CHAPTER 2

Fiscal Targeting in IMF-Supported Programs: Cross-Country Analysis

A common criticism of fiscal adjustment in an IMF-supported program is that it is derived from a "one-size-fits-all" approach, which places too much emphasis on fiscal adjustment (i.e., a reduction in the fiscal deficit defined in terms of either the overall deficit or the primary deficit) without taking account of the specific circumstances of the country. In this chapter, we examine the available evidence on fiscal targets in IMF-supported programs and the extent to which they vary across countries. First, we outline some of the considerations that should ideally be taken into account in setting fiscal targets. Next, we use cross-country analysis to examine a large number of past IMF-supported programs and assess patterns and statistical regularities in the way fiscal targets actually are set.

Relevant Considerations in Determining the Fiscal Stance

It is not easy to determine what should be the extent of fiscal adjustment in a particular country situation. There are several factors that are potentially relevant in determining the nature of fiscal adjustment and some of them could point in different directions.

(1) The scale of fiscal adjustment needed can be viewed as a function of the scale of adjustment required in the current account. Any given reduction in the current account deficit requires a reduction in domestic absorption, and a lower fiscal deficit is a way of reducing excess absorption in the public sector. This is the traditional reason for advocating contractionary fiscal policies in a situation where a reduction in the balance of payments deficit is needed. The need for fiscal adjustment is particularly evident when the current account deficit is bloated by fiscal expansion to begin with, since the alternative would be to force the private sector to bear the burden of adjustment which may fall disproportionately on investment.

(2) The fiscal deficit may need to be reduced as part of an adjustment program where concerns about the sustainability of public debt are expected to have negative effects upon capital inflows. This consideration is particularly important in emerging market economies that have achieved a degree of integration with international financial markets and that rely on financial flows that are highly sensitive to market perceptions regarding debt sustainability. The need for fiscal adjustment in such cases is driven not so much because of the necessity to reduce aggregate demand but rather by the need to persuade markets about debt sustainability to ensure a sufficient flow of resources to finance the existing current account deficit. The scale of the adjustment needed depends upon the stock of public debt in relation to GDP; the potential rate of growth of the economy; and also psychological factors, which determine market perceptions of growth potential and sustainability.

(3) It is also possible to envisage a reduction in the fiscal deficit driven mainly by allocative concerns: that is the desire to reduce the degree to which the fiscal deficit crowds out the private sector. The preexisting size of the fiscal deficit is clearly a relevant factor in determining the direction and scale of adjustment. The volume of government activity in relation to GDP is also important since high levels of government spending clearly signal that some crowding out has taken place.

The importance of these factors would obviously vary from country to country and one would, therefore, expect that the fiscal deficit target built into program projections reflects country-specific judgments on the importance of each of these elements. In the rest of this chapter, we use cross-section data to throw light on these issues, followed by an in-depth study of 13 programs in Chapter 3.

Fiscal adjustment envisaged in programs

Table 2.1 presents the average initial conditions for different types of programs in period T–1, the year immediately preceding the first program year. It

Table 2.1. Initial Conditions as Seen by Staff at the Start of the Program[1]

(In percent of GDP)

	All Arrangements	ESAF/PRGF[2]	SBA/EFF	
			Transition countries	Nontransition countries
External current account balance	–5.2	–7.0	–4.1	–3.9
Overall government balance	–4.1	–4.5	–4.2	–3.6
Government primary balance	–0.6	–1.0	–1.4	0.3
Government revenues and grants	24.4	21.4	33.4	22.9
Government expenditures	28.5	25.9	37.6	26.5
Growth trend (percent)[3]	1.6	1.8	–2.0	3.3
Annual inflation (percent)	92.3	35.7	355.3	14.1
Count (number of programs)	169	71	34	64

Source: Calculated from MONA database.

[1]Initial conditions are measured by outturns for the year immediately preceding the first program year (i.e., year *T*–1), as reported in the MONA database.

[2]Includes all arrangements under concessional facilities—SAF, ESAF, PRGF—including those that were combined with SBAs and EFF arrangements.

[3]For each arrangement, the average rate of real GDP growth in the 10 years preceding the initital program year.

Table 2.2. Program Projections: Changes in Balances from (*T*–1) to (*T*+1)

(In percent of GDP)[1]

	All Arrangements	ESAF/PRGF	SBA/EFF	
			Transition countries	Nontransition countries
Current account	–0.3	0.1	–2.0	–0.2
Government balance	1.7	1.6	1.1	2.0
Primary balance	1.4	1.0	0.4	2.0
Government revenue	0.4	0.4	–1.7	1.3
Government spending	–1.2	–1.2	–2.8	–0.7
Count[2]	133	60	21	52

Source: MONA database.

[1]Figures subject to rounding errors. Magnitudes over 0.5 percent of GDP are statistically significant (different from zero) except current account and government balances in transition countries.

[2]The sample size of 169 arrangements reported in Table 2.1 fell to 133 because data for the second year of the program were unavailable. Most of the reduction in sample size from 169 to 133 was accounted for by arrangements approved in 2001 for which no actuals were available for the second program year.

provides a background against which to compare the fiscal adjustment envisaged in programs.

Table 2.2 provides the average magnitude of envisaged change in fiscal and external balances in the original program design, for the sample as a whole and for the individual subgroups. Since a significant proportion of arrangements were approved well into the initial program year—nearly 40 percent were approved in the second half of the year—we examine changes in key variables over a two-year horizon from the year immediately preceding the initial program year (year *T*–1) to the end of the second program year (year *T*+1).

The following features of the projected changes presented in Table 2.2 are of interest:

- IMF-supported programs have, on average, envisaged only very small changes in external balances between *T*–1 and *T*+1. The only large change envisaged is in the case of transition countries where the current account deficit was projected to widen by 2 percentage points of GDP on average.
- The average targeted improvement in the fiscal balance for the sample as a whole is relatively modest, about 1.7 percentage points of GDP over two years. The programmed improvement in primary balances was even lower—1.4 percent of GDP—implying a slight reduction in envisaged interest payments as a share of GDP.
- The composition of the targeted fiscal adjustment shows, on average, a much larger reliance upon spending reductions than on revenue increases. This is true of the ESAF/PRGF group

Table 2.3. The Direction of Change in Selected Macroeconomic Targets in IMF-Supported Programs as a Share of GDP

(Initial level of balances are shown in italics, as percent of GDP)[1]

Panel A. Distribution of Programs According to the Direction of Envisaged Changes in Current Account and Government Balances[2]

		Current Account Balance: Deterioration	Current Account Balance: Improvement	
Government Balance	Deterioration	15% *Current account: –3.7* *Government balance: –1.1*	15% *Current account: –8.2* *Government balance: –1.1*	30%
	Improvement	27% *Current account: –1.9* *Government balance: –4.4*	43% *Current account: –6.6* *Government balance: –5.7*	70%
		42%	58%	100%

Panel B. Distribution of Programs According to the Direction of Envisaged Changes in Government Revenue and Spending[2]

		Expenditure: Decrease	Expenditure: Increase	
Revenue	Decrease	30% *Revenue: 28.6* *Spending: 32.0*	14% *Revenue: 26.2* *Spending: 26.2*	44%
	Increase	30% *Revenue: 24.3* *Spending: 30.0*	26% *Revenue: 20.0* *Spending: 24.5*	56%
		60%	40%	100%

Source: MONA database.
[1]Changes are between periods *T*–1 and *T*+1.
[2]Initial levels refer to period *T*–1.

and also the transition group. However, in the case of SBA/EFFs in nontransition countries, two-thirds of the fiscal adjustment was envisaged to come from the revenue side.

- In transition countries the reduction envisaged in the fiscal deficit was milder than average, but in these cases there was a significant reduction in both revenue and spending ratios, reflecting the fact that reduction in the size of the state was also an important objective.[1]

[1]This was itself a response to high levels of both revenue and spending; see Table 2.1.

The averages described above conceal considerable within-group variation that is potentially important for our analysis. The conventional image of IMF-supported programs is that they attempt to improve both the current account deficit and the fiscal deficit, implying a degree of economic austerity on both counts. However, Table 2.3, which shows the distribution of programs according to the direction of envisaged changes in the fiscal balances (as a share of GDP) from the preprogram year *T*–1 to year *T*+1, suggests a more complex reality.

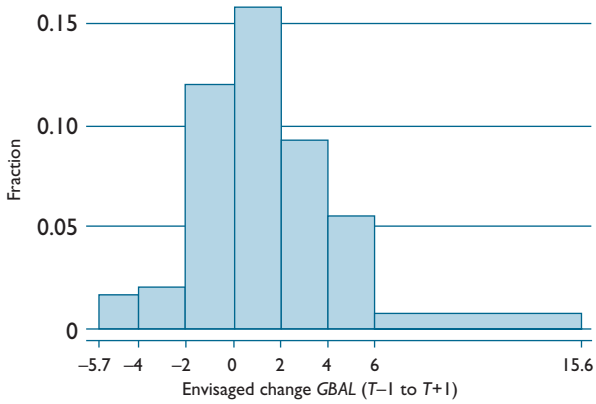
- The current account balance was projected to improve (the current account deficit to narrow) in about 60 percent of programs, but in the re-

maining 40 percent of cases, the current account deficit was projected to widen. The data also show that the direction of change is highly correlated with the initial imbalance; reductions in the current account are associated with large initial deficits, and vice versa.

- Overall fiscal balances were envisaged to improve (fiscal deficits to narrow) in 70 percent of cases. In the other 30 percent of cases IMF-supported programs envisaged a widening of the fiscal deficit. In terms of primary balances, the percentage envisaging a widening was even larger, at 35 percent. The conventional view that IMF-supported programs invariably involve fiscal austerity therefore needs some modification. Again, the envisaged direction of change reflects the size of the initial imbalance; the average initial fiscal deficit in the case of programs where the deficit is expected to be reduced is four times larger (as a percent of GDP) than in situations where that deficit is envisaged to widen.
- The composition of the fiscal adjustment in terms of the relative role of revenue increases and spending reductions also varies considerably across countries. Contrary to the perception that IMF-supported programs typically involve a contraction in expenditure as a percentage of GDP, the data show that in 40 percent of cases, total public spending as a percentage of GDP was actually targeted to increase (primary expenditures were projected to increase in 36 percent of the cases). On the revenue side, while about half of the programs envisaged an increase in revenue as a percent of GDP, the other half envisaged a decline.
- The direction of change in expenditures and revenues responds to the initial level of revenue and spending. Programs typically project reductions in spending as a percentage of GDP when initial spending levels are relatively high, and vice versa. Similarly, increases in revenue as a percentage of GDP are envisaged when initial revenue levels are low, and vice versa.[2]

The extent of variation in the targeted fiscal adjustment can be seen from Figure 2.1, which shows the distribution of programs according to the magnitude of the adjustment between *T*–1 and *T*+1. In about two-thirds of programs, fiscal balances are targeted to deteriorate or to improve by less than 2 percent of GDP over a two-year period. The targeted adjustment exceeds 4 percent of GDP in 20 percent of the programs.

Figure 2.1. Distribution of Programs According to the Magnitude of the Envisaged Change in the Overall Fiscal Balance (*T*–1 to *T*+1)
(In percent of GDP)



Source: MONA database.

The phasing of the targeted fiscal adjustment

The phasing of the envisaged fiscal adjustment during the first two years of the program is also of interest. Table 2.4 shows envisaged changes in fiscal balances, and its components, between the preprogram period *T*–1 and each of the two subsequent years *T* and *T*+1.

- On average, programs target a fiscal adjustment of about 1 percentage point of GDP across all types of arrangements during the first year of the program. This figure seems quite stable across different subgroups. Except for the transition economies, this represents between one-half and two-thirds of the total fiscal adjustment over a two-year period.
- In the transition countries all the fiscal adjustment took place in the first year of the program. However, this was also the result of having a lower envisaged fiscal adjustment over a two-year period.
- The different role that expenditure and revenue adjustments are expected to have as the program is implemented is particularly marked in the case of SBA/EFF arrangements in nontransition countries. In fact, spending was not envisaged to decline but rather to increase in the first year,

[2]The fact that program targets respond to initial levels of revenues and expenditures has been documented by IMF staff, including in Abed and others (1998) and Schadler and others (1995a and 1995b).

Table 2.4. The Pace of the Envisaged Fiscal Adjustment
(In percent of GDP)

	Changes in Fiscal Balances from *T*–1 to:	
	T	*T*+1
All arrangements		
Change in fiscal balance	1.1	1.7
Change in revenue	0.8	0.4
Change in expenditure	–0.3	–1.2
ESAF/PRGF arrangements		
Change in fiscal balance	1.1	1.6
Change in revenue	0.6	0.4
Change in expenditure	–0.5	–1.2
SBAs and EFFs (nontransition countries)		
Change in fiscal balance	1.0	2.0
Change in revenue	1.6	1.3
Change in expenditure	0.6	–0.7
SBAs and EFFs (transition countries)		
Change in fiscal balance	1.0	1.1
Change in revenue	–1.2	–1.7
Change in expenditure	–2.2	–2.8

Source: MONA database.

being offset by robust revenue performance to bring about a reduction in the fiscal deficit. The expected relative contributions of revenue and spending are sharply reversed during the second year of the program when spending reductions become more important.

To summarize, the broad conclusion emerging from our examination of 133 arrangements is that IMF-supported programs show a wide variation in the extent of fiscal adjustment, with 30 percent of the arrangements actually projecting a widening of fiscal deficits. In the nontransition cases, programs also incorporate a measure of gradualism in fiscal targets with one-half to two-thirds of the total fiscal adjustment in a two-year horizon being projected to take place during the first year. Furthermore, programs rely relatively less on expenditure adjustment than revenue adjustments (both as a share of GDP) during the first year of the program.

Factors Determining the Scale and Nature of Fiscal Adjustment

The considerable variation in the size of the fiscal adjustment across programs suggests that the adjustment built into an IMF-supported program is not based on some simple mechanical rule of a one-size-fits-all variety. However, the fact that there is variation across countries does not establish that the variation reflects careful calibration of the scale of the fiscal adjustment to the circumstances of each country.

Cross-country regression analysis provides some indication of possible links between the projected fiscal adjustment built into the programs and some of the macroeconomic variables which could be viewed as determinants. Using the fiscal adjustment envisaged over a two-year period, that is, from *T*–1 to *T*+1 as the dependent variable, we have experimented with a number of potential explanatory variables, including the initial size of the fiscal deficit at *T*–1, the size of the current account adjustment envisaged over the period, the initial size of the current account balance, the projected growth rate, the initial level of government spending as a percentage of GDP, and the envisaged change in reserves and inflation.

A complete presentation of the regression results can be found in Appendix 1, Table A1.1. The following estimated equation gave the best fit and all the variables included, except for envisaged growth rate at *T*+1, have coefficients that are statistically significant at the conventional levels.[3] All macroeconomic balances are expressed as a percentage of GDP.

[3] $\Delta GBAL$ = envisaged fiscal adjustment from *T*–1 to *T*+1. $GBAL_{T-1}$ = government balance at *T*–1. CAB_{T-1} = current account balance at *T*–1. ΔCAB = projected change in current account deficit from *T*–1 to *T*+1. EXP_{T-1} = government spending at *T*–1. *TR* = dummy for transition countries. $Growth_{T+1}$ = envisaged growth rate at *T*+1. The equation was estimated by OLS with heteroskedasticity-consistent standard errors.

$$\Delta GBAL = -1.22 - 0.46 GBAL_{T-1} + 0.11 CAB_{T-1}$$
$$(-1.51)\ (-8.52)\qquad (2.05)$$
$$+ 0.18 \Delta CAB + 0.07 EXP_{T-1} - 2.1 TR$$
$$(4.28)\qquad (2.53)\qquad (-3.26)$$
$$- 0.25 TR^{*} GBAL_{T-1} + 0.05 Growth_{T+1}$$
$$(-1.93)\qquad (0.45)$$

R-squared = 0.61
N = 143

The regression explains 61 percent of the variation in the envisaged fiscal adjustment and the results are quite similar when using the primary fiscal balances as the dependent variable. The main conclusions are the following:

- The most robust finding was a negative association between the size of the programmed fiscal adjustment and the initial (preprogram) level of the fiscal balance. This can be called a tendency toward "fiscal correction": the higher the level of the initial fiscal deficit (or the smaller the fiscal surplus) the stronger is the targeted improvement in the fiscal balance.
- There is a significant positive association between the targeted fiscal adjustment and the envisaged improvement in the current account. In other words, projected improvements in the current account deficit are associated with projected improvements in the fiscal deficit. One can call this a measure of "burden sharing" by the public sector, since the envisaged adjustment in the current account deficit must be shared between the public and private sectors.
- The estimated average "fiscal correction" coefficient for all nontransition arrangements was about –0.5 between (T–1) and (T+1). This implies a reduction of initial fiscal deficits by 50 percent. In the case of transition countries, the fiscal correction coefficient was over –0.70.
- The "burden-sharing coefficients" for all arrangements was about 0.2 for T+1. This means, for example, that projected reductions in the current account deficit of 1 percent of GDP (over the two-year period) are associated with targeted reductions in the fiscal deficit equal to 0.2 percent of GDP over the same period. In other words, only one-fifth of the targeted external adjustment is borne by the public sector. Conversely, if the program envisages a widening in the current account deficit by 1 percent of GDP, it permits a relaxation of the fiscal deficit target by 0.2 percent of GDP.[4]
- The proposed fiscal adjustment is significantly positively associated with the level of expenditures in relation to GDP in the precrisis year. In other words, where expenditure ratios are higher, the fiscal adjustment proposed is larger, a relationship which can be justified because it can be argued that high levels of expenditure also have a crowding-out effect independent of the level of the fiscal deficit.
- Growth assumptions in T+1 were not found to have a significant effect on the targeted fiscal adjustment.
- We found no major difference in these findings across different types of arrangements except for transition countries where, as noted above, the fiscal correction coefficient was larger.

An important limitation of the regression analysis is our inability to test the importance of preprogram public debt ratios as determinants of fiscal adjustment, owing to the absence of comparable data on public debt ratios in the MONA database. This is an important lacuna in the database, which should be corrected for the future.

[4]This symmetry in interpreting the coefficient was tested independently by introducing a dummy variable distinguishing between situations when the current account adjustment was positive or negative.