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### *Editor's Note*

The first research summary in this issue surveys research done at the IMF on *macroeconomic policies and income distribution*. Experience shows that widening income disparities tend to erode the political and social consensus required for the sustainability of macroeconomic and structural reforms, especially in developing countries. The need to understand the linkages between macroeconomic policies and income distribution has, therefore, become an important focus of IMF research.

In light of recent developments in some emerging markets, *dollarization*—the subject of the second article—is both highly topical and of considerable analytical interest.

The country/area study in this issue covers the *euro area*. With the advent of European Economic and Monetary Union, IMF surveillance of this area has involved analytical work on issues common to all twelve countries, as well as on areawide issues relating to indicators, instruments, and transmission channels of macroeconomic policies.

The special topic article describes a new IMF website on *Balance of Payments Statistics*—a useful compilation of data sources and information on conceptual issues related to external sector statistics. Also included in this issue are the summaries of proceedings of two recent IMF conferences, including the second Annual IMF Research Conference.

—Eswar Prasad

*Research Summaries*

## Macroeconomic Policies and Income Distribution

Aleš Bulíř

*The relationship between income inequality and economic policies is of considerable interest to both academics and policymakers. It is also a complex one: macroeconomic policies, structural changes, and redistributive interventions affect income distribution, while income inequality considerations can influence the selection of policies and reforms as well as their implementation and degree of success. The increasing focus on poverty alleviation in IMF-supported programs has further highlighted the need for a better understanding of the nexus between macroeconomic policies and income distribution. This article provides an overview of IMF research in this area.*

(continued on page 2)

## Dollarization

Andrew Berg

*Dollarization manifests itself in two forms: one voluntary and the other largely involuntary. The former type, called full or de jure dollarization, occurs when a country adopts a foreign currency, often the U.S. dollar, as its sole legal tender. The involuntary form, called partial or de facto dollarization, is less under the direct control of the authorities and occurs when a foreign currency circulates alongside a national currency, with bank deposits and loans possibly also denominated in a foreign currency. Most researchers place full dollarization within the realm of exchange rate regime choices in the economic literature, while partial dollarization is typically analyzed as an outcome of disorderly macroeconomic conditions. These two branches of analysis are nonetheless closely linked, as full dollarization is a more attractive choice for countries that find themselves largely dollarized de facto. This article surveys recent research at the IMF on the theoretical and empirical aspects of both partial and full dollarization.*

(continued on page 5)



### *In This Issue*

## *IMF Staff Papers*
### Volume 49, Issue 1



*IMF Staff Papers*, the IMF's scholarly journal, edited by Robert Flood, publishes selected high-quality research produced by IMF staff and invited guests on a variety of topics of interest to a broad audience, including academics and policymakers in IMF member countries. The papers selected for publication in the journal are subject to a rigorous review process using both internal and external referees. The journal and its contents (including an archive of articles from past issues) are available online at the **Research at the IMF** website at *http://www.imf.org/research*.



## Macroeconomic Policies *(continued from page 1)*

The relationship between macroeconomic stabilization and inequality is of keen interest to the IMF's member countries. Stabilization policies can contribute to reductions in inequality by, for example, lowering inflation and reducing the volatility of the exchange rate and other macroeconomic variables. However, a highly unequal income distribution could vitiate the ability of countries to institute sustainable stabilization programs. For instance, rising inequality in some transition economies may have undermined the necessary consensus required to implement market-oriented reforms. Dolinskaya (forthcoming) arrives at this conclusion for Russia, especially given that the redistribution system seems to amplify regional inequality. In contrast, redistributive policies that mitigated the early-transition increase in inequality may have been crucial for the success of Poland's "big bang" reform strategy (Keane and Prasad, forthcoming).[1] Research is under way to analyze in more detail the relationship between inequality and the durability and success of IMF-supported stabilization programs.[2]

IMF staff have made significant contributions to the literature linking various economic and structural policies with income distribution. While some papers have developed theoretical models, the bulk of IMF research in this area has been empirical in nature, emphasizing both cross-country and country-specific studies.[3]

Given the core areas of IMF policy advice, of particular interest have been variables measuring inflation and the volatility of financial variables. Inflation is often regarded as a regressive tax that disproportionately affects the poor. The panel data evidence suggests that inflation indeed worsens income inequality, but inflation variability appears to have an even stronger impact than the level of inflation (Bulíř and Gulde, 2000).[4] Modeling nonlinearities in this relationship differently, Bulíř (2001) finds inflation to be significant for income inequality in cross-country regressions: bringing inflation down from a hyperinflationary level reduces inequality significantly, while further declines bring negligible reductions.[5]

Evidence from a growing body of IMF research suggests that only well-targeted fiscal policies can affect income inequality (and poverty) and that, in the absence of such a targeted mechanism, it may be better to rely on the trickle-down effect of economic growth on inequality.[6] In addition, the success in affecting inequality depends on the scope of redistribution policies and their execution. Tanzi (1998) argues that the primary avenue for government to affect income inequality is through its contribution to human capital creation.[7] Schwartz and Ter-Minassian (1995) claim that there is not necessarily a trade-off between redistributive and efficiency goals of expenditure policies in developing countries, especially over the medium term.[8] Unfortunately, in most of these countries, tax and transfer policies have often not been used effectively to reduce income inequality, in part owing to difficulties associated with the introduction of progressive taxation and targeted redistribution.[9]

The country-specific character of redistribution is difficult to capture in cross-country studies. Individual country case studies are particularly relevant for economies that have undergone severe crises, transition economies, and other economies with pronounced economic changes. Clements (1997) finds that Brazil has been one of the most unequal societies—in part owing to its history of hyperinflation—and income distribution remained unequal after the Real Plan of July 1994, because social expenditures primarily benefit upper-income groups.[10] Baldacci, De Mello, and Inchauste (2002) provide evidence of the impact of the Tequila crisis on Mexico's income distribution.[11] Several pa-

pers have addressed the distributional impact of the profound socioeconomic changes undergone by transition economies.[12] Most authors agree that, while labor earnings disparities widened in the initial stages of transition, consumption and income inequality remained subdued in countries with well-targeted redistribution policies (Keane and Prasad, 2001). In contrast, those countries that failed to establish a system of targeted transfers have seen a significant widening of consumption and income inequality.

Finally, case studies of countries with pronounced economic changes, for example, China, the Philippines, and Uganda, support the notion that redistribution policies and their impact are country specific. China's case is particularly interesting: although regional inequality has widened, the urban-rural income distribution appears to be more equal in fast-growing, coastal regions than in those with little or no trade, and these changes are reinforced by China's redistribution policies.[13] In contrast, income distribution in Philippines has been remarkably stable over the last two decades and little of the "trickle-down" effect of economic growth has been observed.[14] In Uganda, income inequality increased during the 1989–95 period of structural adjustment, owing to a lack of a formal social safety net benefiting the poor.[15]

In research on the OECD countries, Vanhoudt (1997) reports that economic fundamentals explain three-quarters of inequality variation across countries and over time. Cole and Towe (1996) find that the dynamics of the U.S. distribution of income is dominated by cyclical income fluctuations. Decressin (1999) analyzes the Italian redistribution system and concludes that it is not an efficient redistributive and risk-sharing mechanism.[16]

The debate on income inequality in low-income countries is generally overshadowed by concerns about the dynamics of poverty: unlike income inequality, poverty reduction is considered to be a desirable goal of government policies.[17] IMF research on this topic has focused on the linkages between macroeconomic policies, market-oriented reforms, and poverty. On the one hand, there appears to be no medium-term trade-off between stabilization and poverty; that is, fiscal expansion financed with more inflation today does not permanently lower poverty.[18] On the other hand, the evidence suggests that fiscal tightening in the context of IMF-supported structural adjustment programs is associated with increased social spending and less poverty (Gupta, Dicks-Mireaux, Khemani, McDonald, and Verhoeven, 2000).[19]

[1]Irina Dolinskaya, "Transition and Regional Inequality in Russia: Reorganization or Procrastination?" forthcoming IMF Working Paper; Michael Keane and Eswar Prasad, "Inequality, Transfers, and Growth: New Evidence from the Economic Transition in Poland," forthcoming in *Review of Economics and Statistics.*

[2]Anna Ivanova, Wolfgang Mayer, Alexandros Mourmouras, and George Anayiotos, "What Determines the Success or Failure of Fund-Supported Programs?" forthcoming IMF Working Paper.

[3]Theoretical papers include: Sanjeev Gupta, Hamid Davoodi, and Rosa Alonso-Terme, "Does Corruption Affect Income Inequality and Poverty?" IMF Working Paper 98/76, 1998, and also forthcoming in *Economics of Governance*; Antonio Spilimbergo, Juan Luis Londono, Miguel Szekely, "Income Distribution, Factor Endowments, and Trade Openness," *Journal of Development Economics* (June 1999); Giacomo Corneo, Olivier Jeanne, "Pecuniary Emulation, Inequality and Growth," *European Economic Review* (October 1999); Arye L. Hillman, "Poverty, Inequality, and Unethical Behavior of the Strong," IMF Working Paper 00/187, 2000; Li Hongyi, Danyang Xie, Heng-fu Zou, "Dynamics of Income Distribution," *Canadian Journal of Economics* (November 2000); Era Dabla-Norris and Paul Wade, "Rent Seeking and Endogenous Income Inequality," IMF Working Paper 01/15, 2001; Stefania Scandizzo, "Counterfeit Goods and Income Inequality," IMF Working Paper 01/13, 2001; Robert M. Townsend and Kenichi Ueda, "Transitional Growth with Increasing Inequality and Financial Deepening," IMF Working Paper 01/108, 2001.

[4]See Aleš Bulíř and Anne-Marie Gulde, "Inflation and Income Inequality: Further Evidence on Empirical Links," IMF Working Paper 95/86, 1995, and also published in *Finance a úvěr* Vol. 50 (April), 2000.

## Books from the IMF

### Silent Revolution: The International Monetary Fund, 1979–89

*James M. Boughton*

This volume—fourth in a series of histories of the institution—covers a decade when the IMF came of age as a participant in global financial markets and as a development partner for emerging economies. Part One of the book describes how the IMF conducted surveillance of macroeconomic and exchange rate policies, how the annual World Economic Outlook became a major tool for analyzing policy effects, and how the IMF supported policy coordination efforts of the major industrial countries. Part Two analyzes the debt crisis and explains how the IMF worked with indebted countries and their creditors to develop a strategy for resolving the crisis. Part Three examines IMF lending to developing countries, including how several countries fell into arrears to the IMF and how the tactics for dealing with the problem progressed. Part Four examines how the institution evolved throughout the 1980s and how it raised the financial resources to do its work.

Full-text versions (or, in some cases, detailed summaries) of books published by the IMF are available online at the **Research at the IMF** website at *http://www.imf.org/research*. Follow the link to IMF Publications.

## Books from the IMF

### The Modern VAT

*Liam Ebrill, Michael Keen, Jean-Paul Bodin, and Victoria Summers*

Probably the most important tax development of recent years has been the remarkable rise of the value-added tax (VAT), now a central component of the tax systems of over 120 countries. In particular, the VAT has recently become a key component of tax reform in many developing countries. The IMF Fiscal Affairs Department has played a major role in this process, and this book—the first comprehensive treatment of the tax for over a decade—sets out the lessons of its unique experiences.

The book is aimed at academics, policymakers, practitioners, and others with an interest in this increasingly important tax. Starting with an assessment of the key principles of the VAT, and new evidence on its effectiveness, the book covers the central issues in both policy design (such as the optimal rate structure, treatment of financial services and other problem areas) and administration (including audit, refund processing, and organizational structures).

Full-text versions (or, in some cases, detailed summaries) of books published by the IMF are available online at the **Research at the IMF** website at *http://www.imf.org/research*. Follow the link to IMF Publications.



[5]Aleš Bulíř, "Income Inequality: Does Inflation Matter?" *IMF Staff Papers*, Vol. 48, No. 1, 2001.

[6]Michael Sarel, "How Macroeconomic Factors Affect Income Distribution: The Cross-Country Evidence," IMF Working Paper 97/152, 1997; Gary G. Moser, "Economic Growth and Poverty Reduction in Sub-Saharan Africa," IMF Working Paper 01/112, 2001; Aleš Bulíř, "The Impact of Macroeconomic Policies on the Distribution of Income," *Annals of Public and Cooperative Economics*, Vol. 72 (June), 2001.

[7]Vito Tanzi, "Fundamental Determinants of Inequality and the Role of Government," IMF Working Paper 98/178, 1998. See also Hong-Sang Jung and Erick Thorbecke, "The Impact of Public Education Expenditure on Human Capital, Growth, and Poverty in Tanzania and Zambia: A General Equilibrium Approach," IMF Working Paper 01/106, 2001.

[8]Gerd Schwartz and Teresa Ter-Minassian, "The Distributional Effects of Public Expenditure—Update and Overview," IMF Working Paper 95/84, 1995, and also published in *Journal of Economic Surveys*, Vol. 14 (July) 2000. See also Vito Tanzi, Ke-young Chu, and Sanjeev Gupta, eds., *Economic Policy and Equity* (Washington, DC: International Monetary Fund,1999).

[9]Ke-young Chu, Hamid Davoodi, and Sanjeev Gupta, "Income Distribution and Tax and Government Social Spending Policies in Developing Countries," IMF Working Paper 00/62, 2000; Howell H. Zee, "Inequality and Optimal Redistributive Tax and Transfer Policies," IMF Working Paper 99/60, 1999.

[10]Benedict Clements, "Income Distribution and Social Expenditure in Brazil," IMF Working Paper 97/120, 1997.

[11]Emanuele Baldacci, Luiz R. De Mello, and Gabriela Inchauste, "Financial Crises, Poverty, and Income Distribution," IMF Working Paper 02/4, 2002. See also Benedikt Braumann, "High Inflation and Real Wages," IMF Working Paper 01/50, 2001 for a model description of the nexus between high inflation and poverty.

[12]Caroline van Rijckeghem, "Albania's Early Transition, 1991–93: What Administrative Data Tell Us About Income Distribution and Poverty," *Economic Systems,* Vol. 22 (December), 1998; Peter K. Cornelius and Beatrice S. Weder, "Economic Transformation and Income Distribution: Some Evidence from the Baltic Countries," IMF Working Paper 96/14, 1996; Michael Keane and Eswar Prasad, "Consumption and Inequality During the Transition to a Market Economy: Poland, 1985–92," *IMF Staff Papers,* Vol. 48 (Special Issue), 2001; Vincent R. Koen and Steven Phillips, "Price Liberalization in Russia: The Early Record," IMF Working Paper 92/92, 1992; Sanjeev Gupta, Christian Schiller, and Henry Ma, "Privatization, Social Impact, and Social Safety Nets," IMF Working Paper 99/68, 1999.

[13]Anuradha Dayal-Gulati and Aasim M. Husain, "Centripetal Forces in China's Economic Take-off," IMF Working Paper 00/86, 2000, and also forthcoming in *IMF Staff Papers*; Jahangir Aziz and Christoph Duenwald, "China's Provincial Growth Dynamics," IMF Working Paper 01/3, 2001; Shang-Jin Wei and Yi Wu, "Globalization and Inequality: Evidence from Within China," forthcoming IMF Working Paper.

[14]Philip R. Gerson, "Poverty, Income Distribution, and Economic Policy in the Philippines," IMF Working Paper 98/20, 1998.

[15]Calvin McDonald, Christian Schiller, and Kenichi Ueda, "Income Distribution, Informal Safety Nets, and Social Expenditures in Uganda," IMF Working Paper 99/163, 1999.

[16]Patrick Vanhoudt, "Do Labor Market Policies and Growth Fundamentals Matter for Income Inequality in OECD Countries? Some Empirical Evidence," *IMF Staff Papers*, Vol. 44 (September), 1997; Jeffrey Cole and Christopher M. Towe, "Income Distribution and Macroeconomic Performance in the United States, IMF Working Paper 96/97, 1996; Jörg Decressin, "Regional Income Redistribution and Risk Sharing: How Does Italy Compare in Europe?" IMF Working Paper 99/123, 1999.

[17]See IMF Staff, "Should Equity Be a Goal of Economic Policy?" *Finance and Development*, Vol. 35 (September), 1998; Paul Cashin, Paolo Mauro, Catherine Pattillo, and Ratna Sahay, "Macroeconomic Policies and Poverty Reduction: Stylized Facts and an Overview of Research," IMF Working Paper 01/135, 2001.

[18]Mahmood H. Khan, "Rural Poverty in Developing Countries—Issues and Policies," IMF Working Paper 00/78, 2000; Geoffrey Bannister and Kamau Thugge, "International Trade and Povery Alleviation," IMF Working Paper 01/54, 2001; Zuzana Brixiová, Aleš Bulíř, and Joshua Comenetz, "The Gender Gap in Education in Eritrea in 1991–98: A Missed Opportunity?" IMF Working Paper 01/94, 2001; Prakash Chander, "Subsidy Reforms and Poverty Alleviation," IMF Working Paper 01/126, 2001; Paul R. Masson, "Migration, Human Capital, and Poverty in a Dual-Economy of a Developing Country," IMF Working Paper 01/128, 2001; Paul Holden and Vassili Prokopenko, "Financial Development and Poverty Alleviation: Issues and Policy Implications for Development and Transition Countries," IMF Working Paper 01/160, 2001; Alfredo Cuevas, "Short- and Long-Term Poverty and Social Policy in a 'Snakes and Ladders' Model of Growth," IMF Working Paper 01/172, 2001; Ana Corbacho and Gerd J. Schwartz, "Mexico: Experience with Pro-Poor Expenditure Policies," IMF Working Paper 02/12, 2002.

[19]Sanjeev Gupta, Louis Dicks-Mireaux, Ritha Khemani, Calvin McDonald, and Marijn Verhoeven, *Social Issues in IMF-Supported Programs*, IMF Occasional Paper No.191, 2000. See also Sanjeev Gupta, Benedict Clements, and Erwin Tiongson, "Public Spending on Human Development," *Finance and Development*, Vol. 35 (September), 1998.

## Dollarization *(continued from page 1)*

Much of the research on partial dollarization has focused on its underlying causes. Savastano (1996) emphasizes that, while macroeconomic instability is the cause of dollarization, its manifestation depends on the institutional framework. Countries that did not allow dollar deposits, for example, observed more capital flight and increased use of foreign currency, whereas countries with sufficiently flexible financial systems, such as Brazil, saw a proliferation of indexed domestic currency instruments, instead of dollarization.[1] A central feature of de facto dollarization is that it tends not to abate, even after the macroeconomic instabilities that caused it have been brought under control. Mongardini and Mueller (2000) find some econometric evidence of such a "ratchet effect" in foreign currency deposits in the Kyrgyz Republic, but not in cash dollars in circulation (for which they have some survey data).[2]

The literature on partial dollarization makes a distinction between currency substitution—dollarization of money as a means of payment—and asset substitution, which refers to dollarization of stores of value. Earlier research, such as Agénor and Khan (1996), focused on currency substitution, examining the rate of return on foreign currency in money demand functions.[3] As Savastano (1996) notes, however, most of the available data is on interest-bearing, foreign-currency time deposits, for which a focus on asset substitution makes more sense. Moreover, the Asian crisis motivated increased analysis of dollarized loans as well as other financial deposits; large quantities of loans were dollar-denominated and this had important implications for the economic effects of exchange rate fluctuations. More recent research on dollarization has thus concentrated on asset substitution.

Ize and Levy-Yeyati (1998) show that the degree to which the financial system is dollarized depends on relative volatilities of the inflation rate (more volatility makes foreign currency deposits less risky) and the real exchange rate (more volatility makes these deposits more risky in terms of domestic prices). Ize and Levy-Yeyati also explain the persistence of dollarization after stabilization in terms of the fact that real exchange rate volatility, in many cases, decreases faster than inflation volatility.[4] Catão and Terrones (2000) present a model of the banking system which emphasizes how banking and credit market imperfections determine deposit and loan dollarization.[5] Mourmouras and Russell (2000) show how, in the absence of interest-bearing bank deposits, foreign currency surrender requirements may lead to smuggling as a way for residents to accumulate cash dollars.[6]

The implications of partial dollarization for monetary and exchange rate policies and financial supervision is critical to the operational work of the IMF. Berg and Borensztein (2000) conclude that a high degree of currency substitution strengthens the case for fixing the exchange rate, while dollarization as asset substitution has various offsetting effects.[7] Ize (2001) argues that inflation targeting may be feasible even in the presence of substantial currency and asset substitution.[8] Baliño and others (1999) emphasize that dollarization—understood as asset substitution—has implications similar to those of capital account openness in general.[9] Poirson (2001) concludes that countries with a high degree of partial dollarization are, in fact, more likely to choose a more rigid exchange rate regime.[10]

## Policy Discussion Papers

**Policy Discussion Paper No. 01/2**
The IMF and Civil Society: Striking a Balance
*Thomas C. Dawson II and Gita V. Bhatt*

**Policy Discussion Paper No. 01/3**
Providing Health Care to HIV Patients in Southern Africa
*Markus Haacker*

**Policy Discussion Paper No. 01/4**
Globalization Facts and Figures
*Paul R. Masson*

**Policy Discussion Paper No. 01/5**
Reviewing Some Early Poverty Reduction Strategy Papers in Africa
*Caroline M. Robb and Alison M. Scott*

**Policy Discussion Paper No. 01/6**
Financial Sector Regulation and Supervision: The Case of Small Pacific Island Countries
*Klaus-Walter Riechel*

**Policy Discussion Paper No. 01/7**
Monetary Operations and Central Bank Balance Sheets in a World of Limited Government Securities
*Mark D. Zelmer*

IMF researchers have analyzed a variety of country experiences with partial dollarization. Unteroberdoerster (2002) discusses the case of Vietnam; Fritz-Krockow and others (2001) look at Haiti; and Rumbaugh and others (2000) analyze dollarization in Cambodia. Zamaróczy and Sa (forthcoming) estimate the amount of cash dollars in circulation in Cambodia and conclude that the country is almost completely dollarized. Lizondo and others (2001) analyze monetary policy and the advisability of inflation targeting in Peru.[11]

Interest in full dollarization has grown sharply in recent years, both out of dissatisfaction with the alternatives and because several countries, including El Salvador and Ecuador, joined Panama among the ranks of sizable, fully dollarized countries. Berg and Borensztein (2000) analyze the costs and benefits of full dollarization as compared with its closest alternative, a currency board. They attempt to quantify the tradeoffs in the case of Argentina, in particular the cost of foregone seignorage and possible benefits from lower borrowing costs. They observe, however, that the potentially most important considerations—notably, the loss of the "exit option" to devalue in the face of major shocks, and the advantages of deeper integration—are harder to evaluate. They conclude that two groups of countries are most likely to find dollarization attractive: those already highly integrated with the United States (or other country whose currency is to be adopted) and those already highly dollarized de facto.[12] Calvo and Reinhart (2000) also point out that countries that are already substantially dollarized de facto will lose little in going to full dollarization.[13]

Several papers have looked more closely at the various costs and benefits of dollarization. Bogetić (2000) argues that growing partial dollarization and financial development imply that seignorage losses from dollarization would be small in many cases.[14] Parsley and Wei (2001) find that currency boards, and especially dollarization, strongly promote goods market integration, far beyond what is directly associated with exchange rate stability alone.[15]

Dollarization is sometimes seen as an irreversible decision but Liberia, one of only two countries with a long history of dollarization (the other is Panama) reintroduced its own currency in the 1980s. Indeed, Abrams and Cortés-Douglas (1993) provide what amounts to a manual for introducing a new currency, based on the experiences of countries that "deruble-ized" after the breakup of the Soviet Union.[16]

As Mishkin and Savastano (2000) emphasize, actual experiences with dollarization are limited, and the long history of dollarization in the most important case, Panama, is mixed.[17] Bogetić (2000) reviews the experience of Panama and con cludes that it has been broadly positive. De la Torre and others (forthcoming) describe the deep banking and exchange rate crisis that led to Ecuador's January 2000 move to full dollarization and emphasize dollarization's stabilizing role; Offerdal and others (2000) provide an early, cautiously positive, assessment of the outcome.[18] The addition of countries like Ecuador and El Salvador to the ranks of fully dollarized countries will provide important material for future research.

[1]Miguel Savastano, "Dollarization in Latin America: Recent Evidence and Some Policy Issues," IMF Working Paper 96/4, 1996; also published in P.D. Mizen and E.J. Pentecost, eds., *The Macroeconomics of International Currencies: Theory, Policy and Evidence* (Aldershot: Edward Elgar: 1996).

[2]Joannes Mongardini and Johannes Mueller, "Ratchet Effects in Currency Substitution: An Application to the Kyrgyz Republic," *IMF Staff Papers*, Vol. 47, No. 2, pp. 218–37, 2000. Also see notable earlier work on dollarization by Ratna Sahay and Carlos Végh, "Dollarization in Transition Economies: Evidence and Policy Implications," IMF Working Paper 95/96, 1995; also published in P.D. Mizen and E.J. Pentecost, eds., *The Macroeconomics of International Currencies: Theory, Policy and Evidence* (Aldershot: Edward Elgar, 1996).

[3]Pierre-Richard Agénor and Mohsin S. Khan, "Foreign Currency Deposits and the Demand for Money in Developing Countries," *Journal of Development Economics*, Vol. 50, pp. 101–18, 1996; Stanley Black, Charalambos Christofides, and Alex Mourmouras use a model of currency substitution to analyze money demand during the run-up to a currency crisis in "Convertibility Risk: The Precautionary Demand for Foreign Currency in a Crisis," IMF Working Paper 01/210, 2001.

[4]Alain Ize and Eduardo Levy-Yeyati, "Dollarization of Financial Intermediation: Causes and Policy Implications," IMF Working Paper 98/28, 1998; also forthcoming in the *Journal of International Economics* as "Financial Dollarization."

[5]Luis Catão and Marco Terrones, "Determinants of Dollarization: The Banking Side," IMF Working Paper 00/146, 2000.

[6]Alex Mourmouras and Steven H. Russell, "Smuggling, Currency Substitution and Unofficial Dollarization: A Crime-Theoretic Approach" IMF Working Paper 00/176, 2000.

[7]Andrew Berg and Eduardo Borensztein, "The Choice of Exchange Rate Regime and Monetary Target in Highly Dollarized Economies," IMF Working Paper 00/29, 2000.

[8]Alain Ize, "Implications of Partial Dollarization for Inflation Targeting: A View from the Dollarization Literature," (in Spanish) in *Revista de Estudios Económicos,* Nro. 7 (junio 2001), Banco Central de Reserva del Perú.

[9]Thomas Baliño, Adam Bennett, and Eduardo Borensztein, "Monetary Policy in Dollarized Economies," IMF Occasional Paper No. 171, 1999.

[10]Hélène Poirson, "How Do Countries Choose Their Exchange Rate Regime?" IMF Working Paper 01/46, 2001.

[11]Olaf Unteroberdoerster, "Foreign Currency Deposits in Vietnam—Trends and Policy Issues," in David Cowen, Olaf Unteroberdoerster, Chanpen Puckahtikom, and Nita Thacker, *Vietnam: Selected Issues and Statistical Appendix*, IMF Country Report 02/5, 2002; Bernard Fritz-Krockow, Eric Verreydt, Werner Keller, and Randa Sab, "Deposit and Loan Dollarization in Haiti," in *Haiti: Selected Issues*, IMF Staff Country Report No. 01/04, 2001; Thomas Rumbaugh, Kotaro Ishi, Hong Liang, and Atsushi Masuda, "Dollarization and the Monetary Regime," in *Cambodia: Selected Issues,* IMF Staff Country Report No. 00/135, 2000; Mario de Zamaróczy and Sopanha Sa, "Macroeconomic Adjustment in a Highly Dollarized Economy: The Case of Cambodia," forthcoming IMF Working Paper; and Saul Lizondo, Andrew Wolfe, Dale Chua, Juan Pablo Córdoba, and Andrea Richter, "The Design and Challenge of Monetary Policy in Peru," in *Peru: Selected Issues*, IMF Staff Country Report No. 01/51, 2001. IMF country reports are available online in full-text format at *www.imf.org/publications*.

[12]Andrew Berg and Eduardo Borensztein, "The Pros and Cons of Full Dollarization," IMF Working Paper 00/50, 2000, forthcoming in James Dean, Dominick Salvatore, and Thomas Willett, eds., *The Dollarization Debate* (Oxford University Press).

[13]Guillermo A. Calvo and Carmen Reinhart, "Reflections on Dollarization," in Alesina and Barro, eds., *Currency Unions* (Stanford: Hoover Institute Press), 2000. See also their "Capital Flow Reversals, the Exchange Rate Debate, and Dollarization," in *Finance and Development*, Vol. 36 (September), pp. 13–15, 1999.

[14]Zelko Bogetić, "Official Dollarization: Current Experiences and Issues," *Cato Journal* (fall), pp. 179–213, 2000. See also by the same author "Full Dollarization: Fad or Future?" *Challenge*, March/April 2000, pp. 17–48; "The Calculus of Full Dollarization," *Central Banking*, Vol. 11, No. 2, 2000, and "Seignorage and Dollarization," *Central Banking*, Vol. 10, No. 4, 2000.

[15]David Parsley and Shang-Jin Wei, "Limiting Currency Volatility to Stimulate Goods Market Integration: A Price-Based Approach," IMF Working Paper 01/197, 2001.

[16]Richard Abrams and Hernán Cortés-Douglas, "Introduction of a New National Currency: Policy, Institutional, and Technical Issues," IMF Working Paper 93/49, 1993.

[17]Frederic Mishkin and Miguel Savastano, "Monetary Policy Strategies for Latin America," NBER Working Paper No. 7617, 2000.

[18]Augusto de la Torre, Roberto García-Saltos, and Yira Mascaro, "Banking, Currency, and Debt Meltdown: Ecuador Crisis in the Late 1990s," forthcoming in *Latin American Financial Crises,* ed. by Albert Berry (University of Toronto); and Erik Offerdal, Mariano Cortés, Mayra Zermeño, Alvin Hilaire, Gabriela Inchauste, Fernando Delgado, Antonio Pancorbo, and Werner Keller, *Ecuador: Selected Issues and Statistical Annex*, IMF Staff Country Report No. 00/125, 2000.

## *Call for Papers*
## Third Annual IMF Research Conference

The third Annual Research Conference of the IMF will take place at the organization's headquarters in Washington, DC, on November 7–8, 2002. The conference will provide a forum to discuss innovative research by IMF staff and leading outside economists and will facilitate an exchange of views among the participants. The main theme of this year's conference will be **Capital Flows and Global Governance**, which can be interpreted broadly. More information and details about possible topics can be found at the **Research at the IMF** website at *www.imf.org/research*.

Interested contributors should submit a proposal to the Program Committee (email to ARC2002@imf.org) **by March 22, 2002**. The Program Committee will evaluate all proposals in terms of originality, analytical rigor, and policy relevance and will communicate its decision by late April. The Program Committee consists of S. Wei (Chair), X. Debrun, G. Gelos, H. Huang, O. Jeanne, L. Kodres, and A. Spilimbergo.



## *IMF Staff Papers,* Special Issue November 2001
## Proceedings of the First Annual IMF Research Conference

Edited by Eduardo Borensztein and Robert Flood

This special issue of *IMF Staff Papers* contains a selection of papers presented at the first annual IMF Research Conference held in Washington, DC, in November 2000. The papers in this volume were written by IMF authors and invited contributors from a group of distinguished outside scholars. Also included is the text of the first Mundell-Fleming lecture, delivered by Maurice Obstfeld, and a set of remarks by Robert Mundell on the intellectual history of the Mundell-Fleming model.

**International Macroeconomics: Beyond the Mundell-Fleming Model**
*Maurice Obstfeld (University of California at Berkeley)*

**Do Monetary Handcuffs Restrain Leviathan? Fiscal Policy in Extreme Exchange Rate Regimes**
*Antonio Fatás (INSEAD and CEPR) and Andrew K. Rose (University of California at Berkeley)*

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