INTRODUCTION

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The role of fiscal policy in influencing economic activity has for a long time been at the centre of the academic and policy debate. Over recent decades, an activist approach to fiscal action, largely of keynesian origins, has gradually been replaced by a more cautious attitude. Doubts have been expressed about the capacity of fiscal policy to fine-tune the economy. It has been argued that under some circumstances expectations can even reverse the standard impact of fiscal action. Automatic stabilisers have been generally considered preferable to discretionary action.

In this context, the focus of the debate on fiscal policy has shifted to structural issues. Medium and long-term perspectives have gained prominence. Fiscal rules have been introduced to guide policy and to durably restrain deficits.

However, the issue of the impact of fiscal policy remains open. The USA has recently decided to use its large budget surplus to support economic activity. In Europe the debate is largely about the constraints that the rules introduced to support Monetary Union (EMU) allegedly impose on stabilisation policy. In Japan active fiscal policy seems unable to spur economic recovery.

This volume aims at providing an overview of the theoretical and empirical problems that can be encountered in the analysis of the impact of fiscal policy. It includes the papers presented at the Fourth Banca d'Italia Workshop on Fiscal Policy, held in Perugia in March 2002. The papers contribute to the discussion by addressing the following questions: What do we know about the effects of fiscal policy in the short term? What indicators can we use? What is the impact of stabilisers? What do we know about the long-term effects of fiscal policy on economic growth? What are the policy issues under discussion in the main countries and economic areas?

The papers presented at the workshop were allocated in four sessions which are mirrored by the sections in this volume. The first session

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

considered the methodological issues related to the measurement of the impact of fiscal policy. The second session examined the effectiveness of fiscal policy in stabilising the economy and the roles of automatic stabilisers and discretionary policy. The third session considered the impact of fiscal policy on structural features of the economy and its effects on long-term growth. The fourth session was devoted to the analysis of the main policy issues faced by OECD countries, such as the seeming ineffectiveness of fiscal policy in some countries, the management of surpluses and the role of national policies in a currency union.

Indicators of fiscal impact

The assessment of the effects of fiscal policy on output has recently returned to centre stage in the political and academic debate. Four papers in this section provide alternative approaches to the analysis of this issue. The first presents an estimation procedure which seeks to avoid the simultaneity bias caused by the interactions between budgetary items and GDP; the second describes a methodology based on simulations of a fully-fledged econometric model; the third relies on vector autoregressive analysis; and the fourth develops a synthetic indicator. The remaining two papers included in this section focus on more specific issues: the impact of the business cycle on generational accounts in Finland and the relation between country size and the effectiveness of fiscal policy in the European Union.

Murchison and Robbins present an innovative procedure to jointly estimate an indicator of fiscal impact or, equivalently, of the Fiscal Policy Stance (FiPS), and an indicator of the cyclically adjusted budget balance. The procedure is based on the simultaneous estimation of a set of fiscal equations where changes in the main budgetary items are related to changes in the output gap, and of an output equation where changes in the output gap are related to movements in the same budgetary items and in a set of other exogenous determinants. In order to identify the fiscal and the output equations and to control for the simultaneity bias, a generalised method of moments estimator is used. The authors point out that their indicator is more appropriate for the assessment of the fiscal policy stance (in its original meaning, that is "the impact of the budget on the economy") than the widely used cyclically adjusted budget balance which does not allow for heterogeneous effects on demand across the components of the budget and disregards the impact of automatic stabilisers. An important feature of the procedure is that it allows to derive a measure of the uncertainty surrounding the estimates. However, a number of issues, also common to other indicators, suggest a cautious use of the FiPS.

Mohr investigates the impact of fiscal policy in Germany using a structural vector autoregressive (SVAR) model including four series: GDP, private consumption, government receipts and government expenditures. The author identifies independent revenue and expenditure shocks using a set of restrictions similar to those already employed in previous studies but still requiring, in the opinion of the author, a full theoretical and empirical validation. The results of the analysis concerning the responses of GDP and consumption tend to support standard presumptions. In particular, they indicate that a positive shock to expenditure increases GDP and private consumption, whereas a positive shock to revenue reduces them. In both cases, the impact on GDP reaches a maximum after about two years.

The paper by Momigliano and Siviero describes a procedure for assessing the impact of the budget on the economy based on counterfactual simulations of an econometric model. While the proposed approach can take into account more relationships between the budget and the economy than synthetic indicators, it is clearly more complex to manage and less transparent. The procedure is used to appraise the impact of the budget in Italy over the Nineties, using the Bank of Italy’s Quarterly Econometric Model. The results show that during the period of fiscal consolidation (1991-97) the budget had a negative impact on GDP growth of about 0.6 percentage points per year. Over the same period, about a third of the restrictive impulses came from changes in the composition of the budget, indicating that the costs of fiscal adjustment could have been substantially reduced by choosing different measures.

Vanne discusses the uncertainty surrounding generational accounting results for Finland, where economic activity is highly volatile. Estimates of the intergenerational balance of Finland have improved dramatically over the years 1995 to 2000, reflecting favourable macroeconomic circumstances, sound fiscal policies and measures taken by pension institutions. However, generational accounts depend on the long-term forecasts of a number of macroeconomic variables. To assess the underlying risks of the estimates, Vanne presents the results of simulations with stochastic population, productivity, interest rates and returns on stocks. The stochastic properties of the variables are estimated from historical data, assumed to be mutually independent. The paper highlights the relevant role that cyclical factors have on Finnish generational accounts via capital income tax revenues and the returns on assets held by the public sector.

The paper by Denis and Quinet addresses the concern that national fiscal policy may become less effective as integration within the Euro area progresses. In such a context, given the loss of a national monetary policy, fiscal policy needs to play a more significant role in smoothing the impact of country-specific shocks. The authors find no evidence that fiscal policy is less effective in small open economies. They argue that automatic stabilisers seem to be more powerful in these countries, as highlighted by a higher semi-elasticity of the public balance *vis-à-vis* GDP. They also note that the effectiveness of discretionary fiscal policy can be hampered by a high level of public debt and not by a higher propensity to import. Against the background of these results, Denis and Quinet suggest that one way of reconciling the correlation between country size and the fragility of public finances over the past decades is to argue that small open economies are more subject to external shocks and more prone to fiscal crises.

Philip and Janssen present a synthetic indicator of the fiscal stance for New Zealand, which attempts to gauge the impact on aggregate demand of discretionary fiscal policies. The indicator corresponds to the change of the cyclically adjusted primary balance, as a ratio to GDP, adjusted for various factors. The paper discusses systematically the problems that arise in calculating such an indicator and is transparent on the decisions taken concerning each of them. Accounting and data issues are extensively examined and the way the authors treat capital transactions is definitely more accurate than in most analogous studies. The authors note that, at least in the period considered, the indicator is not very sensitive to the key decisions taken in its construction but still advocate a very cautious use of the tool, as a synthetic indicator cannot, by definition, capture all important factors relevant for the assessment of the impact of fiscal policy on the economy.

In commenting on the papers in this section, Artis remarks that they provide a sample of the wide range of empirical work addressing current concerns in the fiscal policy area. He argues that the method proposed by Murchison and Robbins differs from standard approaches to the measurement of the cyclical component of the budget as it includes also systematic reactions of fiscal policy. Referring to the paper by Momigliano and Siviero, he acknowledges the advantages of using a macroeconometric model instead of summary indicators of fiscal policy, but points out that the reliability of results depends in the end on the quality of the model. In this respect, it seems important to provide information on its tracking performance. While stressing the number of problems generally facing SVAR models, Artis welcomes the study by Mohr, in view of the yet limited experience of this framework of analysis. Finally, he approaches the issue of dealing with the uncertainty in generational accounting estimates shown in the paper by Vanne.

Braude focuses his comments on the changes in the composition of the budget. He points out that EU Member States, constrained by the Stability and Growth Pact, are largely left only with the ability to affect activity through the composition of the budget. An important choice, in this respect, is the relative importance to assign to automatic stabilisers and discretionary measures in responding to the business cycle. Braude notes that relying only on automatic stabilisers may be sub-optimal. He also argues that assessing the effects of fiscal policy in periods of structural change, such as those examined by Momigliano and Siviero and by Philip and Janssen, may pose entirely different challenges from those arising when performing the same analysis over more normal periods. This may require caution when comparing the results of the two mentioned studies with those of the paper by Murchison and Robbins.

In commenting the papers, Sartor notes that it is impossible to set up an all-purpose indicator, which can be used for all fiscal policy issues. With respect to fiscal impact and fiscal stance, with the latter referring to the impact of discretionary measures only, he argues that their measurement should not require the identification of the business cycle and that reliance on economic theory cannot be avoided. However, he wonders whether first round effects are of great importance in assessing the appropriateness of fiscal policy. As to the assessment of the long-run effects of fiscal policy, he points out that the analyses by Denis and Quinet and by Momigliano and Siviero suggest that not only model simulations but also judgements on country specific qualitative aspects, such as announcement effects, are required. Sartor welcomes both the work by Vanne and that by Murchison and Robbins for addressing the issue of the uncertainty surrounding empirical results. He notes that full reliance on point estimates may lead to wrong policy indication.

Fiscal stabilisation

The seven papers included in this section can be divided into two groups according to whether their main concern is with the effectiveness of fiscal policy or with the margins that different institutional frameworks allow for active fiscal policy. Non-European papers tend to fall in the first group, while European papers tend to fall in the second. This rule finds two exceptions in the papers by Meyermans and by Brunila, Buti and in't Veld which address the issue of the effectiveness of automatic stabilisers in the Euro area.

Comley, Anthony and Ferguson assess the effectiveness of discretionary fiscal policy in the Australian context, where the medium-term framework designed to ensure a balanced budget over the cycle also allows the use of fiscal policy as a demand management tool. Their paper focuses on two factors: private sector saving offsets and interest rate effects. Concerning the former, Comley *et al.* distinguish between structural and cyclical components of government savings and – in contrast with previous Australian studies – find evidence of significant private savings offsets, mostly in response to changes to the structural component of government savings. This finding points to a greater effectiveness of automatic stabilisers (changes in cyclical government saving) with respect to discretionary policy changes (changes in structural government saving). As to the link between fiscal policy and interest rates, Comley *et al.* find evidence that higher budget deficits (or lower surpluses) can have a significant effect on interest rates in Australia. However, they warn that these results should be treated with some caution since the estimates refer to a period of relatively high public debt and further debt reduction may no longer have large effects.

While in principle similar to the Australian framework, EMU fiscal rules are more formalised. Barrel, Hurst and Pina investigate the risk that the Stability and Growth Pact may act as a constraint on the fiscal policy of EMU Member States in three respects: a) discretionary counter-cyclical policy which finds a limit in the 3 per cent of GDP threshold set for nominal deficit; b) automatic stabilisers whose extent may have to be limited both during the transition to the medium term objective of a budgetary position of close to balance or in surplus, and in the steady state, for countries with strong stabilisers where a high structural surplus may be needed to comply with the 3 per cent threshold; c) public investment, given that there is no provision for a golden rule within the EMU fiscal framework. Barrell *et al.* argue in favour of a revision of the fiscal target set in the Pact of a medium-term position of close to balance or in surplus. They stress the benefits in terms of growth from public borrowing to finance public investment and they point out that a one per cent of GDP deficit over the cycle should still be compatible with the 3 per cent threshold for the annual nominal deficit.

After the failure of fiscal activism to deliver stability and full employment in the Seventies and Eighties, Eckefeldt and Fischer see EMU rules as a commitment mechanism to increase credibility while shifting the main policy focus from short-term stabilisation towards medium-term efficiency. The authors argue that the challenge facing the new framework is how to combine the medium and long-term commitments with short-term flexibility. In this respect, they notice that EU Member States exhibit differences as regards revealed preferences for government provision of stabilisation, depending both on "need" and "taste" factors. The need for stabilisation depends on how sensitive an economy is to external shocks; this sensitiveness in turn depends on a host of factors (e.g. industry structure and trade openness). The taste for stabilisation depends on the prevailing view concerning the role and responsibilities of the State and the market. Eckefeldt and Fischer suggest that these differences may put additional strains on EMU macroeconomic policy framework.

Steindel's paper focuses on the interaction of tax and transfer programs and consumer spending. The issue has attracted increased attention in the United States as a result of simultaneity of the first US recession in a decade and of the 2001 tax cut. Steindel points out that while the US experience supports some of the major implications of the life cycle/permanent income theory, some of the evidence also conflicts with it. For example, in accord with the theory, the response of US consumers to fiscal policy changes is smaller when they are explicitly declared as temporary. However, in contrast to the predictions of the theory, households do not anticipate policy changes until there is an actual effect on their cash flow, and they even seem to gauge the size of permanent policy changes by their short-term cash flow impact. Steindel suggests that the surprising sluggishness of the response may reflect the complexity of the US tax system and the policy process: since the tax law often changes, tax changes that are not explicitly temporary may not necessarily be viewed as permanent.

Hemming, Mahfouz and Schimmelpfennig discuss the effectiveness of fiscal policy in responding to downturns in economic activity. They see this against the background of the contrast between the view that a fiscal expansion is an appropriate policy response to recessions and the experience in Europe during the Nineties which points to the possibility that fiscal contractions can be expansionary. They argue that fiscal multipliers appear to be small in general and that fiscal expansions can be an effective response to a recession only in some instances, such as when there is excess capacity, the economy is a closed one (or an open one with a fixed exchange rate), the government is relatively big and fiscal policy is expenditure-based. Moreover the authors mention the risks involved in the implementation of fiscal policy when there are significant lags or when there are structural impediments on the supply side.

Meyermans investigates how automatic fiscal stabilisers affect economic activity in the euro area. To this end he applies different shocks to an econometric model of the world economy (NIME) developed at the Belgian Federal Planning Bureau. He compares the adjustment path of the main macroeconomic variables under a regime that allows the automatic fiscal stabilisers to operate fully, with the adjustment path under a regime that tempers the working of the automatic fiscal stabilisers. The author also compares the results for the euro area with those for the United States and Japan. He points out that previous studies of the euro area found that output fluctuations are reduced significantly when automatic stabilisers are allowed to operate. In line with this literature, Meyermans finds that the impact of shocks on output is smaller with fiscal stabilisers. However, he finds that this only holds for shocks of a temporary nature. Moreover, he also notices that these results are obtained under the assumption of a well-disciplined government that allows the automatic stabilisers to operate in a downturn and uses the gains in the upturn to reduce the debt.

Brunila, Buti and in’t Veld also examine the effectiveness of automatic stabilisers. They distinguish between supply and demand shocks and, among the latter, they apply a further distinction according to whether the shock affects private consumption, private investment or exports. The authors show that automatic stabilisers are relatively powerful in the event of shocks to private consumption, but less so in the case of shocks to private investment and exports. In the case of supply side shocks, the automatic stabilisers appear to be largely ineffective and Brunila *et al.* suggest that this may reflect the fact that supply-side disturbances call for structural adjustment rather than cyclical stabilisation. The authors conclude by arguing that a future challenge for policy-makers is how to design tax and welfare reforms which, while improving incentives and market functioning, do not stifle but possibly strengthen the impact of automatic stabilisers.

The discussion by Kilpatrick begins with some broad observations on fiscal policy, pointing out how a re-appraisal of the impact of fiscal policy seems particularly relevant in 2002, with the recession in the United States, Japan's difficulties and the European situation where the constraints of the Stability and Growth Pact have begun to bite. He then focuses on the three main issues addressed by the papers included in this section: What is the government's role in stabilisation? How far should it go? Will stabilisation work? He draws the following answers: a) governments do have a role, mostly through automatic stabilisers and in keeping to a steady fiscal path, but they should use their influence wisely and only occasionally; b) fiscal stabilisation can work and is worth trying, but one cannot expect too much from it.

Janssen stresses the wide coverage of the papers included in this section with respect to both the countries studied (United States, Australia, the Euro area and a cross section of developed countries) and the techniques used (from the event study to macroeconomic models, time series error correction models and cross-country regression analysis). Janssen points out that together the papers provide a useful basis for thinking about fiscal stabilisation. However, he argues that they do not tackle the important issues of decision making under uncertainty and how this might influence the degree to which authorities rely on the unqualified operation of automatic stabilisers. In his opinion, the large confidence intervals around estimates of potential output and hence the underlying structural fiscal positions raise the question of whether it is possible to put in place institutional or budget setting processes that generate a robust fiscal policy reaction function, i.e. one that minimises the chance of misjudging structural changes.

Fiscal policy and growth

The five papers included in this section examine the impact of fiscal policy on economic activity with a longer term perspective. Two papers focus on tax reform. One examines expenditure on education. The remaining two papers consider the overall budget. The first addresses the issue of the impact on growth of public finances from the empirical side. The second reviews the theoretical literature underpinning the main channels of influence and the related empirical evidence.

Pereira and Rodrigues discuss tax reform in Portugal on the basis of a dynamic general equilibrium model where the tax system influences long-term growth through its effects on the demand for capital and labour. The model is simulated by implementing the tax reform package proposed by the Portuguese Prime Minister in 1999. The reform included reductions in corporate and personal income taxes, as well as in employers' social security contributions. The authors examine the effects of the tax reform in the presence of alternative financing instruments. The results indicate that both the magnitude of the effects on GDP and the sign of the impact on welfare are significantly affected by the choice of the financing instrument. Moreover, in most of the simulations gains in GDP are accompanied by losses in welfare in discounted terms. These losses stem from the initial fall in consumption, which is only partly offset by the increase in capital income, as investment is subject to adjustment costs. Only when the tax reform is financed by a reduction in public expenditure do both GDP and welfare increase. The authors conclude that when there are serious limitations on the use of either public deficits or reductions in public spending to finance reforms it is difficult to find a tax proposal able to enhance both GDP and welfare.

The paper by Lamo and Strauch reviews the theoretical and empirical literature on the channels through which public finances can contribute to higher growth and employment, with the aim of assessing under which conditions and to what extent they are effective. The paper discusses the three mechanisms highlighted in the Report on "The Contribution of Public Finances to Growth and Employment: Improving Quality and Sustainability" prepared in 2001 by the EU Commission and ECOFIN Council for the European Council. The Report considers: supporting a stable macro-economic environment through sustainable public finances; reducing the tax burden and making tax and benefit systems more employment friendly; shifting public spending towards physical and human capital accumulation and technological innovation. Lamo and Strauch conclude by pointing out that there is empirical evidence supporting the notion that these mechanisms can be effective, but there is considerable uncertainty regarding the size of their impact, as the latter usually depends on many external conditions.

A more optimistic assessment of the possibility for the tax design to improve both equity and efficiency is expressed in the paper by van den Noord and Heady. The authors present a systematic discussion of how tax systems distort saving, investment, labour and product markets. They draw a wealth of examples from the reviews of individual countries tax systems periodically included in the OECD Economic Survey. From the evidence presented in the paper, distortions in economic behaviour stemming from taxation appear to be substantial and the growth dividend arising from easing these distortions may be considerable. The authors point out, in particular, the need to reduce the high tax wedge on low-income earners in several European countries and to increase tax neutrality with regard to the choice of investment funding, business organisation and location. The effectiveness and efficiency of tax collection, enforcement and administration need also to be improved.

Buysse's paper reviews the empirical literature bearing on the relationship between the stock of human capital and economic growth and examines the contribution of government expenditure in education to long-term growth in 20 OECD countries using panel data regressions. Controlling for the average years of education, countries which invest relatively more on education appear to raise the productivity of their human capital. Contrary to previous studies, the results do not indicate significant effects on economic growth of the ratio of students to teachers. While the paper is an accurate and careful empirical investigation, it shares with all other empirical studies of the determinants of growth a number of factors which could affect the robustness of its results. Among these factors, as pointed out by the author, there are the problems stemming from omitted variables, poor quality and limited length of data and model uncertainty.

The methodological issues and econometric problems in the empirical assessment of the determinants of growth are systematically reviewed in the first part of the paper by Hiebert, Lamo, de Ávila and Vidal. In the second part, the authors assess empirically the long-run effects of fiscal policy on growth in the EU countries. As in the previous paper, the authors rely on panel data. They make use of a generalised method of moments estimator to control for the endogeneity of explanatory variables and correlated individual effects. In order to control for the cycle, trend growth is used as dependent variable in the estimation, innovating with respect to the standard practice of taking 5-years averages. The results tend to support the hypothesis that a negative relationship between the level of government revenue and trend growth exists for EU countries. Moreover, they show that improvements in the budget balance tend to enhance long-term growth. Finally, the results suggest that changes in government expenditure, controlling for their financing, have a limited impact on the trend growth rate.

In commenting on the papers in this section, Köhler-Töeglhofer starts from the standard distinction between exogenous and endogenous theories, pointing out that only in the latter can fiscal policies permanently affect growth. She reminds the reader that while it is important to assess the impact of the distortions coming from taxation, it should not be overlooked that there are important targets attached to tax instruments (e.g. redistribution) which may positively affect growth, and that public services, financed by revenue, have a positive impact on the marginal product of capital. Taking into account the effects of both expenditure and revenue may lead to a hump-shaped relation between the size of government and growth. If European governments had been acting on the right side of the curve, corresponding to relatively high levels of taxation, such a relation would be consistent with the empirical results of Hiebert, Lamo, de Ávila and Vidal, pointing to a robust negative relationship between government size and trend growth.

In his comments to the papers of this section, Tannenwald focuses on the large divide between the policymakers' desire for straightforward answers and the complexity of the conclusions arising from the theoretical and empirical evidence on the relationships between fiscal policy and growth. Tannenwald suggests that applied public finance economists should not try to conceal this complexity but help policymakers to work out the right answers for themselves, in terms of their own values and interpretations of available evidence. According to Tannenwald, each of the papers presented furthers the latter goal, avoiding temptations to satisfy the policymakers' wish for a simple answer. This is evident in the discussion by Lamo and Strauch of the many factors bearing on the issue, in the systematic discussion of the econometric problems provided by Hiebert, Lamo, de Ávila and Vidal, in the comprehensive survey of tax issues provided by van den Noord, in the healthy distrust of crude indicators exemplified by the Buysse's study and in the attempt by Pereira and Rodrigues to quantify the tradeoffs inherent in alternative fiscal reforms.

In her general comments to the papers included in this section, Zotteri argues that they are complementary, together providing a comprehensive knowledge of the relevant issues. She stresses that an important conclusion that can be drawn from the papers is that both the revenue and the expenditure side of the budget should be considered when analysing the impact of fiscal policy on growth. Finally, Zotteri remarks that one should bear in mind that growth is not the only target assigned to fiscal policy. Another very important goal is income redistribution, leading to the well known equity-efficiency trade-off. In her comments to the individual papers, Zotteri points out some possible avenues for future research. In particular, she suggests that it may be fruitful to extend the analysis presented by Buysse by taking into account other components of human capital, such as training. Concerning the study by Pereira and Rodrigues, she notes that it could be extended by explicitly modelling labour market imperfections.

Fiscal policy issues in economic areas and countries

Lindh and Ohlsson evaluate the implication for Swedish fiscal policy of being a member of the European Monetary Union. They examine the traditional objectives of fiscal policy and its stabilisation function. They note that while the effects of membership on cyclical fluctuations in smaller countries are still uncertain, membership surely implies that national fiscal policy has a wider role in stabilising the economy since national monetary and exchange rate policies no longer exist. Lindh and Ohlsson argue that automatic stabilisers should be allowed to freely operate and, if necessary, be complemented by discretionary measures. Fiscal policy should aim at a net lending target to be reached over the business cycle. In view of the expected demographic changes, a surplus position seems reasonable in the coming decade. The authors suggest reconsidering the tools of fiscal policy. The time lags of the different fiscal policy instruments should be shortened as well as the time lags of fiscal policy decisions. The authorities should select a small number of appropriate fiscal policy measures in advance for use as economic stabilisers during major macroeconomic shocks. Fiscal institutions may also have to be reformed. One possibility is to create a fiscal policy board to which some stabilisation policy decisions are delegated. The sources of finance and the balance requirement for local governments should be designed in a way that their expenditure contributes to, or at least does not counteract, stabilisation policy. Lindh and Ohlsson conclude that membership of the currency union would not require major changes in Swedish fiscal policy. However, it would increase the pressure to introduce some reforms that Sweden would anyway need.

Gokhale examines how the US budgetary surpluses can best be managed in view of the long-term expenditure pressures that the Social Security and Medicare programmes will exert on the US federal government budget. He notes that the worsening of the American fiscal outlook in 2002 postpones but does not entirely eliminate the need to think about how to deal with a potential cash accumulation with the federal government. If the surpluses turn out to be so large that debt is eliminated and a sizeable cash reserve accumulates with the government, the funds will have to be invested in private assets. Gokhale considers four policy options, in which the assets are respectively managed by the Federal Reserve, the US Treasury, the Social Security Trust Fund (SSTF) and by private individuals via an individual Social Security account system. The last solution implies that the surpluses of the SSTF are invested in marketable debt which is attributed to individual Social Security accounts. Individuals can then trade the public bonds for private stocks and bonds. The alternative solutions are evaluated on the basis of four objectives: preserving a liquid public debt market, minimising deadweight losses from inefficient resource allocation by the government, allowing diversification of pension portfolios and improving intergenerational risk sharing. According to Gokhale, the use of surpluses to start an individual Social Security account system is the best solution.

Nakao examines the evolution of Japanese fiscal policy in the Nineties and its current challenges. His account begins with an analysis of the collapse of the financial bubble at the beginning of the Nineties. He argues that the prolonged economic slump of the last decade largely depends on the effects of wealth losses on consumption and investment decisions and on balance sheet problems of financial and non-financial corporations. These problems were exacerbated by several structural factors, ranging from population ageing to the inflexibility of labour market and corporate governance. Nakao notes that Japanese authorities took an active approach. Many large fiscal packages were introduced to boost the economy determining a sizeable increase in public capital expenditure. Interest rates were reduced. Wide-ranging structural reforms were promoted. However, fiscal expansion did not succeed in reviving the economy. The multiplier effect of public works decreased. Public debt accumulation may have determined expectations of future tax increases; the productivity of the additional public works may have been rather limited. Nakao considers that policies that merely support demand cannot improve economic expectations. He advocates radical structural reforms and a rationalisation of public expenditure, including a better selection of capital projects. An increase of revenues, now relatively low as a ratio to GDP, may also be helpful in improving the budget balance. The author concludes that Japanese technology, saving ratio and well-educated labour force indicate that the country can successfully overcome its current problems.

Robinson presents an overview of fiscal policy objectives and challenges in Australia. He notes that from the mid-Eighties to the late-Nineties fiscal policy basically reflected the need to lower the external current account deficit. Avoiding public sector dissaving was supposed to require the avoidance of (cash) budget deficits. The public sector was to refrain from drawing, other than temporarily during a recession, on private sector saving. The budget was to be balanced, on average, over the course of the economic cycle. In the second half of the Nineties, this policy view gradually changed. Fiscal sustainability became the key concern, in view of the potential threat of unsustainable fiscal policies to external balance and market confidence. However, the rule calling for a balanced-budget over the business cycle was not modified. Public debt is considered both a threat to fiscal sustainability and inconsistent with intergenerational equity. Robinson notes that no distinction is made between borrowing for capital purposes and borrowing for current purposes and that this may contribute to the capital spending drought in Australia. Taking into account asset sales, in recent years the federal government has recorded negative capital investment. Robinson finally notes the changes in the budget deficit concept. While in 1999 cash accounting was replaced by accrual accounting, in 2001 the government reverted again to a cash accounting concept of the budget balance.

Balassone, Franco, Momigliano and Monacelli examine the process of fiscal consolidation in Italy during the Nineties. They highlight its success in reversing a trend that could have led to public debt default, and in ensuring the early participation of Italy to monetary union. The authors argue that some features of the process may have amplified its costs and may have left the country with a difficult legacy. The adjustment relied on significant tax increases, capital spending reductions and the rationing of transfers to local governments. Balassone *et al.* examine the reforms introduced in the pension system in order to contain expenditure growth, reducing distortions in the labour market and increasing the role of funding. They acknowledge that much has been achieved but point to some aspects that still remain problematic. They also analyse the changes introduced in the tax system and highlight the persistent contrast between the need to maximise revenue and that of minimising distortions. According to the authors, there is now a need to shift the focus of fiscal policy from the arithmetic to the microeconomics of fiscal sustainability. Sustaining high taxes and low investment may become difficult as the integration of the Single European Market goes further. Allowing for a lower tax burden, while complying with EMU fiscal rules, calls for expenditure control, a task made more difficult by the upward pressure on outlays exerted by the ageing process. Balassone *et al.* note that the current trend towards greater autonomy for local governments may require significant institutional engineering to ensure consistency with EMU fiscal rules. More generally, existing budgetary procedures and institutions will have to be reconsidered. Finally, with EMU macroeconomic stabilisation regains importance, while during the Nineties it was not the main focus of fiscal policy. Budgetary targets should allow sufficient room for manoeuvre. Size and quality of automatic stabilisers will have to be reconsidered.

Faini focuses his comments on three main aspects: fiscal rules, Italian budgetary policy and fiscal stabilisers. First, in considering Robinson's arguments in favour of a shift from a balanced budget target to the so-called golden rule, he highlights the problematic aspects of the golden rule and the tight requirements for its implementation. Faini stresses that in a currency union it is high debt countries which benefit most from fiscal discipline across the union, to the extent that this is associated with lower interest rates. He also notes that existing fiscal rules are typically unsuited to prevent a long run deterioration in the fiscal position of the public sector due to a significant change in long run entitlements. Faini notes that Balassone *et al.* do not give due importance to the substantive measures which curbed the explosive path of Italian public spending. Even though these measures do not show up in the comparison of expenditure ratios before and after the fiscal adjustment, they had a large impact on the Italian economy. In commenting on the paper by Lindh and Ohlsson, he notes that a strengthening of fiscal stabilizers would require unpalatable solutions such as an increase in the progressivity of the tax system and an expansion in the generosity of unemployment benefits. He finally expresses some concern about discretionary fiscal policy.

Nodgaard comments on the papers from three points of view: stabilisation policy, fiscal sustainability and the structural aspects of fiscal policy. As to stabilisation, he draws some similarities between the Japanese and the Danish experience. In both countries there is clear evidence that when fiscal contractions or expansions affect the overall credibility of fiscal policy, non-keynesian effects can be quite strong. In commenting the suggestion by Lindh and Ohlsson to carry out stabilisation policies via measures with limited efficiency effects, he notes that in Denmark some of the most significant structural reforms were introduced as measures that aimed at reducing aggregate demand and not as structural measures. As to fiscal sustainability, Nodgaard notes that the experience of Nordic countries does not support Gokhale's concern for having public institutions managing large assets. There is little evidence of political interference with asset management decisions. He expresses a note of caution about Robinson's comments on public investments. On the basis of Denmark's experience, he notes that several projects do not reflect cost-benefit considerations. Finally, in examining the analysis of Balassone *et al*. about Italian tax reforms, Nodgaard notes that also Denmark has introduced reforms aimed at making the taxation of capital income less distortionary. He points out that while the latter reforms have been successful, measures intended to reduce the marginal tax rates on labour income obtained less favourable results.