

New policy support program gets wider usage

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The IMF has approved a three-year Policy Support Instrument for Tanzania, the fourth developing country to enter into such an agreement with the Fund since PSIs were introduced 16 months ago. PSIs are designed for low-income countries that don't need, or don't want, financial assistance from the IMF, but do want the Fund to endorse their economic policies, give them advice, and monitor their performance.



Michael Spinkiro/IMF

IMF quota reform plan moves into second phase

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The IMF is pressing ahead with what is envisaged to be a two-year process of reform designed to update the representation of members and modernize the governance of the 62-year-old institution. After an initial round of ad hoc increases last September for four rapidly growing economies that were clearly underrepresented (China, Korea, Mexico, and Turkey), the IMF has now embarked on the second phase of the process. David Burton, head of an IMF panel on quota reform implementation, speaks about progress made so far.



Steve Jaffe/IMF

Brazil: growing, but not fast enough

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Despite a decade of solid economic fundamentals—including low inflation and a strong external position—Brazil's growth has averaged only 2.5 percent a year since the turn of the century. And even with an increase last year and this, it is well below the Latin American average, which in turn trails other rapidly growing areas such as Asia. To unlock its growth potential, Brazil needs to undertake more reforms to strengthen the financial sector and open the economy.



Evanisto SA/AFIP

Taking a lead in combating climate change

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The World Bank and the IMF should become more involved in the fight against climate change, according to Sir Nicholas Stern, a former World Bank chief economist, who is now an adviser to the U.K. government. He told a seminar it is still possible to avoid the worst effects of global warming but governments must act now. Fiscal Affairs Department head Teresa Ter-Minassian said the IMF would seek new ways to help countries address climate change.



Thomas Donohy/IMF

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What's on

MARCH

4–6 Institute of International Bankers' 2007 Annual Washington Conference, Washington, D.C., United States

6 IMF Book Forum, *Global Governance Reform: Breaking the Stalemate*, Colin I. Bradford Jr. and Johannes F. Linn, Editors, Washington, D.C., United States

7–8 International Seminar on Strengthening Public Investment and Managing Fiscal Risks from Public-Private Partnerships, IMF, Hungarian Ministry of Finance, International Center for Economic Growth—European Center, Budapest, Hungary

IMF Executive Board

For an up-to-date listing of IMF Executive Board meetings, see www.imf.org/external/np/sec/bc/eng/index.asp

15–17 7th Annual Conference of the Parliamentary Network of the World Bank, Cape Town, South Africa

16–20 48th Annual Meeting of the Inter-American Development Bank and the 22nd Annual Meeting of the Inter-American Investment Corporation, Guatemala City, Guatemala

24–25 G20 Deputies meeting, Pretoria, South Africa

APRIL

2–4 3rd Secondary Education in Africa Regional Conference, Ghana, Ministry of Education, Accra, Ghana

3 1st Global Forum Plenary Meeting, "Policy Reform Options for Effective Development Finance," OECD, Paris, France

14–15 2007 Spring Meetings of the World Bank Group and the IMF, Washington, D.C., United States

16 Special High-Level Meeting of the Economic and Social Council with the Bretton Woods Institutions, the World Trade Organization, and the United Nations Conference on Trade and Development, New York, United States

MAY

9–14 IMF High-Level Seminar on Macroeconomic Management and the Japanese Experience in Economic Development, Tokyo, Japan

14–15 OECD Forum 2007, "Innovation, Growth, and Equity," Paris, France

14–23 World Health Organization, 60th World Health Assembly, Geneva, Switzerland

20–21 European Bank for Reconstruction and Development, Annual Meeting and Business Forum, Kazan, Russia

New Perspectives on Financial Globalization IMF, Washington, D.C., April 26–27, 2007

The conference, sponsored by the IMF's Research Department and Cornell University, aims to provide a forum to present recent theoretical and empirical research on the macroeconomic implications of financial globalization.

For details, see www.imf.org/external/np/seminars/eng/2007/finflo/042607.htm.

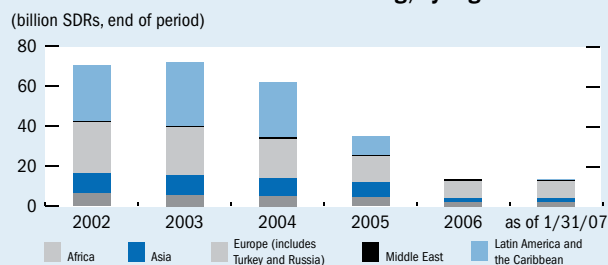
30–15 June 96th Session of the International Labor Conference, Geneva, Switzerland

JUNE

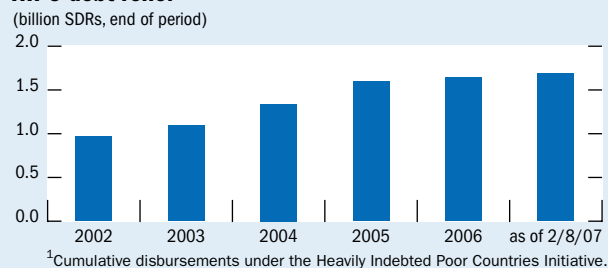
6–8 G8 Summit, Heiligendamm, Germany

IMF financial data

Total IMF credit and loans outstanding, by region



HIPC debt relief¹



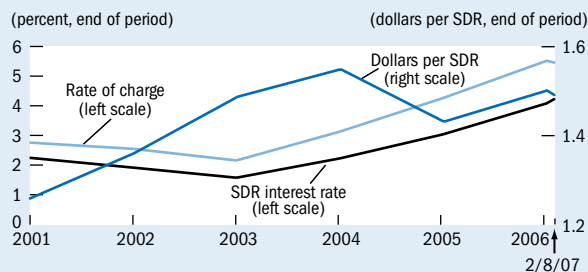
Note: Special Drawing Rights (SDRs) are an international reserve asset, created by the IMF in 1969 to supplement the existing official reserves of member countries. SDRs are allocated to member countries in proportion to their IMF quotas. The SDR also

Major currencies, rates per SDR

	February 23, 2007	Year ago (February 23, 2006)
Euro	1.141	1.202
Japanese yen	181.98	169.27
U.K. pound	0.765	0.820
U.S. dollar	1.498	1.437

Related rates

SDR interest rate, rate of charge on IMF nonconcessional loans outstanding, and dollars per SDR



serves as the unit of account of the IMF and some other international organizations. Its value is based on a basket of key international currencies.

Tanzania is fourth country to agree to PSI with Fund

The IMF has approved a three-year Policy Support Instrument (PSI) for Tanzania, the fourth developing country—all of which are African—to enter into such an agreement with the Fund since PSIs were introduced 16 months ago. PSIs are designed for low-income countries that don't need, or don't want, financial assistance from the IMF, but do want the Fund to endorse their economic policies, give them advice, and monitor their performance. The instruments are also a signal to donor countries, multilateral development banks, and the markets that a country's macroeconomic policies have been discussed with the IMF.

Deputy Managing Director Murilo Portugal, in announcing the Tanzanian program in mid-February, said that "Tanzania has achieved sustained strong economic performance through market-oriented policies within an appropriate macroeconomic framework. To consolidate recent successes, Tanzania will need to maintain sound policies and steadily pursue key structural reforms, including in the critical energy sector, and capacity building to remove key impediments to growth and achieve lasting inroads against poverty."

Three-year concessional loan

The IMF Executive Board's approval of the PSI follows the completion of a three-year Poverty Reduction and Growth Facility (PRGF) arrangement between Tanzania and the IMF, during which the Fund made about \$29.4 million available to Tanzania, the final \$4.2 million after completion of the arrangement on February 16. The PRGF loans are made at concessional rates (0.5 percent) to countries experiencing balance of payments problems. The economic strategies in the lending programs are devised by the countries themselves to promote growth and reduce poverty.

In the three years during which the PRGF arrangement was in place, Tanzania achieved high growth, low inflation, adequate international reserves, and a sustainable external debt position. Real GDP grew 6.8 percent in 2005, but because of drought-related reductions in hydroelectric power and higher fuel prices, real GDP growth was expected to have slowed to 5.9 percent in 2006. The higher energy costs have not yet had a major impact on domestic inflation, but they were reflected in the current account deficit, which widened to 9.3 percent of GDP in 2006, from 5.3 percent the year before. But donor assistance and \$3.8 billion in debt forgiveness through the Multilateral Debt Relief Initiative of the IMF, the World Bank, and the African Development Bank resulted in an overall positive balance of payments.



A woman buys vegetables at a Tanzanian market.

The PSI program that the IMF and Tanzania have agreed to has three core objectives:

- **Enhance public resource mobilization and efficiency of spending.** It seeks to raise central government revenue through tax policy measures and further administrative reforms in tax customs. That should help increase needed spending on infrastructure and reduce Tanzania's long-term dependency on foreign aid. The government also proposes to better align spending with poverty-reducing and growth-enhancing measures.
- **Increase the financial sector's contribution to growth and the effectiveness of monetary policy.** The program includes measures to foster lending to small and medium-sized enterprises, which are seen as important sources of economic growth. The agenda also envisions strengthening monetary operations to help the country deal with price pressures from high inflows of foreign aid.
- **Improve the business environment and enhance investment.** To promote private sector activity and investment, Tanzania's program envisions such efforts as building infrastructure, improving governance, and streamlining an overly burdensome regulatory environment.

The Policy Support Instrument, which is voluntary and always at the request of the country, was introduced in October 2005. A country's performance is normally reviewed every six months by the IMF, and the programs are supposed to meet the same standards that would be required by a more traditional IMF financial arrangement. The other three countries with PSI arrangements are Nigeria (October 2005), Uganda (February 2006), and Cape Verde (August 2006). ■

IMF quota reform a complex, two-year process

The IMF is pressing ahead with what is envisaged to be a two-year process of reform designed to update the representation of members and modernize the governance of the 62-year-old institution. After an initial round of ad hoc increases last September for four dynamic economies that were clearly underrepresented (China, Korea, Mexico, and Turkey), the IMF has now embarked on the second and more far reaching phase of the reform process.

At the IMF-World Bank Annual Meetings last September in Singapore, the IMF's Board of Governors, representing all members of the Fund, approved a resolution initiating the reform plan, which is designed to revamp the representation of members to reflect recent changes in the global economy, while enhancing the participation and voice of low-income countries. The revamp is part of an overhaul of the IMF's priorities and governance spelled out in IMF Managing Director Rodrigo de Rato's Medium-Term Strategy.

The timetable for completing the reforms is by the 2007 Annual Meetings, and no later than the Annual Meetings of 2008.

A key issue in the reform plan is how each member's subscription, or *quota*, is calculated. The reform package consists of the following elements:

- initial ad hoc increases in quotas for China, Korea, Mexico, and Turkey;
- start of work on a new quota formula to guide the assessment of the adequacy of members' quotas in the IMF, to be completed by the 2007 Annual Meetings, and not later than the Spring Meetings of 2008;
- a second round of ad hoc quota increases based on the new formula; and
- work on a proposal to increase the *basic votes* that each member possesses to ensure adequate voice for low-income countries in the IMF.

How quotas work

Voting power at the IMF is tied to the relative size of each country in the global economy—which is reflected in its quota. This quota also has a bearing on each country's access to IMF financing.

Quota subscriptions, which must be paid in full when a country joins the IMF, generate most of the IMF's financial resources. Up to 25 percent must be paid in the IMF's own



Steve Jaffe/IMF

Burton: "Modernizing the quota structure of the IMF to bring quotas more into line with today's economic realities, and enhancing the voice and participation of the low-income countries is vitally important for the future effectiveness of the Fund."

currency called Special Drawing Rights (SDRs), or widely accepted currencies (such as the U.S. dollar, the euro, the yen, or the pound sterling), while the rest is paid in the member's own currency. With the admission of Montenegro as the IMF's 185th member in January, total members' quotas were about \$325 billion.

"The goal is to develop a formula that is both simpler and more transparent than the present approach, and which appropriately captures members' weight and role in the global economy."

—David Burton

What are basic votes?

Under the rules of the Fund, each country has 250 basic votes plus one vote for each SDR 100,000 of quota. The effect of an increase in basic votes is to increase the voting power of those members whose voting power is below the average voting power for Fund membership as a whole, and thereby to allow the smallest members to have an increased measure of influence in the Fund's decision-making process. Successive general increases in quotas have reduced the share of basic votes to the present 2 percent from

11 percent when the Fund was established.

The IMF's Executive Board has proposed at a minimum, a doubling of the basic votes that each IMF member possesses and protection of the pre-first round voting share of low-income countries as a group. The proposal also calls for the share of basic votes in total voting power to remain constant going forward. Offices of African Executive Directors have also been promised additional staffing resources. The

increase in basic votes will require an amendment to the IMF's Articles of Agreement, and may require the approval of national parliaments.

Complicated process

Changing the method of deciding quotas is a complex process. "The resolution approved in Singapore was a crucial first step, and we have made a good start since then in moving forward with the agenda," explains David Burton, head of a committee appointed by de Rato to prepare the implementation of proposals for the Executive Board. "We have had an informal Board seminar on a new quota formula, and discussion of the legal issues involved in amending the Articles to increase basic votes and protect their share in total voting power going forward. Also, the Board has had a first discussion of increasing the resources available to the offices of Executive Directors with the largest constituencies."

"But there is lot of work to do," adds Burton who is also head of the IMF's Asia and Pacific Department. "This is especially true for the development of a new quota formula—an essential step in this reform process, as it will provide the basis for the second round of ad hoc quota increases. We also hope a new formula would be durable and used in further quota adjustments beyond the second round. The goal is to develop a formula that is both simpler and more transparent than the present approach, and which appropriately captures members' weight and role in the global economy."

Developing a new quota formula is very challenging because it is complex conceptually, technically, and politically. The IMF will need a very broad consensus behind a new formula, or it is unlikely to be implemented. "Such a consensus is difficult to forge when changes in relative voting share in the Fund are at stake," Burton admits. "However, it is encouraging that there seems to be a strong commitment on the part of the membership to move forward on this issue, including by members that did not support the resolution in Singapore."

Creating a formula

The IMF's Articles of Agreement provide for a general review and possible adjustment of quotas every five years but do not indicate how quotas should be determined. The Executive Board has neither formally adopted nor endorsed any particular method for determining quotas or quota increases. However, over the years, the Fund has developed quantitative

criteria (or formulas) to "calculate quotas," which help determine the initial quota of new members, and serve as a guide in determining increases in quotas for existing members.

The formulas used by the IMF incorporate a number of criteria or variables to assess the relative standing of countries. Variables used in the current formula are a country's gross domestic product, the size of its current account transactions, the variability of these transactions, and the level of its official reserves.

Key to developing a new formula is deciding exactly which variables to include, and how they should be defined—as well as the relative weights to be given to them. For example, there will need to be further discussion of how to convert GDP into a common currency (including a possible role for purchasing power parity or PPP). Also to be debated is how best to define openness, including how to reflect the importance of capital flows in the global economy.

Developing broad support

The IMF's policy-setting International Monetary and Finance Committee is expected to review progress with the reform plan at the April 14-15 Spring Meetings in Washington, D.C. "It will undoubtedly take more than one further discussion after the Spring Meetings to home in on a specific proposal," says Burton.

"Experience with the discussions leading up to Singapore suggests that it takes time to develop a proposal that can command broad support, and that along the way new ideas are raised from many members, and indeed from outside the Fund, that can help get round what seem like very difficult issues. So, while it may take a little time, I am optimistic that agreement will be reached both on a new formula and the rest of the package broadly on schedule," Burton told the *IMF Survey*.

"At the end of the day, we have to find an agreement that the membership as a whole will support," says Andrew Tweedie, head of a team in the IMF's Finance Department that is working on the quota formula (see interview, next page). "This is an exercise that in the end has real consequences." ■

Jeremy Clift

IMF External Relations Department

"Experience with the discussions leading up to Singapore suggests that it takes time to develop a proposal that can command broad support, and that along the way new ideas are raised from many members."

—David Burton

For further information, see "IMF Board of Governors Approves Quota and Related Governance Reforms," Press Release No. 06/205, September 18, 2006, available on the web at www.imf.org.

Working on a more transparent formula

Andrew Tweedie, head of the team in the IMF's Finance Department that is supporting the working group on quota and voice reforms, spoke to the IMF Survey about the status of the work, including the new quota formula and the proposal to increase members' basic votes.

IMF SURVEY: Work has begun on the new quota formula. What are the drawbacks of the current formula? Are new variables being considered?

TWEEDIE: First, there's more than one formula—there are actually five formulas—and the outcome of these formulas is quite complex and nontransparent, which has undermined their credibility. It's very hard for member countries, and even IMF staff who work on this issue, to know in advance what the impact of a change in a key variable will mean. For example, we've seen that it's possible for countries that are growing very strongly—that have a high GDP growth rate—to lose quota shares. Thus, a key objective of this reform is to make the process more transparent.

A second objective is to modernize the variables, which haven't changed much since the institution was founded in the mid-1940s and haven't changed at all since 1983. These variables now need to be updated to reflect current changes in the world economy. So far, the Executive Board has been primarily reviewing the existing variables, but some directors want us to look at new variables, and the IMF staff is now working on that. In the end, I think there will be a significant element of continuity with the existing variables, but hopefully a simpler, more transparent formula that better reflects the economic size of member countries.

IMF SURVEY: How do countries benefit from any quota revision?

TWEEDIE: The immediate beneficiaries will be countries that get higher quotas as a result of the reform exercise. Once they consent and pay for the increase, they will have a higher quota, which gives them a larger say in decisions and greater access to Fund financing. For other countries, their quotas will stay the same. Given that total quotas will increase, their shares in this total will be somewhat lower, but this will be a proportional decline. This approach, which implies that changes tend to be gradual and measured, has always been used in the past, and helps ensure the acceptability of the changes.

Let me emphasize, however, that all members—even the members whose quotas will not change—will benefit from reforms that make the Fund more effective.



Michael Spalton/IMF

Tweedie: "All of the members—even the members whose quotas will not change—will benefit from reforms to make the Fund more effective."

IMF SURVEY: There have been many previous attempts at revising the quota formula, including the Cooper Report. What makes you think it will succeed this time?

TWEEDIE: One lesson we can draw from the past, including from the Cooper report in 1999-2000, is that it's very difficult to get agreement on a new quota formula in the abstract, that is, in the absence of actually using the formula to change quotas, because members want to know what's in it for them. This time a quota increase will follow the discussions—as agreed by the Board of Governors in Singapore last September. There's also a deadline, which has been made public. And we've already seen some changes involving ad hoc increases for four countries, which were deliberately designed to be modest in scale to keep the incentives in place for the second round.

IMF SURVEY: There's also a proposal to amend the Articles of Agreement to increase members' basic votes. How will this improve the IMF's effectiveness?

TWEEDIE: All members would get an increase in their basic votes, but the change would heavily benefit low-income countries, many of which are relatively small. As a result, the voice of low-income countries would be strengthened, which is one of the two main objectives of the whole exercise. These countries make up more than half the IMF's membership, with the IMF playing a very active role. This is also a reform that is long overdue. The size of basic votes hasn't changed since the IMF was founded, yet the size of total Fund quotas has been increasing. This change will require an amendment of the Articles of Agreement, so it's a fairly big thing. There have only been four amendments of the Articles in the Fund's history. ■

A developing country viewpoint

A new way forward on IMF quota reform

At the UN's Monterrey Summit in March 2002, heads of state and government agreed to broaden and strengthen the participation of developing countries and economies in transition in international decision making and norm setting. But five years later, it is clear that the reform of the IMF's governance—which encompasses, among other things, quotas, voting rights, and voice—has progressed rather slowly. This situation urgently needs to be turned around, as recognized by the International Monetary and Financial Committee, which regularly reviews progress on the Monterrey consensus. Its April 2006 communiqué stated that the IMF's effectiveness and credibility as a cooperative institution must be safeguarded and its governance further enhanced, emphasizing the importance of fair voice and representation for all members.

In an effort to further the debate on how best to formulate a proposal for quotas and voice reform in the IMF, we have looked to John Rawls, arguably the greatest political philosopher of the 20th century, for guidance. We feel that his theory of justice provides an appropriate method for understanding the core issues in this debate. We use the Rawlsian notion of “justice as fairness” to demonstrate that justice in the governance structure requires a distribution of voting power that participants accept as the end result of a fair process—and that a major revision of the quota formulas is long overdue.

Problems with current governance

So how are quotas calculated? When the IMF was established in 1944, a formula—which would become known as the Bretton Woods formula—was developed. It contained five variables: national income, official reserves, imports, export variability, and the ratio of exports to national income. In the early 1960s, this formula was supplemented with four more formulas (which contained the same basic variables but with larger weights for external trade and external variability). But two different data sets were used, making, in effect 10 formulas. In 1981–82, the number of formulas was reduced and the variables used were simplified.

What we are left with today are five formulas that try to capture economic size, openness, and the demand for and supply of IMF resources. The calculated quota serves multiple purposes—including voting power and a country's access to financing—meaning that it has to balance competing considerations about what variables to include in the formulas and the weight to attach to each variable. Over time, members' quotas have become increasingly out of line with their eco-

nomic weight in the global economy. In addition, the current quota formulas do not capture some important aspects of members' economic situation and other variables that should have a bearing on voting rights.

Another problem is that the Bretton Woods founding fathers of the IMF and the World Bank reached a compromise to balance the Westphalian principle of the legal equality of states (which called for one country, one vote) and the economic argument for basing votes on capital contributions—but the balance has been eroded over time. In 1944, they decided to allocate 250 “basic votes” to each member country, ensuring that each country would have a voice. However, since then, IMF quotas have increased 37-fold, with basic votes remaining unchanged. The result has been a drastic reduction in the participation of small countries in decision making.

What Rawls would say

As we weigh how to improve IMF governance, Rawls helps us by stressing in his theory of justice that we should imagine a situation in which a group of individuals are brought together to agree on the basic constitution of an international institution that they are about to enter, but in which, to ensure their impartiality, they are placed behind a veil of ignorance—a device that screens out information about, among other things, population, national output, and level of development. In deciding what the quota formula should be, the representatives must make a choice without knowing what type of country they would represent. With the expulsion of bias-inducing knowledge, the participants are forced into the moral point of view, which allows Rawls to claim that he has set up an inherently fair procedure.

We cannot know for sure what quota formulas would be chosen by rational actors in the hypothetical situation postulated by Rawls. But this should not stop us from doing our best to imagine what that outcome might be, even while recognizing that reasonable people can disagree. That said, it is much easier to demonstrate what does not satisfy Rawlsian principles than what does, and the quota formulas and the IMF's current governance structure do not even come close to justice as fairness. Thus, it is clear that a rational representative considering the governance structure behind the Rawlsian veil of ignorance would not support the current voting distribution that gives almost no weight to the Westphalian principle of “one nation, one vote” and an exact zero weight to the democratic principle of “one person, one vote.”

Devise a new quota formula

So what should a new quota formula include? We would propose the following changes:

Add population. Some observers argue that even though population is not a variable in the quota formulas, it is in effect included—and thus not explicitly needed—because there is a correlation between population and other variables, such as GDP. We disagree and call for the inclusion of population as a variable for several reasons. First, because population data are available, there is no need for a proxy variable. Second, the correlation coefficient between population and other variables would be higher than that between population and GDP—especially if a purchasing power parity (PPP)–based measure of GDP, rather than market exchange rates, were used. Third, GDP is meant to capture a country’s economic size and ability to contribute resources, not the worth of human beings as human beings, which cannot be measured by some aggregate economic concept.

Use PPP, not market rates. Our analysis shows that calculated quotas would be sharply different if appropriate variables for the potential supply of and demand for IMF resources were used. Regarding an economy’s capacity to contribute financial resources, the formulas have always used GDP converted at market exchange rates, but PPP-based GDP is the more relevant indicator for measuring potential contributions. The latter variable correctly shows that the larger the volume of goods and services an economy produces, the greater its size in the world economy. The argument for using the former variable misses the point that there is no need to convert nontraded goods and services at market exchange rates to pay for quotas. Quotas are a small fraction of GDP or exports, and one cannot imagine an IMF so large that countries will have to sell nontradables to pay for their quotas. Moreover, the variable chosen makes a big difference in the calculations of quotas. Indeed, advanced economies’ share of global GDP at market exchange rates is more than 75 percent but only about 50 percent when PPP is used.

Capture demand for IMF resources better. The need to include an openness variable—the first demand variable—is based on the argument that more open economies are more vulnerable to external shocks and, therefore, will be more likely to use IMF resources. The irony is that advanced economies have 70 percent of the share of current payments and receipts in global totals, which means that the bulk of the share in calculated quotas from this variable is given to countries that have not borrowed from the IMF in decades and are not expected to borrow in the foreseeable future. Variability

of current receipts—the second demand variable—has the same problem because the advanced economies’ share exceeds 60 percent. If these variables are capturing the demand for IMF resources, why is their correlation with actual use close to zero?

The traditional openness and variability variables in the quota formulas need to be replaced with new ones that have a high correlation with the actual use of IMF resources. One promising approach would be to include those variables that are good predictors of demand for IMF resources. They could include past use of IMF resources, subinvestment-grade credit rating, sovereign bond spreads, and reserves and short-term debt. There are good reasons for including the capital flow volatility variable in the quota formula but for normalizing it to reflect major differences across countries. If two countries experience the same capital account shock in absolute terms, the smaller one will face a greater burden, which suggests that the volatility of capital flows should be measured as a proportion of GDP. Several important differences between the capital flows of industrial versus developing countries should also be taken into account.

Boost basic votes

Finally, the Rawlsian approach underscores that enhancing the IMF’s legitimacy means giving top priority to ensuring that low-income countries have an adequate opportunity to participate in the institution’s governance. Their share in the world economy is small, but the IMF has a disproportionately large role in these countries in terms of policy advice, financing, and conditions attached to IMF-supported reform programs. Correcting this underrepresentation would also help address the problem of inadequate country ownership of reform programs. The solution thus lies in a sharp increase in basic votes—which would automatically give low-income countries a bigger voice—on top of reforming the quota formula, which would help all developing countries. ■

“The solution thus lies in a sharp increase in basic votes—which would automatically give low-income countries a bigger voice—on top of reforming the quota formula, which would help all developing countries.”

Abbas Mirakhor and Iqbal Zaidi

IMF Executive Director and Senior Advisor, respectively, for a constituency covering the Islamic Republic of Afghanistan, Algeria, Ghana, Islamic Republic of Iran, Morocco, Pakistan, and Tunisia

This article is based on IMF Working Paper No. 06/273, “Rethinking the Governance of the International Monetary Fund,” by Abbas Mirakhor and Iqbal Zaidi. Copies are available for \$18.00 each from IMF Publication Services. Please see page 64 for ordering details. The full text is also available on the IMF’s website (www.imf.org).

Reforms needed to sustain Latin American recovery: de Rato

Although Latin America is growing at its best sustained pace since the 1970s, the apparent dissatisfaction of many voters there “has its roots in real economic problems, especially in growth, which remains too low, and poverty levels, which remain too high in many countries,” IMF Managing Director Rodrigo de Rato told the Latin American Business Association Conference at Columbia University Business School in New York on February 16. The solution, he said, is “to continue with policies that have been shown to work, to refine these policies where necessary to promote further growth and address poverty and inequality, and to do so with sensitivity to both the importance of institutions and the circumstances of individual countries.”

On the plus side, Latin America has been growing solidly, with regional inflation declining. Part of the current economic success, he said, is due to factors that Latin American countries do not control—high prices for the commodities they export, good global market conditions, and strong growth in their trading partners. But Latin America’s “success also owes a great deal to good policies. Fiscal and external positions are much stronger than in earlier expansions; more countries have flexible exchange rate regimes to help them absorb shocks; and around the region, central banks have established credibility in combating inflation. This credibility enables them to set lower real interest rates, which support growth.”

Economics and democracy

Even so, de Rato noted, “some political candidates have questioned both the quality of the outcomes of recent years and the policies that produced those outcomes, and their questions have resonated with voters. What should we make of these developments?” He recognized that there were “genuine sources of economic discontent” in the region, but cautioned against overstating the “populist phenomenon.” Although leaders “with populist agendas were elected in some countries last year, in several other countries governments with a strong commitment to reform were elected or reelected.” De Rato noted that one of the major developments has been the “blossoming of democracy. This is good in itself and good for economic policy. Whatever the details of their programs, elected governments have the legitimacy and the political strength to implement reforms. It is no coincidence that the broadening of democracy has been accompanied by stronger macroeconomic management in many countries.”

De Rato stressed that even though Latin America has been growing solidly for the past four years—it was 5 percent last year and is expected to slow a bit to about 4 percent this



De Rato: “Latin America should “continue with policies that have been shown to work” and refine them when necessary “to promote further growth and address poverty and inequality”

year—growth is “still low” relative to other regions and to the rate needed to make substantial inroads against poverty and income inequality. He said that the way forward was to undertake further reforms. Studies show that “growth has been better in countries where macroeconomic policy has been strongest and where structural reforms have gone furthest.”

Response to critics

How about criticisms that poverty remains high because reforms have gone too far in reducing the state’s role as a provider of public goods? De Rato said that there are activities the state needs to do well, such as maintaining order, running sound financial systems, setting regulations, and building and maintaining an adequate infrastructure. But when the state gets involved in specific industries, it usually does not perform well and “often impedes investment and growth in the economy as a whole.”

Is there merit in criticisms that there is not enough focus on institutions, both formal and informal, that set the framework for economic policy, commerce and political life? Yes, he said, but the IMF and other outside agencies must “be conscious of our limitations in promoting institutional reform” because decisions about institutions are best made from “within countries.”

Finally, are critics right that differences among countries require some differences in reform agendas? Again, yes, but “it also remains true that all countries must compete in the global economy, and many face common problems such as dealing with demographic changes and maintaining financial stability. The laws of economics do not change when you cross national borders.” ■

Brazil's challenge: boosting growth without triggering inflation

Brazil is building on 10 years of robust economic fundamentals. Economic growth, which has long been anemic, is beginning to pick up. Inflation continues to be low. Consumer prices rose only 3 percent between January 2006 and January 2007 and inflation expectations remain low. Brazil's external position is solid, with a strong current account surplus—1½ percent of GDP last year—and international reserves around \$97 billion, equivalent to about 175 percent of its short-term debt.

Despite the improvement, economic growth remains low. Real GDP grew less than 3 percent in 2006 and is projected to grow 3.5 percent in 2007—above the annual average of 2½ percent it has registered since 2000, but below the Latin American average. Brazil recently announced a new program intended to use increased public investment spending and tax incentives to boost annual growth to 4.5–5.0 percent. Even though the focus on raising growth is welcome, unlocking Brazil's vast economic potential—and accelerating the reduction in poverty and income inequality—will require deep structural reforms. This will be the overriding policy challenge for the next few years.

Brazil has made important progress

Brazil has come a long way in the past decade. After a period of high volatility and crises, South America's biggest country reduced inflation drastically by the mid-1990s under the *Real Plan*, an innovative inflation-fighting program based on an exchange rate anchor. Following a period of strong and continued pressure on the exchange rate, the *Real Plan* gave way to an inflation-targeting framework in mid-1999, with flexible exchange rates and stronger fiscal policy underpinnings. This framework has allowed Brazil to withstand the market turbulence associated with the 2002 elections and the mild market impact of a sequence of corruption scandals in 2005. The

Moving ahead

Brazil's GDP is starting to pick up while inflation remains low.

	2003	2004	2005	Proj. 2006
Real GDP (percent change)	0.5	4.9	2.3	2.8
Consumer prices (percent change)	9.3	7.6	5.7	3.1
Current account (percent of GDP)	0.8	1.9	1.8	1.4
External debt (percent of GDP)	42.1	33.3	21.1	17.6
Gross official reserves (billion dollars)	49.3	52.9	53.8	85.8
Primary fiscal balance ¹ (percent of GDP)	4.3	4.6	4.8	4.3

Sources: Brazilian authorities, IMF staff projections.

¹Includes all levels of government, the central bank, and state-owned nonfinancial enterprises.

Brazil at a glance

Capital: Brasilia

Area: 8,459,000 sq km

Population: 186.8 million
(est. 2006)

Life expectancy: 71 years

GDP per capita: \$5,145.7
(est. 2006)

Main export products: Airplanes, metallurgical products, soybeans, automobiles, electronic products, and coffee



contrasting market reactions to the two episodes point to the improved strength of economic fundamentals in Brazil and the new era of stability in the country. This stability has been maintained and strengthened by President Luis Inácio Lula da Silva, the candidate initially feared by the markets in 2002.

A new law ensures fiscal responsibility

Low inflation, narrowing income disparities, and reduced poverty are among the many achievements of the past 10 years. The 3.1 percent increase in consumer prices last year was well below the middle point of the Central Bank's inflation target range of 4½ percent. Income disparities (as measured by Gini coefficients) remain high, but shrank to a historic low in 2005, and the percentage of people under the poverty line has fallen to 30 percent, or 13 percentage points below its 1993 peak. Public debt-to-GDP ratios, although still high, have also been declining since 2002 as a result of years of fiscal effort and institutional changes. Among key changes, the cornerstone was the enactment in May 2000 of the Fiscal Responsibility Law, which sets out for all levels of government rules designed to ensure medium-term fiscal sustainability and establishes strict transparency requirements to underpin the effectiveness and credibility of such rules.

At the same time, growth has been disappointingly low. The average rate of growth of 2½ percent since 2000 is well below the 20th century average of about 5 percent. Actually, low growth has been a problem since the early 1980s, when the economy began to suffer the consequences of a forced development strategy based on continued accumulation of external debt despite two worldwide oil price shocks. In particular, inflation in the 1980s and early 1990s soared despite repeated stabilization plans. The hard-won economic stability initiated in the mid-1990s now seems well-established



Two women assemble electronic products at a plant in Manaus, in northern Brazil.

and that stability is one pre-condition for higher sustainable growth. However, Brazil's recent growth performance underscores the need to go beyond strong macro-economic fundamentals to raise the country's productive capacity.

Policies to raise growth

The public debate to raise growth has centered on several policy alternatives, most of which are already on the radar screen of the Brazilian authorities. In all likelihood, boosting medium-term growth prospects will require consolidating macroeconomic stability by solidifying the institutional underpinnings of macroeconomic policies, improving the efficiency of the public sector, and further strengthening the public sector balance sheet. Continued reliance on inflation targeting with exchange rate flexibility and strong fiscal policies will help keep inflation expectations well anchored. The government has pushed forward administrative reforms of the social security system and plans to further improve its services. Finally, after nearly eliminating the share of bonds linked to the exchange rate, the Treasury plans further reductions in the share of the public debt linked to short-term interest rates, which will further reduce vulnerabilities.

At the same time, it will be important to push ahead an ambitious set of broader structural reforms aimed at improving financial intermediation, encouraging a more open economy, and strengthening the business environment:

- The Brazilian financial system is characterized by a high degree of segmentation, high real interest rates, wide

spreads, and low volumes of intermediation. Lowering reserve requirements imposed on commercial banks, reducing financial transactions taxes, and scaling back directed credit (currently about one-third of total credit) would alleviate distortions and contribute to lower market interest rates. Other important reforms to increase the efficiency and competitiveness of credit markets have already taken place, such as reforming bankruptcy laws, improving credit information, and providing employee choice with regard to payroll deposits.

- There has also been increasing consensus that fiscal consolidation policies need to rely less on tax revenue increases and more on tighter expenditure growth. Indeed, Brazil's tax burden is about to reach 40 percent of GDP. In addition, Brazil's budget is very rigid, with a large fraction of revenues earmarked for particular uses, narrowing the scope for more decisive consolidation and reductions in the tax burden. Loosening these rigidities and reducing taxes would lower production and investment costs and create wider room for private aggregate demand growth.

- Brazil's labor market is characterized by a high degree of informality, stemming in large part from the burden of taxes and regulation on the formal sector. This leads to inefficient small-scale firms, with limited access to financing. Addressing informality directly by reforming the labor code and union organization rules seems to be an important complement to tax reduction.

Another issue underlying Brazil's weak growth performance is its highly unequal income distribution and the prevalence of poverty. These factors themselves contribute to sluggish growth, both by constraining many households' ability to invest in human capital and to obtain financing to start small firms, as well as by contributing to the fragility of the political equilibrium. The income distribution in turn reflects a combination of history and various barriers to outsiders' full participation in the economy. Action is already being taken to address poverty through income transfers, including with the highly successful *Bolsa Familia* program. Public spending priorities are also increasingly directed toward programs that help the poor, including basic education, health care, and water and sanitation.

Brazil faces a moment of historic importance because of the achievements of previous reforms and the unique opportunity to raise the growth profile on a sustainable basis. ■

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Postcrisis blues: how sovereign debt evolves at times of crisis

When a financial crisis hits a country, the first concern is to limit the damage. Typically, the official community has provided the affected countries with sizable financial assistance to support economic reforms designed to ease liquidity pressures and restore confidence. In some countries, the authorities have extended substantial support to financial institutions to limit the fallout on the domestic banking system. Such programs, it is broadly agreed, have been reasonably successful in restoring confidence and in helping crisis countries make progress toward macroeconomic recovery.

But once the immediate crisis is over, the fallout can linger for some time, particularly if the government has taken on large new liabilities to get through the crisis, creating new vulnerabilities. When these vulnerabilities persist, they can undermine a country's ability to exit from a crisis on a durable basis and can leave the economy vulnerable to recurring distress.

Therefore, *how* a country gets out of a crisis matters. A recent IMF study examined the extent to which changes in a country's debt profile during times of financial distress can affect its future financial vulnerability. The findings, from a study of 12 emerging market crises, are relevant to how future financial crises are handled. The study looked at crises in Argentina (2001), Brazil (1998), Ecuador (1999), Indonesia (1998), Korea (1997), Mexico (1995), the Philippines (1998),

THE ISSUE: Emerging market countries tend to exit from episodes of financial crisis with heightened debt-related vulnerabilities, which may leave their economies exposed to the risk of recurrent distress.

BOTTOM LINE: Crises typically cause an increase in public sector debt ratios, while the proportion of debt outstanding to multilateral creditors and the domestic banking system rises, creating a more rigid debt structure—in the sense that a higher share of sovereign debt becomes less amenable to a restructuring in extreme cases where no other feasible set of policies exists to restore debt sustainability.

POLICY IMPLICATION: Policymakers should pay increased attention to debt management issues and discourage a large buildup of domestic banks' exposure to public sector debt.

Russia (1998), Thailand (1997), Turkey (2001), Ukraine (1998), and Uruguay (2002).

Debt proves difficult to reduce

The study shows that the debt ratios of many of the countries in the sample increased as a result of the crisis and proved difficult to reverse in its wake. The net debt-to-GDP ratio (gross debt adjusted for the central bank's international reserve holdings) increased, on average, by 32 percentage points in the first two years following the onset of the crisis, reflecting mainly the effects of a sharp depreciation of the exchange rate. But after two more years, this ratio still exceeded the precrisis level by 21 percentage points.

This pattern of persistently high debt levels was most pronounced for Argentina and Indonesia, where the public debt-to-GDP ratio three years after the end of the crisis was more than 50 percentage points of GDP higher than it was before the crisis (see Chart 1). Although the debt dynamics were less dramatic in Brazil, Thailand, Turkey, and Uruguay, debt ratios still exceeded their precrisis levels by more than 25 percentage points of GDP. In many of these countries, the typically severe impact of exchange rate depreciation on the external component of sovereign debt was reinforced by a substantial increase in domestic debt following the crisis notably because of a temporary loss of access to international capital markets and, in some cases, because of debt issued to recapitalize banks in the context of efforts to address weaknesses in the domestic financial system.

Chart 1

Hard to turn around

The ability to roll back or contain the crisis-induced increase in debt levels varied across countries, with those at the top of the chart showing the largest increase.

Change of debt-to-GDP ratio from t-1 through t+3 (percentage points)



Sources: World Bank, *Global Development Finance*; IMF, World Economic Outlook database; national authorities; and IMF staff estimates.

Note: The chart shows the debt-to-GDP ratio at the end of the last precrisis year (t-1) on the horizontal axis and the change in this ratio within the following three years on the vertical axis. Debt is net (gross debt minus international reserves). For Uruguay, data are for t+2.

Only three countries—Ecuador, Mexico, and Russia—succeeded in fully reversing the initial increase in their debt ratios within three years of the crisis. Their economic adjustment efforts were helped greatly by a favorable trend in key export prices. In Ecuador and Russia, a comprehensive restructuring of sovereign liabilities, including those held by official and private creditors, was also a contributing factor.

More rigid debt structures

The study showed heightened rigidity in some countries' postcrisis debt structure—the result of a sharp increase in the claims of multilateral institutions, which enjoy a de facto senior status over other unsecured claims, and in those held by domestic financial institutions.

Sovereign liabilities to multilateral institutions increased, on average, by 4.3 percentage points of precrisis GDP in the two years following the onset of the crisis, reflecting the substantial financial assistance provided by these lenders. Combined with more modest growth in the exposure of other creditor groups, the result was that senior multilateral debt as a share of total medium- and long-term external debt rose from an average of 24 percent to 33 percent in the crisis year alone and stayed at that level for the following five years.

Debt rigidity also increased because of a significantly higher exposure of a fragile financial sector (notably banks) to the sovereign. Although such claims rose sharply in about half the countries in the sample, bank exposure to the sovereign after the crisis was particularly high in Argentina, Brazil, Indonesia, Mexico, and Turkey. In these cases, it still exceeded 15 percent of GDP in the third postcrisis year and often represented a large share of total bank assets.

Rigidity in the debt structure could exacerbate countries' vulnerabilities to the extent that it makes it more difficult for the sovereign to achieve a sufficient reduction of its debt in

extreme circumstances where there is no feasible set of policies to restore debt sustainability without a debt restructuring. It is not surprising, then, that the substantial size of rigid liabilities relative to some countries' GDP initially increased concerns about postcrisis debt vulnerabilities (see Chart 2). Debt levels, however, eventually declined—even if, in some cases, only with considerable delay—as a result of policy adjustment, a favorable external environment, and, in some cases, a restructuring of the sovereign's liabilities. The issue of debt rigidity thus became less critical.

It is difficult to draw strong conclusions about the other changes in sovereign debt structures because of data limitations regarding the maturity and currency composition of domestic public debt. Evidence from a limited number of countries suggests, however, that governments generally faced significant difficulties in reducing their short-term debt and/or foreign-currency debt following a crisis, and that, as a result, rollover and currency risk did often remain at a significant level.

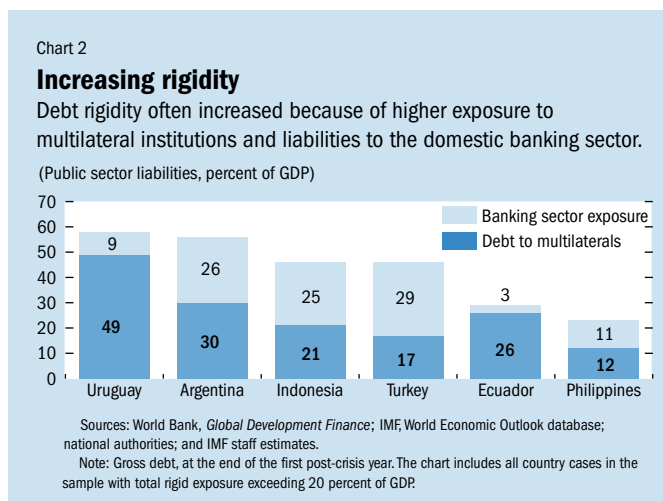
Policy implications

Countries are likely to emerge from a period of financial distress with a debt profile that is weaker than it was before the crisis. There is, however, a greater cause for concern when crisis-induced changes to the sovereign's debt level and profile significantly increase debt-related vulnerabilities and show signs of persistence.

How can countries mitigate the effect of future crises on the level and structure of their debt? Recent crises have shown that improvements in macroeconomic policy responses combined with a strengthening of the institutional environment may help. In this context, the recent shift away from fixed exchange rate regimes and toward more flexible arrangements could limit the scope for large and abrupt changes in exchange rates and their impact on debt levels that plagued countries forced to exit from currency pegs.

Many emerging market countries are also continuing to strengthen debt management by developing domestic debt markets and broadening the sovereign's creditor base. Despite welcome improvements, policymakers should continue to focus on reducing rigidity in the sovereign's debt structure as part of a comprehensive crisis prevention strategy. Such a strategy may include regulatory action aimed at discouraging a large buildup of domestic banks' exposure to the sovereign. ■

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This article is based on IMF Working Paper No. 06/186, "The Level and Composition of Public Sector Debt in Emerging Market Crises," by Monica de Bolle, Bjorn Rother, and Ivetta Hakobyan.

From health care to VAT fraud, IMF research has varied focus

The IMF is probably best known for its advice and loans to member countries. But IMF economists are also studying a wide array of other topics. Much of this research is published in the IMF's Working Paper series. The views expressed in these papers do not represent official IMF policy. They describe research in progress and are published to solicit comments and spark debate. Six recent IMF Working Papers are highlighted below.

Unshackling the financial sector regulator

"The Fear of Freedom: Politicians and the Independence and Accountability of Financial Sector Supervisors," Marc Quintyn, Silvia Ramirez, and Michael W. Taylor, IMF Working Paper No. 07/25.

Compared with the case for central bank independence, which has won a broad following in both academic and policy circles, the case for independence for financial sector regulatory and supervisory agencies is more controversial. Policymakers have been more reluctant to grant independence to regulators, despite strong arguments developed in its favor. This paper surveys trends with respect to independence and accountability in a sample of 32 countries that recently restructured their supervisory landscape, or introduced legislative changes to the supervisory framework.

The authors find that the concept of independence and accountability for financial sector regulatory and supervisory agencies is slowly gaining acceptance—or, at least, being considered seriously. However, there is also evidence of lingering reluctance—to put it mildly—on the part of politicians about granting independence to such agencies. This lack of confidence is translated either into overemphasis on the accountability side or into recourse to direct control measures, or both. In this regard, the survey shows that many governments

wish to retain a role in the licensing and de-licensing of banks, which they apparently still view as a politically very sensitive area. The survey results also show that the role and functions of accountability are in general still not very well understood.

Why exchange controls harm trade

"Collateral Damage: Exchange Controls and International Trade," Shang-Jin Wei and Zhiwei Zhang, IMF Working Paper No. 07/8. A revised version is forthcoming in the Journal of International Money and Finance.

The emerging market crises of the 1990s gave rise to the new conventional wisdom that developing countries should be alert to the adverse effects of premature removal of capital controls. But how high is the cost for countries to maintain exchange controls? Filling a gap in the literature, a new IMF study investigates the additional costs to countries that have not received sufficient attention in policy discussions in terms of forgone goods trade.

The study, based on data for 184 countries, finds evidence that exchange controls (on payments for imports and proceeds from exports, on capital transactions, and on foreign exchange transactions and other items) hurt international trade. That is, countries with exchange controls must enforce those controls. This includes more document requirement on exporters and importers, and/or more inspections of shipment of goods across borders in order to minimize the use of mis-invoicing trade to evade capital controls, thereby raising the cost of conducting trade. The study concludes that the collateral damage of imposing exchange controls in terms of forgone trade is sizable, equivalent to 11–15 percentage points of tariff on imports.

How to pay the growing pension bills



Frank May/Newscom

The looming financial crisis of most public pension programs has sparked a global debate on pension reform. Most public pension programs, such as Social Security in the United States, are pay-as-you-go systems in which the contributions from current workers are used to pay the benefits of retired workers. These plans are in increasing jeopardy because of twin demographic trends. The fertility rate is declining quite noticeably in all developed countries but birth rates are falling even in high-fertility developing countries. That means there are fewer new workers to pay the taxes required to support pensioners.

At the same time, there has been a remarkable increase in life expectancy, which means that a growing number of pensioners will be collecting benefits for an increasing number of years.

To assure the viability of these systems, politicians can either cut benefits or increase contributions, or attempt some combination of the two—such as raising the retirement age. These and other proposals to reform public and private pension systems are being debated in many countries. Nearly all of them seem to have the same denominator: moving risks of old-age financing from the state to the individual.

"Public Pension Reform: A Primer," Alain Jouten, IMF Working Paper No. 07/28.

A critical look at public expenditure

"Public Expenditure in Latin America: Trends and Key Policy Issues,"
Benedict Clements, Christopher Faircloth, and Marijn Verhoeven, IMF
Working Paper No. 07/21.

An important element of the economic policy debate in Latin America is the proper role of government spending—both as a tool of macroeconomic stabilization and as an instrument for the development of human capital and infrastructure. Despite recent strong growth in the region, poverty remains widespread, as does income inequality. This paper assesses trends in public expenditures in 17 Latin American countries. It finds that fiscal positions have improved in recent years, mainly because of a surge in revenues, especially from commodities. The revenue surge has outpaced broad-based and continuing increases in spending. Still, public debt as a percentage of GDP remains high—about 50 percent for the region—and is still above the maximum prudent level in many countries.

In addition to examining trends in public spending, the paper looks at four key policy issues: the cyclical nature of spending, public investment, public employment, and social expenditures. Spending tends to be procyclical, rising during good times and falling during bad, which has delayed the reduction in debt during economic expansions. Public investment is lower than in other regions. And while the wage bill for public employees is similar to that in other regions, the quality of public services is low. Social spending in areas such as education, healthcare, social insurance, and housing represents a large share of total government expenditures, but much of it does not benefit the poor.

How to stop VAT fraud

"VAT Fraud and Evasion: What Do We Know, and What Can be Done?"
Michael Keen, and Stephen Smith, IMF Working Paper No. 07/31.

This year, France is suffering from a massive \$12 billion shortfall in value-added tax receipts. According to the *Financial Times*, alarm bells started ringing when the national statistics institute reported an unexpected drop in exports in the second half of 2006. A subsequent inquiry by the finance ministry revealed a surge in what has been dubbed carousel fraud—companies using specially created supplier companies in other European countries to allow them to reclaim value-added tax (VAT) that was never paid in the first place.

This is just one more instance of a worrying increase in VAT fraud in the European Union (EU). In their paper, Michael Keen of the IMF's Fiscal Affairs Department and Stephen Smith of University College London discuss what can be done about VAT fraud in high-income countries. They conclude that a fundamental redesign of the EU's VAT treatment of intracommunity trade is required and discuss the



Thomas Bravo/Reuters

Attending class in Honduras: Social spending is rising throughout Latin America, but the money is not always well spent.

pros and cons of various proposals to fix problems of non-compliance. They conclude by looking at the implications of the EU's VAT debate for the United States, which is pondering the introduction of a VAT at the federal level.

Getting the balance right in health care policy

"What Should Macroeconomists Know about Health Care Policy?" William Hsiao and Peter S. Heller, IMF Working Paper No. 07/13.

The economics of health is becoming increasingly important across the globe. In low-income countries, health has gained prominent recognition for its role in fostering or hindering development—3 of the 10 Millennium Development Goals to be reached by 2015 concern health. In middle-income, transition, and industrial economies, the pressures are different but also daunting.

Among other things, health care costs are putting pressure on spending levels and inflation caused by aging populations and technological advances. Yet those who design and implement macroeconomic policies may easily overlook how these policies influence and are influenced by the health sector. Also, a tendency to favor market solutions can predispose economists to underestimate the market failures that make undesirable an approach that mostly relies on market forces.

This primer is a step toward bridging the divide between macroeconomic policy and health care policy. It highlights the appropriate roles for the market and the state in health care financing and provision, and reviews health sector issues and policy options that confront countries at different stages of economic development. ■

Copies of IMF Working Papers are available for \$18 each from IMF Publication Services. The full texts of all Working Papers are available on the IMF website (www.imf.org).

IMF, World Bank urged to help fight global warming

At a February 12 seminar organized by the World Bank and the IMF, Sir Nicholas Stern urged the two institutions to take on a greater role in mitigating climate change caused by human-induced global warming. Stern, a former Chief Economist at the World Bank who led a review into climate change for the U.K. government, said it is still possible to avoid the worst effects of global warming. But the window for capping the level of greenhouse gases in the atmosphere at 450–550 parts per million (ppm) CO₂ is closing fast. The current level stands at 430 ppm—concentrations that have already caused a rise in the earth’s temperature by more than half a degree Celsius, according to the Stern review on the economics of climate change, published in 2006.

Rising temperature

Based on current trends, average global temperatures will rise by 2–3 degrees Celsius within the next 50 years or so, Stern said, adding that the most severe impact of global warming will be felt through its effects on water:

- Melting glaciers will initially increase flood risk and will then strongly reduce water supplies.
- Declining crop yields could leave hundreds of millions of people without the ability to produce or purchase sufficient food.
- There will be a worldwide increase in deaths from malnutrition and heat stress in lower altitudes—although in higher altitudes, cold-related deaths will decrease.
- Rising sea levels will put hundreds of millions of people at risk for being flooded each year.
- About 15–40 percent of all species could face extinction as a result of global warming.

Cost of action

Stern estimated that fighting global warming will cost about 1 percent of annual global GDP by 2050, adding that developed countries should be

prepared to shoulder most of the burden, at least initially. He also urged international financial institutions—including the World Bank and the IMF—to take a lead role. The two institutions could disseminate information about what countries are doing worldwide to combat global warming, help spearhead new initiatives such as a global carbon cap and emissions trading system, support efforts to stop deforestation (a very cost-effective way of reducing greenhouse gas emissions), and help countries adopt policy frameworks that mitigate the effects of climate change.

In commenting on Stern’s presentation, Teresa Ter-Minassian, head of the IMF’s Fiscal Affairs Department, noted that the Stern review had prompted the IMF to reflect more deeply on its role in the fight against global warming. “We are keenly aware of the fact that climate change will have major macroeconomic and fiscal effects for the Fund’s member countries.” She said that the IMF would focus on macroeconomic, financial, and especially fiscal instruments to deal with global warming, in line with its mandate and what it does best.

Not everyone agrees with Stern, of course. Some of his judgments have been controversial, and the models used to back the conclusions of his report have attracted criticism from many economists, including Professor William Nordhaus of Yale University and Professor Partha Dasgupta of Cambridge University. But most scholars now agree that the science behind global warming is sound and that the issue needs to be addressed, almost certainly by raising the market price of carbon, as proposed in the Stern report. In February 2007, the United Nations Intergovernmental Panel on Climate Change presented further scientific evidence to support the claim that global warming is caused by carbon pollution. ■

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Researchers check a melting iceberg in Antarctica.

Gary Braasch/ZUMA Press



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