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Proposal for Board Consideration

IMF Mission Reaches Tentative Agreement on Stabilization, Structural Program for Ukraine

The IMF has reached a tentative agreement with Ukraine on an IMF-supported program. Speaking in Kyiv on July 31, Mohammad Shadman-Valavi, head of the IMF mission in Ukraine, said:

"A staff team from the IMF has reached tentative agreement with the Ukrainian authorities on a stabilization and structural reform program for the period July 1, 1998–June 30, 2001, that could be supported under the Extended Fund Facility (EFF), in an amount equivalent to approximately SDR 1.6 billion (165 percent of quota) or nearly $2.2 billion. IMF management intends to propose this program for the consideration of the Executive Board in late August 1998.

"The program aims to promote economic growth and consolidate the recent gains in stabilization. Real GDP is projected to grow by 3–5 percent a year. Annual inflation is targeted to be reduced to about 10 percent in 1998 and about 8 percent during 1999–2001. A key pillar of the program is the strengthening of the government's financial position and a reduction in the budget deficit of the general government from 5.6 percent of GDP in 1997 to 3.3 percent in 1998 and to about 2.0 percent a year thereafter.

"The IMF staff also welcomes the structural measures adopted by the authorities to improve the business environment and create conditions for economic growth. These include measures to rationalize the tax structure and reduce the tax burden; strengthen fiscal and monetary institutions; launch an administrative reform and rationalize the size of budgetary organizations; adopt transparent privatization procedures to further deregulate the economy and reduce government intervention in economic activities; and reform the energy and agricultural sectors.

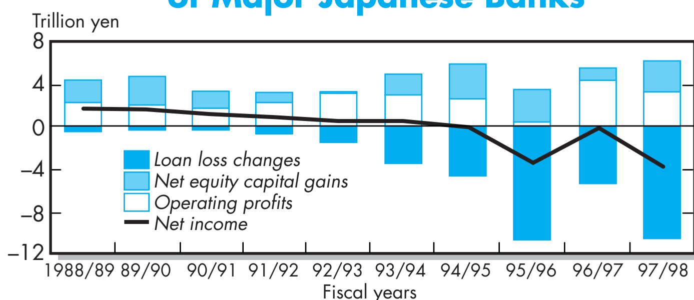
"Adoption of a strong growth-oriented program supported by an EFF arrangement should enable Ukraine to attract new credits from other international organizations and the international capital markets and encourage private creditors to maintain their current exposure to Ukrainian borrowers."

Systemic Problems

Reforms Are Needed to Ensure Restructuring Of Japan's Banking System and Restore Growth

The fragility of Japan's banking system, which reflects long-standing problems, continues to be a major source of potential risk to revived economic performance.

Profitability and Loan Losses of Major Japanese Banks



Data: FitchIBCA

According to an internal IMF staff study by the IMF's Asia and Pacific Department, banking sector problems have been a critical factor in the protracted slowdown of the Japanese economy in recent years. Weaknesses, according to the IMF study, persist in four key areas:

- Problem loans are not fully recognized on banks' balance sheets, and the scale of uncovered losses remains a major source of uncertainty.
- The capital base of banks is weak.
- The process of loan recovery continues to be cumbersome and slow.
- The value of bank franchises is being eroded by financial liberalization, with the situation of long-term credit banks and trust banks becoming increasingly difficult.

(Please turn to the following page)

(Continued from the front page)

Banking Sector Problems

The roots of Japan's banking problems lie in the asset price inflation of the late 1980s. As large corporations obtained funds directly from capital markets, bank lending was increasingly directed toward the real estate and construction sectors. A sharp increase in interest rates in 1990 burst the asset price bubble, and land prices declined sharply over the next several years. The Japanese banking system has yet to recover fully from the effects of the asset price collapse. Moreover, the recent economic downturn in Japan and the crisis in Asia have implied a further deterioration in bank loan portfolios.

During 1997, the strains in the banking system became increasingly apparent when an attempted merger between a major commercial bank—Hokkaido Takushoku Bank—and a smaller regional bank stalled, leading to the collapse of the larger bank. The collapse was preceded by the failure of Sanyo Securities in November, which heightened concerns among market participants about the ability of Japanese financial institutions to honor their interbank obligations. As a result, the Hokkaido Takushoku Bank was unable to raise funds in the market.

Official Action

In the aftermath of the asset price collapse in the early 1990s, the authorities' approach to banking sector problems was predicated on the expectation that the economy would quickly rebound and that a resumption of growth would permit banks and borrowers to recover their financial strength. Over the last three years, however, this orientation has gradually changed, and since 1996, the authorities have introduced a broad range of measures to address banks' problems more forcefully.

In early 1996, the decision was made to overhaul the regulatory and supervisory framework. The new framework is based on three components:

- periodic self-assessment by banks of the quality of their assets;
- a framework for prompt corrective action, establishing a set of structured early intervention and resolution rules to be applied in response to a deterioration of regulatory capital below capital adequacy standards; and
- the establishment of an independent Financial Supervisory Agency to carry out the supervisory responsibilities previously allotted to the Ministry of Finance.

(The self-assessment and the prompt corrective action frameworks were applied from April 1998. The Financial Supervisory Agency began operations in June 1998.)

Later in 1996, the government announced the "big bang" reforms, a wide-ranging liberalization of financial markets. These measures began to be implemented in late 1997.

Prompt intervention by the Bank of Japan limited financial market disruptions after the collapse of the Hokkaido Takushoku Bank. However, fears of additional bank closures were reflected in large deposit withdrawals from weak banks. Market tension intensified with a spate of bad economic news in early December, which sent Japan's stock market to a six-year low and raised pressures on banks whose capital bases were most vulnerable to changes in stock prices. The imminent implementation of the new supervisory framework, which requires prompt corrective action whenever a bank's ratio of capital to risk-weighted assets falls below certain trigger points, increased pressures on banks and prompted their efforts to reduce their risk-weighted assets, contributing to a heightening of credit conditions.

Responding to this situation, in late December the government announced a set of emergency measures to stabilize financial markets and bolster depositor confidence. The measures centered on strengthening the financial capacity of the Deposit Insurance Corporation to protect depositors' and creditors' funds and providing public funds for bank recapitalization through a financial management crisis account that would permit the Deposit Insurance Corporation to inject capital into banks, subject to certain conditions.

These measures were accompanied by several regulatory changes that helped the major banks meet capital adequacy requirements. This package represented the first time that public funds were made available to the banks on a massive scale and, together with provision of liquidity by the Bank of Japan, helped to reduce market pressures.

The measures also provided a mechanism for the Deposit Insurance Corporation to play a role in the consolidation of the banking sector, including allowing it to purchase doubtful and other nonperforming loans from insolvent institutions to facilitate mergers with healthy institutions. In late March (shortly before the end of the financial year), all but one of the major banks and three large regional banks received capital injections.

Since the end of the fiscal year, the Japanese authorities have taken further steps to address banking sector problems:

- Under the framework provided by the emergency measures, some 45 credit cooperatives and 4 small regional banks have been closed, thereby accelerating the consolidation process that has reduced the number of Japanese deposit-taking institutions by some 15 percent since fiscal year 1992.
- In May 1998, plans were announced to establish a mediation panel to facilitate debt workouts, supported by adjustments in the tax treatment of debt forgiveness.
- In June 1998, two weeks after the inauguration of the Financial Supervisory Agency, the authorities announced an intensive inspection of the 19 major banks, to be carried out in collaboration with the Bank of Japan over the next few months.
- In early July, the authorities announced a bridge bank facility to take over the operation of failed banks by arranging mergers. Necessary legislation is expected to be submitted to the Diet soon.

Remaining Challenges and Risks

The greatest challenge to resolving Japan's banking problems, according to the IMF study, will be to strike the proper balance between short-term macroeconomic objectives—that is, avoiding deflationary pressures and restoring growth—and the medium-term structural objectives of promoting and ensuring a market-based restructuring of Japan's banking sector.

In carrying out an effective restructuring strategy, the authorities will need to address certain key issues:

• Mechanisms are needed to encourage weak and undercapitalized banks to seek access to the recapitalization window while fostering a strategic reorientation of banks' activities to raise returns on equity. It is important that access to the recapitalization facility does not result in flows of low-cost capital to inefficient sectors of the economy.

• The potential financial gains from successful and profitable restructurings supported by capital injections with public funds should be shared with the taxpayer.

The efficient use of public funds to implement recapitalization and restructuring plans will also require adherence to certain guiding principles:

• Public funds should be targeted to create a stronger, more profitable banking system.

• Publicly funded asset acquisition should be based on transparent, cash-flow-based loan valuation methods.

• Private market solutions should be encouraged to the extent possible.

• Shareholders and management should bear responsibility for losses and poor performance.

• The terms of recapitalization should provide clear and strong incentives for the eventual replacement of public sector funding with private market capital.

The use of public money has also heightened the need for further improvements in accounting and disclosure standards and internal risk-control mechanisms and corporate governance.

Effective banking supervision is the last line of defense for ensuring accurate recognition of asset quality problems and their prompt correction, according to the IMF study. Experience in other advanced countries suggests that the challenges in fulfilling this task in Japan are likely to increase following the introduction of new financial instruments, liberalized entry into several financial activities, and the more complex organizational structures allowed by the "big bang." International experience also indicates that the success of the Financial Supervisory Agency in ensuring effective supervision will depend on the agency's being provided with adequate resources and expertise and a clear mandate, supported by operational autonomy and balanced by public accountability.

An inevitable consequence of the big-bang reforms will be increased competition for provision of financial services. Prompt resolution of bad loan problems and a rebalancing of portfolios of stocks and loans will be essential if banks hope to prosper in the new liberalized climate. ■

Recent IMF Publications

Occasional Papers ($18.00; academic rate: $15.00)

No. 165: *Algeria: Stabilization and Transition to the Market*, Karim Nashashibi and others. Offers a review of economic developments in Algeria since the late 1980s, focusing on the period 1994–98.

Staff Papers

Staff Papers, Vol. 45, No. 2 (June 1998) ($54.00 for four issues; $27.00, academic rate)

Working Papers ($7.00)

98/91: *Leading Indicators of Banking Crises: Was Asia Different?*, Daniel C. Hardy and Ceyla Pazarbaşıoğlu. (See page 259.)

98/92: *Asymmetric Information and the Market Structure of the Banking Industry*, Giananni Dell Ariccia. Analyzes the effects of informational asymmetries on the market structure of the banking industry.

98/95: *Liberating Supply: Fiscal Policy and Technological Innovation in a Multicountry Model*, Tamim Bayoumi and others. Examines how endogenizing technological progress in a multicountry macroeconometric model affects the analysis of fiscal policies.

98/96: *Banking System Restructuring in Kazakhstan*, David S. Hoelscher. Reviews financial restructuring in Kazakhstan and the condition of the financial system in the period following independence.

98/97: *Financial Opening, Deposit Insurance, and Risk in a Model of Banking Competition*, Tito Cordella and Eduardo Levy Yeyati. Studies the impact of competition on the determination of interest rates and banks' risk-taking behavior under different assumptions about deposit insurance and the dissemination of financial information.

Publications are available from IMF Publication Services, Box XS800, IMF, Washington, DC 20431 U.S.A. Telephone: (202) 623-7430; fax: (202) 623-7201; e-mail: publications@imf.org.

For information on the IMF on the Internet—including the full texts of the English edition of the *IMF Survey*, the *IMF Survey*'s annual *Supplement on the IMF*, *Finance & Development*, an updated *IMF Publications Catalog*, and daily SDR exchange rates of 45 currencies—please visit the IMF's web site (http://www.imf.org). The full texts of all Working Papers, Papers on Policy Analysis and Assessment, and Public Information Notices (PINs) are also available on the IMF's web site.

Economic Diversification

Prudent Policies Spur Mauritius's Development From Sugar Dependency to Balanced Growth

Even in comparisons beyond its region, Mauritius stands out. With a per capita income estimated at about $3,800 in 1996, Mauritius is considered an upper-middle-income economy with an income above that of South Africa and Mexico. Its broad-based social indicators compare favorably with many high-income industrial countries, and its international credit ratings have been the highest of all African countries. The country prides itself on a stable and democratic political system that has emphasized inclusion and participation for its multiethnic population.

After the Sugar Boom

As the result of exceptionally high sugar prices and buoyant profits in the sugar industry, Mauritius experienced strong growth in the early 1970s. In 1974, the sugar industry generated about 80 percent of the country's foreign exchange earnings, employed just under 30 percent of the workforce, and contributed about 50 percent to overall output. Particularly lax fiscal and monetary policies accompanied the boom, however, and once sugar prices dropped from their 1974 peak, the country found itself facing serious macroeconomic difficulties.

Public finances deteriorated, reflecting rising current expenditures and declining tax revenues, and the fiscal deficit averaged about 13 percent of GDP during the financial years of 1976/77 (July to June) and 1997/78. Simultaneously, domestic bank credit to the government grew at an annual rate of about 63 percent, and broad money increased by about 18 percent a year. The rate of inflation rose to about 9–10 percent, while wage increases averaged about 16 percent, associated to a large extent with workers' demands to share in the sugar industry's past profits as well as the backward indexation of wages.

Mauritius's economic situation, and particularly its external position, deteriorated even further in 1979/80, following the sharp rise in international petroleum prices and a number of severe cyclones that substantially damaged the country's sugar crop and infrastructure. The authorities responded to these shocks by adopting comprehensive macroeconomic adjustment measures that from 1977 through 1986 were supported by the IMF through six successive Stand-By Arrangements, three Compensatory Financing Facility purchases, and one Buffer Stock Financing Facility purchase, amounting to a total of about SDR 283 million.

Once the emergency relief and reconstruction needs in the early 1980s were met, the focus of the adjustment effort shifted to reestablishing fiscal discipline and sharply curtailing the government's borrowing requirements. Mauritius primarily achieved fiscal adjustment by substantially reining in government expenditures—restraining its wage and salary bill as well as capital spending and net lending. The level of revenues relative to GDP remained largely unchanged during the 1980s, but some important structural changes nevertheless took place, as taxes on property and goods and services

Mauritius Enjoys Political And Social Stability

The Republic of Mauritius includes the island of Mauritius, situated about 530 miles east of Madagascar; the island of Rodrigues, about 350 miles farther east; and a few smaller and uninhabited islands to the north. Its population of about 1.1 million is diverse, with about 65 percent of its inhabitants of Indian descent; some 30 percent of mixed African and European origin (including a sizable minority of French-Mauritians, whose roots go back to the early eighteenth century when Mauritius was a French colony.); and 3 percent Sino-Mauritians. English is the official language, but French and Creole are widely spoken, as are a number of Asian languages.

Mauritius gained independence from the United Kingdom in 1968 and became a member of the Commonwealth, with the Queen as the official head of state. The Mauritian governmental structure is based on the U.K. model, with political powers vested in the prime minister's office and cabinet. The National Assembly comprises 62 elected and up to 8 designated members, the latter to ensure adequate representation of ethnic minorities. In 1992, Mauritius became a republic, and a president replaced the Queen as head of state.

With the exception of a brief spurt of communal violence in the years immediately following independence, Mauritius has enjoyed a political and social stability virtually unmatched in the region. Over the past 30 years, several free and fair elections have been held. In the most recent election, held in December 1995, a coalition headed by Prime Minister Navinchandra Ramgoolam of the Labor Party replaced the government of Prime Minister Aneerood Jugnauth of the Mouvement Socialiste Mauricien. In July 1997, the coalition broke up and the junior partner left the government to form the official opposition.

For further information about Mauritius, see PIN No. 98/46, June 29, on the IMF's web site (http://www.imf.org/pins).

were increased, and the composition of trade taxes shifted from export to import duties.

In view of the economy's heavy dependence on the sugar industry and the latter's limited capacity to absorb a growing labor force, the authorities encouraged diversification. The government used fiscal and administrative incentives and concessions to spur the establishment and expansion of an export-oriented manufacturing sector through the creation of an export processing zone and to boost tourism.

In the monetary sector, the fiscal improvement provided ample room for expanding credit to the private sector, particularly for the export processing zone and tourism. During the 1980s, the authorities gradually liberalized deposit and lending interest rates, permitted greater competition in the banking system, and gradually phased out the sectoral allocation of credits. To further diversify the economy, the authorities in the late 1980s also enacted legislation to set up a stock exchange and establish the framework for an offshore financial sector and gave supervisory authority over the latter to the Bank of Mauritius.

To reestablish external competitiveness, the Mauritian rupee was devalued in October 1979 and again in September 1981 by a cumulative 36 percent in nominal terms. In February 1983, the authorities changed the pegging of the rupee from the SDR to an undisclosed, trade-weighted basket of currencies, while leaving its exchange value unchanged. Also in the mid-1980s, all quantitative restrictions on imported goods were lifted.

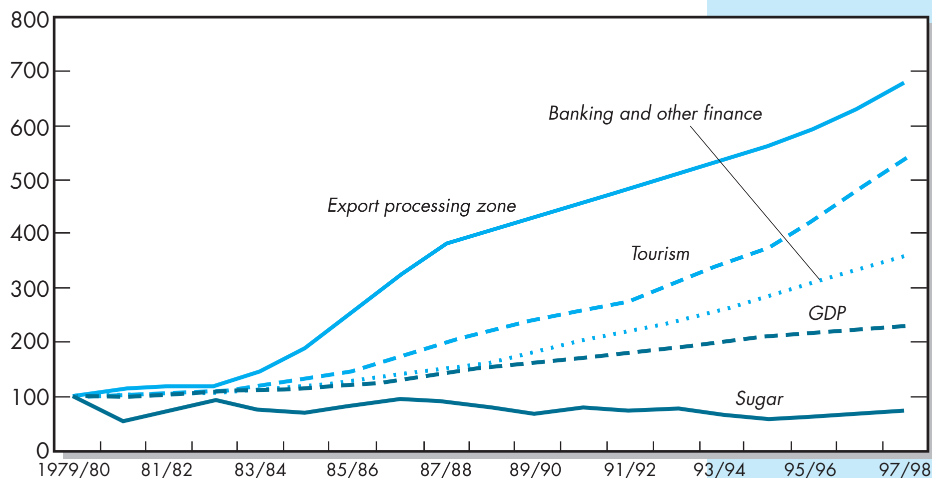
The authorities' prudent and outward-oriented policies placed the Mauritian economy on a vigorous growth trajectory. Between 1980/81 and 1990/91, aggregate output expanded at an average annual rate of 6.3 percent, with the export processing zone and tourism making particularly impressive gains (see chart, above). The mainly textiles-based export processing zone grew at an average annual rate of 15.2 percent, and tourism recorded annual growth rates of about 10 percent, with a particularly strong performance in the latter half of the 1980s. Sugar output over this period remained essentially unchanged. As a result, the shares of GDP of the export processing zone and tourism sectors rose, respectively, from 4.2 percent and 1.6 percent in 1979/80 to 11.4 percent and 2.5 percent in 1989/90. Over the same period, the share of GDP of the sugar industry declined from 18.1 percent to 8.0 percent.

The robust expansion of the Mauritian economy considerably increased employment opportunities and absorbed the large pool of unemployed workers laid off during the late 1970s. Between 1979/80 and 1989/90, the number of people employed in establishments with ten or more employees rose by more than 40 percent, and the unemployment rate declined to less than 3 percent of the workforce from more than 20 percent.

Reflecting the successful diversification of the economy, Mauritius's external accounts also showed a dramatic turnaround. The large and chronic current account deficits of the late 1970s and early 1980s, averaging 8 percent of GDP a year, were eliminated in the latter half of the 1980s (see table, page 258). Benefiting from preferential trade agreements with the United States and the European Union for sugar and manufactured goods, exports of goods and services more than doubled from an annual average of about $370 million during 1979/80–1983/84 to an average of about $775 million during 1984/85–1989/90. During the latter period, gross exports in the export processing zone surpassed sugar exports as the country's main foreign exchange earner, and tourism proceeds almost tripled. Indeed, by the turn of the decade, Mauritius's external reserve position was so strong (with net international reserves of the banking system equivalent to about six months of imports) that the authorities opted to repay all outstanding loans to the IMF a full two years ahead of schedule.

Mauritius: GDP at Constant Prices

(Index, 1979/80=100)[1]



[1]Fiscal year July to June. Data for 1997/98 are estimates.

Data: Mauritian authorities.

Managing Growth and Deepening Reforms

Output growth in the 1990s has continued at a brisk annual rate of about 5 percent, notwithstanding a serious drought in 1993 and a devastating cyclone season in 1993/94 that severely damaged the sugar crop. Meanwhile, the authorities have intensified their structural reform efforts in several key areas. On the fiscal front, Mauritius reduced the number of tariff bands from 90 to 8 and the maximum rate from 600 percent to 80 percent in 1994, and abolished the remaining tax

on sugar exports. Subsequently, it also harmonized excise duties on domestic and imported goods.

The tariff reductions, coupled with the reconstruction efforts following the 1993/94 cyclones, however, resulted in the reemergence of large fiscal imbalances. In response, the government that took office in late 1995 committed itself to fiscal consolidation over the medium term. To this end, and with technical assistance from the IMF, Mauritius enacted a value-added tax (VAT), scheduled to come into effect in September 1998. The VAT is intended to restore tax buoyancy, recoup some of the tax revenue loss resulting from the tariff reductions, and compensate for revenue losses arising out of planned further tariff reductions in the context of regional and international initiatives and commitments.

In the monetary area, the Bank of Mauritius has recently taken steps to vitalize and deepen the financial markets, including removing the commercial banks' required noncash liquid asset ratio. It has also begun publishing a monthly bulletin that, among other macroeconomic statistics, provides market participants with relevant data on treasury bill auctions and foreign exchange transactions. To further strengthen the financial sector, the Bank of Mauritius has tightened prudential regulations by raising the required risk-weighted capital adequacy ratio (in line with the Basle principles) from 9 percent to 10 percent for domestic banks effective July 1, 1997. It has also increased the minimum of paid-up or assigned capital for both domestic and offshore banks from Mau Rs 50 million to Mau Rs 100 million by January 1, 1999, and subjected domestic commercial banks to a 15 percent exposure limit, monitored daily, on their open foreign exchange positions.

In the external sector, Mauritius accepted the obligations under Article VIII of the IMF's Articles of Agreement in 1993, and its payments system has remained free of all restrictions on the making of payments and transfers for current international transactions. In July 1994, the authorities lifted all remaining controls on capital account transactions and introduced an interbank foreign exchange market, thus effectively eliminating the Mauritian rupee's peg and allowing its value to be essentially market determined. The interbank market was further deepened in July 1997 when the Bank of Mauritius terminated the foreign exchange surrender requirements for sugar export proceeds and allowed the Mauritian Sugar Syndicate to sell its foreign exchange earnings directly to the interbank market.

Mauritius: Current Account
(million U.S. dollars, unless otherwise indicated)

	1979/80–1983/84[1]	1984/85–1988/89[1]	1989/90–1993/94[1]	1994/95–1997/98[1]
Current account	–89.8	4.6	–63.4	–64.8
(percent of average GDP)	–8.0	0.3	–2.2	–1.7
Exports, f.o.b.	374.2	741.3	1256.9	1527.3
Sugar	224.0	275.1	338.3	355.4
Export processing zone	117.2	414.9	797.7	1025.6
Other	33.0	51.2	121.0	146.4
Imports, f.o.b.	–447.5	–785.8	–1475.3	–1856.3
Export processing zone	–80.3	–311.0	–491.0	–599.7
Services (net)	–2.8	32.9	67.2	180.9
Travel (net)	23.4	73.4	154.2	278.8
Income and current transfers (net)	–13.7	16.3	87.8	83.3
Memorandum items:				
Net international reserves of the banking system	–120.3	141.0	864.3	975.8
(months of imports, c.i.f.)[2]	–2.9	1.1	6.6	6.1

[1]Period averages; fiscal year from July to June.
[2]Excluding the acquisition of aircraft and ships.

Data: Mauritian authorities and IMF staff estimates

Policy Directions and Challenges

Given intense international competition and dynamic global financial markets, the Mauritian authorities recognize that despite the country's enviable achievements over the past three decades, they must continue to enhance the country's economic framework and build on its strengths. In this vein, they are rendering logistical and legislative support to the private sector, which is embarking on a number of promising initiatives and joint ventures in Africa in the areas of sugar production, manufacturing, and transportation. The IMF has been providing Mauritius with technical assistance in modernizing its banking legislation and strengthening banking supervision. In the near and medium term, the authorities face the challenge of improving labor market flexibility by liberalizing labor legislation and strengthening workers' skills through effective vocational training to reverse the recent rising trend in structural unemployment and enable the economy to move to the production of higher value-added goods and services. Finally, the recent sharp Asian currency depreciations heighten the importance for the authorities of pursuing prudent macroeconomic policies, ensuring that the country's external competitiveness is not eroded, and maintaining external reserves at comfortable levels. ■

Saul L. Rothman and Gamal Z. El-Masry
IMF African Department

Photo Credit: Padraic Hughes for the IMF, page 259.

In Asian Crisis, Macroeconomic Indicators Provided Limited Advance Warning

Few countries have escaped the past three decades without an episode of severe distress in their banking sector. As both the frequency and the intensity of these disturbances increase, researchers are more urgently seeking to identify possible warning signals or leading indicators that could alert authorities to pending danger.

In a recent IMF Working Paper, Leading Indicators of Banking Crises: Was Asia Different?, *Daniel C. Hardy and Ceyla Pazarbasıoğlu examined 43 episodes of banking system distress and crisis in 38 countries from the late 1970s through 1998. Their analysis found robust evidence that several macroeconomic and financial indicators might generally serve as useful leading indicators of crises. The macroeconomic indicators gave limited advance warning of the Asian crises. In that region, the best warning signs were proxies for banking and corporate sector vulnerability.*

Co-author Hardy talks here about the background and methodology, as well as the results, of their study.

IMF SURVEY: *There is now a flourishing body of work seeking to identify the warning signs, or indicators, of a pending banking sector crisis. What does your study add to this effort?*

HARDY: All of the recent work is an attempt to predict when crises are likely to happen and thus head them off—that is, either prevent the conditions from occurring or at least be better prepared when something like this is brewing.

First, it is useful to distinguish the underlying vulnerabilities of economies regardless of whether there is a full-blown crisis or an instance of distress in the banking system. Some economic characteristics are quantifiable—such as the capital adequacy of the banking system or large sectoral exposures. Other characteristics are more institutional in nature, such as the quality of supervision and regulation. A vital role may be played by incentives of different actors in the economy, as well as the development of the rule of law and the administration of the country. But these institutional aspects are very difficult to pin down across countries and are not quantifiable.

Second, there are what I would call proximal causes—the macroeconomic developments that would be manifest in macroeconomic time series, such as credit booms or fluctuations in the capital account or trade shocks. Third, there are specific triggers that release a crisis. The specific triggers tend to be rather idiosyncratic; the exact timing of a crisis is thus difficult to generalize.

Our study is chiefly concerned with the proximal causes—things that are quantifiable and to an extent known in advance and for which there are available data. Some good research in the existing literature—much of it by colleagues here at the IMF—has also looked at these variables. A number of papers have focused on a particular country—commonly the United States. One, by my co-author and others, looked at bank-specific data for Mexico. This work is valuable, but it is almost impossible to make these comparisons across countries. The data are unavailable, of very poor quality, and have long lags.

Hardy: Our study is chiefly concerned with the proximal causes of crises.

We concentrated instead on trying to identify macroeconomic variables that would be widely available outside and inside a country and would be either leading or contemporaneous indicators of banking difficulties. To generate fairly robust indicators across countries, we used as large a sample as possible.

We wanted to see if we could make such generalizations, so our study distinguished between isolated banking problems—that is, periods of distress—and full-blown crises in which the entire system was undermined. It was also important to look at different types of economies. The transition countries all had severe banking difficulties, but that is not too surprising given the output fall there and the fluctuations in inflation and everything else. What happened in Armenia is interesting, but not really comparable to what happened in Korea. It is useful to differentiate among the market economies as well. We wanted to see the extent of commonalities and differences. We were also curious about the time structure and how far in advance those leading indicators contain useful information.

IMF SURVEY: *How do you define a banking crisis?*

HARDY: One of the pervasive difficulties in the literature is identifying what a banking crisis is, when exactly it takes place, and how severe it is. We relied on the work of our colleagues to define our sample. We identify crises as events rather than as continuous variables. There is also a question of scale. In some countries, inflation that rises from 3 percent to 10 percent is a major development. But for others, it is not such a big deal. Data must be scaled to make comparisons across countries.

The gist of our methodology was to relate these events—these singled-out points in time—to a variety of macroeconomic and financial variables, which of course are continuous variables. We were looking not only at the episode of distress but also at the years pre-

ceding the disturbance to see how different the macroeconomic conditions were at the time of the crisis, the year before the crisis, and the time before then. Essentially, you begin to get useful indicators about a year in advance. Before that, it is difficult to distinguish anything—at least across a sample of countries.

IMF Survey: *Which common indicators did you find across countries?*

Hardy: Looking at the global results, we found a certain amount of consistency. Our empirical findings suggest that banking distress is associated with a largely contemporaneous fall in real GDP growth; boom-bust cycles in inflation, credit expansion, and capital inflows; rising real interest rates and a declining incremental capital output ratio; a sharp decline in the real exchange rate; and an adverse trade shock.

There is a danger of crying wolf and precipitating a crisis by undermining confidence.

We also found that even with the recent episodes in East Asia out of the sample, we were able to predict the Asian crises fairly well, although in those cases it was difficult to forecast them a year in advance. The contemporary indicators for Asia are very clear, but the leading indicators are not very useful; but then, these crises came as a surprise to many people.

Our findings in some sense supported the theoretical literature. We could see the effect of a boom and bust pattern—big increases followed by big decreases in inflation and credit growth. We found that the macroeconomic and banking sector statistics have some value as leading indicators. Financial variables, such as real effective exchange rates, have some usefulness as leading indicators but really dominate as contemporaneous indicators. Rising interest rates are a leading indicator across countries. By contrast, we found some variables, such as fixed capital formation, that had been suggested as indicator variables were not significant, but that might be the product of our sample.

We clearly saw different patterns in different regions. The pattern for the African countries—which in effect proxied for economies dependent on primary products—reflected a big effect from terms of trade shocks and less effect from, say, inflation fluctuations. Other regions had no demonstrable effect from terms of trade shocks.

We had asked if the Asian countries were different, and for them we did see a higher than average relationship between their banking sector distress and credit growth, increased capital inflows, real appreciation, and excessive investment, although the pattern is not wildly different from that seen elsewhere. In Asia, we also saw appreciation followed by a depreciation, and a buildup in the foreign liabilities of the banking sector.

We used various methods to assess the relative importance of macroeconomic variables and structural features that persist across time. We found some indications that these structural aspects I mentioned before as underlying vulnerability are very important indeed, but they do not actually help you predict things. They only show you in sample the differences in levels.

Our analysis did distinguish between crises and banking distress. In many countries, segments of the banking system experience difficulty without the entire system being jeopardized. In some cases, the disturbance is simply a matter of individual bank mismanagement. The severe crises, we found, are often associated with big credit expansions funded mainly by capital inflows and fluctuations in real effective exchange rates. By contrast, the periods of distress are more likely to be linked to domestic phenomena, particularly credit expansion and rising real interest rates. This tentatively suggests that a full-blown crisis arises when external factors compound what is happening domestically. Also, deeper, more sophisticated banking systems tend to have periods of distress rather than full-blown crises. The collapse of one or several banks does not constitute a crisis in these systems; elsewhere it might.

Our results are also not bad in terms of avoiding false alarms—that is, avoiding the prediction of crises that did not happen. There is a danger, and the IMF is well aware of it, of crying wolf and precipitating a crisis by undermining confidence.

IMF Survey: *On the basis of this research, what would you advise a country to be alert to in terms of avoiding a potential banking crisis?*

Hardy: I would be concerned about rapid credit growth, particularly rapid credit growth to a small number of sectors—real estate is a classic case. There is then increased vulnerability if there is a downturn in that sector. If you see this situation developing, it is tricky but you can engineer a soft landing. You want to avoid too abrupt a slow down. Another obvious concern, of course, is banks taking large foreign currency positions, particularly short-term positions.

IMF Survey: *What are the implications of your findings for future research?*

Hardy: What is being looked into now are the bank-specific and—as far as possible—institutional indicators. It would also be interesting to look more closely at the similarities and dissimilarities in post-banking distress behavior. How quickly, for example, do countries recover and how do they recover? ■

Copies of IMF Working Paper 98/91, *Leading Indicators of Banking Crises: Was Asia Different?*, by Daniel C. Hardy and Ceyla Pazarbaşıoğlu, are available for $7.00 from IMF Publication Services. See page 255 for ordering information.

Dilemma for Policymakers

Should Central Bank Operations in the Foreign Exchange Market Be More Transparent?

In recent years, there has been a growing consensus on the need for transparency in monetary policy: an economy functions best when policymakers provide a stable environment for the operation of market forces that, in turn, depends upon establishing clear rules for the conduct of policy. Even with increased transparency in monetary policy, however, there may not necessarily be transparency in a central bank's methods of carrying out those policies. It may, for example, be transparent that the central bank seeks higher interest rates or a fixed exchange rate, but the central bank may still obscure how this is to be achieved.

In a new study, *Transparency in Central Bank Operations in the Foreign Exchange Market,* Charles Enoch of the IMF's Monetary and Exchange Affairs Department looks at developments in one of the markets in which the central bank operates—the foreign exchange market—to examine to what extent trends toward transparency and market responsiveness have been mutually reinforcing. Insofar as there may be conflicts, this may place those responsible for policy design in a dilemma. Enoch identifies some areas where such a dilemma may exist and offers some solutions.

The foreign exchange market is particularly relevant with regard to transparency, Enoch states, because it is one of the major channels of transmission from the instruments of monetary policy to the final objectives; developments in the foreign exchange market are by their very nature of interest to partner countries in the foreign exchange market; and noneconomic factors frequently dominate foreign exchange market policy where political pressures, or the desire to maintain the credibility of the exchange rate regime, cause central banks to maintain exchange rates that could not be justified by market fundamentals.

Overt and Covert Intervention

Unless a country has adopted a purely floating exchange rate and is prepared to separate itself from the foreign exchange markets, its government will from time to time participate in the foreign exchange market in an attempt to influence the exchange rate. In most countries, the pool of foreign exchange reserves available for such intervention is small relative to the size of potential market flows, and intervention on its own will tend not to have a lasting effect. Nevertheless, authorities undertake intervention with the expectation that it provides movement toward, or support for, policy objectives. In this regard, leaving aside issues such as when to sterilize the liquidity effects of their actions in the foreign exchange market, central banks have traditionally had the alternatives of covert or overt intervention. Covert intervention, according to Enoch, is designed to avoid indicating to the market that the central bank is involved by giving the impression that there is additional market demand supporting the rate. Overt intervention may be designed not so much to provide additional demand for that currency but to give a signal that the authorities are committed to that rate and are willing to use the instruments at their disposal to maintain it, or simply that they are trying to guide the rate to where they think it should be.

This dichotomy is not so simple, however—there are likely to be limits in the degree to which the central bank can achieve its preference between overt and covert intervention, Enoch explains. The greater the volume of intervention, for example, the less likely that the authorities will be able to keep it covert. Nevertheless, the central bank is generally able to disguise its intervention if it wishes. Intervention, unless massive, may be spread across counterparties and intermediaries, and in some countries, may be undertaken by agencies other than the central bank—for instance, by state-owned commercial banks.

Covert intervention may be desirable when the authorities do not wish to signal their involvement—for example, when:

- The authorities are comfortable with their overall policy stance and feel they are facing a temporary shortfall or glut in demand for currency and are seeking to avoid having those temporary conditions get built into market expectations.
- The central bank is not sure of its own commitment or ability to defend a particular rate and therefore does not wish to jeopardize its credibility by being seen to support a rate that is subsequently not held.
- The central bank is concerned that its appearance in the markets may in fact prompt increased market pressures against it.
- A country is operating within a foreign exchange rate band regime (such as the exchange rate mechanism of the European Monetary System) to avoid the speculative pressures that might emerge if the rate were permitted to move to the edge of the band.
- A central bank tries, like a typical market participant, to get the "best rate" it can; it does not want to risk its actions being perceived as "distress buying," since this might encourage market counterparties to offer it worse terms.

On other occasions, the central bank will wish to make its intervention overt—for example, when:

- It wishes to signal to the market that it has a policy preference about where the rate should be and has suf-

ficient credibility that this signal will encourage expectations that this rate will be achieved.

• It aims to avoid overreaction to market fluctuations brought on by large discrete trades.

• It believes that it will be unable to conceal the intervention and thus considers that giving the market accurate information on intervention would be preferable to the market generating inaccurate information on its own.

• There are uncertainties about its overall policy stance; information about its foreign exchange market activities may improve the credibility of that stance.

Transparency: How and to Whom?

In the same way that inappropriate policies may lead to economic costs, so too can inappropriate implementation of those policies. The public would, therefore, seem to have as legitimate an interest in the implementation of central bank policies as in policy design. In this respect, Enoch identifies two forms of accountability: that of the central bank to the government—or more specifically to the ministry of finance—and that to the public. Although accountability to the government is important, it is not the same as accountability to the public—that is, transparency. The argument for accountability to the government is that the central bank is potentially using public funds, so the authorities have an interest in approving and monitoring the use of those funds. In some countries, the central bank must therefore secure authority in advance for all foreign exchange market intervention and must report intervention immediately to the ministry of finance. However, such intrusive government involvement may be considered inconsistent with the central bank's operational independence. Insofar as a central bank has the mandate to operate monetary policy independently to achieve monetary targets, it should also have day-to-day responsibility for managing the foreign exchange market and, hence, for foreign exchange market intervention, says Enoch.

There is also the question whether transparency can be improved by an advance announcement of the extent of the central bank's intervention. This may be unnecessarily restrictive, however. Foreign exchange reserves are essentially available for intervention, and advance restrictions on their use may diminish their usefulness. Such announcements could also reduce the effectiveness of the interventions.

Transparency means not only giving the public access to as much information as possible but also ensuring that this access is provided on equal terms to all. Privileged access to information would taint that information and make the process no longer transparent. Recognizing this, a number of countries require that the government and the public be given access to central bank information simultaneously. In some countries, restrictive regulations govern interactions between central bankers with insider information and market participants who would stand to benefit from that information. With those able to benefit from such information being ever more sophisticated in their use of the information they gain, increasingly comprehensive regulations on the dissemination of information are likely to be needed. Indeed, during periods when a central banker has market-sensitive proprietary information, it may be necessary to prevent all unmonitored contact with market participants, says Enoch. To prevent such restrictions from becoming impossibly onerous and isolating the central bank too severely, the effects of such restrictions could be mitigated by:

• clarifying in advance, to the greatest extent possible, the basis on which the central bank will be operating (so that the value of any proprietary information is limited);

• minimizing the time during which information is proprietary; and

• minimizing the number of central bankers who have access to it.

Transparency Through Disclosure

Beyond the measures discussed above, the most effective form of ensuring transparency is likely to be through the reporting of central bank activity in the foreign exchange market, Enoch comments. Insofar as there is a lack of transparency in day-to-day central bank operations in the foreign exchange market, however, this should be balanced by clear statements of policy in advance, together with full disclosure within a short period thereafter, to confirm that actual policy was in line with announced policy intentions. In particular, there should be fairly rapid and equal public access to accurate information on a country's foreign reserves position. ■

Copies of IMF Paper on Policy Analysis and Assessment 98/2, *Transparency in Central Bank Operations in the Foreign Exchange Market,* by Charles Enoch, are available for $7.00 from IMF Publication Services. See page 255 for ordering information.

Public Information Notices

Public Information Notices (PINs) are IMF Executive Board assessments of members' economic prospects and policies issued—with the consent of the member—following Article IV consultations, with background on the members' economies. Recently issued PINs include:

United States, No. 54, August 7
Jamaica, No. 55, August 10
Greece, No. 56, August 10
Central African Republic, No. 57, August 11
Sri Lanka, No. 58, August 12
Turkey, No. 59, August 13
Japan, No. 60, August 13

Full texts are available on the IMF's worldwide web site (http://www.imf.org/pins).

Lack of Hard Evidence

Stock Market Reactions to Macroeconomic News Vary According to Economic Conditions

There is a widespread belief that the stock market is sensitive to announcements of macroeconomic events and that any surprises will move stock prices up or down. Reports of stock prices falling because of "disappointing nonfarm payroll employment figures" or rising on account of "encouraging news on the inflation front" are commonplace in the financial media.

There is, however, relatively little hard evidence to support the belief that stock prices respond to general macroeconomic news, apart from some types of monetary information. One reason is that standard regressions treat the market reaction to the same type of macroeconomic news as being identical at all times. The market, however, seems to treat similar macroeconomic information differently, depending on business cycle stages or economic conditions. During a recession, for example, the market could interpret a higher-than-expected pickup in industrial production as an indicator of economic recovery and an improved outlook for corporate earnings, possibly causing a stock market rally. On the other hand, if the same news occurs after a long period of expansion with the economy running near full capacity, it may result in fears of an overheating economy and possible moves by policymakers to increase interest rates. This might well cause the stock market to fall.

In their recent study, *Responses of the Stock Market to Macroeconomic Announcements Across Economic States*, Li Li and Zuliu F. Hu examine stock market reactions in the United States to macroeconomic news under different economic conditions. They also explore potential differences in reactions by small company and blue chip stocks to macroeconomic surprises—a topic that existing research has paid little attention to.

Response to Unanticipated Changes

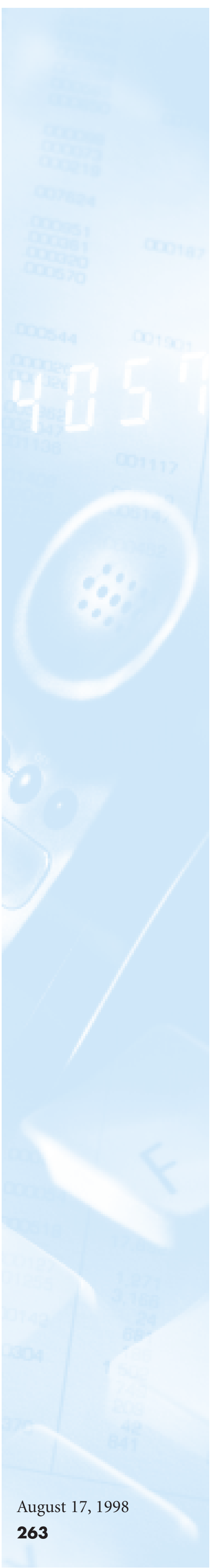
First, Li and Hu review the evidence of the impact of unanticipated changes in macroeconomic variables—such as money supply, inflation, discount rates, and real economic activity—on the stock market. With respect to money supply, they note that the evidence has shown that unanticipated increases in the money supply lead to immediate increases in interest rates, which—through their influence on future cash flows—decrease security prices. There are two prominent explanations for this. The first is the policy anticipation—or liquidity—effect by which an unanticipated expansion of the money supply might lead market participants to expect the central bank to tighten money supply to offset the increase, resulting in higher real interest rates in the future. The second one—the inflation expectation effect—postulates that a positive shock in the money supply leads to an upward adjustment of inflation expectations, which leads to higher nominal interest rates.

If interest rates and, hence, stock prices respond to money supply announcements because of inflationary expectations, they should also be affected by shocks contained in inflation rate announcements. A negative effect should emerge if a positive surprise in announced inflation induces agents to raise their level of expected inflation. Such effects are well documented.

Inflation surprises could also affect the financial market through channels other than changes in inflationary expectations. Unanticipated higher inflation may lead to the expectation of more restrictive monetary policies, which in turn will lead to reduced cash flows and lower stock prices. A positive inflation surprise could also induce agents to adjust their savings, resulting in higher interest rates and lower stock prices. In any event, all these potential links suggest that surprises in consumer and producer price index announcements could be positively related to interest rates and negatively related to stock prices. However, the empirical evidence for the inflation announcement effect is not as strong as the money supply announcement effect.

Discount rate changes reveal new information about short-run policy objectives. An increase, for example, corresponds to a short-run objective of returning to the implied long-run money growth target more quickly. With short-run money growth reduced and the long-run objective unchanged, the change will raise market interest rates, and stock prices should fall as a result. While the discount rate may be considered a weak and infrequently used tool of monetary policy, discount rate changes generally attract close attention: they send a clear signal of the Federal Reserve Board's monetary policy stance and can be easily interpreted by market participants. In addition, rate changes are established by a public body, which is typically perceived as being competent to judge the economy's cash and credit needs, and rate changes are made only at substantial intervals, thus capturing widespread attention once they are announced.

A positive innovation in real economic activity may increase expectation of future growth and, thus, can cause an increase in share prices. Alternatively, greater than expected real economic activity may also cause agents to worry about a more restrictive monetary policy in the future and would thus be likely to depress stock prices. Therefore, the exact impact of real activity surprises on security prices cannot be determined in advance. Li and Hu note that this perhaps explains why



many announcements concerning real activity receive considerable attention in the financial press, but have no grounds in empirical research.

Empirical Model and Results

In the first part of their empirical analysis, Li and Hu employ four U.S. stock indices—the Dow Jones Industrial Index, the S&P 500, the Russell 1000, and the Russell 2000 Index—to examine stock market reactions to a broad set of macroeconomic variables, including the money supply, the Federal Reserve discount rate, inflation, industrial production, nonfarm payroll, unemployment, the merchandise trade deficit, housing starts, business inventories, and capacity utilization. Their sample period covers February 1, 1980, to December 31, 1996.

Consistent with previous research, they find significant negative coefficients for money supply and discount rate change announcements. Inflation rate announcements depress stock prices, and surprises in the money supply tend to have stronger effects on the stock market roughly consistent with the inflation expectation hypothesis and the liquidity effect hypothesis. For real economic activity, positive shocks for nonfarm payrolls push down the S&P 500 and the Russell 1000, and positive trade balance innovations tend to push up the Dow Jones Industrial Index. Although past research has not examined the influence of housing starts, in the Li and Hu study it emerges as a significant variable—unanticipated housing starts have a significant positive impact on all four of the stock indices. By contrast, an unemployment shock is insignificant for the Dow Jones and the Russell 2000. Small companies are found to react significantly differently to shocks of unemployment news compared to the blue chips.

Next, to estimate market responses to the same macroeconomic variables under different conditions, Li and Hu classify economic stages by industrial production, the leading economic indicators, business cycle turning points, the unemployment rate, and differences in monetary policy as determined by discount rate changes. Using this approach, they find strong evidence for variations in stock market reactions to the same macroeconomic news across different economic states. Unanticipated changes in the money supply and discount rates have, for example, significant negative effects only when the unemployment rate is high. Positive trade balance shocks increase all four indexes during expansion. When the economy is in contraction, positive innovations in housing starts announcements push up all indexes. And, as expected, positive surprises in nonfarm payrolls depress the S&P 500 and the Russell 1000 during expansions.

Looking at different economic conditions as determined by the monetary policy regime, Li and Hu find that when monetary policy is restrictive, stocks tend to react more strongly to discount rate changes. Unexpected higher inflation tends to depress stock prices, as do positive shocks to industrial production when monetary policy is restrictive—the unanticipated pickup in production tends to trigger further policy tightening in response to concerns over inflation risk.

Small Caps Versus Blue Chips

Many experts are of the view that small and large companies have different sensitivities to the risk factors relevant for pricing assets. Some studies have found that small firms are more exposed to changes in the risk premium and to production risk—that is, they are less able to adjust if expectations that guide production decisions turn out to be misplaced. Other research has shown that returns of firms in the same size range tend to respond to risk factors in similar ways and that their returns tend to move together. Some argue that small firms are more sensitive to changes in the economy and are less likely to survive adverse economic conditions. In examining the reaction of small and large companies to unexpected macroeconomic news, Li and Hu find that they do respond differently. Small companies also performed better during the sample period. They tended, however, to have lower earnings during restrictive monetary pol-

Members' Use of IMF Credit
(million SDRs)

	Jul. 1998	Jan.–Jul. 1998	Jan.–Jul. 1997
General Resources Account	**4,354.81**	**11,578.35**	**2,750.68**
Stand-By Arrangements	741.06	6,407.74	594.88
Of which: Supplemental Reserve Facility	0.00	4,400.00	0.00
EFF Arrangements	1,457.20	3,014.06	2,048.20
Of which: Supplemental Reserve Facility	675.02	675.02	0.00
CCFF	2,156.55	2,156.55	107.60
SAF and ESAF Arrangements	**46.01**	**506.71**	**334.02**
Total	**4,400.82**	**12,085.06**	**3,084.70**

Note: EFF = Extended Fund Facility
CCFF = Compensatory and Contingency Financing Facility
SAF = Structural Adjustment Facility
ESAF = Enhanced Structural Adjustment Facility
Figures may not add to totals shown owing to rounding.

Data: IMF Treasurer's Department

Selected IMF Rates

Week Beginning	SDR Interest Rate	Rate of Remuneration	Rate of Charge
August 3	4.30	4.30	4.60
August 10	4.24	4.24	4.54

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 (the U.S. dollar, weighted 39 percent; deutsche mark, 21 percent; Japanese yen, 18 percent; French franc, 11 percent; and U.K. pound, 11 percent). The rate of remuneration is the rate of return on members' remunerated reserve tranche positions. The rate of charge, a proportion (currently 107 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 web site (http://www.imf.org/external/np/tre/sdr/sdr.htm).

Data: IMF Treasurer's Department

icy periods and during economic contractions. As such, whether small companies are less likely to survive adverse business conditions remains inconclusive.

Li and Hu also find no evidence that small stocks are more exposed to production risk. Although they find some difference in reaction to inventory shock between small caps and big caps, and other research has shown that small companies account for a significantly disproportionate share of the manufacturing decline and inventory slowdown that follows monetary policy tightening, the evidence remains inadequate and inconclusive. ■

Copies of Working Paper 98/79, *Responses of the Stock Market to Macroeconomic Announcements Across Economic States*, by Li Li and Zuliu F. Hu are available for $7.00 each from Publication Services. See page 255 for ordering information.

Stand-By, EFF, and ESAF Arrangements as of July 31

Member	Date of Arrangement	Expiration Date	Amount Approved	Undrawn Balance
			(million SDRs)	
Stand-By Arrangements			**28,805.05**	**10,185.84**
Bosnia and Herzegovina	May 29, 1998	May 28, 1999	60.60	36.36
Cape Verde	February 20, 1998	April 19, 1999	2.10	2.10
Djibouti	April 15, 1996	March 31, 1999	8.25	2.93
Egypt	October 11, 1996	September 30, 1998	271.40	271.40
Estonia	December 17, 1997	March 16, 1999	16.10	16.10
Indonesia	November 5, 1997	November 4, 2000	8,338.24	4,669.12
Korea[1]	December 4, 1997	December 3, 2000	15,500.00	2,900.00
Latvia	October 10, 1997	April 9, 1999	33.00	33.00
Philippines	April 1, 1998	March 31, 2000	1,020.79	1,020.79
Thailand	August 20, 1997	June 19, 2000	2,900.00	800.00
Ukraine	August 25, 1997	August 24, 1998	398.92	217.59
Uruguay	June 20, 1997	March 19, 1999	125.00	125.00
Zimbabwe	June 1, 1998	June 30, 1999	130.65	91.45
EFF Arrangements			**17,471.99**	**11,072.53**
Argentina	February 4, 1998	February 3, 2001	2,080.00	2,080.00
Azerbaijan	December 20, 1996	December 19, 1999	58.50	24.58
Croatia, Republic of	March 12, 1997	March 11, 2000	353.16	324.38
Gabon	November 8, 1995	November 7, 1998	110.30	49.63
Jordan	February 9, 1996	February 8, 1999	238.04	35.52
Kazakhstan	July 17, 1996	July 16, 1999	309.40	309.40
Moldova	May 20, 1996	May 19, 1999	135.00	97.50
Pakistan	October 20, 1997	October 19, 2000	454.92	398.06
Panama	December 10, 1997	December 9, 2000	120.00	90.00
Peru	July 1, 1996	March 31, 1999	300.20	139.70
Russian Federation	March 26, 1996	March 25, 1999	13,206.57	7,426.86
Yemen	October 29, 1997	October 28, 2000	105.90	96.90
ESAF Arrangements			**4,580.98**	**2,433.85**
Albania	May 13, 1998	May 12, 2001	35.30	29.42
Armenia	February 14, 1996	February 13, 1999	101.25	33.75
Azerbaijan	December 20, 1996	December 19, 1999	93.60	23.40
Benin	August 28, 1996	August 27, 1999	27.18	18.12
Bolivia	December 19, 1994	September 9, 1998	100.96	0.00
Burkina Faso	June 14, 1996	June 13, 1999	39.78	13.26
Cameroon	August 20, 1997	August 19, 2000	162.12	108.08
Central African Republic	July 20, 1998	July 19, 2001	49.44	41.20
Chad	September 1, 1995	August 31, 1998	49.56	8.26
Congo, Republic of	June 28, 1996	June 27, 1999	69.48	55.58
Côte d'Ivoire	March 17, 1998	March 16, 2001	285.84	202.47
Ethiopia	October 11, 1996	October 10, 1999	88.47	73.73
The Gambia	June 29, 1998	June 28, 2001	20.61	17.18
Georgia	February 28, 1996	February 27, 1999	166.50	55.50
Ghana	June 30, 1995	June 29, 1999	164.40	68.50
Guinea	January 13, 1997	January 12, 2000	70.80	35.40
Guyana	July 15, 1998	July 14, 2001	53.76	44.80
Haiti	October 18, 1996	October 17, 1999	91.05	75.88
Kenya	April 26, 1996	April 25, 1999	149.55	124.63
Kyrgyz Republic	June 26, 1998	June 25, 2001	64.50	53.75
Macedonia, FYR	April 11, 1997	April 10, 2000	54.56	27.28
Madagascar	November 27, 1996	November 26, 1999	81.36	54.24
Malawi	October 18, 1995	October 17, 1998	45.81	15.27
Mali	April 10, 1996	April 9, 1999	62.01	20.67
Mongolia	July 30, 1997	July 29, 2000	33.39	27.83
Mozambique	June 21, 1996	June 20, 1999	75.60	25.20
Nicaragua	March 18, 1998	March 17, 2001	100.91	84.09
Niger	June 12, 1996	June 11, 1999	57.96	19.32
Pakistan	October 20, 1997	October 19, 2000	682.38	454.92
Rwanda	June 24, 1998	June 23, 2001	71.40	59.50
Senegal	April 20, 1998	April 19, 2001	107.01	89.18
Tajikistan	June 24, 1998	June 23, 2001	96.00	78.00
Tanzania	November 8, 1996	November 7, 1999	161.59	74.47
Uganda	November 10, 1997	November 9, 2000	100.43	60.26
Yemen	October 29, 1997	October 28, 2000	264.75	220.75
Zambia	December 6, 1995	December 5, 1998	701.68	40.00
Total			**50,858.02**	**23,692.22**

[1]Includes amounts under Supplemental Reserve Facility.
EFF = Extended Fund Facility
ESAF = Enhanced Structural Adjustment Facility
Figures may not add to totals owing to rounding.

Data: IMF Treasurer's Department

Adjustment measures under ESAF-supported programs are expected to strengthen a country's balance of payments position and foster growth.

From the Executive Board

Following is an excerpt of a recent IMF press release. The full text is available on the IMF's web site (http://www.imf.org) under "news" or on request from the IMF's Public Affairs Division (fax: (202) 623-6278).

Mali: ESAF

The IMF has approved the third annual loan for Mali under the Enhanced Structural Adjustment Facility (ESAF), equivalent to SDR 20.7 million (about $28 million) in support of the government's program for 1998–99. The loan is available in two equal semiannual installments, the first of which is available immediately.

Medium-Term Strategy and Program for 1998–2001

The government's medium-term development strategy aims to consolidate macroeconomic stability and attain sustainable economic growth that will reduce poverty and raise the living standards of the population. The principal macroeconomic objectives for 1998/99–2000/01 are to achieve an average annual GDP growth of at least 5 percent, limit inflation to 2–3 percent, and reduce the external current account deficit to 7 percent by 2001. To achieve these objectives, Mali's strategy will be to reinforce macroeconomic policies and deepen and accelerate structural reforms.

Within this medium-term strategy, Mali's program for 1998/99, which will be supported by the third annual ESAF arrangement, projects a real GDP growth of 5 percent, consumer price inflation of 2–3 percent, and an external current account deficit of 8 percent. To these ends, fiscal consolidation efforts in 1998/99 are aimed at reducing the overall budget deficit to 7.6 percent in 1998 and 6.4 percent in 1999.

Structural Reforms

The government's agenda of structural reforms is designed to support the goal of pursuing widespread poverty reduction and improving living standards. The key structural reforms are in the areas of agricultural development, public enterprises, the regulatory system, and regional cooperation and integration.

Social Issues

The government's medium-term social objective is to achieve a broadly based improvement in living standards through the implementation of well-targeted poverty reduction programs and sustained economic growth.

Mali joined the IMF on September 27, 1963. Its quota is SDR 68.90 million (about $92 million). As of end-July 1998, Mali's outstanding use of IMF resources totaled SDR 125.1 million (about $167 million).

Press Release No. 98/34, August 7

Mali: Selected Economic and Financial Indicators

	1996[1]	1997[1]	1998[2]	1999[2]	2000[2]	2001[2]
	(annual percent change)					
Income and prices						
GDP at constant prices	4.0	6.7	5.4	5.0	5.0	5.0
GDP deflator	6.3	1.8	2.7	2.5	2.1	2.2
Consumer price index						
Annual average	6.5	–0.7	2.5	2.5	2.5	2.5
End of period	2.8	0.9	2.5	2.5	2.5	2.5
	(percent of GDP)					
Overall fiscal deficit (commitment basis)[3, 4]						
Excluding grants	–7.9	–7.8	–7.6	–6.4	–5.3	–4.6
Including grants	–0.8	–2.1	–3.9	–2.5	–1.7	–1.3
External current account balance[3]						
Excluding official transfers	–14.2	–9.3	–9.8	–8.6	–8.0	–7.0
Including official transfers	–5.1	–2.8	–3.9	–2.7	–2.5	–1.9
External public debt	111.3	116.9	114.1	110.7	107.5	103.4
	(percent of exports of goods and nonfactor services)					
Debt service ratio						
Before debt relief	30.0	15.0	12.2	12.4	13.2	13.9
After debt relief	15.1	5.0	12.2	12.4	13.2	13.9

[1]Estimates.
[2]Projections.
[3]Including interest due to the People's Republic of China and the Russian Federation.
[4]Before debt rescheduling; after debt cancellation obtained through 1996.

Data: Malian authorities and IMF staff estimates and projections

Free Trade Accords with EU Heighten Need for Tax Reform in Southern Mediterranean Region

Significant long-term benefits can be expected to flow to the southern Mediterranean region from a series of Association Agreements with the European Union (EU). These agreements—which have been signed by Israel, Morocco, and Tunisia, initialed by Jordan, and are under discussion in Algeria, Egypt, and Lebanon—pave the way, over a 12-year period, for a free trade area. While the agreements are expected to produce long-term benefits for the participants, there will be short-term costs. These countries, historically dependent upon trade taxes for a sizable percentage of their revenue, will more urgently need to shift to, or improve the implementation of, consumption and income taxes as well as revamp and strengthen their tax administration.

In *Trade Liberalization and Tax Reform in the Southern Mediterranean Region*, George T. Abed assesses the revenue impact of the EU Association Agreements and explores the reforms necessary to make a successful transition to a free trade area and a more liberal trade regime.

Association Agreements

Essentially, the Association Agreements call for the elimination of any remaining restrictions on the European Union's free access to the southern

Mediterranean countries' industrial products, the gradual elimination of all tariffs on imports from the European Union, the immediate removal of all quantitative restrictions, and the harmonization of policies and regulations covering competition, intellectual property, and industrial standards.

Given the large share of these countries' trade with the European Union and their relatively high initial effective tariff rates, the complete removal of these tariffs will represent a "radical change" in their trade regimes. This effect would be amplified if, to avoid trade diversion, tariffs are also removed for non-EU countries. Abed estimates significant short- to medium-term economic and financial costs; the extent of these costs will be determined by the degree of liberalization, the strength of macroeconomic performance, and the international competitiveness of domestic industries.

Revenue Impact

To gauge the potential revenue impact, Abed measures the initial share of import taxes in total tax revenue, the import demand response to tariff reductions, the share of imports from the European Union in total imports, and the strength of elasticities of substitution between imports from the European Union and from third countries (potential trade diversion) and between all imports and import-competing goods and services (potential erosion in the tax base). The revenue impact is found to be most severe in Lebanon and Algeria, with potentially smaller revenue losses in Tunisia, Jordan, and Morocco (see table, above). These effects derive from either a relatively higher share of EU imports (Tunesia and Algeria) or simply higher general tariff rates (Egypt and Jordan).

The most obvious, and initially the largest, loss in revenue will result from tariffs that are no longer collected. Additional effects may arise if, for example, consumers substitute less expensive EU imports for more expensive non-EU imports (with tariff revenue lost on the latter).

Reviewing the results of a number of studies, Abed estimates that most countries in the southern Mediterranean will see losses of less than 3 percent if no offsetting measures are taken. Countries such as Morocco and Tunisia, which have been liberalizing their trade regimes and strengthening their domestic tax systems, will need to enhance the productivity of their tax systems by 12–15 percent. Lebanon—which is still heavily reliant on trade taxes, has a less developed domestic tax system, and draws nearly 50 percent of its imports from the European Union—will sustain a revenue loss equivalent to 4.2 percent of GDP in the final year of transition. Simply to maintain total budget revenues at current levels, such a loss would require Lebanon to bolster its *domestic* revenue collection by 60 percent.

Tax and Tariff Reforms

Abed indicates that considerable progress has been achieved in Egypt, Jordan, Morocco, and Tunisia, but the tax and tariff systems in most countries in the region remain complex, inefficient, and difficult to administer. The key tax and tariff policy reforms needed are:

• Introduction of *broad-based value-added taxes* (VATs) in Lebanon, Libya, and Syria and the reform of existing VATs by consolidating rates (Algeria, Morocco, and Tunisia), removing exemptions, and broadening the tax base (Egypt and Jordan);

• *Excise reforms*—notably the introduction of ad valorem rates or proper adjustment for inflation to provide for greater revenue buoyancy. Where petroleum products are sold below international prices, there is also scope to increase taxes on these products;

• Simplification of the *tax on business profits* by adopting a single rate (roughly 35 percent) and eliminating special exemptions;

• Adjustment of the top marginal rates for *personal income tax* to the business profits tax rate (necessitating reductions in Algeria, Libya, Morocco, and the West Bank and Gaza Strip and increases in Lebanon and Syria) as well as limiting deductions and exemptions; and

• Further reductions in tariffs to smooth the path to the Association Agreement targets.

Tax administration reforms in the region have progressed more slowly than tax policy reform. The introduction, in the late 1980s, of a VAT in Algeria, Morocco, and Tunisia and a general sales tax more recently in Egypt and Jordan have spurred the tax modernization effort. Nonetheless, considerable work remains to be done, notably:

• *Restructure existing tax agencies* along modern, functional lines and emphasize the most productive taxes and the largest taxpayers;

• *Simplify and modernize systems and procedures* and introduce efficient management practices;

Southern Mediterranean: Tariff Revenue from Trade with the European Union

	EU Share in Total Imports	Import Duties from EU Trade	
	Percent	Percent of total tax revenue	Percent of GDP
Tunisia	71.49	15.86	3.18
Libya	67.27	—	—
Algeria	64.12	19.21	2.21
Morocco	58.78	10.32	2.53
Israel	52.40	0.66	0.21
Lebanon	48.59	28.80	3.32
Egypt	39.84	7.87	1.34
Jordan	35.02	12.13	2.02
Syria	33.11	7.22	0.80

Data: Country authorities, IMF staff estimates; and IMF, *Direction of Trade Statistics*

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Comparative Revenue Structure, 1994–96
(percent of GDP)

	Total Revenue	Other Revenue	Tax Revenue: Income, Profits, and Capital Gains	Tax Revenue: Domestic Goods and Services	Tax Revenue: International Trade
Southern Mediterranean[1]	24.41	9.45	3.75	6.98	4.21
Algeria	31.02	19.49	2.78	4.91	3.45
Egypt	24.88	7.83	6.16	4.57	3.37
Jordan	30.24	13.59	3.31	7.09	5.90
Lebanon	16.26	4.74	1.65	...	7.34
Libya[2]	24.75	17.43	...	...	...
Morocco[3]	24.52	—	5.90	10.61	4.31
Syria[4]	25.29	14.17	3.85	0.97	2.63
Tunisia	25.48	5.42	4.69	9.82	4.57
West Bank and Gaza Strip[5]	17.24	2.37	1.64	10.89	2.11
OECD[1]	33.62	3.27	9.01	10.32	0.56
Non-OECD Asia[1]	19.62	5.21	4.91	5.81	2.52
Middle East (including Israel)[1]	27.01	11.40	5.36	5.48	2.98

[1]Unweighted average. The components do not add up to the unweighted averages of tax revenue because detailed data are not available for all countries.
[2]Data are for 1994–95.
[3]Calendar year data through 1995; starting 1996 fiscal year, data are for July/June. The 1996 calendar year data are estimated by averaging fiscal year data for the first half of 1996 and 1996/97.
[4]General government.
[5]Data are for 1995–96.

Data: Country authorities; IMF staff estimates; IMF, *Government Finance Statistics* (various years); and IMF, *International Financial Statistics* (various years)

- *Expand computerization* to speed tax processing and more effective use of databases to strengthen audit and enforcement;
- *Reorient audit strategy* toward the VAT, focusing on short, well-designed, and targeted interventions;
- *End separate assessments* and collections in francophone Africa (this has led to inefficiencies, evasion, and the buildup of tax arrears); and
- *Strengthen staff resources* through intensive training, better pay, and greater autonomy for tax officials.

Revenue Shares

The southern Mediterranean countries reduced their reliance on trade taxes as a percentage of GDP and as a share of total tax receipts through the 1980s, but have recorded a rising trend since 1990. For those countries in the southern Mediterranean region with available long-term data, the ratio of trade taxes to GDP declined steadily to 4.5 percent in 1990 from 6.3 percent in 1975, but has risen to 5.5 percent in the mid-1990s. This ratio is much higher than for other Middle Eastern countries and non-OECD Asian countries (see table, above). A similar pattern emerges with regard to the share of trade taxes in total tax revenue. Progress remains modest, and—even more worrisome—it may have been reversed in some instances (Algeria, Egypt, and Jordan) since 1990.

In addition to a relatively heavy dependence on trade taxes, the region is characterized by strong revenues from consumption taxes (highest among the non-OECD countries, reflecting the introduction of VATs in six of the nine countries) and poor productivity from direct taxation (the lowest of all the regions, reflecting a narrow tax base and weak collection and enforcement capacity). There is exceptional reliance (38.7 percent of total receipts) on nontax revenue drawn from either energy resources or ownership of productive enterprises. This has allowed the southern Mediterranean countries to attain one of the highest regional revenue-to-GDP ratios in the world (24.4 percent) despite an unremarkable tax effort, Abed observes. As the liberalization of the economy proceeds in these countries, however, nontax revenue is certain to decline. Failure to reduce spending and/or improve the tax effort will risk revenue shortfalls and increase the likelihood of fiscal deterioration.

Morocco, Tunisia, and, to a lesser extent, Egypt and Jordan have relatively well-developed tax systems and generate high tax revenue in relation to GDP. But in most of the other countries—notably Libya, Syria, and Lebanon—a heavy reliance on nontax receipts helps to augment modest collections from weak tax systems. Revenue from direct taxes remains relatively weak.

Thus, despite considerable progress, the countries of the southern Mediterranean region remain heavily dependent on trade taxes. With the transition to free trade with the European Union, a more vigorous reform of domestic tax systems, Abed concludes, will become increasingly vital, both to replace lost trade tax revenues and more broadly, and lastingly, to remove distortions, improve resource allocation, and enhance the prospects for more robust economic growth.

Copies of IMF Working Paper 98/49, *Trade Liberalization and Tax Reform in the Southern Mediterranean Region*, by George T. Abed, are available for $7.00 from IMF Publication Services. See page 255 for ordering information.