

INTERNATIONAL MONETARY FUND

**The Design of Fund-Supported Programs—Overview**

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In consultation with other departments

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**I. INTRODUCTION**

1. During the course of the 2000-02 Conditionality Review, which had focused primarily on the coverage and modalities of conditionality, Executive Directors requested that the next conditionality review also address broader issues of program design.<sup>1</sup> In response, as indicated in SM/04/174, the 2004 Conditionality Review has two parts. The present set of papers examines key features of Fund-supported programs over the period 1995-2003, including their design, their objectives and the extent to which these objectives were achieved.<sup>2</sup> A separate paper, to be discussed by the Executive Board in early 2005, will examine the initial experience related to the application of the 2002 Conditionality Guidelines. These papers examine the full spectrum of Fund-supported programs, including

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<sup>1</sup> See, for instance, the Chairman's Concluding Remarks on *The Modalities of Conditionality—Further Considerations* (Executive Board Meeting 02/9). Directors reiterated these requests during discussions of reports of the Independent Evaluation Office (IEO): "Directors looked forward to further work by the staff on the relationship between external financing, adjustment, and sustainability; on the analytical framework for program design; on the trade-offs between macroeconomic and structural policies; and on the parameters for assessing program success." (Board discussion of the Task Force to Address the Recommendations of the IEO Report on Prolonged Use of Fund Resources, April 2003). The Board also called for a review of program design in the summing up for the IEO report on capital crises (May 2003) and for follow up to the recommendations of the IEO Report on Fiscal Adjustment in IMF-Supported Programs (March 2004).

<sup>2</sup> The period covered by this review is 1995-2003. This timeframe allows for both program and post-program experience to be analyzed. The sample consists of arrangements approved between 1995 and end-2000.

Stand-By and Extended Arrangements and ESAF (cum PRGF) arrangements.<sup>3,4</sup> Further work on issues specific to PRGF-supported programs will be discussed by the Board at a later stage.

2. A Fund-supported program is a package of policy measures which, combined with approved financing, is intended to achieve certain economic objectives—such as reducing inflation and achieving orderly external adjustment, promoting growth and poverty reduction, and reducing vulnerability to future balance of payments problems or financial crises. A program is thus defined by its broad objectives, the analytical framework linking these objectives to policies, and the formulation and implementation of individual macroeconomic and structural policies. Therefore, one approach, which is adopted here, to evaluating such programs—and considering the design of future programs—is to consider three sets of questions:

- What were the main objectives of the programs and were they achieved?
- What is the analytic basis for policy formulation and how well do existing analytical frameworks perform?

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<sup>3</sup> During this period, the Fund's financial engagement with low-income countries underwent important changes with the shift from the Enhanced Structural Adjustment Facility (ESAF) to the Poverty Reduction and Growth Facility (PRGF) in 1999/2000. The findings in this review for low-income countries pertain principally to ESAF-supported programs.

<sup>4</sup> Other staff papers have examined specific aspects of program design, or the design and outcomes of programs in specific contexts. Some examples are the 2002 paper on *IMF-Supported Programs in Capital Account Crises* and the 2002 PRGF Review. Some reviews have focused on specific countries or small groups of countries, such as *IMF-Supported Programs in Indonesia, Korea, and Thailand—A Preliminary Assessment*; and *Lessons from the Crisis in Argentina*. The last comprehensive review of experience under Stand-By and Extended Arrangements was undertaken in 1994; ESAF arrangements were reviewed in 1997. Several reports of the Independent Evaluation Office (IEO) are also relevant: *Evaluation of the Role of the Fund in Recent Capital Account Crises—Report by the Independent Evaluation Office—Volume I* (SM/03/171, 5/9/2003); *Independent Evaluation Office—Evaluation Report on Fiscal Adjustment in IMF-Supported Programs* (SM/03/291, 8/12/2003); *Independent Evaluation Office—Evaluation of the Role of the Fund in Argentina, 1991-2001* (SM/04/237, 7/12/2004); *IEO Evaluation Report on PRSPs and the PRGF* (SM/04/227, 7/7/2004).

- How were specific macroeconomic and structural policies geared towards achieving program objectives, to what extent were they implemented as programmed, and what were the associated outcomes?

Three background papers—“Fund-supported Programs: Objectives and Outcomes” (SM/04/404); “Policy Formulation, Analytical Frameworks and Program Design” (SM/04/405); and “Macroeconomic and Structural Policies in Fund-supported Programs: Review of Experience” (SM/04/406)—seek to answer these questions.

3. This Overview paper summarizes the key findings of the three background papers, draws broad conclusions, and is organized as follows. Drawing on the first background paper (SM/04/404), Section II presents a taxonomy of Fund-supported programs and discusses both their broad objectives—growth, inflation, and external adjustment—and associated outcomes. The process of policy formulation and its analytical basis, including the quality of projections for key macroeconomic variables underlying program design, is discussed in Section III based on SM/04/405. Experience with the use of specific macroeconomic and structural policies is reviewed in Section III, drawing on SM/04/406. Section V presents conclusions and outlines issues for discussion.

## II. OBJECTIVES AND OUTCOMES

4. The broad objectives and outcomes of programs supported by the General Resources Account (GRA)—Stand By (SBA) and Extended (EFF) arrangements—and by the Fund’s concessional facilities (ESAF/PRGF) are examined in detail in the background paper “Fund-supported Programs: Objectives and Outcomes” (SM/04/404). The key findings are summarized in Box 1.

5. In assessing Fund-supported programs, it is first necessary to ascertain what they were intended to achieve. In doing so, it is useful to distinguish among a number of types of programs, which have important differences with regard to their initial conditions, objectives, and expected outcomes. In the **classic**, Fund GRA-supported program, a member seeks Fund financing because it faces a loss of international reserves stemming from an external current account imbalance. In this setting, the primary objective is to correct the current account imbalance and to replenish reserves to a prudent level. The Fund provides temporary financing to attenuate this adjustment, allowing time for some positive supply response in addition to demand restraint. Policies are also intended to help restore confidence and catalyze flows from other official and private sources, and to improve the current account balance with minimum impact on activity. The behavior of key economic indicators of programs supported by the GRA (excluding those with transition economies) show striking similarities to the predictions of this traditional model (Figure 1). In particular, the current account deficit narrows from 3 percent of GDP on average over the three years preceding the program to about zero in the program year, achieved, in part, by fiscal adjustment of about 1 percent of GDP over the same period (as well as a decline in investment and a temporary

### Box 1. Fund-supported Programs: Objectives and Outcomes—Key Findings

- Beyond the **classic** current account adjustment program, the past decade has seen important evolutions in the objectives and design of Fund-supported programs. **Capital account crises** have brought external adjustment into sharper relief and called for a flexible policy response as the priority shifts from inducing an improvement in the current account to preventing excessive, and achieving orderly, external adjustment. With the exception of real GDP growth, which rises during the program period, the behavior of other economic variables among members that had **precautionary arrangements** was similar to those for other GRA-supported programs. For **programs in low-income countries (and to some degree also among the initial programs in transition economies)**, the emphasis has been on structural transformation, poverty reduction, and growth promotion rather than on external adjustment.
- **Fund support** typically finances the **replenishment and accumulation of gross reserves**, which, on average increase by more than the financing provided by the Fund. Since the use of Fund resources adds to the member's external obligations, the **purpose of Fund financial support** is to achieve an **appropriate time profile for external adjustment**, trading off the short-run impact on output against longer-term considerations of debt sustainability.
- **Experience regarding external adjustment differs** between GRA- and ESAF/PRGF-supported programs.

In **GRA-supported** programs, **external adjustment** has been generally **consistent** with what is required by **medium-term debt sustainability**, with a positive relationship between the initial level of external debt and the external adjustment targeted and achieved. Nevertheless, there is an important subset of countries—including, but not exclusively capital account crises—where the **external adjustment was greater than envisaged by the program** or by **considerations of debt sustainability as capital inflows failed to materialize** in the short run and the **availability of official financing was limited**. In addition, **current account adjustment** undertaken in the context of a **Fund-supported program** is associated with a **lower output loss** than the corresponding adjustment outside of a program context.

**ESAF/PRGF-supported** programs have been geared more toward achieving external viability over the longer term, including by removing trade distortions and fostering growth. This has been reflected in **current account balances** that have fallen **well short of programmed balances** or the **balances necessary to stabilize debt ratios** (including at the lower levels of debt that would prevail following HIPC debt relief), implying **significantly higher debt ratios in the absence of debt relief**.

- In contrast to earlier experience, members with **Fund-supported** (GRA- or ESAF/PRGF-supported) programs in the 1990s have seen marked and durable **decreases in inflation**.
- Members with **GRA-supported** programs saw **output growth return** to the **pre-program** growth rate but **no increase relative to the pre-program** period. By contrast, members with **ESAF/PRGF-supported** programs have seen **lasting improvements in growth** (relative to the pre-program period), reflecting both better macroeconomic policies and a more benign environment—in contrast to the experience under earlier ESAF-supported programs.

improvement in private saving). Classic adjustment programs have on average been associated with lower growth relative to the pre-program period, but with a return to more normal output growth rates as the member emerges from its balance of payments problems.<sup>5</sup>

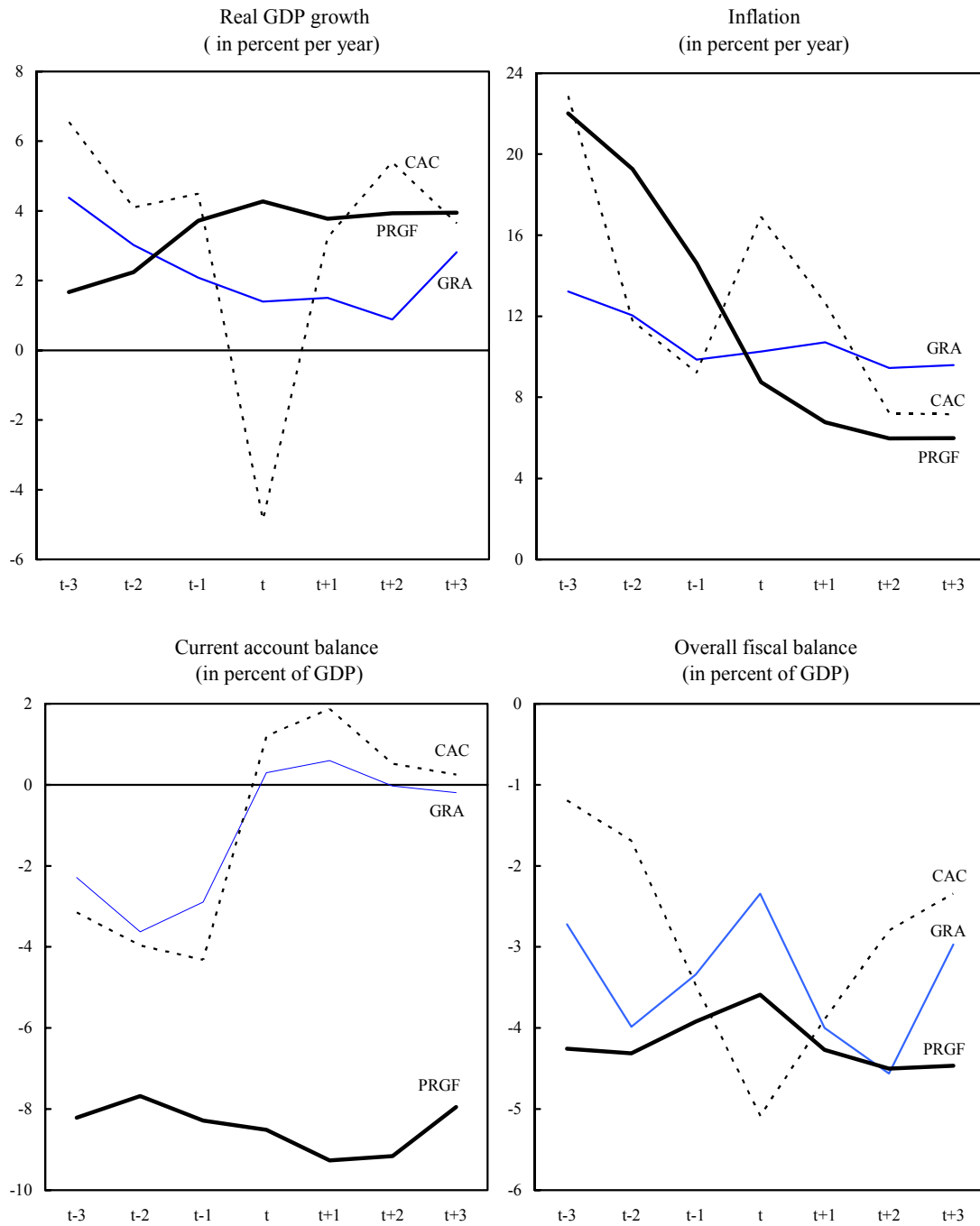
6. While this classic adjustment pattern remains relevant, there are other programs that are sufficiently distinct to merit separate classification. Among these are programs pertaining to **capital account crises**. In a capital account crisis, the salient initial condition is a sudden loss of private external financing; a sizeable current account imbalance may not exist prior to the crisis (Figure 1). Typically, this loss of financing puts the exchange rate under pressure and a large currency depreciation ensues. Currency mismatches in domestic public and private sector balance sheets exacerbate the effects of the currency depreciation, leading to a sharp contraction in economic activity that brings about a large current account adjustment. Overall, the behavior of the main economic variables largely mimics that in the traditional case, albeit with more pronounced patterns. The key difference lies in the orientation of policies. In traditional adjustment programs, macroeconomic policies are intended to induce external adjustment; in capital account crises, since external adjustment is driven by the lack of market finance, economic policies are intended to mute the impact on growth and inflation, achieving a more orderly current account adjustment by restoring confidence and securing additional financing.

7. In **low-income countries**, programs supported by the Fund's concessional facilities have broader objectives—including promoting growth and reducing poverty under PRGF

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<sup>5</sup> With the exception of real GDP growth—which rises during the program period—the behavior of other economic variables among members that had precautionary arrangements is similar to those for arrangements where the member made a purchase; in fact, both are characterized by sharp improvements in the fiscal and current account balances during the program and a corresponding build-up in reserves though, over the longer term, the savings ratio rises more among precautionary programs than among other GRA-supported programs.

Figure 1. Macroeconomic Performance under IMF-Supported Programs, 1995-2003 1/



Source: Background paper "Fund-Supported Programs: Objectives and Outcomes;" Figure 1, Figure 3, and Figure 5.  
 1/ GRA: GRA-supported programs excluding transition economies; PRGF: ESAF/PRGF-supported programs; CAC: Capital account crisis-country programs.

arrangements—than narrowing the current account deficit.<sup>6</sup> Macroeconomic stability and structural reforms are the key ingredients for achieving sustained output growth in these Fund-supported programs (Figure 1). Some measures—such as import liberalization—may widen the external deficit in the short run, but nevertheless put the economy and the balance of payments on a more sustainable future path for growth by enhancing economic efficiency. Spending levels—and corresponding fiscal and current account deficits—have been geared towards protecting and expanding priority expenditures for poverty reduction, with less focus on achieving debt sustainability through adjustment. As such, although members have seen sustained increases in output growth under these programs, their current account deficits remain large.

8. This taxonomy defines the broad contours and objectives of the different types of Fund-supported programs and is useful for assessing members' progress towards achieving them.<sup>7</sup>

9. As regards **external adjustment**, Fund resources typically contribute to, but do not fully finance, the replenishment and accumulation of gross international reserves (see “Fund-supported Programs: Objectives and Outcomes,” SM/04/404, paragraphs 30-31 and Table 1). By adding to reserves and helping to restore confidence, such financing helps limit vulnerabilities. Indeed, Fund financing is small (on average, about 10 percent) in relation to the member's total financing requirement, which is provided by the private sector or official sector once a Fund-supported program is approved. The pattern of current account adjustment differs markedly between middle-income (GRA-supported) and low-income countries (Box 2):

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<sup>6</sup> Likewise, in many transition economies, beyond the initial stabilization phase, the main priorities are to undertake structural reforms aimed at reducing the size of the public sector and transforming the economy, while maintaining macroeconomic stability and a viable external position (see “Fund-supported Programs: Objectives and Outcomes” (SM/04/404), paragraphs 19-20 and Figure 4). Although the transition and low-income countries obviously differ in many respects, they share the goals of structural transformation of the economy and the promotion of growth. The growth picture of transition economies differs considerably from other Fund-supported programs mainly because of the abrupt transformation in the allocation of productive resources and of the disruption of existing trade linkages. In terms of macroeconomic policies, on average, both the fiscal deficit and the current account improved.

<sup>7</sup> While some findings are specific to members' experience under their Fund-supported programs, caution is required in making causal interpretations since it is difficult to establish counterfactual outcomes had the member not sought the Fund's financial support (for a discussion, see “Fund-supported Programs: Objectives and Outcomes,” SM/04/404, Appendix IV).

### Box 2. External Adjustment and External Debt Sustainability

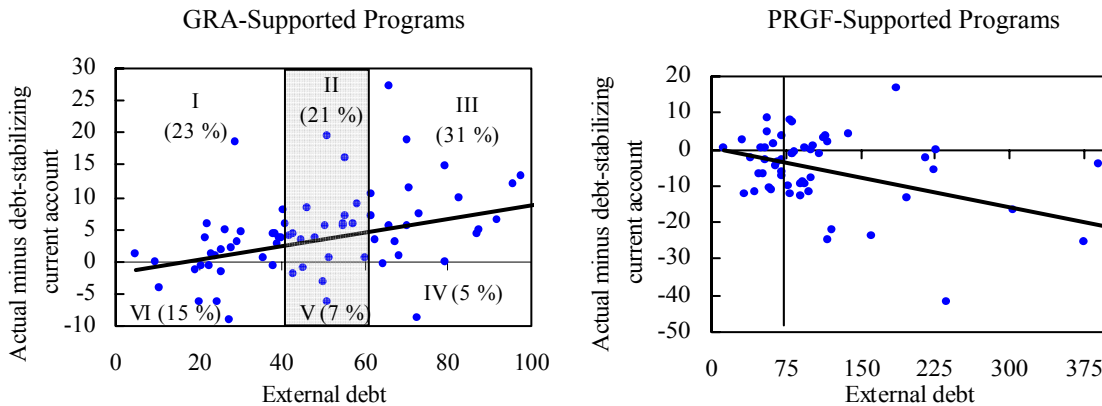
*Fund-supported Programs: Objectives and Outcomes* (SM/04/404) examines programmed and actual external adjustment against the metric of external debt sustainability. Since a full assessment is beyond the scope of this study, a useful benchmark is the debt-stabilizing balance, with the expectation that countries with high initial levels of external debt should run large current account balances (larger than the debt-stabilizing balance) to reduce vulnerability to a crisis, countries with moderate levels need only to stabilize their external debt ratios, and countries with low levels do not need to stabilize these ratios immediately. While it is difficult to establish precise thresholds at which external debt levels may become problematic, the existing empirical literature suggests that market borrowers face an appreciable increase in the likelihood of a crisis at external debt ratios above 40-60 percent of GDP (see SM/02/166).

Using this metric, what is the evidence from Fund-supported programs?

As indicated in the chart (left panel), in three quarters of the 75 GRA-supported programs reviewed, the current account balance was larger than would have been necessary to stabilize the external debt ratio (the observations lie above the horizontal axis). In addition, there is a positive and statistically significant relationship between the actual current account balance (relative to the debt-stabilizing balance) and the initial external debt. A useful way to characterize the results is to divide the chart into six segments according to the initial debt ratios and whether the external balances exceeded the debt-stabilizing balance. For observations in region I (23 percent of the GRA-supported programs), the current account balance exceeds the debt-stabilizing balance even though the initial debt ratio is low (i.e. less than 40 percent of GDP). A further 20 percent of programs are in the intermediate range (region II, with debt ratios of 40–60 percent of GDP). These countries have current account balances that would reduce their debt ratios, although their initial debt ratios are in the gray zone where—though a reduction in debt ratios may be considered appropriate—it is unclear that this should take place immediately. Countries in region III (32 percent of the total) are generating larger current account balances than would stabilize external debt: however, these countries start from debt levels that should be reduced. Countries in regions IV, V, and VI have external balances that are smaller than the debt-stabilizing balance, which is particularly problematic for countries in region IV. Overall, these results suggest that external adjustment was largely consistent with that required by medium-term debt sustainability. However, as noted above, the external adjustment was greater than necessary to stabilize the debt ratios for some countries with low initial debt levels.

PRGF countries experience the opposite. A comparison of the actual and debt-stabilizing current account balances shows that about one-third of HIPC's failed to generate current account balances sufficient to stabilize the external debt ratio even though it was at elevated levels (right panel). Most observations are below the horizontal axis and many have external debt ratios above 75 percent of GDP, comparable to an NPV debt ratio of 45 percent with a 40 percent grant element above which debt distress rises sharply (SM/04/27). These programs did not envisage making adjustments to stabilize the external debt ratios since the programmed debt stabilizing adjustment was also negatively correlated with the initial debt levels. It could be argued that these calculations do not incorporate anticipated external debt relief under the HIPC initiative, potentially the prime vehicle for achieving external debt stability over this period. However, the imbalances are also too large to stabilize the debt ratios that would prevail following HIPC relief, assuming comparable concessionality rates.

Initial External Debt and Actual and Debt-Stabilizing Current Account Balances (in percent of GDP)





- In **GRA-supported** programs, consistent with considerations of debt sustainability, a positive relationship exists between the initial level of external debt and the external adjustment targeted and achieved. Nonetheless, for a subset of GRA-supported programs—including, though, not exclusively capital account crisis cases—external adjustment is larger than anticipated and greater than would be indicated by considerations of debt sustainability.<sup>8</sup> These program cases typically had external debt ratios of 40 percent of GDP or lower. Some of these cases are associated with positive shocks to the current account balance—for instance, positive terms of trade shocks—or the deliberate accumulation of foreign exchange reserves to reduce future vulnerability. But in other cases, the initial policy package was insufficient to elicit the anticipated response of markets and a return of capital inflows. Larger current account adjustment than expected was particularly pronounced in capital account crises, where private capital outflows far exceeded initial projections, and the associated depreciation of the exchange rate exacerbated balance sheet mismatches, resulting in a sharp reduction in economic activity.
- In **ESAF/PRGF-supported programs**, not only were improvements in current account balances, on average, lower than programmed, they were also too low to stabilize external debt ratios. Indeed, programmed (*a fortiori*, achieved) improvements of the current account balance were negatively related to initial debt levels. While, in part this reflected anticipated effects of HIPC debt relief, it is also noteworthy that current account deficits were also too large to reduce or stabilize external debt ratios at the lower levels that would prevail following HIPC debt relief. Thus, while fiscal—and relatedly, current account—deficits in these countries were smaller than in the past, they remained too large to secure external viability in the absence of debt relief.

10. Beyond external adjustment, the evidence suggests that members have been largely successful in lowering **inflation** and maintaining price stability thereafter (see “Fund-supported Programs: Objectives and Outcomes,” SM/04/404, paragraphs 55-56 and Table 3). GRA-supported programs also made important progress in achieving disinflation: over the period 1992–2002, inflation fell in the non-PRGF eligible sample from 80 percent per year during the three years prior to the program to an average of 27 percent per year in the three years following the program (Table 1). Inflation in countries with PRGF-supported programs also declined—respectively, from an average of 28 percent per year to 8 percent per year.

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<sup>8</sup> At the same time, a given improvement in the current account balance undertaken in the context of a Fund-supported program is associated with a smaller output loss than the same current account improvement outside of a Fund-supported program (see Box 5 of “Fund-supported Programs: Objectives and Outcomes,” SM/04/404).

Table 1: Macroeconomic Performance of Countries with Fund-Supported Programs 1/

	Number of observations	3-years prior to program	During program	3-years after program
PRGF eligible countries				
Inflation				
1980-1991	169	68 n.a.	26	73
1992-2002	62	28 n.a.	16 *	8 ***
Real GDP growth				
1980-1991	169	2.1 n.a.	2.6	2.4
1992-2002	62	2.4 n.a.	4.1 ***	3.4 *
Non-PRGF eligible countries				
Inflation				
1980-1991	104	42 n.a.	72	55
1992-2002	51	80 n.a.	39	27 *
Real GDP growth				
1980-1991	104	2.7 n.a.	2.0	3.1
1992-2002	51	3.6 n.a.	2.7	3.4

Source: “Fund-Supported Programs: Objectives and Outcomes,” Table 3.

1/ Statistical significance at the \*\*\* 1 percent and \* 10 percent level.

11. Consistent with the classic adjustment paradigm, GRA-supported programs have succeeded in restoring **output growth** rates to their pre-crisis levels but—with the exception of transition economies—were not associated with higher growth relative to the pre-program period (Table 1). By contrast, a majority of members with ESAF/PRGF-supported programs in the 1990s have seen a lasting improvement in their **real GDP growth performance** that is both economically and statistically significant.<sup>9</sup> Underlying this improved growth performance is greater macroeconomic stability, lower inflation, smaller fiscal deficits, and a more benign external environment (see “Fund-supported Programs: Objectives and Outcomes,” SM/04/404, paragraphs 62-64 and Table 4).

### III. POLICY FORMULATION, ANALYTICAL FRAMEWORKS, AND PROGRAM DESIGN

12. The process of policy formulation in Fund-supported programs and the analytical tools country teams draw upon when advising national authorities is set out in “Policy Formulation, Analytical Frameworks and Program Design,” (SM/04/405). In particular, the paper assesses how well the modeling process works in practice by examining the record of program projections. Key findings of this paper are summarized in Box 3.

<sup>9</sup> This contrasts with results on macroeconomic performance under ESAF-supported programs in earlier time periods, which found that growth at best recovered from depressed pre-crisis levels; see ESAF Review Overview Paper (1998).

**Box 3. Policy Formulation, Analytical Frameworks, and Program Design—Key Findings**

- National authorities—and country teams in advising them—use a variety of methods, models, ad hoc equations and economic judgment in developing the projections that underlie Fund-supported programs. No single model or framework is universally applicable. A key feature of this eclectic approach is its adaptability to evolving economic conditions with program reviews providing an opportunity to reassess policies based on new information.
- The role of the Fund’s **financial programming** framework is to tie together, and ensure consistency, of the projections of individual sectors (external, monetary, fiscal) into a coherent macroeconomic framework rather than to pin down economic parameters. Capital account crises pose special challenges for policy formulation because the interaction of capital flows with balance sheet vulnerabilities can alter the impact of policies on the economy; the **balance sheet approach** may be informative in this regard, though there are limitations to such analysis. The Fund’s **debt sustainability template** complements the near-term macroeconomic projections by considering the implications for longer-term debt dynamics. While the template helps discipline projections, ultimately debt sustainability assessments will be only as good as the underlying macroeconomic projections.
- These observations are supported by the record on **program projections**. For the **near term**—horizons over which policies are normally set in Fund-supported programs—projections for **output growth** and **inflation** are **relatively accurate** (with a few exceptions, most notably capital account crises), while **external adjustment** is **underestimated in GRA-supported** programs and **over-estimated in PRGF-supported** programs. The **relationships** between macroeconomic instruments and targets assumed in programs also do not show systematic biases, except that **programs** assume a **smaller positive association** between **fiscal adjustment** and **output growth**, and between fiscal adjustment and improvement of the **current account balance** than implied by the actual relationships.
- **Longer-term** projections for **output growth** display a systematic **over-optimism bias**. This bias contributes to **projection errors** for the **external debt ratio**, especially in **low-income countries** where **current account deficits** are also systematically **under-predicted**. In middle-income countries, the impact of **lower growth** and sharper **real exchange rate depreciations** than programmed are partly offset by the **greater external adjustment than projected** (especially in response to capital outflows in capital account crises).
- Preliminary evidence shows that **cross-country growth models** may outperform medium-term projections contained in staff reports, suggesting that such models could serve as a **reference point** and **disciplining device** for medium-term output growth projections undertaken by country teams.

13. While the challenges of setting coherent policies are not unique to Fund-supported programs—national authorities face such challenges on a daily basis—they take on added importance when the economy is undergoing periods of stress. National authorities are likely to turn to, and draw upon, the Fund’s advice at such times. For its part, the Fund must assess whether the member’s policy package is likely to achieve its intended objectives, thus addressing the country’s economic problems and safeguarding Fund resources. In practice, this assessment considers whether projections for evolution of key macroeconomic targets— inflation, growth, and external balance—are consistent, conditional on the implementation of agreed economic policies. Since no single model is universally applicable, national authorities, working with Fund country teams, must draw upon available data, and a variety of methods, models, ad hoc equations and economic judgment in undertaking these projections. A key feature of this approach is its adaptability to evolving economic conditions based on program reviews. In this regard, the Fund’s **financial programming framework** ties together, and ensures consistency of projections of the individual sectors (real, external, monetary, fiscal)—rather than seeking to pin down the parameters of the financial program—and serves to monitor developments in key areas.

14. Capital account crises pose special challenges for policy formulation. Not only is the magnitude of potential outflows difficult to estimate, interactions between such flows and domestic balance sheet exposures can fundamentally alter key economic relationships.<sup>10</sup> The Fund’s **balance sheet approach** may be informative in this regard, with balance-sheet analysis helping to pinpoint possible sources of balance of payments disequilibria as well as the impact of policy instruments on the economy. For instance, the effect of monetary policy on the exchange rate may depend on the domestic financial and corporate sectors’ relative exposures to exchange rate or domestic interest rate risks. Nevertheless, it is also important to recognize the limitations of the analysis: although it can help identify vulnerabilities, it cannot predict either the precise timing or magnitude of a possible crisis and attendant capital flows. Moreover, there are a number of difficulties with the practical application of the framework, particularly as regards the availability of data.

15. Beyond the short-run projections of immediate policy consequence, Fund-supported programs must take account of longer-run dynamics as well. The Fund’s **debt sustainability template** complements near-term macroeconomic projections by articulating their implications for longer-run debt dynamics and subjecting them to systematic stress tests. Ultimately, however, the quality of debt sustainability assessments will be only as good as the underlying projections for deficits, interest rates, exchange rates, and output growth. Regarding the latter, the basis for sustained growth is poorly understood—not just in the Fund but in the economics profession at large—and more study is clearly needed. But within the scope of existing knowledge, growth projections (both in program and surveillance

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<sup>10</sup> A further complication in many capital account crises were the concomitant banking crises.

contexts) can be improved, including through the possible use of a cross-country growth model to provide a more systematic checking of the realism of growth projections.

16. These observations are supported by the record on **program projections**. Near-term projections are relatively accurate (Table 2). There were no systematic biases in inflation or output growth projections (except in capital account crises). Current account deficits were underestimated in ESAF/PRGF-supported programs and overestimated in GRA-supported programs, especially in capital account crises. The **relationships** between macroeconomic policy instruments and targets for real growth and inflation assumed in Fund-supported programs do not differ systematically from their actual relationships. Programs tend to assume however a somewhat smaller positive relationship between fiscal adjustment (a larger surplus or smaller deficit) and output growth, and between fiscal adjustment and improvements in the current account balance, than implied by the (ex-post) data (see “Policy Formulation, Analytical Frameworks and Program Design,” SM/04/405; Table 3 and paragraphs 34-36). One possible explanation may be that economies tend on average to be more open in reality than assumed, leading to greater current account adjustment and a smaller impact on output.

Table 2: Statistical Characteristics of Program Projection Errors

	Number obs.	Period t		Period t+1		Average period t+1:t+3	
		Mean error	RMSE	Mean error	RMSE	Mean error	RMSE
<b>Real GDP Growth</b>							
PRGF-supported programs	56	-0.4	2.2	-1.2 ***	3.1	-1.3 ***	2.8
GRA-supported programs							
Transition economies	27	0.1	3.7	-0.7	4.4	-0.5	2.9
Non-transition economies	35	-0.3	2.7	-0.7	4.4	-2.4 ***	4.3
Capital account crises	9	-9.3 ***	10.7	-0.9	5.0	-0.4	2.3
<b>Current Account Balance</b>							
PRGF-supported programs	48	-1.5 **	4.9	-1.9 ***	4.8	-2.2 ***	4.1
GRA-supported programs							
Transition economies	24	0.4	2.5	-0.4	2.3	-0.8	2.6
Non-transition economies	28	2.4 ***	4.6	2.7 ***	5.2	1.6 ***	3.2
Capital account crises	8	5.6 **	7.2	6.5 **	8.7	...	...

Source: “Policy Formulation, Analytical Frameworks, and Program Design,” Table 2 and Table 4.

1/ Statistically significant projection errors at the \*\*\* 1 percent and \*\* 5 percent level.

17. Longer-term projections for output growth, however, do not fare as well and are systematically **over-optimistic**. Among both GRA (excluding transition economies and capital account crises) and PRGF-supported programs the average errors are statistically significant, raising questions about the accuracy of these medium-term growth projections. Preliminary evidence shows that cross-country growth models may outperform medium-term projections contained in staff reports (see Box 6 of “Policy Formulation, Analytical Frameworks, and Program Design,” SM/04/405), suggesting that such models could serve as

a reference point and disciplining device for medium-term output growth projections undertaken by country teams.

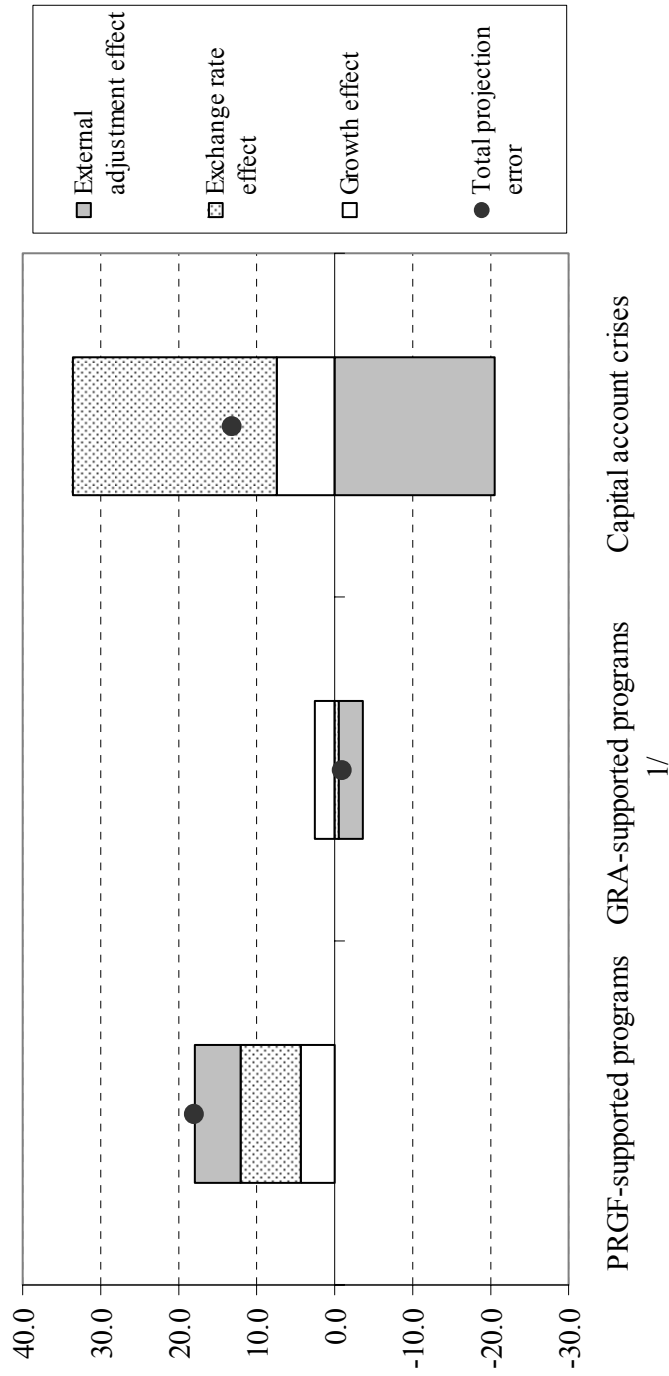
18. Among low-income countries, this upward medium-term growth bias, coupled with less external adjustment than programmed, results in significantly higher external debt ratios (in the absence of debt relief) than envisaged (Figure 2). In middle-income countries, the higher debt ratios implied by lower medium-term output growth are largely offset by the greater external adjustment than expected—especially in capital account crises. However, the error in projecting the debt ratio is exacerbated by the larger-than-expected real exchange rate depreciations associated with these capital outflows; overall, middle-income countries succeeded in reducing their external debt ratios, though by less than programmed.

#### IV. MACROECONOMIC AND STRUCTURAL POLICIES

19. Program objectives, together with the applicable economic relationships, define the required policy content of programs—or, at least the different configurations of specific macroeconomic and structural policies consistent with attaining program goals. This raises questions about whether macroeconomic (namely, a country's exchange rate regime, monetary and fiscal policies) and structural measures have been geared towards achieving program objectives, whether the intended policies were carried out, and what was the outcome. The last background paper (SM/04/406) examines the experience with specific macroeconomic and structural policies. The key findings are summarized in Box 4.

20. As regards the choice of **exchange rate regime** and program objectives—in particular, lower inflation—countries are no more likely to alter their exchange rate regime at the outset of a Fund-supported program than otherwise. In some cases, this may reflect concerns about the difficulties of engineering a graceful exit from a pegged exchange rate when such a regime is less well suited for the country beyond the program horizon. At the same time, disinflations have been carried out successfully under pegged regimes in GRA-supported programs (particularly transition economies) and under more flexible regimes in low-income countries (see Table 3 of SM/04/406). A key factor determining success at disinflation was whether the requisite fiscal adjustment was undertaken (Table 3).

Figure 2. Contributions to Errors in Projections of External Debt Ratios  
(In percent of GDP; as of end-year t+2)



1/ Excluding transition economies.

#### **Box 4. Macroeconomic and Structural Policies in Fund-Supported Programs—Key Findings**

- **Devaluations or shifts in the exchange rate regime at the outset** of a Fund-supported program **are the exception** rather than the norm. Countries are no more likely to alter their exchange rate regime at the outset of a Fund-supported program than otherwise. Most regime shifts involved pegging the exchange rate in transition economies or moving to more flexible regimes in non-transition economies.
- Among programs that explicitly targeted **disinflation**, **GRA-supported** programs typically used the **exchange rate as a nominal anchor**, while **PRGF-supported** programs tended to use **money-based stabilizations**. But **success rates did not differ markedly**. In fact, success is linked to supporting policies—most notably whether fiscal adjustment was achieved.
- **Programs target some tightening of the monetary stance**—in order to lower inflation, promote orderly external adjustment, and stem capital outflows. The **monetary stance is tightened, though on average by less than is programmed**, leading to higher inflation than projected. Importantly, **policies set in the context of Fund-supported programs appear to enjoy greater credibility**, leading to higher money demand, and thus lower inflation for a given growth rate of broad money. The empirical evidence does **not support** the assertion that the **monetary stance was set excessively tight**, thus leading to **lower growth**.
- **Monetary expansions that reflect higher net foreign assets** correspond to capital inflows responding to higher money demand, and should thus have a **smaller inflationary impact**; **conversely**, monetary **overruns** that reflect larger **NDA growth** than programmed should have a **larger inflationary impact**. Empirically, however, the source of the monetary overrun makes no difference to the inflationary impact, underscoring that a NDA/NIR framework is not well suited to controlling inflation, which requires a more explicit nominal anchor.
- **Fund-supported programs target fiscal consolidation** to promote external adjustment, underpin macroeconomic stabilization, and to put public finances and debt dynamics on a more sustainable footing. In the event, **however, fiscal slippages are typical**, undermining the achievement of these objectives. On average fiscal consolidation falls short of program targets due to expenditure overruns in GRA-supported programs and a combination of primary expenditure overruns and revenue shortfalls in ESAF/PRGF-supported programs
- **Missing the programmed fiscal consolidation cannot be explained by the planned current account adjustment having been achieved**—fiscal consolidation was not sustained even in cases where the external adjustment fell short of expectations.
- Empirical evidence suggests that **fiscal adjustment in Fund-supported programs contributes to external adjustment** but **does not** account for cases where external adjustment was significantly greater than anticipated (owing to a shortfall in external financing). **Fiscal adjustment was not associated with lower output growth**.
- **Structural measures** in Fund-supported programs **show some alignment between their primary objectives**—bolstering the management of aggregate demand, enhancing the flexibility of the economy and raising efficiency (both of which serve to strengthen growth prospects), and reducing vulnerabilities to future crises—and the broad program goals.
- While it is difficult to establish the impact of individual structural reforms, the evidence suggests that **fiscal structural measures** have been **useful in underpinning fiscal adjustment** and that there is a **positive correlation between** growth-related **structural measures** in Fund-supported programs **and medium-term growth** performance.



Table 3. Fiscal Adjustment and Success Rates for Disinflation Attempts

	Projection Error: Actual - Projected					
	Full sample		GRA-supported		PRGF-supported	
	Fiscal balance 1/	Inflation 1/	Fiscal balance 1/	Inflation 1/	Fiscal balance 1/	Inflation 1/
Disinflation Attempts 2/ (no. of observations)	-0.83 58	4.42 58	-0.75 30	5.98 30	-0.91 28	2.76 28
Success 3/ (no. of observations)	0.05 36	0.31 36	0.12 19	2.01 19	-0.03 17	-1.60 17
Failure (no. of observations)	-2.26 22	11.16 22	-2.26 11	12.82 11	-2.26 11	9.49 11
H <sub>0</sub> : Success = Failure 4/	3.62 ***	-4.02 ***	2.13 *	-2.39 **	3.37 ***	-3.71 ***

Source: "Macroeconomic and Structural Policies in Fund-Supported Programs," Table 4.

1/ Fiscal balance refers to the change in fiscal balance in percent of actual GDP; inflation is end of period, in percent, per year.

2/ Disinflation attempts refer to programs that envisaged disinflation between years t-1 and t+1 of: 1) over 5%, when initial inflation in t-1 is less than 20%; 2) over 10%, when initial inflation is between 20% and 50%; or 3) over 20%, when initial inflation is higher than 50%.

3/ Success is defined as actual disinflation performance between years t-1 and t+1 at least meeting the disinflation target (i.e. 5%, 10%, and 20%).

4/ Two-sided t-test for differences in mean. Significant at: \* 10 percent; \*\* 5 percent; and \*\*\* 1 percent level.

21. Fund-supported programs typically seek to tighten the **monetary stance** to help restore macroeconomic stability, reduce inflation, and promote orderly external adjustment. Empirically, while the monetary stance is tightened, the tightening usually is not as much as programmed, leading to higher inflation than projected (Table 4).<sup>11</sup> Monetary overruns have an inflationary impact regardless of whether they stem from an expansion of net domestic assets or net foreign assets, raising questions such as how to sterilize capital inflows in market borrowers and large donor support in low-income countries. It is notable that disinflations undertaken in the context of Fund-supported programs are associated with faster growth in money demand—perhaps reflecting greater credibility of the authorities’ policies—than disinflations undertaken in the absence of a program, thus leading to lower inflation for a given rate of broad money growth.<sup>12</sup> Monetary tightening has little impact on the current

<sup>11</sup> In a few cases, programmed tightening could not be pursued because of the need to extend lender of last resort support to the banking sector.

<sup>12</sup> See Box 3 of "Macroeconomic and Structural Policies in Fund-supported Programs: Review of Experience," SM/04/406. The finding of lower inflation for a given growth of broad money holds particularly for middle-income countries, perhaps because credibility effects are of greater importance in countries with relatively more developed financial markets.

account balance, and there is no evidence that the monetary stance was set excessively tight in Fund-supported programs, leading to lower output growth.<sup>13</sup>

Table 4. Programmed and Actual Inflation, Money Growth, and NDA Contribution

	Actual Inflation 2/		Projection Error (actual minus projection)					
			Inflation		Broad money growth		NDA contribution 1/	
	t	t+1	t	t+1	t	t+1	t	t+1
Full sample	13.3	9.4	1.1	3.6	2.9	2.9	22.3	7.5
inflation at t-1 < 20%	6.47	5.57	2.1	-0.2	6.4	4.5	29.5	4.6
20% < inflation at t-1 < 50%	22.1	18.7	5.5	10.5	4.6	13.1	2.0	14.8
inflation at t-1 > 50%	34.9	17.5	1.0	6.8	5.4	9.4	-32.7	29.0

Source: “Macroeconomic and Structural Policies in Fund-Supported Programs,” Table 10.

1/ NDA contribution is defined as  $\Delta NDA/\Delta M$  where  $\Delta$  indicates level difference.

22. Fund-supported programs also usually target some **fiscal consolidation** to promote external adjustment, underpin macroeconomic stabilization, or put the public finances and debt dynamics (including prospective financial sector restructuring costs) on a more sustainable footing (see Section IV of “Macroeconomic and Structural Policies in Fund-supported Programs: Review of Experience,” SM/04/406). On average, however, fiscal adjustment falls short of program targets, due to primary and interest expenditure overruns in GRA-supported programs and a combination of primary expenditure overruns and revenue shortfalls in ESAF/PRGF-supported programs.<sup>14</sup> These slippages undermine disinflation efforts and result in higher public debt ratios than programmed, though below-the-line operations (including financial sector restructuring costs in the aftermath of banking crises) are the most important source of deviations from program-consistent projections of public debt dynamics. Aggregate fiscal adjustment undertaken in the context of Fund-supported programs contributed to external adjustment and to disinflation, but was not associated with lower output growth (Table 5).<sup>15</sup>

<sup>13</sup> As noted in paragraph 29 and Table 13 of “Macroeconomic and Structural Policies in Fund-supported Programs: Review of Experience,” SM/04/406, this holds both for the current and the one-year lagged impact of monetary policy on output growth. The Independent Evaluation Office Report on PRGF-supported programs draws similar conclusions for programs with low-income countries.

<sup>14</sup> As noted above, these findings for low-income countries pertain primarily to ESAF programs. Preliminary experience under PRGF-supported programs will be examined in forthcoming staff work.

<sup>15</sup> Since, as noted above, in GRA-supported programs, on average, the current account balance improved by more than expected, this leaves open the possibility that a looser fiscal

(continued...)

Table 5. Estimated Impact of Fiscal Adjustment on Growth and Current Account Balance

	PRGF		GRA	
	[1]	[2]	[3]	[4]
I. OUTPUT GROWTH AND FISCAL BALANCE				
Dependent variable: change in the GDP growth rate				
Regressors 1/ 2/				
Change in the fiscal balance (instrumented)	1.56 **	0.13	0.28	0.14
# observations	108	88	118	83
R squared	0.10	0.66	0.10	0.56
II. CURRENT ACCOUNT AND FISCAL BALANCE				
Dependent variable: change in the current account balance as a percent of GDP				
Regressors 1/ 2/				
Change in the fiscal balance (instrumented)	1.69 **	1.24	0.83 ***	0.91 **
# observations	108	88	118	83
R squared	0.09	0.23	0.15	0.57

Source: "Macroeconomic and Structural Policies in Fund-Supported Programs," Table 19.

1/ Regressions in columns [1] and [3] include dummies identifying types of programs. Regressions in columns [2] and [4] include these same dummies as well as the lagged dependent variable, the fiscal balance lagged, broad money growth, and terms of trade growth.

2/ Statistical significance at \*\*\* 1 percent and \*\* 5 percent level.

23. Importantly, fiscal adjustment does not seem to account for cases, particularly capital account crises, where current account adjustment was significantly sharper than expected (or growth significantly lower than expected)—suggesting that these cases were the result of an abrupt change in available external financing rather than the impact of fiscal policy on aggregate demand (Figure 3). The appropriate fiscal policy response in these cases depends on whether capital outflows stem from weaknesses in public or private sector balance sheets, and on whether they are in the nature of a supply-side or a demand-side shock.<sup>16</sup>

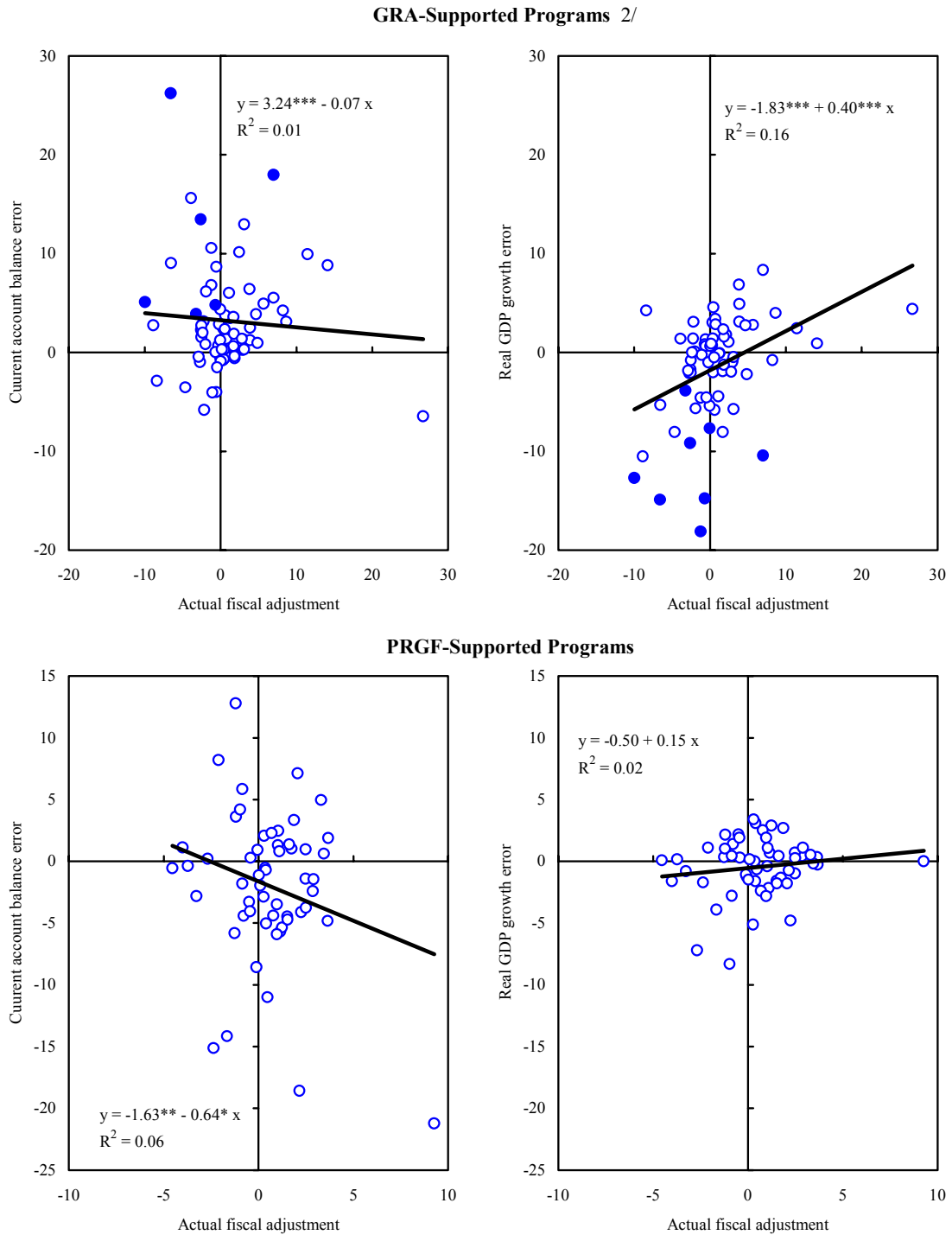
stance would have been appropriate in those cases where the main purpose of fiscal consolidation was external adjustment. On average, however, fiscal adjustment was as likely to fall short of its program target in those cases where the current account improvement was as large as (or greater than) programmed, as it was in cases where the current account improvement was smaller than targeted.

<sup>16</sup> In particular, when fiscal consolidation is not required for the sustainability of the public finances or to underpin macroeconomic stabilization, and capital outflows have a negative impact on aggregate demand, loosening fiscal policy to help support economic activity would be appropriate. For this reason, fiscal targets in several Asian crisis programs were eased successively as it became evident that activity and growth would be significantly weaker than expected. Some of these cases, however, also had to contend with a substantial increase in public debt, associated with financial sector restructuring costs. See Section IV of

(continued...)

24. Most **structural reforms** in Fund-supported programs can be classified according to their primary objectives of bolstering the management of aggregate demand, enhancing the flexibility and efficiency of the economy, or reducing vulnerabilities to future crises (such as

Figure 3. Fiscal Adjustment and Current Account and Growth Projection Errors 1/



Source: “Macroeconomic and Structural Policies in Fund-Supported Programs,” Figure 4.

1/ Errors defined as actual minus projection.

2/ Solid dots represent capital account crisis countries.

measures to strengthen supervision of the financial sector). Classifying structural measures into these three categories and using the traditional current account adjustment program as a benchmark, suggests some alignment between the structural policy content of programs and the broad program objectives. In particular, relative to this benchmark, programs in transition economies and those in low-income countries have a slightly larger proportion of measures oriented towards enhancing economic flexibility and efficiency, while capital account crisis programs have a significantly larger proportion oriented towards reducing vulnerabilities (Figure 4). Though it is difficult to establish the impact of individual structural reforms, the evidence suggests that fiscal structural measures have been useful in underpinning fiscal adjustment through an increase in revenues (set of regressions [1] and [2] in Table 6). There is also a positive association between economic efficiency-enhancing measures in Fund-supported programs and improved medium-term growth performance (Table 6, set of regressions [3]).

Table 6. Estimated Impact of Structural Measures on Fiscal Adjustment and Growth 1/

Dependent variables:	Actual adjustment in the fiscal balance [1]		Actual adjustment in government revenue [2]		Average change in real GDP growth [3]	
	All programs	Non-stoppage programs 2/	All programs	Non-stoppage programs 2/	All programs	Non-stoppage programs 2/
Regressors 3/						
Number of fiscal measures related to:						
a) the fiscal balance (rev. and exp. measures)	0.11 *	0.14 *				
b) revenue measures only			0.16 **	0.32 ***		
c) growth-related structural measures					0.07 **	0.10 *
# observations/programs	100	67	100	67	100	63
R <sup>2</sup>	0.11	0.12	0.08	0.16	0.40	0.32

Source: Background paper "Macroeconomic and Structural Policies in Fund-Supported Programs," Tables 20 and 21.

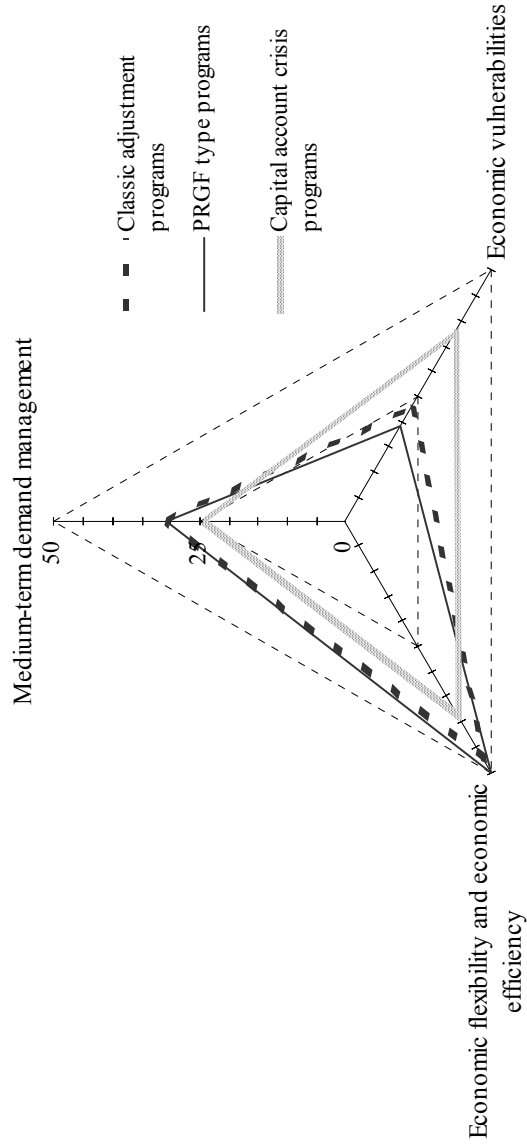
1/ Dummy variables for different program types were added to all regressions; also, in growth regressions, some macro variables were included. The number of measures is normalized by the duration of the program. Assessment based on average t:t+2, where t is the year the program is approved.

2/ A stoppage program is defined as a program that terminates earlier than was originally anticipated.

3/ Statistical significance at \*\*\* 1 percent, \*\* 5 percent, and \* 10 percent level.

Figure 4: Distribution of Structural Conditionality in Fund-Supported Programs

(In percent of total number of conditions per program year; average 1995-2000)



Source: MONA database.

## V. CONCLUSIONS AND ISSUES FOR DISCUSSION

### A. Conclusions

25. Several broad themes emerge from this review.
26. First, **Fund-supported programs have evolved from the classic current account adjustment paradigm and are differentiated according to their circumstances and objectives.** This differentiation should be recognized clearly in evaluating their results.
27. Second, **macroeconomic and structural policies are generally formulated in line with program objectives and country circumstances.**
- Disinflations have been successful under both pegged and more flexible exchange rate regimes, with GRA-supported programs using the former and low-income countries relying on the latter. A key determinant of success is whether the supporting fiscal adjustment was undertaken.
  - Monetary overruns—whether reflecting unexpected expansion of net domestic assets or of net foreign assets—are associated with inflation targets being missed, underscoring the need for a nominal anchor, and the possible need to sterilize the impact of capital inflows or large amounts of donor support. On average, in the programs under review, tightened monetary policies were not systematically associated with slower output growth (or with lower real GDP growth than projected).
  - Fiscal adjustment is targeted to underpin macroeconomic stabilization, promote external adjustment, and to put the public finances on a more sustainable footing—fiscal policy slippages undermine these efforts. On average, in the programs under review, fiscal tightening was not associated with lower output growth or with unexpectedly sharp adjustment of the current account balance.
  - Both monetary and fiscal policies should underpin stabilization and adjustment efforts with the availability of instruments and the relative sizes of their direct effects on targets determining the appropriate instrument assignment in individual programs. On average, the empirical findings suggest that monetary policy might be assigned to achieving the inflation target and fiscal policy the external target.
  - Structural measures have been important in underpinning macroeconomic policies and in some cases in supporting long-term growth. However, the role of structural reforms in restoring confidence is difficult to quantify and warrants further scrutiny.
28. Third, **external adjustment in middle-income countries is generally geared towards achieving medium-term debt sustainability, but in a number of cases was sharper and more abrupt than expected, or than would be indicated by such**



**considerations.** This underscores the need for better understanding, including through the further development of analytical tools, of the determinants of capital flows and their implications for the efficacy of policy instruments, as well as for stronger macroeconomic policies and structural measures to elicit the anticipated market response. It may also point to the need for greater official financing to help limit downward exchange pressures and the attendant balance sheet effects in cases where capital outflows are forcing exceptionally large external adjustment on the economy and a collapse of activity—though such financing may also facilitate a faster exit of private capital if supporting policies are not in place. Such cases may also merit further exploration of the benefits and risks of imposing capital controls or of other forms of private sector involvement to help limit the impact of capital outflows on the economy.

29. Fourth, **in low-income countries, the objectives are often to place the economy on a more sustainable long-term path for growth and the balance of payments, rather than an immediate improvement of the current account balance.** Sustained higher output growth rates, based in part on improved macroeconomic policies, suggest that national authorities have been broadly successful in limiting their recourse to inflationary forms of budgetary finance, while protecting—and increasing—priority expenditures. At the same time, both in low-income and middle-income countries, medium-term growth projections exhibit systematic biases, pointing to a need for a better understanding of the determinants of growth, including the role of structural reforms and institutions, as well as more disciplined projections, inter alia to provide more reliable debt sustainability assessments. Moreover, the behavior of debt dynamics of low-income countries over the past decade (abstracting from explicit debt relief) raises questions of whether the improved growth performance and progress towards meeting the Millennium Development Goals can be maintained without either an unsustainable build up of debt, future debt relief, or greater grant financing.

## **B. Issues for Discussion**

30. Directors may wish to focus their interventions on the following issues:

- Do Directors agree with the broad characterization of the different types of Fund-supported programs and their objectives developed in the paper?
- How do Directors view the different patterns of external adjustment? In particular, what are the implications of cases in GRA-supported programs where adjustment was sharper and more abrupt than anticipated? What are the implications of the relative lack of current account adjustment in low-income countries?
- Directors may wish to comment on the analytical frameworks employed in program design. What do they see as the main strengths? In what areas do they see a need for further development? In particular, is there a need to strengthen the analytical effort to understand capital flows and the factors underlying output growth?

- What lessons do Directors draw from the experience with disinflation in Fund-supported programs? Do Directors see scope for more active use of the exchange rate regime for helping to achieve program objectives?
- How do Directors see the role of fiscal policy in Fund-supported programs? Do they see the degree of fiscal tightening envisaged in Fund programs as broadly appropriate? And do they agree that countries need to make greater efforts to achieve lasting fiscal consolidation, in line with program targets, through high-quality medium-term measures?
- Directors may wish to comment on the structural content of Fund-supported programs. What lessons would they like to see carried forward into the forthcoming review of application of the conditionality guidelines?
- Since the Fund's engagement with low-income countries underwent important changes with the shift from the Enhanced Structural Adjustment Facility to the Poverty Reduction and Growth Facility, are there specific issues Directors would like addressed in the forthcoming staff work on the design of PRGF-supported programs?