THE CONSISTENCY OF IMF PROGRAMS

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IMF Program Design and Growth: What is the Link?

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International Monetary Fund
Washington D.C.

April 2003

I. INTRODUCTION

In the last decade alone, the International Monetary Fund (IMF) lent over US$200 billion to more than 60 countries as part of its various economic adjustment programs. Given the enormous financial and political importance of IMF adjustment programs, the impact of these programs has been the subject of a large academic and popular debate (see Haque and Khan (1998)) for a survey). However, because both a country's decision to seek an IMF program, and the IMF's decision to agree to a program are correlated with the state of the economy, much of the empirical literature has faced serious methodological difficulties. The results that do exist are either inherently sensitive to the counterfactual specifications (Presowksi and Vreeland (1999)) or depend on instruments that are not entirely convincing (Barro and Lee (2002)).

Surprisingly, despite the large research effort devoted to quantifying the impact of IMF programs, there has been much less analysis of whether the IMF programs achieve the macroeconomic objectives specified in these programs.[2] That is, despite nearly forty years of IMF lending, little is known about the relationship between the policy targets that are prescribed under such arrangements and the macroeconomic outcomes they are designed to produce[3].

The aim of this paper, then, is to explore whether the policy targets meet the goals of Fund program and the implications for meeting or missing these targets for achieving the goals of the program. By looking at these questions, we hope to shed light on how program design can be improved. This approach contrasts with most previous work in this area in that we do not evaluate the program for the outcomes they deliver against some subjective criteria (for example, was growth high or low? Did inflation fall or not?) but against the benchmark

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[2] Within the IMF, periodic reviews of Fund programs are conducted. These reviews typically cover selected program countries (those in the most recent 3-4 years) and attempt at documenting how and why outcomes deviated from policy targets.

[3] See Ghosh et. al (2002), Helbling, Mody, Sahay (2003).

set in these programs (for example, did the program meet the growth target? Did it under-perform on the inflation target?).

In addition, we ask whether under- or over-performance in the intermediate policy targets mattered for achieving the goals of the program. The latter has particular significance because it can be expected to shed light on whether Fund programs target the right policies for the objectives they are intended to achieve. Note also that in answering these questions, there is no need to get into political economy questions of whether some countries got more or less loans because they had close links with a particular economically powerful country— this is because Fund programs when they are designed (or modified in light of new information) should take these constraints into account in setting policies and objectives which should be mutually consistent. In short, our intention in this paper is to explore the consistency amongst program objectives and targets.

Before contemplating an answer to the question of whether IMF programs are well-designed, it is useful to make clear in one's own mind what the objectives of IMF programs are and how programs are designed. On the objectives of IMF programs, the IMF Articles of Agreement (Article I, "Purposes") seems to be a reasonable starting point. Of the six objectives listed, there are two that come closest to specifying what the IMF programs objectives are for its member countries. To quote, the purpose of Fund programs is " *to give confidence to members by making general resources of the Fund temporarily available to them under adequate safeguards, thus providing them with opportunity to correct maladjustments in their balance of payments...*" and *"..to shorten the duration and lessen the degree of disequilibrium in the international balance of payments."* If one were to read this literally, the aim of Fund programs would appear to be a pretty narrow one—correct balance of payments disequilibria. And, if this were the only goal by which the Fund were to be judged, the innumerable papers that have been written on Fund program evaluation unanimously point to the Fund's resounding success in this area. End of story. So what is all the fuss about?

Fixing the balance of payments disequilibria at the expense of all other economic goals, seems somewhat silly. For example, one can imagine a situation where extremely tight macroeconomic policies combined with large exchange rate devaluations would turn the current account around pretty quickly but would drastically reduce welfare and growth by compressing consumption and investment. Moreover, narrowly focusing on the balance of payments in Fund programs would seem inconsistent with the Fund's broader mandate "…*to facilitate the expansion and balanced growth of international trade, and to contribute thereby to the promotion and maintenance of high levels of employment and real income and to the development of the productive resources of all members as primary objectives of economic policy*" and "*each member shall: (i) endeavor to ...orderly economic growth with reasonable price stability...*" Indeed, a series of political decisions made by the Fund has affirmed and reaffirmed this broader role from time to time. The latest facility designed for the low income countries, Poverty Reduction and Growth Facility, explicitly mentions growth as an objective.

The theoretical relationship between policy targets and macroeconomic aggregates (such as growth) in IMF programs is derived from the monetary approach to the balance of payments. In turn, this approach produces a construct known as financial programming, which uses a series of macroeconomic accounting identities to link economic growth, inflation, money supply, the current account, and budget deficit. Therefore, the intermediate policy targets derived within this framework, such as domestic credit to the private sector, and reserve accumulation, are designed to be consistent with the chosen set of macroeconomic targets—such as growth, current account adjustment, and inflation—that are meant to help resolve the country's economic difficulties; and, as mentioned above, loan disbursements are contingent on whether the country meets these intermediate policy targets.[4]

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[4] Additional performance criteria are often set on structural reforms. These are not derived directly from the financial programming framework but are meant to be consistent with, and support, the policy targets.

As a result, the financial programming methodology provides a precise and direct means of evaluating the effectiveness of IMF adjustment programs. Specifically, for IMF adjustment programs to be thought of as effective, countries that meet the intermediate policy targets should conditionally expect to achieve the macroeconomic outcomes that underlie these targets. Conversely, IMF adjustment programs would be considered ineffective if macroeconomic outcomes systematically differed from the outcomes envisaged under the program, despite the fact that the policy targets were achieved. More generally, since a financial program is merely a set of consistent economic identities, its usefulness depends on the extent to which the policy maker understands the economy's behavioral model. Hence, this conception of IMF program effectiveness is epistemic in nature, measuring the IMF's knowledge of the underlying economy.

Questions regarding the financial programming approach to design IMF programs have often been raised. Why does a typical Fund program appear to be only a set of macroeconomic identities? Why is there no standard comprehensive behavioral model that underlies these programs? In principle, these are valid questions. In practice, we are skeptical that such a large behavioral model with inter-sectoral linkages can be constructed to apply to all program countries. This problem is particularly acute in low income countries where either the data simply do not exist (or are imperfectly measured) or economic and structural relationships are constantly changing as the economies develop. This precludes the estimation of parameters with some degree of confidence. However, it is worth pointing out that Fund programs are not devoid of behavioral relationships. Depending on data availability, country desk economists do estimate some relationships—the typical ones are money demand functions, export and import functions, and investment and saving functions. Exercises on domestic and external debt dynamics are also an internal part of a desk economist's job. The result of these estimations does feed into the financial programming exercise. But in the end, some informed judgment calls need to be made in consultation with the country authorities to complete the process of setting policy targets and projections on outcomes. It is also true that the growth generating process is one of the least understood problems in developing countries, not only inside the Fund, but also among academics, policy makers, and the general public at large. Given the importance of growth for countries

and the general lack of understanding of what drives growth (in the short as well as the long run), we felt it was worth attempting to begin the process of understanding the relationship between Fund program design and growth.

Our regression proceeds in two stages. We first ask if our data indicate that there is a trade-off between three macroeconomic objectives—GDP growth, current account balance, and inflation rate. We then explore whether the deviations in the growth objective is correlated with deviations on intermediate policy targets. In other words, is meeting the growth objective contingent on meeting the policy targets? On the first count we find weak evidence for tradeoffs between objectives but the results are sensitive to the specifications used. Specifically, we find some indication that there may be a tradeoff between meeting the current account and growth objectives. In contrast, there does not appear to be a trade-off or a relationship between the growth and inflation objectives—the only exception is in those cases where inflation is very high. In the latter case, bringing down inflation from very high levels (more than 50 percent) appears to help revive growth.

With respect to the intermediate policy targets we find, interestingly, that there is little systematic relationship between these targets and program objectives. Ex-ante we might have expected that the intermediate policy targets are means to achieve the program objectives—indeed, programs are designed with some explicit or implicit relationship between the targets and the outcomes.

This paper is organized as follows. The next section discusses the financial programming methodology. Section 3 describes the data and systematic patterns observed in the data, while Section 4 presents the regression results. Section 5 concludes.

II. THE IMF MODEL AND EMPIRICAL FRAMEWORK

Building on the monetary approach to the balance of payments, financial programming makes use of simple macroeconomic identities in order to link intermediate policy targets with macroeconomic aggregates such as economic growth. To illustrate this approach, consider the classical money equation:

$$MV = PY \tag{0.1}$$

where M is money supply, V is the velocity, P is the aggregate price level in the economy, and Y is aggregate output. For a given growth, inflation and velocity projection, the resulting log transformed change in the demand for money satisfies the banking system balance sheet:

$$\Delta m = \Delta NDA + \Delta NFA \tag{0.2}$$

where Δm is change in money supply, NDA is net domestic assets, and NFA is net foreign assets. But simple accounting requires that the change in net domestic assets equals the change in net domestic credit plus the change in other items net, a term that captures miscellaneous movements in these aggregates:

$$\Delta NDA = \Delta NDC + \Delta OIN \tag{0.3}$$

where NDC is net domestic credit and OIN is "other items, net." In turn, the change in domestic credit can be decomposed into the shares that go to the private and public sectors:

$$\Delta NDC = \Delta CPS + \Delta NCG \tag{0.4}$$

where CPS is credit to the private sector and NCG is net credit to the government. The budget deficit/surplus *(BD)* must be financed with some combination of domestic credit (ΔNCG), non bank borrowing from the private sector $(\Delta NBBp)$ and foreign sources or external financing (ΔEF):

$$BD = \Delta NCG + \Delta NBBp + \Delta EF \tag{0.5}$$

Therefore, given a balance of payment target, ΔNFA^*, and a decision on credit to the private sector, ΔCPS^*, the government's budget deficit is largely determined.

The financial programming framework is an amalgam of accounting identities that organize economic data. And while the identities must hold in principle, the framework is useful in a policy making setting to the extent that the policy maker understands the underlying data generating process—the behavioral model governing economic activity. For example, to select a reserve accumulation target, a policy maker must be able to predict correctly the growth and inflation targets that would be consistent with the government's ultimate fiscal stance, and the balance of payment position. This entails knowing how public spending affects current growth and inflation, and understanding how expectations about the fiscal stance feed into price expectations and exchange rate movements. Therefore, this approach to testing whether IMF programs work—whether meeting intermediate policy targets systematically produce the growth outcomes upon which these targets are derived—is epistemological test: do IMF programs "know" the economy's underlying behavioral model?

To illustrate the empirical methodology, let X_{it} denote the set of intermediate program targets in period t for country i; let $\widehat{X}_{it}$ denotes the actual outcome of these variables. Similarly, let Y_{it} represent the set of macroeconomic aggregates that underpin X_{it}; $\widehat{Y}_{it}$ is the actual outcome of this macroeconomic aggregate. Moreover, to allow for the presence of shocks, let Z_{it} denote the set of "exogenous" control variables: terms of trade shocks, commodity prices, and political events. Lastly, the prefix D denotes the difference between the program target and the actual realization; for example: $DY_{it} = Y_{it} - \widehat{Y}_{it}$. Using the financial programming framework (equations (1.1) through (1.5), the expected difference of the macroeconomic aggregate from its programmed value conditional on the difference between policy target and policy outcome can be written as:

$$E\left(Dy_{it}, Dp_{it} \mid DX_{it}, Z\right) = D\Delta NFA_{it} + D\Delta CPS_{it} + D\Delta NCG_{it} + D\Delta OIN_{it} + Z\alpha \qquad (0.6)$$

III. DATA AND DESCRIPTIVE STATISTICS

The data requirements for estimating equation (0.6) are substantial. Information is needed on program intermediate policy targets; the macroeconomic targets upon which theses targets are built; the actual value of the intermediate policy variable, as well as the actual realization of the macroeconomic aggregate. Unfortunately, while realized values are a matter of public record and easily available, program data: policy targets as well as their macroeconomic counterparts have only recently been compiled in the IMF, and every attempt has been made to ensure consistency in the definition of variables used in this study.

In the sampling methodology a unit of observation is defined as a program country year: a calendar year in which disbursements were made to a particular country. Before disbursements are made a document known as a Staff Report is issued and discussed at a meeting of the Executive Board, the body that decides IMF policy. As their name suggests, staff reports contain the IMF staff's assessment of a country's economic situation and policies. These documents include the program's intermediate policy targets and their macroeconomic counterparts that are meant to correct the particular problem(s) that prompted the country to seek IMF assistance.

From 1993 through 2002, a total of 91 countries were involved in 417 different IMF lending arrangements. In the sampling exercise, data from 29 countries or about 30 percent of the total countries have been collected thus far (Table 1). Table 2 shows that the average country in this group had moderate growth, high inflation, and substantial external imbalance. These three macroeconomic variables are often considered to be objectives of IMF programs, and we will treat them as such in the regressions below. Table 2 also shows that, against these realized values, the average projections made for these variables 1-2 years in advance were considerably optimistic, especially for the growth and the inflation rate.

While the inflation data may be affected by outliers the difference between the programmed and actual growth is striking. This raises the question whether there is a systematic bias in the growth projections—either because the growth generating process is

not well understood or because it is deliberate. The latter is a possibility if growth forecasts are viewed as targets to be achieved. It can also happen in the context of medium term debt dynamics exercises to ensure that debt is sustainable in the medium term. Per the IMF's Articles of Agreement, a program cannot be approved if the country is on an explosive debt path.

Figures 1–5 present the differences between programmed and actual values for macroeconomic variables in IMF programs. Fund programs also missed the external sector targets (Figures 1 and 2), but to lesser extent. On average, export and import projections were slightly overoptimistic. Projections on monetary targets and inflation (Figure 3) shows that, while the broad money target is close to being met, on average, actual inflation exceed programmed inflation by a significant margin. This could come about if money demand was not estimated correctly and/or if the programs were arrested mid way.

Figure 4 focuses on the fiscal targets and performance—the overall balance, total revenues, total expenditures, and primary balance. The forecasts errors are systematically in the direction of underestimation on the revenue side and overestimation on the expenditure side. Thus, fiscal policy was always looser than programmed. Putting together the implications of Figures 1-4, it would appear that inflation performance was not affected by the performance on the monetary front. However, growth was indeed lower when fiscal policy was loose.

Finally, Figure 5 illustrates for one country—Turkey—the implication of overestimating growth and underestimating fiscal effort. External debt is systematically underestimated. This had serious consequences for the verdict on whether the debt was deemed sustainable or not.

IV. REGRESSION ANALYSIS

A. Objectives

Our regression results proceed in two stages. We first examine whether our data indicate a trade-off among program objectives. We consider the three most important macroeconomic objectives of IMF programs: GDP growth, current account balance, and inflation rate. Specifically, we ask whether meeting the growth objective (defined as actual growth meeting programmed growth) negatively correlated with meeting the current account or the inflation objective. We define indicator variables equal to one if the realized value of the variable exceeds the programmed value. Moreover, because the relationship between the inflation and growth targets might depend on the existing inflation level, we construct an indicator variable that takes on the value of one when annual inflation is equal to or exceeds 50 percent in a year (HINF). Fischer, Sahay, and Vegh (1996), found that inflation rates above 50 percent prevented growth from reviving in more than 20 IMF-supported stabilization programs.

Since there are various types of IMF programs, we also explore whether there are systematic differences across these different types. We divide them into two groups: those that are short-term in nature and are available at a higher interest rate (Stand-By Arrangements—SBAs), and those that are longer-term and less expensive (Extended Fund Facility and Poverty Reduction and Growth Facility). Accordingly, we include an indicator variable for the type of IMF lending program, taking on the value one when the program is a Stand-By arrangement (SBA).

Table 3 reports the results from a linear probability model. Using both fixed effects and pooled regressions, there is little evidence of a trade-off among the various objectives. In the first and fourth columns for example, the growth objective is regressed on the current account objective using pooled and fixed effects estimation. In both cases, meeting the current account objective does not significantly affect the probability of meeting the program's growth objective. Similar results are obtained for the inflation objective considered separately (columns two and five), and for both the current account and inflation objectives (columns three and six). However, in all specifications there is a significant

evidence that when compared to other types of programs, stand by arrangements (SBAs) are less likely to meet their growth objectives. Thus, while there is no apparent tradeoff among common program objectives, further work is needed to understand better why particular types of programs appear to systematically fall short of their growth objectives.

The use of binary variables, as in Table 3 above, may be suppressing useful variation. Even if program objectives are not met, is it the case that moving closer towards meeting one objective is associated with moving further from another objective? Our new data set allows us to explore this question. In Table 4, we report results from regressing the deviation between the programmed and actual growth on the deviation between programmed and actual values of the other program objectives.[5] As before, we first explore the relationship of the growth objective with the current account objective, then with the inflation objective, and then with both the current account and inflation objectives. The second and third regressions are suggestive of a tradeoff between the current account and growth objectives. A closing of the current account gap is associated with a widening of the growth gap. When inflation is included the current account variable loses significance. While this suggests that the finding with the current account variable may be fragile it could also indicate collinearity between the current account and inflation. A country with lose macroeconomic policies is likely running high inflation and high fiscal deficits, which in turn could lead to external current account deficits.

While the difference between projected and actual inflation does not appear to be significantly related to the growth gap (columns 4-9), the inflation interaction term enters with a negative sign. In economies where inflation exceeds 50 percent, a large over performance on the inflation target--inflation is much lower than programmed— is associated with a narrowing of the difference between projected and actual growth. That is, stabilizations are good for both inflation and growth. At less severe levels of inflation, we do not find any evidence that the inflation and growth objectives co-move.

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[5] The variables used in the regressions are defined as programmed values minus realized values.

B.   Policy Targets

The analysis now examines the relationship between the various intermediate policy targets and the overall program objectives of an IMF program: growth, inflation and the current account balance. Intermediate policy targets are those economic aggregates that are considered to be reasonably under the policy maker's direct control. Since this definition invites some ambiguity, the empirical strategy considers two types of intermediate targets. One approach narrowly focuses on the quantitative performance criteria (PCs) set in IMF programs; these criteria are those economic variables that contractually must be met in order for disbursement. The maximum level of net domestic assets (NDA), and a minimum level of net foreign assets (NFA) are the two most frequently used performance criteria. Since these variables are meant to achieve a particular money growth path and fiscal stance, to be comprehensive the analysis also includes a broader set of possible policy targets: the broad money stock (FMB) and the budget surplus (BSP).

Table 6 analyzes the relationship between performance on the various types of intermediate policy targets and the performance on growth. Growth performance is measured as the difference between programmed and actual; performance on monetary aggregates is defined as the difference between programmed and actual growth rates. Each regression also includes year dummies and the growth in the terms of trade. The latter proxies for terms of trade shocks—an omitted variable that can both drive intermediate policy and growth performance. The objectives of programs vary depending on country circumstance; a dummy variable taking on the value of one when the program is a stand by arrangement and zero otherwise is included to help capture some of this program variation.

A key theme in Table 6 is the absence of any robust relationship between the performance on the intermediate targets and growth performance. Column 1 first considers performance on NDA. The point estimate is negative, suggesting that large differences between programmed and actual NDA growth are associated with smaller differences between programmed and actual real GDP growth. However, the NDA coefficient is imprecisely measured and not different from zero (p-value 0.23). The full specification includes performance on NFA. The coefficient is both small and again not different from

zero. In contrast, positive terms of trade developments suggests a narrowing of the growth gap: a percentage point increase in the terms of trade growth rate is associated with a -5.9 percentage point narrowing of the growth gap. Taken together, these findings suggest that terms of trade developments are a more robust determinant of performance on IMF programs than the intermediate policy targets upon which the programs are built.

Table 7 examines the relationship between broader macro targets such as broad money, the fiscal balance and the growth objective. There is little evidence of a link between the broad money and growth targets. However, the coefficient on the fiscal target is large, positive and significant. A one percentage point narrowing of the fiscal gap is associated with a 0.57 percentage point narrowing of the growth gap. The robustness of this association suggests that fiscal performance may be a key determinant of the growth performance. That said, because the budget deficit is measured as a percent of GDP, omitted shocks that affect GDP may also help explain the positive relationship.

Table 3 repeats the exercise looking at the percent errors. While NDA continues to be insignificant, the percent difference between programmed and actual growth in NFA enters with a negative and significant coefficient, and the R^2 in the regression is 0.85—suggests that performance on the NDA and NFA targets explain a significant fraction of the variation in performance on the growth objectives. A one percentage point widening of the NFA gap is associated with a -0.03 decrease in the growth gap. The current account balance equals the change in NFA plus net capital inflows. To achieve external balance and reduce a current account deficit, the NFA target is usually achieved by a combination of expenditures switching policies and policies that reduce domestic demand. Thus the negative link between performance on the NFA target and growth performance is suggestive of a possible inconsistency in IMF programming. Policies that help an economy achieve its NFA target push the economy away from its growth objective—the objective that the NFA target was designed to be consistent with. A similar exercise for the broader targets—FMB and BSP-- yields non significant regressions.

This methodology was repeated for the inflation and current account objectives (Tables not shown). Throughout, the regressions were consistently non significant. The absence of a significant relationship between performance on monetary aggregates and performance on the inflation objective is surprising given the well known relationship between movements in these aggregates and inflation. Equally surprising is the failure to find any link between current account performance and performance on either NFA or the fiscal balance.

To summarize, based on the sample of 29 countries during 1993-2002, we do not find strong evidence of tradeoffs between objectives. Two tentative findings emerge but both are sensitive to the specification used. First, there is some indication that the growth and current account objectives may move in opposite directions. However, the relationship is difficult to disentangle from the effects of inflation. Second, there is little relationship between the growth and inflation objectives, except for countries stabilizing from very high rates of inflation. At the same time, our data do not indicate a significant relationship between intermediate policy targets and growth objectives. The best we could find is the negative link between performance on NFA and growth. While this suggests some inherent inconsistency in the design of IMF programs, this relationship is quite sensitive to measurement method. We also intend to expand the data set gradually to cover all Fund programs to see whether our results in this paper carry over in the larger data set.

Table 1. Countries in Database

COUNTRIES IN MONA DATABASE	IMF PROGRAM	COUNTRIES IN THE OUR SAMPLE
ALBANIA	PRGF	Albania
ALGERIA	EFF	Argentina
ARGENTINA	SBA	Armenia
ARMENIA	PRGF	Brazil
AZERBAIJAN	PRGF	Bulgaria
BELARUS	SBA	Cameroon
BENIN	PRGF	Chad
BOLIVIA	PRGF	Georgia
BOSNIA & HERZEGOVINA	SBA	Ghana
BRAZIL	SBA	Guyana
BULGARIA	EFF	Jamaica
BURKINA FASO	ESAF	Korea
CAMBODIA	ESAF	Kyrgyz Republic
CAMEROON	PRGF	Mexico
CAPE VERDE	SBA	Moldova
CENTRAL AFRICAN REPUBLIC	PRGF	Nicaragua
CHAD	PRGF	Pakistan
COLOMBIA	EFF	Peru
CONGO	ESAF	Philippines
COSTA RICA	SBA	Romania
COTE D'IVOIRE	ESAF	Russian Federation
CROATIA	SBA	Slovak Republic
CZECH REPUBLIC	SBA	Tajikistan
DJIBOUTI	SBA	Thailand
DOMINICAN REPUBLIC	SBA	Turkey
ECUADOR	SBA	Ukraine
EGYPT	SBA	Uruguay
EL SALVADOR	SBA	Uzbekistan
EQUATORIAL GUINEA	ESAF	Venezuela
ESTONIA	SBA	
ETHIOPIA	PRGF	
GABON	SBA	
GAMBIA, THE	PRGF	
GEORGIA	PRGF	
GHANA	ESAF	
GUINEA	PRGF	
GUINEA-BISSAU	ESAF	
GUYANA	PRGF	
HAITI	ESAF	
HONDURAS	ESAF	
HUNGARY	SBA	

JAMAICA	EFF	
JORDAN	EFF	
KAZAKHSTAN	EFF	
KENYA	PRGF	
KYRGYZ REPUBLIC	PRGF	
LAO PEOPLE'S DEM. REP.	PRGF	
LATVIA	SBA	
LESOTHO	PRGF	
LITHUANIA	SBA	
MACEDONIA (FYR)	PRGF	
MADAGASCAR	PRGF	
MALAWI	PRGF	
MALI	ESAF	
MAURITANIA	ESAF	
MEXICO	SBA	
MOLDOVA	EFF	
MONGOLIA	PRGF	
MOZAMBIQUE	ESAF	
NEPAL	ESAF	
NICARAGUA	ESAF	
NIGER	PRGF	
PAKISTAN	PRGF	
PANAMA	SBA	
PAPUA NEW GUINEA	SBA	
PERU	SBA	
PHILIPPINES	SBA	
POLAND	SBA	
ROMANIA	SBA	
RUSSIAN FEDERATION	SBA	
RWANDA	ESAF	
SAO TOME & PRINCIPE	PRGF	
SENEGAL	PRGF	
SIERRA LEONE	ESAF	
SLOVAK REPUBLIC	SBA	
TAJIKISTAN	PRGF	
TANZANIA	PRGF	
TOGO	ESAF	
TURKEY	SBA	
UGANDA	ESAF	
UKRAINE	EFF	
URUGUAY	SBA	
UZBEKISTAN	SBA	
VENEZUELA	SBA	
VIETNAM	PRGF	
YEMEN	PRGF	
YUGOSLAVIA	SBA	
ZAMBIA	PRGF	
ZIMBABWE	SBA	

Table 2. Macroeconomic Outcomes and Projections
(Averages)

	Actual	**Projections**
GDP Growth	2.39	4.14
Inflation	20.49	11.06
Current Account,	-8.83	-7.94

Table 3. Is there a Trade-Off between the Macroeconomic Objectives?
Linear Probability Model
(Dependent Variable=1, if actual growth $\geq$ program growth)

	(1)	(2)	(3)	(4)	(5)	(6)
Fixed Effects	*No*	*No*	*No*	*Yes*	*Yes*	*Yes*
Current Account	Not significant		Not significant	Not significant		Not significant
Inflation		Not significant	Not significant		Not significant	Not significant
Inflation*High Inflation Dummy		Not significant	Not significant		Not significant	Not significant
Program Type (SBA=1)	Minus*	Minus**	Minus**	Minus**	Minus**	Minus**

Table 4. Is There a Trade-Off between the Macroeconomic Objectives?
OLS and Fixed Effects Model:

(Dependent Variable: Difference between Projected and Actual GDP Growth)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Fixed Effects	*No*	*Yes*	*Yes*	*No*	*Yes*	*Yes*	*No*	*Yes*	*Yes*
Year Dummies	*No*	*No*	*Yes*	*No*	*No*	*Yes*	*No*	*No*	*Yes*
Current Account	Not Sig	minus**	Minus*				Not Sig	Not Sig	Not Sig
Inflation				not signif.	Not signif.	Not signif.	Not signif.	Not signif.	Not signif.
Inflation *HINF				Not Sig	Not Sig	Not Sig	Minus**	Minus**	Not Sig
Program Type (SBA=1)	Plus**	Plus**	Plus**	Plus**	Plus**	Plus**	Plus**	not signif.	Not signif.
Terms of Trade Growth	Not Sig	Not Sig	Not Sig	Not Sig	Not Sig	Not Sig	Not Sig	Not Sig	Not Sig

Notes: "Minus" indicates a statistically significant negative coefficient.

Table 5. Does Meeting Policy Targets Matter for Achieving Growth Objectives?

Linear Probability Model
(Dependent Variable=1, if actual growth $\geq$ program growth)
(Dependant Variable: 1, if

Fixed Effects	No	No	No	Yes	Yes	Yes
Fiscal Balance	Not Sig		Not Sig	Not Sig		Not Sig
Exports		Not Sig	Not Sig		Not Sig	Not Sig
Program Type (SBA=1)	Minus**	Minus *	Minus**	Minus**	Minus**	Minus**

***indicates significance at the 1 percent level; **indicates significance at the 5 percent level

**Table 6. Does Meeting Policy Targets Matter for Achieving Growth Objectives?**

OLS and Fixed Effects
(Dependent Variable: Difference between Projected and Actual GDP Growth)

Fixed Effects	Yes	Yes	No	Yes	Yes	No
NDA	-1.53 (0.23)	-1.55 (0.59)	-1.37 (0.37)	---	---	---
NFA	---	0.006 (0.97)	-0.04 (0.75)	---	---	---
Fiscal Balance	---	---	---	---	0.57 (0.00)	0.33 (0.02
Broad Money	---	---	---	1.12 (0.60)	1.21 (0.53)	-0.37 (0.82)
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Program Type (SBA=1)	-0.81 (0.69)	-3.13 (0.04)	0.37 (0.47)	-1.26 (0.58)	-0.69 (0.74)	0.45 (0.49)
Terms of Trade Growth	-1.67 (0.63)	-5.92 (0.09)	-3.93 (0.18)	-1.99 (0.57)	-2.01 (0.56)	-1.37 (0.64)
R^2	0.31	0.48	0.16	0.28	0.37	0.20
F-statistic	1.05 (0.42)	9.17 (0.00)	---	1.1 (0.45)	1.73 (0.08)	1.44 (0.16)

Table 7. Does Meeting Policy Targets Matter for Achieving Growth Objectives?

OLS and Fixed Effects
**(Dependent Variable: Percent Difference between Projected and Actual GDP Growth)**

Fixed Effects	Yes	Yes	No	Yes	Yes	No
NDA	0.0004 (0.61)	0.00058 (0.989)	0.01 (0.795)	---	---	---
NFA	---	-0.026 (0.01)	-0.037 (0.00)	---	---	---
Fiscal Balance	---	---	---	---	0.164 (0.30)	0.159 (0.182)
Broad Money	---	---	---	-0.002 (0.27)	-0.002 (0.26)	-0.002 (0.21)
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Program Type (SBA=1)	-2.36 (0.09)	-2.33 (0.15)	-0.29 (0.54)	-2.44 (0.08)	-2.43 (0.08)	0.014 (0.97)
Terms of Trade Growth	2.58 (0.08)	-2.45 (0.15)	-1.33 (0.28)	2.75 (0.06)	2.69 (0.06)	3.26 (0.03)
R^2	0.54	0.85	0.09	0.57	0.57	0.33
F-statistic	1.03 (0.44)	14.26 (0.00)	---	1.02 (0.45)	1.12 (0.36)	1.43 (0.16)

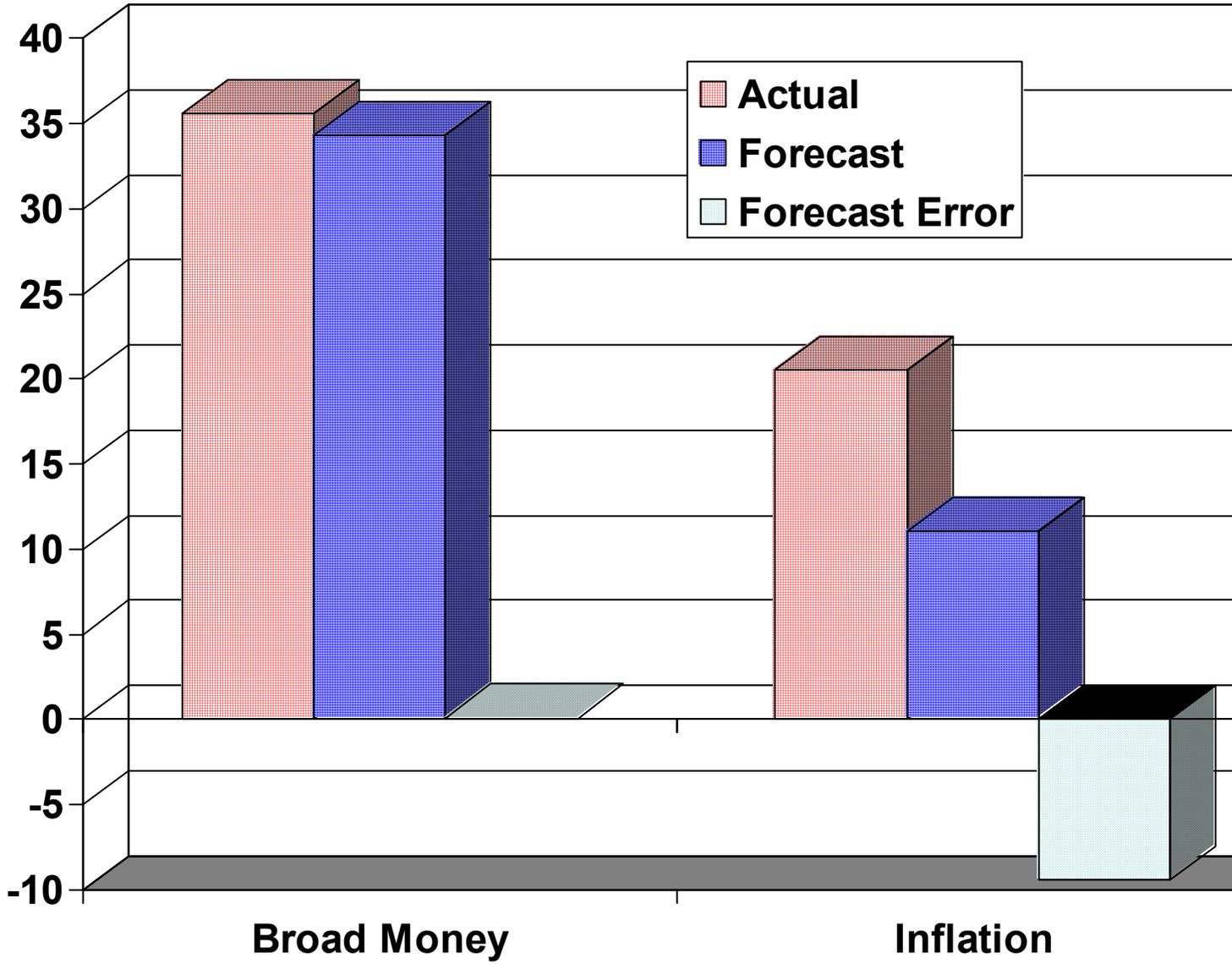**Figure 1. Objectives in IMF Programs**
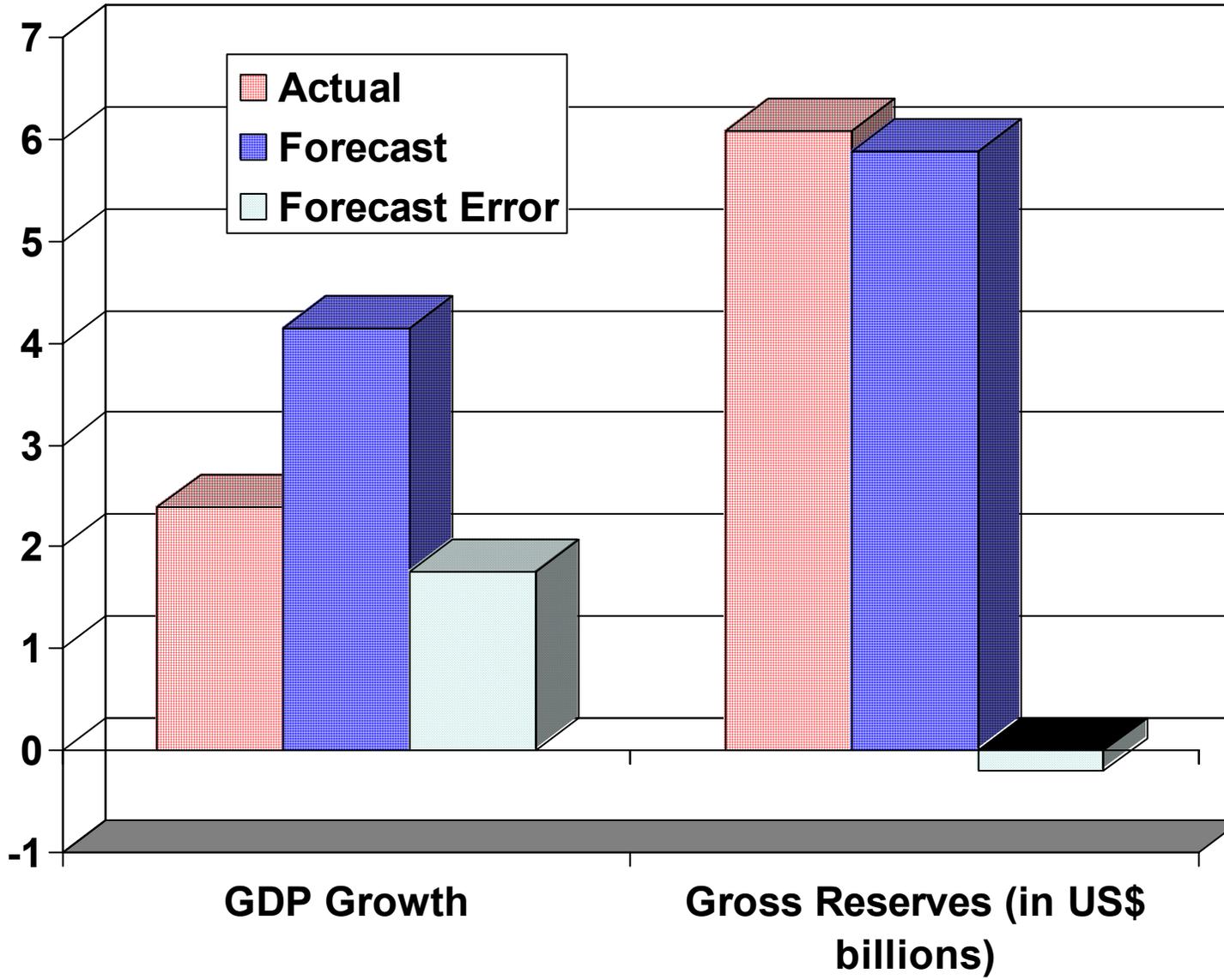
Source: International Monetary Fund (IMF).

Figure 2. IMF Programs: External Sector Targets and Performance
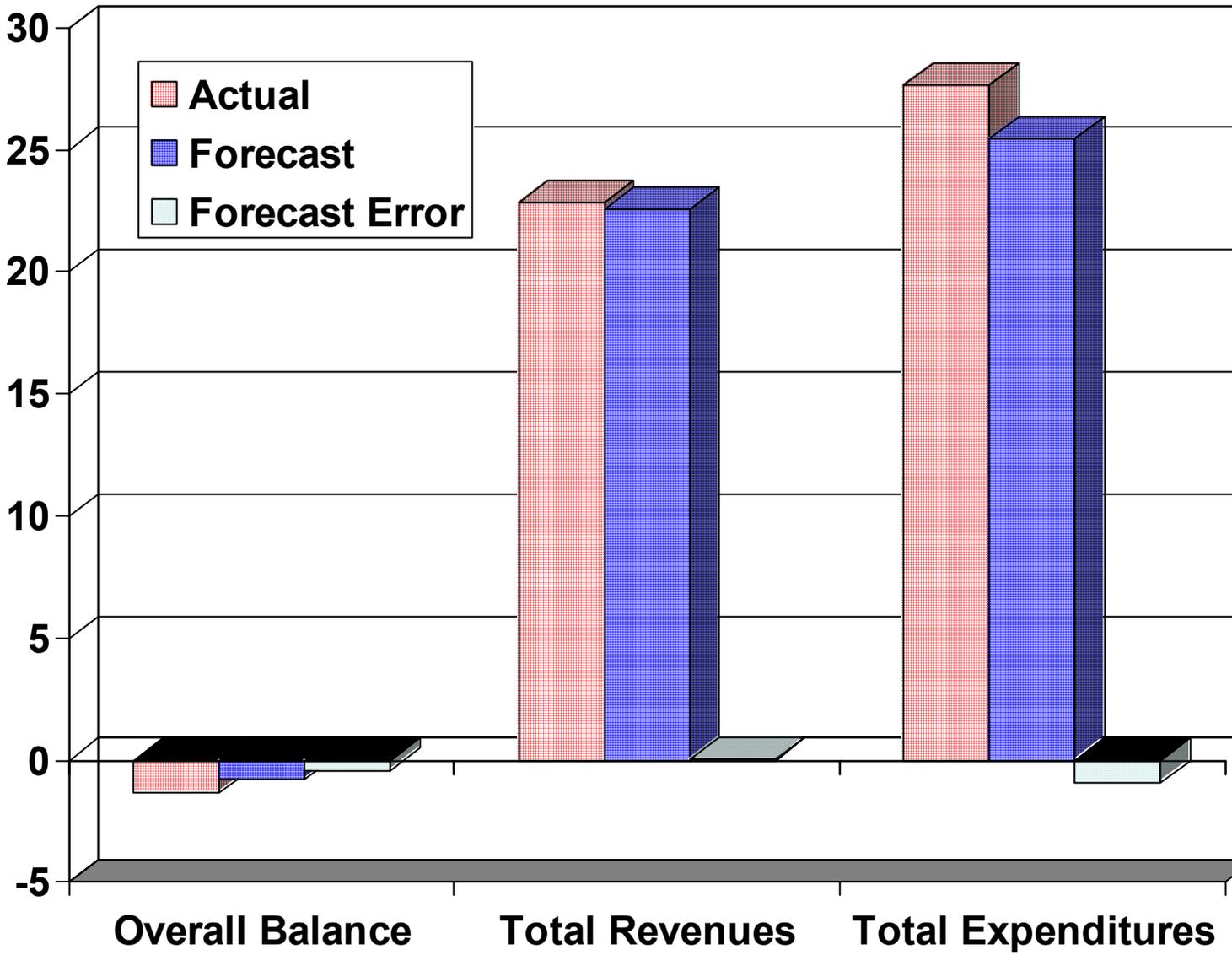**(Percent of GDP)**
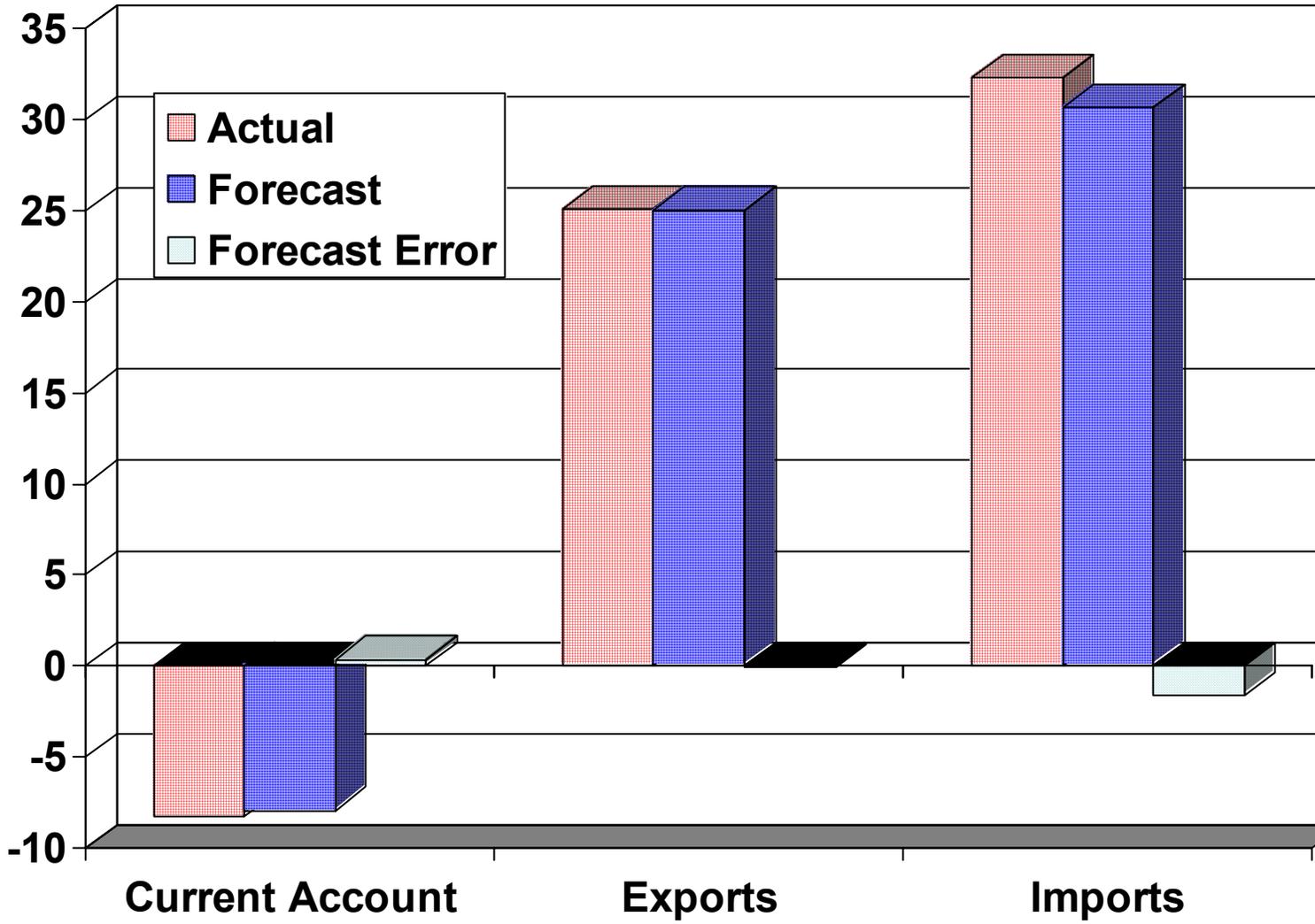
Source: International Monetary Fund (IMF).

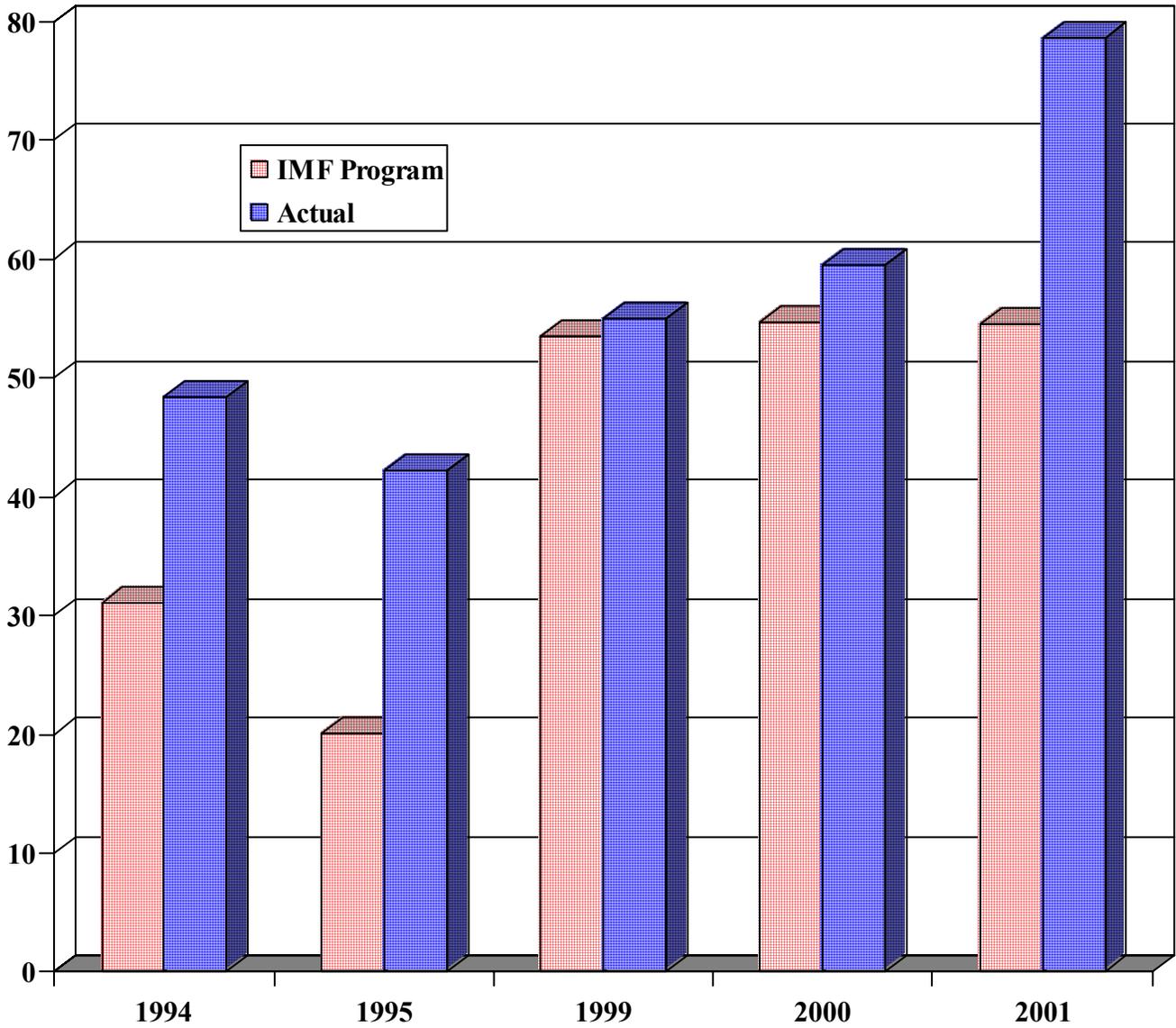**Figure 3. IMF Programs: Inflation and Monetary Aggregates**
(Percent of GDP)

Source: International Monetary Fund (IMF).

Figure 4. IMF Programs: Fiscal Targets
(Percent of GDP)

Source: International Monetary Fund (IMF).

**Figure 5. External Debt/GDP: IMF Program vs. Actual Values
Turkey (1994-2001)**

Source: International Monetary Fund (IMF).

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