweden	4.9	5.9	3.6	2.7	1.6	0.2	3.6	3.2
United Kingdom ²	4.1	5.1	4.4	2.6	2.4	5.9	4.9	3.8
United States	2.0	1.3	1.1	1.0	1.4	1.4	0.7	0.9
Euro area	4.3	3.9	4.6	4.1	4.3	4.4	4.2	3.0
OECD	3.5	3.2	3.4	3.3	3.3	3.8	3.8	3.4

1. Net fixed investment plus net capital transfers.

2. Prior to 1988 in the case of Denmark, 1995 for Portugal and 1987 for the United Kingdom data are backward extrapolations based on earlier National Accounts series.

Source: OECD Analytical Database figures underlying *OECD Economic Outlook* 68, December 2000 and *OECD National Accounts*.

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DESIGNING MODEL-BASED FISCAL POLICY RULES

*Javier J. Pérez and Paul Hiebert**

1. Introduction

In order to generate solvency for the fiscal sector, leading macroeconomic forecasting models employ a fiscal rule. The rule is designed to guarantee that the intertemporal budget constraint of the government is satisfied – thereby generating model closure. In addition to effectively ruling out the possibility of an explosive path for fiscal variables such as the government debt ratio, the adopted rule can strongly influence the adjustments of fiscal variables against shocks or policy changes. The choice of fiscal rule thus entails potentially significant consequences for the intertemporal behaviour of fiscal variables, as well as effects on macroeconomic and financial variables in the model. More importantly perhaps, policy choices can be influenced by the specification of the fiscal rule, as the impact of policy changes and reforms is often assessed on the basis of a macroeconomic model that can be influenced by the specification of the fiscal rule.

Existing fiscal rules employed in leading macroeconomic forecasting models are generally imposed *exogenously*, and involve backward-looking behaviour on the part of the fiscal sector, despite the widespread use of a forward-looking framework in modelling households, firms and the monetary authority. This modelling strategy can, in principle, lead to inconsistencies in the fiscal sector with other sectors of the model as the functional form and calibration of the rule is largely determined outside the auspices of the model.

In this paper, we describe a recent methodological proposal put forth by Pérez & Hiebert (2001) to identify the appropriate fiscal rule *endogenously* in a stochastic model, based solely on the properties of the model itself. Specifically, we discuss how a state-contingent policy rule can be obtained, relating fiscal instruments to different shocks affecting the

* European Central Bank. The views expressed in this paper are those of the authors and do not necessarily reflect those of the European Central Bank (ECB). The authors would like to thank F. Orlandi, R. Johnson, J.-P. Vidal, M. Catenaro, M. Tujula, P. Cour-Thiman, R. Strauch, along with seminar participants at the 3rd Banca d'Italia Workshop on Public Finance and the Fiscal Policies Division of the ECB for helpful discussions and comments. Any remaining errors are of course the sole responsibility of the authors.

economy and expectations of future developments of the economy – all on the basis of the existing set-up of a the model at hand. This endogenous fiscal policy rule is inherently consistent with the fundamental structure of the model on which it is based, wholly integrated with all agents and sectors in the economy, and with the structural parameters of the model. In addition, the proposed fiscal rule, with a fiscal authority systematically reacting to disturbances to the economy is consistent with the standard role of government of fiscal stabilisation in the face of economic fluctuations.

The paper is organised as follows. In Section 2, we discuss the rationale for fiscal policy rules, in the context of uncertainty in public finance – and how to capture these concepts in a macroeconomic model. In Section 3, we explore the need for fiscal rules in macroeconomic models, and on the diversity of existing rules. In Section 4 we offer the rationale for an alternative specification in the form of an endogenous fiscal rule. Finally, in Section 5 we present some concluding remarks.

2. Main features of fiscal policy rules

2.1 Sources of variability in public finances

Government budgets are subject to considerable uncertainty, given various shocks which have an impact on public finances, both of a permanent and temporary nature. The effects of on public finances of uncertainty may first come from non-budgetary sources. Shocks may be of the standard macroeconomic type – involving, for instance, shocks to technology, demand, energy, and labour supply. They may also be due to changes in key financial variables, such as interest rates and exchange rates. The effects of on public finances of uncertainty may also come from budgetary sources. This could include uncertainty which often is inherent in developing public spending plans, particularly relating to unforeseen developments in military spending (*e.g.* wars) and agricultural spending (*e.g.* compensation for droughts, epidemics). In addition to these sources of temporary unpredictability, shocks of a more permanent nature to public finances can include demographic shifts (*e.g.* pressure on public expenditure expected to accompany population ageing) and underlying changes in tax collection (*e.g.* the development of “underground” economies).

Given the numerous sources of unpredictability, there is considerable scope for forecasting errors in developing and executing fiscal

plans. Kilpatrick (2001) postulates that in a stochastic world, in order to maintain budgetary stability in any given period, the fiscal authority should react to any shocks that affect public spending or the tax base. This implies that either implicitly or explicitly, governments should have a type of contingency fund to cater for these sources of uncertainty. Although in reality, the identification of shocks is not straightforward – see, for example, Blanchard and Perotti (1999), in a macroeconomic model, the source of all shocks hitting public finances or the economy is clearly identifiable.

2.2 *Modelling uncertainty in public finances*

In theory, the government reaction to shocks affecting the budget in a model should be shock-specific. As such, in a model characterised by optimising forward-looking agents, the intertemporal fiscal rule should include policy reactions to the different shocks affecting the economy. In the absence of an active monetary authority monetising shocks to debt, as is in the case of most industrialised countries, the fiscal authority should react to any innovation affecting the fiscal sector through the adjustment of budgetary items.

For instance, we may expect that different unforeseen shocks, such as those to output (*e.g.* an oil shock) or those to government spending (*e.g.* a war or drought) would have differing impacts on the government budget and therefore elicit a nuanced reaction based on the source of the shock. Moreover, the rule should, in principle, be introduced in a forward-looking manner consistent with the other sectors of the model. As such, the rule should be based on expectations of future values of relevant variables. Thus, the rule would amount to some combination (either linear or nonlinear) of endogenous and exogenous variables in the model. We import and discuss these a rule which satisfies the above criteria in Section 4.

3. On the need for fiscal rules in macroeconomic models, and on their diversity

In establishing the basis for including a fiscal rule in a macroeconomic model, one must look first to the government budget constraint, which takes the following standard form in discrete time:

$$[1] \quad \frac{B_t}{P_t} + \tau_t = g_t + I_{t-1} \frac{B_{t-1}}{P_t}$$

where B_t stands for time- t nominal debt, g_t is real primary spending, τ_t tax collection in real terms, and $I_t \equiv 1+i_t$, the nominal interest rate on bonds¹. Simply put, this condition entails that the government has to issue debt to pay for spending in excess of tax collection. The aggregate variables defined above may of course be broken down into their subcategories in macroeconomic models used in practice. Solving this equation forward we have that:

$$[2] \quad \frac{B_t}{P_t} + = \sum_{i=0}^{\infty} \left(\prod_{j=0}^i \frac{\pi_{t+j+1}}{I_{t+j+1}} \right) [\tau_{t+i+1} - g_{t+i+1}] + \lim_{i \rightarrow \infty} \left(\prod_{j=0}^i \frac{\pi_{t+i+1}}{I_{t+i+1}} \right) \frac{B_{t+i+1}}{P_{t+i+1}}$$

where π_t is the time- t inflation rate. For the government to be solvent, the second term of the right-hand side of the previous expression has to be equal to zero. In other words, any shock affecting spending or real debt should be covered by tax changes². In any standard model with optimising debt-holders, this is the condition close to the exact form of one of the optimality conditions (the transversality condition attached to bond-holdings) that has to be verified.

3.1 General formulation of a fiscal rule

The fiscal rules used in existing macroeconomic models are based on maintaining budgetary solvency required by (1). As the rules

¹ Seigniorage revenue is neglected for the sake of simplicity.

² Effectively, this can be considered as a no-Ponzi game condition, whereby in order to guarantee solvency, the government must be able to back all debt through its tax and spending system.

traditionally involve adjustment on the revenue side of the government budget, we can write any generic tax system as:

$$[3] \quad \tau_t = \tau(c_t, y_t, \dots) + \tau_t^{rule}$$

where the first part of the equation embodies the normal tax system of the economy (income taxes, consumption taxes, etc.), while the second component represents the revenue adjustment by the government to guarantee solvency, and react to shocks. Permanent shocks to the economy would show up in the first part of the equation, while transitory shocks would be catered for by the second. In theory, fiscal closure rules – captured here by the τ_t^{rule} – can take various functional forms, including several types of variables, not only lagged values of certain state variables. These rules for model economies approximate the actual reaction to shocks by the fiscal authority.

3.2 Traditional specification of fiscal closure rules in macro models

Budgetary adjustment is generally either in the form of either a tax-difference rule – as in MULTIMOD (IMF) and NIGEM (National Research Institute) – whereby the change in taxation is a function of the objective variable; or tax level rule – as in MSG2 (a model developed by McKibbin and Sachs) – whereby the tax rate itself is adjusted in reference to the objective variable. To illustrate, a tax-difference rule would take some variant of the following generic form:

$$[4] \quad \tau_t^{rule} - \tau_{t-1}^{rule} = a(x_{t-1} - x_{t-1}^*) + b\Delta(x_{t-1} - x_{t-1}^*)$$

where x is the objective variable (*i.e.* government debt or deficit), with an asterisk denoting the steady state value, and a and b the speed of adjustment parameters, which are calibrated. $\Delta \equiv I-L$ stands for the first difference operator.

The calibration of the exogenous rules currently used in practice requires the calibration of the so-called *speed of adjustment* parameters, controlling the behaviour of the adjustment variable to deviations of target values in the rule (*e.g.* deficit, debt) from their steady-state values. Mitchell *et al.* (2000) find that this calibration may be somewhat informal or ad-hoc, although some modellers have pursued more formal exercises in the derivation of their fiscal rule – see, for example, the derivation based on a

quadratic loss function in Barrell *et al.* (1994). In any case, when designing the rules and calibrating the key parameters, these existing rules do not consider explicitly who the debt holders are in the models they are analysing, and tend to focus the stability analysis on the system formed by the budget constraint, (1), while the calibration of the speed of adjustment parameters is then done on the basis of some advocated properties of the model solution and responses to shocks. Although this is a practical and partially valid approximation, it does not guarantee that the resulting fiscal rule is fully consistent with the properties of the model it is trying to close.

The rules used in practice are quite diverse in specification, and some recent studies have found through standardised simulations that the various specifications of these rules can lead to widely divergent results. For instance, Mitchell *et al.* (2000) compare the response of standardised version of the fiscal rules of leading macroeconomic forecasting models, including NIGEM, MULTIMOD and MSG. They find that the impulse response function to a shock in government expenditure differs widely, ranging from a relatively monotonic adjustment to a nonlinear adjustment path. Bryant and Zhang (1996) also find that the response of variables can differ quite substantially on the basis of alternative standardised fiscal rules. They conclude on the basis of this evidence that generally, there is a particularly imprecise understanding of how economies respond to fiscal policy actions. Lastly, Barrell *et al.* (1994) also find that the implementation of the fiscal policy rule has a significant effect on model properties in comparing the tax rules of NIGEM, MULTIMOD and MSG.

Despite the variation in results, little consensus exists on the proper formulation in terms of the dynamic adjustment component of the fiscal rules in the literature. As noted in Mitchell *et al.* (2000) and Johnson (2000), this wide variety of fiscal rules found in the literature highlights the lack of agreement amongst modellers regarding the appropriate functional form for these rules. This at least can partially be attributed to their formulation which, to a certain extent, may lack rigorous theoretical underpinnings fully consistent with the model in which they are used. Their formulation is imposed outside the confines of the model, and can involve the considerable use of judgement in some cases. In this sense, their derivation cannot be entirely consistent with all of the other economic variables in models by design. This type of lack of internal consistency in modelling has been criticised by many for its lack of microfoundations starting with Lucas (1976). A more fundamental criticism of exogenously imposed fiscal rules is their inherent vulnerability to the points raised in the

Lucas paper, as changes in the baseline parameters of the model may not directly lead to a change in the form or calibration of the fiscal rule.

4. A proposal to identify model-based fiscal closure rules

Based on the principles outlined in Section 2, it is sensible to postulate that a fiscal closure rule code for a government could take the form of a given reaction to transitory shocks affecting their budgets, $\tau_t^{rule} = f(shocks_t)$. This rule would imply that, on average over the simulation horizon, any increase in tax collection due to shocks of one sign would be offset by decreasing tax collection (transfers) coming from shocks of the opposite sign. A policy reacting to innovations would be countercyclical by nature, and non-distortionary, as it should be that $E_{t-1}[\tau_t^{rule}] = E_{t-1}[f(shocks_t)] = 0$. If the fiscal authority were to react to time- t shocks, this would be enough to ensure stability of the model economy.

4.1 Derivation of Ramsey-type optimal policies

In order to endogenously calibrate the form of τ_t^{rule} , and as an alternative to the exogenous imposition of a fiscal rule, one solution would be to derive a fiscal rule based entirely on the design of the markets in the model, in a fully-fledged optimising framework entirely consistent with the microeconomic foundations of the model, so that one could obtain the coefficients in τ_t^{rule} optimally and also the optimal form of $\tau(c_t, y_t, \dots)$ in (3). For the development and implementation of such a rule in simple models see, for example, Chari *et al.* (1994) or Manzano and Ruiz (2000).

Although the strategy pursued in this literature would entail many desirable characteristics, it is generally limited to the analysis of fairly simplified economies – and would be impractical for large-scale macro models, given the level of complexity of the economy in these models and their level of disaggregation. In fact, solving a dynamic optimisation model in which the government maximises agents' utility subject to all Euler conditions in agents' problems would be cumbersome, if not impossible, with the level of disaggregation in large-scale macroeconomic forecasting models.

4.2 *Fiscal theory of the price level*

Another alternative that goes beyond the standard practice outlined in the previous Section uses the stability properties of the model under analysis to *constrain* the coefficients of rules of the form (4). In other words, the coefficients a and b are chosen on the basis of agents' decisions ensuring stability of real debt. Nonetheless, these coefficients cannot be uniquely calibrated using this strategy, and the formulation of the functional form of the rule itself remains *ad-hoc*. This shortcoming is natural, as this approach has been used for alternative purposes of macroeconomic modelling, mainly to stress the close link that the government budget constraint imposes between monetary and fiscal policies – see, for example, Leeper (1991), Sims (1994), Woodford (1995), Mc Callum (2001) or Andrés *et al.* (2001).

4.3 *An identification methodology based on the analysis of forecast errors*

This methodology to retrieve *endogenous* fiscal policy rules in models with imperfect foresight on the part of agents generates rules which are formulated entirely on the structural parameters and framework of the model. In this way, the rule adjusts automatically in response to any changes to structural parameters of the model, thereby reducing the susceptibility of this sector to the Lucas Critique.

The rule is derived using standard stability analysis theory for rational expectations models, based on Blanchard and Khan (1981), Sims (2000) and Novales *et al.* (1999). It is constructed based on the expectations errors of agents within the model. It can be expressed in implicit form or explicit form, whereby the fiscal authority systematically reacts to individual shocks to the economy via a state-contingent lump sum tax on households³.

³ See Perez and Hiebert (2001) for an illustration of this on the basis of a simplistic standard model. Nevertheless, it should be stressed that the proposed identification methodology is, in principle, general enough to be applied to any given large-scale macroeconomic model with optimising agents.

Box**The four steps required to construct a model-based fiscal rule**

1. Perform the stability analysis of the model at hand to determine the *stability needs* of the system, assuming $\tau_t^{rule} = 0$;
2. Identify the expectation error relevant for debt stability, from the relevant row(s) of the stability conditions, and then use them to guess a first tentative relation between τ_t^{rule} and the relevant expectation error(s).
3. Determine the value of the coefficient(s) of that relation on the basis of the stability analysis of the system, and it has to compute the stability conditions of the system including the guess (initialised, for example, to one); then the parameter(s) are calibrated in such a way that the stability conditions are exactly the initial set (computed in the first step).
4. Compute the fiscal closure rule by using the calibrated coefficient and the relevant condition relating expectation errors and shocks.

4.3.1 *Government solvency and stability analysis in rational expectations models*

Any given dynamic stochastic rational expectations model can be written, without lack of generality, in the following implicit form:

$$[5] \quad F(u_{t+1}, u_t, \varepsilon_t, \eta_{t+1}) = 0$$

where the vector u_t contains the endogenous and exogenous variables in the model, as well as the conditional expectations in the model; they may be decision variables of the economic agents, such as consumption or real debt holdings, or variables obtained as functions of decisions, such as real interest rates, or exogenous variables like random shocks or policy variables decided by the government. The vector ε_t contains the innovations in the laws of motion of the exogenous states, and η_t is the vector of expectational errors, satisfying $E_t(\eta_{t+1}) = 0$, where the operator

$E_t(\bullet)$ denotes the expected value of the argument given the information set available up to time- t .

Proceeding to conduct a stability analysis of the above system, we express the linearised/ log-linearised version of the system around the deterministic steady-state can as:

$$[6] \quad \Gamma_0 u_{t+1} = \Gamma_1 u_t + \Psi \varepsilon_{t+1} + \Pi \eta_{t+1}$$

plus a set of transversality conditions:

$$[7] \quad \lim_{j \rightarrow 0} [\varphi^j u_{t+j}] = 0$$

where φ is the appropriate discount rate for this model. For the transversality conditions to hold, we need to add a set of *stability conditions* to the system described in (6). For this model, these stability conditions are defined by the eigenvectors associated with the unstable eigenvalues of the system (6). Assuming invertibility, the stability analysis is based on $\Gamma_0^{-1}\Gamma_1$.⁴ The key to obtaining the stability conditions is obtaining the transversality conditions attached to the unstable eigenvalues, given that those attached to the stable eigenvalues are always satisfied. Expressing the stability conditions as a linear (or log-linear) relationship between the expectational errors and the structural shocks affecting the economy, a unique stationary equilibrium satisfies the condition:

$$[8] \quad P^s \Gamma_0^{-1} (\Psi \varepsilon_{t+1} + \Pi \eta_{t+1}) = 0 \text{ for all } t$$

where P^s denotes the rows of the decomposed matrix of $\Gamma_0^{-1}\Gamma_1$ which amounts to a particular linear (or log-linear) combination of the endogenous and exogenous variables in the model. The above closing condition would be needed to solve for all expectational errors in the model. As discussed in Sims (2000), for the equilibrium to be uniquely determined, one such condition should be present for each expectational error in the model. The stable paths of the approximated model economy can be simulated given (6) just by appending (8).

In order to construct the fiscal rule, we would need to detect the relevant stability condition for debt given by (8), and then identify the necessary fiscal policy reaction, linking the tax instruments to the structural

⁴ Note that invertibility is not strictly required – a more generalised solution algorithm is available in the form of *QZ*-decompositions (see, for instance, Sims (2000) or Novales *et al.* (1999)).

innovations in the economy in order to endogenously determine policy responses by identifying the coefficients γ_{η}^s in:

$$\tau_t^{rule} = \gamma_{\eta}^s \eta_t^s$$

and then identify an implied relation:

$$\tau_t^{rule} = \gamma_{\epsilon}^s \epsilon_t^s$$

4.3.2 Obtaining an endogenous fiscal rule in implicit form

Consider a standard neoclassical growth model with agents maximising their discounted utility derived from consumption, and with debt, in which the transversality condition associated with debt takes the form:

$$\lim_{j \rightarrow \infty} E_t \left[\varphi^{t+j} \frac{B_{t+j}}{P_{t+j}} \right] = 0$$

Using the standard analysis outlined in Perez and Hiebert (2001) would imply that for this transversality condition to hold, one equation summarising the relevant stability conditions should be added to the system of first order conditions and constraints. This condition would take the form of a linear/non-linear combination of real debt with other variables in the economy, such as consumption, (c_t) or the capital stock (k_t):

$$\text{function}_{\text{debt}}(B_t/P_t, c_t, E_t [f_{\text{debt}}(c_{t+1}, k_{t+1}, \dots)], \dots, \text{shocks}_t) = 0$$

and should hold in each single period of time. This condition would be unique, and would replace the transversality condition in the set of optimality conditions used to solve for all the variables in the model. One way to give some economic interpretation to this type of condition would be as follows. Once agents internalise that the government commits itself to be solvent, they behave in such a way that indeed the resulting equilibrium is stationary and the government debt is valued and held by the agents.

From an economic point of view, and for the purposes of policy analysis, the intuition behind a pure analysis of the stability conditions might be considered a bit obscure. Although imposing such conditions to solve for the variables in the model is technically correct, it is somewhat

more difficult to give some economic meaning in the framework of the model being analysed. Specifically, when imposing the transversality conditions for bonds, one may wonder which instrument the government would be moving on the event of, for instance, a recession. The implicit formulation above reflects how agents internalise the commitment from the part of the government to be solvent. When this commitment is internalised, solvency is automatic. Indeed, a way to rewrite the stability condition for bonds would be:

$$E_t [f_{\text{debt}}(c_{t+1}, k_{t+1}, \dots)] = \text{function}_{\text{debt}}^{-1}(B_t/P_t, c_t, \dots, \text{shocks}_t)$$

so that imposing solvency implies a certain form to solve for agents' beliefs. This is why for the solution to be unique there should be one such condition per expectation error or expectation in the model.

4.3.3 Expressing the endogenous fiscal rule in explicit form

From the fiscal policy point of view we would be interested in knowing what amount of revenue given by τ_t^{rule} would stabilise debt and make the transversality condition hold. To do so, first note that the condition including debt of the type outlined above has a counterpart involving either a linear or non-linear relationship between the expectational error associated with agents' interest rate forecasts, ξ_t^I , a subset of η_t – the structural shocks. Using this as an example, by construction,

$$\xi_t^I \equiv f_{\text{debt}}(c_t, k_t, \dots) - E_{t-1} [f_{\text{debt}}(c_t, k_t, \dots)]$$

we can then postulate that the government should raise or decrease revenue in line with agents' relevant expectational error:

$$\tau_t^{\text{rule}} = -\gamma_{\xi^I}^b \xi_t^I$$

and we can identify the first coefficient on the right hand side of the above expression out of the stability analysis of the system at hand. Combining the coefficient identified by the means outlined above with the implied relation between ξ_t^I and the structural innovations would give us a relationship of the form:

$$\tau_t^{\text{rule}} = -\gamma_{\varepsilon}^b \varepsilon_t$$

that can be identified as the fiscal policy closure rule. Taking the set of first order conditions and constraint corresponding to the model under analysis, and appending this rule would produce stable outcomes fully consistent with the model solution, where all of the behavioural elements that the literature on fiscal rules normally imposes on the fiscal rule would be transferred back to the properties of the model itself.

5. Conclusions

In principle, the methodology outlined in this paper is applicable to a wide range of macroeconomic forecasting models, given its requirement only of rational expectations frameworks in stochastic imperfect foresight models – and, accordingly, the presence of expectations errors. Specifically, we explain how the presence of forward-looking agents, combined with some other mild conditions, is sufficient to generate model closure and intertemporal behaviour consistent with the foundations of the model at hand.

The model-based rules which would result from an application of the methodology proposed in this paper would share many of the desirable features of exogenously-imposed rules. Most importantly, they guarantee solvency on the part of the government and rule out instrument instability. In addition, the proposal presented here possesses some additional appealing properties not shared by exogenously imposed fiscal rules. Firstly, the rules are forward-looking and in a manner consistent with the specification of other sectors in the economy. More generally, the rules are consistent with the setup of the model in which they are implemented, by design, meaning that a change in structural parameters will automatically be reflected in the fiscal rule. Secondly, they are state-contingent. Exogenously imposed fiscal rules may involve acyclical features, where, for example, adjustment of taxes is dependent solely on the observed deviation of the deficit or debt from its target value. The endogenous fiscal rules derived here, on the other hand, are exhibit shock-specific fiscal policy responses, which is a desirable property from an economic point of view. Thirdly, the rules, in principle, ought to produce relatively smooth adjustment processes for taxes consistent with the behaviour of households with concave utility functions - which gives the result that households smooth consumption. Unlike many exogenously imposed fiscal rules, the impulse response of variables is consistent with the optimal time path of adjustment of agents within the model, and adjustment is not dependent on

calibrated parameters. Lastly, the rules would embody only counter-cyclical automatic adjustments on the part of the fiscal authority unless a discretionary component is assumed – and in this way can be considered as mimicking automatic stabilisation properties of government budgets.

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TRANSPARENT FRAMEWORKS, FISCAL RULES AND POLICY-MAKING UNDER UNCERTAINTY

*Andrew Kilpatrick**

1. Introduction

1. Over the past 30 years increasingly rapid flows of information have radically altered the power and role of the state. The ability of governments to influence their economies directly has gradually diminished. Electorates have become more sophisticated and better informed; labour markets have become more atomised; financial markets are more open and integrated and exert increasing power across national boundaries; and ever closer relationships between European States and among the G7 countries, for example, have strengthened fiscal surveillance and peer pressure. All these factors have contrived to limit the scope and impact of national fiscal policies.

2. Furthermore, fiscal policy itself failed more often than not to deliver stability. This undermined belief in the power of the authorities to deliver desirable macro outcomes. It is true that the task of fiscal policy was complicated by exogenous shocks, such as the oil crises in the 1970s, and persistent trends like the increase in social security spending through the 1980s. And monetary policy has been at least as much to blame. Nonetheless there have been clear episodes – at least in the UK – when the operation of fiscal policy has been a destabilising rather than stabilising force.

3. During this period developments in economic thinking also contributed to a gradual change of approach – shifting away from activist or interventionist fiscal policies at the macro level. In the macroeconomic context, academic attention has for the most part focused on monetary policy. This has been associated with many worthwhile policy changes, most notably the focus on credibility and the move towards independent central banks and greater transparency. There are parallel gains to be made to fiscal policy, although to date the academic community has paid relatively little attention to this.

* HM Treasury – United Kingdom. The views expressed in this paper are those of the author and do not necessarily represent those of HM Treasury.

4. In a dynamic and information hungry society transparency can promote a better understanding of policy and greater fiscal discipline, particularly when combined with well-defined fiscal rules and mature and respected institutions. This paper explores how a more transparent macroeconomic framework in the UK has helped put policy on a sounder footing. In a wider context, the recent IMF Code for Fiscal Transparency should similarly help improve the conduct of policy in other countries.

5. Although transparency appears to be a necessary condition for a successful fiscal policy it is unlikely to be sufficient, at least in the first instance. In particular, fiscal rules can play an important additional role. The paper describes the way in which fiscal rules have operated within a transparent framework in the UK since 1997 to produce better outcomes than experienced in previous decades.

6. Fiscal policy – perhaps in contrast to monetary policy – is a complex and multi-faceted business. The practical realities of fiscal policy-making are much more complicated than is typically portrayed in macro textbooks. All fiscal policy-makers face a number of potentially conflicting pressures beyond the decision to set the balance between spending and receipts or the short-term fiscal stance. For example, there will be a need to ensure that:

- public spending plans and the services they deliver meet the needs and expectations of the electorate;
- the tax burden remains low and the right incentives are in place to encourage work, enterprise and savings;
- ambitions for redistribution are met; and that
- policy is sustainable over the longer term and that the Government remains solvent.

7. In the UK the control of fiscal policy (including tax and spending policy) rests largely in the hands of the Chancellor and the Treasury. The *ex ante* decision in setting the balance between spending and taxation is thus relatively unencumbered by the need to take account of balances between regions or departments. The legal and parliamentary processes are also relatively straightforward and well understood. In this respect the institutional framework is sound and supports the policy-making process.

8. General uncertainty about the state and direction of the economy is an important influence on the way in which decisions are made. Even where a high degree of control is exerted from the centre, there remains a measure of manoeuvre in practice. Data and other lags from administrative,

implementation, legal or other factors often mean that little is known about the consequences of policy actions until some time after the event. Forecasting errors can be large but are not often analysed. The paper looks at the issue of uncertainty in the context of policy-making where the objectives of fiscal policy are clear and explores the trade-offs that must be made when making fiscal decisions.

9. In the light of these circumstances it is perhaps not surprising that many Governments have failed to manage fiscal policy well. The paper argues for there is a need for a cautious approach to policy-making and that a transparent macroeconomic framework underpinned by clear fiscal rules can play an important role in clarifying the purpose and conduct of fiscal policy and in producing more successful outcomes than in the past.

2. Lessons of the past

Macroeconomic instability

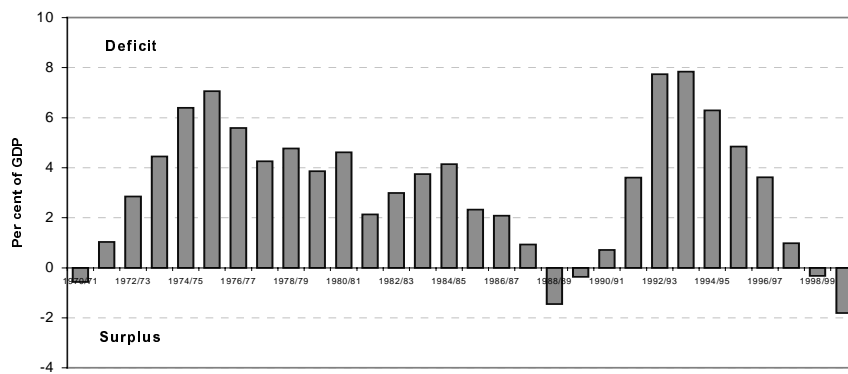
10. The primary objective of macroeconomic policy, and thus fiscal policy, should always be economic stability. Economic stability provides suitable conditions for the achievement of the high levels of growth and employment that governments and electorates desire. For this reason the new macroeconomic framework that has been put in place in the UK since 1997 has been geared towards delivering economic stability.

11. Until recently, however, the UK's macroeconomic experience was one of instability. Charts 1 and 2 show the volatile paths for the overall fiscal deficit, public debt and net worth that the UK experienced from the 1970s on. There were periods of substantial deficit, rapid build-up of debt and decline in net worth. Similar volatile patterns can be found for growth and inflation. This instability frequently translated into the uncomfortable policy choices.

12. Between 1979 and 1996 the overall deficit averaged 3 per cent of GDP. Moreover, as Chart 3 shows, there was a substantial decline in public sector net investment, from around 6 per cent of GDP to less than 1 per cent. Part of this change reflects the impact of privatisation but the general picture holds if adjustment is made for this factor. Compared with other G7 countries over this period the UK had a more volatile economy, invested less and grew more slowly (and had higher inflation).

Chart 1

Public sector net borrowing, 1970-1999
(per cent of GDP)¹



¹Excluding windfall tax and associated spending.

Chart 2

Public sector net debt and net worth
(per cent of GDP)

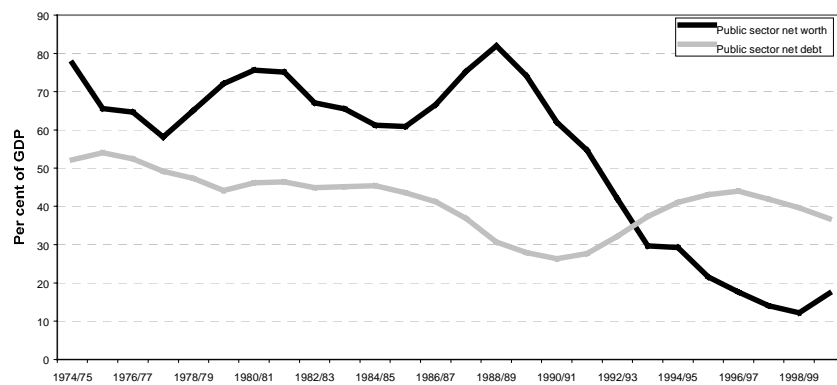


Chart 3

Public sector net Investment*Imprecise objectives*

13. Looking back, one of the lessons of this period has been the need to identify – and stick to – clear objectives. Too often in the past the purpose and precise objectives of fiscal policy were left unspecified or vague, allowing policy-makers an inappropriate degree of discretion. Policy could thus be changed in the light of circumstances, both economic and political, but without great risk of being called to account, at least in the short-term.

Poor coordination of policy

14. A notably serious failing during this time was improper coordination of fiscal and monetary policy. This seems paradoxical, given that the decision to set both the fiscal stance and the interest rate rested in the hands of one person, the Chancellor of the Exchequer. But as Table 1 shows, more often than not short-term interest rates were cut within a few days of the announced Budget package. Between 1979 and 1996, interest rates were cut on 14 such occasions, and raised in only 2.

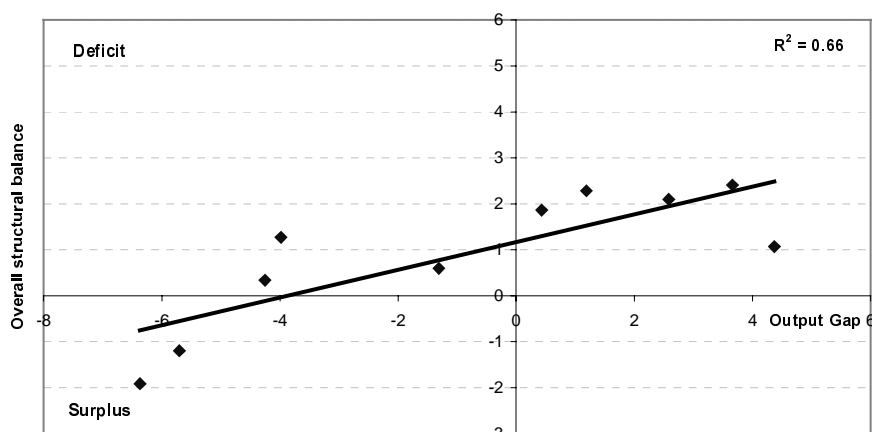
Table 1**Post Budget Interest rate changes**

Budget date	Interest rate movements	
	Rate change	Decision
12 June 1979	15 June	up 2 pps
26 March 1980		
10 March 1981	11 March	Down 2 pps
9 March 1982	12 March	Down ½ pp
15 March 1983	15 March	Down ½ pp
13 March 1984	7 March	Down ¼ pp
	15 March	Down ¼ pp
19 March 1985	20 March	Down ½ pp
	29 March	Down ½ pp
18 March 1986	19 March	Down 1 pp
17 March 1987	10 March	Down ½ pp
	19 March	Down ½ pp
15 March 1988	17 March	Down ½ pp
14 March 1989		
20 March 1990		
19 March 1991	22 March	Down ½ pp
10 March 1992		
16 March 1993		
30 November 1993	23 November	Down ½ pp
29 November 1994	7 December	up ½ pp
28 November 1995	13 December	Down ¼ pp
26 November 1996		

15. It also appears that the stance of fiscal policy did not work fully in the interests of stability. For example, during the 1980s and early 1990s the underlying stance of policy seems to have been relatively tight when the economy was weak and loose when the economy was overheating, as Chart 4 indicates.

Chart 4

Overall Structural Balance and the Cycle, 1981-82 to 1990-91



Cyclical effects

16. Care was also needed in taking account of the effects of the economic cycle on the public finances. A particularly instructive episode occurred between 1986 and 1996. During this economic cycle output is estimated to have ranged from some 4 per cent above trend in the late 1980s to a similar amount below trend in the recession of the early 1990s. The overall fiscal balance also fluctuated significantly, from a surplus of just over 1 per cent at the peak in 1988 to a deficit approaching 8 per cent of GDP by 1993.

17. When the fiscal position moved into surplus (1988-89) after a long period in deficit there was a belief that the economy's potential had increased - there were few visible signs of inflation for example - and that the economy would remain strong and the surplus would last. Commentators and politicians began to talk of 'supply-side' miracles and even in terms of 'repaying the national debt', and policy was loosened.

18. The underlying position was not so rosy however. Potential output had not risen as far as people thought. And when it became clear output was well above potential it was too late: inflation accelerated, policy was tightened and the economy went into reverse.

19. One lesson to be drawn from this episode is the importance of trying to take the impact of the economic cycle on the public finances into account. Such estimates are necessarily imprecise but it is far better to make some attempt to adjust for the cycle than none at all.

20. Had such an attempt been made an unwarranted loosening of fiscal policy at the top of the cycle might not have occurred. In retrospect, the output gap was strongly positive by the late 1980s and implied a large component of the fiscal surplus was due to cyclical, and thus temporary, rather than structural factors. Estimates now show that rather than being in surplus the underlying fiscal position was one of deficit of the order of 1 per cent of GDP. The loosening of policy merely acted to compound the difficulties of an overheating economy and forced a greater retrenchment subsequently than otherwise necessary.

Trend growth

21. A further dimension to this experience concerned the assessment of trend growth, rather than the position of the economy in relation to trend. Trend growth was thought to have increased substantially. In fact, throughout the 1980s the economy had confounded the critics and recovered strongly with little evidence of inflation.

22. Published estimates of the medium-term growth path set out in successive Budget reports were thus moved up from an average of 2¼ per cent annual growth (over 4-5 years ahead) in the early part of the period to 3 per cent by 1989. Based on an assumption of a medium-term growth path of 3 per cent the fiscal projections were duly flattered, making tax cuts seemingly viable and consistent with a stable fiscal and debt position. It was not long however before it became clear trend growth had been significantly overestimated and had to be revised down.

Consequences for public spending

23. By creating uncertainty, mistakes over medium term assumptions also carried important consequences for public spending settings. In parallel with the often short-term and expedient approach to fiscal policy a ritual of bid, counterbid, escalation and deadlock characterised much of spending policy during this time. Annual jousting between spending departments and the Treasury would typically continue until time ran out

and a special council of Ministers (eg Star Chamber) or even the Prime Minister was required to declare in favour of Department X or Y.

24. In effect the planning horizon was a year ahead. This led to inefficiencies of various kinds; including, for example, poor value for money spending at year-end under a ‘use it or lose it’ mentality. While indicative plans were set for years 2 and 3, little attention was paid to them, not least because the economic and fiscal projections on which they were based constantly changed. Institutional short-termism prevailed and investment in particular suffered as a result.

Some conclusions

25. Some broad conclusions and lessons may be drawn from the experiences of this period. In particular, fiscal policy should benefit from:

- clear principles and targets;
- transparency and accountability;
- well-defined roles and responsibilities among the key actors;
- adequate mutual support between fiscal and monetary policy in promoting stability;
- caution against over-optimistic and insufficiently forward-looking assessments;
- taking account of the effects of the cycle on the public finances;
- a more stable and long-term framework for public spending decisions; and
- fiscal (and monetary) decisions should always be made in the best interests of the economy.

3. Reforms to the framework

Learning the lessons of the past

26. The design of the UK’s new macroeconomic framework has taken account of the lessons of the past. In addition, policy since 1997 has been set to restore the health of the public finances. The Government’s reforms have been based on sound principles and are supported by clear objectives and firm rules. By aiming to create a climate of low inflation and strong public finances not only is the basis for economic growth enhanced but it is

possible to take a much longer term view in plotting a course for public spending and, in particular, to create a firmer path for public investment.

27. Rather than leaving too much scope for policy to be decided on the basis of expediency, fiscal policy now operates under three significant types of constraint:

- first, there is greater **transparency and accountability**;
- second, **independent and transparent monetary policy**;
- third, there are firm **fiscal rules**.

28. In all this the need to restore and subsequently maintain the credibility of policy has been regarded as of paramount importance.

Transparency and accountability

29. Given the history of UK fiscal policy, and the fact that the public sector deficit was over 4 per cent of GDP in 1997, it was clear when the new Government entered office that considerable changes were necessary to achieve a greater degree of credibility in policy making.

30. The need for transparency and the advantages of policy credibility are well documented for monetary policy. Credibility and transparency are, however, just as important when it comes to setting fiscal policy. For this reason, a similar philosophy to that adopted for monetary policy was pursued in the case of fiscal policy.

Legislative framework

31. The Code for Fiscal Stability (HM Treasury (1998f)) was thus created to provide a basic structure for the framework and was given statutory backing in the Finance Act 1998. The Code strengthened the openness, transparency and accountability of fiscal policy, features that also characterised the framework for monetary policy following the introduction of the 1998 Bank of England Act. It also improved the quality of information given to the public, the lack of which in the past was an important factor behind policy mistakes.

32. Legislating to make the Code a formal requirement of this Government's fiscal policy and those of future governments was an important step forward. For good reason a number of details were left

outside the statute book. But what the legislation did do for the first time was formally require any government to:

- specify its principles of fiscal management and state the objectives of fiscal policy;
- set out key annual reporting requirements, in particular a consultative Pre-Budget Report, an Economic and Fiscal Strategy Report as well as the traditional Financial Statement and Budget Report, and a Debt Management Report (see box 1); and
- adopt best practice accounting standards.

33. The Code draws together and makes clear the framework within which fiscal policy must operate. It demonstrates the Government's commitment to well-based policy, helping to improve the time consistency of fiscal policy. In other words, it supports the idea that the optimal policy for the Government remains the same over time, helping to ensure that short-term expediency does not take precedence over long-term planning.

Principles of fiscal management

34. Five principles of fiscal management are at the heart of the framework:

- *transparency* in the setting of fiscal policy objectives, the implementation of fiscal policy and in the publication of the public accounts;
- *stability* in the fiscal policy making process and in the way fiscal policy impacts on the economy;
- *responsibility* in the management of public finances;
- *fairness*, including between generations; and
- *efficiency* in the design and implementation of fiscal policy and in managing both sides of the public sector balance sheet.

35. These principles help to make clear what policy-makers should have uppermost in their minds when setting policy.

Roles and responsibilities

36. An integral part of any successful management framework is a

Box 1**KEY PROVISIONS OF THE CODE FOR FISCAL STABILITY**

Under the Code, the Government undertakes a number of commitments. It must:

- *conduct fiscal and debt management policy in accordance with a set of specific principles;*
- *state explicitly its fiscal policy objectives and operating rules, and justify any changes to them;*
- *operate debt management policy to achieve a specific primary objective;*
- *disclose, and quantify where possible, all decisions and circumstances which may have a material impact on the economic and fiscal outlook;*
- *ensure that best practice accounting methods are used to construct public accounts;*
- *publish a pre-Budget report to encourage debate on the proposals under consideration for the Budget;*
- *publish a Financial Statement and Budget Report to disclose the key Budget decisions and the short-term economic and fiscal outlook;*
- *publish an Economic and Fiscal Strategy Report outlining the Government's long-term goals, strategy for the future and how it is progressing in meeting its fiscal policy objectives;*
- *publish a specific range of information in its economic and fiscal projections, including estimates of the cyclically-adjusted fiscal position and long-term projections to assess the sustainability of policy;*
- *invite the National Audit Office to audit changes in the key assumptions and conventions underpinning the fiscal projections;*
- *produce a Debt Management Report outlining the Government's debt management plans;*
- *refer all reports issued under the Code to the House of Commons Treasury Select Committee;*
- *ensure that the public has full access to the reports issued under the Code.*

proper assignment of roles and responsibilities among the main actors. In the case of the Monetary Policy Committee (MPC), established in 1997, its job is to set interest rates to achieve the Government's inflation target. They are thus held to account for their performance in achieving low inflation.

37. Responsibility and accountability for fiscal policy is equally clear. The Chancellor has set clear targets against which commentators, the public and Parliament alike can assess performance. Furthermore, under the new public spending regime departments and their Ministers have been allocated funds over three years in return for agreed pledges to achieve a range of specific results (known as Public Service Agreements), all of which are published and subject to regular appraisal.

Consensus

38. Compared with the past there is a reasonable consensus over the broad parameters of what constitutes sensible fiscal policy, and perhaps even more agreement over what represents bad policy. Transparency helps to build up the constituency for stability-oriented policies and encourages people and businesses to plan for the long term, rather than basing decisions only on what makes sense in the short term. In this way it helps to allocate both public and private resources efficiently.

Cyclical adjustment

39. One aspect of the fiscal framework that builds on past experience is the view that prominence should be given to the underlying fiscal position through the use of cyclically-adjusted indicators. Estimates of structural fiscal balances were thus published for the first time by a UK Government in 1997.

40. There are uncertainties and differences of view over methodologies used for calculations of structural balances so it follows that a high degree of transparency is appropriate here too. The UK published a paper (HM Treasury (1999b)) explaining how the cyclically-adjusted estimates presented in Budget reports are constructed. It is thereby open to others to make their own calculations for the purposes of assessing the Government's plans and comparing them against the Government's view;

and for example major international organisations such as the IMF, OECD and European Commission do this.

Automatic stabilisers

41. Focusing on the cyclically-adjusted position also gives appropriate prominence to the automatic stabilisers and the role they play in smoothing the path of output by boosting aggregate demand when the economy is below trend and curbing demand when the economy is above trend. The strength of the automatic stabilisers will depend on particular characteristics of the taxation and spending regimes, for example the progressivity of taxes. But when considering the extent to which the fiscal policy framework is supporting monetary policy, the strength of the automatic stabilisers should be taken into account.

Key assumptions

42. Transparency over the key assumptions which form the basis of the fiscal projections is important. It allows commentators and others scope to assess the realism of the projections on which policy is based, and to explore variants. In the UK these assumptions are independently audited by the National Audit Office (NAO) who consider whether they are realistic and cautious. Their reports are presented to Parliament and form part of the Budget documentation (see, for example, NAO (2001)).

43. The Government also sets store in focusing on the longer term and avoiding the risk of short-term reversals in policy. Thus policy is assessed annually against longer-term developments, such as the consequences of the ageing of the population.

Scrutiny and accountability

44. The ability to conduct high quality scrutiny also depends on transparency in a different direction; namely on timely, accurate and relevant statistics and high quality accounting standards. The UK's track record on statistics is good and has been enhanced in a number of ways to allow a better assessment of the fiscal aggregates. Moreover, all relevant figures are presented in line with internationally accepted statistical definitions.

45. Accounting standards in the public sector are undergoing a process of change as the UK moves onto a resource and budgeting basis, as has occurred in New Zealand and Australia for example (HM Treasury (1999c)). They are thus becoming increasingly in line with best practice in the private sector.

46. Although it is still a little way off, developments are well under way to produce a set of Whole of Government Accounts by 2005-06. This will be the first time a full consolidated set of accounts for the government sector will be available in the UK. Consolidated accounts for central government are likely to be available in 2003-04 and will help improve the quality of public spending decisions in forthcoming Spending Reviews.

47. Published Budget and other reports such as the UK Convergence Programme (HM Treasury (2000d)) contain a considerable amount of information on the progress of and outlook for fiscal policy. The ability and willingness to assess performance in a transparent way – for example by including details of fiscal aggregates on a cyclically-adjusted basis and by providing long-term fiscal projections – is an important feature of sound policy. So too is a strong commitment to long-term goals and a willingness to make policy-adjustments (in either direction) so that policy remains on track.

Objectives

48. Above all, there must be transparency over the objectives of policy. As set out in *Analysing UK Fiscal Policy* (HM Treasury (1999f)) the key objectives of the Government's fiscal policy are:

- over the *medium term*, to ensure sound public finances and that spending and taxation impact fairly both within and across generations. In practice, this requires that:
 - the Government meets its key taxation and spending priorities while avoiding an unsustainable and damaging rise in the burden of debt; and
 - those generations who benefit from public spending also meet, as far as possible, the costs of the services they consume;
- over the *short term*, to support monetary policy, by:
 - allowing the automatic stabilisers to play their role in smoothing the path of the economy in the face of variations in demand; and

- to provide further support to monetary policy through changes in the fiscal stance, where prudent and sensible.

49. The Government's specific fiscal rules provide the operational basis for achieving the medium term goals while the independent central bank conditions the scope of fiscal policy over the shorter term. We turn to these issues.

Independent and transparent monetary policy

50. Proper coordination of fiscal and monetary policy is an important feature of the new macroeconomic framework. A high degree of transparency, as well as clear roles and responsibilities for all parties, ensures that the monetary policy authority is aware of fiscal policy objectives and performance, including performance against those objectives.

51. Monetary policy and fiscal policy each have the same aim of underpinning long-term growth through economic stability so it is appropriate for policy to be properly coordinated. Clearly defined objectives and transparent procedures enhance this. The MPC and the Government are each aware of what the other is trying to achieve. The arrangements allow the Treasury (non-voting) representative to participate fully in MPC deliberations, for example helping to provide MPC members with a good understanding of tax and spending developments during the year. In this way the main players are able to become aware of the likely reaction to each other's policy decisions.

52. Awareness of the policy reaction function by key players is one aspect of the system. However, the transparency and independence of the monetary policy framework imposes a particularly important discipline on fiscal policy. Its real impact in this context comes through the risk that interest rates are raised in reaction to fiscal policy, and through comments on the policy setting in the published minutes of the MPC meetings and the Inflation Report. In effect, these provide a high profile judgement on the Budget and other aspects of fiscal policy, which need to be taken into account by the fiscal policy-maker if credibility is to be maintained.

53. There can be no clearer contrast with the past. The present arrangements provide a credible threat of an interest rate rise in the event of inappropriate fiscal policy. This constrains budgetary policy in a more

time consistent way than previously where a Chancellor remained free to choose the option of declaring his economic policy, and the Budget in particular, a success and worthy of an interest rate cut.

Fiscal rules

54. A transparent macroeconomic framework along these lines goes a long way in holding policy to a more reasonable set of outcomes. Nonetheless, in the context of a new framework, which takes time to be fully understood, a simple guide to the operation of policy is also necessary. Hence the need for fiscal rules.

55. Ideally, such rules should be realistic and relevant, capable of being understood by all, as well as being measurable and achievable. They should also be applied consistently. Different rules might share these characteristics but it is unlikely that universal rules exist. For this reason it was decided not to incorporate the specific fiscal rules within the UK legislation.

56. Different rules should reflect, for example, the different circumstances countries face at any particular time. Nonetheless, for a group of countries such as those in the European Union a common set of fiscal rules may be appropriate provided the diversity of Member States' circumstances can be taken into account in the application of those rules.

57. A fiscal rule, or set of rules, is necessarily somewhat arbitrary. However, rules can serve as a guide to better behaviour and for this reason alone it is likely to make sense to introduce some rules. Once this has been done it is important for the credibility of policy to stick with them.

58. Two fiscal rules apply in the UK:

- *UK fiscal rules the golden rule*: over the economic cycle, the Government will borrow only to invest and not fund current spending; and
- *the sustainable investment rule*: public sector net debt as a proportion of GDP will be held over the economic cycle at a stable and prudent level.

59. The fiscal rules provide benchmarks against which the performance of fiscal policy can be judged. The Government will meet the golden rule if, on average over a complete economic cycle, the current budget is in

balance or surplus. The Government has also stated that, other things being equal, a modest reduction in public sector net debt to below 40 per cent of GDP over the economic cycle is desirable.

Rationale

60. Economic theory sheds light on the UK's past experience and strengthens the rationale for stating explicit fiscal rules. The benefits of establishing a sound and stable fiscal framework will be maximised if the framework is credible - that is, if households and firms believe firmly that the Government will deliver its commitments.

61. If the policy framework lacks credibility, households and firms will continue to base their decisions on previous experience. Savings and investment decisions would continue to anticipate poor fiscal management and a return to volatile output, high inflation and low growth. The benefits of a new framework would thereby be delayed until the Government was able to establish a convincing track record of favourable policy outcomes.

62. Firm fiscal rules also modify the tendency for fiscal policy to deviate from sound economic principles to provide short-term gains to certain interest groups. Such tendencies often occur, not surprisingly, close to elections. Indeed, as Keech (1985) suggests, even if a fiscal rule is not optimal in a perfect world, it may well be the best economic response in a situation where the unconstrained political process produces outcomes that are even less desirable.

Flexibility: cycles and other shocks

63. Rules, by their very nature, are intended to impose restrictions on behaviour. Fiscal rules can ensure that the public finances are managed prudently and are maintained within sensible boundaries so that Governments meet their spending commitments without jeopardising economic stability or running up an unfair bill for future generations.

64. It is important, however, that the chosen rules allow sufficient flexibility to react sensibly to economic developments. The right balance needs to be struck between a rigid mechanical approach and one based on unfettered discretion. In particular, there must be scope to accommodate

the impact of the economic cycle and room to act in the event of exceptional economic shocks.

65. Fiscal policy can help to stabilise the economy through the operation of the automatic stabilisers. These movements support monetary policy by dampening economic cycles without putting at risk the long-term sustainability of fiscal policy. It is essential that the chosen rules do not override this inbuilt capacity to respond to changing economic circumstances.

66. The chosen fiscal rules should also make room for sensible discretionary adjustments to fiscal policy. For example, in the first years of this Government's term of office fiscal policy was additionally tightened to support monetary policy and to restore the structural integrity of the public finances as quickly as possible.

67. Fiscal rules should similarly incorporate a measure of flexibility to accommodate exceptional shocks, not associated with the usual economic cycle. The Code for Fiscal Stability thus permits a Government to deviate from its fiscal rules in exceptional circumstances, such as wars or natural disasters for example. The Code requires the reason for any such change to be explained in public, with guidance on how policy will operate in the meantime and for how long (if known).

Scope

68. A further consideration is the ambit of the rules. Ideally, they should relate to the whole public sector, ie general, central and local government and public corporations. The liabilities of public corporations could fall ultimately on the taxpayer so it is appropriate that the fiscal rules extend beyond the general government sector. Moreover, if the rules were applied to these activities alone it could lead to perverse incentives to reclassify spending in an attempt to get around the fiscal rules.

Golden rule

69. The previous fiscal policy regime made no formal distinction between current and capital spending and concentrated on a cash aggregate, the public sector net cash requirement. A significant shortcoming of this approach was that it created a bias against capital

spending. It also gave misleading signals when public assets were sold off. Current and capital spending could be offset against each other, making capital projects - where returns appear only in the future - an easy target when it became necessary to tighten the overall fiscal policy stance. The bias against capital contributed to a considerable under-investment in public assets (HM Treasury (1998c)).

70. The golden rule draws a distinction between current and capital spending and is designed to remove the bias against capital spending. The rule also gives consideration to fairness, and in particular, fairness between generations. Government decisions on spending and revenue may have important implications across generations. For example, large-scale investments, such as roads, produce benefits not just at the beginning but over the whole of the investment's effective life, which may be in excess of 40 years. It is fair that those generations who benefit from this spending also meet some of the costs.

71. It is not practical, of course, to match the timing of the streams of costs and benefits for each and every spending proposal. But, in aggregate, the Government takes the view that current spending, which mainly provides benefits to existing taxpayers, should be paid for by the current generation of taxpayers. Similarly, because capital spending produces a stream of services over time, it is appropriate that this form of spending is financed initially through borrowing. As far as possible each generation should pay for the benefits of the public services that it consumes.

72. It follows naturally that the definitions of current and capital spending are important to the application of the rule. For the purpose of the fiscal rules, the Government considers the best measure of capital currently available is that used in the national accounts (Office of National Statistics (1998)).

73. Another key feature of the golden rule, as the Government has adopted it, is that it is defined over the economic cycle. As mentioned earlier this allows room for the automatic stabilisers to operate freely. This characteristic is shared with the sustainable investment rule.

Sustainable investment rule

74. The Government's motive for borrowing reflects considerations related to fairness between generations and factors related to the economic

cycle. Borrowing allows the government to spread the upfront costs associated with capital projects across generations, so that the costs and benefits are matched more evenly. Even in the absence of major catastrophes such as war, most countries have positive levels of public net debt. However, in many cases this is symptomatic of poor control of public spending rather than high investment.

75. As noted above, the golden rule allows governments to borrow for the purposes of investment. If left unconstrained, however, it is conceivable that borrowing could reach levels that are too high, notwithstanding the specific merits of the underlying investment. This possibility motivates the Government's sustainable investment rule, that net debt should be held at a stable and prudent level.

Limits to public sector debt

76. The concept of sustainability involves analysing the conditions required to stabilise public debt at a given proportion of GDP. On this basis, a fiscal policy is usually defined as sustainable if, given reasonable assumptions, the government can maintain its current policies indefinitely while continuing to meet its debt obligations.

77. If the real interest rate exceeds the real growth rate - as has been the case for most of the last two decades - a primary surplus is generally required to prevent the debt ratio from rising. The extent of this surplus depends on the size of the interest rate-growth gap and the target public debt to GDP ratio.

78. The risks that are faced by a country with high levels of public debt are well known and readily apparent from calculations of primary balances required to stabilise debt under different conditions. A seemingly sustainable fiscal policy can quickly become unsustainable when real interest rates outstrip growth. And the costs of fiscal policy becoming unsustainable are likely to be high. Indeed, the corrective action needed to avert a fiscal crisis or the debt servicing obligations created by rising debt can threaten economic and political stability. Therefore, a disciplined and prudent approach to fiscal policy is sensible.

79. A prudent fiscal policy can be defined as one that is likely to be sustainable even in the event of adverse shocks. Thus, a prudent fiscal policy is likely to lead governments to select a lower level of public debt.

80. It is important to avoid high levels of debt as well as unsustainable levels. Although there is no clear consensus on the optimal level of public debt, it is clear that high levels of public debt can limit the effectiveness of policy. For example, high levels of public debt can:

- *make the public finances more vulnerable to increases in interest rates and economic shocks*: at high levels of public debt a sustainable fiscal policy can quickly become unsustainable through adverse movements in interest rates and/or growth rates;
- *erode the ability of fiscal policy to buffer the economy against major shocks*: if debt is not maintained at low levels during favourable economic times, there will be reduced scope for supporting monetary policy and cushioning the economy when faced with unfavourable shocks;
- *lead to a higher risk premium in interest rates*: high public debt levels increase default risk which leads to greater risk premia, higher interest rates and potentially 'crowding out' effects;
- *lead to a low level of Government services per unit of tax collected, lower levels of economic welfare and higher levels of structural unemployment*: high debt levels imply high levels of debt servicing - resources that would otherwise be available for spending programmes or to be distributed as tax cuts.
- *threaten intergenerational fairness* : high initial levels of debt can put such intergenerational equity at risk, especially where pensions systems are unfunded.

81. Even if fiscal policy is sustainable, the public debt ratio may not be at an optimal level. Some level of public debt is clearly justified. However, as noted above, high levels of public debt make the economy vulnerable to the need for large adjustments in fiscal policy with negative consequences for long-term growth and employment. This suggests that there may be a middle ground: a level of debt that represents an optimal trade-off between the need to undertake public investment (and funding this in an equitable way) and the economic costs associated with higher levels of public debt.

82. A small number of academic studies have tried to identify the optimal public debt ratio using empirical means. Three approaches may be noted:

- *inferring the optimal debt ratio by observing debt/equity ratios prevailing in the private sector*. The assumption implicit in this approach is that whatever the optimal debt ratio may be, the private

sector has solved this to its own satisfaction. Thus given the Government's estimated assets, one could argue that the optimal debt ratio for the UK may lie somewhere in the range of 30-50 per cent of GDP (based on private sector gearing ratios). However, given the differing risk characteristics of activities in the public sector the use of private sector benchmarks is questionable, and even more so when applied at an aggregate level.

- *inferring the optimal debt ratio from tests of dynamic efficiency.* This approach stems from economic theory and involves analysing differentials between investment and profit levels or, alternatively, economic growth rates and interest rates. One US study by Zee (1988) suggested that the optimal public debt level is less than 20 per cent of GDP, although the results are conditional on the parameters and assumptions made in the model.
- *estimation of the optimal public debt ratio using statistical techniques.* One study by Smyth and Hsing (1995) using US data suggested that economic growth is maximised when public debt levels are around 50 per cent of GDP. Robson and Scarth (1997) argue for a target of 20 per cent of GDP in the Canadian context. By contrast, another US study by Asilis (1994) suggested that the costs of being away from the optimal level are quite small: public debt levels need to rise substantially before serious damage to the economy will occur. More generally, it is important to note that the public debt that maximises growth need not correspond to that which maximises welfare.

83. The methods and assumptions underpinning each of these approaches are open to criticism; and the range of results illustrates the difficulty encountered in arriving at a precise answer to the optimal debt ratio question.

84. While it may not be possible to make definitive statements about optimal ratios of debt to GDP, it is possible to say that lower debt ratios allow more room for manoeuvre to redress shortfalls in public investment or to undertake tax reforms that might enhance potential output and employment. Lower debt thus conveys some advantages and over time may provide room for more flexibility in the interpretation of shorter term rules, such as overall budgetary balance.

Conclusion

85. The golden rule is particularly appropriate in the UK context, given a history of public sector underinvestment and run down of net worth. The sustainable investment rule ensures borrowing to finance investment is not excessive and remains consistent with fiscal policy sustainability. By setting the rules over the economic cycle appropriate scope is given to the operation of the automatic stabilisers. The choice of holding public net debt below 40 per cent of GDP (roughly equivalent to less than 50 per cent on the Maastricht definition) is somewhat arbitrary, though not unreasonable. It means that the public debt ratio is amongst the lowest in the EU and G7 and provides room to cope with unforeseen shocks.

4. Uncertainty and caution

86. In considering the operation of fiscal policy, and Budget decisions in particular, it is important to recognise the high degree of uncertainty that surrounds any fiscal judgement. As noted earlier, the costs of making faulty judgements can be severe. It is thus important to make every effort to meet a set of fiscal rules so as to achieve credibility. The strength of this commitment will be tested by the process through which judgements are made in trying to meet the rules.

Credibility and caution

87. In order to have a good chance of meeting the fiscal rules there is a need to guard against future uncertainties. If the costs of policy reversals are high, and if a set of fiscal rules should be met to generate credibility, it becomes all the more important to take a cautious approach.

88. But it is also the case that there are dangers in excessive caution, since that might imply a sub-optimal tax or spending path, or intergenerational imbalance, with associated welfare costs. A suitable balance therefore needs to be struck between credibility and caution on the one hand and efficiency, growth and fairness on the other.

89. If the sole aim of policy was to meet a particular fiscal rule, there is no reason in theory why it should not be possible to achieve a very high probability of doing so if the fiscal policy-maker is prepared to build in a

sufficiently large margin for error and does not mind systematically overachieving the rule.

90. However, while there are potential benefits from budget surpluses, such as lower risk premia, lower debt service costs and reduced vulnerability to shocks, there are also potential costs, arising for example from the distortionary effects of taxation, political costs associated with ignoring calls for tax cuts/more spending¹ and costs associated with possible distortions to intergenerational fairness.

91. This is shown conceptually in Chart 5. The first line shows the expected costs associated with failing to meet the rule. These decrease as the certainty of meeting the rule rises. The second line illustrates the implicit expected costs of overachievement. As the probability of success moves towards certainty the margin required to raise that probability – and hence the distortionary taxes needed – rises at a disproportionate rate. The cost functions are assumed to be non-linear because the cost of missing the rule is likely to depend increasingly on the amount by which the rule is missed, in both directions. The chart illustrates an assumed asymmetry in that the costs of missing the rule on the downside (risking credibility) are greater than those associated with overachieving the objective. A total cost curve can be found by summing the two cost functions. Assuming the aim is to minimise the total expected costs, a margin sufficient to raise the probability of meeting the rule consistent with the lowest point of the total cost curve is required.

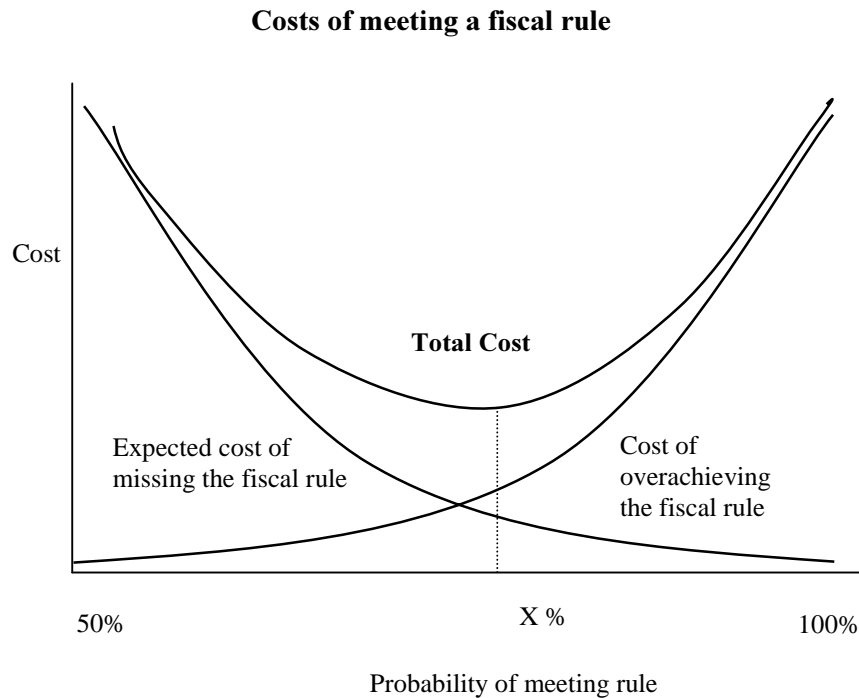
92. It is conceivable that such a trade-off may change over time. For example, the costs of missing the rule may diminish as a fiscal framework becomes more established, and its credibility grows.

Precautionary saving

93. The problem facing a responsible government in trying to smooth taxes and/or spending in the face of future uncertainties is not dissimilar to that facing consumers who want to smooth the path of consumption/utility.

¹ A recent study by the US General Accounting Office suggests that public support for fiscal discipline quickly dissipates when there is excess money at the end of the year, see “Budget Surpluses: Experiences of other nations and implications for the US” General Accounting Office (1999).

Chart 5



Being aware of the discomfort that unfavourable future shocks may bring consumers build up precautionary savings in an attempt to cover such risks. The greater the future uncertainties or the tighter the liquidity constraint faced by the consumer, the greater the degree of precautionary saving.

94. Governments in industrialised countries are unlikely to face problems of solvency; and they of course retain the power to tax. In this respect they face less severe constraints than many consumers. Nonetheless, the desire to be re-elected may operate in a similar way to a liquidity constraint. In particular, Governments in some instances may wish to insure themselves against the consequences of unexpected adverse shocks in the run-up to an election. Moreover, at the margin a less than cautious approach could force up risk premia on debt; while attempts to raise taxes may be counter-productive. A responsible approach to fiscal policy is thus likely to imply a certain degree of precautionary saving.

Contrasts with monetary policy

95. In the monetary policy context, outcomes above or below the inflation target are regarded as equally undesirable. The independent central bank is able to raise or lower interest rates, at frequent intervals if necessary, without fear of asymmetrical costs or penalties, provided inflation is already low. Policy can be conducted in a time consistent manner. In fiscal policy, however, the position is rather different.

96. Once a set of fiscal rules is in place it will generally be better for credibility to meet the rules by a small margin rather than to miss by an equivalent amount, particularly when the rules are new. The Government in effect faces a reputational cost function which is asymmetric. Its form might be thought of as $\Phi(D) = \max \{0, \phi D\}$ where D is the accumulated deficit since the Government entered office, or when the rule was set.

97. An example is shown in Cart 6. This illustrates a quadratic reputational loss function of the form $\Phi(D) = \phi D + \frac{1}{2}\psi D^2$. Here reputational losses increase with the size of the deficit; and there is an increasing marginal cost associated with a large accumulated deficit (or surplus). Once in deficit, the Government faces reputational losses and to stem the flow would require a surplus to meet the rule. If surpluses are excessive, the Government also suffers a reputational loss, on the basis the fiscal rule(s) is significantly overachieved and the electorate are unimpressed by the failure to hand back the excess in the form of tax cuts or better public services. The Government thus prefers to achieve a modest surplus, and aims to be in the region AB (at $-\phi/\psi$).

The government's reputational loss is:

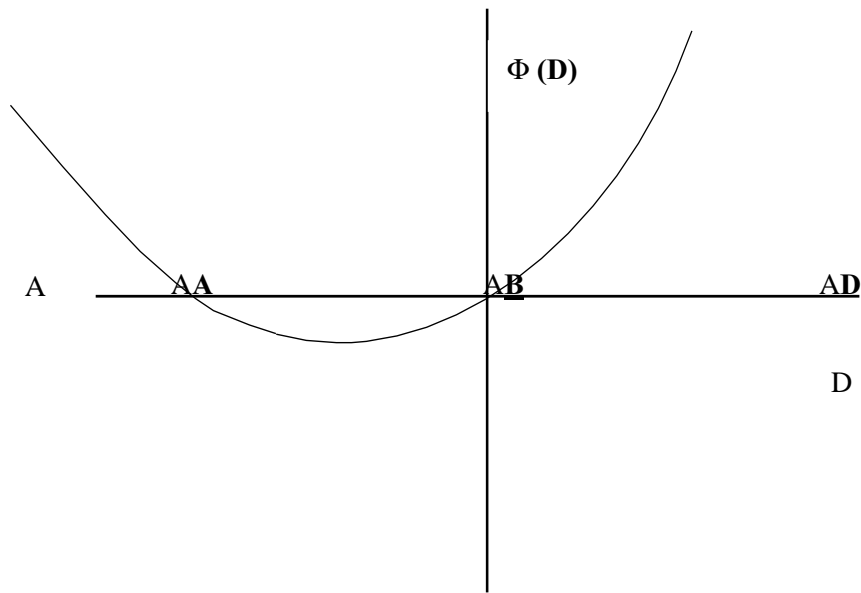
$$\Phi(D) = \phi D + \frac{1}{2} \psi D^2 \quad \text{where } \phi, \psi > 0$$

98. It is also generally much easier to reduce taxes than to raise them; and to increase spending rather than cut it. There are several reasons for this:

- political factors: governments face elections and the instruments of fiscal policy are powerful and tempting tools in the electoral armoury;
- administrative, legal, parliamentary and other lags make reversals of policy difficult to achieve;
- losers, ie current taxpayers or recipients of public spending, are likely to press for compensation whereas gainers (such as future taxpayers) will be less vociferous.

Chart 6

The Government's reputational loss function



99. Fiscal decisions in Budgets are normally conducted annually and this is a further reason why fiscal policy cannot operate like monetary policy. But it is also the case that the principle of tax (and spending) smoothing implies an asymmetric effect in the face of meeting a fiscal rule. The deadweight costs² of distortionary taxes are an increasing function of the tax rate so any requirement to raise taxes to meet a fiscal rule, eg at the end of a cycle or a Parliament, will be more costly than an equivalent reduction in taxes.

² A deadweight cost reflects the efficiency loss incurred when the imposition of non-lump sum taxes drives the economy away from its free market equilibrium.

100. For these reasons time inconsistency remains a problem in the fiscal policy context. The external constraints imposed by transparency and fiscal rules are an important and necessary counter-balancing force. But the principles of tax smoothing and gains from credibility can be enhanced by a cautious approach to policy.

Time horizon

101. The time horizon in the application of any fiscal rule is also relevant since it will determine the speed of adjustment to shocks. For example, if balance had to be achieved in each and every year, the Government would need to change its spending plans or tax rates on a frequent basis. The administrative costs of such a system - both to the Government and taxpayers - makes it highly impractical. More fundamentally, frequent tax rate changes could be destabilising, raise uncertainty and run counter to the principle of tax smoothing.

102. The UK approach moves in the direction of tax smoothing in a number of ways. First, allowance is made for transitory shocks related to the economic cycle. The time horizon is thus likely to be several years, though this is not precisely known. Second, capital and current budgets are treated separately. There is no strong reason why current taxpayers should finance capital investment in full so this potentially 'lumpy' constraint is effectively smoothed out, subject to a debt ratio criterion.

103. In principle, the time horizon might be stretched even more, leaving only a fiscal sustainability constraint in place (in addition to the constraint deriving from an independent monetary authority). However, it is not clear that fiscal discipline is sufficiently entrenched or credible to make this feasible.

Forecast errors

104. While a Budget is an annual event, and taxes and spending can in principle be adjusted each year, frequent and unpredictable adjustments to taxes and public expenditure are far from ideal. The effects of fiscal measures take time to work through, and are sometimes set to change only some years ahead. Moreover, it is often not clear what impact a Budget has had by the time of the subsequent Budget.

105. Fine tuning of fiscal policy is rarely feasible or sensible. It is therefore appropriate to try to plan as smooth a path for taxes and spending as possible. Given this aim – and consistent with the principle of stability – a medium-term approach is necessary.

106. The emphasis on the medium term puts a great deal of weight on forecasts. The fiscal projections are a crucial component in deciding which Budget options for tax or spending appear feasible. But forecasts are fallible, so care needs to be taken in assessing the risks involved.

107. These risks may be thought of as deriving from two sources: mis-specification of general economic conditions, notably GDP, and more specific fiscal risks, such as sudden shortfalls in taxes or overspends unrelated to cyclical factors. In the UK, fiscal projections have suffered from both sources of error. Charts 7 and 8 show successive projections of GDP and borrowing against outcomes illustrate some of the problems.

108. It is instructive to look back at the size and sources of forecast errors in the context of forecasts on the basis of which fiscal judgements were made. For this purpose, we have looked at the period from 1986 to 1996, which comprised a full economic cycle. It is difficult to make an assessment earlier than this; and we have only limited information on forecast errors since the new macroeconomic framework was put in place.

109. Table 2 sets out average one year ahead forecast errors for public sector net borrowing (PSNB) for the period 1986-87 to 1996-97. It distinguishes between actual errors and absolute errors, ie errors where the signs are ignored. The errors refer to outturn less forecast; and the one year ahead period relates to the immediate year, eg the one year ahead forecast error for the March 1986 Budget refers to the outturn and forecast for the fiscal year 1986-87. The table also shows the errors which occurred from factors other than from GDP forecast errors, for convenience described as ‘fiscal’ errors. An unexpected shortfall in underlying income tax receipts would be an example of such an error.

110. Over this period, the average error in forecasts of borrowing amounted to 0.1 per cent of GDP. One year ahead forecasts of borrowing were thus slightly optimistic on average. However, this hides considerable variation: the average absolute error was more than 1 per cent of GDP, a large error just one year ahead.

Chart 7

Successive illustrative projections of real GDP

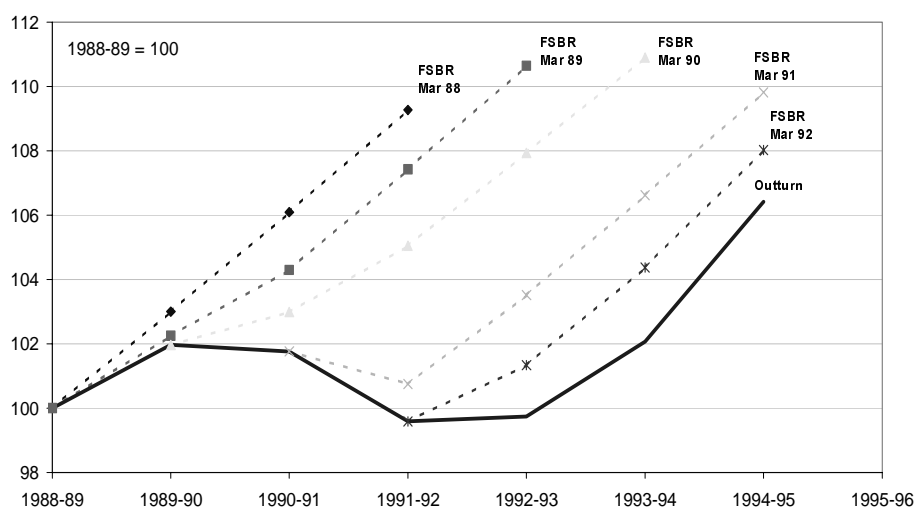


Chart 8

Borrowing (PSNB) - Medium term projections and outturns

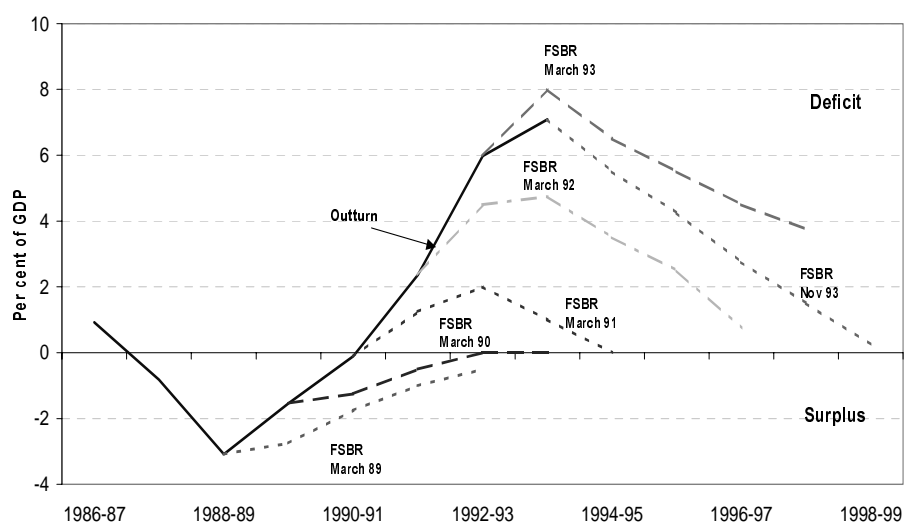


Table 2

Comparison of one-year ahead forecast errors - borrowing (PSNB)

1986-87 to 1996-97	Total error (% GDP)	'Fiscal' error (%GDP)
Actual	0.1	0.7
Absolute	1.1	1.1

111. Within the total, errors in forecasting GDP were an important influence. But even if GDP had been forecast correctly, significant fiscal errors remained, also amounting to around 1 per cent of GDP in absolute terms. Although this is not shown in this table the errors grow significantly as the time period is extended to two-year, three-year ahead errors, etc. These errors are strongly influenced by a growing GDP error component. For example, the two-year ahead absolute error in PSNB forecasts is estimated to be 2 per cent of GDP, of which the fiscal error is 1.4 per cent of GDP; three-years ahead the absolute average error is 3 per cent of GDP, with the fiscal component some 2 per cent.

Implications for the conduct of fiscal policy

112. These results carry important implications for fiscal policy. First, they indicate that even if GDP is forecast correctly, or if the economy remains on trend, considerable errors can still arise from other sources. Second, the considerable uncertainties implicit in forecasting mean in practice that there is leeway for the policy-maker to fudge results if the process is not wholly transparent.

113. Above all, the scale of the errors emphasises the need for caution in policy-making. It is not unusual for a surge in spending, a large bonus or a sudden shortfall in receipts to appear "out of the blue", sometimes almost before the ink has dried on a Budget. Political and other pressures can dictate that a surplus or windfall should be given away or spent on priorities. (Consider for example recent the clamour to spend UTMS

licence windfall receipts.) Given the size, frequency and direction of the errors it is quite probable that a windfall, if fully spent for example, will have to be clawed back before long.

Building a margin

114. Given the potentially large errors in any forecast of the public finances, aiming for exact balance, say, one year ahead would result in a significant chance that the target was not met and might require drastic or inappropriate remedial action to meet the objective. This could be costly in economic terms and might compromise the ability of fiscal policy to support monetary policy. For these reasons, it makes sense to build in a margin to achieve a good probability of meeting the fiscal rules.

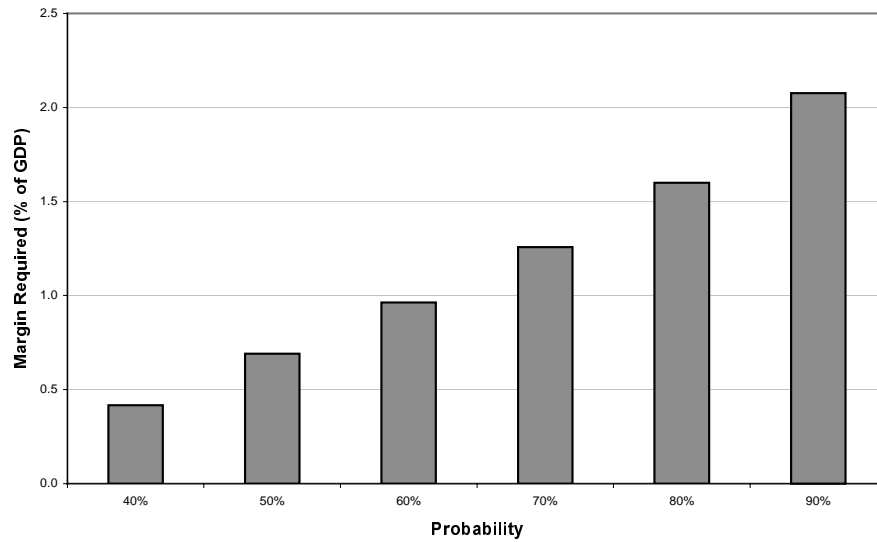
115. Suppose there is no uncertainty with respect to GDP on the basis that the monetary authority is presumed to be successful in keeping the economy on its trend path. Fiscal errors are likely to remain, however. Using the mean and the variance of the fiscal errors over the past, Chart 9 shows the margin that would be required to meet a cyclically-adjusted balance rule one year ahead. A surplus of 0.7 per cent of GDP is needed simply to offset the previous bias to have a 50 per cent chance of being on target. A surplus of well over 1 per cent of GDP would be required to improve the probability of meeting the objective to, say, 75 per cent. The chart illustrates the trade-off that exists between the need for certainty and the margin required, which rises at a disproportionate rate to the degree of certainty achieved.

Three sources of errors

116. There are a number of uncertainties that can be identified as key sources error of error. We look at three here:

- where the economy is in relation to trend at the start of the forecast ('output gap' error);
- specific fiscal and economic assumptions, such as VAT ratios, unemployment, equity prices and turnover (which drive capital taxes), interest rates (which impact on debt interest projections), oil prices, and so on;
- how trend output is likely to evolve (trend growth assumption).

Chart 9

Meeting the Rules: Additional Margin Required*'Output gap'*

117. One of the key uncertainties for the policy maker is knowing the position of the economy in the economic cycle at any given point in time. This might be called 'output gap' error, ie knowing how far the economy is above potential (or otherwise). Important information, such as GDP, is only available with a lag and can be subject to substantial revisions. What appears plausible at Budget time can often look different several months or years later. Nonetheless, a view must be taken in framing the Budget.

118. Taking account of the experience of the late 1980s, when assumptions about potential and the output gap proved to be seriously wrong, a more cautious approach has been followed since 1997. Because of the inherent uncertainties involved the projections are 'stress tested' by considering a more cautious case than the main projection. In this case, the question is posed whether the fiscal rules would still be met in the event that the level of trend output was 1 percentage point lower than assumed.

119. By way of illustrating the implications, consider the following example. Assume the economy starts on trend and in fiscal balance and the aim is to reach the next Budget a year later in the same state, ie again in structural balance. Policy is set accordingly. Suppose further that it is realised later in the year that the economy had in fact been running more strongly than earlier supposed, say at 1 per cent above potential. With the economy above trend the fiscal position would in fact be in structural deficit of around 0.7 per cent of GDP, based on ready reckoners. So the previous policy measures would have turned out to have been inappropriate and remedial action, with associated costs, would have to be taken to get back to the target.

120. In order to counter this risk and avoid potential disruptions to policy from this source of error, it makes sense to aim for a surplus of at least 0.7 per cent of GDP in this example.

Fiscal error

121. As noted earlier, optimism in the past allowed policy to be looser than warranted. Ex-ante projections turned out to be significantly worse ex-post. Identifying the exact causes of this bias is not easy. However, by adopting a cautious set of assumptions, ex-ante projections may turn out to be acceptable ex-post, as indeed seems to have been the case recently in the UK.

122. An example of adopting a more cautious approach can be seen from the behaviour of the underlying VAT ratio which was expected to rise in the early 1990s as the economy recovered from recession. However, this did not occur and in fact the ratio fell. Had a cautious assumption been adopted, as now with a gently falling ratio assumed, it is estimated that the average error would have been reduced by 0.3 per cent of GDP.

123. There are other areas where a prudent approach has been adopted. For instance instead of scoring all expected returns from Spend to Save programmes (programmes designed to reduce fraud and raise tax) only direct effects are taken into account. Unemployment is no longer assumed to fall; and market interest rates - rather than internal, undisclosed assumptions - are used explicitly to drive the debt interest forecasts. Had these and other similarly cautious assumptions been used much of the previous optimism bias would have been removed.

124. Assumptions in these areas are now independently audited by the National Audit Office (NAO) to ensure that they remain both reasonable and cautious. The full set of assumptions audited is shown in the box 2.

Trend growth assumptions

125. A particularly important assumption concerns trend growth, which has a strong influence on the medium-term profile of taxes and, to a lesser extent, spending. Under the current forecasting arrangements trend growth for the public finance projections is taken to be 2¼ per cent a year in contrast to the ‘neutral’ view of 2½ per cent used in the economic forecast.

126. The effect of additional annual growth of a quarter percentage point on the public finances builds up over time. For example, after 3-4 years it improves the budget balance by an amount approaching half a per cent of GDP, equivalent to more than £4 billion extra spending a year.

127. It is also worth noting that a cautious trend growth assumption helps to constrain policy choices that extend into the medium term. This is especially important where a multi-year public spending regime is in place, as is now the case in the UK. It also applies to tax where announcements are often made in advance but may be implemented later and extend into the future. By constraining the fiscal aggregates to a more moderate path over the medium term, policy is less likely to be over-stretched. The short-term outcome for the fiscal balances, and for policy overall, may be better as a result.

Improving the chances of meeting the rules

128. The adoption of cautious assumptions raises the probability of meeting the fiscal rules. Using the assessment of errors presented earlier, it is possible to deduce the chances of meeting the rules under this approach. To simplify, we assume the Bank meets the inflation target and the economy remains close to trend. It is also assumed that there is no longer any optimistic bias in the fiscal component of the projections but that the absolute errors are similar to those previously. This appears broadly appropriate on the basis of the limited evidence since 1997. Again, for exposition we start from a position of balance, and the objective is to achieve structural balance in a year’s time.

Box 2**Key assumptions audited by the NAO**

- Privatisation proceeds^{1,6}
Credit is taken only for proceeds from sales that have been announced.
- Trend GDP growth^{1,6}
2¹/₄ per cent a year.
- UK claimant unemployment^{1,4,7, 8}
Rising slowly to 1.06 million.
- Interest rates^{1,6,7}
3 month market rates change in line with market expectations.
- Equity prices^{2,7}
FT-All share index rises in line with money GDP.
- VAT^{2,7}
Ratio of VAT to consumption falls by 0.05 percentage points a year.
- GDP deflator and RPI^{2,7}
Projections of price indices used to plan public expenditure are consistent with RPIX.
- Composition of GDP³
Shares of labour income and profits in national income are broadly constant in the medium term.
- Funding³
Funding assumptions used to project debt interest are consistent with the public finances forecast and with financing policy.
- Oil prices^{5, 8}
\$24.40 a barrel in 2001, the average of independent forecasts, and then constant in real terms.
- Anti-tobacco smuggling measures⁶
Only direct effects, including deterrent effects of fiscal marks, are allowed for.

¹ NAO (1997a)² NAO (1997b)³ NAO (1998a)⁴ NAO (1999a)⁵ NAO (1999b)⁶ NAO (2000a)⁷ NAO (2000b)⁸ NAO (2001)

129. Policy is set to achieve this objective. The mean expectation for the fiscal position is balance, ie there is a 50 per cent chance of achieving this particular rule in one year ahead. This is unlikely to be sufficient to ensure policy credibility since, if the pattern of past errors were repeated, there is a good chance of a deficit of 1 per cent of GDP within one year.

130. In using the cautious case and cautious assumptions a structural surplus equivalent to around $\frac{3}{4}$ per cent of GDP is being aimed for. This improves the chances of achieving balance or surplus from 50 per cent to over 70 per cent.

131. Over the medium term fiscal errors grow larger, reflecting greater uncertainty. However, a cautious trend growth assumption builds up a further margin over time. In principle, one might set the expected additional margin from lower than central trend growth to match the additional risk arising from future projections. On the other hand, since some policy adjustments can be made in future Budgets this may not be necessary.

5. Conclusions

132. On the basis of UK evidence, it appears that the probability of meeting the golden rule (starting from a position of balance) over the medium term, other things equal, remains better than evens and is perhaps in the region of 70 per cent as a result of the adoption of cautious assumptions. Like all such figures, they are only illustrative and depend on several conditions that may not hold in practice. But they make the point that in trying to meet a set of fiscal rules, some assessment needs to be made of how likely it is they will be met and whether additional action is required to improve the chances of doing so.

133. Good rules should produce good outcomes. But rules should not be pursued for their own sake or simply because they are there. It is the spirit of the law that should count not the letter of the law. However, fiscal rules must deliver for most of the time and especially when first set.

134. Ideally a fiscal framework and associated rules should operate through constrained discretion. Constrained first by the transparency of the overall macroeconomic - monetary and fiscal - framework and second by the particular fiscal rules. The operating rules should provide room for some discretion:

- to allow scope for sensible adjustment to severe shocks;
- by leaving room for cyclical and other transitory shocks and by allowing full scope for the automatic stabilisers to exert their smoothing effect on the economy; and
- to ensure that sensible investments with appropriate rates of return are not unduly held back.

135. Two fundamental objectives for fiscal policy seem to hold. First, to ensure that policy remains sustainable over the longer term. Second, to support monetary policy in the short-term to achieve a sensible policy mix.

136. The specific fiscal rules set need to take account of circumstances. In the UK redressing the considerable underinvestment in public sector infrastructure, and improving generational balance, have motivated the focus on the golden rule. Setting the rules over the economic cycle has general applicability where it is desired that automatic stabilisers should have a free rein.

137. In practice, meeting a set of fiscal rules is important for credibility. Over time, once credibility of fiscal policy has been regained and has become entrenched it may be possible to relax fiscal rules further. In the monetary policy context, for example, the Bundesbank achieved sufficient credibility that whether or not its monetary targets were met was not of vital importance, since it was more or less universally believed that the central goal of low inflation would be achieved.

138. The path for fiscal policy is more difficult, not least because Governments will always face re-election. Transparent frameworks and a credible set of fiscal rules, however, currently offer the best route forward within a political democracy.

139. The credibility of the monetary authority depends on output gap smoothing and hitting an inflationary target. The credibility of the fiscal authority depends on achieving a sustainable fiscal path and meeting its fiscal rules. But it also depends critically on not disrupting the monetary authority's task, ie ensuring that there is good co-ordination of policy. The independence and transparency of the monetary authority serves to ensure a more disciplined and efficient fiscal policy.

140. Two trade-offs are of particular importance in calibrating a fiscal system. First, between transparency and the rigidity of fiscal rules: a greater degree of transparency may imply less need for rigid rules. Second,

between the rigidity of the fiscal rules and the extent of tax and/or spending smoothing. The more rigid the rules the less scope there will be for smoothing tax or spending in the face of shocks.

141. Uncertainty over the state of the economy and specific fiscal risks interfere with the conduct of policy in practice. In particular, they can reduce the transparency of policy and create risks over meeting fiscal rules. Uncertainty thus can undermine the credibility of policy. Moreover, since reversals of policy are costly – both in political terms and through economic inefficiency – governments should favour approaches that reduce these risks.

142. Countering uncertainty requires a fiscal margin, a form of precautionary saving. The larger the margin, the higher the probability of meeting the rules, thus strengthening the reputation of the fiscal policy-maker and fiscal credibility. But a larger margin also involves potential costs in terms of lost output (or reduced welfare) via higher taxes or lower spending paths than would otherwise be the case.

143. In the UK the Government has introduced a transparent macroeconomic framework, backed by legislation, and supported by a clear set of fiscal rules. It has supplemented this by a comprehensive outcome-based multi-year regime for public spending, which is now being run on resource accounting and budgeting lines and more in keeping with best-practice in the private sector.

144. Because of risks and future uncertainties the fiscal projections are based on a cautious approach, with key assumptions audited by an independent authority (the NAO), and are ‘stress tested’ to try to avoid repetition of past mistakes. The effect is to improve the chances of meeting the fiscal rules and thereby provide a smoother path for taxes and spending. This has helped to improve policy credibility, for instance (along with monetary policy) helping to reduce the risk premium on debt and has strengthened efficiency in spending on public services.

145. Through a combination of a transparent framework, sensible fiscal rules, cautious assumptions and a well-informed and equally transparent independent monetary authority it is possible to arrive at desirable outcomes for macroeconomic policy: economic stability based on low inflation, sound public finances and an appropriate policy mix.

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THE EVOLUTION OF THE FEDERAL BUDGET AND FISCAL RULES

*Richard W. Peach**

1. Introduction

Following roughly two decades of large federal deficits and rising federal debt as a share of GDP, the U.S. has enjoyed a dramatic improvement in its fiscal balance over the past several years. From a deficit of \$290 billion or 4.7% of GDP in Fiscal 1992, the federal balance moved into surplus in FY1998 and that surplus rose to \$237 billion or 2.4 percent of GDP in Fiscal 2000¹. More recently, the improvement from deficits to significant surpluses has led to both faster growth of spending and a significant tax cut. Nonetheless, under current tax and spending policies and reasonable economic assumptions, the federal budget is projected to remain in surplus over the next decade. Of course, it is widely recognized that under current policies, by around 2015 the federal balance is likely to revert back to deficit as the baby-boom generation begins to retire and draw on federal retirement and health benefits.

Beginning in the mid 1980s, the federal government enacted a series of fiscal rules intended to reduce the deficits and put federal fiscal policy on a sustainable path. The first generation of fiscal rules established specific numerical targets for the deficit that proved to be politically impossible to meet as economic growth slowed in 1989 and 1990. Latter attempts were a blend of numerical targets on some categories of spending and budget process rules that were largely adhered to through most of the 1990s.

The fact that these rules were in place over the period when the federal balance moved from deficit to surplus naturally leads some to conclude it was

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I would like to thank Donald Rissmiller and A.J. Glusman for their diligent research assistance. All errors and omissions are my own responsibility. The opinions expressed in this paper do not necessarily reflect the views of the Federal Reserve Bank of New York nor the Federal Reserve System.

¹ In the U.S., the federal fiscal year runs from October through September.

the rules per se that led to the improvement in the fiscal balance. This paper will argue that the rules certainly played a useful role. First, the rules were reasonably transparent; much more so than the traditional budget process. The rules significantly changed the debate on budget issues, keeping attention focused on the big picture of eliminating the deficits and so on the need to make tradeoffs. Gradually, as the rules were adhered to for a longer and longer period, the government's credibility was enhanced in financial markets, helping to reduce interest rates and the deficit.

But while helpful, rules are just rules. Ultimately it was the political will to first enact and then adhere to the rules that is the main explanation for the improvement in the federal balance. This political will stems from the fact that, after a recognition delay, voters had come to recognize that the stance of fiscal policy from the early 1980s to the early 1990s was unsustainable. What drove that home most powerfully was the rising federal debt and the periodic need to raise the statutory ceiling on that debt, a law that dates back to 1917. Indeed, the need to raise the debt ceiling was such an unambiguous symbol of failure on the part of the government that it often provided the catalyst for enactment of meaningful legislation to slow the growth of outlays and/or raise the growth rate of revenues.

That the fiscal rules of the 1980s and 1990s were "political symbolism" of sorts is made all the clearer by the fact that while those rules are still the law of the land they have been routinely ignored in recent years. The movement to surpluses has once again changed the fiscal debate from whether the deficit should be reduced by raising taxes or cutting spending to how much of the surplus should be returned to taxpayers in the form of tax cuts, how much should be used for additional spending, and how much should be used to pay down the existing stock of federal debt.

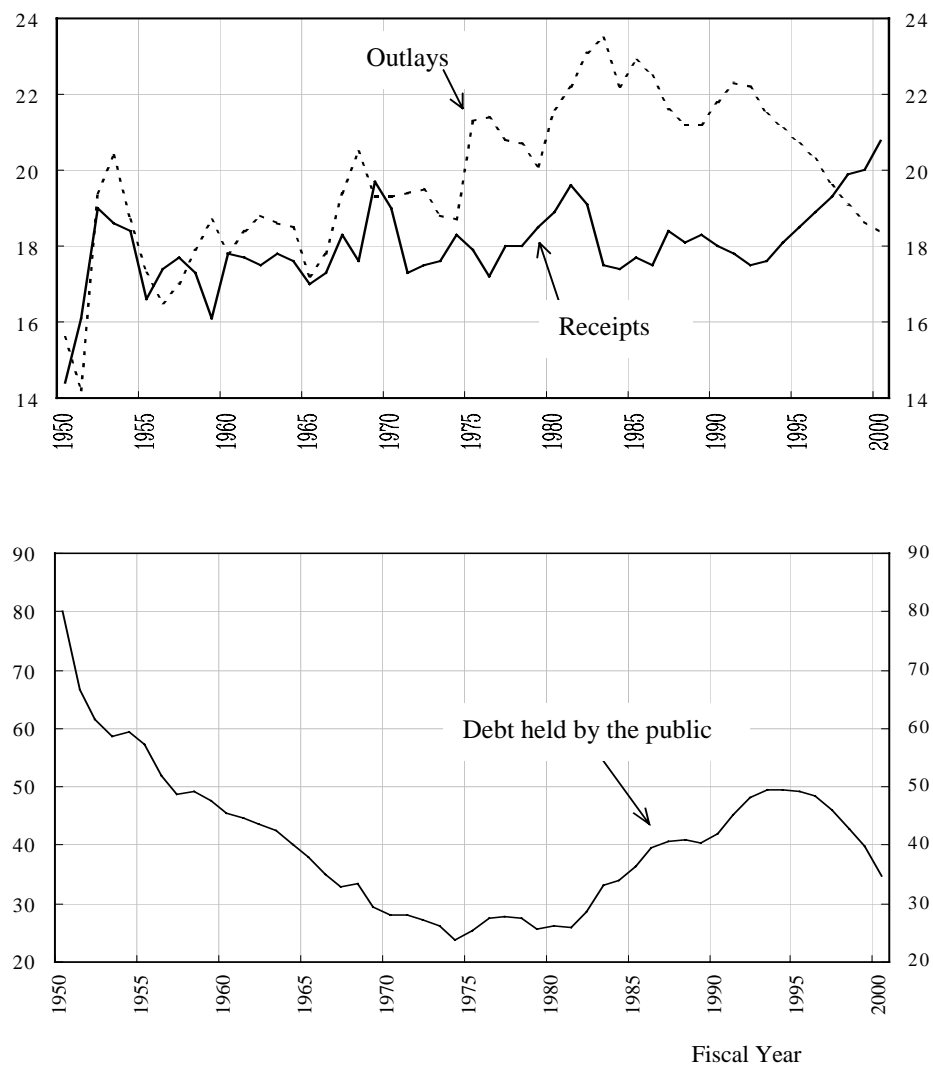
The outline of this paper is as follows. Section 2 provides a broad overview of trends in federal revenues, outlays, and debt over the post World War II period. Section 3 provides a chronology and brief description of the fiscal rules that have been enacted. Section 4 concludes.

2. Evolution of the Federal Budget

Over the 1950s and 1960s, despite the cold war with the former Soviet Union and armed conflict in Korea and Southeast Asia, the federal government ran relatively modest deficits. Over those two decades, the federal balance was in deficit by an average of \$3.7 billion (0.6 percent of GDP) per year. While in nominal terms the stock of federal debt continued to grow, it fell steadily expressed as a percent of GDP (figure 1).

However, conditions began to change by the mid 1970s as the growth of outlays increased due primarily to the expansion of federal entitlement programs or transfers (figure 2). The Social Security program was made more generous in terms of benefits and coverage over the 1950s, 1960s, and early 1970s. Medicare Part A and Part B as well as Medicaid were enacted in 1965. In contrast, defense spending was declining rapidly as a share of GDP.

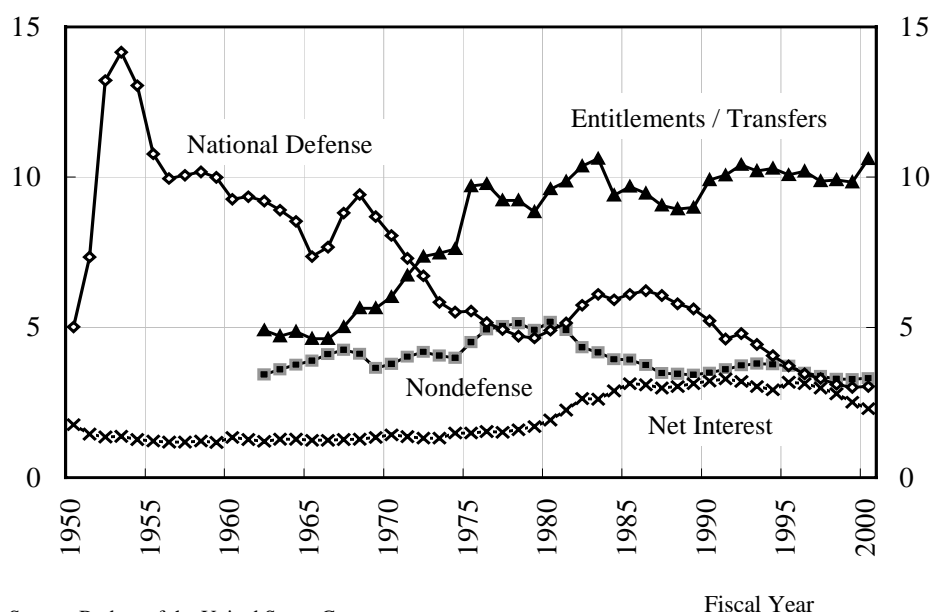
Over the second half of the 1970s revenues also rose as a share of GDP, limiting the size of the deficits such that debt held by the public remained fairly stable as a share of GDP. The rapid growth of revenues was due in large part to the rapid inflation of that period, which led to rapid growth of nominal incomes which in turn pushed individuals into higher marginal tax rate brackets (there were considerably more brackets and higher marginal rates at that time). The enactment of the Economic Recovery Tax Act of 1981 significantly reduced the level of receipts as a share of GDP while also limiting their future growth rate by lowering individual income tax rates and by introducing inflation indexing into the individual income tax code. Even though outlay growth began to slow in the 1980s, despite a relatively moderate rise in defense spending, the size of the gap between outlays and revenues was quite large. It narrowed a bit in the late 1980s in response to robust economic growth, but then widened again in the early 1990s as the economy experienced a relatively mild and brief recession followed by several years of sluggish economic growth. Over the period from 1983 to 1992 the deficit averaged 4.3 percent of GDP. These large and sustained deficits caused the stock of debt held by the public to rise from around 25 percent of GDP in the mid 1970s to around 50 percent of GDP in the early to mid 1990s. Expressed as a share of total household sector financial assets, the stock of federal debt held by the public also roughly doubled, from around 10 percent in the mid 1970s to around 20 percent by the early 1990s (figure 3).

Figure 1**Federal Receipts and Outlays and Debt Held by the Public**
(percent of GDP)

Source: Department of the Treasury.

Figure 2

Federal Outlays by type
(percent of GDP)

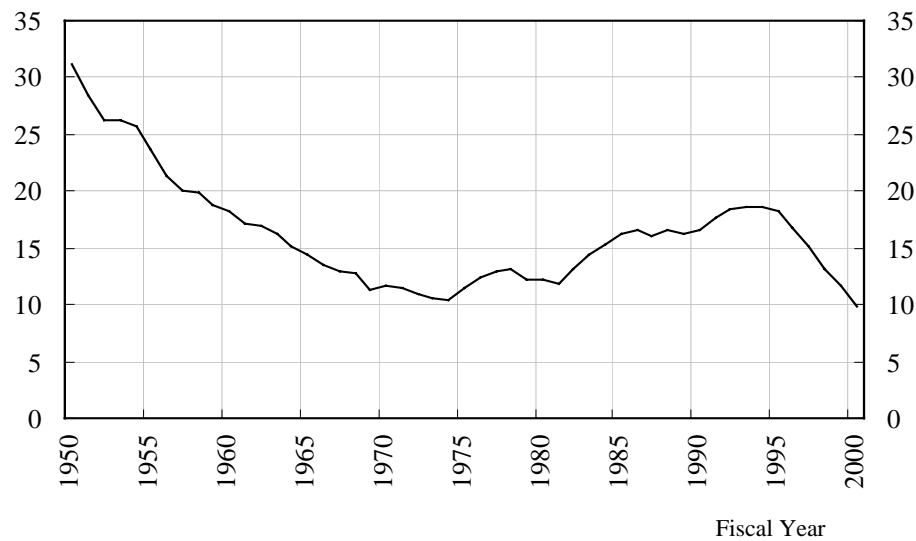


Source: Budget of the United States Government.

Since 1992, the U.S. has experienced a dramatic improvement in its federal fiscal situation. From a deficit of \$290 billion or 4.7% of GDP in Fiscal 1992, the federal budget moved into surplus in Fiscal 1998 and that surplus rose to \$237 billion or 2.4 percent of GDP in Fiscal 2000. The transition from deficits to significant surpluses led to faster growth of spending in FY2000 and FY2001 and a significant tax cut enacted in mid 2001. Nonetheless, under current tax and spending policies and reasonable economic assumptions, the federal budget is projected to remain in surplus over the next decade (cfr. figure 4 and table 1). However, it is widely recognized that, due to the aging of the population, the current policy fiscal projections over the next 50 years are quite gloomy.

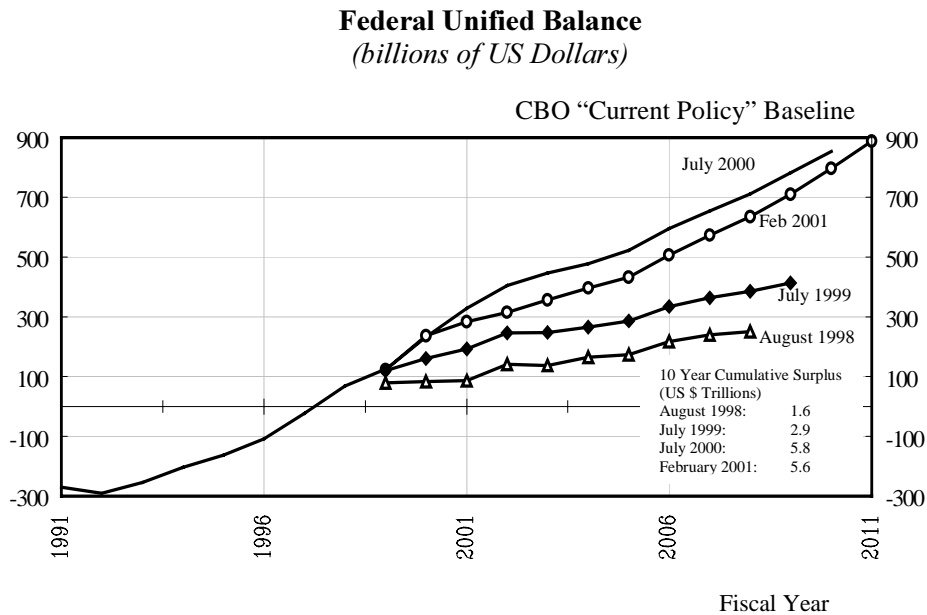
Figure 3

Federal Debt Held by the Public
(percent of Household Financial Assets)



Source: Council of Economic Advisors, Department of the Treasury, and Board of Governors of the Federal Reserve System.

The source of the 7 percent of GDP swing in the federal fiscal balance over the period from Fiscal 1992 to Fiscal 2000 was a 3.3 percentage point of GDP rise of total revenues and a 3.8 percentage point decline of total outlays. Most of the improvement in receipts was in individual income taxes (up 2.7 percentage points), while corporate income tax receipts also rose as a share of GDP (up 0.5 percentage points) due to a rise of corporate profits as a share of national income (cfr. table 2). The sharp rise of individual income taxes as a share of GDP has been the largest surprise and the largest source of error in the underestimation of federal receipts in recent years. There are three main reasons for this surprising growth: (1) growth of taxable personal income in excess of growth of GDP, (2) growth of adjusted gross income in excess of growth of taxable personal income, and (3) increases in effective tax rates on adjusted gross income (CBO, 2000).

Figure 4

Over the period from Fiscal 1994 to Fiscal 2000, taxable personal income, which consists of wages and salaries, personal interest income, personal dividend income, rental income of persons, and proprietors' income, rose from 68.2 percent of GDP to 71.3 percent of GDP. Similarly, corporate profits before tax rose from under 7 percent of GDP in Fiscal 1991 to 9.5 percent of GDP in Fiscal 1997. A major reason that all of these income shares rose is that the statistical discrepancy between the income side and product side of the U.S. National Income and Product Accounts (NIPAs) widened substantially over the past several years. The statistical discrepancy, an entry on the income side of the ledger that forces GDP as measured by total income to equal GDP as measured by total expenditures, went from +0.3 percent of GDP in 1991 to -1.3 percent of GDP in 2000. As a result, national income rose at a compound annual rate of 5.9% over that nine-year period while GDP rose at a 5.7% compound annual rate.

Table 1
Comparison of CBO Current-Policy Macroeconomic Assumptions (Fiscal Years)

	Date	ACTUAL	FORECAST				PROJECTIONS			AVERAGE
		FY1999	FY2000	FY2001	FY2002	FY2003	FY2002	FY2003	FY2004-2009/20	
Real GDP	8/98	2,3	1,9	1,7	2,2	2,5	2,2	2,5	2,3	
	7/99	4,1	2,8	2,3	2,3	2,3	2,3	2,3	2,5	
	7/2000	4,1	5,1	3,4	2,8	2,8	2,8	2,8	2,7	
	2/2001	4,2	4,6	2,7	3,2	3,4	3,2	3,4	3,0	
CPI-U	8/98	2,4	2,8	2,7	2,5	2,5	2,5	2,5	2,5	
	7/99	1,9	2,5	2,5	2,5	2,5	2,5	2,5	2,5	
	7/2000	1,9	3,0	2,7	2,7	2,7	2,7	2,7	2,5	
	2/2001	1,9	3,2	2,9	2,8	2,8	2,8	2,8	2,5	
3-month T-Bill	8/98	5,3	4,9	4,6	4,5	4,4	4,5	4,4	4,4	
	7/99	4,5	5,0	4,8	4,5	4,5	4,5	4,5	4,5	
	7/2000	4,4	5,6	6,6	5,6	5,1	5,6	5,1	4,8	
	2/2001	4,6	5,7	5,2	4,8	5,1	4,8	5,1	4,9	

Table 2

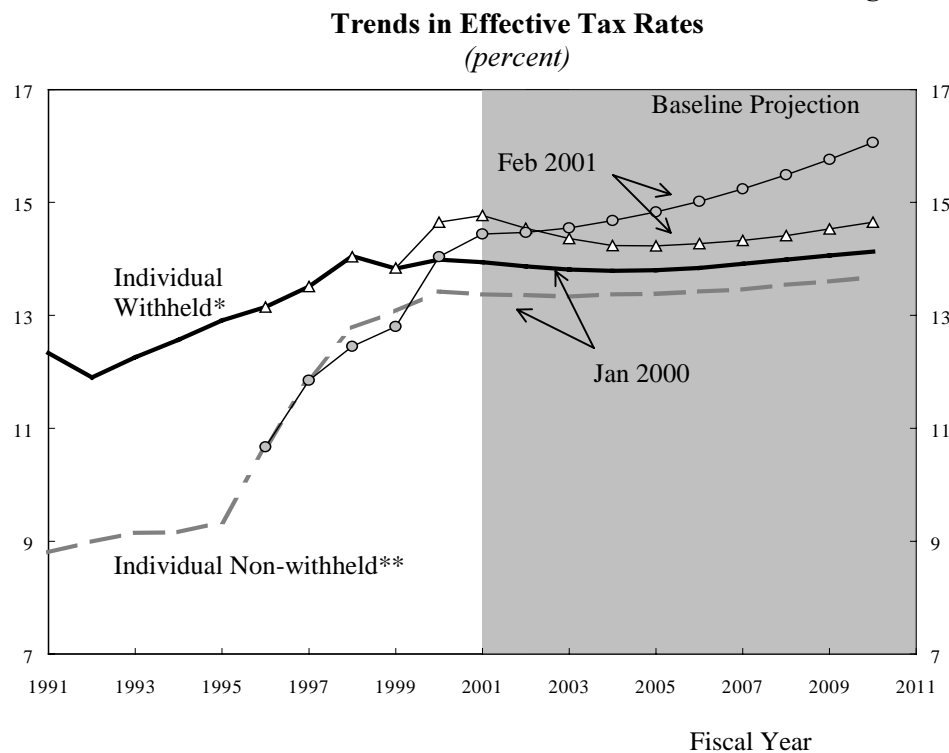
Federal Receipts by Type

	Percent of Total	Percent of GDP		
		FY 1992	FY 2000	Change
Total	100.0%	17.5%	20.8%	3.3
Individual Income	49.6%	7.7%	10.4%	2.7
Individual Withheld	34.0%	5.6%	7.1%	1.5
Individual Nonwithheld	15.6%	2.0%	3.3%	1.3
Capital Gains	5.8%	0.4%	1.2%	0.8
Social Insurance	32.2%	6.6%	6.7%	0.1
Corporate	10.2%	1.6%	2.1%	0.5
Other*	8.0%	1.6%	1.7%	0.1

* Includes excise taxes (3.4%), estate and gift taxes (1.4%), customs duties (1.0%) and miscellaneous (2.1%).
 Note: Individual components may not sum to totals due to rounding.

Adjusted gross income (AGI), the income concept used as the basis for income taxation, rose faster than taxable personal income due to sharply increased capital gains realizations, larger withdrawals from tax-deferred accounts such as IRAs and 401ks, and the fact that an increasing share of Social Security benefits became subject to taxation. The final, and most important, reason for the rapid rise of individual income taxes over this period is the rise of average effective individual income tax rates (see figure 5). This is due to increases in real income, which push taxpayers into higher marginal rate brackets (real bracket creep), and shifts in the distribution of income toward higher-income taxpayers, as shown in table 3.

Figure 5



* Percent of wage and salary income.

** Percent of proprietors' income, rental income of persons, personal dividend income, and personal interest income.

Table 3

**Percentage of Returns, Adjusted Gross Income
and Tax Liabilities for High-Income Taxpayers, Tax Years 1993-1998**

AGI (1998 dollars)	1993	1998*
Percentage of Returns		
200,000 and above	1,1	1,6
500,000 and above	0,2	0,4
1 million and above	0,1	0,1
Percentage of AGI		
200,000 and above	14,5	21,6
500,000 and above	7,7	13,1
1 million and above	4,9	9,3
Percentage of Tax Liabilities		
200,000 and above	29,8	39,8
500,000 and above	17,5	25,6
1 million and above	11,4	18,3

Source: Congressional Budget Office.

Note: AGI = Adjusted Gross Income.

* Data are based on tax returns processed through November, 1999.

Turning to outlays, Table 4 presents the major categories of outlays expressed as a percent of GDP for Fiscal 1992 and Fiscal 2000. In total, outlays fell from 22.2 % of GDP in Fiscal 1992 to 18.4% in Fiscal 2000, a decline of 3.8 percentage points to the lowest level since the mid 1960s. About half of the total decline was in defense outlays, which fell 1.9 percentage points of GDP over the period. Entitlement outlays also fell as a percent of GDP, due to relatively slow growth of new retirees over the period, concerted efforts to slow the growth of health care outlays in both the public and private sectors, and the combination of strong economic growth and policy changes which slowed the growth of means-tested entitlement programs. Finally, with both lower interest rates and a declining stock of debt, net interest payments also fell as a share of GDP.

Table 4**Budget Enforcement Act Presentation of Federal Outlays**

	% of Total	% of GDP		
		FY 1992	FY 2000	Change
Outlays	100,0%	22,2%	18,4%	-3,8
Discretionary	34,5%	8,6%	6,3%	-2,3
Defense	16,5%	4,9%	3,0%	-1,9
Nondefense	18,0%	3,7%	3,3%	-0,4
Entitlements/ Transfers	57,5%	11,5%	10,6%	-0,9
Social Security	22,7%	4,6%	4,2%	-0,4
Medicare	12,1%	2,1%	2,2%	0,1
Medicaid	6,6%	1,1%	1,2%	0,1
Other *	16,1%	3,8%	3,0%	-0,8
Net Interest	12,5%	3,2%	2,3%	-0,9
Other	-4,5%	-1,1%	-0,9%	0,2

* Family Support (AFDC), SSI, EITC, Student Loans, Farm Price Supports, Federal Civilian and Military Retirement, etc.

Note: Individual components may not sum to totals due to rounding.

3. Overview of Fiscal Rules

Federal law contains numerous provisions that can be labeled fiscal rules. Some of these provisions are quite old, such as the debt ceiling, while most were enacted in an attempt to reduce the large deficits of the 1980s and the first half of the 1990s. This section provides an overview of the main fiscal rules. Note that this review does not attempt to explain all of the legislative detail of these laws, which is often quite complex.

A. Statutory Debt Ceiling

The Liberty Bond Act of 1917 established a statutory limit on the gross indebtedness of the federal government. This was introduced as a simplifying procedure during World War I, as prior to the passage of this law each individual bond issue had to be approved by Congress. In the 1980s and 1990s the need to raise the federal debt ceiling often provided the catalyst for enactment of deficit reduction legislation.

B. Congressional Budget and Impoundment Control Act of 1974

The Budget Act, as it is called, established the current congressional budget process and in so doing introduced some discipline to that process. The Act established the House and Senate Budget Committees, the adoption of a Congressional Budget Resolution, and the reconciliation process. It also created the Congressional Budget Office, which gave the Congress an analytical capability comparable to that of the Executive Branch.

C. Balanced Budget and Emergency Deficit Control Act of 1985 (Gramm-Rudman-Hollings I)

This act established declining deficit targets for each year through Fiscal 1991, at which point the budget was to be balanced. It also established a sequestration process under which previously approved spending was canceled if the projected deficit exceeded the target. However, the actual deficit did not need to meet the target, even if Congress changed policy over the course of the year. The sequestration process was to be controlled by the General Accounting Office, a branch of Congress.

D. Balanced Budget and Emergency Deficit Control Reaffirmation Act of 1987 (Gramm-Rudman-Hollings II)

The Supreme Court had ruled that having the sequestration trigger in the hands of the General Accounting Office was a violation of the Constitutional principle of separation of powers. Under this legislation, the sequestration

trigger was placed in the hands of the Director of the Office of Management and Budget (OMB), an office of the Executive Branch. In addition, the deficit targets were revised and extended to FY1993, at which time the budget was to be balanced.

E. Budget Enforcement Act of 1990

As part of a major deficit reduction package that included increases in taxes and reductions in spending, the Budget Enforcement Act (BEA) significantly altered the budget enforcement mechanisms. First, it effectively eliminated deficit targets. In their place it established nominal ceilings or “caps” on discretionary budget authority and outlays over the period from Fiscal 1991 to Fiscal 1995. Discretionary outlays, which currently represent about one-third of total outlays, are those which are controlled by the annual appropriations process. The caps are adjustable to accommodate “emergencies” as well as other extenuating circumstances such as funding for the International Monetary Fund. When initially enacted in 1990, there were three separate caps for defense, international, and nondefense domestic spending for the period from Fiscal 1991 through Fiscal 1993. Then from Fiscal 1994 to Fiscal 1995 there was a single cap covering the total discretionary category.

In addition, the BEA established the “pay-as-you-go” or “PAYGO” process for revenues and direct spending. Direct spending is for the most part entitlements or transfer programs that are established through authorizing legislation. Outlays are determined not by annual appropriations but rather by the eligibility criteria and benefit formulas of the specific programs in combination with underlying economic and demographic conditions. Under PAYGO, all changes in the tax code and in direct spending enacted in a session of Congress must be “deficit neutral” over one year and five year horizons. The Senate subsequently enacted a 10-year horizon test as well². PAYGO does not require congressional action if revenues fall or outlays grow

² The PAYGO provision made the scoring or pricing of legislation a critical exercise and introduced a new form of lobbying. Interest groups would higher consultants to influence the way in which their favored provisions were scored so as to minimize their cost.

due to changing economic or technical assumptions such as demographic conditions and endogenous changes in effective tax rates. PAYGO is enforced one year at a time, meaning that an overage in one year can not be offset by an underage in another year. Moreover, an underage or overage in the PAYGO section of the budget can not be transferred to the discretionary section of the budget and vice versa.

Both the discretionary spending caps and PAYGO are enforced through the threat of sequestration, an executive order permanently canceling some previously approved spending. As mentioned above, the 1985 act (Gramm-Rudman-Hollings I) established the sequestration process. The BEA of 1990 established new, more elaborate sequestration rules and procedures.

F. Federal Credit Reform Act of 1990

This Act changed the budget treatment of direct loans and loan guarantees by the federal government. Prior to this legislation, direct loans were treated as outlays when funds were dispersed. The outlays were netted against repayments of principal and interest. Loan guarantees were recorded as outlays only when there was a default that prompted the federal government to make good on its guarantee. Under the Credit Reform Act, the estimated discounted present value of the subsidy inherent in a direct loan or guarantee is scored as an outlay in the year in which the loan or guarantee is made.

G. Omnibus Budget Reconciliation Act of 1993

In addition to raising tax rates on upper-income taxpayers and reducing spending, the Act extended the discretionary spending caps and PAYGO through FY1998.

H. Line Item Veto Act of 1996

This law granted the President authority to cancel selected categories of spending and tax provisions over the period from FY1997 to FY2004. It was ultimately struck down by the Supreme Court.

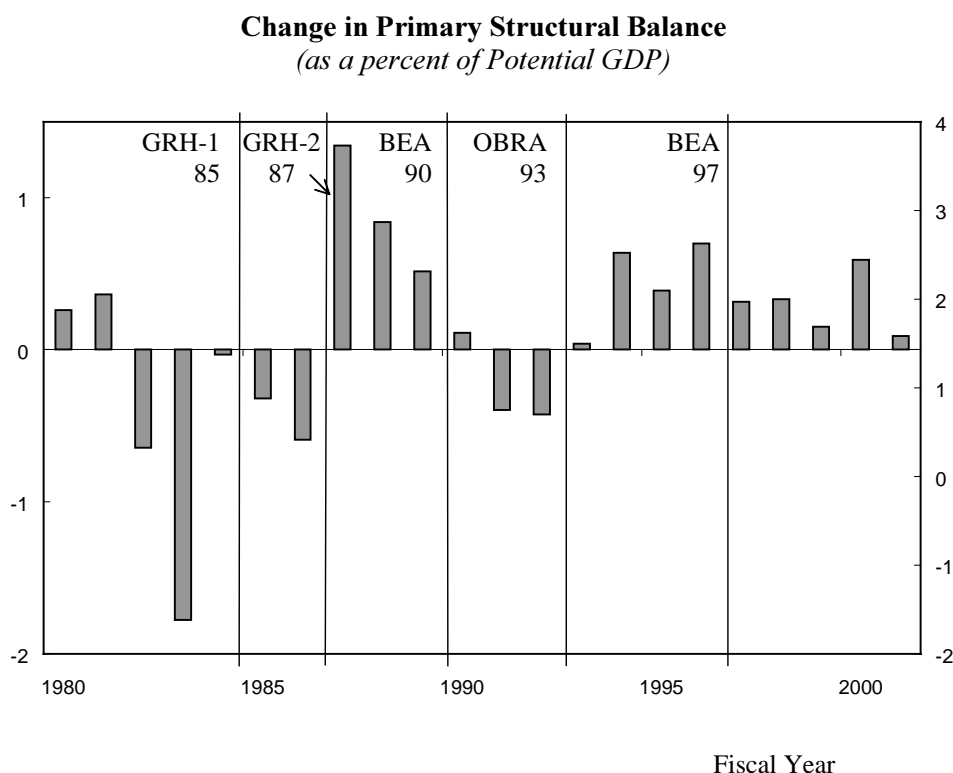
I. Budget Enforcement Act of 1997

This legislation extended the discretionary spending caps and PAYGO through Fiscal 2002. Separate caps were again imposed on defense and nondefense discretionary spending for the period from Fiscal 1997 to Fiscal 1999. In addition, a separate cap was introduced for a new category of outlays called Violent Crime Reduction for the years Fiscal 1997 to Fiscal 2000. After that, all discretionary spending was again covered under a single cap. As part of the Transportation Equity Act for the 21st Century, a separate cap for highway and mass transit spending was enacted. In reality, these special caps were not ceilings but floors on categories of spending with particularly strong constituencies.

4. Fiscal Rules and Changes in the Primary Structural Deficit

While the fiscal rules of the 1980s and 1990s became more elaborate, they were easily circumvented or simply overridden when political pressure to restrain spending eased. For example, in the development of the budgets for Fiscal 1999 and Fiscal 2000, the discretionary spending caps were effectively overridden by declaring large increases in outlays to be “emergency” spending. For Fiscal 2001, the Congress and the President simply enacted a very large increase in the discretionary spending caps to accommodate the level of spending they desired. Similarly, the tax cut enacted in 2001 should prompt a sequester under the PAYGO rules, but it is widely expected that those rules will be ignored.

One objective way of evaluating the effect of the enactment of fiscal rules on the stance of fiscal policy is to look at the change in the primary structural balance in the years immediately after enactment. The structural deficit or balance is what the federal balance would be if the economy was operating at potential. Accordingly, this measure of the balance is not affected by short-run variations in growth of GDP. The primary structural balance is the structural balance excluding interest payments on the stock of outstanding debt. By excluding the interest cost of debt accumulated in the past we are able to focus on the policy decisions of the present government. Changes in the primary structural balance indicate whether fiscal policy is tightening or easing.

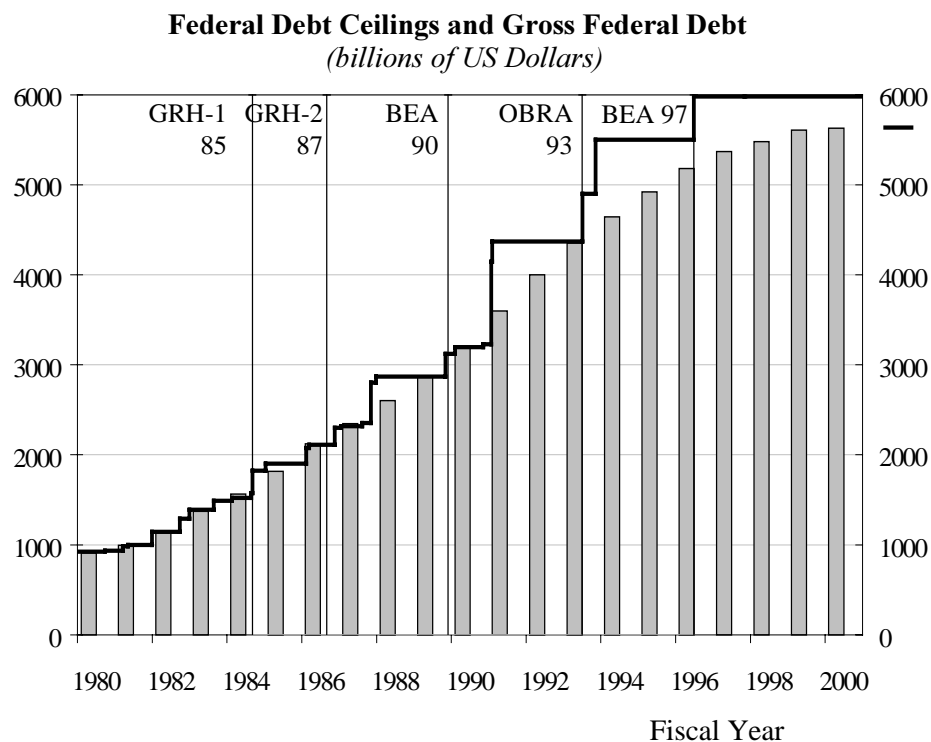
Figure 6

Source: Congressional Budget Office.

Figure 6 presents changes in the primary structural balance as a percent of potential GDP, both estimated by the Congressional Budget Office, for fiscal years from 1980 to 2000. Included in the chart are the dates of passage or extension of the major fiscal rules of the past two decades. One of the first things to note is that enactment of fiscal rules was not always associated with a shift toward contractionary fiscal policy. For example, enactment of the Budget Enforcement Act of 1990 was followed by expansionary fiscal policy until enactment of the deficit reduction package of the Omnibus Budget Reconciliation Act of 1993. The main reasons are two fold. First, while

BEA90 introduced the discretionary spending caps for the period from Fiscal 1990 to Fiscal 1995, the cap for Fiscal 1991 permitted a 6.6% increase in discretionary spending for that year, well above the 3.8% compound annual rate of growth over the preceding five years when Gramm-Rudman-Hollings I and II were in effect. Second, the late 1980s and early 1990s witnessed an explosion in the rate of growth of the federal health care programs (Medicare and Medicaid) due to expansion of eligibility and rapid increases in health care usage and prices. OBRA93 proved to be more successful in shifting the stance of fiscal policy to contractionary by reining in the growth of these health care programs, in addition to some significant tax increases.

Figure 7



Source: Council of Economic Advisors.

Figure 7 presents the total amount of federal debt subject to limit and the statutory debt ceiling for the period from fiscal 1980 to fiscal 2000. Note that the dates of enactment of fiscal rules and deficit reduction packages always correspond to periods when it was necessary to raise the debt ceiling. Note also that over time, when the debt ceiling needed to be increased, it tended to be increased by larger amounts. This demonstrates the power of this relatively simple rule that quite by accident became instrumental in the improvement of the federal fiscal balance.

5. Conclusion

Fiscal rules can be effective in restraining fiscal policy as long as they are adhered to. They are more likely to be adhered to if compliance can be easily observed, such as whether the stock of debt is rising. But most important of all, a majority of voters must be convinced that adherence to the rules is in their interest.

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THE ROLE OF FISCAL RULES IN DETERMINING FISCAL PERFORMANCE

*Suzanne Kennedy, Janine Robbins and François Delorme**

1. Introduction¹

The topic of fiscal rules has attracted significant attention over the last decade, as several countries have adopted fiscal rules in an attempt to eliminate large deficits. More recently, fiscal rules have been the subject of renewed interest as countries consider how to adapt fiscal policy for times of surplus and how to ensure long-term sustainability of fiscal policy, particularly in light of pressures related to population ageing.

The purpose of this paper is to examine the importance of fiscal rules in determining fiscal performance. By necessity, the focus is on the role for rules in fiscal consolidation; most countries under consideration have not yet achieved surpluses or have only done so recently. As such, it is too early to evaluate the effectiveness of rules in maintaining surplus positions. The paper begins with a brief summary of the rationale for fiscal rules and concerns related to their implementation. Section 3 compares fiscal rules in Canada with similar practices in the United States, the European Economic and Monetary Union, Germany, Japan, New Zealand and Sweden. Fiscal rules at the subnational level in the United States and Canada are also reviewed. General observations about the role of fiscal rules are drawn from a comparison of the evolution of total government structural balances in the above-mentioned countries and in countries without legislated fiscal rules during the fiscal consolidation of the mid-1990s. Section 4 reviews a selection of recent empirical studies addressing fiscal rules and section 5 concludes.

Before proceeding, it is necessary to clarify this paper's definition of "fiscal rule", as there are many possible definitions. A broad definition

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The views expressed in this paper are those of the authors and do not reflect those of the Department of Finance. The authors would like to thank Richard Hemming, Ernesto Stein and the other participants at the Committee on Hemispheric Financial Issues' Seminar on Debt and Fiscal Management for their helpful comments and discussion. The authors are also grateful to Peter DeVries and Gaétan Pilon for their suggestions. Any and all errors are the responsibility of the authors.

¹ This paper builds on Brunnen and Pilon (1996).

could encompass the set of rules and regulations according to which budgets are drafted, approved and implemented (as used to define “budgetary institutions” in Alesina and Perotti (1999)). For the purpose of this paper, however, a much narrower definition is chosen: a “fiscal rule” is defined as a statutory or constitutional restriction on fiscal policy that sets a specific limit on a fiscal indicator such as the budgetary balance, debt, spending, or taxation. In other words, the focus is restricted to rules that impose a specific, binding constraint on the government’s range of policy options. Policy rules or guidelines that are not legislated are not considered to be fiscal rules in this analysis, because although they may influence the decisions of the government, they do not impose binding constraints on present or future governments.

This paper focuses on the experiences of industrialized countries with fiscal rules. However, it should be noted that other countries, particularly Latin American countries, have had interesting experiences with fiscal rules as well. Appendix A provides a brief summary of fiscal rules currently in place in three major Latin American countries.

2. Why Legislated Fiscal Rules?

In theory, discretionary policy can achieve the same outcomes as fiscal rules, and should in fact be superior because it allows greater flexibility. However, many have suggested that this is not the case in practice. The literature identifies a number of potential problems that fiscal rules may be used to address². For example, numerous political economy studies describe how electoral pressures may lead politicians to adopt a short time horizon, resulting in socially suboptimal policy choices (see, for example, Cukierman and Meltzer (1986) or Nordhaus (1975)). Tufte (1978) and Rogoff (1990) demonstrate how government spending or taxes may be influenced by a political budget cycle. Alesina and Tabellini (1990) show that when successive governments have different policy preferences, public debt may be used strategically to influence the choices of successors, in which case the equilibrium level of debt will be higher than is socially optimal. Weingast, Shepsle and Johnsen (1981) demonstrate how political institutions may systematically bias public decisions toward larger than efficient projects as legislators fail to

² For a more extensive analysis of the political economy of budget deficits, see Alesina and Perotti (1995).

internalize the full cost of programs that benefit their geographical constituencies but that are funded at the national level. In light of these various types of potential distortions, fiscal rules may be viewed as the best available replacement for a benevolent social planner.

In practice, fiscal rules have been adopted for a wide variety of reasons, for example: (a) to ensure macroeconomic stability, as in post-war Japan; (b) to enhance the credibility of the government's fiscal policy and aid in deficit elimination, as in some Canadian provinces; (c) to ensure long-term sustainability of fiscal policy, especially in light of population ageing, as in New Zealand; or (d) to minimize negative externalities within a federation or international arrangement, as in the European Economic and Monetary Union. Underlying most fiscal rules is a sense that present or future governments, for any number of reasons, may not be willing or able to implement optimal fiscal policy measures without external pressure. However, this line of argument may be refuted by the fact that several countries, such as Canada, have implemented successful fiscal adjustments in recent years without legislated fiscal rules, as discussed in section 3.

The enactment of fiscal rules raises a number of issues concerning flexibility, credibility, and transparency. One of the main concerns about fiscal rules is that they may be overly restrictive and limit a government's ability to engage in legitimate countercyclical fiscal policy when required. As such, legislation must be written in such a way that it provides some flexibility, in order to be functional, yet not be so flexible that it becomes a non-binding constraint. This concern is addressed in greater detail in section 4.

In addition, rules should be transparent. As such, they should not be overly complicated, and should be easy to monitor and defined in terms of fiscal indicators that cannot be easily manipulated. As for credibility, the rule should be viewed as permanent. This leads to the question of whether the fiscal rule should be implemented by statutory or constitutional law, the latter being far more difficult to change or revoke. Due to the costs of changing a constitutional rule of law, it is likely that a constitutional fiscal rule will be less explicit in its policy specification. At the same time, it is likely that it will stand the test of time. By comparison, a statutory fiscal rule has the advantage of increased clarity, yet is more likely to be altered over time. Thus, there is a trade-off between longevity and clarity. An additional concern with respect to constitutional rules is that they may transfer the interpretation of an economic target or rule from policymakers

to constitutional court judges. A final issue related to credibility is that of enforcement – there must be some mechanism to enforce the rule.

However, fiscal discipline is not guaranteed even in the presence of the most effective fiscal rules; political commitment is also necessary if rules are not to be circumvented. For example, Milesi-Ferretti (2000) demonstrates that when a government has a margin for “creative accounting”, the imposition of a fiscal rule may entail a trade-off between costly “window-dressing” and real fiscal adjustment.

3. An Assessment of Fiscal Rules in Practice

This section provides an overview of fiscal rules in various countries, under the Maastricht Treaty, and at the subnational level in the U.S. and Canada, as summarized in Table 1. The most common type of fiscal rule is a restriction on the budgetary balance. These often take the form of balanced budget requirements, as in many of the U.S. states and Canadian provinces. Inasmuch as these rules often apply only to the current budget, they are equivalent to the “golden rule”, which specifies that deficits may only be run in order to fund investment. Restrictions on the budgetary balance may also be expressed in terms of specific target levels, as under the Maastricht Treaty. Another common type of fiscal rule consists of debt targets or restrictions, as implemented in the Maastricht Treaty, most American states and some Canadian provinces. Alternatively, there may be tax or expenditure limits, such as in the U.S., Sweden and several American states. In addition, jurisdictions may require a general referendum to be called to approve major taxation initiatives, as in some American states and certain Canadian provinces. Among the jurisdictions under consideration, the most comprehensive series of enacted fiscal rules were found at the subnational level, in several Canadian provinces and American states.

By their nature, legislated fiscal rules are intended to be permanent. As such, they should be designed to apply over the economic cycle. Indeed, most of the fiscal rules that are currently in force may be useful for maintaining surpluses as well as for eliminating deficits. One possible exception is the system of expenditure limits in the U.S., the value of which has been questioned since the emergence of large and growing surpluses.

It should be noted that both the United Kingdom and Australia enacted legislation in 1998 setting out broad fiscal policy guidelines to increase transparency and accountability in the conduct of fiscal policy. The legislation in both countries established a new set of reporting requirements and principles to guide the conduct of fiscal policy. However, neither framework includes legislated numerical targets. Rather, the emphasis is placed on requiring government to clearly set out its fiscal strategy and targets. Because these frameworks do not impose binding constraints on present and future governments in terms of numerical rules, they are not considered legislated fiscal rules for the purpose of this paper. Nevertheless, both countries provide useful examples of non-legislated rules and targets, so their fiscal frameworks are discussed in the following overview.

Table 1**Fiscal Rules at a Glance**

	Budgetary Balance Controls	Debt Restrictions	Tax or Expenditure Controls	Referendum for New Taxes
US: Gramm-Rudman-Hollings Legislation, 1985	X			
US: Budget Enforcement Act 1990 onward			X	
Maastricht Treaty	X	X		
Germany	X			
Japan, 1997-98	X	X	X	
New Zealand	X			
Sweden			X	
Federal Canada, 1991/92- 95/96			X	
American States	48	40	27	3
Canadian Provinces	8	3	2	4

3.1 *International Overview of Fiscal Rules*

3.1.1 *United States*

At the federal government level in the United States, deficit controls were introduced in 1985 through the Gramm-Rudman-Hollings (GRH) legislation (the Balanced Budget and Emergency Deficit Control Act). It

imposed an annual deficit reduction schedule for a five-year period, with a balanced budget set for 1991, which was later revised to 1993. The Act covered on-budget items (i.e., excluding Social Security trust funds) and deficit objectives were to be accomplished mainly through spending cuts. Without an agreement on cuts to achieve the targeted deficit, automatic across-the-board cuts in spending for most discretionary and some mandatory programs had to take place.

Ultimately, both the 1991 and 1993 targets were missed by significant amounts. One of the main reasons for this outcome was that the targets were applied to the *projected*, rather than the *actual* deficits. In using overly optimistic economic and fiscal forecasts, budgetary projections could easily meet the targets, while the actual deficit exceeded the limit every year.

The legislation was replaced by the Budget Enforcement Act of 1990 (BEA), which shifted the focus away from deficit targets toward expenditure and revenue controls. Similar to the GRH legislation, the BEA applies only to the on-budget accounts. It sets annual dollar limits on discretionary spending, which are adjusted annually for revisions to technical assumptions, emergency appropriations, and certain other reasons. Pay-as-you-go rules apply to any new legislation affecting mandatory spending and revenue, meaning that new legislation may not impose net costs. A sequestration procedure is triggered if aggregate discretionary appropriations enacted for a fiscal year exceed that year's spending caps or if a fiscal year's aggregate mandatory spending and receipts legislation is considered to entail a net cost. As an improvement over the GRH legislation, the BEA applies only to parts of the budget that are under the direct control of lawmakers, not to fluctuations rooted in the economy nor changes in the cost of existing entitlement programs. The 1990 BEA applied to fiscal years 1990 to 1995, although it was extended to fiscal year 1998 by the Omnibus Budget Reconciliation Act of 1993. The Balanced Budget Act of 1997 extended the provisions through fiscal year 2002.

While the original BEA limits have sometimes been surpassed, the legislation has been credited with improving fiscal discipline (Schick (2000)) and limiting the costs associated with new legislation (OECD (1999)). The spending caps were designed with a view to balancing the budget by 2002, but this goal was attained much earlier, in 1998, mainly as a result of strong economic growth. In light of the rising surpluses, the spending restrictions have increasingly been viewed as unnecessarily tight.

The administration's FY2001 budget plan proposed that spending caps be raised and extended to 2010, such that government operations could be maintained at currently enacted levels, with discretionary spending rising in line with inflation.

3.1.2 The Fiscal Criteria of the Maastricht Treaty

The 1992 Maastricht Treaty set out convergence criteria that must be satisfied in order for countries to participate in the European Economic and Monetary Union (EMU). The main goal of the agreement in terms of fiscal policy is to ensure fiscal discipline in member countries in order to prevent fiscal crises that would negatively affect other countries. Under the Treaty, fiscal discipline is to be judged on the basis of two main criteria: (1) whether the government deficit as a percentage of GDP exceeds the reference value of 3 per cent of GDP; and (2) whether the ratio of gross government debt to GDP exceeds the reference value of 60 per cent of GDP. Exceptions may be made with respect to the deficit criterion if the ratio of the deficit to GDP has declined significantly and is close to the reference value, or if the excess is only temporary and the ratio remains close to the reference value. Exceptions may be made with respect to the debt criterion if the debt-to-GDP ratio is diminishing at an acceptable pace.

The Maastricht Treaty provisions were strengthened by the Stability and Growth Pact (SGP), which ensures that countries sustain their commitment to fiscal prudence once they have joined the EMU. The SGP was adopted in 1997 and took effect when the euro was launched on January 1, 1999. In addition to the Treaty's debt and deficit rules, the SGP requires that member states set medium-term objectives of budgetary positions close to balance or in surplus, in order to provide sufficient flexibility to allow the operation of automatic fiscal stabilizers while remaining within the 3 per cent deficit limit. This last point is considered to be especially important since member countries can no longer rely on the exchange rate instrument to dampen economic shocks.

The SGP also provides for increased monitoring, with an annual review of the stability programmes of countries participating in the euro area (and convergence programmes of those not participating in the euro area). The programmes set out medium-term targets and the adjustment path toward the targets. The Council of Ministers assesses and delivers an opinion on each programme, based on the recommendation of the European Commission. In addition, the Council and Commission regularly

monitor the implementation of the programmes and can recommend corrective action if a significant divergence from the medium-term budgetary objective or the adjustment path is identified.

In the case of an excessive deficit in a country participating in the euro area, a course of remedial action will be proposed, which must be implemented within ten months. Otherwise, the country may be subject to sanctions in the form of a mandatory non-interest bearing deposit, which varies in size with the magnitude of the excessive deficit, up to a maximum of 0.5 per cent of GDP. If the excessive deficit is eliminated within two years, the deposit will be returned to the country. If it is not eliminated within that time frame, the deposit will become a fine.

By 1998, eleven of the fifteen EU member states had met the convergence criteria and agreed to participate in EMU. As of the European Commission's Autumn 2000 forecast, all eleven EMU participants were expected to comply with the deficit criterion in 2000. Seven countries were expected to have gross debt levels at or below the 60 per cent reference level, while the others had decreasing debt ratios and were thus considered to be in compliance with the criteria.

The Maastricht Treaty fiscal criteria are generally credited with having accelerated fiscal consolidation in the EU countries. For example, France faced a fiscal crisis in the early 1990s, with the total government deficit peaking at 6 per cent of GDP in 1993. However, the fiscal situation improved significantly over the following years, largely due to discretionary policy undertaken by the government in order to comply with the Maastricht Treaty. By 1998, the deficit was under 3 per cent, consistent with the convergence criteria.

3.1.3 Germany

Germany has a history of fiscal rules dating back to 1969. In that year, a constitutional rule was introduced which requires a balanced budget, but allows borrowing for investment expenditure (i.e., the golden rule). This rule applies to the federal government and the entirety of its budget – including consolidated federal enterprises and special funds. In addition, some states' constitutions include the golden rule.

The constitution specifies exceptions from a balanced budget during times of macroeconomic disequilibrium or war, and an important German

policy mandate is that restrictive fiscal policy should not destabilize the economy or restrict growth and prosperity. On several occasions, the Constitutional Court has ruled that the need to stabilize the economy warranted borrowing in excess of investment. Overall, the constitutional fiscal rule poses only a minor constraint to the government and has not prevented deficits.

More importantly, Germany is subject to the Maastricht Treaty and the Stability and Growth Pact. As discussed earlier, these have imposed effective constraints and fiscal discipline on European governments. Since the Maastricht Treaty applies at the general government level, the German federal government has proposed to determine legally binding allocations of the Maastricht deficit limit between the federal government and the states, as well as across states.

3.1.4 Japan

Japan has had a legislated fiscal rule since 1947, which prescribes that bond issuance be limited to raising funds for financing public works. The rule covers only the general account budget of the central government, which represents only about 25 per cent of the central government's total budget. However, since 1975, deficit-financing bonds have been issued on a regular basis in addition to construction bonds, which are exclusively for public works. Moreover, the distinction between construction and deficit-financing bonds became less clear as construction bonds were issued to cover more and more spending categories. As such, the fiscal rule has not proven to be a binding constraint since 1975.

In order to address the deficit which had persisted through the early to mid-1990s, especially in light of future ageing-related pressures, the government engaged in fiscal tightening and passed the Fiscal Structural Reform Law in 1997. The legislation provided that the sum of the central and local government deficits as a percentage of GDP should be reduced to 3 per cent or less by FY2003 (from around 6 per cent in FY1997). Furthermore, it provided that the amount of deficit-financing bonds should be reduced every fiscal year and issuance of such bonds should cease by FY2003. The legislation also required that numerical limits be set for expenditures in each major programme from FY1998 to FY2000. Finally, it specified that the sum of taxes, payroll contributions and the deficit should not exceed 50 per cent of GDP.

However, the fiscal tightening initiated in 1997 was too much for the economy to bear. Under pressure from the Asian economic crisis and the failure of some major Japanese financial institutions, the economy fell into recession. In response, the government revised the Fiscal Structural Reform Law in May 1998 to introduce more flexibility, and then formally suspended its application in November 1998. Since that time, the government has followed expansionary policies and the general government gross debt-to-GDP ratio has skyrocketed, reaching 105.3 per cent in 1999 (OECD (2000)).

3.1.5 New Zealand

In 1994, the Fiscal Responsibility Act (FRA) was enacted in New Zealand to improve the conduct of fiscal policy by setting out principles of responsible fiscal management and by promoting accountability and a long-term focus in fiscal planning. In contrast to the Maastricht Treaty, the FRA places more emphasis on transparency than on numerical targets. It requires that the government run annual operating surpluses in order to achieve unspecified “prudent” levels of Crown debt. Once these levels have been achieved, they must be maintained by, on average, avoiding an operating deficit. It also provides that sufficient levels of Crown net worth (total Crown assets less total Crown liabilities) be maintained in case of future adverse conditions. Temporary departures from these principles are allowed as long as the government specifies the reasons for the departure and sets out how and when it will return to the principles. The FRA does not include any sanctions, but sets out detailed reporting requirements, including a requirement to publish the government’s long-term fiscal policy objectives.

Although the Act does not specify numerical debt targets, the government has defined its targets for fiscally prudent levels of debt. The present goal is to reduce gross debt to below 30 per cent of GDP and net debt to below 20 per cent of GDP. The government has generally been successful in meeting its goals. The target of running operating surpluses has been achieved since the FRA came into force. Moreover, net debt fell from around 50 per cent of GDP in the early 1990s to below 30 per cent in 1996-97, and it is expected to fall below 20 per cent in 2001-02. However, it is difficult to assess the contribution of the fiscal rules to the improvement in New Zealand’s fiscal situation; the success was likely due

to a combination of the fiscal rules, improved reporting requirements, better economic conditions and political commitment.

3.1.6 Sweden

Sweden's Fiscal Budget Act of 1996 requires Parliament to set nominal expenditure limits for 27 expenditure areas of the central government, including transfers to other levels of government, for a three-year period. Each year, Parliament sets new limits for the third year, and the ceilings are set so as to ensure that outlays fall as a proportion of GDP. The measures were strengthened in 1999 through a prohibition on using allocations transferred from previous years. Although the spending caps are not accompanied by sanctions, to date they are considered to have been effective controls. Overall, Sweden has achieved significant improvements since it undertook its fiscal consolidation programme in 1994-95.

3.1.7 Canada

At the federal level in Canada, the Federal Spending Control Act set limits on program spending from 1991-92 to 1995-96. It covered all program spending, with the exception of that under major self-financing programs, such as expenditures under the Unemployment Insurance Act.

The Act permitted overspending in one year if offset in the following two years. If spending were under the limit for a fiscal year, the difference could be allocated to a subsequent fiscal year. In addition, upward adjustments in annual spending were allowed if associated with an equivalent increase in revenues. Finally, the Auditor General was required to express an opinion as to compliance with the Act.

Spending levels were lower than the set limits in every year except 1992-93 (part of underspending in 1991-92 was allocated to 1992-93 to cover the excess spending). Moreover, actual spending from 1991-92 to 1995-96 was \$23.4 billion under the aggregate spending control limits. Overall, the legislation did not prove to be necessary for controlling spending and therefore was not extended beyond 1995-96.

More importantly, the government introduced a number of non-legislated policy rules that contributed significantly to the dramatic improvement in Canada's federal finances in the 1990s. In 1994, the government adopted the practice of basing budget planning on economic

assumptions near the low end of the range of private sector forecasts, in order to minimize the risk of taking inappropriate policy actions as a result of overly-optimistic economic assumptions. In addition, the government began setting two-year rolling deficit targets, with an ultimate goal of a balanced budget. In 1995, the government introduced a Contingency Reserve in its budget planning, to protect against adverse changes in the economy or forecasting errors. If not needed, the reserves were applied to deficit reduction. Through prudent economic planning assumptions and an emphasis on credible, short-term fiscal targets, with a firm commitment to meet these targets, the federal government was able to move from a deficit to a surplus position.

In 1998, the federal government committed to follow a non-legislated Debt Repayment Plan, under which a \$3-billion Contingency Reserve is set aside each year and is devoted to debt reduction if not needed. In the 2000 budget plan, the government announced that the extra economic prudence, which was previously included in revenue and expenditure projections, will now be explicitly shown, in order to facilitate evaluation of the credibility of the fiscal projections. When the extra prudence is not required, it will become part of future planning surpluses. In addition, the government recently stated that in the future, it will announce each fall whether a greater amount than the \$3-billion Contingency Reserve should be devoted to that year's debt paydown, depending on the economic and fiscal circumstances at the time. As a result of the Debt Repayment Plan and the growing economy, the ratio of net public debt to GDP has been reduced from a peak of 71.2 per cent in 1995-96 to 58.9 per cent in 1999-2000.

3.2 Overview of Non-Legislated Numerical Rules

3.2.1 Australia

The Charter of Budget Honesty, passed in 1998, introduced a fiscal framework in Australia similar to that in New Zealand. The Charter requires governments to set out their medium-term fiscal strategy in each budget as well as their short-term fiscal objectives and targets, although it does not place any constraints on the nature of the targets.

The government's original debt target was to reduce the Commonwealth general government net debt-to-GDP ratio to half of its 1995-96 level by the turn of the century. This target has been comfortably

met, with net debt falling from a peak of almost 20 per cent of GDP in 1995-96 to around 7 per cent in 2000-01. About two-thirds of the reduction reflects privatization proceeds, with the remaining third coming from budget surpluses.

The government's current medium-term objective is to balance the budget over the economic cycle. Consistent with this goal, the government aims to continue running surpluses over the short term. As a supplementary objective, the government also aims to improve its net worth (a measure that includes physical as well as financial assets). Recent projections indicate that positive net worth could be achieved by 2003-04. It would seem that the strategy of requiring government to set out clear objectives, without dictating what these objectives should be, has served Australia well.

3.2.2 United Kingdom

The United Kingdom adopted similar legislation in 1998, which set out principles to guide the conduct of fiscal policy (the key principles are transparency, stability, responsibility, fairness and efficiency). In addition, the legislation requires that the government table in Parliament a code for fiscal stability setting out its fiscal strategy in accordance with these principles.

The current government's fiscal code is guided by two rules: The "golden rule", under which borrowing should be used only to finance investment; and the "sustainable investment rule", which states that public sector net debt is to be held at a stable and prudent level, which the government currently defines as below 40 per cent of GDP. Both rules are designed to apply over the economic cycle.

To date, the government has been successful in meeting its goals. Public sector net debt was brought down from 44 per cent of GDP in 1996-97 to 36.8 per cent in 1999-00.

3.3 *Overview of Subnational Fiscal Rules in Canada and the U.S.*

3.3.1 *American States*³

All but two American states have provisions requiring a balanced budget. Most states are subject to the relatively loose requirement that the governor submit a balanced budget. In addition, 40 states require the legislature to pass a balanced budget, and 34 require the governor to sign a balanced budget. Most states have constitutional requirements or a combination of constitutional and statutory requirements; only five rely solely on statutory requirements. A majority of states are subject to more stringent provisions that prevent them from carrying deficits over into the next fiscal year or the next two-year budget period. Typically, state fiscal rules carry no sanctions and apply only to general funds, excluding separate accounts such as the capital account and accounts for social insurance and employee retirement.

In addition to balanced budget rules, 27 states have tax and expenditure limitations, which set limits on annual revenue or expenditure increases. Of those with expenditure limits, most limit appropriations to some index of inflation, often state personal income growth or a certain percentage of state personal income. Three states require voter approval to increase revenues.

Furthermore, most states have some form of constitutional or statutory limits on the issuance of general obligation debt (debt which is guaranteed by all government funds and the government's ability to raise taxes). Most limits are based on a formula involving state revenues or appropriations, while some states impose maximum dollar limits. Fourteen states allow general obligation debt to be overridden by a referendum or supermajority vote, and a few states prohibit the issuance of general obligation debt altogether.

Despite the balanced budget provisions, states generally can run small, temporary deficits. However, strong economic growth over recent years has enabled most states to run surpluses and build up reserves (most have "rainy day" funds) in case of economic slowdown.

³ All statistics taken from National Association of State Budget Officers (1999).

3.3.2 Canadian Provinces and Territories

Nine provinces and territories have enacted or tabled fiscal rules. Each fiscal rule requires balanced budgets, except in the Yukon, where deficits are permitted as long as no net debt is accumulated. Fiscal rules cover the consolidated budget in every jurisdiction, except Saskatchewan and the Yukon, where it is the general revenue fund in the former case and the non-consolidated Public Accounts in the latter case.

Most provinces require a balanced budget on an annual basis. However, New Brunswick and Saskatchewan are required to balance their budgets over a four-year period. In Quebec and Ontario, deficits may be offset by previously accumulated surpluses. Similar to Quebec's legislation, British Columbia requires that deficits be gradually eliminated before achieving balanced budgets. Deficits are permitted in Nova Scotia, Quebec and Ontario as long as they are offset in the next fiscal year. Manitoba's legislation includes a Fiscal Stabilization Fund representing up to 5 per cent of annual expenditure to offset unforeseen fluctuations in revenue. Many jurisdictions also have provisions for exceptional events such as a major disaster. In terms of using surpluses, Alberta's legislation specifies how excess revenues can be used and Nova Scotia limits spending on new programs to existing budgets.

Several provinces have chosen to also target debt reduction and elimination. Manitoba has a debt repayment schedule incorporated into the law, whereby a minimum of \$75 million (\$96 million in 2000-01) is deposited every year into a *Debt Repayment Fund* to be applied against the general purpose debt and/or pension liability at least every 5 years. In Saskatchewan, the legislation states that a four-year debt management plan must be tabled, although there are no specific requirements except that surpluses must go towards debt reduction. After eliminating its net debt (excluding pension obligations), Alberta legislated a 25-year debt repayment schedule, to eliminate the accumulated debt by 2025. Finally, in the Yukon, deficits are permitted, but the legislation prohibits net debt accumulation. Although Nova Scotia does not have a debt repayment plan, legislation requires a reduction in the amount of foreign currency exposure.

Ontario, Manitoba, Alberta and the Yukon have taxation-by-referendum approval rules. Ontario's legislation is the most comprehensive, applying to personal income, corporate, retail sales, employer health, gasoline and fuel, provincial land and education taxes. In Manitoba, a referendum must be called for any major tax increases,

whereas in Alberta, it applies to the implementation of a retail sales tax. In the Yukon, a referendum is required for increases or implementation of new taxes covered by the *Income Tax Act* and *Fuel Oil Tax Act*.

Ontario, Manitoba, British Columbia and the Yukon have legislated penalties for not achieving the fiscal targets. Ontario's legislation applies to members of the Executive Council, whereby salaries are reduced by 25 per cent in the first year of a deficit and 50 per cent for each year thereafter. For Manitoba, ministerial salaries are cut by 20 per cent in the first year of a deficit and by 40 per cent if there are two or more consecutive deficits. British Columbia's legislation reduces salaries of the Executive Council by 20 per cent if balance targets are not met. The Yukon has the strictest of all legislation as an election is triggered if any net debt is accumulated.

From discussions with the provinces, one of the main advantages of legislated fiscal restrictions is that they increase the Finance Ministers' bargaining power to promote unpopular fiscal measures within the Cabinet. Essentially, policymakers can quote the rules as an external constraint in reference to internal allocations of limited funds.

3.4 *International Comparison of Fiscal Outcomes*

In order to give a general indication of the success in fiscal consolidation in countries with and without fiscal rules, this section examines the change from 1995 to 1999 in the structural balances of the countries discussed earlier. Structural balances are used in order to control for the effects of the business cycle. Data are presented for the total government sector, although for the purpose of this comparison, countries are classified on the basis of whether they have fiscal rules at the central government level. In Canada's case, it should be noted that many of the provinces had fiscal rules in place over this period. However, the deficit in the mid-1990s was much greater at the federal level; in 1995, the federal deficit accounted for approximately 73 per cent of the total government deficit. Therefore, most of the consolidation was achieved at the federal level, where there were no fiscal rules. Moreover, roughly three quarters of the total provincial deficit in 1995 was attributable to the province of Ontario, which did not adopt fiscal rules until 1999.

The period of 1995 to 1999 was chosen because it represents a time of fiscal retrenchment in most countries and because it allows for a logical separation of countries according to whether they have legislated fiscal

rules (Canada's limits on program spending ended in 1995, and Sweden adopted expenditure limits in 1996). EU countries are classified according to whether they joined the EMU when it came into being (this approach assumes that the countries that joined the EMU considered the convergence criteria as a binding constraint).

The evolution of structural balances relative to GDP from 1995 to 1999 indicates that most countries achieved some degree of fiscal consolidation over this period (Table 2). Notable exceptions are Japan, which was engaging in deficit spending in an effort to combat a major economic downturn, and New Zealand, which had already attained a financial surplus in 1995. The improvement in the structural balance was particularly strong in Sweden, Italy, the U.K., Canada and Australia. In other words, major improvements were made in countries both with and without fiscal rules.

Table 2

Total Government Structural Balance
(percent of GDP)

	1995	1996	1997	1998	1999	Change from 1995 to 1999
Countries with legislated fiscal rules						
United States	-3.0	-2.3	-1.1	0.0	0.7	3.7
Germany	-2.7	-2.4	-1.6	-1.2	-0.5	2.2
France	-4.6	-2.8	-1.7	-1.8	-1.3	3.3
Italy	-7.2	-6.5	-2.0	-2.0	-0.8	6.4
New Zealand	2.5	2.4	1.7	2.5	0.7	-1.8
Sweden	-6.9	-1.9	-0.5	2.9	2.1	9.0
EU11 weighted average	-4.1	-3.0	-1.4	-1.3	-0.6	3.5
Countries without legislated fiscal rules						
Canada	-4.4	-1.6	1.0	0.9	2.3	6.7
Japan	-3.1	-4.4	-3.6	-4.2	-6.0	-2.9
United Kingdom*	-5.0	-3.8	-2.1	0.2	1.1	6.1
Australia*	-3.5	-2.0	-0.4	0.3	1.6	5.1

Source: OECD Economic Outlook, December 2000.

Note: The United Kingdom and Australia have legislated fiscal frameworks with non-legislated numerical rules, as discussed in section 4.2.

Naturally, such comparisons do not permit strong conclusions regarding the role of fiscal rules, since other important factors, such as political considerations, are not held constant. For example, we cannot go so far as to conclude that fiscal rules are not necessary for fiscal success; in some of the above countries, such as some of the euro area countries, such consolidation might not have been possible without the imposition of strict rules. However, we can conclude from the above evidence that having legislated fiscal rules is *not* a necessary condition for successful fiscal consolidation in *all* countries.

In addition, it is important to note that industrialized countries' experience with fiscal rules at the national level is relatively short, and the time frame studied above does not encompass any major recession in developed countries. In other words, fiscal rules have not yet been seriously tested. The real test of whether countries will respect their fiscal rules when they become binding and whether adherence to such rules will be harmful or beneficial to these countries will come with the next major recession.

4. Selected Recent Empirical Studies

This section reviews a selection of recent empirical studies on fiscal rules, which address the following themes: (a) whether fiscal rules are effective; (b) how the characteristics of fiscal rules are related to their effectiveness; (c) whether fiscal rules limit a government's ability to engage in countercyclical fiscal policy; and (d) the relationships among political and budgetary institutions and fiscal consolidation.

4.1 Effectiveness

The fundamental question addressed by empirical research on fiscal rules is whether they are effective. Poterba (1996, 1997) reviews the nature of balanced budget requirements at the U.S. state level and considers the empirical evidence in the current literature. His findings suggest that changes in budget rules and, more broadly, fiscal institutions can affect fiscal policy outcomes.

In a study on the effectiveness of tax and expenditure limits, Stansel (1994) shows that the relative rate of growth of spending in states with tax

and expenditure limits declined significantly within five years of the implementation of the limits. Moreover, the relative decline in the growth of state taxes was also significant in the five years immediately following the tax and expenditure limit enactment. It is difficult to determine if the relative declines in the rates of spending and taxation growth are due to the enactment of the tax and expenditure limits, the determination of the government in power to reduce the relative growth rates or some other unspecified variable. Given this correlation, however, the introduction of a tax and expenditure limit could potentially be used as a signal of commitment to reduce tax and expenditure growth on the part of policymakers.

A Canadian econometric study by Kneebone and McKenzie (1997) examines the Alberta government's past reactions to unanticipated shocks to expenditures and revenues. They find evidence of asymmetric behaviour – unexpected losses in revenue did not affect the current budget, whereas unexpected increases in revenue were built into current revenue plans. They suggest that Alberta's legislation at the time may have been a response to this asymmetry, as it required higher than expected revenues to be used for debt reduction and prohibited the government from budgeting the entirety of forecasted corporate income tax and natural resource revenues.

Eichengreen and Bayoumi (1994) explore the impact of fiscal rules on state general obligation bond yields. Their evidence indicates that, for average levels of debt-to-gross state product, tax rates, and lagged state unemployment, if a state without a tax and expenditure limit enacts one of the more strict tax and expenditure limits, interest costs would decline by nearly 50 basis points. Eichengreen and Bayoumi argue that a tax and expenditure limit reduces the likelihood of future surges of borrowing and hence the likelihood of default.

Poterba and Rueben (1999), on the other hand, find that tax and expenditure limits lead to different outcomes in terms of borrowing costs. Similar to Bayoumi and Eichengreen, they find that states with expenditure limits face lower borrowing rates than states without such limits. However, they find that states with tax limitation legislation face higher borrowing costs than states without similar laws, presumably because tax restrictions may limit a government's ability to pay interest on its bonds. As for laws that restrict deficits, they confirm that states with weak laws face higher borrowing costs than those with strict laws. Along the same lines,

Goldstein and Woglom (1992) find that states with limitations on borrowing face a lower cost of borrowing.

However, evidence from Mattina and Delorme (1996) highlights factors apart from fiscal rules that can also ensure fiscal discipline; their research indicates that discipline imposed by market mechanisms can be effective in encouraging fiscally responsible policies. They use an approach based on methodology similar to that of Bayoumi, Goldstein and Woglom (1995) to estimate the supply of credit available to three Canadian provinces as a function of the yield spread⁴. The spread may be regarded as the default risk associated with a particular province. The underlying hypothesis contends that the financial community demands a risk premium that rises at an increasing rate with respect to protracted debt accumulation. The Canadian evidence supports the existence of a non-linear supply curve consistent with the hypothesis of a “market-based fiscal discipline”. The non-linear supply curves suggest that the yield spread begins to accelerate rapidly once the debt-to-GDP ratios of two provinces diverge by 35 to 50 percentage points.

4.2 Nature of Fiscal Rules and Effectiveness

Research on fiscal rules has also attempted to determine how the nature of fiscal rules is related to their effectiveness. Poterba (1994) explores the dynamics of U.S. state taxes and expenditures in the late 1980s and early 1990s and finds that more restrictive U.S. state fiscal institutions, particularly annual balanced budget requirements and tax and expenditure limits, are correlated with more rapid fiscal adjustment to unexpected deficits.

A study by von Hagen (1991) examines the effectiveness of debt limits and balanced budget requirements in U.S. states by comparing fiscal performance indicators in states with and without debt limits and in states with varying degrees of strictness in terms of their balanced budget requirements. His analysis suggests that the presence of debt limits or stringent balanced budget requirements affects the distributions of per capita state debt, the debt-to-income ratio, and the ratio of nonguaranteed to guaranteed debt. He finds that there is a higher percentage of states with high ratios of nonguaranteed to guaranteed debt in the state groups with

⁴ The study estimated the supply functions for Ontario, Québec and Nova Scotia. The yields spreads and debt-to-GDP ratios are expressed in terms of the respective British Columbia figure.

debt limits or with more stringent balanced budget requirements. Given that state debt limits routinely restrict only guaranteed debt and that balanced budget requirements only target on-budget or general account activities, this would suggest that states endeavour to avoid the full impact of fiscal rules through accounting measures.

However, this assertion is refuted by research by Bohn and Inman (1996). They use data from the U.S. states from 1970-1991 to explore the effectiveness of different types of rules. They conclude that there is little to suggest that balanced budget rules shift deficits into other fiscal accounts. They also find that tighter balanced budget rules are associated with higher state surpluses. Their analysis indicates that the most effective rules are constitutional (as opposed to statutory) requirements that apply to the end-of-year balance, rather than ex-ante budget requirements, and are enforced by an independently elected state supreme court.

Alesina et al. (1999) use data from twenty Latin American and Caribbean countries from 1980 to 1992 to examine the effectiveness of their budget institutions. They create an index of budgetary institutions that takes account of various forms of borrowing constraints, the role of a macroeconomic plan in constraining the budget process and rules regarding modification of the budget. Their findings indicate that there is a significant negative relation between the stringency of the constraints and the size of the primary deficit.

4.3 *Fiscal Rules and Stabilization*

One of the main areas of research regarding fiscal rules focuses on determining whether such rules constrain the government's ability to use fiscal policy to smooth business cycle fluctuations. Research in this regard has been limited to the U.S. states and has produced somewhat mixed results.

Using state level data from 1971 to 1990, Bayoumi and Eichengreen (1995) find that states with relatively smaller cyclical offsets tend to have more stringent fiscal constraints. Specifically, they find that moving from no fiscal restraints to the most stringent restrictions lowers the fiscal offset to income fluctuations by around 40 per cent (the fiscal offset is a measure of the sensitivity of the level of the fiscal balance to real output). In addition, they conduct simulations that indicate that such a reduction in

fiscal stabilizers could lead to a significant increase in the variance of aggregate output.

However, Alesina and Bayoumi (1996) show that although tighter fiscal rules are associated with lower cyclical variability of the fiscal balance, this does not lead to increased state output variability. Using U.S. state data from 1965 to 1992, they find no statistically significant relation between the variability of real state output and the stringency of fiscal controls. They speculate that this may arise simply because stabilization at the state level may not be very important, or because tighter controls limit politically motivated and potentially destabilizing fluctuations in the surplus as well as limiting countercyclical policies, leading to an uncertain impact on output variability.

Conversely, Levinson (1998) points out that Alesina and Bayoumi (1996) do not control for unobserved state characteristics that may be correlated with business cycle fluctuations and the existence of state fiscal controls. He suggests that the size of the state is correlated with its ability to affect business cycle fluctuations through countercyclical fiscal policy, and posits that if state fiscal policy matters more in large states than small states, then the difference between business cycle fluctuations in states with lenient versus strict fiscal controls should be greater for large states than for small states. He then shows that although states with stricter rules do not have higher volatility on average (from 1969 to 1995), the difference in volatility between states with lenient and strict rules is indeed greater among large states than among small states. From this he concludes that there is evidence that strict balanced budget rules do exacerbate business cycle fluctuations.

4.4 Political Economy Aspects

Yet another interesting line of research explores the relationships among the political system, budgetary institutions and fiscal consolidation. Hallerberg and von Hagen (1999) use pooled time series data from the EU states from 1981-94 to contradict earlier studies, which contend that proportional representation systems are more deficit-prone than pluralist systems. Instead, they show that the presence of either negotiated spending targets or delegation of power to a strong finance minister is key in limiting deficit growth. Moreover, they conclude that one-party majority governments, most common in pluralist systems, are most suited to delegation to a strong finance minister, while multi-party coalitions, most

common in proportional representation systems, would generally do better with commitment to negotiated fiscal targets.

Stein, Talvi and Grisanti (1999) reach a somewhat different conclusion with respect to Latin American countries. First, they find that countries whose electoral systems exhibit a large degree of proportionality tend to have more procyclical fiscal policies, larger governments and larger deficits. Next, using an index of budgetary institutions similar to that used in Alesina et al. (1999), but for the period from 1990 to 1995, they find that constraints on the deficit, a greater concentration of power in the finance minister and in the executive, and greater transparency in budget procedures all tend to lower deficits and debt. Contrary to Hallerberg and von Hagen's (1999) conclusions for European countries, they do not find evidence that strong budgetary institutions neutralize the potentially negative effect of a large degree of proportionality in electoral systems on government deficits in Latin American countries.

Arreaza, Sørensen and Yosha (1999) expand on Hallerberg and von Hagen's (1999) conclusions and find that the government's ability to smooth consumption through government consumption and transfers is much higher in countries with either delegation of power or negotiated fiscal targets. In addition, they find that there is no statistical relation between the deficit and the amount of consumption smoothing in a given country. Thus, they conclude that the presence of effective budgetary institutions, as defined above, can lead to lower average deficits as well as efficient consumption smoothing via government deficit spending.

An interesting non-empirical analysis by Corsetti and Roubini (1996) addresses the relationship between fiscal rules and the level of government, and contends that fiscal rules are more suited to subnational governments than to national governments. They point out that states are aided in balancing their budgets by countercyclical transfers from the federal government, and that states' efforts to balance their budgets would otherwise have a much larger negative impact on their residents' income. They also note the supply- and demand-side macroeconomic effects of any action on the part of the federal government to balance the budget during a recession would be much greater than similar actions at the state level, since state revenues and expenditures represent a much smaller proportion of state income than do federal revenues and expenditures. Finally, they argue that insofar as individual states' business cycles are not perfectly synchronized, the actions of any given state trying to balance its budget do not have a national impact. Conversely, an attempt by the federal

government to balance its budget during a recession could affect the whole country.

Corsetti and Roubini's arguments are complemented by Bayoumi and Eichengreen's (1995) findings, which emphasize the importance of central governments in providing fiscal stabilization. They find that the U.S. federal budget and social security provided about six-sevenths of the total fiscal offset to income fluctuations in the 1970s and 1980s, while state budgets provided only around one-seventh. Moreover, they find that central governments (including social security funds) in the U.S., Germany, Canada, Japan, France and the Netherlands provided similar degrees of fiscal stabilization from 1970 to 1989. Similarly, as mentioned in the section on fiscal stabilization, Alesina and Bayoumi (1996) suggest that their finding that the stringency of fiscal rules does not affect state output variability might reflect the fact that the state's role in stabilization is not very important. From this they conclude that, if this is the case, balanced budget rules may be effective for subnational governments, but not for national governments.

5. Conclusions

This paper attempts to shed light on the role of legislated fiscal rules in determining fiscal performance. The focus is placed on evaluating the role played by fiscal rules in the fiscal consolidation of the 1990s. Some of the conclusions reached in this respect may be extended to the role for rules in maintaining surpluses, but a thorough analysis of this issue is left for future research.

A review of the experiences of various countries as well as subnational levels of government suggests that fiscal rules can be useful tools for fiscal retrenchment, if properly designed. However, an examination of the structural balances of countries both with and without fiscal rules during the fiscal consolidation of the mid-1990s shows that fiscal rules are not necessary for successful fiscal consolidation in all cases. In addition, before making any judgements about the value of fiscal rules, it is important to note that fiscal rules at the national level have not yet been seriously tested; the real test will come with the next major recession.

The evidence from empirical studies generally supports these conclusions. Many studies find that fiscal rules do indeed have an impact

on fiscal outcomes. In addition, research has attempted to identify certain characteristics of fiscal rules that tend to be associated with greater success, with some studies finding that stricter rules, rules that apply to the actual budgetary outcome, rather than forecasts, and constitutional rules that are enforced by an independent body seem to be the most effective. As for whether fiscal rules impede a government's ability to engage in countercyclical fiscal policy, empirical results have been mixed. However, recent research suggests that fiscal rules exacerbate business cycle fluctuations, although empirical work has yielded mixed results in this regard.

Finally, researchers have addressed how a jurisdiction's political institutions determine the appropriate type of budgetary institutions needed to ensure fiscal discipline. In this respect, some researchers have found that countries governed by multi-party coalitions, usually countries with proportional representation systems, can best control deficit growth through negotiated fiscal targets, while countries with pluralist systems are more likely to be able to achieve fiscal discipline through delegation of power to a strong finance minister. Similarly, some have suggested that fiscal rules are more appropriate at the subnational level than at the national level.

Overall, it would seem that there may be a role for legislated fiscal rules in certain cases, but that legislated rules are by no means necessary for achieving fiscal consolidation in all jurisdictions. Determining the conditions under which legislated fiscal rules are indeed necessary to ensure fiscal discipline, or determining when political commitment, non-legislated rules or a commitment to transparency would be sufficient, is an area for further research.

APPENDIX

FISCAL RULES IN LATIN AMERICA

This section provides a brief summary of fiscal rules currently in place in three major Latin American countries.

i) Argentina

In September 1999, the Argentine Congress passed the Fiscal Responsibility Law. The law sets a ceiling for the deficit and requires that it decline such that balance will be achieved in 2003. It also established a Fiscal Stabilization Fund, financed through tax revenues, to dampen the impact of cyclical fluctuations and external shocks on government revenues. In addition, the law prohibits the creation of off-budget items and sets out new reporting requirements. Finally, it provides for penalties for civil servants who do not implement the budget.

ii) Peru

Peru's Congress approved the Fiscal Transparency Law in December 1999, which sets limits on the deficit, the growth of government expenditure and the increase in public debt. Similar to Argentina's legislation, Peru's also established a fiscal stabilization fund to ensure savings in peak years that may be used in times of recession. Furthermore, it contains measures to encourage transparency and requires that the budget be prepared within a three-year macroeconomic framework.

iii) Brazil

In Brazil, the Fiscal Responsibility Law was enacted in May 2000. In contrast to the legislation in Argentina and Peru, Brazil's law applies to all levels of government. The law prohibits financial support operations among different levels of government, sets limits on personnel expenditures and requires that limits on the indebtedness of each level of government be set by the senate. It also includes measures to improve transparency and accountability. Separate legislation imposes penalties for violations of the Fiscal Responsibility Law by public officials.

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COMMENTS ON SESSION I: THE PROS AND CONS OF FISCAL RULES

*Ludger Schuknecht**

1. Introduction

The papers presented in this session provide very important insights into the history, role and conditions for the proper functioning of rules. Two types of rules were identified – numerical rules, including e.g. the SGP deficit rule, and procedural rules on transparency, enforcement etc.

An important question raised in these papers was when do rules work? It was argued that rules and their objectives must be clear, simple and the outcome measurable as compared to the target. Transparency, monitoring and enforcement must be secured, and rules must be hard to change. The institutional framework in which rules are imbedded is crucial to insure their “success”. The following comments try to pick up some of these themes as discussed in individual papers.

2. Reputation versus rules for fiscal discipline

George Kopits paper provides an excellent discussion of the “pros and cons” of fiscal rules. I only have one small quibble regarding the possible substitution between rules and reputation to safeguard fiscal discipline. George argues that rules should come first, but that over time reputation may make rules unnecessary. Germany and Japan are mentioned as examples for this. I would disagree. In the political market, reputation is not necessarily an equally strong incentive for “good” behaviour as in private markets. In the private market, principals (share holders) can dismiss agents (managers) at any time and reputational capital may be protected that way. In politics, an election victory provides a four year franchise and agents can not do anything if they feel cheated until the next election.

* European Central Bank. The Comment reflects the personal views of the author and not those of the European Central Bank.

Governments may squander a reputation of tight fiscal policies if they think that short term fiscal profligacy would help to win the next election and another four year franchise. Germany is perhaps an example of this. In Germany, the 1970s witnessed relatively high fiscal deficits. This followed (amongst other reasons) the erosion of the golden rule. In the 1990s, the golden rule was circumvented through special funds. In both periods, reputation was no reason to keep fiscal discipline. This potential failure of reputation as a disciplining device is an important argument why rules should be hard to amend/circumvent.

3. Clarity of rules in practice

As to Andrew Kilpatrick's paper, I am intrigued by its upbeat rhetoric. Only time will tell whether the combination of numerical and procedural rules applied in the UK warrants such optimism and I have my doubts. The paper stresses the importance of clear objectives and transparency. But reading carefully, there is more vagueness in the rules than it is claimed. The paper talks about the requirement of "prudent" debt levels but what prudence is seems to be decided by government. There is more vagueness when it is argued that government is to provide "support to monetary policy through changes in the fiscal stance where prudent and suitable". "Sensible discretionary policies" are also mentioned as part of the government's fiscal strategy elsewhere in the paper. Moreover the formal rules (e.g. the golden rule) are not ambitious and have proven to be quite soft in other countries that applied them.

4. Rules beyond macro targets

I do not have specific suggestions of improvements for the Paul Atkinsen and Paul Van Den Noord's study. But as a more general comment, so far we have focussed mostly on rules which take away macro discretion from policy makers. The Atkinsen/Van Den Noord paper focuses on public expenditure and how the consolidation framework could also help to obtain leaner and more efficient government. This is very interesting and important. It raises the question whether we should also have rules for other aspects of public finances. Should we have rules specifying certain functional expenditure levels, distributional or social objectives, even employment rates or minimum growth rates? There is

certainly a tendency in this respect in the policy arena. This topic is worthwhile discussing but moving in this direction also bears risks:

- the objectives may not be easy to specify and may not be clearly linked to fiscal policies alone
- the objectives may be unrealistic and politicised and may even discredit rules more generally.

The paper also does an excellent job in discussing the importance of different ways by which expenditure policies can achieve more efficient government. Let me just mention vouchers in education where the debate focuses on how best to achieve high education standards. Government could be the provider or just the financier of “public” goods and services such as education. Here the question arises whether certain activities should be done by the private or the public sector “as a rule”. The question may be easy to answer for airlines (private) or the military (public) but the “right” approach in education is not obvious and probably depends very much on the country circumstances.

5. Implicit and contingent liabilities

My final comment once more refers to the tendency towards rule erosion and circumvention. If you have a deficit limit as your only constraint on fiscal policies why not move activities off budget? This could take the form of financing items or contingent/implicit liabilities. The Atkinson/Van Den Noord paper briefly discusses this issue and there is an emerging literature elsewhere. However, there is still very limited understanding of this domain. This is made worse by lack of transparency in government financial and off-budget accounts. Contingent and implicit liabilities are often not accounted and provisioned for.

Here procedural rules seem important again, including the application of modern accounting rules and high transparency standards for the government. Numerical targets, such as a prohibition of government guarantees and off-budget accounts, could be imagined.

The growing importance of implicit liabilities is well recognised, e.g. in the debate on ageing and implicit liabilities from the financial system. The costs to government, if such liabilities have to be covered by the fiscus, can be very high. A better understanding of implicit and

contingent liabilities and how to apply rules to control such liabilities seems a research area warranting more attention from the fiscal perspective in the future.

COMMENTS ON SESSION I: THE PROS AND CONS OF FISCAL RULES

*Geert Langenus**

I would like to start this discussion by congratulating the contributors to this session for their excellent papers and presentations. At the same time, I want to apologise to them for not discussing the individual papers in great detail - time being probably too short for that - and therefore not giving them the attention they deserve. What I would like to do instead, is focus on a few general issues and try to summarise and put into perspective what we have heard in the various presentations.

In my opinion, the two main questions in this session are the following: 1) do we need fiscal rules (or are they, to quote George Kopits, an unnecessary ornament)?; and 2) if so, how should these rules be designed and implemented?

Starting with the first question, I understand that the majority view of the different speakers is that fiscal rules are indeed useful although there are some qualifications. Perez Garcia and Hiebert look at rules as a way to simply understand policy in a model-based approach rather than to actually govern it. Kopits argues that rules can be an unnecessary nuisance for governments which already enjoy a sound fiscal reputation. Finally, Peach is rather sceptical about the role played by the regulatory framework in consolidating the US federal budget.

With respect to the usefulness of fiscal rules, one could also turn to the empirical literature, an aspect which was a bit neglected in the presentations. In the Kilpatrick paper it is argued that this issue has received surprisingly little attention in the empirical literature, the rules-vs.-discretion debate having almost exclusively focused on monetary rather than fiscal policy - although there are obvious parallels to be drawn. I fully agree with Kilpatrick: the existing empirical literature on this issue is probably neither very rich nor convincing. Most studies look at State finances in the US and try to establish a link between fiscal rules and fiscal outcomes (usually a simple numerical indicator such as the overall budget balance or the evolution of public debt). On average, they tend to find a

* Nationale Bank van België / Banque Nationale de la Belgique.

strong positive relationship which leads them to conclude that the existence of fiscal rules is some sort of guarantee for a satisfying fiscal outcome. Obviously, nearly all of these studies suffer from the endogeneity problem described by Poterba (1996) which I believe can be quite damaging. Perceived causality might very well be mere coexistence because of voter preferences. Indeed, if the electorate is averse to sloppy fiscal policy, it will probably tend to elect a government favouring strict fiscal discipline while at the same time additionally constraining the government by adopting clear fiscal rules. Both the rule and the outcome can simply reflect voter preferences: there needn't be any causal relationship between them.

Bearing this caveat in mind, the existing literature nevertheless *suggests* that fiscal rules do seem to have a favourable impact on fiscal outcomes. This is not sufficient, however, to advocate their use. Even if they are shown to be a good drug against fiscal diseases, one should make sure that they do not have any harmful side-effects. They do put constraints on fiscal flexibility and hence limit the scope for tax smoothing or active anti-cyclical policy. In the latter respect, the backward-looking sections in the Kilpatrick paper are very enlightening. The UK fiscal stance *before* the adoption of the new regulatory framework is clearly shown to be procyclical rather than the opposite. In the year 2000 Annual Report of the Belgian National Bank similar evidence is presented for Belgium and the euro area. This suggests that, if governments face no constraints whatsoever, they seem to use this freedom in potentially destabilising ways which might enhance cyclical fluctuations. On this issue one can also refer to the work by Alesina and Bayoumi (1996) analysing the link between fiscal rules and output variability at the State level in the US and concluding that the latter is actually smaller in States with stronger fiscal rules. Obviously, State finances might only have a very weak impact on State output and the correlation reported by Alesina and Bayoumi might to some extent be spurious but, on the other hand, their results could confirm that fiscal rules effectively limit the scope for destabilising fiscal policy. All in all, there seems to be some evidence - albeit not entirely convincing - that fiscal rules not only provide for better fiscal outcomes in the purely accounting sense (higher budget balances, lower public debt) but also for better fiscal policy in the broader macroeconomic sense.

As to *why* fiscal rules are appropriate, the basic explanation that was echoed in the presentations is related to the dynamic inconsistency of voter preferences: voters always tend to prefer a larger deficit in the current year than they had preferred for this current year earlier. In this respect, I am not

fully convinced that Kopits's view of rules not being necessary for governments that already enjoy a sound reputation is correct. In my view, reputation is a very asymmetrical feature: it takes a lot of time to build but can be lost quite rapidly. I would also like to add a simpler argument of my own concerning the reasons why rules can be useful: the mere existence of fiscal rules can lead to an increased media attention and coverage of fiscal policy. Indeed, the media generally like to report more extensively on fiscal outcomes when they can compare them to pre-fixed targets. In Europe, for instance, public finances have received unprecedented media attention since the Maastricht criteria have been agreed upon. Because of this, public awareness about public finance issues grows and this is obviously beneficial.

If the answer to first question - do we need fiscal rules? - is by and large yes, there is far less unanimity on the second question with respect to the exact design and implementation of these rules. Kilpatrick describes two lines of thinking although the distinction is probably more a matter of emphasis than of anything else. One approach emphasises accountability and transparency (the typical example being the UK budgetary framework) whereas the other one is blunter in a way and relies more on simple yardsticks for numerical budgetary indicators (the deficit criterion of the Treaty on European Union is one of the best-known examples). This distinction between procedural rules and numerical ones was also alluded to by the Chairman in his opening remarks.

If one focuses for the time being on the numerical rules, the literature, e.g. the papers by Inman (1996) and Bohn and Inman (1996), provide a number of characteristics of 'good' rules. They should be simple, concern ex-post government accounts, be enforced by a non-partisan agency which can effectively inflict penalties and be costly to amend. If I stop here, then this list of desired characteristics reads to a certain extent as a blueprint for the Maastricht deficit criterion for instance. In several presentations a few other characteristics have been highlighted however. The rules should ideally be growth-oriented, take into account the generational balance - if not actually target generational equity - and explicitly refer to trend economic growth. I very much agree with the importance of the latter criteria and what I would like to stress is that, in my view, they conflict to a certain extent with the more traditional criteria of 'good' fiscal rules, most notably the call for simplicity and the need for penalties.

Obviously, from an optimality point of view, rules should target actual fiscal policies rather than fiscal outcomes. In practice, one generally assumes, however, that the latter are adequate proxies for the former and rules typically apply to outcomes. Nevertheless, one should be aware of the fact that these outcomes are co-determined by a number of exogenous elements that fall outside the government's direct control. Predominant among them is obviously the business cycle. Thus, ideally, the influence of the cycle should be wiped out and the rule should be based on a cyclically-adjusted indicator. In addition, to a certain extent, the government can always shift revenue and expenditure from one period to another so an ideal rule should consider some indicator of long-term sustainability. Currently, generational accounting measures are already routinely used in the budgeting process in a number of countries. Finally, if rules should ideally support economic growth, then at the very least one should distinguish between current and capital spending and consider rules of the golden type. We all know, however, that this distinction is not sufficient: investment in human capital in the form of expenditure on education, tax incentives for private investment, etc. can enhance growth in the same way as government investment in physical capital.

If rules take into account all of these refinements, however, - as I believe they should in order to allow for a richer policy analysis - then one obviously loses in terms of simplicity and, probably, enforceability. In addition, these issues, cyclical adjustment, generational accounting and the impact of public finances on growth, are very controversial and rules that try to take them into account might prove difficult to sell.

Summing up and coming back to the Chairman's distinction between procedural and numerical rules, I believe that the former might in the end be more important. I would argue that we should to some extent move away from what Kopits dubbed the 'eurocentric' view of bluntly comparing actual fiscal balances with simple numerical yardsticks and focus attention rather on issues such as transparency. Meanwhile, the profession should spend even more time and energy on developing true or at least better indicators of actual fiscal policy - taking into account, as Van den Noord and Atkinson argue, the impact of that policy on private-sector behaviour. Once a consensus about methodological issues has been reached and we feel confident enough to use these indicators, we might move one step further and consider numerical rules actually targeting these indicators rather than simple accounting balances. Even if a lot of progress has been

made already (e.g. concerning cyclically-adjusted balances) this final goal is probably still a (large) number of workshops away.

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