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**Fiscal Policy Under a
Currency Board
Arrangement:
Bulgaria's Post-crisis
Policy Dilemmas**

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Abstract

The paper analyses some policy issues under a currency board arrangement (CBA), focusing on the conduct of fiscal policy which is the only policy instrument at the disposal of the authorities as the CBA precludes an independent monetary policy. It is argued that the loss in degrees of freedom under a CBA restrains considerably the room for fiscal policy manoeuvre, especially in cases of external disturbances or shocks. Within this framework the paper analyses some of the policy challenges that policy makers in Bulgaria have been facing since 1997. It is argued that despite the macroeconomic stabilization and the fiscal consolidation achieved after the introduction of the CBA, some serious economic problems still remain and new ones have emerged; among them are the deterioration in competitiveness and the large losses that SOEs continue to generate.

The paper addresses also some more general issues related to fiscal accounting during the transition in the context of the intertemporal budget constraint of the public sector. Attention is drawn to the importance of monitoring not only the conventional fiscal balance but also the broader fiscal balance, including the quasi-fiscal deficit.

Keywords: Bulgaria, macroeconomic regime, currency board, fiscal policy, fiscal accounting, public sector solvency

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Executive summary

The difficult transition from plan to market in Bulgaria was marked by persistent macroeconomic and financial instability leading to a major economic collapse in 1996-97. In 1997 a currency board arrangement (CBA) was established as a 'policy of last resort' to reverse macroeconomic instability and to impose fiscal and financial discipline. The experience since the introduction of the CBA has been mixed, combining notable progress in macroeconomic and financial stabilization with sluggish economic activity, rising unemployment and deteriorating external balances. In addition, the CBA implies a substantial loss of sovereignty in economic policy. This paper argues that this consequence is not only confined to the area of monetary policy (which is eliminated altogether) but extends to fiscal policy, strictly reducing the functions of the latter to sustaining the long-term solvency of the public sector. The resulting loss in the degrees of freedom considerably restrains the room for policy manoeuvre, especially in cases of external disturbances or shocks.

The paper addresses also some more general issues related to fiscal accounting during the transition in the context of the intertemporal budget constraint of the public sector. Attention is drawn to the importance of monitoring not only the conventional fiscal balance but also the broader fiscal balance, including the quasi-fiscal operations of the central bank and the deferred contingent fiscal liabilities of the government. In particular, it is argued that the losses generated by state-owned enterprises (SOEs) should be considered in the broader definition of the fiscal balance of the public sector as these losses are the primary ingredients of the quasi-fiscal deficit.

The smooth functioning of a CBA implies a high degree of price and wage flexibility for the economy to be able to accommodate external disturbances. However, Bulgaria's economic performance since the introduction of the CBA has revealed a low degree of responsiveness of the labour market, and, in particular, a high degree of inertia in wage setting. The absence of well-functioning shock absorbers has instigated a substantial deterioration in competitiveness which, in turn, has resulted in the opening of large external imbalances.

The paper analyses some of Bulgaria's post-crisis policy challenges. It is argued that despite the macroeconomic stabilization and the fiscal consolidation achieved after the introduction of the CBA, some serious economic problems still remain and new ones have emerged; among them are the deterioration in competitiveness and the large losses that SOEs continue to generate. The available policy options to address these problems under a CBA are limited: one of the conclusions is that due to the reduced degrees of policy freedom in the context of the current macroeconomic regime, fiscal policy is very restricted in what it can do to counterbalance the mounting quasi-fiscal deficit, the loss in competitiveness and the escalating external imbalance.

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Fiscal Policy Under a Currency Board Arrangement: Bulgaria's Post-crisis Policy Dilemmas

1 Introduction

Throughout the 1990s Bulgarian macroeconomic policy has been facing numerous challenges resulting from the unprecedented transformational recession, large and persistent macroeconomic imbalances – some inherited from the previous regime and others emerging subsequently – and, more generally, from the overall fragility of the economy. The need for a massive reallocation of resources and the hardship this entailed for the population were persistent and severe constraints on the degrees of freedom open to policy makers. The implementation of efficient policy was also hampered in the beginning by the lack of wide public support for the reform process and by a general deficiency of experience and skills in the conduct of macroeconomic policy.

In general, the Bulgarian transition has been very difficult, with considerable delays in the introduction of some reforms and a series of setbacks in economic performance. In 1996-97 Bulgaria experienced a major 'triple' crisis comprising a currency crash, a run on the banking system and a drain on the public finances, the result being an outburst of hyperinflation and the closure of many banks. On the other hand this major crisis set the stage for a change in the course of economic policy and for an acceleration of the reform process. The main innovation was the establishment of a currency board arrangement (CBA) under which the Bulgarian lev (BGL) was pegged to the German mark (DEM) (from 1 January 1999 – to the euro).

The Bulgarian currency board is of the narrow type which requires the full backing of the monetary base by reserves at all times.¹ In accordance with the new Law on the Bulgarian National Bank (BNB), the central bank was re-organized into three main departments: an Issue Department (which carries out the functions of the currency board), a Banking Department and a Banking Supervision Department. Accordingly, severe restrictions were imposed on the monetary operations of the central bank (discontinuation of open market operations and elimination of supplies of direct credit to the government and of the

* The views expressed in this paper are those of the author and not necessarily those of the organization to which he is affiliated. I am most grateful to Paul Rayment and Michael Landesmann for many helpful comments and suggestions. In preparing the final version of the paper I also benefited greatly from the discussion at a seminar held at WIIW on 27 January 2000.

¹ The actual reserves held by the BNB are in fact even higher than what is required to cover the monetary base since BNB also holds a special deposit of the Banking Department (which can only be used for emergency short-term lending to financially sound banks in the event of systemic risk in the banking system) as well as the fiscal reserve account of the government.

refinancing of commercial banks) which represent a loss of sovereignty to pursue an independent monetary policy.²

Actual experience since the introduction of the CBA has been mixed. On the positive side, macroeconomic and financial stability were restored and the strain on public finances markedly reduced. At the same time, economic growth has been disappointing, with no signs yet of a sustained recovery. Severe external shocks – such as the Russian crisis of 1998 and the Kosovo conflict in 1999 – also had a negative impact on domestic economic activity.

This paper analyses some of the policy issues related to the introduction of the CBA in Bulgaria in the context of recent economic performance. It focuses on the conduct of fiscal policy (which is in principle the only policy instrument at the disposal of the authorities as the CBA precludes an independent monetary policy) and addresses some of the challenges faced by fiscal policy since the introduction of the CBA.

2 Fiscal policy in a currency board system

Under a currency board system of the type applied in Bulgaria, the size of the money supply (defined as base money) is set in a one-to-one proportion to the level of the foreign reserves held by the central bank. Thus an inflow of reserves should automatically result in an expansion of high-powered domestic money while an outflow would cause a contraction of the monetary base.³ The nominal exchange rate is fixed for an indefinite period of time and the convertibility of base money is unlimited. Since the central bank does not perform open market operations, it has no discretion as to the level of interest rates which in principle should be entirely market determined. Domestic prices are expected to be fully flexible, with prices of tradables responding instantaneously to changes in international prices. Under these arrangements there is no room for sovereign monetary policy; the stance of monetary policy is entirely determined externally: a country applying a CBA *de facto* 'borrows' the monetary policy of the country of the reserve currency.⁴

Under a CBA, the instruments of fiscal policy, in principle, remain available to policy makers as they are not formally tied to external constraints. However, in practice, if fiscal policy is to be prudent and responsible and if the macroeconomic regime is to be sustained

² The only monetary instrument still in the hands of the BNB is the setting of the minimum reserve requirement of the commercial banks.

³ However the CBA does not restrict directly the growth of other monetary aggregates which are linked to base money through the money multipliers. Consequently, *ceteris paribus* (including a constant level of base money), a change in the money multipliers may cause a change in the broader monetary aggregates.

⁴ In the case of Bulgaria, this was initially the Deutsche Bundesbank, and later, the ECB.

at least in the medium term, the degrees of freedom in the conduct of fiscal policy are extremely limited.

The dichotomy between monetary and fiscal policy has been recently revisited in the macroeconomic literature and there has been a re-assessment of the monetary–fiscal policy mix in the context of the so-called 'fiscal theory of the price level' (for a discussion see Begg, 1998). The main emphasis in this debate is on the 'dominance' of fiscal or monetary policy in the mix (in terms of identifying which of the two is truly exogenous and hence left to policy makers) and on the actual degrees of freedom open to macroeconomic policy under various macroeconomic regimes and arrangements. Begg (1998), following Canzoneri and Diba (1996), distinguishes between 'fiscal dominant' and 'money dominant' macroeconomic policy mixes. Fiscal dominance denotes a mix in which primary deficits do not respond to the level of government debt⁵ in a systematic way and hence monetary policy has to correct for that in order to prevent a public debt crisis. In this mix fiscal policy dominates (and can be regarded as exogenous) whereas monetary policy plays a subordinate and corrective role. Conversely, if the fiscal position (in terms of the primary deficit) does correspond to the long-term requirements of public sector solvency, then monetary policy is freed from the role of fiscal correction and its targets can be set independently. Such a mix is one of 'money dominance' as monetary policy is the truly exogenous one while fiscal policy is fully preoccupied with the long-term sustainability of the government debt.

Applying these notions to the context of a CBA, if macroeconomic policy is to be sustainable, then by definition the policy regime has to be one of money dominance.⁶ The only potentially sustainable fiscal policy course is the prudent and responsible one in which the government maintains a primary fiscal balance that responds to the level of government debt. Hence fiscal policy, by definition, is deprived of its main macroeconomic policy variable: the possibility of maintaining an independently targeted fiscal position. In this sense it has zero degrees of macroeconomic policy freedom.⁷ Moreover, the regime of money dominance in this case is one of 'external dominance' as the central bank is obliged to borrow the monetary policy of the country of the reserve currency: monetary policy also has zero degrees of macroeconomic policy freedom. Thus, in total, macroeconomic policy has zero degrees of freedom.

⁵ In a broader sense, to the level of the government's net worth (see section 3).

⁶ The regime of fiscal dominance has to be rejected outright because an independent monetary policy is non-existent and therefore this channel of possible policy correction for the deficiencies in fiscal policy is missing. Hence a fiscally dominant regime in which the fiscal stance does not respond to the level of public debt will by definition lead to an unsustainable accumulation of debt.

⁷ Understandably, in this case we are only considering the 'first tier' of degrees of freedom, those (such as the budget deficit) that directly affect the macroeconomic balance. At lower tiers, fiscal policy does have additional degrees of freedom (for example, by restructuring revenue and expenditure) which can have an indirect impact on the macroeconomic balance.

Two main problems arise from this outcome. The first – and more general – issue is whether fiscal policy actually meets the prerequisites of (external) money dominance in the sense of whether the primary fiscal deficit correctly targets the long-term government debt. Some aspects of this problem – in relation to economies in transition – are discussed in section 3. The second, and more specific issue is to what extent fiscal policy under a CBA will be sustainable even if it is responsible and prudent in targeting a primary fiscal deficit that is consistent with the level of public debt.

The elimination of important policy tools under a CBA is to be compensated by the effect of specific mechanisms, acting as 'automatic stabilizers',⁸ which should be self-activated in the case of external disturbances. The interest rate mechanism is one of the most important of such automatic stabilizers which responds to changes in money demand. If money demand is stable, it is to be expected that the domestic interest rate will move in parallel to that of the reserve currency country, with an adjustment reflecting risk premia and restrictions on convertibility (as only base money is fully convertible). However, when money demand changes in one direction or another (causing an outflow or inflow of reserves), the interest rate should respond to smooth money demand and counterbalance the outflows or inflows of reserves.⁹ Price flexibility should in principle be another such automatic stabilizer allowing the economy to adjust to changes in real final demand. For example, a negative shock to export demand would have to be reflected in falling domestic prices (as the exchange rate is fixed); this would improve the competitive position of domestic producers eventually leading to a recovery in exports.

The biggest problem – and danger – is that the perfect operation of these automatic stabilizers is not guaranteed by the design of the CBA. While with some degrees of freedom policy can be active and if necessary can move swiftly (for example in response to an unexpected shock), under a CBA its role is mostly reduced to a passive observation of the operation of the stabilizers in the hope that they will bring about the required adjustments. Indeed policy can help to improve the operation of the stabilizers, for example, by enhancing the competitive environment, eliminating market distortions and further liberalizing the economy. Yet there is still no guarantee that the stabilizers will operate effectively in response to all disturbances or shocks.

What happens if we go one step further, suggesting that there are systemic distortions or deviations in the operation of some automatic stabilizers? Consider, for example, a

⁸ I use this term here in a different sense from its customary usage to denote a countercyclical fiscal adjustment mechanism.

⁹ For example, an outflow of reserves which results in a contraction of the monetary base makes domestic assets relatively scarce and this will tend to push up the domestic interest rate, eventually above (the adjusted) interest rate parity. This would make domestic assets attractive to foreign investors leading to a reversal in the flow of reserves.

situation of sticky prices (and/or wages). In general the notions of money and fiscal dominance are derived under the assumption of complete wage and price flexibility. Hence Begg (1998) suggests that 'even a little nominal inertia makes prices predetermined and eats up a degree of freedom': consequently, in either of the regimes (money or fiscal dominance), fiscal or monetary policy has to give up its remaining degree of freedom to counteract price inertia in order to guarantee long-term public sector solvency.

What would be the result of a systemic failure of the automatic stabilizers under a CBA? The unpleasant outcome is that policy makers will be left with minus one degrees of freedom or, put differently, they will not have efficient policy options to counterbalance the systemic deviation in the performance of the stabilizers. The result would be an imbalance which might lead to a deviation from the pre-set path of macroeconomic performance. As the imbalance may vary in character, there might be different scenarios possible, including more favourable ones. For example, the interest rate mechanism may fail to neutralize a persistent capital inflow (especially when led by FDI).¹⁰ However this might possibly be a case of 'virtuous' imbalance, as the economy might receive a positive stimulus from this excessive capital inflow which could set it on a virtuous path of accelerating growth with a positive impact on the macroeconomic balance.

On the other hand, what can be expected in the case of a demand shock coupled with wage or price inertia? The likely outcome would be a loss in competitiveness, a deterioration in the trade balance and a further negative impact on economic activity. If the situation is further aggravated, the economy could be locked into a suboptimal path of worsening output performance coupled with a deteriorating external balance. In this situation, policy makers may be driven into the uncomfortable position of passive observers without the possibility of intervening to reverse the course of economic performance. In such an event, the accumulating imbalances may jeopardize public sector solvency which in turn may force an adjustment in the macroeconomic regime to restore it.

Thus the efficiency of the CBA as a macroeconomic policy regime – and indeed the medium-term sustainability of such a regime – would appear to depend crucially on the performance of the automatic stabilizers. Fiscal policy as such – while possibly remaining responsive to the level of public debt, which is a general requirement for fiscal solvency – may not be in a position to engineer the desired operational effectiveness of the stabilizers. Hence responsible fiscal policy alone may not be sufficient to guarantee the medium-term stability of a CBA. This issue will be developed further in section 5.

¹⁰ As happened for example in Estonia and, to a lesser extent, in Lithuania in 1996-98.

3 Some issues in transitional fiscal accounting

The incorporation of the intertemporal public sector budget constraint broadens the understanding of the fiscal implications of economic policy and raises the requirements of fiscal accounting. Introducing an intertemporal dimension in fiscal policy re-focuses attention on the budget deficit as an indicator of the long-term sustainability of government policy (Blejer and Cheasty, 1991).¹¹ In this sense, the proper evaluation of public sector solvency depends firstly on the correct evaluation of the public sector's net worth, i.e. of the net present value of all present and future assets and liabilities of the public sector, and secondly, on the proper evaluation of changes in the public sector's net worth.

As noted by Blejer and Cheasty (1991), the intertemporal budget constraint reflects the fact that although the government can shift spending between periods by saving and borrowing, in the long run it is constrained by the stream of its income and its initial net worth. In this sense the current fiscal deficit is equivalent to the dissaving of the government, i.e., to the change in its net worth. Easterly (1999) has neatly summarized government behaviour, when subject to the intertemporal budget constraint, in the form of two identities:¹²

Flow fiscal constraint: Return on net worth = Government spending + Change in net worth

Stock fiscal constraint: Initial net worth = Present value of all future government spending

The flow constraint reflects the current liquidity position of the government. In this formulation, the change in the net worth corresponds to the primary fiscal balance (deficit or surplus) of the government while the return on the public sector net worth is the 'net return' on the net worth (the difference between the return on all public sector assets which accrues to the government, on the one side, and the redeemed claims on public sector liabilities – or, put differently, the return earned by the holders of public sector liabilities – on the other). The stock constraint reflects the long-term solvency position of the government, i.e. the fact that if the government is to remain solvent in the future, the present value of its future spending programme must equal its net worth.

Following conventional logic, public sector net worth equals the sum of the net present value of all public sector assets minus the sum of the net present value of all public sector

¹¹ Actually the same concept lies behind the discussion on the macroeconomic policy mix referred to in section 2 but there it only focuses on the level of public sector debt.

¹² In what follows I have slightly modified Easterly's formulation in order to ease some of his assumptions (in particular the very strong assumption of a single interest rate which also equals the rate of return on government assets and liabilities).

liabilities.¹³ As suggested by different authors (Blejer and Cheasty, 1991; Buiters, 1983; Easterly, 1999, among others), the definition of public sector assets and liabilities should be broad, amounting to a comprehensive government balance sheet. Thus government assets should include the present value of future tax revenues and social security contributions; the present value of financial assets held by the government; publicly owned real capital (including land, real estate, mineral resources and property rights on public resources); as well as equity (including state-owned enterprises) and the present value of seigniorage. Liabilities include public debt (domestic and foreign), the stock of high-powered money, the present value of social insurance and other government programmes, including all future claims on the government.¹⁴

Accordingly, the proper valuation of the 'change in net worth' – which is equivalent to the broader valuation of the primary fiscal balance (deficit or surplus) of the government that is sustainable in terms of long-term solvency – should also reflect systemic or lasting changes in the net present value of public sector assets and liabilities. Buiters (1997) suggests that the proper measurement of the broader public sector primary fiscal balance (which is the correct measure in terms of the long-term solvency position of the government) should include, in addition to the conventional fiscal balance, also the quasi-fiscal balance of the central bank and the balance of contingent deferred claims on the government. The quasi-fiscal operations of the central bank are operations which are functionally equivalent to government taxes or subsidies (for example, reserve requirements are equivalent to an additional tax on commercial banks whereas credits at below market rates are equivalent to subsidies). In turn, a contingent fiscal claim is created when the government 'issues' implicit guarantees to the corporate sector (for example, when it is known that the government is willing to engage in a future bail-out of an enterprise or a bank).

The reasons for this digression on the problems of the intertemporal budget constraints on the government are twofold. First, I would like to reinforce the importance of long-term public sector solvency (an issue which was already raised in section 2) and, second, to draw attention to some transition-specific fiscal accounting issues.

The importance of recognizing the necessity for a broader valuation of the primary fiscal balance has been acknowledged in the transition literature (Budina and van Wijnbergen, 1997; Buiters, 1997; Coricelli, 1998). However, when it comes to measurement, the issues

¹³ It should be noted that the actual valuation of public sector net worth is subject to inherent volatility as it incorporates a discount rate (used to determine the net present value of future flows) and this rate may be time dependent, reflecting changes in economic fundamentals and in expectations (I owe this insight to Michael Lansdesmann). This creates further difficulties in the proper tuning of fiscal policy.

¹⁴ Easterly (1999) distinguishes between two kinds of government liabilities: explicit debt and implicit government liabilities, which include government guarantees.

become more ambiguous, especially as regards the contingent deferred claims on the government.¹⁵

One issue on which the literature has been particularly vague is the treatment of state-owned enterprises (SOEs) and the outcome of their operations on the intertemporal government budget constraints of economies in transition. This in turn has given rise to ambiguity in the valuation of the contingent deferred claims on the government and hence of the broader valuation of the primary fiscal balance of general government operations. While in principle it is generally accepted that the net present value of the equity held by the state in SOEs is to be considered as part of the public sector net worth (see above), the implications of this on the broader valuation of the primary fiscal balance have not been spelled out clearly and explicitly.

In mature market economies with clearly defined property rights, full transparency in the generation of claims on the government and a relatively small share of the public sector in the economy (which in general is efficient and generally run in a manner similar to that in the private corporate sector), in principle it is possible to draw a line between the operations of SOEs and the operation of the general government. Or, as Buiter (1997) puts it, the general government 'excludes the state enterprise sector'. However, the situation is very different in economies in transition. The public sector of the economy is large although declining (at the outset of transition the state formally owned the entire corporate sector); although privatization in general has proceeded rapidly, in many instances property rights are still ambiguous (in some cases mass privatization schemes have resulted in complex ownership relations including hybrid property rights and cross-ownership). The management of SOEs incorporates substantial inertia from the past and often there exist quite close (formal or informal) links between the government and the management bodies of SOEs; full fiscal transparency is still in the making. Hence the general government and the public sector of the economy at least in the initial phase of transition exist in a symbiosis.^{16,17} On the other hand, in the course of transition, and especially with the progress in market reforms, these links begin to weaken and in the more advanced transition economies they start to resemble those in mature market economies.

¹⁵ As regards the quasifiscal balance of the central bank, Buiter (1997) suggests as an approximation to treat all credit extended by the central bank to the non-government sector as quasi-fiscal subsidies.

¹⁶ Thus Buiter (1997) notes that delayed structural reforms and the failure to impose hard budget constraints, notably on SOEs, can lead to the escalation of all three deficits (conventional deficit, quasi-fiscal central bank deficit and contingent deferred fiscal deficit). However, he stops short of accepting that the negative financial results of SOEs' operations should be treated as part of the fiscal deficit.

¹⁷ For example, the SNA distinction between 'General Government' and the 'Public Sector' is difficult to make in operational terms in transition economies. The process of doing so is itself part of the transition process. [I owe this insight to Paul Rayment – R.D.]

The existence of strong links between the operations of SOEs and those of the general government needs to be clearly reflected in the intertemporal budget constraints of the government. Following the concepts outlined above, the flow constraint of the government should take into account the change in the net worth of the public sector of the economy (matching the recognition that the stock constraint incorporates the net worth of SOEs).

The basic fiscal problem in the transition economies (and a major factor differentiating them from mature market economies) is the existence of a large segment of inefficient SOEs. These enterprises are typically chronic loss-makers and have accumulated considerable amounts of bad debt; but although many of them are technically insolvent, they continue to operate as going concerns. In the literature such enterprises have been named 'financial black holes' (Gomulka, 1994) or 'intrinsic loss-makers' (Dobrinisky, 1996). Hereafter I shall refer to such enterprises using the latter term, abbreviated as ILM(s).

For working purposes I shall define an ILM as a state-owned enterprise in a transition economy, inherited from the period of central planning, with technologically determined inefficiency and no further potential for x-efficiency gains in terms of increased profit/reduced loss (efficiency may possibly, but not necessarily, be improved only on the basis of new net investment in the enterprise). These properties reflect the essence of ILMs: their inefficiency is embodied in their production technology: even after all possible x-efficiency gains are achieved, the enterprise continues to perform at a loss under market conditions. The only way to improve the productive efficiency of such an enterprise is to upgrade its production technology which requires new investment. However, the economic rationale of such upgrading may be dubious because the costs of upgrading may be higher than the costs of a greenfield investment in a new production site of the same capacity.¹⁸

In principle, from the perspective of the enterprise balance sheet, the losses reduce the enterprise net worth. Moreover, chronic loss-makers with a built-in inefficiency (such as the ILMs, as defined above) have negative net worth and hence in terms of stocks their existence reduces the public sector net worth. Furthermore, ILMs are systemic sources of contingent deferred claims on the government. The fact that chronic loss-making SOEs continue to exist as going concerns indicates that their losses have been financed, partly by external finance.¹⁹ Such finance may be provided by (state-owned) banks under pressure by the government to extend directed credit to such enterprises, or banks may

¹⁸ Understandably the notion of ILMs as treated here is an oversimplification which is used to clarify the argument. In reality, chronic loss-making SOEs may not necessarily be unviable; for example, the losses may be partly due to a prolonged transformational depression or may reflect an unfavourable capital structure (large level of debt). Arguably, in the absence of hard budget constraints persistent inefficiency may reflect resistance to change and reluctance to restructure on the part of enterprise management and under such conditions not all chronic loss-making SOEs may have exhausted all their potential for x-efficiency gains.

¹⁹ As noted by Schaffer (1998), loss-making firms can (at least partly) self-finance their losses by running down inventories, receivables or cash deposits.

voluntarily extend it on the assumption that the enterprises are subject to implicit guarantees by the state (Perotti, 1993; Schaffer, 1998); bank credit may also be available because of distorted or perverse incentives in the banking system (Dobrinisky et al., 1999); other sources of external finance are payments arrears, especially tax arrears (Schaffer, 1998). The accumulation of such claims on chronic loss-making SOEs is arguably equivalent to the accumulation of contingent deferred claims on the government, as the enterprises obviously will not be able to repay these debts and at some point the government may be compelled to intervene with a bail-out (which constitutes an open recognition of the negative change in the public sector's net worth).

These arguments therefore suggest that the losses generated by the chronic loss-making SOEs (the ILMs) – which reflect changes in the enterprises' net worth – should be considered as part of the change in the net worth of the general government and hence be included in the valuation of the primary fiscal balance of the public sector.²⁰

Clearly, ILMs should be targets of policy action during the transition since obviously they cannot survive in a market environment in their present form; sooner or later they will have to be restructured or, most likely, liquidated as going concerns. However, the authorities may be severely restricted in their course of action. In the case of large firms, the government may be subject to severe political constraints. In addition, in terms of economic efficiency, there may be no 'first best choices'. As shown in the Appendix, under certain conditions the closure of an ILM may not even be an efficient policy in reducing the negative fiscal impact. Moreover, unless the reduction of employment due to a closure is offset by net job creation in the rest of the economy (which would be an unlikely outcome in a stagnant economy), there will be a residual and persistent negative fiscal impact for the government as a result of contingent fiscal claims being made explicit. In addition, the closure of large firms will inevitably have negative and indirect multiplier effects on the rest of the economy since the exit of such firms destroys the market for a large number of smaller subcontractors. If such indirect effects lead to the prolongation of stagnation or a deepening of recession, the overall fiscal position of the government may even deteriorate.

In sum, the legacy of large but unviable, loss-making SOEs (the ILMs) during the transition from plan to market is a source of persistent fiscal imbalance in the economy regardless of the fact that at some point in time they may be closed down. By generating a chronic fiscal imbalance, the inherited ILMs are sources of potential macroeconomic instability in the transition economies (the degree of which depends on the size of the ILM sector). The negative financial result of the operations of ILMs should therefore be taken into account in the broader valuation of the primary fiscal balance.

²⁰ It should be made clear that from a policy action perspective loss makers and the losses that they generate should be treated separately from profitable SOEs. The latter contribute positively to the conventional fiscal balance, and have positive net worth which is not reduced by inefficient performance.

4 Bulgaria's recent economic performance

4.1 Post-crisis adjustment

The Bulgarian economic scene has changed dramatically since the introduction of the currency board in July 1997. Even a superficial look at some of the main economic indicators (Table 1) shows that the change in the macroeconomic regime has marked an important turning point in performance.

At first glance, there has been a striking improvement in most aspects of economic performance: growth was positive in 1998 and in 1999; personal consumption and investment recovered notably in that year; after falling continuously for five years, real wages also rebounded in 1998-99; forex reserves were replenished and reached their highest level since the start of transition. The most striking progress was made in terms of macroeconomic stabilization: the rate of disinflation exceeded even the most optimistic expectations; consequently, nominal interest rates dropped to levels that had not been seen since the onset of reforms.

The accompanying fiscal consolidation (Table 2) was no less impressive: after years of exuberant (overall) fiscal deficits, the situation reversed dramatically already in 1997, and in 1998 there was a surplus in the overall fiscal balance. In addition, a number of positive changes can be observed in the breakdown of revenue and expenditure. Since 1996 revenue collection has increased considerably (by 6.5 percentage points in relation to GDP – Table 2) thanks to the improvement in the economic environment (in particular to the elimination of the Olivera-Tanzi effect) and to more efficient tax collection.²¹ However, the most important changes in this period took place on the expenditure side where an overall decline in total expenditure (by some 5 percentage points of GDP between 1996 and 1998) was accompanied by major restructuring in spending. The most remarkable positive shift was the reversal in the dynamics of non-interest and interest expenditure after 1996 (Figure 1). In the course of transition, as a result of the chronic and large overall fiscal deficit (Table 1) and a series of large bail-out operations (Dobrinsky, 1999, 1994a), domestic public debt had snowballed; consequently, interest expenditure was continuously rising until 1996 and persistently crowding out other expenditure. At the peak of the crisis in 1996 the two main expenditure categories were actually very similar in size (Figure 1). However, already in 1997 and especially in 1998-99 interest expenditure was drastically reduced to around 4% of GDP from nearly 20% in 1996; this eased considerably the pressure on the public finances and allowed for a marked recovery in non-interest expenditure which increased by more than 17 percentage points between 1996 and 1999 (Table 2).

²¹ Since 1997 the Bulgarian authorities have implemented a major tax reform including important changes in the system of taxation, unification of the personal income tax and reorganization of the tax collection system. A reform of the pension system and social security in general is also under way. See IMF (1999).

These positive changes reflect the favourable impact of macroeconomic stabilization (in the first place the dramatic fall in nominal interest rates) as well as the overall reduction of the level of public debt (Figure 2). In turn, the notable shrinking of public debt as a proportion of GDP was caused by several factors: the erosion of the real value of domestic debt denominated in domestic currency; the partial restructuring of the domestic public debt (that directly held by BNB) into external debt (debt to IMF) in the context of the introduction of the currency board; the real appreciation of the BGL in 1997-98 (Table 1) which reduced the level of the external debt as a proportion of GDP.

Not everything is bright, however, even on the surface. The most acute problem is the low level of economic activity which has remained sluggish: given the dramatic output decline in previous years, the recorded GDP growth is modest and still there is no evidence of robust recovery. Industrial production (measured by gross industrial output) continued to fall steeply after 1997 (both in 1998 and in 1999 it declined at double-digit rates) leading to a considerable drop in exports in this period, and there was a considerable deterioration in the trade and current account balances (Table 1). Two negative external shocks reinforced the deterioration in economic activity: the Bulgarian economy was badly hit by the Russian crisis, losing by 1999 about half of its exports to Russia (which accounted for approximately 8% of total exports in 1997), and on top of that, the Kosovo conflict led to a further drop in exports.²² As a result of these negative developments, unemployment started to increase rapidly in 1999 (Figure 4).

Although there has been some remonetization in terms of base money and M1, other monetary aggregates (deposits, commercial credit, broad money) in relative terms are still much below their pre-crisis level. The 'triple crisis' which eroded the real value of domestic currency assets resulted in large-scale demonetization of the economy which is likely to have long-lasting consequences.

The banking system, which was devastated by the crisis (17 banks were closed in 1996-97), has also been strengthened. The state-owned commercial banks that survived the crisis were re-capitalized; some of them have already been privatized to strategic foreign investors and those still in state ownership are due to be privatized in 1999-2000. A change in legislation mandated an increase in the capital base of all commercial banks which forced the smaller private banks to raise their capital too. In terms of financial stability the banking system is much healthier now; however, since the financial crisis there

²² Bulgaria was particularly hurt by the destruction of infrastructure during the air strikes as approximately half of Bulgarian exports were transported through the territory of Yugoslavia. The damage to the Yugoslav infrastructure which may leave these routes unusable for a long time results in rising transport costs for Bulgarian exporters.

has been a major change in credit policy and practices resulting in increased disintermediation and a continuing contraction of corporate credit (Table 1).²³

Although this brief overview of current performance gives some impression of the present economic situation, a deeper analysis is needed to reveal the underlying changes in economic performance and their driving forces as well as the acute problems that the Bulgarian economy is still facing. To do that, it is necessary to take a longer perspective because most of these problems are structural, deep-seated and chronic and some of them reflect the legacy of the period of central planning. In what follows I address two main problem areas – competitiveness and the performance of the corporate sector, in the first place the SOEs – which are likely to remain in the forefront of economic policy, and in particular of fiscal policy, in Bulgaria.

4.2 Competitiveness

Economic decline has prevailed in Bulgaria throughout most of the past decade and the cumulative drop in output since the start of transition has been enormous. In the course of the 1990s Bulgaria lost some 35% of its aggregate output and some 65% of its gross industrial output (Figure 3).²⁴ At the same time the numbers employed shrank by more than 30% while employment in industry fell by more than one half (Figure 4). Unlike central Europe and the Baltic states, the Bulgarian economy never managed to embark on a path of sustained and robust recovery and, despite the short-lived episodes of modest recovery, arguably Bulgaria has yet to emerge from the transformational recession. The reasons for this disappointing performance are numerous and complex; a comprehensive analysis is beyond the scope of this paper and here I shall only discuss some selected aspects of the macroeconomic dynamics which have a lasting impact on the current economic situation and on the degrees of freedom of economic policy.²⁵

One important factor with considerable negative consequences for the current and future growth potential of the Bulgarian economy has been the dwindling of investment activity. In 1998 real investment in fixed capital was a mere 40% of its pre-transition level (Figure 3). Between 1989 and 1988 the share of gross fixed capital formation (GFCF) in GDP

²³ Apart from being a consequence of the financial crisis, this change in behaviour is also related to the amendments to the Law on banks and credit activity passed in 1997 which raised substantially the liquidity requirements for the banks and the personal responsibilities of bankers for the banks' performance (one of the provisions of this law is now equivalent to an 'automatic trigger' mandating the central bank to withdraw the licence of a bank that has been illiquid for more than a week).

²⁴ 'Industry' here is defined as mining and manufacturing. It should be noted that in terms of value added the drop in industrial output during this period is probably not so large; however, the absence of consistent data of acceptable quality makes it impossible to quantify this change more precisely (as a proxy, Figure 3 contains the aggregate value added of industry and construction).

²⁵ For more details about the crisis in Bulgaria and for a more general overview of current developments see Dobrinsky (1999) and OECD (1999, 1997).

measured in current prices fell from 26.4% to 11.6%.²⁶ In real terms the GFCF/GDP ratio declined in this period by almost a half (Figure 5). Consequently, there has been a decapitalization of the economy and a general degradation of the country's productive assets.

The economic restructuring that did take place during this period was mainly of the passive type, due to different rates of output decline in the various sectors of economic activity. What is striking is that during the ten years of transition, measured labour productivity in Bulgaria was on average declining rather than growing: thus in 1999 industrial labour productivity²⁷ was at about three quarters of its pre-transition (1989) level (Figure 5).²⁸ Crude as this is as a measure of labour efficiency, it is still quite indicative of the general economic degradation and regress during this period. The available facts can also be looked at from another angle, namely, that despite the significant reduction of industrial employment (Figure 4) labour adjustment (labour shedding in the first place) was not vigorous enough and thus firms are still likely to be retaining excessive amounts of labour. Such an interpretation, however, does not change the fact that the investment process during the past ten years has not been supporting a sustained recovery of economic growth in the near term.

Despite the debt reduction achieved by the London Club deal in 1994 and a subsequent further restructuring of its foreign debt, Bulgaria is still heavily in external debt (Figure 2). Currently, total annual debt service amounts to some 10% of GDP and 20% of exports of goods and services (IMF, 1999). This relative burden is likely to prevail both in the short and in the medium term. The need to transfer such considerable resources abroad is another important factor that reduces the future growth potential of the country. On the other hand, following the default on its foreign debt in 1990, the country was almost completely isolated from the international financial markets,²⁹ foreign direct investment, at least until 1999, was only marginal and the external payments gap was only covered by official financial assistance. Hence if the country is to regain financial sovereignty in the future, it has either to engineer a sufficient inflow of private finance or to be able to finance its debt servicing obligations with a current account surplus.

In this respect it is important to see what is happening to competitiveness. In what follows I look at it briefly from several angles, all of which seem to point to some rather controversial

²⁶ National Statistical Institute data.

²⁷ Measured by gross industrial output (mining and manufacturing) per employee. Due to the absence of appropriate data it is difficult to estimate the changes in hourly productivity or labour productivity in manufacturing alone.

²⁸ Again, the deterioration in measured labour productivity in terms of value added per employee is probably less but, as noted, the lack of data prevents us from quantifying it more precisely.

²⁹ Since the start of transition Bulgaria has not issued sovereign debt on the international financial markets. The USD 50 mn of municipal bonds issued by the city of Sofia in 1999 was the first issue by a Bulgarian entity in this period.

outcomes. Thus the dynamics of real wages in industry (Figure 6)³⁰ looks quite different when considered from the producer and from the consumer side. Due to the considerable divergence between PPI and CPI during the past ten years, with consumer prices rising much faster (Table 1), real producer wages in industry (wages deflated by PPI) followed a quite different trend from real consumer wages of industrial employees (wages deflated by CPI). As a result, while between 1989 and 1998 real consumer wages declined by some 60%, real product wages in 1998 were roughly at their pre-transition level. As to the dynamics of 'dollar' wages (also shown on Figure 7),³¹ there was a large increase in the international level of wages. Given the output decline and the drop in productivity, this amounts to a significant deterioration in the competitiveness of Bulgarian manufacturing industry. The paradox is that at the same time manufacturing employees suffered an enormous fall in the purchasing power of their wages (I shall return to the discrepancy between PPI and CPI dynamics a little later). After 1997, there has been some recovery in real consumer wages, but the divergence between the latter on the one hand and real product wages and dollar wages, on the other, has increased even more. Both real product wages and dollar wages have been growing very fast since 1997 despite the continuing fall in measured labour productivity.

The dynamics of the real exchange rate is illustrated in Figure 7 by three versions of the real effective exchange rate (REER) computed by using weighted but differently composed deflators: (1) the CPI differential; (2) the PPI differential; and (3) the unit labour costs (ULC) differential.³² The first of these measures indicates a continuing real appreciation almost throughout the whole ten-year period from 1989 to 1998. When measured by the ULC differential, there are considerable ups and downs, but towards the end of the period strong real appreciation prevails again. Only the PPI measure shows a real depreciation until 1997 and a modest real appreciation thereafter. These changes are consistent with the observed divergence in the dynamics of CPI and PPI noted above. Actually the ratio PPI/CPI is in itself another measure of the real exchange rate;³³ indeed, its dynamics (also shown on Figure 7) has been very similar to that of the REER deflated by CPI differential.

Several conclusions can be drawn from these facts. During the ten years of transition there has been much stronger evidence of a real appreciation of the exchange rate than of depreciation. Since 1996, there has been a real exchange rate appreciation, and in terms of ULCs it has been considerable. All indications are that the relative domestic prices of

³⁰ Taken as a proxy for real wages in manufacturing due to the absence of adequate data.

³¹ In this case defined as nominal wages deflated by the nominal effective exchange rate.

³² A downward trend in Figure 7 indicates a real appreciation and vice versa.

³³ It can be used to approximate the 'internal terms of trade'. Considering that CPI is a weighted average of the domestic prices of tradables and non-tradables, then the ratio between PPI and CPI should have approximately the same dynamics as the ratio between tradables and non-tradables (see Halpern and Wyplasz, 1997).

non-tradables have increased faster than the relative domestic prices of tradables. All these facts point to a considerable and continuing deterioration in competitiveness.

Given the persistent output decline and the fall in measured productivity, the dynamics of the real exchange rate may appear paradoxical and not conforming either with what is suggested by theory or by some suggested interpretations of the dynamics of the real equilibrium exchange rate during the transition (see for example Halpern and Wyplosz, 1997). However, there may be some unconventional interpretations which are consistent with theory.

The well-known Balassa-Samuelson effect (conventionally ascribed to an economy which is undergoing a catch-up process) suggests that the real exchange rate will tend to appreciate if productivity in the tradables sector grows faster than productivity in the non-tradables sector. It is consistent with the conjecture that in a fast growing economy the equilibrium real exchange rate appreciates (Halpern and Wyplosz, 1997). However, for its results to hold formally it is only the relative, and not the absolute, dynamics that matter. In principle we can look at the productivity dynamics in reverse, with respect to an economy which is falling behind: if the output/employment decline is differentiated, it may well be that the relative productivity in the tradables sector will also increase vis-à-vis labour productivity in the non-tradables sector even during a prolonged depression. Although the lack of adequate data does not allow a proper analysis of the dynamics of (absolute and relative) labour productivity in Bulgaria, some approximate measures suggest that on average this may have been the case during the past ten years (Figure 8). In this context the dynamics of the real exchange rate in Bulgaria is consistent with the Balassa-Samuelson conjecture although it is a perverse Balassa-Samuelson effect taking place during a process of falling behind.

The PPI/CPI dynamics may offer another clue to the real exchange rate puzzle. Given the fact that it reflects the internal terms of trade, the discrepancy in the PPI-CPI dynamics indicates that the relative prices of Bulgarian tradables have been declining in this period vis-à-vis the relative prices of non-tradables. One possible interpretation of this phenomenon is that it reflects a deterioration in the average 'quality' of tradables/exports in terms of a declining share of high value added and hence relatively more expensive products.³⁴ Consequently, the fact that the PPI-measured real exchange rate has not been appreciating cannot be interpreted as a favourable factor as regards competitiveness; on the contrary, coupled with rising wage costs it is yet another indication of deteriorating competitiveness.

³⁴ After the loss of the CMEA market, Bulgaria practically could not re-direct a large share of its high-valued added manufacturing exports to other markets and these flows were destroyed (see Dobrinsky, 1994b).

How are these changes in competitiveness (as measured by the relations between productivity, real wages, and real exchange rates) reflected in the trade performance? Figures 9 and 10 suggest (although only in terms of a graphically presented statistical association) that there is a very close link between the changes in competitiveness and export (more generally, trade) performance. Figure 9 shows that after the liberalization in 1991-92 there has been a pronounced negative statistical association between real unit labour costs and export performance (the latter is measured on the chart with the export/GDP ratio). In view of this, one of the worrying features of Bulgaria's post-crisis external position is the sharp increase in real ULCs after 1997 which was coupled with a notable deterioration in export performance in 1998 and 1999. The main factor behind this development has been the rapid rise in real wages after 1997 which was not matched by an accompanying rise in labour productivity.

Figure 10 looks at labour costs from a different angle: how are the average (nominal) wage costs in industry (taken as a percentage of gross output) associated with the balance of merchandise trade? The statistical correlation reflected on this chart is probably even stronger: in almost every year shown on the chart, a change in the share of nominal costs has been associated with the reverse change in the trade balance. Again the results after 1997 indicate a significant rise in labour costs coupled with a substantial deterioration in the trade balance.

4.3 The state of the enterprise sector

It has been widely argued (Avramov and Sgard, 1996; Dobrinsky, 1999; OECD, 1999, 1997) that although the Bulgarian crisis resulted in a macroeconomic collapse, its basic roots were microeconomic in nature, resulting from financial indiscipline and the escalation of bad debts. In this respect the fiscal crisis (or the fiscal aspect of the Bulgarian financial crisis) was not so much due to major flaws in conventional fiscal policy but rather to more general flaws in government policy with negative quasi-fiscal implications.³⁵ In accordance with the arguments of section 3, the solvency of the public sector was not just a consequence of mismanagement of the conventional fiscal balance during this period (as can be seen from Table 2, the primary fiscal balance was highly positive after 1994) but of the escalation of the deficit in the broader fiscal balance, including the quasi-fiscal operations of the central bank and the deferred contingent fiscal liabilities of the government (for short, hereafter, I shall refer to these two components just as the 'quasi-fiscal deficit').

³⁵ It has to be pointed out that the magnitude of the crisis also reflects the extremely unfavourable starting conditions for Bulgaria's transition, especially the fact that the degree of built-in inefficiency in Bulgaria's industry due to arbitrary past investment decisions was extremely high (certainly much higher than in central Europe) and hence policy makers were faced with much more severe restructuring problems in engineering the needed re-allocation of resources in the economy.

In a transitional environment, such as that prevailing in Bulgaria in this period, the continuing operation of inefficient SOEs, as noted in section 3, may persistently generate contingent claims on the general government. The financing of the losses of genuinely inefficient SOEs (which are not in a position to settle their mounting financial liabilities) is the primary source of such a quasi-fiscal deficit. If the losses are financed by the banks, the likely result is a snowballing of bad loans which at some point may endanger the solvency of the banks. Furthermore, if the authorities then bail out the banks first by providing central bank refinance and later by taking over the banks' non-performing assets, this would amount to the direct fiscalization and monetization of the quasi-fiscal deficit. In very broad terms, this is how the Bulgarian financial crisis escalated in the years leading to the 1996-97 collapse.

The data in Table 3 give some idea of the magnitude of the quasi-fiscal problem related to the loss-making SOEs. These data show that in the period from 1994 to 1997 the loss-making SOEs have been generating annual losses amounting on average to 8.6% of GDP.³⁶

Naturally, it would be an exaggeration to claim that all SOE losses are transformed into claims on the general government budget (in its broad valuation). Some losses may be of a temporary nature due to cyclical factors or to a process of restructuring. Others may be due to managerial (dis)incentives (for example pre-privatization), the enterprise being otherwise viable. Besides, as noted above, some enterprises may be in a position to finance internally their temporary or cyclical losses. What counts are the losses of the genuinely unviable SOEs (the ILMs). Such an assessment would require a very detailed inspection of individual enterprises, something which is beyond the scope and goals of this paper. However, some rough and indirect estimates indicate that the number of unviable SOEs in Bulgaria was (and probably still is) significant.³⁷

A 'back-of-the-envelope' estimate of the degree of fiscalization of the quasi-fiscal deficit can be made by comparing the cumulative losses with the cumulative level of public debt induced by them. The two main sources of increased public debt, for enterprise and bank bail-outs (in 1994 and in 1996), alone amounted to roughly 36% of GDP. On the other hand, assume that the average losses in the public sector of the economy throughout 1991-96 were at the level of the above-mentioned annual average. Juxtaposing the two would imply that in 1991-96 roughly 70% of the total losses generated by loss-making

³⁶ Here measured as the aggregated after-tax profit or loss.

³⁷ For example some enterprise studies have shown that more than half of the SOEs had a negative operating profit between 1994 and 1996 (Dobrinsky et al., 1999), meaning that even disregarding the level of debt, they were not capable of generating sufficient revenue from their operations to finance their operating costs (in this case inclusive of depreciation).

SOEs were *de facto* fiscalized. Although this is no more than a very rough proxy, it at least gives some idea of the likely order of magnitude of the fiscalization of losses.

In this regard it is instructive to see what has happened to enterprise profitability in the state sector since 1997. Table 4 illustrates some of these developments.³⁸ Although the more recent data do not allow a distinction between profit- and loss-makers but only reflect aggregate performance, what is notable is a rapid deterioration in profitability after 1997. Some of this deterioration in aggregate performance is due to the fact that with privatization (which presumably involves only viable firms) the relative share of unviable, loss-making SOEs in the state sector increases. Nevertheless, the exit of firms from the state sector and its changing composition does not affect in any way the absolute level of losses generated by genuinely inefficient SOEs.

The deterioration of the financial results in 1998 and 1999 can be attributed to two groups of factors: (1) those related to the decline in output, and (2) those related to the structure of costs. One important factor within the first group has been the postcrisis credit crunch already mentioned in section 4.1 which has had a depressing effect on the cash-strapped Bulgarian enterprises (and was one of the supply-side factors behind the output decline after 1997). Another factor was the series of negative external shocks which – together with the general weakening of world demand for primary commodities in 1998 – hit severely a number of local producers. However, of no less importance is what happened on the cost side. As already pointed out, one of the major reasons for the deterioration in competitiveness has been the rapid growth of real wages which has been squeezing the profits of exporters (and in general of all local producers). There were other cost factors too, in the first place the price of energy. Since 1997 the government has been systematically raising the regulated energy prices; in addition, a ten-year barter agreement on gas deliveries from Russia expired in 1998 and Russian suppliers started to charge market prices. All this has resulted in a significant rise in the energy component of costs and in a further squeeze on the profit margins of firms.³⁹ At the same time accounting profits (as reported in Table 4) contracted after 1997 due to an increase in the depreciation norms introduced in 1998 to take into account the effect of hyperinflation.⁴⁰

³⁸ The data in Table 4 should be treated with some caution as they are based on the preliminary reporting of firms to the National Statistical Institute. It should also be noted that the data in Table 4 are not directly comparable to those referring to SOEs in Table 3 due to some differences in coverage and in reporting methodology.

³⁹ At the same time the data in Table 4 indicate that since 1997 the energy sector has become on average one of the most profitable sectors in the economy. Arguably the change in energy prices has resulted in a major redistribution of profits within the economy.

⁴⁰ To some extent the profits reported in 1996 and especially in 1997 are 'paper' profits as the non-taxable depreciation allowances in this period were not updated to reflect the very high inflation rate. By taxing such paper profits the budget *de facto* confiscated part of the capital of the firms. It should be noted that despite the negative impact on accounting profits the updating of depreciation allowances had a positive financial impact on firms as it increased their cash flow.

Although exact figures on the total losses generated by SOEs after 1997 were not available to the author at the moment of writing, the results shown in Table 4 indicate that the absolute level of these losses is likely to have increased in 1998 while preliminary data (first half-year only) suggest that large losses can be expected in 1999 as well.

5 Current fiscal policy dilemmas

It follows from the discussion in the previous section that despite notable progress in macroeconomic and financial stabilization, the Bulgarian economy still faces a number of acute problems, some of them newly emerging. What are the policy implications of the current economic situation? As there is no room for independent monetary policy under a CBA, such a question is pointed at fiscal policy. To assess the current policy options it is useful to return to the classification of the types of macroeconomic policy regimes and the degrees of policy freedom under different regimes as discussed in section 2.

We start with an overview of the policy mix before the introduction of the currency board. At first glance, the data on the primary (conventional) fiscal balance (Table 2) would imply that there was a major change in regime in 1994 when the primary balance increased by several percentage points and remained highly positive thereafter. This was the year when the servicing of the foreign debt was resumed as a result of the London Club deal and the debt service laid a heavy toll on the public finances. The fiscal balance before 1994 reflects the lack of effort on the part of fiscal policy to honour the flow and stock fiscal constraints, and during these early years of transition (1991-93) the macroeconomic policy mix was apparently one of fiscal dominance.⁴¹ The highly positive primary balance after 1994, in view of the very high level of public debt (Figure 1), reflected an attempt to target the long-term solvency position of public finances. However, would this be sufficient to conclude that the policy regime changed to one of money dominance? I would answer no, despite the impressively high levels of the primary surplus (Table 2).

My main argument is not so much related to the issue of the consistency or inconsistency of the conventional fiscal balance with the monetary debt of the public sector but with the apparent inconsistency of the *de facto* broad fiscal balance (including the quasi-fiscal deficit) with the net worth of the public sector.⁴² Taking into account the considerable gap in the broad balance, monetary policy in this period was pushed to provide a matching policy component that would guarantee the overall solvency of the public sector.⁴³ Thus solvency was restored via the financial crisis of 1996-97 by eroding the real value of the domestic

⁴¹ However, in view of the moratorium on the foreign debt service, monetary policy was not required to correct for that in order to guarantee public sector solvency.

⁴² The arguments in support of such a conclusion are contained in the discussion in sections 3 and 4.

⁴³ The fact is that during this period monetary policy was almost perfectly accommodating and the overall fiscal deficit was largely monetized (see Dobrinsky, 1999).

debt denominated in domestic currency through very high inflation (which was equivalent to imposing an extra tax on the holders of such debt).

As noted in section 2, if a currency board system is to be regarded as a long-term commitment of the authorities, then it implies by definition a macroeconomic policy mix of (externally borrowed) money dominance. Moreover, the solvency constraint imposes zero degrees of freedom of fiscal policy: if long-term solvency is to be maintained, fiscal policy is obliged to target a primary fiscal balance that is consistent with the public sector net worth. Thus in order to assess the long-term sustainability of the current macroeconomic policy regime in Bulgaria (and the policy options of fiscal policy under the CBA), in accordance with the arguments of section 3, one has to address two main points: (1) Is the current (broad) primary fiscal balance actually consistent with the public sector net worth? (2) Are there other systemic threats to long-term public sector solvency and to the macroeconomic regime in general?

Two additional clarifications are needed here (which are relevant to public solvency in general, regardless of the actual macroeconomic policy mix and regime). First, as observed by Buiter (1997), the 'required' primary balance (that which is consistent with long-term solvency) as well as the 'primary gap' (the difference between the actual and the required balance) are *ex ante* measures because *ex post* any gaps will be closed. This argument implies that if policy is inconsistent, sooner or later there will be a correction (through an orderly or through a forced adjustment). Second, the primacy of public sector solvency in setting the required primary balance is a long-term requirement and should mainly be regarded as such. Consequently, the consistency of the primary balance with the public sector net worth has to be interpreted in the sense of absence of systematic deviations from the required levels; minor fluctuations around this trend need not endanger the overall solvency of the public sector (Begg, 1998). The latter argument eases somewhat the restrictions imposed on the degrees of freedom of fiscal policy under a CBA.

As already noted, the data on the (conventional) general government fiscal account indicate a substantial improvement since the introduction of the CBA in 1997 (Table 2). At the same time, as shown in section 4, there are signs that the quasi-fiscal deficit continues to be dangerously high. Due to the lack of adequate data, I am not even attempting here to assess whether there exists a primary fiscal gap (in the above sense). I am just drawing attention to the fact that the broad definition of the primary balance is likely to be quite different from the numbers shown in Table 2 and that in terms of the broad balance the picture is probably not so rosy.

Has policy been addressing this issue since 1997? As discussed earlier, the generation (or elimination) of deferred contingent claims is not necessarily within the scope of fiscal policy *per se*; it may be the result of government policy in a broader sense if the latter results in

changes in the broad definition of the fiscal balance. Hence a policy assessment should not be confined to conventional fiscal policy but rather should try to trace each element of the quasi-fiscal deficit to the policy action or inaction that causes the change in the broad definition of the fiscal balance. Understandably my brief overview only focuses on some of the most obvious pieces of evidence.

It would be unfair to say that the problems related to the quasi-fiscal deficit have been ignored by policy; on the contrary, the authorities have made considerable progress in reducing some of the sources of contingent deferred claims on the government and in closing some of the previous loopholes. First of all, the CBA eliminates the possibility of any claim-creating quasi-fiscal operations by the central bank and hence the possibility of direct monetization of the quasi-fiscal deficit is non-existent. Secondly, the authorities have made progress (although less than initially envisaged) in implementing a 1996 programme in which some 70 large loss-making SOEs were placed in financial isolation (by denying them access to bank finance) with the goal of privatizing those that could be sold and liquidating the rest. A number of loss-making SOEs have been closed down in addition to those in the isolation programme. Privatization in general has been given a serious boost by putting practically all SOEs (with the exception of a small set of selected firms) up for sale.

Against these achievements are some of the outcomes and problems. First there is the continued generation of large losses by the state sector of the economy coupled with the generally deteriorating financial results of this sector after 1997. The options for restructuring this sector are limited and do not always produce the expected results. For example, as shown in the Appendix, the downsizing or even the closing down of an inefficient SOE will not necessarily be a fiscally efficient policy option. In addition, even the immediate closure of a genuinely unviable SOE is likely to result in a lasting residual fiscal liability for the state. It should also be noted that not all privatization methods eliminate the contingent deferred claims on the government from the operations of former SOEs. For example, when the state retains a stake in privatized companies, as in cases when the new owners are financially weak (such as they emerge after the voucher privatization through privatization funds or from sales to insiders, two methods that have prevailed in Bulgaria so far), the implicit claims on the public sector *de facto* remain even if the state has not ownership stakes post-privatization.

One additional loophole which apparently has not been closed yet is tax arrears. Despite the progress in the level of tax collection, tax arrears have remained a major problem even after the introduction of the CBA. Table 5 illustrates this with some statistics on the level of

enterprise tax arrears in Bulgaria in 1994-97.⁴⁴ The data show that although aggregate tax arrears were lower in 1997 than in 1996, they still remained quite high. The data also show that the aggregate tax arrears of the corporate sector in 1997 were much larger than the interest arrears, which was not the case in 1994-95 (interest arrears started to fall already in 1996 and in 1997 they were reduced considerably). Although systematic data for the period thereafter are lacking, anecdotal evidence suggests that tax arrears (as well as inter-enterprise arrears and other payment arrears) have continued to grow in 1998-99 as well.⁴⁵

In fact, despite the notable improvement in the fiscal situation, at the same time the fiscalization of the quasi-fiscal deficit has continued. Systematic recent data are still unavailable, but according to some rough estimates, in 1999 alone the net effect of various bail-out operations undertaken by the government (mostly in the form of writing off old debts of SOEs in the course of their privatization but also in the form of writing off of tax arrears as well as writing off of liabilities to the state of already privatized firms) amounted to some 4% of GDP.⁴⁶

One might ask whether fiscal policy could take care of the quasi-fiscal deficit by targeting a different level of the conventional fiscal balance (in this case a larger primary surplus). While in principle this might be a reasonable policy course in terms of long-term solvency, in the circumstances (given the stagnant economy and the deterioration in competitiveness) such a course might have other negative implications. A shift to targeting a larger primary surplus would be equivalent to a lasting fiscal contraction which in turn will be likely to have a negative impact on economic activity and growth. Considering the trend towards real appreciation of the exchange rate (due to the perverse Balassa-Samuelson effect and the absence of wage flexibility) the outcome may be a further deterioration in competitiveness and a widening of the external deficits.

The policy fight against the quasi-fiscal deficit is indeed a race against time and it remains to be seen whether the authorities will be able to reduce the flow of newly generated contingent deferred claims on the government to a safe level before the stock of accumulating claims reaches proportions that might endanger the stability of the macroeconomic regime.

⁴⁴ Tax arrears in the table are measured by the difference between taxes due and taxes actually paid. The incidence of negative VAT and excise 'tax arrears' indicates cases of large advance prepayment of taxes by exporters subject to reimbursement after the execution of the export operation.

⁴⁵ For example, it has been reported that in mid-1999 the cumulative tax arrears of Bulgargas (the state-owned gas monopoly) alone amounted to some BGL 500 bn (or around 2.5% of GDP). Against that, Bulgargas held almost the same sum in receivable arrears from its clients (mostly large SOEs).

⁴⁶ Reported by the weekly newspaper *Kapital*, No. 45, 15-19 November 1999.

The situation is even more serious as regards competitiveness which, moreover, is an issue that in principle is within the direct competence and responsibility of macroeconomic (hence fiscal) policy. The overview of current economic developments in section 4.2 presents strong evidence of a rapid deterioration in competitiveness after 1997 followed by a considerable worsening of the trade balance. The conclusion that follows from this is that the primary sources of these negative changes are (1) the discrepancy between the changes in productivity and in real wages in the tradables sector (the growth of real wages exceeding by far the growth in productivity), and (2) the real appreciation of the currency when regarded from the cost side (in terms of ULCs). This is equivalent to saying that the evolution of wages, and probably the incomes policy followed since the introduction of the CBA, have not been consistent with the actual macroeconomic performance and with the overall stance of macroeconomic policy in this period.

Regardless of the actual mechanisms of the wage dynamics to which I return below, this is also equivalent to an admission of the fact that there has been insufficient wage flexibility since the introduction of the CBA. The situation has been made even worse due to the series of negative external shocks which, however, did not induce an adequate compensation reaction (i.e., the automatic stabilizers did not perform their expected function). Recall the arguments on the degrees of freedom of fiscal policy under a CBA presented in section 2: in fact the observable patterns of performance in Bulgaria in 1998-99 are very much in line with the negative scenario discussed there.

The current course of deteriorating competitiveness due to rising real ULCs is obviously a hazardous one because of its depressing effect on economic activity coupled with the widening of the external imbalances. Given the stagnant economy and the high level of external indebtedness, this can hardly be considered as a sustainable economic performance. Following the arguments in section 4.2, it is important to point out once again that given the fact that most of the external debt is public debt, the deterioration in competitiveness may endanger directly public sector solvency and hence the macroeconomic regime.

What are the fiscal policy options in these circumstances? Not very comforting, the basic conclusion which follows from the discussion in section 2 is that under a CBA fiscal policy is incapable of directly addressing the issue of competitiveness using its first tier policy instruments (namely targeting specific levels of the fiscal balance). What remains at the disposal of policy makers are second tier instruments related to the structure of revenue and spending. In this regard it would be useful to identify the causes of the discrepancy in the growth of wages: to what extent was it the outcome of policy action or inaction and what can policy do (if anything at all) to reverse this situation?

Since the start of economic transformation, wage formation has been characterized by considerable inertia and backward-looking expectations. The growth of wages in the public sector has in principle always been subject to controls which have changed over time.⁴⁷ Throughout most of the 1990s the growth of wages lagged behind CPI inflation, leading to a considerable reduction in real consumer wages (Table 1 and Figure 6). In the course of the hyperinflation in the first months of 1997 the value of real wages collapsed,⁴⁸ however, in the period thereafter, this pattern was reversed and the authorities have tolerated a growth in nominal wages which has been larger than the change in CPI and a growth in real wages which has been more than that of productivity. While this probably partly reflects populist motives, it is also an indication of the inefficiency of incomes policy in this period which has failed to tie real wages to productivity and to introduce a forward-looking element in wage formation.

Another policy-related factor was the *de facto* failure of the authorities to impose hard budget constraints on the SOEs even after the introduction of the CBA. Strong evidence of this is the incidence of growing tax arrears as discussed above. As a consequence, even loss-making SOEs have been in a position to raise wages, in violation of the regulations. This is probably the policy area where the two main negative aspects of the current economic performance discussed in this paper (the quasi-fiscal deficit and the deterioration in competitiveness) come most closely together.

One obvious area of possible intervention to counter the deterioration in competitiveness is incomes policy. However, the problem is that already the attained level of nominal wages poses a danger to competitiveness while under the fixed exchange rate system and in the absence of sovereign monetary policy the authorities are deprived of the easier policy option to reduce real wages through nominal exchange rate depreciation and inflation. Indeed the Bulgarian economy in 1999 was facing the reverse problem: negative inflation coupled with growth of nominal wages which has resulted in an even faster growth of real wages. The problem is aggravated further due to the deterioration in the internal terms of trade during the past several years, with PPI lagging behind CPI. As noted earlier, due to this divergence the current wage level has different implications from a macroeconomic point of view (defining competitiveness) and from the microeconomic perspective of employees who saw the purchasing power of their wages drop sharply in this period. In these circumstances, trying to force a reduction in nominal wages in order to improve competitiveness would probably be an extremely difficult policy task.

⁴⁷ Until 1997 wage regulation in SOEs included indexation linked to inflation. After indexation was abandoned, the growth of the wage fund of SOEs was in principle linked to profitability and to the growth in productivity. Loss-making SOEs and SOEs in arrears were not allowed to raise wages but at the same time no constraints were imposed on the growth of wages in SOEs reporting profit and current on all their payments. For details see IMF (1999).

⁴⁸ At the peak of the crisis, in February 1997, economy-wide average monthly dollar wages were reduced to some USD 25.

There is probably some scope for further improvement as regards the imposition of hard budget constraints on the SOEs by tightening tax collection and eliminating tax arrears. As argued above, such a policy is likely to have a positive impact on the quasi-fiscal balance as well. However, again, this policy may have negative side effects as well. Forcing hard budget constraints is likely to result in a growing number of bankruptcies (including some large SOEs) with explosive social consequences. So far the authorities have probably deliberately refrained from doing so fearing the social consequences. In addition, one has to take into account the negative multiplier effects and the residual fiscal effects of the eventual closures as well.

Most importantly, if the economy remains stagnant, these possible policy interventions are unlikely to produce a lasting reversal of the current negative trends. In the present circumstances, the most desirable option in terms of outcomes would be the resumption of economic growth. If robust and sustained growth (especially in the tradables sector) were to resume, this in itself would eliminate most of the problems discussed throughout this paper: an eventual upturn in productivity would help to reverse the negative trends in competitiveness and in addition would produce a notable fiscal boost (as the arguments are evident, I shall not dwell on this issue in more detail). Thus a strong recovery would be equivalent to windfall policy gains. The problem – especially in view of the persistently meagre investment activity in recent years – is that robust growth does not seem to be forthcoming.

Can fiscal policy do something to enhance the growth potential of the economy? While a dedicated long-term policy effort (in institution building, education and human capital development, improvement of the business climate, development of the infrastructure, and the like) may produce a positive outcome in the long run, the room for manoeuvre in the short run is very limited. Given the constraints stemming from the CBA, systemic fiscal operations in growth promotion (resulting in a lasting shift in the level of the fiscal balance) are unlikely to be sustainable. In practical terms, the possible area of fiscal policy activism is confined to eventual minor counter-cyclical involvement and/or internal restructuring of revenue and expenditure.

6 Concluding remarks

This paper discusses some of the fiscal policy issues arising in the transition from plan to market in the context of Bulgaria's recent experience with a CBA.

Bulgaria's economic transformation has been extremely difficult, featuring persistent macroeconomic and financial instability and a series of crises leading to a major economic collapse in 1996-97. In 1997 a CBA was established as a 'policy of last resort' to reverse macroeconomic instability and to impose fiscal and financial discipline. The experience

since the introduction of the CBA has been mixed, progress in macroeconomic and financial stabilization being combined with sluggish economic activity and a failure to embark on a path of sustained recovery.

The most serious policy implication of the introduction of a CBA is the severe loss of sovereignty in economic policy. The paper argues that this loss of sovereignty is not confined to the area of monetary policy (which is eliminated altogether) but extends to fiscal policy as well since the functions of the latter are strictly limited to sustaining the long-term solvency of the public sector. The resulting loss in the degrees of freedom considerably restrains the room for policy manoeuvre, especially in cases of external disturbances or shocks.

The smooth functioning of a CBA implies a high degree of price and wage flexibility for the economy to be able to accommodate external disturbances. However, testing this assumption against Bulgaria's recent economic performance – especially in the light of the recent external shocks – reveals a low degree of responsiveness of the labour market, and, in particular, a high degree of inertia in wage setting. The absence of well-functioning shock absorbers (generating a compensating response) has instigated a substantial deterioration in competitiveness and in the opening of large external imbalances.

The paper addresses also some more general issues related to fiscal accounting in the transition from plan to market in the context of the intertemporal budget constraint of the public sector. Attention is drawn to the importance of monitoring not only the conventional fiscal balance but also the broader fiscal balance, including the quasi-fiscal operations of the central bank and the deferred contingent fiscal liabilities of the government (defined for short as the 'quasi-fiscal deficit').

It is also argued that due to the transitional specificity of the relations between the state and the SOEs (especially during the initial phases of transition), there should be a special treatment of the financial results of the operations of the SOEs in the fiscal accounts of the public sector. In particular, the losses generated by SOEs should be considered in the broader definition of the fiscal balance of the public sector as these losses are the primary ingredients of the quasi-fiscal deficit. The exceptionally high level of the quasi-fiscal deficit during the initial phase of transition in Bulgaria, and its subsequent fiscalization and monetization, were the root causes of the 1996-97 crisis.

The paper analyses some of Bulgaria's post-crisis policy challenges. It is argued that despite the macroeconomic stabilization and the fiscal consolidation achieved after the introduction of the CBA, some serious economic problems still remain and new ones have emerged. Among them are the observable deterioration in competitiveness (and the ensuing increase in the external deficits) and the fact that SOEs continue to generate large

losses (and hence increase the quasi-fiscal deficit). If the resulting imbalances continue to escalate, they may endanger the stability of the current macroeconomic regime.

The available fiscal policy options to address these problems under a CBA are also discussed in the paper. One of the conclusions is that due to the limited degrees of policy freedom in the context of the current macroeconomic regime, fiscal policy is very restricted in what it can do to counterbalance the mounting quasi-fiscal deficit, the loss in competitiveness and the escalating external imbalance.

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Table 1

Bulgaria: Selected macroeconomic indicators

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Real economy (average annual rates of change, %, unless otherwise noted)									
Gross domestic product	-9.1	-11.7	-7.3	-1.5	1.8	2.9	-10.1	-7.0	3.5
Private consumption	0.6	-8.3	-2.4	-2.9	-4.4	-2.9	-3.9	-16.0	7.6
Gross fixed capital formation	-18.5	-19.9	-7.3	-17.5	1.1	8.8	-21.2	-23.9	16.4
Gross industrial output	-16.7	-22.2	-15.9	-10.9	8.5	5.0	-8.3	-10.4	-13.5
Total employment	-6.1	-13.0	-10.4	-1.6	0.6	1.3	-0.1	-2.7	-1.6
Rate of unemployment 1/	1.7	11.1	15.2	16.4	12.8	11.1	12.5	13.7	12.2
Employment in industry	-9.0	-17.9	-13.2	-8.3	-3.7	-2.2	-1.2	-4.1	-5.8
Labour productivity in industry	-8.5	-5.2	-3.1	-2.8	12.7	7.4	-7.2	-6.5	-8.2
Prices and wages (average annual rates of change, %, unless otherwise noted)									
Consumer prices	23.8	338.5	91.2	72.8	96.0	62.1	123.0	1082.3	22.3
Consumer prices (year on year) 2/		473.7	79.5	63.9	122.0	32.9	310.8	578.7	1.0
Producer prices in industry	14.7	296.5	55.9	26.9	75.0	52.7	138.4	925.9	15.5
GDP deflator	..	..	59.6	51.1	72.7	62.8	121.0	951.0	21.9
Average wages and salaries (total economy) 3/									
Nominal	31.5	165.8	113.5	57.8	53.5	53.2	83.8	865.6	46.5
Real (CPI deflated)	6.2	-39.4	11.7	-8.7	-21.7	-5.5	-17.6	-18.3	19.8
Monetary aggregates (year on year rates of change, %) 3/									
Money supply (M1)	24.0	24.2	40.7	27.3	55.5	43.6	119.3	868.0	23.4
Money supply (broad money)	16.1	118.0	52.5	53.1	78.6	39.6	124.5	359.3	10.1
Time deposits (domestic currency)	..	513.8	129.7	86.6	50.0	54.9	27.6	146.8	-2.3
Credit to the corporate sector	..	112.5	33.6	32.8	31.5	30.8	227.9	183.0	-1.2
Nominal interest rates (%), 4/									
BNB basic interest rate	4.5	56.5	58.2	58.1	81.8	59.8	245.8	137.1	5.4
Average yield of (short-term) treasury bills	..	..	..	55.0	76.9	61.7	278.7	200.8	6.2
Short-term lending interest rate of commercial banks	..	67.8	74.0	78.3	102.6	79.8	300.2	209.9	14.2
Commercial banks' rate on (one-month) time deposits	..	59.2	55.6	52.0	65.1	43.6	146.4	80.8	3.0
External variables (mn USD)									
Gross foreign debt (endperiod)	10007	12247	13806	13836	11338	10148	9514	9677	10072
Forex reserves excluding gold (endperiod)		331	935	655	1002	1236	484	2249	2831
Net foreign debt (endperiod)		11916	12871	13181	10336	8912	9030	7428	7241
Merchandise exports	5266	3279	3922	3721	3985	5355	4890	4940	4293
Merchandise imports	5482	2647	4468	4757	4185	5658	5074	4932	4995
Trade balance (-deficit)	-216	632	-546	-1036	-199	-303	-184	8	-702
Current account balance (-deficit)	-1152	-77	-361	-1098	-32	-26	16	416	-251
Exchange rate									
Nominal exchange rate, period average (BGL/USD)	4.5	16.7	23.3	27.6	54.2	67.1	177.5	1681.8	1760.4
Real exchange rate (CPI), rate of change, % 5/	..	-12.1	-24.8	-29.7	2.5	-21.9	19.6	-17.8	-13.3
Real exchange rate (PPI), rate of change, % 5/	..	-2.8	-7.8	-5.3	14.3	-17.4	16.0	-11.9	-8.2
Selected ratios (% of GDP)									
Monetisation (M1)	..	15.5	14.0	13.1	10.9	9.3	7.4	7.4	10.4
Monetisation (broad money)	..	60.8	67.5	65.1	63.0	56.9	44.4	23.5	26.7
Monetisation (time deposits)	..	..	22.7	29.2	26.2	25.9	16.0	3.4	3.7
Monetisation (corporate credit)	..	67.6	68.5	64.0	50.2	35.5	34.8	16.6	14.4
Trade balance (-deficit)	-2.1	7.8	-6.3	-9.6	-2.1	-2.3	-1.9	0.1	-5.7
Current account balance (-deficit)	-11.4	-0.9	-4.2	-10.2	-0.3	-0.2	0.2	4.1	-2.0
Consolidated government balance (-deficit)	-4.9	-3.6	-5.2	-10.8	-5.8	-5.6	-10.4	-1.6	0.3

1/ Endperiod ratio (%), registered unemployed only

2/ December over December

3/ Until 1995 excludes private sector

4/ Average annual compound rates

5/ Deflated by the price differential vis-à-vis the USD

Source: National Statistical Institute; Bulgarian National Bank; author's own calculations

Table 2

Consolidated general government fiscal account (% of GDP)

	1992	1993	1994	1995	1996	1997	1998	1999*)
Revenue								
Total revenue	38.4	37.2	39.9	35.7	31.9	35.6	38.4	42.9
Tax revenue	33.2	28.9	31.8	29.3	25.8	28.0	30.9	22.8
Profit taxes	6.8	2.2	3.7	3.8	4.2	6.4	4.0	..
Non-financial enterprises	4.5	2.0	3.6	3.4	3.6	5.8	3.1	..
Financial enterprises	2.3	0.3	0.1	0.4	0.7	0.6	0.8	..
Income taxes	5.4	5.0	4.4	4.1	4.0	4.0	4.7	..
VAT/turnover taxes	3.6	3.5	7.3	6.7	6.7	6.1	8.5	..
Excise duties	2.6	3.8	3.4	2.6	1.5	2.1	3.1	..
Customs duties	2.0	3.0	2.8	2.4	2.2	2.1	2.1	..
Social insurance contributions	10.7	10.1	8.9	7.9	6.2	6.8	7.6	10.5
Pension fund	9.2	8.6	7.6	6.7	5.4	6.1	6.9	..
Unemployment fund	1.5	1.5	1.3	1.2	0.8	0.7	0.7	..
Other taxes	2.1	1.3	1.2	1.7	1.0	0.5	0.9	..
Non-tax revenue	5.3	6.3	7.6	5.7	4.9	7.6	7.5	9.6
BNB transfers	1.6	3.2	3.8	1.8	1.3	0.2	0.0	..
Other non-tax revenue	3.7	3.1	3.8	3.9	3.7	7.4	7.5	..
Extrabudgetary funds	..	2.1	0.5	0.7	1.2	..	..	..
Expenditure								
Total expenditure	43.6	48.1	45.7	41.3	42.3	37.1	38.1	43.9
Non-interest expenditure	37.1	38.7	32.2	27.2	22.6	28.7	33.7	39.9
Current expenditure	34.4	36.8	30.7	26.1	21.9	26.0	29.4	..
Wages and salaries	6.1	6.4	5.3	4.6	3.5	4.2	5.3	..
Maintenance/operating	8.0	6.5	6.4	5.5	4.9	6.7	6.7	..
Defense/security	4.2	4.0	3.6	3.6	3.0	3.9	4.4	..
Subsidies	1.8	2.2	1.4	1.1	0.8	2.3	2.1	..
Social expenditure	14.2	15.2	13.0	10.8	8.6	8.9	10.9	..
Pensions	10.0	11.0	9.8	8.0	6.5	6.7	8.4	..
Assistance	3.5	3.2	2.6	2.1	1.5	1.8	2.1	..
Unemployment	0.7	1.0	0.7	0.7	0.6	0.4	0.5	..
Extrabudgetary funds	..	2.6	1.0	0.6	1.0	..	..	..
Capital expenditure	2.8	1.9	1.5	1.1	0.7	2.7	4.3	..
Interest expenditure	6.5	9.3	13.5	14.1	19.7	8.4	4.4	4.0
External	1.6	1.0	1.3	2.8	2.7	3.0	3.2	..
Domestic	4.8	8.3	12.3	11.3	17.0	5.5	1.2	..
Balance (-deficit)								
Primary balance	1.3	-1.5	7.7	8.5	9.3	6.9	4.8	3.0
Overall balance	-5.2	-10.8	-5.8	-5.6	-10.4	-1.6	0.3	-1.0
Financing								
Total financing	5.2	10.8	5.8	5.6	10.4	1.6	-0.3	..
External financing (net)	-0.7	-1.3	-0.5	-1.3	-2.9	0.9	-0.1	..
Domestic financing (net)	6.0	12.1	6.3	7.0	13.3	0.7	-0.3	..
Banking system	6.0	10.9	5.5	4.9	12.2	-2.4	-2.0	..
Non-bank financing	..	1.2	0.7	2.1	1.1	-0.7	-0.3	..
Privatization	..	..	..	..	..	3.7	2.0	..

*) Preliminary

Source: National Statistical Institute; Ministry of Finance; IMF (1999); author's own calculations

Table 3

Profits and losses in the Bulgarian corporate sector

	1994			1995			1996			1997		
	State sector	Private sector	All enterprises	State sector	Private sector	All enterprises	State sector	Private sector	All enterprises	State sector	Private sector	All enterprises
a) Profit makers (enterprises with positive after tax profit)												
Number of enterprises	3133	2676	5809	2591	9048	11639	3321	20601	23922	2843	28788	31631
Average profitability of sales (%)	4.6	11.6	5.4	3.4	7.8	4.9	8.1	6.9	7.7	13.0	6.7	9.9
Aggregate profit (- loss) as percentage of GDP (%)	2.9	0.9	3.8	2.0	2.5	4.5	8.8	3.7	12.5	10.3	5.4	15.7
Memo: Share in the total number of enterprises (%)	30.8	26.3	57.1	13.4	46.7	60.1	8.9	55.0	63.9	6.5	66.2	72.7
Memo: Share in the total aggregate sales of all enterprises (%)	43.4	5.2	48.6	38.1	19.9	58.0	48.6	23.5	72.2	38.7	39.1	77.8
b) Loss-makers (enterprises with negative after tax profit)												
Number of enterprises	3570	799	4369	2772	4956	7728	2001	11537	13538	1047	10827	11874
Average profitability of sales (%)	-12.2	-12.8	-12.2	-11.5	-16.9	-12.4	-25.8	-26.7	-26.1	-28.6	-15.4	-24.0
Aggregate profit (- loss) as percentage of GDP (%)	-8.9	-0.2	-9.1	-6.4	-1.9	-8.3	-10.8	-5.6	-16.4	-8.4	-2.5	-10.9
Memo: Share in the total number of enterprises (%)	35.1	7.9	42.9	14.3	25.6	39.9	5.3	30.8	36.1	2.4	24.9	27.3
Memo: Share in the total aggregate sales of all enterprises (%)	50.3	1.1	51.4	35.0	7.0	42.0	18.6	9.2	27.8	14.4	7.9	22.2
c) All enterprises												
Number of enterprises	6703	3475	10178	5363	14004	19367	5322	32138	37460	3890	39615	43505
Average profitability of sales (%)	-4.4	7.3	-3.7	-3.8	1.4	-2.4	-1.3	-2.6	-1.7	1.7	3.0	2.3
Aggregate profit (- loss) as percentage of GDP (%)	-6.0	0.7	-5.3	-4.4	0.6	-3.8	-2.0	-1.9	-3.9	1.9	2.9	4.8
Memo: Share in the total number of enterprises (%)	65.9	34.1	100.0	27.7	72.3	100.0	14.2	85.8	100.0	8.9	91.1	100.0
Memo: Share in the total aggregate sales of all enterprises (%)	93.7	6.3	100.0	73.1	26.9	100.0	67.2	32.8	100.0	53.0	47.0	100.0

Source: National Statistical Institute; author's own calculations

Table 4

Average profitability of sales in the state sector of the economy by branches, %

Branch	1994		1995		1996		1997		1998		1999(H1)	
	Operating profitability	After tax profitability	Operating profitability	After tax profitability	Operating profitability	After tax profitability	Operating profitability	After tax profitability	Operating profitability	After tax profitability	Operating profitability	After tax profitability
Mining and quarrying	-8.0	-18.9	-12.5	-22.3	11.9	-8.6	19.2	7.9	-3.5	-5.5	-0.5	-8.1
Manufacturing	14.8	-3.9	9.6	-3.2	13.4	0.6	16.6	1.2	2.3	-2.4	-5.8	-17.9
Food, beverages and tobacco	15.5	-4.2	11.6	-3.1	21.6	3.9	21.6	8.7	7.2	2.3	9.8	4.3
Textiles, apparel and leather	13.3	-3.7	6.6	-4.9	21.5	4.6	15.9	1.2	-7.7	-24.3	-18.5	-35.3
Chemical industry	11.7	-1.4	9.7	-1.6	7.5	-2.9	17.0	-2.1	4.7	-1.7	1.3	-12.7
Basic metals and metal products	35.7	-0.5	14.1	-1.4	17.5	3.1	11.6	0.2	-7.1	-10.8	-36.2	-62.8
Machinery and equipment	7.3	-13.5	5.3	-11.5	13.5	0.0	19.9	1.8	3.3	2.1	-6.6	-5.6
Other manufacturing	6.6	-1.0	7.4	1.0	7.1	0.6	12.8	7.3	3.7	1.2	2.7	1.9
Electricity, gas and water	-11.1	-19.1	-4.2	-14.2	12.4	-2.0	28.5	8.8	14.6	12.2	8.1	7.8
Industry total	12.1	-5.5	8.0	-4.5	13.2	0.0	19.2	3.2	4.9	1.1	-0.9	-8.8
Other sectors of economic activity	5.1	-0.3	2.8	-1.8	4.0	0.3	8.6	3.7	3.7	2.5	4.1	0.2
All sectors of economic activity	9.6	-3.6	6.3	-3.6	10.3	0.1	15.7	3.4	4.5	1.6	1.1	-5.3

Source: National Statistical Institute; author's own calculations.

Table 5

Flows of enterprise arrears to the state budget and flows of enterprise interest arrears, % of GDP

	1994			1995			1996			1997		
	State sector	Private sector	All enterprises	State sector	Private sector	All enterprises	State sector	Private sector	All enterprises	State sector	Private sector	All enterprises
a) Profit tax arrears												
Enterprises with negative after tax profit	0.3	0.0	0.3	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Enterprises with positive after tax profit	1.3	0.0	1.3	0.7	0.1	0.8	2.0	0.4	2.4	0.4	1.0	1.4
All enterprises	1.6	0.0	1.6	0.8	0.1	0.9	2.0	0.4	2.5	0.4	1.0	1.4
b) VAT and excise tax arrears												
Enterprises with negative after tax profit	1.1	0.0	1.1	0.4	-0.1	0.3	2.4	0.1	2.4	1.5	0.0	1.5
Enterprises with positive after tax profit	-0.2	0.0	-0.2	0.1	-0.8	-0.7	0.8	-0.1	0.7	-1.0	-0.2	-1.1
All enterprises	0.9	0.0	0.9	0.5	-0.9	-0.4	3.1	0.0	3.1	0.5	-0.1	0.4
c) Arrears to the social security system												
Enterprises with negative after tax profit	1.3	0.0	1.3	0.5	0.1	0.6	0.5	0.2	0.7	0.1	0.2	0.3
Enterprises with positive after tax profit	0.7	0.1	0.9	0.3	0.1	0.5	1.4	0.3	1.6	1.0	0.4	1.4
All enterprises	2.0	0.2	2.2	0.8	0.3	1.1	1.9	0.5	2.3	1.0	0.6	1.6
d) Total arrears to the state budget												
Enterprises with negative after tax profit	2.7	0.0	2.7	1.0	0.1	1.1	2.9	0.3	3.1	1.6	0.2	1.8
Enterprises with positive after tax profit	1.8	0.2	1.9	1.1	-0.5	0.6	4.1	0.6	4.8	0.4	1.2	1.6
All enterprises	4.4	0.2	4.6	2.1	-0.4	1.7	7.0	0.9	7.9	2.0	1.4	3.4
e) Interest arrears												
Enterprises with negative after tax profit	4.1	0.1	4.2	2.5	0.7	3.2	1.5	0.8	2.3	0.3	0.3	0.6
Enterprises with positive after tax profit	0.2	0.0	0.2	0.1	0.0	0.1	0.5	0.1	0.6	0.1	0.0	0.2
All enterprises	4.2	0.1	4.4	2.6	0.7	3.4	2.0	0.9	2.9	0.5	0.3	0.8

Source: National Statistical Institute; author's own calculations

Figure 1. Consolidated government account: non-interest and interest expenditure, % of GDP

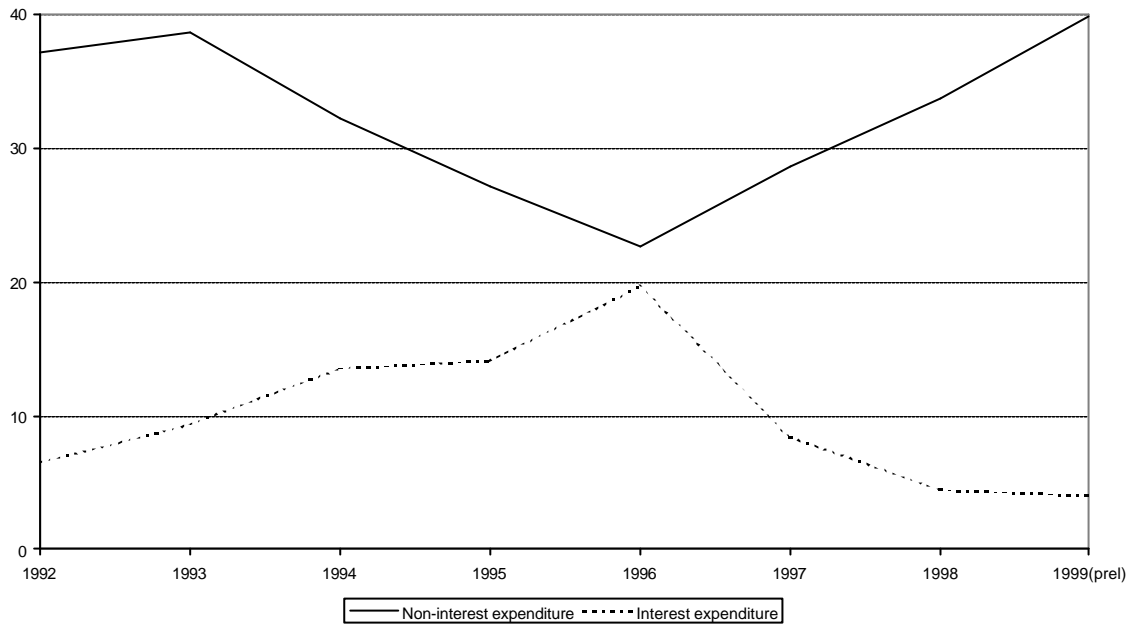


Figure 2. Public debt, % of GDP

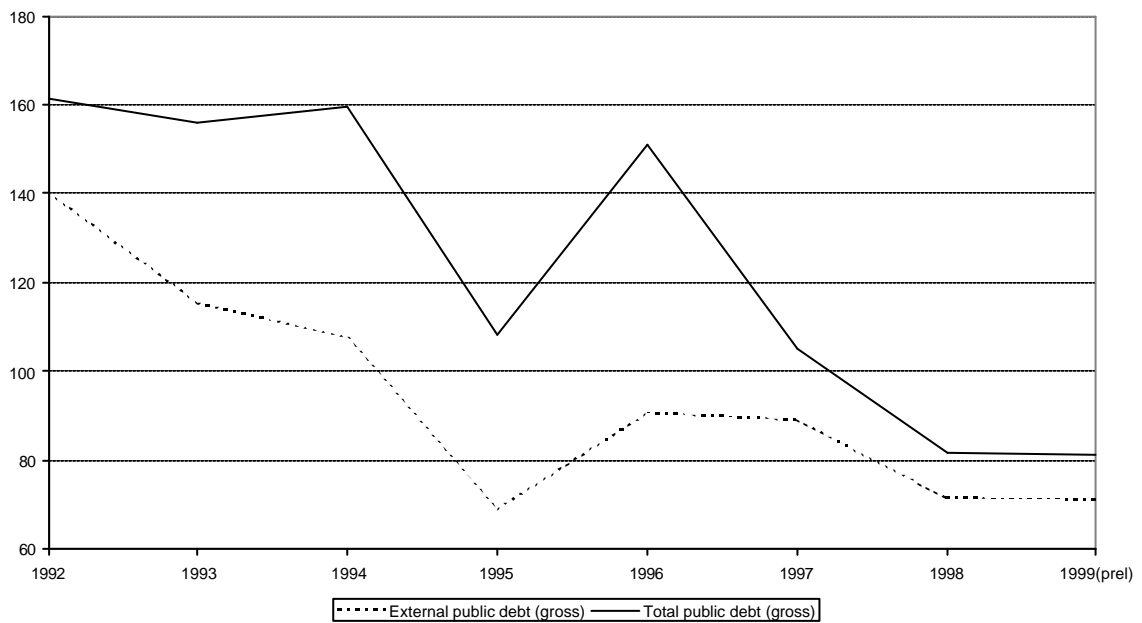


Figure 3. Indices of aggregate output and gross fixed investment, 1989=100

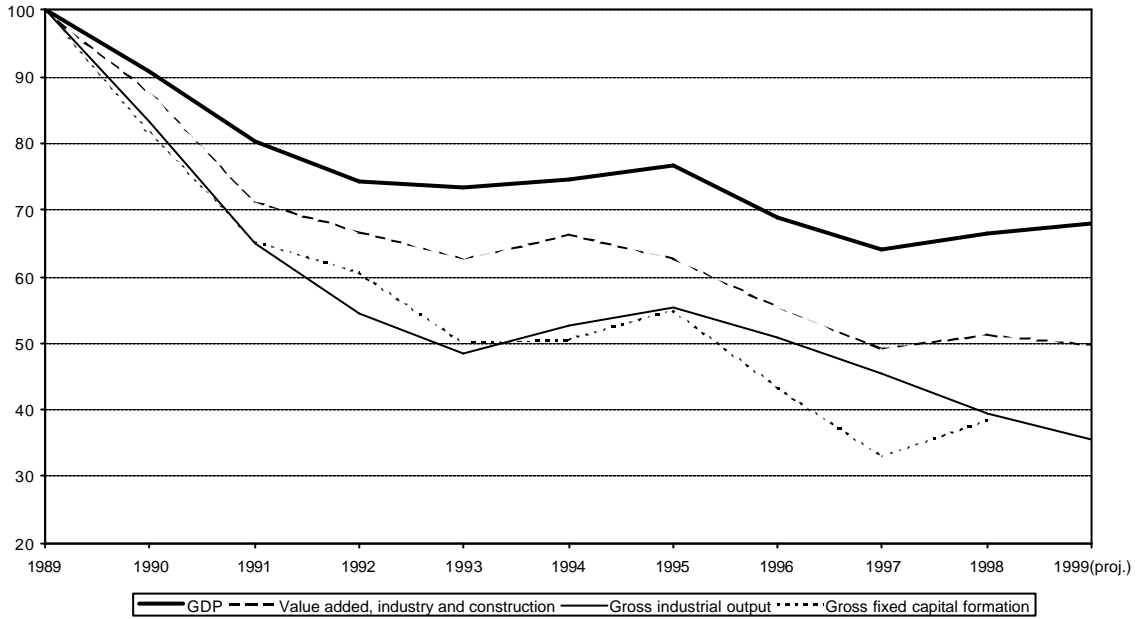


Figure 4. Employment and unemployment

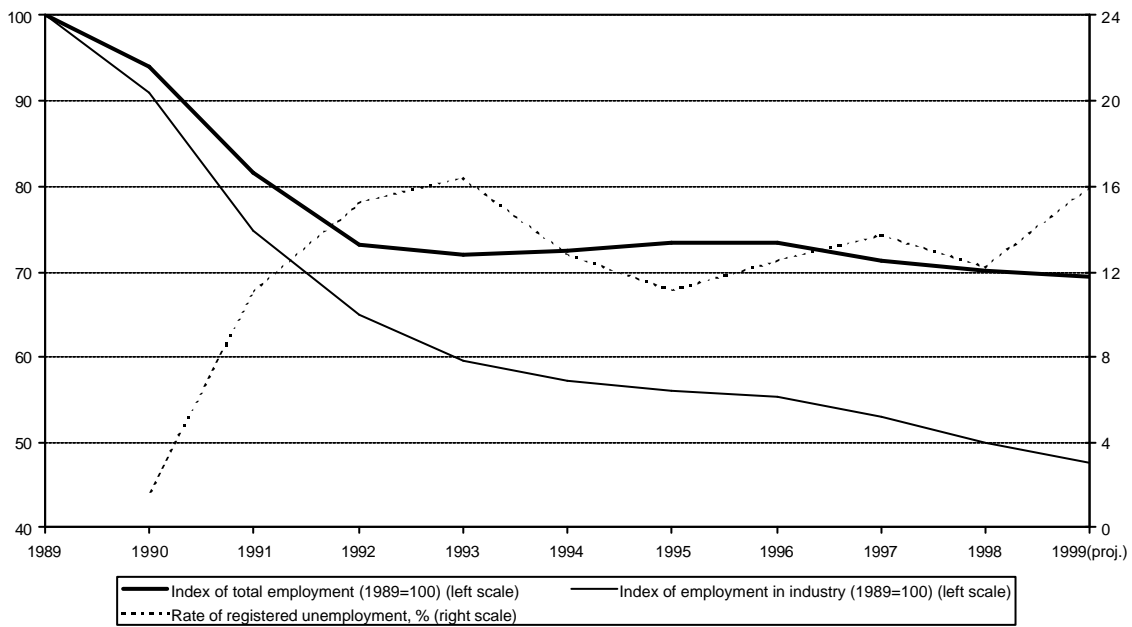


Figure 5. Labour productivity in industry and investment ratio, indices, 1989=100



Figure 6. Indices of real wages in industry, 1989=100

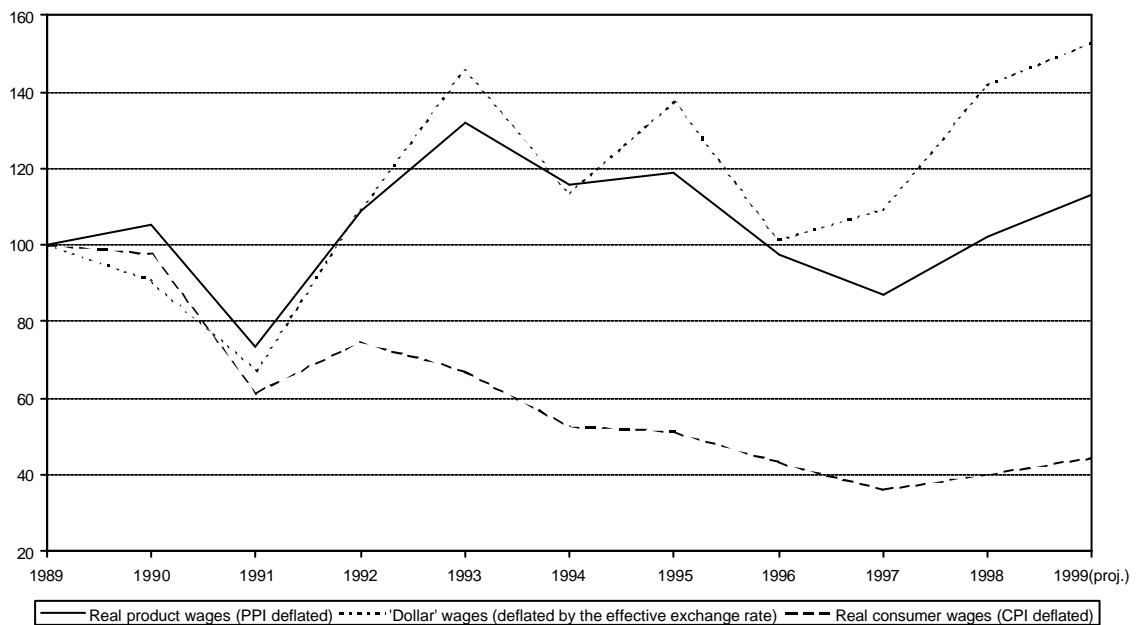


Figure 7. Indices of the real exchange rate, 1989=100

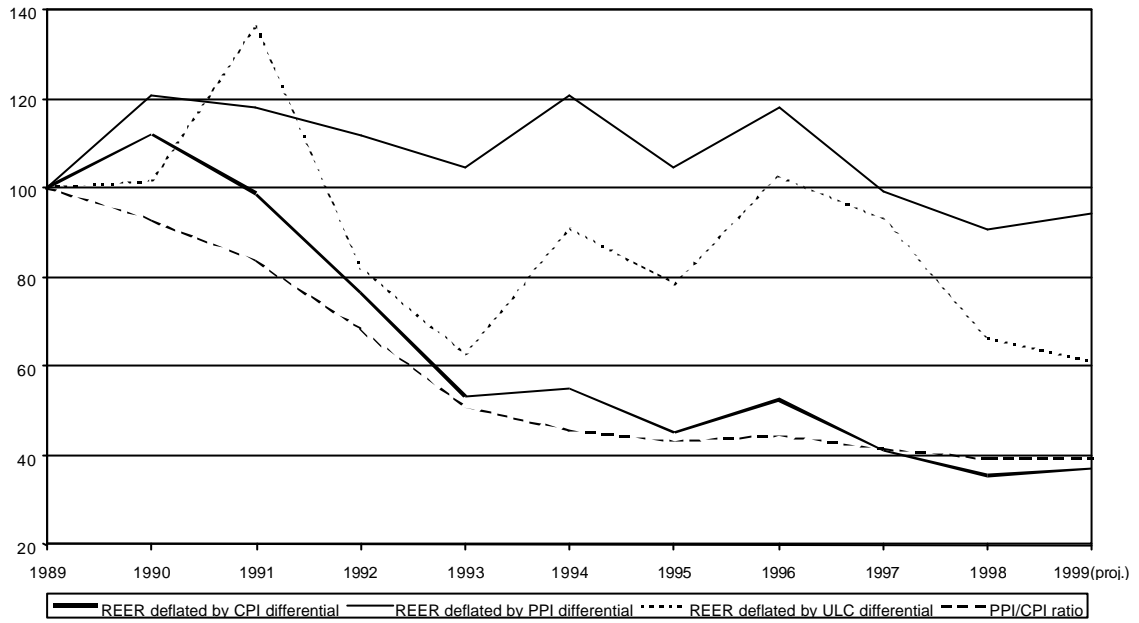


Figure 8. Indices of relative labour productivity (total economy = 1), 1989=100



Figure 9. Real unit labour costs in industry and export performance

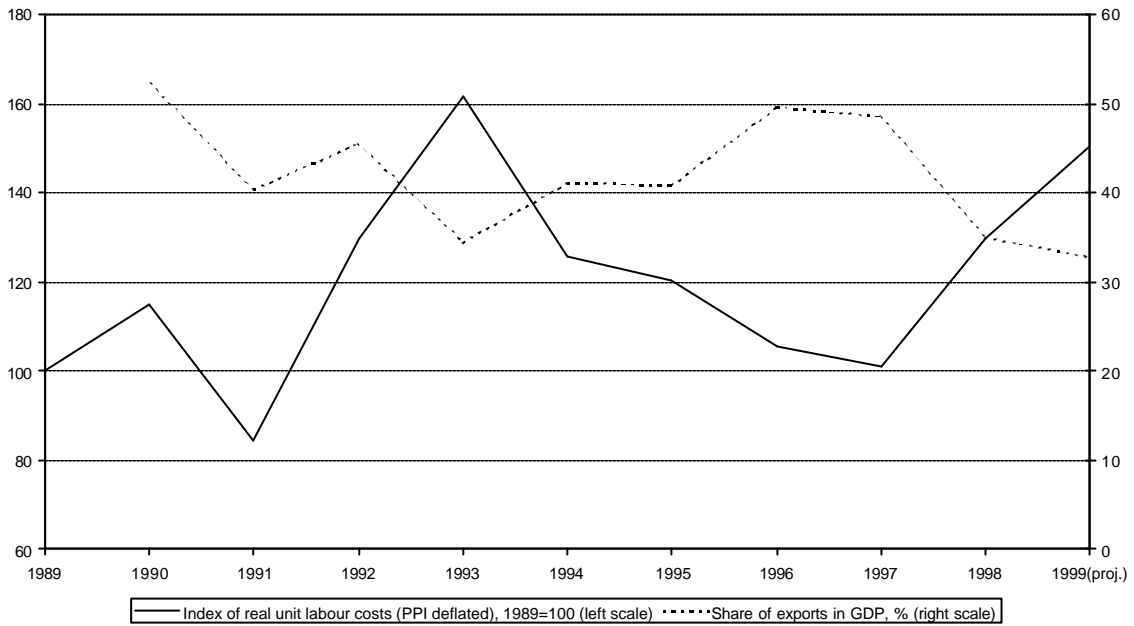
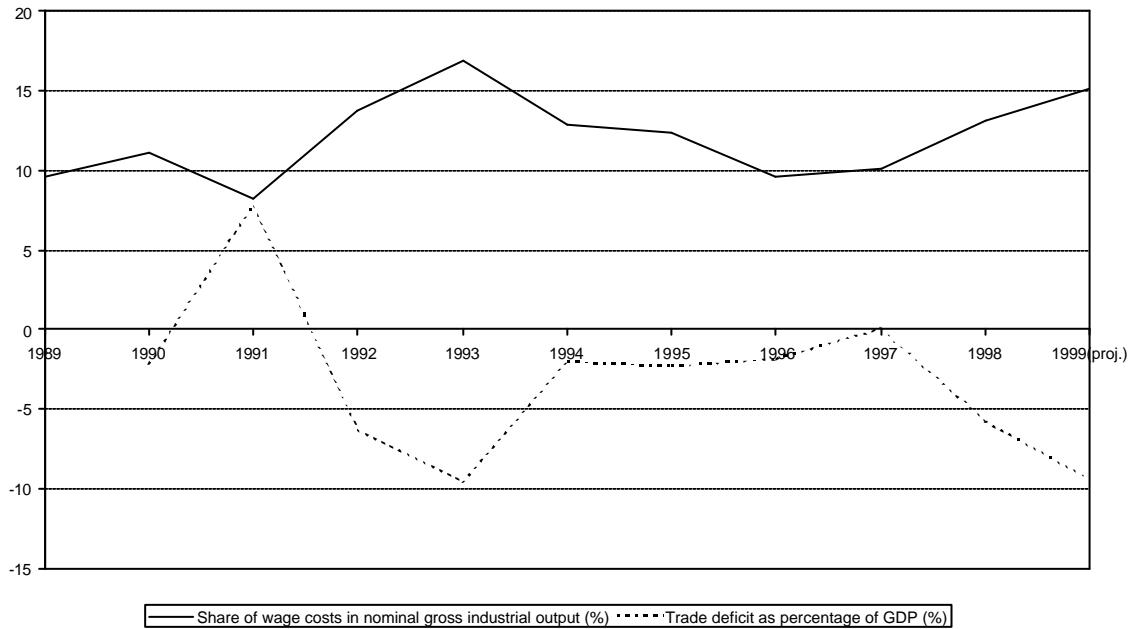


Figure 10. Wage costs in industry and trade deficit



Appendix: Restructuring Intrinsic Loss-Makers (ILMs): Some Fiscal Implications

Assume:

1. Restructuring an ILM by downsizing the employed labour cannot bring larger efficiency gains (in terms of profit/loss) than an equiproportionate reduction of losses.

Such an assumption is justified by the definition of the nature of an ILM; in addition it implies that some initial restructuring has already take place in which all possible x-efficiency gains have been achieved.

2. The downsizing of the workforce in an ILM causes a permanent rise in the number of unemployed in the economy in the short run.

The sheer act of making (part of) the workforce of a loss-making enterprise redundant does not imply any net new job creation. Some of the workers may eventually find new jobs but, as no new jobs emerge economy-wide, this will be at the expense of others. Reduction of the number of unemployed will take place only as a result of net new job creation activity but as indicated by the experience of even the more advanced transition economies, economic recovery and high rates of economic growth are not necessarily accompanied by a decline in the rate of unemployment in the short run.

3. The losses generated by ILMs are considered as an inherent element of a broader definition of the public sector fiscal balance.

This assumption reflects the arguments presented in the main text.

4. The net fiscal contribution of an ILM is equal to the payroll taxes of its employees reduced by the sum of the loss and the unemployment benefit paid to displaced workers from the enterprise.

This follows directly from the above assumptions and from the fact that an ILM does not contribute profits taxes to the budget. Note that payroll taxes include both personal labour income taxes and social security contributions.

5. Wages paid in the enterprise are exogenously set.

This amounts to the assumption that wage bargaining takes place at a higher level (sectoral or economy-wide).

6. A fiscal prerequisite for restructuring a SOE is a negative fiscal contribution of the enterprise. An enterprise restructuring policy is defined as 'fiscally efficient' if it increases the net fiscal contribution of the enterprise.

The increased net contribution may be spelled out in terms of an increased positive contribution or a reduced negative one.

Denote:

- Q total revenue from business activities;
 - L number of employees;
 - w average wage rate in the enterprise;
 - C all other business costs, excluding wage costs;
 - Z profit/loss of the enterprise;
 - Y valued added produced by the enterprise;
 - y average measured labour productivity in the enterprise defined as value added per one employee ($y = Y/L$);
 - h average payroll tax rate (including personal income tax on labour income and social security contributions);
 - b replacement ratio for displaced employees of the enterprise defined as the ratio between unemployment benefits and the previous wage $w(0 < b \neq 1)$;
 - R net fiscal contribution of the enterprise.
- Asterisk (*) denotes the corresponding variable after restructuring.

By definition, the following identities hold:

$$Z = Q - Lw - C; \quad (1)$$

$$Y = Z + Lw = Q - C. \quad (2)$$

For an enterprise making losses (as an ILM does by definition)

$$Z = Y - Lw < 0, \quad (3)$$

$$y = Y/L < w. \quad (4)$$

By definition and by virtue of assumption 4 the following identity holds as the initial condition (before restructuring):

$$R = hLw + Z = hLw + Y - Lw = Y - Lw(1-h). \quad (5)$$

Then the fiscal prerequisite for enterprise restructuring (assumption 6) may be spelled out as follows:

$$R = Y - Lw(1-h) < 0 \text{ or} \quad (6)$$

$$y < w(1-h). \quad (7)$$

As R by definition is negative, it can also be interpreted as the 'intrinsic fiscal imbalance' generated by an ILM. By virtue of assumption 6, a prerequisite for a fiscally efficient restructuring policy is:

$$R^* - R > 0 \quad (8)$$

Restructuring of an ILM by downsizing its employed labour by a margin of s , measured as a share of the initial workforce ($0 < s \leq 1$), can result in no more than an equiproportionate reduction of the loss (assumption 1). Assuming, for the sake of simplicity, equality in the rate of decline of losses we get:

$$Z^* = (1-s)Z = (1-s)(Y-Lw). \quad (9)$$

In accordance with the latter and with assumption 4 we have:

$$R^* = (1-s)hLw + (1-s)Z - sbLw. \quad (10)$$

Proposition (*static conditions for the fiscal efficiency of downsizing*). Downsizing of an ILM will be a fiscally efficient restructuring policy if and only if:

$$y < w(1-h-b). \quad (11)$$

The proof follows in a straightforward manner from the definitions and assumptions: Rearranging (10) yields:

$$R^* = R + s [Lw(1-h-b) - Y]. \quad (12)$$

Placing (12) into the condition for a fiscally efficient restructuring policy (8) and rearranging yields (11), which is the necessary condition. In a straightforward manner it follows that if (11) does not hold, then (8) does not hold either which gives the sufficient condition.

Note that the 'scale factor' of downsizing ' s ' is not present in the condition of fiscal efficiency which reflects the assumptions of a technological determination of enterprise inefficiency

and equiproportionate reduction of losses. The actual net fiscal effect of the downsizing ($R^* - R$), however, as can be seen from (12), does depend on s .

In the special case of immediate closure of the enterprise ($s = 1$) and assuming in addition that the proceeds from sales of physical assets exactly match the sum of debt and liquidation costs (an assumption that may yield an upward bias in the assessment of the fiscal effect):

$$Z^* = 0; \quad (13)$$

$$R^* = -bLw, \quad (14)$$

$$R^* - R = Lw(1-h-b) - Y. \quad (15)$$

These results point to an important but unpleasant fiscal implication: even the boldest restructuring measure – the immediate closure of an ILM – results in a lasting residual fiscal liability for the state (14). Moreover, if an operating ILM generates deferred contingent fiscal liabilities, after liquidation, the resultant fiscal claims pertain to fiscal spending proper. Actually (14) defines the upper bound of the intrinsic fiscal imbalance (lower in absolute value) generated by the ILM.

A useful corollary follows from the Proposition which has important implications for the choice of enterprise restructuring policies.

Corollary: If

$$w(1-h-b) < y < w, \quad (16)$$

then downsizing will be a fiscally inefficient restructuring policy for an ILM.

The left side inequality of (16) follows directly from the sufficient condition of the Proposition whereas the right side inequality is the definition of a loss-making firm (4).

The policy implication of this corollary is that it defines the borders of a 'grey zone' in which downsizing or liquidation are fiscally inefficient restructuring policies in the sense that they would lead to a worsening rather than an improvement of the fiscal efficiency of the enterprise. From (7) and (16) it follows that if

$$w(1-h-b) < y < w(1-h) \quad (17)$$

then the net fiscal contribution of the enterprise after downsizing will remain negative and will increase in size whereas if

$$w(1-h) < y < w \quad (18)$$

then the net fiscal contribution after downsizing will be positive but will decline in size.

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