IMF approach to economic stabilization: does one size fit all?

Particularly in recent years, the IMF’s quantitative approach to economic stabilization—and the conditionality associated with it—has been the subject of considerable controversy. Because IMF-supported programs are seen as applying a similar framework to a wide array of cases, critics accuse the IMF of being rigid and unresponsive to the particular situations of different members and to changing conditions. Also, because virtually all IMF-supported programs include quantitative performance criteria for fiscal and monetary policy, critics claim the IMF approach is based on outmoded economic models and principles that fail to take account of the complexity and uncertainty of key macroeconomic relationships.

At a recent IMF Institute seminar, Michael Mussa, IMF Economic Counselor and Director of the Research Department, and Miguel Savastano, Deputy Chief of the Commodities and Special Issues Division in the Research Department, addressed these and other misconceptions about how an IMF-supported program is developed and how the approach operates in reality. The lecture was based on a paper presented at the NBER Macroeconomics Annual Conference, March 26–27, in Cambridge, Massachusetts. A revised version will be available shortly as an IMF Working Paper.

Building an IMF-supported program

Much of the misconception about the inflexibility and dogmatism ascribed to IMF programs derives from the superficial similarity that the programs exhibit in terms of quantitative performance criteria for fiscal and monetary policies. But, as Miguel Savastano explained, IMF programs are, in practice, quite flexible. They can evolve along many potential pathways.

Preparing for EU entry

Choice of exchange rate system poses dilemmas for advanced Central and Eastern European countries

As the more advanced Central and Eastern European countries prepare for European Union (EU) membership, the choice of an appropriate exchange rate policy becomes more complicated. Increased capital mobility imposes added constraints on fixed exchange rate regimes, while the real appreciation of these currencies makes the coexistence of low inflation and exchange rate stability problematic. Pegging to the new euro offers an attractive alternative, but these countries might also consider the feasibility of another monetary framework—inflation targeting. In a new IMF Policy Discussion Paper, Paul R. Masson, Senior Advisor in the IMF’s Research Department, weighs the respective merits of these monetary and exchange rate policy options. He argues that a hybrid system holds real merit and that the European Union should avoid insisting on unduly rigid exchange rate arrangements (ERM 2) for prospective members of its Economic and Monetary Union (EMU).

Performance to date

After sharp output declines, the transition economies of Central and Eastern Europe generally began to register positive growth rates by 1994. Inflation rates fell dramatically in all but Albania, Bulgaria, and Romania. High per capita growth rates and moderating inflation levels have thus begun to put most of the region on a path to convergence with the EU.

(Continued on page 262)
The process involves two main parties: a country facing external payments problems rooted in macroeconomic or structural imbalances, or both, and the IMF, with its mandate to offer financial and technical assistance to members that undertake economic adjustment. From the country’s side, the process is delimited by the authorities’ capacity and willingness to implement the measures needed to resolve their external payments problems. From the IMF’s side, the process is governed by IMF conditionality—that is, policies and procedures that regulate access to, and uses of, IMF financing.

The process, Savastano explained, comprises six broadly defined phases: inception, blueprint, negotiation, approval, monitoring, and completion. All six phases, he emphasized, leave room for reassessment and revisions.

A typical IMF program begins with an explicit request from a member. Discussions with staff or management sometimes precede a request, and in the regular process of IMF surveillance, staff or management may impress upon the authorities the need to adopt measures to redress actual or potential imbalances. But the decision to request support rests with the country’s authorities. Often, Savastano said, authorities delay taking the requisite adjustment measures, and domestic and external imbalances worsen substantially before IMF assistance is sought. As a consequence, IMF programs often start with crisis or near-crisis conditions in the balance of payments, requiring rapid—and often painful and unpopular—policy responses.

Once the request has been received, IMF staff prepare a blueprint of the adjustment program that contains a preliminary assessment of the underlying causes of the imbalances that have triggered the deterioration of the country’s balance of payments, evaluates the authorities’ response to the unfolding crisis, and outlines the central elements of an adjustment program that could warrant financial support from the IMF. This blueprint is the basis for negotiations with the authorities. When agreement is reached—often after hard bargaining over key elements of the program—the arrangement has to be cleared by IMF management. IMF staff then prepare a “staff report”—an account of discussions with the authorities and the policy understandings reached with them. The report also contains a detailed macroeconomic framework, with a full set of projections of the country’s fiscal, monetary, and balance of payments accounts covering the first full year under the IMF arrangement and a medium-term scenario showing progress over five years. This staff report is submitted to IMF management, which then recommends approval by the IMF Executive Board.

Although the Board rarely withholds its approval of a program that has been cleared by management, Savastano stressed that the approval process is by no means a rubber stamp. Executive Directors representing the 182 member countries could reject the proposed program. This provides an incentive for IMF management and staff to take to the Board only programs they expect will command the Board’s support. Board approval triggers release of the first disbursement of an IMF loan.

Thereafter, disbursements proceed automatically if all the performance clauses are met as initially specified. In reality, however, this rarely happens all the way through an arrangement. Instead, if various conditions are not met, deviations may be accommodated with “waivers,” projections may be revised, and numerical targets changed. For this reason, the monitoring that follows Board approval is normally the longest and most important phase of IMF-supported programs. Savastano said, covering a one-to-three-year period when the bulk of the IMF loan is scheduled to be disbursed. Monitoring involves much more than a mechanical review of compliance with numerical and structural performance targets. Rather, it entails a continuous assessment by the staff of developments in the borrowing country and of their implications for attaining the program’s goals. It requires keeping track of the timely implementation of the policy measures agreed to by the authorities and the behavior of variables beyond the authorities’ control that affect the macroeconomic projections on which the arrangement was based.

Formally, IMF programs are completed when the borrowing country becomes eligible for the last installment of the IMF loan. But, Savastano said, completion of an IMF arrangement does not usually imply that the numerical targets for the main economic objectives originally approved by the Executive Board were met. Rather, completion implies that, in the IMF’s view, the country made substantial and satisfactory progress toward the primary objectives of its adjustment program and that the authorities’ policies were broadly in line with the (often revised) understandings reached with the IMF during the life of the arrangement.

Economics of IMF-supported programs

Despite differences dictated by country-specific circumstances, adjustment blueprints prepared by IMF staff have important common elements, Michael Mussa said. At their core, IMF-supported programs emphasize a member country’s actions in three areas:
• Sustainable external financing. Because the external financing constraint is often severe, IMF-supported programs aim at restoring the country’s access to foreign financing as rapidly as possible. The IMF staff produce “reasonable” estimates of net financing flows from official and private sources and assume a coordinating role with the country’s creditors in various forums.

• Demand-restraining measures. These macroeconomic policies seek to restore and preserve viable equilibrium between expenditure and income in the program country. They normally contemplate a tightening of fiscal and monetary policies by an amount deemed necessary to bring aggregate demand in line with the staff’s estimates of prospective output and available external financing.

• Structural reforms. These comprise policies aimed at reducing government-imposed distortions and other structural and institutional rigidities that impair efficient allocation of resources. As Mussa noted, the structural reform component differs from other core components in that its application varies more widely across member countries, depending on level of income and stage of development. In the Asian crisis countries, the structural reform content of IMF-supported programs focused on the financial sector; in the transition economies, privatization and the building of basic institutions of a market economy were key structural priorities.

**Criticisms of the IMF approach**

Much of the criticism of the IMF approach is fueled by the disparity between its three core elements and what virtually everyone sees as the desirable objectives of economic policy. These broader objectives, Mussa said, include attaining high growth and low inflation, alleviating poverty, and ensuring an adequate supply of public goods and are certainly relevant for program design in terms of what should be achieved in the medium and long term. But it cannot reasonably be argued that the immediate effect of IMF-supported programs is always positive in all the desirable dimensions of economic policy and performance. The IMF, Mussa said, is basically like a doctor who administers chemotherapy to a patient suffering from cancer; the objective is to cure the patient, but the immediate effects can be painful, costly, and distressing. Economic adjustment and reform are costly and difficult endeavors, he observed, especially in the crisis or near-crisis conditions in which countries normally come to the IMF to request support. In those circumstances, there are no quick and easy solutions that will make everyone feel a whole lot better—both immediately and forever after.

Another strand of criticism questions whether the intellectual doctrine underlying IMF-supported programs is sufficiently responsive to changing conditions in the global economy and whether the IMF approach to economic stabilization is too rigid and dogmatic to accommodate the differing and changing circumstances of member countries. This impression, Mussa acknowledged, is not entirely without foundation. There is a legal framework for IMF operations, based on the Articles of Agreement and established policies of the Executive Board, which imposes constraints on what is and what is not acceptable in IMF arrangements. All of this imparts a degree of conservatism to the IMF approach, which is both bad and good: bad because it implies a lesser degree of flexibility in IMF conditionality than would be desirable in some ideal world; good because IMF members that may wish to make use of the IMF’s resources or members that may be called upon to supply these resources need to have a reasonable understanding of the circumstances, conditions, and terms under which IMF financing may be made available. There must be reasonable assurance of equality of treatment; members encountering similar balance of payments problems and willing to undertake adjustment measures should have similar access to IMF resources.

The general impression of inflexibility in the IMF’s actions, policies, and doctrine, however, seriously exaggerated, Mussa said. All arrangements contain numerical targets for output growth, the inflation rate, and the current account for one to three years ahead. And all contain quantitative performance criteria for fiscal and monetary policy variables—usually for quarterly “test dates” covering the first 6 to 12 months of the arrangement. Many mistakenly believe, however, that the IMF expects countries to adhere to an inflexible standard: if the quantitative criteria are met, the program is on track and disbursements of IMF resources continue; if the criteria are not met, the program is off track, and disbursements cease. The possibility of waivers or modifications of performance criteria or of revisions and renegotiations of the adjustment blueprint to strengthen policy actions and minimize the interruptions to the flow of IMF disbursements is not normally perceived—or generally publicized by the IMF—as an integral part of IMF arrangements. But the member and the IMF fully understand these possibilities.

To ensure minimal consistency among the numerical performance criteria for fiscal, monetary, and external debt policy contained in every IMF arrangement, the IMF employs a quantitative framework, called “financial programming.” Financial programming is not a formal economic model. Rather, it is a simple framework that combines basic macroeco-
nomic identities and balance sheet constraints that the staff use to gauge the size of the adjustment required from a country experiencing balance of payments difficulties, given assumptions about prospective external financing, output, growth, inflation, and exchange rates.

In view of the errors that inevitably infect this process, the usefulness of financial programming depends not so much on the accuracy of its forecasts as on the flexibility for revising the main numerical targets as new information becomes available. In fact, all performance criteria in IMF-supported programs are conditional on assumptions about the behavior of a number of variables, and these assumptions frequently change over the course of the program as conditions change. The scope that this “open-loop” feature of the approach affords for exercising judgment when a country’s performance under an IMF arrangement is assessed explains why IMF financial programming has proved so resilient. The superficial uniformity that financial programming imparts to all IMF arrangements is a far cry from the view that portrays it as a standard and rigid economic model that is mechanically applied to all program countries.

Flexibility within a structure
Although the IMF maintains a general policy of uniformity of treatment of its members, IMF-supported programs are far from uniform. Mussa and Savastano concluded. The reason is simply that IMF members have quite different economies, face different problems necessitating adjustments in their balance of payments, and have different policy regimes and varying ability and willingness to implement policies to correct external payment imbalances and their underlying causes. IMF programs need to be, and are, flexible enough to address those problems within a general framework that has a quantitative dimension and imposes sufficient consistency and discipline on all users of IMF resources.

ESAF studies
Review of IMF experience cites high cost of interruptions in structural adjustment process

The IMF’s traditional lending was designed to help countries weather short-term balance of payments crises. The severity of the problems faced by poor and often highly indebted countries in the 1980s, however, prompted the IMF to create longer-term and more concessional financing arrangements. The Structural Adjustment Facility (SAF) established in 1986 and the Enhanced Structural Adjustment Facility (ESAF) in 1987 were designed to help these countries undertake extensive reforms of their economies as well as macroeconomic adjustment.

By the end of 1994, 36 countries had drawn on the ESAF in support of 68 multiyear programs. This structural adjustment lending has been the subject of both periodic evaluation by IMF staff and a recent external evaluation by independent experts. Economic Adjustment and Reform in Low-Income Countries, edited by Hugh Bredenkamp and Susan Schadler, is a collection of IMF staff studies carried out for the 1997 internal review of the ESAF. The book offers a wide-ranging examination of ESAF-related issues, providing staff insights on methodological issues, starting conditions in program countries, policy steps, growth records, inflation performance, progress toward external viability, achievements and disappointments in structural reform, and program interruptions.

Background
The evaluation of structural adjustment efforts has been and remains a controversial topic. The IMF study assumes that the basic strategy for growth and adjustment that underlies the ESAF is the right one. It focuses on evaluating how well that strategy is reflected in the design and execution of the programs, how much progress was made in strengthening economic performance, and in what respects the strategy could be improved. The study does not assume that ESAF support has necessarily caused certain policies or outcomes, but it does seek to gauge how strong the ESAF-supported policies and outcomes were.

Countries with ESAF-supported programs tended to suffer from entrenched structural defects rather than acute, transitory macroeconomic instability. These weaknesses, the study finds, were in part the legacy of inward-looking strategies in the 1960s and 1970s. Controls and economic distortions during that period had stifled saving, investment, and growth. Over time, the government and external accounts of these countries fell into chronic imbalance, which in turn fueled severe debt burdens and often high inflation.

To reverse these trends and to lay the groundwork for a more dynamic market economy, the ESAF-supported efforts sought to reduce macroeconomic imbalances, promote saving, liberalize and open up markets, strengthen institutions, and mobilize external financial assistance on appropriate terms. For much of the period under review, these initiatives were implemented under adverse conditions. The late 1980s and early 1990s were notable for a sharp deterioration in the terms of trade and frequent disruptions occasioned by
civil strife and natural disasters. Global conditions generally improved after 1993 and likely contributed to the stronger growth witnessed in these countries in 1994–96.

**Policy record**

The record of policy reforms and adjustment that ESAF countries accumulated from the mid-1980s through 1995 tells a story, the IMF study observes, “of qualified progress, with consistent but often hesitant advances in most areas of economic policy.” Despite unmet goals in some areas and in some countries, all ESAF program countries managed to create more flexible and market-oriented economies and appeared to strengthen their adjustment efforts in the early 1990s.

These countries recorded their clearest success in dismantling state control over exchange and trade systems, price setting, and marketing arrangements. Liberalized exchange markets helped correct widespread and often severe currency overvaluations, thus promoting greater trade openness. ESAF countries also made modest progress in reorienting government spending toward investments in human capital development (notably in health and education) and in infrastructure. In public enterprise reform and bank restructuring, however, slippages in implementation were commonplace and overall progress was limited.

On the macroeconomic front, instances of high inflation were tackled effectively, but many countries failed to reach single-digit inflation. Efforts to halve budget deficits typically achieved only 50 percent of their goal. The large portion of budget resources absorbed by inefficient public enterprises and the meager headway in civil service reform are key impediments to adjustment, according to the study.

**Growth, inflation, and external viability**

Ultimately, the goal for ESAF program countries was to sustain economic growth and improve living standards. Average real per capita growth in these economies turned modestly positive in the early 1990s—a distinct contrast to their negative growth in the 1980s, which had left them out of step with other developing countries. By 1993, the ESAF program countries had closed this “growth gap.”

The IMF study, which dissects the growth record of the ESAF countries, found roughly half of the improvement attributable to strengthened macroeconomic and structural policies. Comparatively weak growth performance in African countries can be linked to high population growth in the region and insufficient investment in human capital, according to the analysis. This finding reinforces the need to make room for efficient social spending in ESAF-supported programs and to ensure that such spending is protected.

Growth was also found to be significantly and inversely related to inflation, leading the authors of the staff study to take a close look at the “decisively mixed record” of ESAF countries in reaching single-digit inflation. Higher inflation does impair growth, suggesting that the failure to reduce inflation to lower levels has significant economic costs.

ESAF countries may have postponed disinflation measures, fearing short-term output costs and loss of seigniorage revenue for the budget. But growth, according to the staff analysis, typically began to rise immediately in ESAF countries as they embarked on adjustment, even in those that achieved significant disinflation. The study concludes that fears of output loss were misplaced; growth could be achieved when demand restraint is combined with supply-side reforms. But the loss of seigniorage was a genuine concern; disinflation therefore needs to be accompanied by durable tax and expenditure reform.

The study also suggests that ESAF-supported programs were insufficiently ambitious in tightening fiscal policy and lacked an effective nominal anchor for inflation. A reliance on credit ceilings had not been able to stem monetary expansion. The situation could be remedied, according to the study, by stronger fiscal programs backed up by nominal anchors in the form of money ceilings, exchange rate pegs, or formal inflation targets.

In addition to growth, ESAF countries sought to reduce their debt burdens and their degree of dependence on debt rescheduling and official balance of payments support. Approximately three-fourths of ESAF users moved closer to external viability, but the gains were generally modest. Performances differed across countries—largely because of variations in the pace of economic growth. The finding suggests that growth and external viability are complementary objectives and that policies that advance one goal will contribute to both. Less reassuring, according to the analysis, is a finding that access to external financing (reflected in the pace of debt accumulation) is not closely linked to a country’s compliance with its IMF-supported program.

**Obstacles and interruptions**

Many ESAF countries have had persistent problems in improving the financial position and efficiency of public enterprises and addressing weaknesses in bank portfolios and practices. The key reason for the slow progress made in public enterprise reform is a failure to impose effective budget constraints and management accountability. According to the staff study, more extensive privatization may be the only solution to these problems in many countries. Programs have been moving in this direction in recent years, but the study cautions that if governments wish to exert the necessary degree of financial discipline on public enterprises, they will need “far better information about enterprise finances than most currently have.” The study recommends that higher priority be given to compiling ade-
Central and Eastern European policy options

(Continued from front page)

But this common macro-economic performance has been associated with a wide range of exchange rate arrangements (see table, page 263) and with a shared feature—a trend real appreciation of currencies, measured on the basis of relative consumer price indexes. Such an appreciation, Masson explains, is consistent with real wage increases brought on by rapid productivity growth, but the appreciation experienced in these countries is not necessarily the result of faster productivity growth in traded sectors.

Another distinguishing feature of the region's transition process has been the reorientation of trade from the former Council of Mutual Economic Assistance (CMEA) markets to the West. A general liberalization of trade and an exploitation of comparative advantage have been responsible for a significant portion of the shift, but Association Agreements with the European Union, which eliminated tariffs and import restrictions on all but agricultural products, have also helped speed a reshaping of the composition of trade. By 1997, 58 percent of all exports from Central and Eastern Europe were going to the European Union.

Implications of EMU

The power and potential of the euro offers non-EU members an attractive currency peg. As Masson observes, the euro represents a much larger proportion of trade and capital flows than, say, the deutsche mark and is based on a deeper and more liquid capital market. For countries contemplating accession to the EMU, the euro will have an even more direct impact on their monetary policy options. New EU members are expected to become part of the EMU (there will be no more opt-out clauses, such as those used by Denmark and the United Kingdom), and transitional periods,
while in theory possible, are in practice unlikely to be granted.

Masson notes, however, that new EU entrants would be unlikely to satisfy Maastricht convergence criteria immediately. Their fiscal balances, for example, are currently in excess of 3 percent of GDP, if quasi-fiscal deficits are incorporated into budgets. Inflation in the possible Central and Eastern European entrants is more than 1.5 percentage points above that of the best-performing EU countries.

With the creation of the euro, an asymmetric system—an ERM2—has been established for EU countries that do not yet participate in EMU but are preparing to do so. Under this preparatory arrangement, non-EMU central banks have the primary responsibility for maintaining the stability of their currencies relative to the euro. Central and Eastern European countries that accede to EU membership would at some stage be expected to join the ERM2. As countries move toward EU accession, it is thus quite likely that they will be subject to greater pressure to limit their exchange rate fluctuation relative to the euro.

Is an early euro peg desirable? The countries of Central and Eastern Europe have essentially three exchange rate options: a currency board; a band around an adjustable central parity; and a more flexible exchange rate (crawling band or managed float), perhaps augmented by another nominal anchor for monetary policy. For these countries, the selection of the appropriate policy will be made more complex by the knowledge that whatever is chosen will represent, ideally, a transitional strategy. The ultimate goal for most of these countries remains EMU membership.

Currency boards. The suitability of a currency board arrangement is determined by weighing possible gains (the credibility that will come from tying the hands of the monetary authorities) against possible costs (the likelihood that countries with a currency board will be vulnerable to different shocks than the country whose currency is being used). A simple measure of how exposed these countries might be to different real shocks in the European Union can be derived, Masson notes, by comparing production structures. Available data provide only a rough division of the region’s GDP into industry, agriculture, and other (mainly services). It is clear that agriculture generally constitutes a greater share, and services a smaller share, of overall GDP in Central and Eastern Europe, but, to date, studies have failed to identify obvious potential sources of asymmetric shocks. It is also anticipated that as the economies of Central and Eastern Europe evolve, they will more closely resemble those of Western Europe.

Adjustable pegs. The strength of currency board arrangements is that their transparency and commitment to conservative financial policies leave them relatively unsusceptible to speculative pressures. Adjustment pegs are especially vulnerable to speculative pressures, and the marked expansion of capital flows from industrial to developing and transition economies has made the exchange rate commitments of these countries that much more fragile.

Central and Eastern Europe: exchange rate regimes

<table>
<thead>
<tr>
<th>Country</th>
<th>Exchange rate regime</th>
<th>Basket/Target</th>
<th>Fluctuation band</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albania</td>
<td>Independent floating</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bulgaria</td>
<td>Currency board</td>
<td>DM</td>
<td>0 percent</td>
</tr>
<tr>
<td>Croatia</td>
<td>Managed floating</td>
<td>De facto narrow target band vis-à-vis DM</td>
<td></td>
</tr>
<tr>
<td>Czech Republic</td>
<td>Managed floating</td>
<td>DM</td>
<td>0 percent</td>
</tr>
<tr>
<td>Estonia</td>
<td>Currency board</td>
<td>DM</td>
<td>±2.25 percent</td>
</tr>
<tr>
<td>Hungary</td>
<td>Crawling peg1</td>
<td>Basket: DM (70 percent) U$ (30 percent)</td>
<td></td>
</tr>
<tr>
<td>Latvia</td>
<td>Fixed peg</td>
<td>SDR</td>
<td>0 percent</td>
</tr>
<tr>
<td>Lithuania</td>
<td>Currency board</td>
<td>U$</td>
<td>0 percent</td>
</tr>
<tr>
<td>FYR Macedonia</td>
<td>Managed floating</td>
<td>De facto peg to DM</td>
<td>±7.00 percent</td>
</tr>
<tr>
<td>Poland</td>
<td>Crawling peg1</td>
<td>Basket: U$ (45 percent) DM (35 percent), £stg. (10 percent) FF (5 percent), SWF (5 percent)</td>
<td></td>
</tr>
<tr>
<td>Romania</td>
<td>Independent floating</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slovak Republic</td>
<td>Independent floating</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slovenia</td>
<td>Managed floating</td>
<td>De facto shadowing of DM, combined with real exchange rate rule</td>
<td></td>
</tr>
</tbody>
</table>

1Midpoint of band is devalued monthly by 0.8 percent.
2Midpoint of band is devalued monthly by 0.65 percent.

Data: IMF, Monetary and Exchange Rate Policy of Transition Economies of Central and Eastern Europe after the Launch of EMU.
The inability of inflation targeting to deliver inflation close to its targeted value would, in effect, damage the credibility of monetary policy.

**Inflation targeting**

With the susceptibility of adjustable pegs to speculative attack and the relative costliness of currency board arrangements as a transitional arrangement, Masson suggests considering greater exchange rate flexibility supplemented by a monetary policy anchor. Inflation targeting—a monetary policy framework already adopted by a half-dozen industrial countries—would not entail a defense against speculative attacks, and its transparency could boost the credibility of macroeconomic policy. An added advantage is that inflation targeting also addresses one of the EMU’s chief convergence criteria.

But inflation targeting, he emphasizes, is more than a vague commitment to bringing inflation levels down. To be effective, inflation targeting needs “freedom to carry out an independent monetary policy and a quantitative framework linking policy instruments to inflation.” Many developing countries rely heavily on seigniorage as a source of revenue, so that budgetary deficits dictate monetary growth. Without developed domestic financial markets, central banks thus function as the sole source of deficit financing, leaving no room to effectively pursue other objectives. Central banks need to be freed of this role in order to target low inflation effectively. Also, effective inflation targeting depends on the ability to forecast the effects of policy instruments at a one- or two-year horizon.

In the Central and Eastern European countries, estimated seigniorage has dropped as dramatically as inflation and, budget deficits are reasonably well contained in all but a few countries. In terms of central bank independence, Hungary ranks with some of the successful practitioners of inflation targeting, and recent legislative changes in other countries have improved the legal, if not always the practical, independence of their central banks.

What is more problematic in the region, Masson finds, is the political consensus in favor of low inflation and the existence of a stable and predictable relationship linking monetary policy instruments to future inflation. Some countries may give higher priority to objectives other than low inflation, and price stability, in any case, may take on different meanings in different countries. With regard to the need for stable and predictable relationships, it is clear that structural changes will have an impact on the stability of forecasts. Transition economies, Masson explains, are likely to face large relative price movements, which, in turn, will lead to greater variability in inflation levels than is common among advanced economies. The inability of inflation targeting to deliver inflation close to its targeted value would, in effect, damage the credibility of monetary policy.

In sum, Masson finds, some weight should be given to attaining low inflation, but in the absence of the necessary tools, it would be unwise to make inflation targeting the centerpiece of monetary policy. Inflation targeting may grow more important as inflation levels decline and experience increases, but much will depend on the priority the European Union gives to inflation performance in considering countries for EMU membership. According to Masson, two types of transition to EMU are conceivable—one that emphasizes low inflation and another in which a close link with the euro is deemed sufficient proof (even if inflation is significantly higher than in the European Union). “It is important to choose between them,” he cautions, if the European Union is to avoid setting up impossible criteria for the acceding transition countries. Failing to do so might inadvertently lengthen the transition period to the European Union, forcing these countries to settle into industrial country levels of productivity growth before they can formally enter the euro zone.

As the advanced countries of Central and Eastern Europe prepare for EU accession, it would be wise, Masson suggests, to exercise some caution about attempting to peg to or shadow the euro in the short run. Given that the prerequisites for implementing inflation targeting are also not yet in place in the region, a more practical solution may be a hybrid system with some weight given to both inflation and the exchange rate. The European Union should also, he counsels, clearly specify that it is not necessary for these countries to achieve both exchange rate and price level stability before becoming EMU members.
Following are excerpts of recent IMF press releases. Full texts are available on the IMF’s website (www.imf.org) under “news” or on request from the IMF’s Public Affairs Division (fax: (202) 623-6278).

Georgia: ESAF
The IMF approved an augmentation of SDR 5.6 million (about $7.5 million) and an extension to August 13, 1999, of Georgia’s Enhanced Structural Adjustment Facility (ESAF) that was approved on February 28, 1996, in an amount equivalent to SDR 166.5 million (about $225.1 million). (See Press Release No. 96/7, IMF Survey, March 19, 1996, page 97.) The augmentation, which brings total financial support to SDR 172.1 million (about $232.6 million), is to assist in offsetting the adverse impact on the balance of payments stemming from the Russian crisis. The decision was made in conjunction with completion of the midterm review, which triggers release of an amount equivalent to SDR 33.3 million (about $45.0 million) on August 6, 1999.

Excerpts from IMF Deputy Managing Director Shigemitsu Sugisaki’s statement on the Executive Board discussion follow.

“Executive Directors recognized the very difficult challenges facing the Georgian authorities and their efforts to strengthen policies. Nevertheless, they considered that greater adjustment efforts were indispensable. They stressed that, to achieve lasting financial stability, determined efforts were needed to bring revenues to a level at which expenditure commitments could be covered.

“Directors supported the authorities’ commitment to a prudent monetary policy and considered that their adoption of a floating exchange rate regime had been appropriate. They welcomed the Bank of Georgia’s efforts to strengthen the banking system.

“Directors stressed the importance of an orderly servicing of Georgia’s substantial external debt. Directors welcomed the authorities’ recognition of the need to improve governance and the recent progress in judicial reform.”

Program summary
Georgia faced adverse internal and external factors that have made implementation of its economic program more difficult over the past year. The Russian crisis had a direct adverse impact on the economy and magnified large underlying internal and external imbalances. Real GDP growth in 1998 was estimated at 2.9 percent, compared with the program target of 10 percent. The Russian crisis had a marked impact on the tradable goods sector and disrupted the payment system between the two countries.

Overall price and output developments in 1998 were favorable, notwithstanding the negative effects of the Russian

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<tbody>
<tr>
<td>GDP at constant prices</td>
<td>2.4</td>
<td>10.5</td>
<td>11.0</td>
<td>10.0</td>
<td>2.9</td>
</tr>
<tr>
<td>Consumer price index</td>
<td>57.4</td>
<td>13.7</td>
<td>7.3</td>
<td>6.0</td>
<td>10.6</td>
</tr>
<tr>
<td>Fiscal balance (commitment basis)</td>
<td>-5.3</td>
<td>-4.9</td>
<td>-4.6</td>
<td>-2.0</td>
<td>-4.3</td>
</tr>
<tr>
<td>Gross international reserves</td>
<td>2.7</td>
<td>2.5</td>
<td>2.0</td>
<td>2.3</td>
<td>1.2</td>
</tr>
<tr>
<td>(months of imports of goods)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.5</td>
</tr>
</tbody>
</table>

1Actual.
2Based on the revised program discussed with the authorities in June 1999.
Data: Georgian authorities and IMF staff estimates

Notes: PINs are IMF Executive Board assessments of members’ economic prospects and policies issued following Article IV consultations—with the consent of the member—with background on the members’ economies; and following policy discussions in the Executive Board at the decision of the Board.

Letters of Intent and Memorandums of Economic and Financial Policies are prepared by a member country and describe the policies that the country intends to implement in the context of its request for financial support from the IMF.

Policy Framework Papers are prepared by the member country in collaboration with the staffs of the IMF and the World Bank. These documents, which are updated annually, describe the authorities’ economic objectives and macroeconomic and structural policies for three-year adjustment programs supported by Enhanced Structural Adjustment Facility resources.
Zimbabwe: Stand-By

The IMF approved a Stand-By credit for Zimbabwe amounting to SDR 141.4 million (about $193 million), which is designed to support the nation's economic program over the next 14 months. Of the total, SDR 17.7 million (about $24 million) is available immediately. A further SDR 7.1 million (about $9.7 million) will be available after August 16. Subsequent quarterly disbursements will be made available on the basis of Zimbabwe's meeting performance targets and the completion of program reviews.

Projected growth in real GDP is 1.2 percent in 1999, which reflects a significant downward revision from previous expectations because of lower output in the mining and manufacturing sectors. The government's inflation target for end-1999 is 30 percent, which is to be achieved by containing money supply growth. Excluding grants, Zimbabwe's fiscal deficit is expected to reach levels around 5.3 percent of GDP.

Excerpts from IMF Deputy Managing Director Shigemitsu Sugisaki's statement on the Executive Board discussion follow.

*Directors emphasized the importance of macroeconomic stabilization and economic reforms. They underscored that the immediate challenge is to stabilize the exchange rate and bring inflation under control through a further tightening of financial policies. Directors stressed that the restoration of market confidence was central to this effort, and steps being taken under the program toward the early removal of price controls and trade and exchange restrictions were welcomed. They welcomed the cabinet's endorsement of the program and the authorities' intention to publish the letter of intent. Directors stressed that strong and sustained commitment and broad consensus on economic reforms will be critical to reestablish the conditions for enhanced growth, address unemployment and poverty issues, and set the stage for the provision of broader support from the international financial community. They also emphasized the importance of strong implementation of the Stand-By Arrangement and significant progress in adopting structural reforms to establish the basis for discussions on an ESAF arrangement.

"Directors underscored the need for sustained fiscal consolidation and emphasized that the realization of the authorities' fiscal consolidation objectives will hinge on early and continued efforts to strengthen revenue collection, cut public expenditure, and reorient spending toward more productive uses. "Directors welcomed efforts by the authorities to tighten monetary policy in order to bring down inflation and their willingness to allow further increases in interest rates if necessary.

"On structural reforms, Directors encouraged the authorities to continue to implement the land reform program that had been agreed with stakeholders and donors. They attached special importance to liberalization of the trade regime as a means of enhancing Zimbabwe's capability to compete internationally. Directors stressed that attracting new foreign investment was crucial for promoting economic growth and poverty alleviation, and suggested that much could be done to improve the environment for private investment."

Performance under Zimbabwe's previous 13-month Stand-By credit was mixed. The budget deficit was cut by more than one-half in 1998 and monetary growth was reduced. Additionally, the external current account narrowed and the process of rebuilding foreign reserves began. Zimbabwe's balance of payments situation, however, has remained precarious and inflation has increased to high levels in response to a difficult external environment, a deterioration in the financial position of the parastatal sector, and a series of policy decisions that undermined market confidence. Uncertainties over the government's land reform program and unresolved issues relating to price controls and tariff regimes prevented completion of the first program review under the previous arrangement.

Program for 1999

The government's economic program for 1999 seeks to dampen inflationary pressures, restore a viable external position, and provide a springboard for economic growth. The stabilization effort centers on continued financial restraint, including recent steps to bring monetary growth under control, and price adjustments in the parastatal sector, notably in the oil and electricity sectors.

Projected growth in real GDP is 1.2 percent in 1999, which reflects a significant downward revision from previous expectations because of lower output in the mining and manufacturing sectors. The government's inflation target for end-1999 is 30 percent, which is to be achieved by containing money supply growth. Excluding grants, Zimbabwe's fiscal deficit is expected to reach levels around 5.3 percent of GDP.
in 1999, which corresponds to a primary budget surplus around 3.2 percent of GDP.

**Structural reforms**

A fully transparent procedure governing land reform efforts, including fair compensation for land acquired, will be an important part of Zimbabwe's structural reform agenda. Trade and foreign exchange controls implemented on an emergency basis in response to Zimbabwe's balance of payments difficulties will be eased. The authorities will also concentrate their efforts on strengthening the financial position of the banking sector and accelerating divestiture of various enterprises.

**Social safety nets**

Currency depreciation and increases in basic food prices since the early 1990s have had a significant adverse impact on real incomes and employment. Broad-based growth and price stability are therefore critical to underpinning poverty alleviation in Zimbabwe. The current program also envisions a continuation of a high level of investment in human resources, and maintaining social safety nets to foster the reduction in poverty.

Zimbabwe joined the IMF on September 29, 1980, and its quota is SDR 353.4 million (about $483 million). Its outstanding use of IMF financing currently totals SDR 263 million (about $359 million).

**Former Yugoslav Republic of Macedonia: CCFF**

The IMF has approved a credit for the former Yugoslav Republic of Macedonia totaling SDR 13.76 million (about $19 million) under the Compensatory and Contingency Financing Facility (CCFF) to help offset a temporary shortfall in exports of goods and services resulting from effects of the Kosovo crisis.

Excerpts from IMF Deputy Managing Director Shigemitsu Sugisaki's statement on the Executive Board discussion follow.

"Directors observed that, because of the Kosovo crisis and the resulting closure of the main transit route through the Federal Republic of Yugoslavia, the former Yugoslav Republic of Macedonia's exports to the Federal Republic of Yugoslavia and other trading partners had been seriously disrupted. A full recovery of exports would have to await a restoration of the transit routes through the Federal Republic of Yugoslavia. Moreover, Directors noted that, largely reflecting the slump in exports, economic activity had declined and unemployment had risen from its already high level. These developments and the refugee-related expenditures have put significant strains on F.Y.R. Macedonia's budget and balance of payments.

"Directors praised the former Yugoslav Republic of Macedonia's response to the formidable challenges posed by the crisis. Noting the heavy economic and social costs suffered by the former Yugoslav Republic of Macedonia as a result of the crisis, Directors called on the international community to provide early additional financial assistance in order to help meet the sizable financing requirements in 1999 and over the following three years.

"Directors regretted the slow progress on structural reforms, especially in the enterprise sector, and the lapses in expenditure management and control that had occurred in recent months. However, they welcomed the authorities' renewed commitment to reforms, following the end of the conflict as evidenced in the recent passage of the value-added tax law, as well as the steps taken to restore control over central government wages in the second half of the year, and to enhance bank supervision. In this context, Directors welcomed the authorities' intention to begin negotiations on a program that could be supported by a new ESAF arrangement, in order to preserve the hard-won stabilization gains made under earlier IMF arrangements."

**Program summary**

The Kosovo crisis inflicted enormous economic costs on the former Yugoslav Republic of Macedonia, with 260,000 refugees living there at the height of the crisis. As a result of trade disruption and the erosion of investor confidence, GDP is expected to decline by 4 percent in 1999, and the unemployment rate to increase by two percentage points to 36% percent. At the height of the crisis, a widening of the general government budget deficit by 5½ percentage points to 7½ percent of GDP was projected, but with the refugees now returning to Kosovo, the deficit could be closer to 6% percent. The crisis also led to a deterioration in the quality of the loan portfolios of banks.

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<tr>
<td>Real GDP</td>
<td>0.8</td>
<td>1.5</td>
<td>5.0</td>
<td>2.9</td>
<td>5.0</td>
<td>-4.0</td>
<td>-9.0</td>
</tr>
<tr>
<td>Consumer prices (period average)</td>
<td>2.5</td>
<td>1.5</td>
<td>3.0</td>
<td>0.6</td>
<td>1.0</td>
<td>2.0</td>
<td>1.0</td>
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<tr>
<td>Unemployment rate (average)</td>
<td>31.9</td>
<td>36.0</td>
<td>...</td>
<td>34.5</td>
<td>34.3</td>
<td>36.5</td>
<td>2.2</td>
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<td>General government balance (accrual)</td>
<td>-0.5</td>
<td>-0.4</td>
<td>-0.7</td>
<td>-1.8</td>
<td>-2.1</td>
<td>-7.7</td>
<td>-5.4</td>
</tr>
<tr>
<td>Current account balance</td>
<td>-6.5</td>
<td>-7.4</td>
<td>-7.3</td>
<td>-8.2</td>
<td>-6.7</td>
<td>-14.5</td>
<td>-7.1</td>
</tr>
<tr>
<td>Official gross reserves</td>
<td>2.0</td>
<td>1.9</td>
<td>2.3</td>
<td>2.1</td>
<td>2.3</td>
<td>2.7</td>
<td>0</td>
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*Persons seeking employment as percent of total labor force, based on official labor force survey.

**Excludes revenue and expenditure of the special revenue and expenditure accounts of line ministries.

**There are indications that the current account deficit is substantially overestimated because of unreported remittances.

**Incremental impact of Kosovo crisis is calculated as dollar difference as a percentage of revised imports.

**Data: Former Yugoslav Republic of Macedonia authorities and IMF staff estimates.

The authorities have stated their intention to request support from the IMF under a new Enhanced Structural Adjustment Facility (ESAF), and to this end they have committed themselves to a number of important policy initiatives, including strengthening expenditure management, enhancing banking supervision, reforming enterprises, and phasing out trade restrictions.

The former Yugoslav Republic of Macedonia joined the IMF on December 14, 1992, and its quota is SDR 68.9 million (about $94 million). Its outstanding use of IMF financing currently totals SDR 67 million (about $92 million).
Mali: ESAF

The IMF Executive Board approved a three-year loan for Mali under the Enhanced Structural Adjustment Facility (ESAF), equivalent to SDR 46.7 million (about $63.1 million) to support the government’s economic reform program. The first annual loan will be disbursed in two equal installments, the first of which, equivalent to SDR 6.8 million (about $9.1 million), will be available in mid-August.

Excerpts from IMF Deputy Managing Director Shigemitsu Sugisaki’s statement on the Executive Board discussion follow.

“Directors welcomed the significant progress that was made in reducing macroeconomic imbalances and economic distortions under Mali’s previous ESAF-supported programs. Economic and financial developments in 1998 were on the whole encouraging, despite lower-than-expected real GDP growth and a temporary rise in food prices associated with the weather-related decline in cereals production. Directors agreed that the outlook for 1999 is for a rebound of economic growth, low inflation, and a narrowing of the external current account deficit.

“Directors also welcomed the focus of Mali’s new ESAF-supported program on consolidating the gains achieved thus far and implementing the next phase of its reform agenda, so as to encourage private investment, attain higher and sustained economic growth, improve social indicators, and reduce poverty.”

Program summary

The medium-term strategy is to consolidate the gains achieved to date and implement the next phase of the reform agenda, so as to better develop private sector activities and

Mali: selected economic indicators

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<tbody>
<tr>
<td>GDP at constant prices (percent change)</td>
<td>4.0</td>
<td>6.7</td>
<td>4.6</td>
<td>3.6</td>
<td>6.4</td>
<td>5.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Consumer price index (end of period) (percent of GDP)</td>
<td>-14.0</td>
<td>-9.5</td>
<td>-8.8</td>
<td>-9.6</td>
<td>-8.5</td>
<td>-8.4</td>
<td>-7.8</td>
</tr>
<tr>
<td>Overall fiscal deficit (commitment basis, excluding grants)</td>
<td>-8.0</td>
<td>-7.9</td>
<td>-7.5</td>
<td>-8.1</td>
<td>-7.6</td>
<td>-6.9</td>
<td>-6.0</td>
</tr>
<tr>
<td>External current account balance (excluding official transfers)</td>
<td>-14.0</td>
<td>-9.5</td>
<td>-8.8</td>
<td>-9.6</td>
<td>-8.5</td>
<td>-8.4</td>
<td>-7.8</td>
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* Including interest due to the People’s Republic of China and the Russian Federation.
* Before debt rescheduling after debt cancellation obtained through 1996.

Data: Malian authorities and IMF staff estimates and projections.

IMF completes Indonesia review, approves next credit tranche

In a newsbrief issued on August 3, the IMF announced that the Executive Board had completed the sixth review under the Extended Fund Facility (EFF) for Indonesia. As a result, SDR 337 million (about $460 million) is available to Indonesia. Excerpts from IMF First Deputy Managing Director Stanley Fischer’s statement on the Executive Board’s discussion of the review follow.

“During today’s discussion, Executive Directors welcomed the improvement in the performance of the Indonesian economy in recent months and the strengthening signals of an incipient recovery in real output. They also welcomed the improvement in market confidence based on both the successful elections and the implementation of the Indonesian economic program, reflected in gains in a broad range of financial indicators, notably in the appreciation of the exchange rate of the rupiah, and the sharp upturn in equity prices. Negative inflation continued through July, marking five consecutive months of declining prices.

“The IMF program has continued to be on track, and Directors stressed the importance of maintaining program implementation during the remaining period of transition to a new government. The agreed monetary policy stance should permit a further gradual and market-led decline in interest rates, given the sizable output gap and the absence of inflation. Exchange rate policy should continue to be implemented flexibly so as to accommodate market pressures. In the near term, fiscal policy should deliver the planned stimulus necessary to promote recovery. In this connection, Directors referred, in particular, to the need for a well-targeted and effectively monitored increase in expenditures on a strengthened social safety net and other socially related programs.

“Directors emphasized that the restoration of strong and sustainable growth requires an acceleration of structural reforms, especially in bank and corporate restructuring. With regard to the banking sector, the priorities should be to improve loan collection and asset recovery, to restructure and then recapitalize the state banks, to prepare for early privatization of the banks that have been taken over by the Indonesian Bank Restructuring Agency, and to improve bank supervision. While the institutional framework to deal with corporate debt is in place, Directors emphasized the need to strengthen and accelerate the implementation of bankruptcy procedures. Directors encouraged the authorities to proceed only with great caution in implementing their fiscal decentralization plan so as to ensure that macroeconomic control is maintained and regional disparities are not exacerbated.

“Directors recognized that the economic recovery is still at an early stage, and emphasized the need for continued careful implementation of agreed macroeconomic and structural policies to ensure that recent achievements are preserved and enhanced as the political environment changes.”

The full text of News Brief 99/46 is available on the IMF’s website (www.imf.org).
investment, achieve higher and more robust economic growth, and reduce poverty, given that important structural rigidities continue to hinder economic performance despite the progress made. Real GDP growth under the 1999 program, is projected at a rate of 6½ percent on the basis of a weather-related rebound in cereal production to about 8½ percent of GDP. Inflation is projected at around 2–3 percent, and the external current account deficit (excluding official transfers) is expected to narrow by 1 percentage point to about 8½ percent of GDP.

Consistent with the medium-term policy objective of strengthening revenue mobilization and raising public sector savings, and considering the potential revenue losses associated with trade liberalization, the program aims at reducing the overall budget deficit (on a commitment basis and excluding grants) to 7½ percent of GDP in 1999 from the revised level of 8 percent in 1998.

Structural reforms will focus on rehabilitating the judicial system and accelerating regulatory reform to reduce obstacles that confront potential investors, completing the reform of the public enterprise sector, strengthening the banking sector, privatizing the electricity and telecommunications companies, and implementing a comprehensive reform of the cotton sector.

In the social sector, the 10-year development program of education aims at raising the primary education enrollment rate to at least 61 percent in 2002 from 50 percent in 1998. The objective of the health and social development program for 1998–2002 is to raise the infant immunization rate to 76 percent in 2002 from 45 percent in 1998 and to increase the share of the population receiving primary health care to 60 percent in 2000 from 40 percent in 1998.

Mali joined the IMF on September 27, 1963, and its quota is SDR 93.3 million (about $126.1 million). Its outstanding use of IMF financing currently totals SDR 139.2 million (about $188.2 million).
For resource-abundant countries, strengthening institutions can help prevent corruption

A growing body of literature is analyzing the impact of corruption on economic activity. Carlos Leite, an Economist in the IMF’s African Department, and Jens Weidmann, a former IMF Economist who is now Secretary General of the German Council of Experts, look at the link between natural resource abundance and corruption and lower growth over the long term. In an interview with the IMF Survey, they discuss their findings, which have recently been published in IMF Working Paper No. 99/85, Does Mother Nature Corrupt? Natural Resources, Corruption, and Economic Growth.

Leite and Weidmann: In the mid-1980s, a growing body of research began pointing to the negative impact that corruption had on growth directly and on the level of investment and the productivity of public expenditures indirectly. A decisive event, in terms of public awareness, was the enactment in the United States of the Foreign Corrupt Practices Act. By the 1990s, anticorruption policies—previously viewed as too politically sensitive—became a key component of policy recommendations from international institutions.

Some researchers in the 1970s had suggested that bribes might enhance the functioning of the economy by “greasing the wheels of commerce” and allowing entrepreneurs to work around time-consuming bureaucratic procedures. In economic terms, corruption was thought to lead to a more efficient outcome by allowing those for whom time was most valuable to move to the front of the queue or by awarding projects to those firms that were the most profitable (and therefore able to pay the highest bribes).

This argument has now been reversed, and corruption is viewed as the cause, rather than the consequence, of costly red tape. As quantitative indexes have become available, economists have been able to confirm that corruption does depress important determinants of growth, such as private investment, the productivity of public expenditures, and spending on education and health. Corruption is now seen as raising the level of uncertainty for entrepreneurs and leading to significant resource misallocations. In this sense, it serves as an important deterrent to economic growth. Until now, there has been a dearth of empirical studies on the determinants of corruption; this is one contribution of our paper.

Our interest in natural resource abundance and its effects on economic performance was triggered by a puzzling empirical result of previous studies that indicated that in the long run, resource-rich economies tend to grow more slowly than resource-poor economies. We thought corruption might constitute the missing link and thus explain this paradoxical finding on natural resource intensity. We suggest that natural resource exploration tends to generate high rents, leading to increased rent-seeking opportunities and, ultimately, corruption. Thus, through increased corruption, natural resources—if not adequately managed—may actually reduce long-run economic growth. Of course, proper management of resource booms should also take into account other negative, but short-run, effects like the potential loss in competitiveness of the nonresource sectors—the phenomenon commonly labeled “Dutch disease.”

IMF posts report commissioned by Russian central bank

The IMF has posted on its Internet site (www.imf.org) a report prepared by PricewaterhouseCoopers at the request of the Central Bank of Russia. The report describes relations between the Central Bank of Russia and the Financial Management Company Limited (FIMACO). The procedures adopted in the preparation of the report were agreed to with the Central Bank of Russia to assist it in evaluating the activities of FIMACO and its transactions with the various entities set out in the report.

According to a note to correspondents issued by the IMF on August 5, the posting of the report on the IMF website is designed to facilitate public access to the information contained in the FIMACO report. Under the terms of release requested by PricewaterhouseCoopers and agreed to by the IMF, the FIMACO report will be removed from the IMF website within 30 days [September 4] of its posting. The IMF will not publish the report elsewhere or distribute hard copies.
ute branch to enforce them. Political stability and transparency of rules, for example, are necessary conditions for an effective anticorruption strategy. Likewise, the lack of horizontal social mobility and the concentration of power in the hands of a small elite can foster corruption.

The trade literature also suggests that trade restrictions significantly increase the opportunities for rent-seeking behavior. Empirical studies find that rents accruing from the imposition of trade regulations are quantitatively significant, amounting in some cases to double-digit GDP shares. Natural resource abundance is thus only one element in the creation of rent-seeking opportunities. Our study shows, however, that it is a decisive one, particularly in the case of capital-intensive natural resources, such as fuels and minerals, with the negative impact on growth being higher for less developed economies.

Building on the premise that investment projects require government approval, our theoretical model focuses on factors such as the concentration of bureaucratic power, the probability of being caught (which, in turn, depends on the extent of corruption) and the associated penalty, and the monitoring and enforcement technology employed by the government. Not surprisingly, higher penalties and better monitoring and enforcement technologies deter corruption and, through increased investment, ultimately lead to higher growth.

Our model also indicates, however, that the impact of these two anticorruption policies depends on the state of economic development of the country. We suggest that, in less developed economies, the focus of anticorruption strategies should be on levying higher penalties, while in more developed economies, the focus should be on improved monitoring and enforcement. Empirically, it’s difficult to make such a fine distinction between penalties and enforcement, and, in practice, we have only broad measures for the quality of institutions and political stability, which capture elements from both components.

IMF Survey: How did you define and measure corruption, and what other economic and political variables did you look at?

Leite and Weidmann: We focused on corruption in the public sector—or the extent to which public office is used for private gain. There are now several indexes attempting to measure this type of activity, including the widely known Transparency International measure. Generally, these indexes measure the extent to which “special payments” are required by government employees in the normal conduct of business. Because it was available for earlier periods and for a broad cross section of countries, we used the corruption index of an investment advisory service, the Investment Country Risk Guide. In terms of political variables, we looked at the quality of the legal and political institutions and the degree of political stability. We would expect that an environment of law and order, effectively enforced by credible and accessible institutions, should improve the deterrent value of penalties.

For economic variables, we looked at the economy’s reliance on natural resources and at the degree of openness of external trade. Clearly, the discovery of natural resources boosts economic growth rates (at least in the immediate term), but the sudden wealth needs to be well managed if this effect is to persist. The rationale for using trade openness is that regulations and barriers to trade provide public servants with the opportunity to seek side payments to circumvent restrictions.

We also investigated two other possible sources of corruption: whether ethnically diverse societies generate “special favor” behavior, where leaders might work to benefit their family or ethnic group rather than for the greater public good, and whether the corruption process is different in Africa. Certainly, there is substantial anecdotal evidence that supports these two hypotheses.

IMF Survey: Did your empirical findings suggest a strong correlation between natural resource endowment and corruption and growth?

Leite and Weidmann: Our study showed that capital-intensive natural resources—namely, oil and miner-

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<th>Week beginning</th>
<th>SDR interest rate</th>
<th>Rate of remuneration</th>
<th>Rate of charge</th>
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<tbody>
<tr>
<td>August 2</td>
<td>3.36</td>
<td>3.36</td>
<td>3.82</td>
</tr>
<tr>
<td>August 9</td>
<td>3.38</td>
<td>3.38</td>
<td>3.84</td>
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The SDR interest rate and the rate of remuneration are equal to a weighted average of interest rates on specified short-term domestic obligations in the money markets of the five countries whose currencies constitute the SDR valuation basket (as of January 1, 1999, the U.S. dollar was weighted 41.3 percent; euro (Germany), 19 percent; euro (France), 10.3 percent; Japanese yen, 17 percent; and U.K. pound, 12.4 percent). The rate of remuneration is the rate of return on members’ remunerated reserve tranche positions. The rate of charge, a proportion (currently 13.7 percent) of the SDR interest rate, is the cost of using the IMF’s financial resources. All three rates are computed each Friday for the following week. The basic rates of remuneration and charge are further adjusted to reflect burden-sharing arrangements. For the latest rates, call (202) 623-7171 or check the IMF website (www.imf.org/external/np/tre/sdr/sdr.htm).

Data: IMF Treasurer’s Department

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als—contribute significantly to an increase in corruption. But more labor-intensive natural resources, such as agricultural products and food, tend to reduce the level of corruption. For other variables, we found that, as expected, more law and order and more political stability reduce corruption, and countries more open to foreign trade also tend to have lower levels of corruption.

Our results also suggest that periods of fast growth, even after accounting for the incidence of natural resources, tend to increase corruption. This may be because in periods of particularly rapid economic growth, institutions do not adapt quickly enough to the changes in production methods and social relationships. Our findings refute the suggestion that ethnic diversity or anything specific to Africa has any significant impact on corruption. Accounting for the other factors, both diversity and location in Africa are insignificant determinants of corruption. We also find that location in Africa has no special bearing on long-term growth, in contrast to previous studies. This is good news for policymakers, because it indicates that there is nothing particular (or undefined) about the growth process in Africa. In this sense, the lessons we learn from other places carry over to the African context.

Our study confirms that corruption affects growth negatively, and that natural resources, even after accounting for the effects through the corruption channel, also tend to reduce long-term growth. This last result remains a bit of a puzzle. We also ran a few experiments to quantify the effect on growth, including the indirect effect through corruption, of improved policies and institutions. We show, for example, that if Nigeria had, between 1970 and 1990, emulated Chile in terms of both trade policy and quality of legal and political institutions, Nigeria’s income per adult in 1990 would have risen to $3,000, compared with the actual figure of $2,000. Approximately $300 of this increase would have been due to the improvement in trade policy and the remaining $700 to institutional enhancements. By the same token, if Chile had emulated the United States, its income per adult in 1990 would have been $8,600 instead of the actual figure of $6,800. These are significant sources of improvements in the standard of living.

**IMF Survey:** Given your findings, what would you advise countries that are rich in natural resources or are, for whatever reason, experiencing rapid growth?

**Leite and Weidmann:** Countries rich in natural resources have the difficult task of managing windfalls—difficult for private individuals as much as for governments. The transitions that such windfalls entail typically occur much faster than the institutional changes needed to ensure effective management and prevent an increase in corruption. Corruption can be countered on two broad fronts: reducing the scope for corrupt activities and increasing the penalty for engaging in such activities.

Governments need to ensure that incentive systems encourage productive activity and curb unproductive activity. They can reduce policy distortions, such as trade barriers and unnecessary bureaucracy and costly regulations, and improve the efficiency of the public service by enhancing management and streamlining procedures in key areas such as customs and procurement. In general, sound economic policies, by creating an environment that rewards the pursuit of productive economic activities can deter corruption.

To discourage unproductive activity, governments need to concentrate on improving the quality of public institutions, including enhancing the auditing and accountability services, ensuring adequate access to an independent and credible judiciary, and adopting a strong legal framework. An effective way to increase the penalty for corrupt behavior would be to reform the public service and make wage increases dependent more on merit and less on other factors and, where warranted, raise public service wages (which would implicitly raise the penalty associated with losing the job). The work of legal institutions is enhanced by ensuring that procedures in areas such as procurement are transparent and that laws are not overly complex.

These measures, by helping ensure that policy is implemented to serve the public good, would go a long way toward making certain that natural resource windfalls translate into sustained long-run economic growth.