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Fiscal Adjustment in Turkey: The Role of Quasi-Fiscal Activities and Institutional Reform

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Abstract

The aim of this paper is to discuss the size, composition and institutional features of the fiscal adjustment that needs to be undertaken in Turkey. We first develop new measures of public sector deficits and net domestic public debt by explicitly taking account of an important portion of quasi-fiscal activities undertaken by public sector commercial banks, not accounted for in the conventional measures of the PSBR. We find that operational deficits, which measure fiscal deficits after removing the effects of inflation from interest payments, change in line with the coverage of the public sector and with the way in which public sector debt is consolidated. Second, using the framework developed by Anand and Wijnbergen (1989; see also World Bank 1996 for a recent application), we discuss the necessary aggregate adjustment in operational deficits consistent with target debt and inflation levels, under different assumptions about the paths of several other key macroeconomic variables. Provisional results of this "sustainability exercise" suggest that the size of the required deficit reduction and other policy conclusions depend critically on how operational deficits are measured. Hence neglecting quasi-fiscal operations can result in serious errors in assessing both the current fiscal stance and the required adjustment. Third, we discuss the options available regarding the composition of fiscal adjustment. We argue that successful fiscal adjustment requires not only changes in deficits and debts, but also institutional reforms which widen budget coverage, increase transparency and reduce discretion in fiscal policy. We discuss how, given the current political and institutional constraints, these reforms can be weaved into a fiscal adjustment program.

1. Introduction

Turkey has suffered from high and persistent inflation for more than two decades. Such situations of persistent inflation are often explained by sustained fiscal deficits and their financing, as suggested by the public finance approach to inflation. In Turkey as well, the fiscal deficits are widely perceived as among the primary determinants of persistent inflation. Consequently, adjustments in public finances are seen as essential components of disinflation.

Recent developments have added an additional twist to the discussion. Since 1994 the primary balance of the public sector has been in surplus, a retrenchment that has not apparently led to a significant decline in inflation. On the one hand, this has led to some discussion about whether disinflation can be achieved by fiscal retrenchment alone, and about the specific role of management of inflationary expectations in a disinflation program. At the same time there is an increased awareness that some expenditures, especially related to agricultural subsidies, are carried out outside the budget process through public banks. This realization has led to a questioning of whether there has been a fiscal adjustment at all, though, so far, lack of consistent and comprehensive data on quasi-fiscal activities has prohibited a decisive answer to this question.

The purpose of this paper is to discuss some aspects of the fiscal component of a disinflation program in Turkey. First, we shed some light on the current fiscal stance by developing new measures of operational deficits that vary according to the coverage of the public sector and the degree of consolidation of intra-governmental debt. In particular, our measures take account of quasi-fiscal (QF) activities carried out by three public banks. These activities are not properly accounted for in the conventional public sector accounts. Second, we examine whether a disinflation program would require further adjustments in fiscal deficits. We use the framework developed by Anand and Wijnbergen (1989; see also World Bank 1996 for a recent application) to discuss the necessary aggregate adjustment in

operational deficits consistent with target debt and inflation levels, under different assumptions about the paths of several other key macroeconomic variables. Results of this exercise suggest that the size of the required deficit reduction and other policy conclusions depend critically on how operational deficits are measured. Hence neglecting quasi-fiscal operations can result in serious errors in assessing both the current fiscal stance and the required adjustment.

Third, we discuss the options available regarding the composition of fiscal adjustment. More importantly, we argue that successful fiscal adjustment requires not only changes in deficits and debts, but also institutional reforms which widen budget coverage, increase transparency and reduce discretion in fiscal policy. We discuss how, given the current political and institutional constraints, these reforms can be weaved into a fiscal adjustment program.

The rest of the paper is organized as follows: Section 2 identifies key isues that need to be addressed in designing a fiscal adjustment program. Section 3 develops various measures of operational deficits and public debt. Section 4 presents the Anand and Wijnbergen (1989) model which is used in the analysis of the required reduction in deficits (RDR) during disinflation. Section 5 calculates RDR for 1998 and 1999 under various scenarios. Section 6 discusses the composition of fiscal adjustment and institutional reforms that would enhance the sustainability and credibility of fiscal adjustment.

2. Issues in the design of fiscal adjustment

There is now a voluminous literature on conditions that need to be met for a fiscal adjustment program to be successful. In this section we draw on this literature and identify several factors that are likely to be important in the Turkish context. A good starting point is provided by Ter-Minassian and Schwartz (1997) who highlight four main issues that need to be addressed in designing the fiscal component of a stabilization program. These are:

(i) measuring the extent of the existing fiscal disequilibrium

(ii) determining the size of the fiscal adjustment needed

(iii) selecting appropriate high-quality fiscal adjustment measures

(iv) sequencing correctly the implementation of the selected measures.

Regarding the first point, measuring the current fiscal stance requires a comprehensive view of the government's fiscal activities and the accounts where these activities are recorded. A correct measure of fiscal stance needs to take account of hidden public liabilities, contingent liabilities, off-budget and quasi-fiscal activities, and the like. Similarly, fiscal balances need to be corrected for "illusory" improvements generated by privatization or other forms of asset decumulation (Easterly, 1999). In this paper we take a step in this direction by incorporating into our measures of fiscal stance stocks and flows arising from quasi-fiscal activities of public banks. This complements several other corrections on the published data on deficits and debt. We develop different measures of operational deficits corresponding to different levels of consolidation of intra-governmental debt.

The size of the required fiscal adjustment is calculated by means of a simple model developed by Anand and van Wijnbergen (1989). This is a model of the government (flow) budget constraint that can be used to estimate the level of operational deficits consistent with target levels of inflation and public debt, given assumptions about several other key macroeconomic variables such as GNP growth, real exchange rate depreciation and the real interest rate. One of the key conclusions of the paper is that the size of the required adjustment in deficits varies considerably depending on which measures of deficits and public debt are used.

Once the required reduction in aggregate public deficits is determined, the next step is to discuss its composition. Here, the quality of fiscal adjustment depends on several factors. First, one needs to avoid illusions, that is, adjustments that reduce fiscal deficits or public debt while increasing other, less visible expenditures or liabilities (Easterly, 1999). In the Turkish context, adjustments which primarily rely on various forms of asset decumulation (cuts in high-quality public investments, or

privatization) or which reduce conventional PSBR while not controlling QF operations would constitute illusory adjustments.

Second, to be successful, fiscal adjustment needs to be perceived as credible and sustainable by both domestic and foreign actors. Much has been said on what ensures sustainability in this context, and several features stand out. Credibility in the initial stages requires that the proposed program is seen as politically and socially acceptable and administratively viable. Perotti, Strauch and von Hagen (1997) argue that that sustainable adjustment in public finances requires identifying the long-run sources of non-sustainable deficits and “attacking the problem at source”. More specifically, adjustments achieved by cuts in those expenditure items which are easy to reduce in the short run ("quick fixes") but which did not generate the fiscal problem in the first place are not likely to last long. Consequently, adjustments that rely heavily on quick fixes are not likely to be seen as credible.

Sustainability may also require changes in the institutions that govern the behavior of actors responsible for fiscal policy making (OECD, 1995; Perotti, Strauch and von Hagen, 1997; Campos and Pradhan, 1996). In particular, to be sustainable, an adjustment program may need to establish mechanisms that would make it more difficult for future, perhaps less reform minded governments to reverse the achievements gained so far. While some general principles exits, the details of the design of institutional reform need to be largely country-specific. We discuss concrete components of institutional reform that are likely to be important in the Turkish context. We emphasize institutional reforms which enhance transparency and reduce discretion and ague that these would seriously enhance the credibility of a fiscal adjustment program.

A good discussion of composition of adjustment should also take account of what Ter-Minassian and Schwartz have called "endogenous factors". These are changes in revenues and expenditures induced by changes in key variables such as inflation, exchange rate and interest rates, which are themselves induced by the

process of fiscal adjustment. While we discuss some of the likely effects of these factors, a more rigorous treatment lies outside the scope of this paper.

Regarding sequencing we note that measures that have immediate impacts on public balances often take precedence over institutional measures because the latter are perceived to take much longer to provide tangible results. In the Turkish context this perception is misleading. We argue that many components of institutional reform proposed in this study can be launched without much delay, and are likely to have an impact on the credibility and progress of the adjustment program, and even on fiscal aggregates in a relatively short period of time.

3. An Overview of Fiscal Stance for Turkey

Improving measures of current fiscal stance is important both to have a better understanding of fiscal performance in the recent past, and to have more reliable estimates of the magnitude of fiscal retrenchment that needs to be carried out as part of a disinflation program.

In the Turkish context, improving measures of fiscal stance requires both making several corrections to published PSBR data, and inclusion of activities not covered by conventional measures of PSBR. In addition, one needs to take account of the impact of inflation. In this section we make some progress towards these objectives. After correcting for some accounting irregularities, we develop several measures of operational deficits which change according to method of calculation, the coverage of the public sector, and the way in which public debt is consolidated. In particular, we try to incorporate QF activities of three major public sector banks.

We should note that, especially in terms of the coverage of the public sector, our analysis is not complete. The measures we develop do not take account of several additional extra-budgetary operations, especially contingent liabilities, as discussed in more detail in section 6.2. However, we provide evidence that a

disinflation strategy based only on conventional measures of public sector balance is likely to be erroneous.[1]

3.1 Initial corrections on the PSBR

Before going into the details of derivations, we report several adjustments made on published PSBR data. The first adjustment relates to interest income on deposits held by public entities. In the current accounting practice, this income is recorded under non-tax revenues. The adjustment we make subtracts this income from non-tax revenues and also deducts it from interest payments. This adjustment effectively increases primary deficits by an amount equal to interest income on deposits held by the public sector (to obtain "Primary Deficit with net interest payments") and decreases total interest payments on domestic debt by the same amount (to obtain "net total interest payments"). It leaves PSBR unchanged. As shown in Table 3.2 below, this adjustment may increase primary deficits by close to 1 percent of GNP in some years (in 1998 the primary surplus reduces from 2.54 to 1.37 percent of GNP)

The second adjustment relates to privatization revenues. The conventional figures on PSBR treat privatization revenues as an above the line revenue item. These revenues are recorded as non-tax revenues in the consolidated budget and the accounts of the privatization administration. We deduct this item from revenues and treat it as a financing item instead. This adjustment is done only for 1996-1998, but this is not a serious omission since privatization revenues in earlier years were very small.

The last adjustment has to do with interest payments on non-cash debt. Non-cash debt issued by the Treasury will be discussed in more detail below. The adjustment we report here concerns the fact that often interest payments on these

[1] We also presume that the conventional PSBR captures adequately the QF activities of non-financial State Economic Enterprises (SEEs). We have not examined raw data on SEE performance to check the validity of this presumption.

securities are made through additional securities rather than through allocations from the budget. Therefore, under the current practice, these payments are treated as below the line, and are not recorded as interest payments in the conventional PSBR. The adjustment that we make increases interest payments (and PSBR) by that amount. This adjustment is relevant since 1996. All of these three adjustments are shown in Table A.1.2. In the sections that follow, all measures of primary and operational deficits are derived from the corrected PSBR figures.

3.2 Measurement of the Operational Deficit

The operational deficit measure which plays a central role in determining the current fiscal policy position and the estimation of required deficit reduction is conceptually a weighted measure of fiscal deficit putting zero weight on the inflation induced part of the interest payments. The rationale is that the effect of inflation on total interest payments can actually be perceived as part of the amortization of the debt, compensating the creditors for the erosion of their assets, and may well be interpreted as a below the line item. In that respect the conventional deficit measure will be overstating the deficit by this amount. Thereby it excludes part of the debt service compensating the debt holders for the inflationary erosion of their claims.

In the empirical part of the paper two different methods for calculating the operational deficit are implemented. The first method is based on the realisation of the interest payments: the inflationary erosion of the beginning of period domestic debt stock is deducted from the realised interest payments to end up with a measure of the real component of total interest payments. For the remainder of the study this method will be referred as OD1. The expression for this measure of operational deficit is given by equation (3.1).

$$OD_t = PD_t + INT_t^D - D_{t-1} \cdot \pi_t + i_t^* \cdot D_{t-1}^* \tag{3.1}$$

where,

OD_t : Operational deficit at time *t*,

PD_t : Primary deficit compatible with the debt stock at time *t*,

INT_t^D : Realized domestic interest payments compatible with the debt stock at time *t*,

D_t : Domestic debt stock at time *t*,

π_t : Inflation rate at time *t*,

i_t^* : Effective foreign nominal interest rate at time *t*,

D_t^* : Foreign debt stock at time *t*

The foreign interest payments are taken as the realised figures in the calculations.

There are two major drawbacks in using this method of calculating the operational deficit. The first is general and the second is peculiar to the Turkish case. First, since most government securities carry zero coupons, the realisation of interest payments for the current year is very much dependent on the maturity structure of debt. A temporary shortening or lengthening of the maturity leads to a temporary worsening or improvement of the operational deficit even without a significant change in the underlying debt dynamics.

The drawback specifically arising in Turkish context is related with the practice of issuing “non-cash bonds and bills”. Non-cash bonds and bills are issued to retire the intra-governmental debt and therefore the Treasury does not obtain any cash receipts by issuing them. Due to this practice, the change in the total stocks of bonds and bills is not equal to the domestic financing of the deficit obtained by issuing bonds and bills. The problem is that the non-cash issues of government securities have historically carried less than the market interest rates, and their effective maturities have been longer than those of cash issues. As a result, interest payments from the consolidated budget are reduced compared what they would have been if these securities were to be offered to the market. However, this gain is illusory, since holders of non-cash securities, themselves public entities, incur losses. These losses

are either real, as is the case if the holder of the security decides to sell it in the secondary market at a discount, or exist in the sense of opportunity cost if holders hold the securities till maturity. Our argument is that this loss should be reflected properly in the consolidated budget. In addition, note that real interest rates calculated for treasury auctions is a better estimate of the cost of borrowing that the government will face in the future than those calculated from realized payments, again because non-cash issues carry lower-than-market rates. In addition to showing the inappropriateness of the first method of calculating operational deficits, this underlines the importance of using the broadest possible coverage for the public sector and the consolidation of the public accounts in the debt sustainability analysis.

In recent years the share of "non-cash" issues of Treasury bills and bonds in total debt stock has been declining mainly due to the rapid increase in cash issues. Securitized domestic debt figures as percentage of GNP are presented in Table 3.1.

Table 3.1: Securitized domestic debt stock figures (% of GNP)*

DEBT STOCK (% of GNP)	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**
TOTAL	8.14	11.66	12.77	13.98	14.55	18.55	20.02	21.92
CASH	6.64	7.55	6.88	8.70	9.34	12.84	15.64	17.95
-INDEXED	2.24	0.92	0.31	1.14	0.96	2.12	4.39	5.41
NON-CASH	1.50	4.10	5.89	5.28	5.22	5.70	4.39	3.97
-INDEXED	0.33	1.38	1.74	1.17	0.89	2.10	1.73	1.60

(*) GNP is expressed in average prices.

Non-cash issues raise an additional problem already mentioned in section 3.1. The budgetary allocations for the interest payments cover all interest payments to cash issues but only a portion of those of non-cash issues. The remaining portion of interest payments to non-cash debt is met by new non-cash securities, which increase the stock of public debt. As discussed in section 3.1, our figures of public deficits are corrected for this effect.

The second method of calculating the operational deficit avoids most of the problems involved with the first one. Real interest payments under the second method is estimated as the product of the initial stock of debt and the ex-post real interest rate calculated from auction rates. Effectively, this assumes that all interest on debt existing as of t-1 is paid in period t. Operational deficits calculated in this manner will be referred to as OD2. The expression for OD2 is given by equation (3.2).

$$OD_t = PD_t + D_{t-1} \cdot r_t + i_t^* \cdot D_{t-1}^* \qquad (3.2)$$

where,

OD_t : Operational deficit at time *t*,

PD_t : Primary deficit compatible with the debt stock at time *t*,

D_t : Domestic debt stock at time *t*,

r_t : The real effective interest rate on Treasury auctions at time *t*,[2]

i_t^* : Effective foreign nominal interest rate at time *t*,

D_t^* : Foreign debt stock at time *t*

The foreign interest payments are taken as the realised figures in the calculations. Data for OD1 and OD2 are presented in Table 3.2 (see also Figure 2).

[2] The real effective exchange rate is calculated as (1+weighted average compound annualized nominal auction rate)/(1 + percent change in the GNP deflator).

Table 3.2: Conventional PSBR, primary deficit, primary deficit with net interest payments, OD1, OD2 (% of GNP), Maturity of Domestic Borrowing (Month)

	1991	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**
PSBR/GNP(*)	10.16	10.57	12.01	7.89	5.20	*9.99*	*9.05*	*10.49*
PD/GNP	4.58	4.88	4.10	-2.15	-3.39	-1.75	-0.62	-2.54
PD(net)/GNP	5.39	5.61	4.79	-1.18	-2.51	-1.07	0.46	-1.37
OD1/GNP	7.73	7.70	8.06	0.95	-0.92	4.46	2.44	3.08
OD2/GNP	7.30	7.35	7.19	2.62	0.31	2.37	2.91	2.19
MAT. BOR. (**)	11.8	20.5	25.1	13.3	24.1	20.9	22.2	9.4

Note: A positive figure denotes a deficit and GNP is expressed in average prices.
(*) Between 1996 and 1998 the PSBR figures are adjusted for privatization revenues and interest payments on non-cash debt. All PD and OD calculations are based on adjusted PSBR. See text in section 3.1.
(**) Between 1991 and 1997, exchange rate differences and short term advances are excluded, roll-overs are not included, original maturities are indicated in non-cash sales, maturities over 60 months are included in 120months.

The real interest rates paid on the domestic debt increases very significantly especially after 1993, which shows up as an increased positive gap between OD2 and OD1 in most part of that period.[3] The table also shows how changes in maturity is reflected in the gap between OD1 and OD2. It can be seen, for example, that part of the apparent improvement in OD1 in 1995, relative to 1994, is attributable to the increase in maturity from 13 to 24 months. The same situation can be seen in the year of 1997 and 1998. In 1998, shortening of maturity caused an increase in domestic interest payments, which is reflected in a worsening of OD1. By contrast, between 1997 and 1998 OD2 actually improves by decreasing from 2.9 to 2.2 percent of GNP.

The public sector coverage of OD1 and OD2 is the same as that of the conventional PSBR and includes the central government, financial and non-financial state economic enterprises, local governments and extra-budgetary funds. The third measure extends coverage by incorporating a rough approximation of quasi-fiscal

[3] That is, the difference between interest rates on cash issues and non-cash issues increases.

deficits. In this measure, called OD3, the fiscal balance is computed by adding, to the adjusted measure of PSBR, a major component of quasi-fiscal deficits which accounts for the special duty losses of the major public banks.

Public banks incur these duty losses mainly as a result of agricultural subsidies, and preferential credits they advance to specific classes of borrowers. Moreover, these duty losses do not show up in the conventional measures of PSBR, even though the calculation of the conventional PSBR does take account of the profits and losses of state banks. The first time a duty loss occurs, it is recorded as a claim on the asset side of the state bank's balance sheet. Interest accruing on that stock is shown as interest income in the bank's profit and loss statement, even when no cash income is received from the Treasury. The discrepancy may arise because state bank profit and loss statements are prepared on accrual basis whereas the PSBR is calculated on cash basis. The calculation of OD3 compensates for these discrepancies.

The detailed discussion on the treatment of the duty losses in the sustainability analysis is given in Annex 2. Due to the unavailability of data this third measure of operational deficit is only calculated for 1997 and 1998. Very briefly, the treatment of quasi-fiscal activities followed in the study assumes that they are transferred to the consolidated budget at the end of 1996 onwards for 1997 and the same assumption is also made at the end of 1997 onwards for the year 1998. The public domestic debt stock is increased as well to incorporate the accumulated stock of duty losses (see below). OD3 turns out to be 4.87% of GNP and 4.08% of GNP in 1997 and 1998, respectively (Tables 3.3 and 3.4 below).

The fourth measure of operational deficits, OD4, is motivated by the idea of consolidating the debt stock of the public sector by removing intra-governmental debt. Though the size of the conventional PSBR is not affected by such a consolidation exercise, the operational deficit is, due to the interest income earned from the intra-governmental claims.

The consolidation of the stock of domestic public debt is important to define the net debt relationship between the public and the private sector, which is actually the main determinant of the sustainability of deficits and clearly the interest rate that matters in these transactions is the market rate of interest. The important issue to be highlighted is that depending upon the derivation of the net domestic debt stock, an adjustment to the total interest payments and primary deficit involved in the calculation of the operational deficit is required. For example, if the net domestic debt stock is obtained by subtracting the deposits from the debt stock conventionally defined, the primary deficit needs to be redefined to exclude the interest income from the deposits, and the interest payments have to be net of the interest income obtained from the deposits. For the consolidated debt stock taking account of the intra-governmental debt, both the primary deficit and interest payments need to be netted out, accounting for the interest income obtained for the corresponding claims for the asset owner party (as shown in Table A.1.5). The size of the overall PSBR is not affected by these adjustments.

The consequences of including quasi-fiscal deficits, the stock of duty losses and debt consolidation on measures of primary and operational deficits and the net stock of public debt can be followed in Table 3.3 for the year 1997. Row 3 in the table shows that adding the stock of duty losses to the existing stock of net public debt increases the latter by 3.8% of GNP (end year prices), to 17.3. Consolidating intra-governmental debt reduces it to 14.6% of GNP (end year prices). Moving down column 3, the addition of quasi-fiscal activities to the budget turns the primary balance with net interest payments from a deficit of 0.46 percent of GNP into a deficit 2.12 of percent. Hence, in 1997 the QF deficit was about 1.7 percent of GNP. Surprisingly, the netting out of intra-governmental interest payments and receipts ends up *increasing* the primary deficit from 0.46 to 1.34 percent of GNP when one excludes the QF, and from 2.12 to 3.01 percent of GP when QF is included.

Table 3.3: Deficits and Domestic Debt for 1997

	OD1	OD2	OD3	OD4
PSBR (adjusted)/GNP	9.05	9.05	12.74	12.74
Primary Deficit (with net interest pay.)/GNP	0.46	0.46	0.46*	1.34*
Primary Deficit (with net interest pay., inc. QF)/GNP			2.12	3.01
Domestic Debt Stock/GNP (end-year prices)**	13.5	13.5	17.3	14.6
Operational Deficit/GNP	2.44	2.91	4.87	5.62

(*) The implied figures for OD3 and OD4 when QF is not included.
(**) GNP is expressed in end-of-year prices in domestic debt stock ratios, but in average prices otherwise.

The same operational deficits and domestic debt figures are also calculated for the year 1998 and shown in Table 3.4, however due to the unavalibility of data, intra-governmental debt could not be consolidated and the fourth measure of operational deficit could not be calculated. In 1998 domestic debt of public sector increased by around 2 percent and reached out to 15.4% of GNP (end year prices). The stock of QF debt increased very rapidly in 1998 and reached 5.3% of GNP (end year prices). Adding this to the domestic debt stock, total public debt increases to 20.7% of GNP (end year prices). The primary balance, including QF, showed a surplus of around 0.2 percent of GNP. Thus, for 1998, the contribution of QF activities to the total public primary deficit was about 1.2 percent of GNP (inclusion of QF reduces the plus from 1.37 to 0.17 percent of GNP).

Table 3.4: Deficits and Domestic Debt for 1998

	OD1	OD2	OD3
PSBR (adjusted)/GNP	10.49	10.49	15.00
Primary Deficit (with net interest pay.)/GNP	-1.37	-1.37	-1.37*
Primary Deficit (with net interest pay., inc. QF)/GNP			-0.17
Domestic Debt Stock/GNP (end-year prices)**	15.4	15.4	20.7
Operational Deficit/GNP	3.08	2.19	4.08

(*) The implied figures for OD3 when QF is not included
(**)GNP is expressed in end-of-year prices in domestic debt stock ratios, but in average prices otherwise.

Overall, we can remark that the difference between OD1 and OD2 is less than 1 percentage point of GNP in most years. Inclusion of QF has a larger impact: primary balances worsen by 1.7 percentage points in 1997 and 1.2 percentage points

in1998. OD increases by about 2 percentage points of GNP. The impact of QF on the stock of debt is also quite high, about 4-5 percentage points of GNP.

3.3 Other studies

Here we report other studies that estimate measures of operational deficits. An in-house study carried out by the General Directorate of Public Finance, Undersecretariat of Treasury measures the operational deficit for the consolidated budget on an ex-post basis for each of the securities sold by Treasury auctions and for those of the non-cash issues the interest payments of which are covered under the budgetary allowance. In this approach the real return on each paper is obtained as its own rate deflated by realized inflation rate corresponding to own maturity period. Koğar (1998) studies a range of different measures for operational deficit for the consolidated budget and including only cash debt. Canakcı (1997) uses the model used above to examine the sustainability of public debt for 1997. Türkan (1997) provides various estimates of operational deficits for the whole of the public sector. None of these studies incorporate estimates of QF activities in their estimates of public sector deficits.

4. Methodology

The theoretical framework to analyse the consistency between the fiscal deficits and other macroeconomic targets is presented in Anand and Wijnbergen (1989) with a simple model. This framework has been widely used in empirical country analyses and constitutes the core of the methodology adopted in this paper. The consistency of fiscal deficit with the macroeconomic targets and the interactions between the fiscal deficits, output growth, rate of inflation and a range of main macroeconomic variables is sought for measuring the "financeable deficit". The financeable deficit as defined in World Bank (1996) is the deficit that does not require more financing than is compatible with "sustainable" external and internal borrowing, and existing targets for inflation and output growth. The Anand and Wijnbergen (1989) model is described briefly in section 4.1. Section 4.2 presents the results for the money demand estimates used in the model.

4.1 The Model

The starting point in deriving the financeable deficit is the government budget identity given in equation (4.1),

$$D + iB + i^{*}B^{*}E = \dot{B} + \dot{B}^{*}E + \dot{DC}_{g} \qquad (4.1)$$

D : Non-interest deficit

i : Nominal domestic interest rate on domestic debt

i^{*} : Nominal foreign interest rate on foreign debt

B : Domestic debt

B^{*} : Foreign debt

E : Nominal exchange rate

DC_{g} : The stock of Central Bank advances to the public sector.

"$\cdot$" : Change in the value of the variable

Government budget identity simply states that the total deficit has to equal the sum of financing from all sources. The sources of financing are issuing interest-bearing internal and external debt, and using monetary sources of the Central Bank.

Taking into consideration the fact that Central Banks of most countries behave like a public sector entity, assuming foreign debt of the public sector, issuing subsidized credits to preferential sectors, and the like, Central Bank profit and loss accounts should be included into the public sector account. In the paper presented by Anand and Wijnbergen (1989) a simple Central Bank account is taken into consideration:

Assets	**Liabilities**
DCg (Domestic credit to government)	NW (Net worth)
NFA^*E (Net foreign assets)	Cu (Currency)
	RR (Commercial bank reserves)

Currency held by the public and required reserves of the commercial banks form base money definition from the liability side. Alternatively, net liabilities of the Central Bank to the private sector can also be stated as the base money as given in equations (4.2) and (4.3).

$$M = Cu + RR \tag{4.2}$$

$$M = DC_g + NFA^*E - NW \tag{4.3}$$

In the simple Central Bank account, profits are stated as interest earnings on foreign reserves and the counterpart of these profits is the increase in the Central Bank net worth, as stated below by equation (4.4),

$$i^* NFA^* E = \dot{NW} \tag{4.4}$$

In order to incorporate the Central Bank account into that of the public sector, the profit of the Central Bank should be subtracted from the deficit and the increase in net worth of the Central Bank should be subtracted from the increase in

public sector liabilities. Therefore, consolidated account can be stated as in equation (4.5),

$$D + iB + i^*(B^* - NFA^*)E = \dot{B} + \dot{B}^*E + \dot{DC}_g - \dot{NW} \qquad (4.5)$$

Two additional steps are required to render the accounting identity more useful. First, since the central bank and public sector accounts are consolidated, and since the left hand side lists interest payments on net foreign debt of the public sector, it is useful to express the source of finance on the right hand side in terms of net foreign debt of the public sector as well. This is done by adding and subtracting the change in the net foreign assets of the central bank:

$$D + iB + i^*(B^* - NFA^*)E = \dot{B} + (\dot{B}^* - N\dot{F}A^*)E + \dot{DC}_g + N\dot{F}A^*E - \dot{NW} \qquad (4.6)$$

Second, the change in domestic credit to the government is a transaction between the two public entities and should be eliminated. This can be done by recognizing that the last three elements of equation (4.6) is equal to the change in monetary base:

$$D + iB + i^*(B^* - NFA^*)E = \dot{B} + (\dot{B}^* - N\dot{F}A^*)E + \dot{M} \qquad (4.7)$$

The budget deficit presented in equation (4.7) does not capture the public sector's claim on resources. The right hand side of the equation shows the total public sector liabilities in nominal terms. While measuring the real liabilities of the public sector to the private sector, domestic and foreign inflation components of the nominal interest payments should be excluded since these components are treated as capital account rather than current account. After subtracting the stated capital account from both sides of the equation, all variables are divided by the price level P and a new equation is obtained:

$$d + rb + r^*(b^* - nfa^*)e = \dot{b} + (\dot{b}^* - n\dot{f}a^*)e + \dot{M} / P \qquad (4.8)$$

Lower case variables denote the real variables, P and P* denote the domestic and foreign price level and r and e are calculated as follows,

$$1 + r = (1 + i) / (1 + \hat{P})$$

$$1 + r^* = (1 + i^*) / (1 + P^*)$$

$$e = EP^* / P$$

Here "hat" (^) denotes percentage change. Capital losses due to changes in real exchange rates, changes which are part of the cost of servicing foreign debt, should also be included in the equation in order to show the real liability of public sector to the private sector. Capital loss due to foreign exchange rate changes is stated as:

$$\overbrace{(b^* - nfa^*)e}^{\cdot} = (\dot{b}^* - n\dot{f}a^*)e + \hat{e}(b^* - nfa^*)e$$

Substituting the above expression into equation (8) gives equation (9) given below,

$$d + rb + (r^* + \hat{e})(b^* - nfa^*)e = \dot{b} + \overbrace{[(b^* - nfa^*)e]}^{\cdot} + \dot{M} / P \qquad (4.9)$$

The last term of the right hand side of the equation is the increase in real money balances. The rise in real money balances shows the revenues of the government from the issuing of money as inflation tax and seigniorage. This can be shown as:

$$\dot{M} / P = \dot{m} + \hat{P}m$$

and substituting this into the equation (4.9),

$$d + rb + (r^* + \hat{e})(b^* - nfa^*)e = \dot{b} + \overbrace{[(b^* - nfa^*)e]}^{\cdot} + \dot{m} + \hat{P}m \qquad (4.10)$$

The deficit obtained above shows the fiscal deficit of the public sector in combination with the Central Bank profit and loss account, while excluding inflationary erosion of the public sector net debt from the private sector. Consequently, the formulation above establishes the equality between the real deficit (inclusive of central bank profit and loss account, and accounting for real components

of interest payments) and changes in the real value of domestic and foreign debt plus revenue from the seigniorage and inflation tax.

Equation 4.10 is an accounting identity. Ex-ante it can be used to check the consistency of macroeconomic policy targets, given additional assumptions about the path of exogenous variables. In particular, it can be used to evaluate the needed adjustment in fiscal deficits (relative to a base year) consistent with inflation and debt targets. In that sense, the right hand side of the equation can be seen as an estimate of the financeable deficit, given debt and inflation, real exchange rate and GNP growth targets, which can be compared with the expression for actual deficit given on the left hand side. When the two are not equal, policy targets are not consistent with realized deficits. The difference between the two provides an estimate of the required deficit reduction (RDR).

In order to carry out such an assessment, we will need to make some assumption as to the desirable level of the stock of public debt. We will simply assume that the ratio of the real stock of domestic debt to real output has to remain constant.[4] We also assume that the ratio of foreign debt to output remains constant as well (that is, real net foreign debt cannot grow faster than the ratio of output to the real exchange rate):[5]

$$\dot{b} = nb \text{ and } \dot{(b^* - nfa^*)e} = (n - \hat{e})(b^* - nfa^*)$$

$$\dot{b} / y = n\tilde{b} \text{ and } \dot{(b^* - nfa^*)e / y} = (n - \hat{e})(b^* - nfa^*)$$

~ indicate variables expressed as a percentage of GNP
n growth rate of real output, y. Using the equations above

$$\tilde{d} + r\tilde{b} + \tilde{r^*(b^* - nfa^*)e} = n\tilde{b} + (n - e)\tilde{(b^* - nfa^*)} + (\hat{P} + n)m \quad (4.11)$$

[4] We are therefore ignoring the thorny issue of whether the current stock of debt is too high and unsustainable. It is often argued that even though the current stock of debt is not high relative to GNP, it is high relative to the size of the domestic financial system and therefore puts pressure on interest rates. The merits of this argument would depend critically on one's views about access to international capital flows.

[5] In further simulations we test how results change when the net foreign debt-GNP ratio is required to decline by one percentage point.

The equation above states that non interest deficit and real interest payments on domestic and foreign debt cannot exceed what can be financed through debt issue at the target debt-output ratios, and revenue from the steady-state seigniorage and inflation tax.

Note that for consistency, and since demand for money itself is affected by changes in the inflation rate, demand for base money needs to be evaluated at the target inflation rate and prevailing interest rates. This requires an estimate of how money demand responds to changes in these variables. This is handled in the next sub-section.

4.2 Money Demand Functions

Base money is determined by the demand functions for currency in circulation, demand deposit, time deposit and foreign currency deposit. In the estimations average quarterly data are used, starting from 1980-1 to 1998-1 except for foreign currency deposit equations which starts from 1986-1 to 1998-1. The functional forms used in the equations are based on the portfolio approach to the asset demands and similar to those used in World Bank Report (1996). The estimation results for the components of money demand functions are presented at Table 4.1, the implied long-run coefficients are given in Table 4.2.

Table 4.1: The Estimation of Base Money Demand

DEPENDENT VARIABLE	Const	ln(CPI/CPI(-1))	$\ln(1+i_{TD})$	$\ln(1+i_{FXD})$	Trend	Lagged Endogenous Variables
ln(Cu/PY) R^2=.87 DW=1.83 1981.1-1998.1	-1.12 (-3.79)	-0.32 (-2.35)			-0.002 (-1.68)	0.62 (6.71)
ln(DD/PY) R^2=.96 DW=1.70 1981.1-1998.1	-1.11 (-4.30)	-0.38 (-2.35)	-0.52 (-2.77)		-0.007 (-2.87)	0.47 (4.63)
ln(TD/PY) R^2=.92 DW=1.53 1981.1-1998.1	-0.32 (-4.09)		0.104 (1.00)		-0.002 (-2.68)	0.847 (24.9)
ln(FXD/PY) R^2=.96 DW=1.59 1986.2-1998.1	-1.09 (-3.28)			0.143 (2.46)	0.005 (2.524)	0.708 (8.40)

* The numbers in brackets are the t values of the regression.

Table 4.2: Implied Long Run Coefficients of the portfolio model

DEPENDENT VARIABLE	ln(CPI/CPI(-1))	$\ln(1+i_{TD})$	$\ln(1+i_{FXD})$
ln(CU/PY)	-0.8571		
ln(DD/PY)	-0.7376	-1.003	
ln(TD/PY)		0.6875	
ln(FXD/PY)			0.4926

Cu : Currency in circulation

DD : Total demand deposits held in banks

TD : Total time deposits held in banks

FXD : Total foreign exchange deposits held in banks

CPI : Consumer price index

i_{TD} : Average weighted interest rates on time deposits

i_{FXD} : Average weighted interest rates on foreign exchange deposits, inclusive of nominal depreciation of the exchange rate.

PY : CPI index multiplied by annualized real GNP.

The estimation results show that the inflation elasticities of currency in circulation and demand deposits are very high. This implies that for an increase in the revenue from monetization in the form of inflation tax and seigniorage revenues, the government needs higher and higher inflation with more shock component in it.

5. Results

In this section we use the Anand and Wijnbergen model to calculate extent of fiscal adjustment that would be needed to implement a disinflation program. We use the various measures of operational deficits derived earlier to assess the extent to which estimates of required deficit reduction are sensitive to the specific approaches used in calculating operational deficits and public debt.

Incorporating quasi-fiscal accounts into this exercise deserves some comments. Note that, strictly speaking, as long as these accounts remain in the books of state owned commercial banks, they do not directly enter the financeable deficit equation. In other words, they are not financed either by actions of the treasury or the central bank, that is, either by monetization or by issues of government securities. Rather, they are financed by the state banks themselves. The reason we think an exercise of the required deficit reduction should incorporate the QF accounts is our argument that the fiscal adjustment component of a comprehensive stabilization program should include steps through which the Treasury would recognize its quasi-fiscal liabilities. In effect, including the QF accounts in the definition of public deficits and debt is tantamount to assuming first, that the Treasury compensates for the flow of duty loses fully within the year through budgetary appropriations, and second, that it issues non-cash securities in exchange for the stock of accumulated duty losses.[6]

[6] We also note that the fact that under the current regime the duty losses are financed by the state banks does not imply that they do not affect the financing of the deficit. To the contrary, financing of the deficit is affected through several channels. Duty losses create liquidity problems which state banks resolve either by increased recourse to the inter-bank market or by more aggressive behavior in the market for deposits (see, for example see Radikal, April 30, 1999, p. 15). Both can be expected to

For 1998 basically scenarios are examined for each of the different measures of public sector deficits introduced in section 3. The detailed accounts involved in the derivation of the debt stocks and the corresponding operational deficit figures are presented at Annex 1. The first scenario is the base case in the sense that it takes 1997 as the point of departure and assumes that the rate of growth of GNP and the real auction rate remain at their 1997 levels.[7] The second and third scenarios analyse the required reduction in operational deficits when the GNP growth rate and the real auction rate are set to their actual 1998 levels, for inflation targets 55% and 20% respectively, and the domestic and foreign debt to GNP ratios are held at their 1997 levels. The fourth scenario attempts to account for the developments that actually took place in 1998 and assumes a net foreign debt repayer position amounting to 1% of GNP while targeting 55% inflation and still keeping the domestic debt GNP ratio constant. The results are presented in Table 5.1.

affect the Treasury auction rates. In addition, the increased demand for liquidity may push the central bank to engage in open market operations, which affects the money supply.

[7] The analysis of the base case involves finding the inflation rate where actual and financeable deficits are equal.

Table 5.1: Alternative Scenarios for the Financable and the Core inflation for 1998

			Key Assumptions			Operational Deficit		
			GNP Growth(%)	Real Dom. Int.(%)	Inflation	Actual	Financiable	RDR
A.		OD1 = 2.44% & Dom.Debt/Y = 13.5%						
	A.1	Base Case	8	14.2	0	2.4	3.5	-1.1
	A.2	55% Inf. Target	3.8	24.0	55	3.8	3.4	0.4
	A.3	20% Inf. Target	3.8	24.0	20	3.8	2.7	1.1
	A.4	55% Inf. T.& 1% Net For. Debt Repay.	3.8	24.0	55	3.7	2.4	1.3
B.		OD2 = 2.91% & Dom.Debt/Y = 13.5%						
	B.1	Base Case	8	14.2	0	2.9	3.5	-0.6
	B.2	55% Inf. Target	3.8	24.0	55	4.2	3.4	0.8
	B.3	20% Inf. Target	3.8	24.0	20	4.2	2.7	1.5
	B.4	55% Inf. T.& 1% Net For. Debt Repay.	3.8	24.0	55	4.2	2.4	1.8
C. (with QF Def.)		OD3 = 4.87% & Dom.Debt/Y = 17.3%						
	C.1	Base Case	8	14.2	30	4.9	4.8	0.1
	C.2	55% Inf. Target	3.8	24.0	55	6.6	3.6	3.0
	C.3	20% Inf. Target	3.8	24.0	20	6.6	2.9	3.7
	C.4	55% Inf. T.& 1% Net For. Debt Repay.	3.8	24.0	55	6.5	2.5	4.0
D. (C+Consolidation)		OD4 = 5.62% & Dom.Debt/Y = 14.6%						
	D.1	Base Case	8	14.2	90	5.6	5.5	0.1
	D.2	55% Inf. Target	3.8	24.0	55	7.0	3.5	3.5
	D.3	20% Inf. Target	3.8	24.0	20	7.0	2.8	4.3
	D.4	55% Inf. T.& 1% Net For. Debt Repay.	3.8	24.0	55	6.9	2.4	4.5

A major issue to be highlighted by the results is that different measures of operational deficits suggest widely different recommendations regarding the size of the required fiscal adjustment. The figures in row A1 suggest that, assuming that OD1 is the correct measure of operational deficits, the government could reach a zero percent inflation target by further loosening fiscal policy by 1.1 percent of GNP in 1997. Row A.2 suggests that in 1998[8] reaching a target of 55 percent for the rate of inflation would have been possible with an operational deficit of 3.4 percent of GNP, which implied a reduction in 0.4 percentage points of GNP relative to its level in 1997. The scenarios for OD2 (panel B) also suggest a further loosening of fiscal policy for the base case. When the growth rate and the auction rate are adjusted to their 1998 levels, for a target inflation rate of 55 percent, and a 1 percent decrease in

[8] Remember that GNP growth rate and real domestic auction rates assumed in row A.1 correspond to those prevailing in 1997. By contrast, the values of these variables in panels A.2-A.4 reflect realizations in 1998.

the ratio of foreign debt to GNP, scenario B.4 suggests a further reduction of the operational deficit by 1.8 percentage point of GNP over its level in 1997.

Panel C provides the results when QF activities are taken into account. Compared to panel A and B, the primary consequence of the inclusion of QF activities is the increase in the gap between financeable and actual deficits. Compared to an RDR of 1.8 in scenario B.4, scenario C.4 now suggests a financiable deficit of 2.5 percent of GNP – a reduction of 4 percentage points – to attain an inflation target of 55 percent. (With total (real) interest expenses of about 4.2 percent of GNP, a financeable deficit of 2.5 percent corresponds to a primary surplus of about 1.7 percent of GNP). In 1998 realization of OD3 was around 4.08 percent of GNP. Part of the explanation of the gap is explained by debt dynamics: These scenarios are made under the assumption that the ratio of domestic debt stock to GNP is constant. In fact in 1998 the domestic debt ratio increased by around 3.4 percentage points of GNP, raising the financeable deficit by that amount. Additional financing was available due to privatization revenues of around 0.9% of GNP. Ultimately, these figures correspond to a financeable deficit that is higher than those derived in the model.

While incorporation of QF activities imply significant changes in policy recommendations, the impact of the consolidation of intra-governmental debt is not that large. For scenarios 2-4, the difference between the results of Panel C and those of Panel D are less than half a percentage point of GNP. Note, however, that the base case core inflation of 90 percent suggested by scenario D.1 is far closer to actual inflation in 1997 than the 30 percent suggested in scenario C.1. We interpret this as supporting our tendency to regard OD4 (and the associated measure of net public debt) as possibly the most accurate among the measures considered in this study.

Scenarios for 1999 are displayed in Table 5.2. In each panel, scenario 1 is again the base case, where GNP growth its level in 1998. Scenarios 2-4 assume GNP growth rate of 3 percent and a real auction rate of 24 percent. Scenario 5 assumes that the auction rate increases to 35 percent. The purpose of examining such a high real interest rate scenario should be obvious. In case of a serious disinflation effort, with

rigidities in nominal rates, facing extraordinarily high real rates is a likely possibility. One would like to evaluate the impact of this eventuality on the size of the necessary adjustment as well.

Table 5.2: Alternative Scenarios for the Financeable and the Core inflation for 1999

			Key Assumptions			Operational Deficit		
			GNP Growth(%)	Real Dom. Int.(%)	Inflation	Actual	Financiable	RDR
A.		OD1 =3.08% & Dom.Debt/Y = 15.4%						
	A.1	Base Case	3.8	24.0	30	3.1	3.1	0.0
	A.2	35% Inf. Target	3.0	24.0	35	3.1	2.9	0.2
	A.3	10% Inf. Target	3.0	24.0	10	3.1	2.2	0.9
	A.4	35% Inf. T.& 1% Net For. Debt Repay.	3.0	24.0	35	3.0	1.9	1.1
	A.5	A.4 + incr. in real dom. int. rate	3.0	35.0	35	4.7	1.9	2.8
B.		OD2 = 2.19% & Dom.Debt/Y = 15.4%						
	B.1	Base Case	3.8	24.0	0	2.2	2.0	0.2
	B.2	35% Inf. Target	3.0	24.0	35	2.2	2.9	-0.7
	B.3	10% Inf. Target	3.0	24.0	10	2.2	2.2	0.0
	B.4	35% Inf. T.& 1% Net For. Debt Repay.	3.0	24.0	35	2.1	1.9	0.2
	B.5	B.4 + incr. in real dom. int. rate	3.0	35.0	35	3.8	1.9	1.9
C. (with QF Def.)		OD3 = 4.08% & Dom.Debt/Y = 20.7%						
	C.1	Base Case	3.8	24.0	80	4.1	4.1	0.0
	C.2	35% Inf. Target	3.0	24.0	35	4.1	3.1	1.0
	C.3	10% Inf. Target	3.0	24.0	10	4.1	2.4	1.7
	C.4	35% Inf. T.& 1% Net For. Debt Repay.	3.0	24.0	35	4.0	2.1	2.0
	C.5	C.4 + incr. in real dom. int. rate	3.0	35.0	35	6.3	2.1	4.2

The first thing to note in Table 5.2 is that, as was with the case of 1998, inclusion of QF activities affects policy recommendations rather dramatically (compare results in Panel C with those in A or B). Whether one uses OD1 or OD2 also has an affect, but the impact is smaller. Returning now to specific results, for OD1, the base case suggests that reaching a target rate of inflation of 30 percent was possible with an operational deficit of 3.1 percent of GNP. Inclusion of QF activities produces a different picture. The two cases of special interest are C.4 and C.5. The target rate of inflation is specified as 35 percent, since this was the target adopted in the annual program of 1999. In both cases the financeable deficit is calculated as about 2.1 percent of GNP. At a real interest rate of 24 percent, in C.4 this amounts to

a primary surplus of 3.4 percent of GNP.[9] In C.5, which assumes a real interest rate of 35 percent, an OD3 of 2 percent of GNP translates into a primary surplus of 5.4 percent of GNP.[10] Compared to its level in 1998, these amount to a further reduction in OD by 2 and 4.2 percentage points of GNP, respectively. By contrast, the official annual program for 1999, which does not take into account QF activities explicitly, envisages a continuation of the fiscal stance for 1998. Our results suggest that the macro targets identified in the annual program are difficult to achieve.

The first main point in all this is that policy recommendations regarding adjustment does indeed depend on how fiscal stance is measured. Second, the required deficit reduction is quite sensitive to the level of real interest rates that will prevail during the disinflation period. This suggests that debt management policies will play a crucial role in the adjustment process, an issue that is not addressed in this paper. We argue below that real interest rates themselves are likely affected by lack of confidence and credibility regarding fiscal policies. Given lack of comprehensiveness and transparency in public accounts, improvements in observable fiscal aggregates may be insufficient to establish credibility.

6. Designing Fiscal Adjustment: Composition and Institutional Reforms

6.1 Composition of Adjustment

It will be useful at his point to summarize our main observations about the current fiscal stance of Turkey. The relevant data is in tables 3.2-3.4. Since we do not have data for QF deficits prior to 1996, we put that aside for the moment. The different measures of primary and operational deficits suggest that fiscal policy is

[9] Assuming a net repayment position of 1 percent of GNP on foreign debt, interest payments on foreign debt amounts to about 1.09 percent of GNP. Interest payments on domestic debt is about 4.41 percent of GNP (0.24 times nominal debt stock in the beginning of 1999 divided by projected nominal GNP in 1999). Then we have PD= 2.1 - (4.41+1.09) = -3.4.

[10] Total real interest payments in this case is 7.52 percent of GNP (1.09 on foreign debt plus 6.43 on domestic debt). Then we have PD = 2.1 – 7.52 = -5.42.

more under control in the post-1994 period compared to the pre-1994 period. Again, putting aside QF activities, the conventional measure for primary deficits suggest a serious adjustment effort in 1998, though PD with net interest payments suggest that part of the increase in the primary surplus was due to higher interest earnings on government deposits. Furthermore, the change in operational deficits from 1997 to 1998 is even smaller, reflecting the increased burden of real interest payments. Inclusion of QF activities in 1997 and 1998 raises operational deficits by close to 2 percentage points of GNP to about 4-5 percent of GNP. Our summary of all this is that there was a fiscal retrenchment in 1998, but it is not as large as what is suggested by unadjusted figures published by the government.

We next examine the composition of public sector primary balance (Table 6.1). The dominant items are the deficit of the consolidated budget and that of the SEEs. The borrowing requirements of SEEs have declined compared to their pre-1994 levels, partly because of several debt restructuring efforts which have resulted in significant reductions in their interest payments. However, focussing on 1998, we see that while the consolidated budget has gone through a serious retrenchment, SEE deficits have increased by about 1.6 percentage points of GNP. Moreover, a major factor behind this deterioration of SEE accounts is agricultural subsidies: Most of the financing gap in SEEs is concentrated in those non-financial enterprises which are heavily involved in transfers to agriculture. Hence agricultural subsidies account not only for the off-budget activities of public banks, but also of the non-financial SEEs.[11]

[11] The difference between the two is that while the QF activities non-financial SEEs are captured in the PSBR, those of the public banks are not. We may note here that in the pre-1994 period as well, SEE deficits were highly concentrated in enterprises hat were engaged in transfers to agriculture. See Atiyas (1996).

Table 6.1: Primary Deficits by sector (% of GNP)

	1990	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**
Total Public	2,75	4,58	4,88	4,10	-2,15	-3,39	-1,75	-0,62	-2,54
Consolidated Budget	-0,51	1,49	0,65	0,87	-3,76	-3,30	-1,73	-0,13	-4,09
SEEs	2,89	1,73	1,95	1,14	-0,21	-1,51	-0,79	-0,91	0,72
Local authorities	0,04	0,27	0,79	0,72	0,41	0,21	0,35	0,30	0,25
Revolving funds	-0,02	0,01	0,01	0,00	0,01	0,04	-0,01	-0,02	-0,03
Social security institutions	-0,27	0,14	0,24	0,58	0,58	0,63	0,25	0,01	0,03
Extra-budgetary funds	0,61	0,94	1,26	0,80	0,82	0,55	0,06	-0,10	0,10
Privat. Revenues in Privatiz. Adm.	0,00	0,00	0,00	0,00	0,00	0,00	0,12	0,24	0,47

Subsidies for agriculture therefore appear as a major expenditure item that needs to be put under control. In the terminology of Perotti, Strauch and von Hagen, agricultural subsidies are potentially one of the important sources of fiscal problems in Turkey. As discussed in more detail below, they are also extremely discretionary. On the other hand, agricultural subsidies are politically complex, and reducing these subsidies on a sustainable basis requires a major assessment and reform of overall agricultural policy.

The contribution of social security institutions to overall public primary deficit is small, but this is misleading since government support to these institutions is predominantly done through the budget, as discussed below.

We next examine the consolidated budget in some detail. Table 6.2 provides data on changes in the ratio of respective consolidated budget items as a percentage of GNP. Looking at changes in the ratio of primary surplus to GNP, we identify three periods of fiscal adjustment (1987-88, 1993-94 and 1997-98) and two periods of expansion (1990-91, 1995-96 and 1996-97).[12] Several observations can be made. First, both in 1993-94 and 1997-98, fiscal adjustment was due to both revenue increases and expenditure cuts. Second, whereas in 1993-94 there was a substantial decrease in personnel expenditures, that item did not decrease during 1997-98. The

[12] Our criteria for selecting a period is a minimum increase or decrease of 1.25 percentage points in the ratio of primary balance on the consolidated budget to GNP.

contribution of personnel expenditures to the expansion of 1995-97 is also relatively small. The main item that increases during that period is “other transfers”, the bulk of which belongs to social security institutions and agricultural support. A large part of the sizeable adjustment in expenditures during 1997-98 has also come from “other transfers”. More detailed data reveals that reductions in the following items account for this decrease: state participations (1/2 percent of GNP), duty losses (0,16%), agricultural support (0,5%), transfers to extra-budgetary funds (0,5%). Note that the decline in expenditures on agricultural support is more than compensated for by the increase in the borrowing requirements of SEEs active in agricultural transfers.

Table 6.2: Consolidated budget: Contribution of revenue and non-interest expenditure components to fiscal adjustment and expansion (% of GNP)

	Years of fiscal adjustment			Years of fiscal expansion		
	1987-88	1993-94	1997-98	1990-91	1995-96	1996-97
Change in primary surplus	1,31	4,63	4,51	-2,00	-1,28	-1,83
Revenues	-0,31	1,57	2,61	1,01	0,29	1,35
Expenditures (non-int)	-1,62	-3,06	-1,89	3,00	1,57	3,18
Personnel	-0,08	-1,46	0,24	1,11	0,10	0,54
Other current	-0,19	0,12	0,03	-0,01	0,25	0,34
Investment	-0,76	-0,79	-0,29	0,17	0,39	0,47
Transfer to see's	0,20	-0,75	-0,11	1,60	-0,24	0,08
Other transfers	-0,78	-0,17	-1,75	0,13	1,06	1,70

Source: Undersecretary of Treasury
Note: There are slight discrepancies with earlier data due to the use of different sources.

Our interpretation is that further reductions in personnel expenditures (currently at about 7% of GNP) are possibly politically unacceptable, and possibly also highly undesirable. Salaries of civil servants are very low in real terms and cuts probably have a negative effect on the quality of public services (Ul Haque and Sahay, 1996). Investment Expenditures have been severely reduced over the last decade (from about 3-4 percent of GNP in late 1970s and 1980s to less than 2 percent in the second half of the 1990s). Most public investment is concentrated in infrastructure. Bal and Zaman (n.d.) provide evidence that private investment depends

positively on public infrastructure investment. Hence further reductions in investment expenditures are also highly undesirable.

These observations suggest that these items in the consolidated budget offer limited room for further fiscal adjustment. One item that does attract attention is transfers to social security institutions. Transfers to social securities institutions increased by about 1.25 percentage points of GNP between 1995-1998 to about 2.6 percent of GNP (corresponding to a total deficit of about 4 percent of GNP). The Treasury estimates that the total borrowing requirements of social security institutions will reach 10 percent of GNP by 2050. (Undersecretariat of Treasury, 1998). If reform of the social security system is successful, this may provide significant savings in expenditures.

Normally interest expenses are not considered at the discretion of policy makers. However, in Turkey interest rates have been high and variable. There is a discussion in Turkey about the causes of this. One view suggests that interest rates are high because the stock of domestic public debt, although not very high in relation to GNP, is high relative to the size of the domestic financial system. This view would imply that fiscal adjustment should target not constant but lower debt to GNP ratios. We suspect that current rates carry a high confidence and credibility premium. A comparison of real interest rates on Treasury auctions and real deposit rates is taken as an indicator of the credibility of economic policies (Alesina, Prati and Tabellini, 1990). Figure 3.2 in Annex 3 shows that beginning with 1993 the holders of government debt have demanded much higher real interest rates compared to the real deposit rates, which may indicate the risk perception of the debt holders. A serious stabilization program combined with serious institutional reforms that increase transparency and controllability of expenditures (see below) is likely to have a significant positive effect on real interest rates.

We also suspect that significant savings can be generated by increasing the efficiency of public expenditures. This is also closely related to institutional reforms, discussed in more detail below. Possibly the benefits are not immediate, but very high and sustainable in the medium term.

6.2 Institutional Reforms[13]

Existing budgetary institutions: It is increasingly recognized that in order to be sustainable over a long period of time, adjustment in fiscal aggregates need to be complemented by reform of institutions that regulate the behavior of actors who take part in the making of budget policy.[14] This is true for several reasons. First, it is hoped that by changing the rules of budget making and implementation, these actors will be given better incentives to act in a fiscally responsible manner (or face more effective penalties when they do not). Second, some aspects of institutional reform may actually facilitate fiscal retrenchment by both helping identify those areas where expenditures have lowest value in terms of social welfare, and more generally, by increasing the allocative and cost effectiveness of expenditures. Third, institutional reforms may be the most effective means of increasing public confidence in the government, and thereby reduce the cost of rolling over the debt. Fourth, and perhaps most important, institutional reforms may be the most effective means of signalling the true intentions of the government, and thereby increasing the credibility of the whole program. All of these factors are relevant in Turkey. In order to place institutional reform into a proper context, we first discuss the important features of existing budgetary institutions in Turkey.

Dominance of distributive politics. It is well known that public finances under representative democracies are vulnerable to pressures from distributive politics. These pressures are especially strong in Turkey. They are fed by both the peculiarities of organizational and leadership structures of political parties, and by the

[13] This section draws heavily on Atiyas and Sayın (1997, 1998a, 1998b).

[14] There is now a large literature on how budgetary institutions affect fiscal outcomes. Prominent examples are von Hagen, (1992), Alesina and Perotti, (1996a, 1996b) and Campos and Pradhan (1996).

nature of political competition between parties.[15] Distributive politics, or more concretely, the allocation of public resources through various forms of transfers to particular constituencies or interest groups has become the predominant means of political competition in Turkey (as opposed to, say, positions on alternative policies or ability to produce public policy). Distributive politics suffers from a collective dilemma in that political parties collectively would have preferred to allocate less transfers to constituencies, but, given competition, a unilateral decision to act fiscally responsibly would result in losing the elections (Dixit and Londregan, 1996). Recent literature has shown that distributive politics can result in excessive spending and generate a "deficit bias" (Chari and Cole, 1993, Velasco, 1997).

This tendency of distributive politics is reinforced by a lack of cohesiveness within political parties. Potentially, party leadership structures can contain distributive pressures by protecting the collective interests of the party rather than the interests of individual politicians (Cox and McCubbins, 1993). Even though Turkish political parties are very centralized and party leaders exercise substantial authority in a wide variety of dimensions, including intra-party promotions, selection of candidates, and appointment of ministers once the party gains political power, this authority is delegated against an implicit understanding that once in power, leaders cater to the distributive demands of party notables. Party notables' threat of "transferring" to another party is another mechanism that increases the responsiveness of party leaders. In effect, distributive politics has also become the main "glue" that holds political parties together. In fact, ability to raise political support through distributive and partisan allocations of public funds has become an important factor that determines intra-party promotions.

Incentives for distributive politics are further reinforced by norms that guide constituency behavior. Populism in Turkey has historical roots in the development of multi-party democracy and is deeply ingrained in the political culture

[15] Atiyas and Sayın (1999) present a detailed discussion of these issues.

(Heper and Keyman, 1997; Sunar, 1990). Distributive demands by constituencies are more than straightforward expressions of pursuit of self-interest. In addition, the collective expectations of constituencies have been such that responding to constituency demands have been seen as a primary *duty* of the state. The state has been perceived as an "institution that guarantees the livelihood of broad strata of the population" (Öniş and Webb, 1994: 135; see also Heper, 1985).

Another important institutional factor that affects budget outcomes is the nature of the government (majority/minority, single party/coalition). Recent evidence suggests that coalition governments (or, in presidential systems, divided government) perform worse than majority (respectively, unified) governments in terms of budget discipline. Hence, the fact that Turkey has been governed by coalitions or minority governments since the elections in 1991 probably has played an important role in the increase in public deficits.

The role of central agencies. The central control agencies, namely the Ministry of Finance (MOF), the Treasury, and the State Planning Organization (SPO) play a critical role in the conduct of budget policy. The fact that central control is distributed among the three agencies reflects serious fragmentation of budget policy. The MOF is primarily responsible for the preparation and overall implementation of the budget, the Treasury is responsible for cash and debt management, and the SPO is responsible for authorizing public investment projects. The SPO and the Treasury are both organized under the Prime Ministry, however in practice both have been responsible to separate state ministers. Potentially, economic policy making in general, and fiscal policy in particular is fragmented. Coordination is hard to achieve and requires a lot of effort from the bureaucrats.

On the other hand, the preferences of the central agencies exhibit an important degree of aversion against allocations of public resources to particular groups in exchange for political support. Recruitment in the central control agencies is done on a merit basis and the central agencies have developed norms of professional ethic. They can potentially act as a commitment device against distributive pressures,

a role similar to that of the "independent conservative central banker" in theories of time consistency in monetary policy. The extent to which they can play this role depends very much, on the one hand, on who is appointed as top managers (the undersecretary is almost always a political appointment) the preferences of ministers, and the extent to which the different agencies can act in a coordinated fashion. The degree of coordination has increased over the years, and there have been some limited attempts at institutionalizing it. However, to the extent that it exists, coordination is still a product of the personal efforts of the bureaucrats and remains fragile.

Budget Coverage. As discussed in Atiyas and Sayın (1999), two aspects of budget coverage are important. The first is coverage in terms of commitment and control, that is, whether activities which use public resources are carried out with prior authorization from the parliament through a budget law. The second aspect is coverage in terms of transparency. That is, irrespective of whether authorized by the parliament, do all forms of expenditure of public resources get reported or accounted for? The coverage of budget laws in Turkey is limited in both respects. An important part of public expenditures is undertaken without requesting the approval of the legislature. The fact that the government can spend public resources outside the budget both increases the government's discretion and reduces transparency since it becomes much more difficult for the public or the opposition to monitor how public resources are spent.

The most important expenditure component not covered in the budget, namely state banks' quasi-fiscal operations, has been discussed above. Other components are: subsidies provided through SEEs (especially for agriculture), tax expenditures, contingent liabilities, and capital commitments (commitments for future expenditures on investment projects approved by the SPO). There are also extra-budgetary funds and over three thousand revolving funds that are not covered by the budget.

Some of these off-budget activities are reported ex-post by the SPO. The annual programs contain data on "public sector balances" which document receipts,

expenditures and borrowing requirements for key public sector entities (agencies covered by the consolidated budget, financial and non-financial state economic enterprises, local governments, social security institutions, revolving funds and extra-budgetary funds). Some (eg some contingent liabilities, parts of duty losses) are reported in budget statements but not in formats that are easily understandable or analytically useful. Others are not reported at all. There is a severe lack of information on fiscal aggregates, not only for the public in general, but also for the actors primarily responsible for budget policy. Lack of transparency both reduces the accountability of the government towards its citizens, but also severely weakens the internal controllability of expenditures.

Supplementary Budgets and the Dominance of Budget Implementation over Preparation. The commitment value of annual budgets is further weakened because actual expenditures can and do exceed appropriations specified in the budget law. There are several mechanisms through which this can be done, but the most important is supplementary budgets. Since Turkey is governed by a parliamentary system of government, as long as the government has a majority in the parliament, passing a supplementary budget poses no serious challenge. That allows governments to allocate public resources according to short-term political priorities and hence validates their vulnerability to distributive demands. Significant gaps have come to exist between budget appropriations and realizations, and there is a close correlation between deficits in the consolidated budget and realization gaps. In other words, it seems that high budget deficits have occurred in years where expenditure gaps have been large (Atiyas and Sayın, 1999, Figure 5).

The ability to pass supplementary budgets also implies that in most cases the real bargaining over the budget takes place during budget implementation, rather than budget preparation. In addition, the presence of high inflation further creates opportunities of discretion during implementation, and increases the stakes in this bargaining process, since those who get paid earlier are better off. Both appropriations and cash rationing become politicised.

Lack of evaluation of expenditures, allocative and cost inefficiencies. The prospect of supplementary budgets reduces the significance of the budget preparation process in budget policy. Another important factor that weakens the budget preparation process is that budgets are prepared virtually with no information on the allocative and cost efficiency of existing programs. Under the current system, this type of information is not produced. The absence of such evaluation not only makes it difficult to reduce allocative and cost inefficiencies, but also makes strategic prioritization at the budget preparation stage extremely difficult. As a result, whenever budget cuts have been necessary, they have been carried out across the board, without a strategic focus. Hence, absence of evaluation also further complicates the establishment of aggregate fiscal discipline. We suspect that the under the current budget system implementation of expenditures is highly cost-inefficient due to high informational rents. Within the various levels of the political and bureaucratic hierarchy, the ability of the principals to monitor agents is severely restricted due to insufficient information. Frequent news of scandals in public procurement are symptoms of this inefficiency. Second, we suspect that the implementation of transfers in response to distributive pressures also is not efficient and suffers from significant dead-weight losses. As discussed in Coate and Morris (1997), transfers to special interest groups often are not done in a transparent manner but need to be disguised as provision of public goods and services. For example, the government cannot simply make lump sum transfers to a specific constituency in return for political support; rather, such transfers need to be disguised as public policy, such as the building of a road or agricultural support purchases. Such instruments typically entail additional costs and distortions, which are pure welfare losses. Again, these distortions arise due to informational asymmetries.

Elements of reform. Reform of budgetary institutions should have two immediate objectives. The first is to reduce the degree of discretion in expenditure policy. The second is to increase the degree of comprehensiveness and transparency of fiscal accounts. Realization of these objectives would both increase fiscal control

and constrain public expenditures, enhance the credibility of announced fiscal policy, and increase public confidence.

There are several measures that can be undertaken to reach these objectives. The most immediate step is making the fiscal implications of quasi-fiscal operations transparent. A partial approach to this problem would require closer monitoring of these operations, and instituting a system of flow of information that would generate their fiscal cost without a delay. This information can be published by the central agencies, along with monthly statistics on budget revenues and expenditures, which are already published.

A more comprehensive approach to increase transparency would overhaul the government reporting requirements altogether. The most effective means of doing so would be to publish a balance sheet of the state, with its supporting documents. [16] Initially, the balance sheet may capture current assets and liabilities of the central government. The balance sheet can be accompanied with additional financial tables that capture quasi fiscal activities, contingent liabilities, commitments and cash flow. The primary data for the balance sheet is available in the Treasury and in the agencies that carry out quasi-fiscal operations. It is expected that treasury guarantees form the bulk of contingent liabilities, hence the primary data for that is also available. The main source of commitments is probably the stock of programmed and ongoing public investments, the record of which is available in the SPO.

The second element of budget reform focuses on increasing the comprehensiveness of the budget itself. This is essential to reduce discretionary expenditures. In most cases the current legal framework delegates the authority to generate duty losses to either the cabinet or the relevant agency. Hence, quasi-fiscal operations are undertaken with no link to the budget. The budget should impose limits on the maximum amount of duty losses that can be generated within the year. These limits should be treated like all the appropriations in the budget and should not be

[16] For a discussion of basic principles that should guide the the design of a balance sheet of the state in the Turkish context, see Emil (1997).

overridden by cabinet decisions. More generally, the budget should cover all public expenditures.[17]

Introduction of a medium term fiscal program would be an important institutional innovation and serve two important purposes. First, it would play a crucial role in clarifying the medium term revenue and expenditure implications of current policies. This helps increase discipline on the current budget preparation process. It has been argued that the practice of providing forward estimates, and reporting ex-post deviations from these estimates has helped increase the accountability of politicians and bureaucrats in countries which have reformed their budgetary institutions (Campos and Pradhan, 1996). Second, in the Turkish context, it would enhance the degree of coordination among the central agencies. Currently such coordination takes place during the preparation of the annual programs (published by the SPO) and the annual budgets. A medium term fiscal program would act as a more effective mechanism to coordinate the strategies and expectations of the central agencies.

Regarding coordination among the central agencies, any proposal that would redistribute decision making authority among the central agencies would probably costly to implement and in all likelihood would be vetoed by the losing agency. The reform strategy should instead strive to make each agency improve its own functions and establish better coordination within the existing distribution of decision making authority.[18]

Measures can also be taken to de-politicise the appropriations and cash rationing process. This can be done by having the MOF and Treasury to jointly draw up an appropriations and cash release program and make that public. Some progress towards a coordinated and programmed release of expenditures has been made in the current fiscal year.

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[17] In recent years budget laws have provided upper bounds on the amount of guarantees that can be advanced by the Treasury. The effect of these bounds have been limited because the cabinet was given the authority to increase these limits.

[18] See Atiyas and Sayın (1999) for more discussion on this.

The most important tools of discretion in the current system are supplementary budgets. The most effective way of restricting supplementary budgets would be through constitutional amendments. For example, the constitution could forbid supplementary expenditures on discretionary items (or, for example, items other than interest expenses) when they are not justified by unexpected revenue shortfalls or gaps between forecast and actual inflation. Alternatively, supplementary appropriations on specific items could require a super-majority in the parliament. We do not see this as likely in the near future. Even without constitutional amendments, however, it is possible for a reform-minded government to undertake actions which would at least increase the cost of routine uses of supplementary budgets basis. Even announcements of a commitment to avoid supplementary budgets may have some signalling value, especially if accompanied by additional actions that increase the transparency of fiscal accounts, and reduces the discretionary powers of the executive. More on this below.

Most of the measures mentioned above target the establishment of aggregate fiscal discipline and macroeconomic stability. One can also mention a second set of measures which primarily aim at increasing the allocative and cost efficiency of fiscal policy. This efficiency of expenditures requires better monitoring of public expenditure programs and evaluation of their impact on social welfare. Substantial capacity for evaluation already exists, especially in the SPO, which houses a large number of sectoral experts. This expertise can be easily mobilized for specific programs whose current fiscal impact is expected to be large.

Another important component of institutional reform relates to increasing the taxation capacity of the state. Tax avoidance is still extremely high in Turkey. Reforming tax administration so as to increase tax enforcement and compliance, and to enhance the base remains an important policy objective.

Sequencing: institutional reform vs adjustment.

The accepted wisdom on institutional reforms is that they necessarily take time. As a result, it is often argued that adjustment in fiscal aggregates necessarily has

to lead a stabilization and adjustment program, and institutional reforms can only follow with a lag. We would like to raise disagreements with this position.

First of all, as presented above as one of the main arguments of this paper, failing to adopt a comprehensive of fiscal accounts may create serious errors in ascertaining both the magnitude and composition of the required fiscal adjustment. In the case of Turkey, whether or not further fiscal adjustment is needed depends critically on whether one or not quasi fiscal operations are included in the assessment.

Second, even though many components of institutional reforms discussed above require time and new laws, many others do not. More importantly, we would like to assert that it is not impossible to affect the stakeholders' perceptions and expectations with several institutional and transparency-related innovations which are in fact easy to implement and costly to revoke. Recent experience in Turkey suggests some admittedly circumstantial evidence for this assertion.

In the last two years the treasury has started announcing borrowing programs that specify the timing and magnitude of auctions of government securities. The announcement of borrowing programs is an institutional innovation which reduces discretion if it is costly for the government to deviate from them, or to cease the practice announcing programs. This is likely to be the case in environments characterized by imperfect information. In essence, announcements of programs provide imperfectly informed public with an additional yardstick with which to evaluate the performance of the government authorities, hence potentially they provide new information on performance. It is possible to imagine that a decision to unilaterally terminate announcements would provide a bad signal for the government and therefore would be costly.[19]

In 1998, as a result of prodding from the central agencies, the government promised to refrain from issuing a supplementary budget. The media has been active

[19] The publication of the balance sheet of the central bank is also a relatively new phenomenon in Turkey. The balance sheets have now become a fact of life in financial markets. We would conjecture that terminating their publication would provoke a serious reaction from financial markets, and therefore entail serious costs, especially in financing the deficit.

in keeping that promise in the public agenda. To our knowledge, this was the first time that the media made an issue out of supplementary budgets. Our interpretation is that the promise was not regarded as cheap talk and that it did have some commitment value. Further, we conjecture that a if a reform minded government initiates a practice of preparing "sincere" budgets and avoids supplementary budgets, and if the significance of this practice is well publicized through the media, it will create a new yardstick which the public would use to evaluate future governments.

The same would be true with other initiatives that would enhance transparency, such as: publishing data on quasi-fiscal accounts along with the budget and the PSBR during the year, incorporating them fully into the budget, publishing data on the face value contingent liabilities with progress reports, etc. Many of these innovations would be easy to jump-start. Further, it would not be costless for future governments to terminate them. Finally, when initiated parallel to an adjustment program, it is highly likely that they will be taken seriously by the markets and enhance the credibility of the program itself. Only a government that is serious in pursuing reform would provide the public with additional information which can be used for more precise evaluation of its performance.

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