CHAPTER 7

The Evolution and Reform of the International Financial System

THE FINANCIAL PROBLEMS THAT BEGAN in Asia in the second half of 1997 have exposed weaknesses both in emerging market countries and in the international financial system. In response, the United States has taken steps, jointly with the international community, not only to contain the financial crisis but also to foster reforms of the international financial system to make it less crisis prone in the future. The recent turmoil followed a robust period of increasing integration of world product and financial markets—a trend well epitomized by the long-anticipated realization of European Monetary Union in January 1999.

The recurrence of currency and financial crises in the world economy poses major challenges to policymakers. What are the causes of these repeated crises, and of instability and financial market volatility? Are financial integration and globalization partly to blame? Does integration into modern global financial markets require the loss of macroeconomic policy autonomy? What regime of exchange rates is best for emerging market economies and other small countries in this new world of global capital mobility? Can the Bretton Woods institutions—the International Monetary Fund (IMF) and the World Bank—which were designed for a world of fixed exchange rates and limited capital mobility, still promote the stability of the international financial system in a radically different environment? What institutional framework best promotes the stability of the international financial system? Answers to these questions will be critical to efforts to strengthen the stability of the international financial system and help to ensure that global financial integration will continue to sustain prosperity and growth in the world economy.

A broad international consensus now supports reform of the global financial architecture to achieve several goals: to increase transparency (that is, to improve the availability of information about macroeconomic and financial conditions); to strengthen and reform domestic financial institutions so as to prevent crises from occurring; and to improve the mechanisms available to resolve those crises that do occur. This chapter starts by describing proposals that have been advanced in each of these three areas. It then analyzes the next steps that are being considered in the redesign of the international financial system. Finally, it considers European Monetary Union, the prospects for the euro as an international currency, and the possible implications for the U.S. dollar.

REFORM OF THE INTERNATIONAL FINANCIAL ARCHITECTURE

As explained in Chapter 1, the international community, under U.S. leadership, has proposed a set of reforms to strengthen the international financial system. These reforms, designed to reduce the incidence of future crises, are referred to collectively as the "new international financial architecture." Their aim is to create an international financial system for the 21st century that captures the full benefits of global markets and capital flows, while minimizing the risk of disruption and better protecting the most vulnerable groups in society. The work accomplished toward these goals in 1998 was only the latest stage in an evolutionary process that has been under way for some years.

FROM THE HALIFAX SUMMIT TO THE G-22 REPORTS

A broad debate on the steps needed to strengthen the international financial system was already under way when the Mexican peso was devalued suddenly in December 1994. The ensuing crisis, however, gave the debate considerable impetus and pertinence. The annual summit of the leaders of the Group of Seven (G-7) nations (Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States) in 1995, held in Halifax, Nova Scotia, initiated work in a number of areas. One such area was additional study of means to promote the orderly resolution of future financial crises. The finance ministers and central bank governors of the G-10 countries were asked to review a number of ideas that might contribute toward that objective. The G-10 (which actually has 11 members: the G-7 plus Belgium, the Netherlands, Sweden, and Switzerland) established a working party, which submitted a report—informally known as the Rey Report, after the chairman of the working party—to the ministers and governors in May 1996.

The report noted recent changes in financial markets that, in some cases, have altered the characteristics of currency and financial crises in emerging markets. It indicated that neither debtor countries nor their creditors should expect to be insulated from adverse financial consequences in the event of a crisis. It also called for better market-based procedures for the workout of debts when countries and firms are in financial distress. Reforms of bond contracts were proposed to encourage the cooperation and coordination of bondholders when the financial distress of a country or a corporation requires the restructuring of the terms of a bond. The report also suggested a review of IMF policies on "lending into arrears" to extend the scope of this policy to include new forms of debt. Such policies would allow the IMF to continue lending, in certain unusual and extreme circumstances, to countries that had temporarily suspended debt-service payments but

continued to maintain a cooperative approach toward their private creditors and to comply with IMF adjustment policies.

A number of important innovations came out of this reform process: the development of international standards for making economic data publicly available (under the IMF's Special Data Dissemination Standard); international standards for banking supervision (the Basle Core Principles for Banking Supervision); the decision to expand the IMF's backup source of financing under the New Arrangements to Borrow (25 participants in the NAB agreed to make loans to the IMF when supplementary resources are needed to forestall or cope with an impairment of the international monetary system, or to deal with an exceptional situation that poses a threat to its stability); and, more recently, a new financing mechanism in the IMF, called the Supplemental Reserve Facility, to help members cope with a sudden and disruptive loss of market confidence, but on terms designed to encourage early repayment and reduce moral hazard.

Despite some progress in strengthening the system, the eruption of the Asian crisis in 1997 demonstrated the importance of considering further questions regarding the operation of the international system. In November 1997, on the occasion of the Asia-Pacific Economic Cooperation leaders' summit in Vancouver, a number of Asian leaders proposed a meeting of finance ministers and central bank governors to discuss the crisis and broader issues. They suggested that participation in the meeting be expanded to include emerging market countries, not just the usual small number of major industrial countries. The President responded by calling on the Secretary of the Treasury and the Chairman of the Board of Governors of the Federal Reserve System to convene such a meeting. Finance ministers and central bank governors from 22 systemically significant countries in the international financial system (informally dubbed the Group of 22, or G-22) gathered in Washington on April 16, 1998, to explore ways to reform the system that could help reduce the frequency and severity of crises. Three working groups were formed to consider the following three sets of issues: measures to increase transparency and accountability, potential reforms to strengthen domestic financial systems, and mechanisms to facilitate appropriate burden sharing between official institutions and the private sector in time of crisis. The three working groups presented their reports in October 1998 on the occasion of the annual meetings of the IMF and the World Bank.

GREATER TRANSPARENCY AND ACCOUNTABILITY

The report of the first working group reflects the existence of a broad consensus on the need for greater transparency not only by the private sector and national authorities but by the international financial institutions (IFIs) as well. The Asian crisis made clear once more that it is important for countries to provide sufficient information

about their macroeconomic and financial conditions. The information needed includes data on the size, maturity, and currency composition of external liabilities, as well as accurate and comprehensive measures of the level of foreign exchange reserves. The crisis also underscored the need for banks and corporate enterprises to provide accurate information about their financial accounts. Without such information, outsiders cannot adequately assess the true financial condition of governments and firms. The crisis made clear as well the importance of transparency on the part of the IFIs themselves, and led to calls for the IMF and other IFIs to be more open about their activities, economic analysis, policy advice, and recommendations.

The report of the G-22 working group on transparency and accountability recommends that national authorities publish timely, accurate, and comprehensive information on the external liabilities of the financial and corporate sectors in their countries as well as their own foreign exchange positions. Published information on official foreign exchange positions would extend to both reserves and liabilities, for example those deriving from government intervention in forward exchange markets. The report recommends adherence to existing international standards for transparency and finds that standards in additional areas, including monetary policy and accounting and disclosure by private financial institutions, might be useful. The report calls for better monitoring of countries' compliance with such standards, including through IMF reporting on countries' adherence to internationally recognized standards. It also recommends that the potential for greater transparency of the positions of investment banks, hedge funds, and institutional investors be examined.

Finally, the report calls on the IMF and the other IFIs to be more open and transparent. Accountability, it argues, is important for all institutions, and unnecessary secrecy would be particularly inappropriate in institutions that are telling others to be more transparent. For example, the report recommends that IFIs adopt a presumption in favor of the release of information, except where confidentiality might be compromised. It also calls for publication of program documents, of background papers to reports following the regular yearly visit by the IMF to a member state, of public information notices following the IMF Executive Board's discussion of reports on member countries' economic conditions, of retrospective program reviews, and of other policy papers.

Increased transparency can help prevent the buildup of countries' financial and macroeconomic imbalances. In the Asian crisis, for example, more information concerning the external debt of firms and banks might have limited investors' willingness to lend to such institutions in the first place. Transparency can also encourage more timely policy adjustment by governments and help limit the spread of financial market turmoil to other countries by enabling investors to distinguish

countries with sound policies from those with weaker policies. Nonetheless, transparency alone is unlikely to be sufficient to prevent another major crisis from occurring. In Asia, greater transparency about net reserves and offshore liabilities of the financial and corporate systems might well have helped attenuate the crisis. But investors also missed many warning signals in data that were widely available. More is needed than just information.

REFORMING AND STRENGTHENING DOMESTIC FINANCIAL INSTITUTIONS

As discussed in Chapter 6, weaknesses in the financial sectors of borrowing countries now appear to have been a central cause of the Asian crisis, and of some previous financial crises as well. Commercial banks and other financial institutions borrowed and lent imprudently, channeling funds toward projects that were not always profitable. Insufficient expertise and resources in countries' regulatory institutions led to weak regulation of the financial system, and in particular to lax supervision of banks. Insurance of bank deposits was either implicit or poorly designed. Often, governments did not provide explicit deposit insurance; rather, they implicitly insured the liabilities of the banking system. Connected lending was widespread: banks and other financial firms in a business group would make loans to other firms in the group without objectively evaluating or monitoring their soundness. The result was often distorted incentives for project selection and monitoring. All these factors contributed to the buildup of severe structural weaknesses in the financial system, the most visible manifestation of which was a growing level of nonperforming loans. The growing supply of funds from abroad, facilitated in part by capital account liberalization, only heightened the problem; rising capital inflows combined with poorly regulated and often distorted domestic financial systems to create a dangerous environment.

Strengthening domestic financial systems, the focus of the second G-22 working group, will thus be a central element of ongoing systemic reform. The list of measures required is long and will take years to complete. The reforms recommended by the G-22 report include the development of liquid and deep financial markets, especially markets in securities (bonds and equities). Financial markets should be able to rely on strong prudential regulation and supervision of banks and other financial institutions, based on the Basle Core Principles of Banking Supervision and the Objectives and Principles of Securities Regulation set out by the International Organization of Securities Commissions. Appropriate restrictions on connected lending would be beneficial. The working group's report also calls on countries to design explicit and effective deposit insurance mechanisms to protect bank depositors. The report also calls for better corporate governance in both the financial sector and the nonfinancial sector, so that investment

decisions respond to market signals rather than to personal relationships. It further recommends the design and implementation of bankruptcy and foreclosure laws for insolvent firms and, more broadly, the implementation of efficient insolvency and debtor-creditor regimes, possibly including procedures for systemic bank and corporate restructuring and debt workouts for corporations in financial distress. Finally, the report advocates better coordination and cooperation among international organizations and international supervisory entities in strengthening financial systems, as well as increased technical assistance for and training of government officials and regulators.

BETTER CRISIS RESOLUTION, INCLUDING APPROPRIATE ROLES FOR THE OFFICIAL COMMUNITY AND THE PRIVATE SECTOR

Although strengthening financial systems may prevent some crises from occurring and make those that do occur less virulent, it cannot be expected to eliminate them altogether. It is therefore essential to establish means of minimizing the depth and severity of crises without undermining appropriate incentives for prudent private and public behavior. This very important task constitutes the third and final pillar of the set of international financial reforms proposed in October by the G-22 working groups.

The G-22 report on this topic identifies policies that could help promote the orderly resolution of future crises, including both official assistance and policies and procedures that could facilitate the involvement of the private sector as appropriate. It noted that recent events have highlighted how the larger scale and greater diversity of recent capital flows to emerging markets generate the risk that crises can erupt more quickly and can be larger in scope than in the past. It is of critical importance that the IMF and the other IFIs remain capable of catalyzing policy reform and the restoration of market confidence in their member countries in the event of an international financial crisis, in the context of a strong program of policy adjustment. The combination of adjustment and financing should be sufficient to resolve most payments difficulties. However, the scale of private capital flows significantly exceeds the resources that the official community can reasonably provide, even with the quota increase to bolster IMF resources and other measures. Moreover, the perception that sufficient official financial assistance may be made available to allow a country to meet all contractual obligations without some form of appropriate private sector involvement might distort the incentives of both creditors and debtors. It may encourage some creditors to take unwarranted financial risk, some debtor countries to follow inappropriate policies, and both debtors and creditors to underestimate the risks they are assuming. Although the international community will continue to provide assistance—conditioned on economic reform—to deal with the prob-

lems that have given rise to crises, mechanisms are needed to allow the private sector to participate constructively in containing crises and resolving them over time. Work is under way to find constructive and cooperative ways to "bail in" private investors.

New procedures suitable to modern markets might be usefully developed for effective management of the financial difficulties of both firms and countries. When banks accounted for the majority of international capital flows, as in the 1970s and 1980s, troubled debtors could more easily resolve a crisis through joint negotiations with a small number of banks and the IFIs. Negotiations such as those developed to address the 1980s debt crisis entailed agreements to postpone debt repayments (debt restructuring) and occasionally to reduce the overall value of the obligation (debt writedown). However, the recent proliferation of creditor institutions and instruments and the growth of international bond markets have made it harder to coordinate the actions of creditors during a crisis. Unilateral actions by troubled debtors are, on the other hand, highly disruptive and can lead to contagion, if they increase investors' concern that other countries may follow suit. This might explain why Russia's unilateral debt restructuring in August 1998 disrupted markets as far away as Latin America.

Recognizing the need for new procedures, the G-22 report includes a number of recommendations. First, it calls for a range of policies to help prevent crises and limit the severity of those that do occur. The report emphasizes that countries might want to limit the scope of government guarantees, including those covering the liabilities of financial institutions, and to make explicit those guarantees that are offered and price them appropriately (for example, through effective deposit insurance). In addition, the report endorses the development of innovative financing techniques to permit increased payment flexibility, greater risk sharing among debtors and creditors, or the availability of new financing in the face of adverse market developments such as sudden reversals of capital flows. For example, debt contracts calling explicitly for repayments contingent on the prices of key primary commodities could automatically reduce countries' debt burdens when prices move against them.

Finally, the report identifies key features of effective insolvency and debtor-creditor regimes (including bankruptcy, restructuring, and foreclosure laws) and highlights the role of such regimes in contributing to effective crisis containment and resolution. Workable procedures in these areas may be useful to encourage the prompt recovery of economic activity following a financial crisis. Among the most important basic objectives of an insolvency regime are to maximize the value of a firm's assets after its liquidation or reorganization; to provide a fair and predictable regime for the distribution of assets recovered from debtors; and to facilitate the uninterrupted provision of credit for commercial transactions by providing an orderly regime for the distribution of debtors' assets.

Other measures recommended by the working group would encourage the coordination of creditors in the event of a crisis. Following the recommendations of the 1996 Rey Report, the G-22 report proposes the inclusion of creditor coordination clauses in bond contracts. These clauses would be designed to create an environment in which all parties—creditors, debtors, and IFIs—can work together to resolve crises in the most advantageous manner possible. Collective action clauses in bond contracts could help overcome the problems to which a large number of creditors inevitably gives rise. For example, a clause allowing for the collective representation of creditors (such as through the formation of a creditors' committee) can help facilitate coordinated action among a large group of creditors. A majority action clause could prevent a small minority of creditors from impeding a debt-restructuring agreement, by allowing a qualified majority of creditors to alter the payment terms of the debt contract. Currently, most sovereign bond contracts in the United States require unanimity to restructure the terms of the contract. Similarly, sharing clauses would mandate the equal treatment of creditors by imposing a fair division of payments among them. This could discourage disruptive legal action and preferential settlements that benefit a few creditors at the expense of others.

The report also calls for new methods of crisis management in the extreme case of a temporary suspension of debt payments. Recent experience (as in Russia in 1998) underscores the fact that such suspensions and unilateral restructuring actions can be highly disruptive, especially if they substitute for policy reform and adjustment. The G-22 report argues that countries should not, and normally would not, suspend debt payments (interest and principal) until all other reasonable alternatives have been exhausted. However, suspension might occur in exceptional cases, in the event of severe and unanticipated adverse market developments. In these cases, the report emphasizes the importance for countries to rely on orderly and cooperative approaches, rather than unilateral actions, in negotiating the restructuring of contractual obligations. Unilateral action may entail significant economic and financial costs.

If a country does suspend its debt payments to private creditors, it is technically in arrears. The report argues that, in those exceptional cases when a country experiences a severe crisis and a temporary payments suspension cannot be avoided, the international community and private creditors may still have an interest in providing incentives for strong and sustained policy adjustments and structural reform. It therefore suggests that the international community can signal its conditional willingness to provide financial support, under appropriate conditions, even if a country has imposed a temporary payments suspension. The report argues that such official support should be provided only if the decision to suspend payments reflects the absence of rea-

sonable alternatives, if the government is willing to undertake strong policy adjustment, and if the government is engaged in good faith efforts with creditors to find a cooperative solution to the country's payments difficulties. An IMF policy of lending to a country that has not yet completed negotiations with private creditors, but is negotiating cooperatively and in good faith, is referred to as "lending into arrears."

A final set of recommended measures would facilitate prompt and orderly debt workouts. As outlined above, the orderly resolution of crises will require a combination of official finance, in the context of strong policy adjustment programs, and appropriate private sector involvement. Financial crises are often associated with significant financial distress in the banking and corporate sectors. Although national insolvency regimes (such as bankruptcy and corporate restructuring laws) are intended to provide an appropriate legal and institutional framework for the restructuring of corporate debt, corporate sector crises may occasionally achieve sufficient scale to threaten the solvency of a country's entire financial system, as happened in the Asian crisis.

Several measures can be undertaken to facilitate the orderly workout of the liabilities of firms in distress. One such measure is available in domestic insolvency regimes—such as corporate restructuring under Chapter 11 of the U.S. bankruptcy code—that allow distressed firms to obtain new, senior credits to ensure their ongoing operation during the restructuring of their debt. (Seniority means that the new lenders will be first in line for repayment. Without such assurance, new lenders are unlikely to come forward.) Analogously, in the international context, the report suggests that the development of better means of encouraging the private sector to provide new credits, in the event of a debt crisis or suspension of debt payments, should be considered. Otherwise, loans for basic purposes, such as working capital for production and exports, can become unavailable. In certain circumstances the government may also find it useful to develop a framework for encouraging out-of-court negotiations between private debtors and their creditors. International support can be harnessed to support restructuring efforts as well. For example, one goal of the Asian Growth and Recovery Initiative, recently launched by the United States and Japan, is to support the implementation of more comprehensive and accelerated restructuring of banks and corporations in the crisis-afflicted countries in Asia.

Implementation of the international financial architectural reforms proposed in the G-22 reports will take time. But they also promise to reduce the likelihood of future crises and the severity of those that do occur. For its part, the G-7 strongly signaled its commitment to implement many of the reforms proposed by the working groups in its October 30 declaration, a subject considered next.

ADOPTION OF MEASURES TO REFORM THE INTERNATIONAL FINANCIAL ARCHITECTURE

The release of the G-22 reports was followed by detailed discussions among the G-7 finance ministers and central bank governors and with officials from other industrial and emerging market economies. The G-7 ministers and governors agreed, in a statement issued on October 30, 1998, on specific reforms to strengthen the international financial system. In the words of their communiqué, they:

> agreed to carry these forward through our own actions and in the appropriate international financial institutions and forums. These reforms are designed to: increase the transparency and openness of the international financial system; identify and disseminate international principles, standards and codes of best practice; strengthen incentives to meet these international standards; and strengthen official assistance to help developing countries reinforce their economic and financial infrastructures. They also include policies and processes to ensure the stability and improve the surveillance of the international financial system. Finally, they aim at reforming the International Financial Institutions, such as the IMF, while deepening cooperation among industrialized and developing countries.

FURTHER STEPS TO STRENGTHEN THE INTERNATIONAL FINANCIAL ARCHITECTURE

In their October 30 statement, the G-7 countries committed themselves to a number of reforms consistent with the recommendations of the G-22 working groups, as well as a great deal of additional analysis and research. The G-7 also stressed the need for the international community to widen its efforts to strengthen the international financial system. The G-7 thus committed themselves to initiate further work in a number of other important areas to identify additional, concrete steps to strengthen the international financial architecture. These include:

- examining the additional scope for strengthened prudential regulation in industrial countries
- further strengthening prudential regulation and financial systems in emerging markets
- developing new ways to respond to crises, including new structures for official finance and new procedures for greater private sector involvement in crisis resolution
- assessing proposals for further strengthening of the IMF

- seeking to minimize the human cost of financial crises and encouraging the adoption of policies that better protect the most vulnerable in society
- consideration of the elements necessary for the maintenance of sustainable exchange rate regimes in emerging markets.

Each of these steps poses a number of issues and challenges. Many are interrelated. Some of these issues that the international community will be examining in the future are addressed below.

STRENGTHENED PRUDENTIAL REGULATION AND SUPERVISION IN INDUSTRIAL COUNTRIES

The crises of the past year have revealed the importance of strengthening prudential regulation to promote international financial stability. Global financial integration has led to a proliferation of financial institutions making cross-border transactions, to the growth of offshore financial centers and hedge funds, and to the development of a wide range of derivative instruments. In this new environment, investors may underestimate the risks they are assuming during periods of market euphoria, and thus contribute to an excessive buildup of exposures during the upswing.

Such developments pose significant challenges to financial regulators and supervisors. Regulatory incentives may be needed to encourage creditors and investors to act with greater discipline, that is, to analyze and weigh risks and rewards appropriately in their lending and investment decisions. Thus, it will be useful to examine the scope for strengthened prudential regulation and supervision in industrial countries. Here we explore some aspects of these regulatory challenges.

Enhanced International Financial Supervision and Surveillance

Traditionally, supervision and regulation of financial systems have been domestically based. But the increased global integration of financial markets and the proliferation of institutions doing cross-border transactions suggest the desirability of enhanced *international* financial supervision and surveillance. Better national and international procedures to monitor and promote stability in the global financial system might prove useful.

Although good financial supervision still must begin at the domestic level, international institutions and national authorities involved in maintaining financial sector stability must work jointly to foster stability and reduce systemic risk. They will also benefit from exchanging information more systematically about the risks prevailing in the international financial system. A useful contribution in this regard might be a policy-oriented forum including financial authorities from the G-7 countries, key emerging markets, the IFIs, and other relevant international organizations.

Another way to improve global surveillance and coordination might be to have the IFIs, working closely with international supervisory and regulatory bodies, conduct surveillance of national financial sectors and their regulatory and supervisory regimes. For this to succeed, all relevant information would need to be made accessible to them.

Strengthened Bank Capital Regulation

At the heart of the issue of bank regulation are banks' capital adequacy standards. As discussed in Chapter 6 (see Box 6-5), banks may have an incentive to make excessively risky investments, since much of the cost of failure may be borne by the government. To mitigate this tendency, banks are required to hold a certain amount of their own capital in reserve against the loans they make.

The fact that many banks are currently active on a global scale provides good reasons for common international bank capital standards. Globally active banks headquartered in countries with low capital requirements would otherwise be at an advantage over those headquartered elsewhere. In addition, by virtue of their global scale, the impact of a global bank's failure would likely extend well beyond the borders of the country in which it is headquartered.

The 1988 Basle Capital Accord established such an international bank capital standard by recommending that globally active banks maintain capital equal to at least 8 percent of their assets. In addition, the accord sought to distinguish between more and less risky assets and required that more capital be held against investments with greater risk. As a result, the 8 percent standard called for in the accord applies not to a bank's total assets but to its risk-weighted assets. Safe government bonds or cash, for example, receive a zero weight in calculating aggregate risk exposure, whereas long-term lending to banks and industrial companies in emerging markets receives a 100 percent weight. Such minimum capital standards are meant to work in conjunction with direct supervision of banks and basic market discipline to restrain excessive risk taking by banks that have access to the safety net.

Even at the time of their adoption, it was recognized that the standards called for in the Basle Capital Accord might have to be reviewed and strengthened in the face of developments in the international financial environment. Effective capital regulation is an evolutionary process, and the Basle standards have already been improved in a number of ways in the decade since their adoption, for example by the adoption of amendments covering market risk. However, recent developments have made some shortcomings of the rules for credit risk more apparent. First, the risk weights applied to broad asset categories mirror only crudely the actual risk associated with different types of assets. Second, a number of financial innovations may have made it easier for banks to assume greater risk without becoming subject to increased capital charges. Third, the current standards may

have encouraged banks in industrial countries to make short-term rather than longer term loans to banks in emerging markets. Fourth, off-balance-sheet items such as derivative positions, committed credit lines, and letters of credit may not be adequately addressed by the current standards. The task of further improving the Basle Capital Accord has just started. No consensus has yet emerged concerning the next steps in the reform of bank capital regulation. But it is likely that a strong and effective system of bank capital regulation will rely on several complementary components: strengthened capital standards; improved internal risk management controls in banks, including greater reliance on banks' own models of risk assessment; and increased reliance on market discipline.

A broad debate is certain to be waged over how to provide effective capital regulation of banks in the globalized environment in which they now operate. The Basle standards were designed for banking institutions in the G-10 countries, but the proliferation of financial institutions in emerging markets also poses the question of whether the same standards adequately address the risks faced by institutions operating in emerging markets.

The rapid development of derivative instruments and their widespread use in international financial markets pose another set of difficult regulatory issues. Derivatives are contracts written in terms of the price of some underlying asset; for example, stock options and stock futures contracts are written in terms of stock prices. Derivatives can be used to hedge risks and thus have been very useful in risk management by banks, other financial institutions, and nonfinancial firms. However, they can also be used to take speculative positions, thus increasing rather than decreasing risk. Moreover, the fact that derivative positions are recorded off the balance sheet makes it more difficult for the market and for regulators to assess their contribution to the risks taken by the institution using them. Also, because the creditworthiness of the counterparties to a derivatives transaction is not perfect, firms or banks that believe they are hedged against various risks may effectively not be.

A difficult issue concerns the type of regulatory oversight that should be put in place for derivative instruments. For example, excessive regulation of derivatives could lead the derivatives business to move to unregulated offshore markets. The President's Working Group on Financial Markets is undertaking a long-term study of derivative instruments, including their potential risks and effects. This study will review recent market developments and existing regulation and consider what regulatory or legislative changes may be appropriate. It will investigate possibilities for reducing systemic risk and eliminating legal uncertainty. It will also assess the potential use of derivatives for fraud or manipulation, and methods for curtailing regulatory arbitrage, or the exploitation of differences in regulation across different jurisdictions.

Issues Posed by Hedge Funds and Other Highly Leveraged Investment Funds

Another set of difficult regulatory issues is posed by hedge funds and other highly leveraged entities. Hedge funds in their present form represent a relatively recent innovation in financial markets. The near-failure of a prominent hedge fund in September 1998 (see Chapter 2) focused renewed attention on the role and activities of these and other highly leveraged entities.

The "hedge fund" label is usually applied to investment funds that are unregulated because they restrict participation to a small number of wealthy investors (see Chapter 2 for a broader discussion of their activities). They generally use sophisticated techniques to make targeted investments. In addition, some of them use significant leverage—that is, they not only invest their own equity capital but use sizable amounts of borrowed funds as well. Regulation of hedge funds could also prove difficult. Poorly designed regulation might, for example, lead such funds to move to unregulated offshore markets.

The impact of hedge funds and other highly leveraged entities on financial markets certainly needs to be better understood. Accordingly, the Secretary of the Treasury has called upon the President's Working Group on Financial Markets to prepare a study of the potential implications of the operation of firms such as hedge funds and their relationships with their creditors. A primary concern for regulators is to ensure that lenders appropriately manage the risks associated with extending credit to hedge funds.

The study by the President's working group will examine a number of issues, including questions relating to the disclosure of information by entities such as hedge funds and the potential risks associated with highly leveraged institutions generally. The study will also examine whether the government needs to do more to discourage excessive leverage, and if so, what the appropriate steps might be. A number of the agencies participating in the working group are also involved in several studies on the international aspects of these questions.

STRENGTHENING PRUDENTIAL REGULATION AND FINANCIAL SYSTEMS AND PROMOTING ORDERLY CAPITAL ACCOUNT LIBERALIZATION IN EMERGING MARKETS

The Asian crisis has focused attention on a wide variety of financial policies, both international and domestic in scope. Considering the central role played by financial sector weaknesses in the crisis (see Chapter 6), the case for strengthening financial systems is particularly strong in emerging markets. Accordingly, the second area in which the G-7 called for further work is the identification of concrete steps to further strengthen prudential regulation and financial systems in emerging markets. Clearly, this is an ambitious undertaking and will require

a vast number of issues to be considered and challenges to be overcome. Some of the most significant are addressed below.

Many countries have benefited significantly from the increased integration of global capital markets. But recent events have shown that integration, when countries do not have the policies and institutions in place to capture the full benefits of global integration, can also bring new risks. The right approach is to put into place the policies and institutions needed to capture the full benefits of financial integration.

Remarkably, very few countries have been tempted to turn inward as a result of the recent crisis. However, instead of facing the challenges of strengthening their financial institutions, a few have in effect decided to eschew the benefits of international capital flows by introducing controls on capital outflows as a way to prevent "destabilizing" capital flight. However, many considerations argue against the use of capital controls in a crisis. First, controls on outflows are often in practice administered in institutional frameworks in which they are used to extract economic rents and delay necessary reforms. Elaborate foreign exchange controls thus lead to corruption, besides distorting international trade. In any case, investors often find ways to avoid the controls over time. Moreover, capital controls may divert attention from the need to address policy distortions that lead to excessive borrowing, such as inadequate prudential supervision and regulation of the financial system. Reliance on targeted controls might eventually also lead countries to use capital controls indiscriminately, thus insulating unsound macroeconomic policies from the discipline of the marketplace. Capital controls and other domestic capital market restrictions also serve as a form of financial repression—a distortionary type of taxation—that reduces the incentive to save. Studies show that capital controls in Latin America in the aftermath of the 1980s debt crisis led to negative real interest rates, which eventually provoked more flight of capital out of the country rather than less. Finally, controls on outflows may discourage capital *inflows*, since foreign investors will then fear they may not be able to repatriate the proceeds of their investments in the future. Fears of the imminent imposition of controls on capital outflows can actually accelerate rather than avoid or postpone a crisis, and they can lead to perverse international contagion. For example, news of the imposition of capital controls in Russia and Malaysia in August 1998 was a factor in the spread of financial panic to Latin America and other emerging markets.

The Benefits of Free Capital Mobility

The arguments for free capital mobility are numerous, especially when domestic financial systems are strong and properly supervised and regulated. The United States and most other leading industrial countries, for example, do well without capital controls. First, with unrestricted capital mobility, the market is free to allocate saving to

the best investment opportunities, regardless of where in the world those opportunities are. Investors can then earn a higher rate of return than they could if limited to the domestic market. Second, firms and other borrowers in high-growth countries can obtain funds more cheaply abroad in the absence of controls than if they had to finance their investments at home. Third, free capital mobility allows investors and households to diversify risk; access to foreign investment opportunities enhances the benefits of portfolio diversification. Fourth, the scrutiny of global investors can provide an important discipline on policymakers. Well-functioning capital markets can discourage excessive monetary and fiscal expansion, since inflation, budget deficits, and current account deficits quickly lead to reserve outflows and currency depreciation. Logically, a case for restricting capital mobility requires the identification of distortions in the market allocation of capital.

Increasing the Resilience of Financial Systems

Although introducing controls on outflows is not a desirable response to a crisis, international capital inflows can reverse suddenly, and openness potentially does make emerging economies more vulnerable to such reversals. As a result, policies to increase the resilience of financial systems might be usefully identified, to make countries less vulnerable to these crises. These include effective prudential regulation and supervision of financial markets, as discussed above. The G-7 has suggested investigating concrete means of encouraging emerging market economies to adopt international standards and best practices. In addition, countries could take several steps to reduce the vulnerability of their financial systems. For example, they can encourage greater participation in their markets by foreign financial institutions. They can foster a better credit culture in the banking system. They can rely more on equity and other financing that does not result in the buildup of excessive debt burdens. They can implement an orderly and progressive liberalization of their capital accounts. And in some circumstances they might find it useful to rely on restraints on some short-term capital inflows, in the context of sound prudential regulation of the banking system.

The Orderly Liberalization of Capital Flows

Most emerging market economies have historically placed heavy restrictions on their capital markets. One result of the recent crisis is a growing consensus that capital market liberalization has to be carried out in a careful, orderly, and well-sequenced manner if countries are to benefit from closer integration into the global economy. As discussed in Chapter 6, however, if domestic financial systems are weak, poorly regulated, and subject to institutional distortions, rapid capital account liberalization can lead to excessive short-term borrowing and lending and a mismatch of maturities and currency denominations in the

assets and liabilities of both financial institutions and nonfinancial firms. To reduce the risk of financial and currency crises following liberalization, effective regulatory and supervisory regimes must be in place, and the financial sector must be poised to deal adequately with these risks.

It may prove useful to develop principles to help guide countries that are liberalizing and opening their capital markets, to help reduce the vulnerability of their financial systems to sudden shifts in capital flows. Possible measures include, for example, a policy of openness to foreign direct investment and promotion of longer term equity financing. Conversely, some support consideration of measures to restrain cross-border short-term interbank flows into emerging markets, because such flows are likely to be both volatile and vulnerable to distortions arising from financial safety nets.

Prudential Regulation of Short-Term Interbank Cross-Border Inflows

One approach to ensuring the stability of short-term interbank flows is through enhanced prudential banking standards. On the borrower side, a range of possible measures could be considered to help discourage imprudent foreign currency borrowing, while relying on market mechanisms to the extent possible. Prudential bank standards, such as limits on a bank's open foreign currency positions, if enforced effectively, could reduce the riskier kinds of foreign borrowing by banks. Some countries have experimented with regulatory requirements that force their banking systems to maintain "liquidity buffers" to protect against the risk of sudden shifts in funds out of the banking system. Argentina, for example, has required banks to maintain large, liquid reserves against their short-term liabilities, including their short-term foreign liabilities.

Greater prudence in the use of short-term, cross-border interbank flows could also be encouraged on the lender side. This could be accomplished through prudential regulation of the international short-term lending of banks in the industrial countries, so as to encourage more careful lending to emerging market entities that operate in weak financial systems.

Should There Be Broader Controls on All Short-Term Capital Inflows?

More controversially, some have suggested wider use of market-based restraints on all short-term capital inflows, to deter short-term foreign borrowing not just through banks but by other means as well. Chile is one country that has taken this approach. In some countries, nonfinancial firms are reported to have undertaken large-scale risky cross-border borrowing directly, rather than via the banking system, in the leadup to the crisis in Asia, for example. It has been argued that

regulation of inflows to banks alone would lead to evasion through direct cross-border borrowing by nonfinancial firms. It has also been argued that taxes on general inflows may help in the management of monetary policy when surges in inflows create difficult problems, such as how to "sterilize" their impact and avoid an inflationary surge in the money supply.

The effectiveness of such controls has been questioned, however. Evasion and leakages tend to make capital controls less effective over time. Also, the apparent success of Chile may have been due more to that country's very effective prudential regulation and supervision of its financial system and fairly sound macroeconomic policies than to capital controls. Finally, such controls have tended to favor large corporations (which are more capable of raising funds directly in international financial markets) at the expense of small and medium-size ones.

The available empirical evidence from countries that have imposed controls on a broad range of short-term capital inflows shows that they do appear to have affected the composition of inflows. Controls have steered inflows away from instruments of short-term maturity and toward longer term instruments and foreign direct investment. They do not appear to have affected the overall volume of capital inflows. Opponents of controls point out that, during the recent financial turmoil, Chile, Colombia, and Brazil have all reduced their controls in order to stimulate urgently needed capital inflows and reduce pressures against their currencies. Proponents reply that these moves do not undermine the rationale for controls. Their purpose is to slow down short-term capital inflows temporarily during a cyclical phase where such inflows are feared to be excessive. In the outflow phase of the cycle (and especially in time of crisis), it is argued that it is sensible, and not inconsistent, to remove the controls. Evidence on the appropriateness of Chilean-style controls is not only mixed but preliminary and based on the experience of a limited set of countries. Given the numerous arguments on both sides, policies to restrict all short-term inflows remain quite controversial.

Alongside the policies needed to strengthen financial systems, a number of other policies are beneficial in developing countries to enhance financial stability, foster long-term economic growth, and limit their vulnerability to shifts in global capital. Countries need sound and consistent monetary and exchange rate policies, as well as fiscal policies that avoid excessive accumulation of government debt. Although short-term and foreign currency borrowing can be very appealing to a government, because it is cheaper and often easier in the short run than borrowing long term and in local currency, too much of this kind of borrowing makes countries vulnerable to sudden shifts in investor confidence. Sound public debt management is important to insure against the risk of market disruptions.

DEVELOPING NEW APPROACHES TO CRISIS RESPONSE

Any regime designed to respond to international financial crises must provide some combination of external financial assistance and domestic policy changes. The provision of large-scale official international finance raises difficult questions concerning the criteria that should govern access to such assistance, the appropriate terms, the links (if any) to private sector involvement, and the sources of funding. Reform of the present regime also requires the consideration of new procedures for coordinating the relevant international bodies and national authorities, alongside greater participation by the private sector in crisis prevention and resolution.

New Structures for Official Finance

The recent global financial turmoil points to the usefulness of developing new ways for the international community to respond to crises. This entails exploring the possibilities of new structures for official finance that better reflect the evolution of modern markets. In their October 30 declaration the G-7 agreed that, in response to the current exceptional circumstances in the international capital markets, strengthened arrangements for dealing with contagion will be beneficial. They called for the establishment of an enhanced IMF facility that would provide a contingent short-term line of credit for countries pursuing strong IMF-approved policies —that is, those cases where problems stem more from contagion than from poor policies. This would be a departure from traditional IMF packages, which are disbursed in a series of stages, or tranches, to encourage borrowers to adhere to strict policy conditionality. This facility could be drawn upon in time of need and would entail appropriate interest rates along with shorter maturities. The facility would be accompanied by appropriate private sector involvement.

The rationale for a precautionary facility is that countries with sound economic policies may be subject to attack because of contagion. The international community has a role to play in international financial crises, by intervening, when appropriate, to help limit contagion and global instability. It may make sense in today's world of large and sudden liquidity needs for more official money to be made available up front in return for policy changes that are likewise more up front. The Congress' agreement in 1998 to support an increase in the IMF quota will provide the IMF with an important pool of new, uncommitted funds. The U.S. contribution that Congressional action made possible will be strongly leveraged through the contributions of the other IMF members.

The Continued Need for Greater Private Sector Participation

As described earlier in this chapter, the G-22 working group report on international financial crises pointed to the need for future work to develop new procedures for orderly and cooperative crisis resolution, to

complement the role of official finance. The G-7 has called for similar work as part of the next steps identified in its October 30 Declaration. The size, sophistication, and heterogeneity of recent international capital flows have reduced the relevance of the procedures used in the past when the private sector was involved in the resolution of severe international financial crises. These procedures were developed during an era when a small number of large international banks were the source of most capital flows to emerging markets. There is now a need to develop innovative ways for holders of new financial instruments to participate constructively in crisis containment and resolution. Also, innovative financing techniques, such as prenegotiated contingent lines of credit and financial provisions that provide greater explicit sharing of risk between creditors and debtors, are two avenues, among others, worthy of exploration.

STRENGTHENING THE IMF

With the IMF's resources recently augmented, the institution's members need to be sure that its policies effectively address the new challenges of the global economy, and to provide the necessary political oversight and guidance to accomplish this objective. An enhanced IMF facility to provide a contingent line of credit, as discussed above, would constitute a significant adaptation and strengthening of the IMF's policies for crisis prevention and resolution to reflect the evolution of the global economy. Another area where policies could be strengthened is in the concerted use of periodic reviews of members' economies, to promote greater transparency of policies and compliance with standards or other expressions of best practice in areas relevant to the effective conduct of economic policy. One aspect of transparency of particular importance concerns encouraging the publication, by those countries that rely on global capital markets, of key economic data as set forth in the Special Data Dissemination Standard, which has been in effect on a voluntary basis since 1996. The IMF's own transparency could also be further improved by such steps as more widespread public release of information on the policy deliberations of the IMF's Executive Board. This could be accomplished along the lines of the procedures for the IMF's periodic reviews, mentioned above, whereby the country under review may assent to a press release. In all these areas, the IMF will need to ensure that its work continues, as warranted, to be closely coordinated with other international entities, such as the World Bank.

It will also be important to ensure that the IMF's Interim Committee, as the body designed to provide ministerial-level guidance to the work of the IMF on a regular basis, is able to continue to provide effective political-level oversight and direction of the IMF in a manner that reflects the evolving nature of the challenges of the international financial system. Consideration of proposals to achieve this objective

is in progress. Any changes adopted will need to be consistent with the parallel objective of strengthening the World Bank's Development Committee, which is the comparable entity for that organization.

MINIMIZING THE HUMAN COSTS OF FINANCIAL CRISES

The sharp recessions in East Asia have led to a steep increase in both unemployment and poverty in that part of the world, inflicting severe social costs. More attention must be given in time of crisis to the effect of economic adjustment on the most vulnerable groups in society. Thus, strengthening social safety nets in crisis countries is also an important goal of stabilization packages. Ways must be found to minimize the human cost of financial crises and encourage the adoption of policies that better protect the most vulnerable in society. Just as important, countries should be encouraged to establish minimal social services for their populations, so as to be prepared to weather financial crises and other such shocks.

The Administration has been working with the world's multilateral development banks (MDBs; these include the World Bank and the regional development banks) to provide increased social safety nets in the countries in crisis, to help the least advantaged citizens in those countries who are experiencing hardship. The G-7 have asked the World Bank to develop, in consultation with other relevant institutions, general principles of good practice in social policy. These should then be drawn upon in developing adjustment programs in response to crises. The World Bank and the regional MDBs are well positioned to provide adequate spending in the areas of health and education—two of the most crucial areas in which the MDBs should focus their resources. Plans for employment creation, support for small and medium-size enterprises, and support in the development of unemployment insurance and pension plans are needed as well.

SUSTAINABLE EXCHANGE RATE REGIMES FOR EMERGING MARKETS

Exchange rate regimes are institutional choices that signal policies, priorities, and commitments. They vary in their rigidity. The choices go beyond fixed versus floating rates. They range from institutional arrangements like monetary unions, dollarized regimes, and currency boards to conventional fixed exchange rates, crawling pegs, basket pegs, managed floats, and free floats. No single exchange rate regime is best for all countries at all times; rather the choice must be based on a country's circumstances.

The choice of an appropriate exchange rate regime for emerging market economies is particularly difficult, given that many emerging markets have extensive trading ties to a number of major industrial economies, and that the credibility of the policy environment in many

emerging markets will take time to establish. No matter what exchange rate regime a country chooses, it is critical that it be backed by strong financial regulation and appropriate monetary and fiscal policies. Macroeconomic stability is based on good policies, irrespective of the exchange rate regime. Policy mistakes that contribute to a currency crisis can occur under any exchange rate regime.

The three goals of financial market openness, monetary policy independence, and exchange rate stability are not conceptually consistent—indeed, these goals are sometimes called the "impossible trinity." There are tradeoffs among these goals: a country can attain any two out of the three, but not all three; it must give up at least one. As we have seen, most countries have moved in the direction of increasingly open capital markets. For them the choice narrows to the other two goals. With perfect capital mobility, a country choosing a fixed exchange rate loses its ability to pursue an independent monetary policy; conversely, an autonomous monetary policy can be pursued only if the exchange rate is allowed to move flexibly. Therefore, a choice must be made between exchange rate fixity and monetary policy autonomy if free capital mobility is to be maintained.

Benefits of Fixed Exchange Rate Regimes

Why would a country choose to fix its exchange rate, if it must give up a large part of its monetary independence to do so? There are a variety of reasons. One is that by eliminating exchange rate risk, a fixed exchange rate regime may encourage international trade and finance. However, the evidence on the effects of exchange rate stability on trade volumes is mixed. The effects on trade and finance may be greater if a country goes beyond fixing its exchange rate and simply adopts the currency of another country, through monetary union or dollarization.

Another potential benefit of fixed rate regimes is that they can foster monetary discipline. The loss of monetary autonomy under fixed exchange rates limits the ability of monetary authorities to pursue excessively expansionary and inflationary monetary policies. Thus, such a regime can be an important signal of policy commitment to achieving and maintaining low inflation, especially when countries are seeking a rapid retreat from conditions of high inflation or hyperinflation, as part of a consistent plan for macroeconomic stability.

By reducing the ability of monetary authorities to monetize fiscal deficits, a fixed rate regime may also restrain tendencies toward loose fiscal policy. Adopting a fixed exchange rate does not, however, automatically instill policy discipline. Rather, a fixed exchange rate regime or a currency board *requires* fiscal discipline and a strong financial system to be credible. (A currency board is a particularly rigid variety of fixed rate regime that issues only as much domestic currency as is backed by foreign exchange reserves; see Box 7-1 for a discussion.)

Box 7-1.—Currency Boards

A currency board is a monetary institution that only issues currency to the extent it is fully backed by foreign assets. Its principal attributes include the following:

- an exchange rate that is fixed not just by policy, but by law
- a reserve requirement stipulating that each dollar's worth of domestic currency is backed by a dollar's worth of reserves in a chosen anchor currency, and
- a self-correcting balance of payments mechanism, in which a payments deficit automatically contracts the money supply, resulting in a contraction of spending.

By maintaining a strictly unyielding exchange rate and 100 percent reserves, a government that opts for a currency board hopes to ensure credibility.

The first currency board was established in Mauritius, at that time a colony of Great Britain, in 1849. The use of currency boards eventually spread to 70 British colonies. Their purpose was to provide the colonies with a stable currency while avoiding the difficulty of issuing sterling notes and coins, which were costly to replace if lost or destroyed. The colonies also benefited from this arrangement in that they could earn interest on the foreign currency assets being held in reserve. The use of currency boards peaked in the 1940s and declined thereafter. In the 1960s, many newly independent African countries replaced their currency boards with central banks, and most other countries followed suit in the 1970s.

The introduction of currency board-like arrangements in Hong Kong (1983), Argentina (1991), Estonia (1992), Lithuania (1994), and Bulgaria (1997) constitutes a small resurgence in their use worldwide. A currency board can help lend credibility to the policy environment by depriving the monetary authorities of the option of printing money to finance government deficits. Argentina, for example, has benefited from the credibility inspired by its currency board regime. Argentina was prompted to adopt such a regime, which it calls the Convertibility Plan, because of a dramatic hyperinflation in the 1980s and the absence of a credible monetary authority. Since 1991 the country has become a model of price stability and has achieved laudable growth rates, except during the recession brought on by the tequila crisis in 1995, from which it has rebounded. By most accounts, the currency board has worked for Argentina.

Characteristics that suit countries to be candidates for currency boards are the following: a small, open economy; a desire for further close integration with a particular neighbor or trading

Box 7-1.—*continued*

partner; a strong need to import monetary stability, because of a history of hyperinflation or an absence of credible public institutions; access to adequate foreign exchange reserves; and a strong, well-supervised, and well-regulated financial system. Advocates of currency boards have pushed for their wider use—in particular, for Indonesia, Russia, and Ukraine. However, proclaiming a currency board does not automatically guarantee the credibility of the fixed rate peg. A currency board is unlikely to be successful without the solid fundamentals of adequate reserves, fiscal discipline, and a strong and well-supervised financial system, in addition to the rule of law.

Benefits of Exchange Rate Flexibility

Exchange rate flexibility offers several benefits. Most succinctly, as already noted, it allows greater monetary independence. Flexible exchange rate regimes allow a country to pursue a different monetary policy from that of its neighbors, as it might want to do, for example, when it is at a different stage of its business cycle. In addition, a flexible rate regime can facilitate a country's adjustment to external shocks, such as the swings in capital flows and the terms-of-trade shocks that have been factors in recent crises. Finally, flexible exchange rates make the risk of foreign currency-denominated borrowing by banks and firms explicit. This may help discourage the accumulation of unhedged foreign currency liabilities.

Many episodes of currency crisis in the 1990s, discussed in Chapter 6, occurred under regimes where exchange rates were either fixed or kept in a narrow band. Semi-fixed exchange rate regimes and policies of exchange rate-based stabilization have at times led to real currency appreciations that worsened a current account deficit and helped trigger a crisis. Maintaining fixed rates long into the aftermath of an exchange rate-based stabilization can lead to a real appreciation (due to residual inflation) and a deteriorating trade balance, which can eventually undermine the fixed rate regime if it is not supported by consistent policy regimes. Some countries have made strong institutional commitments to a rigidly fixed regime; others could benefit from increasing flexibility during periods of macroeconomic and financial stability, when the move to flexibility may be less disruptive.

One form of fixed exchange rates that is even more extreme than a currency board is a monetary union, which solves the problems of credibility and speculation automatically. The next section discusses the prospects of European Monetary Union and whether Europe represents an "optimum currency area."

EUROPEAN ECONOMIC AND MONETARY UNION

The European response during the 1990s to the challenges presented by financial globalization has been to continue the process of economic and financial integration of the continent. As part of this process, 11 members of the European Union embarked on a project of monetary unification, which took effect on January 1, 1999, with the third stage of European Economic and Monetary Union (EMU). European integration raises some of the same analytical issues and policy challenges as the integration of the emerging market countries into the world financial system.

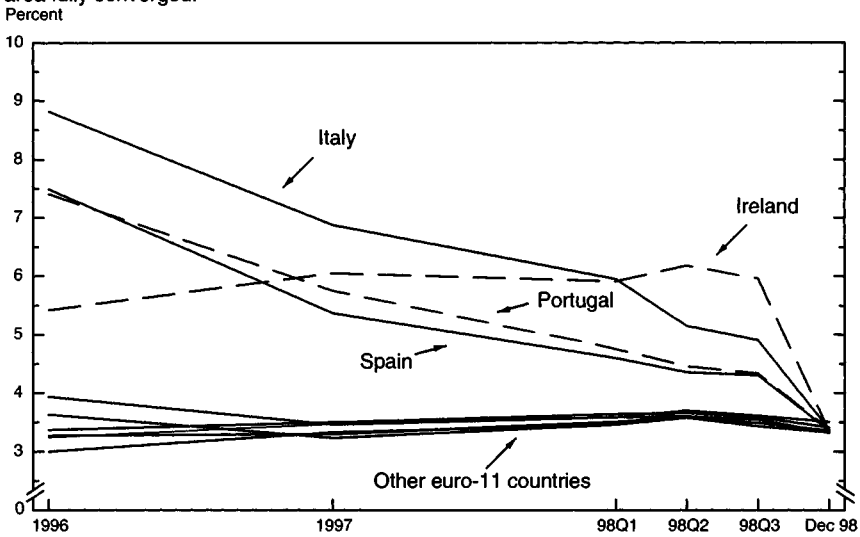
THE EMU SCHEDULE

In a summit meeting in the spring of 1998, the heads of the EU governments decided that EMU should proceed as envisioned in the Maastricht Treaty of 1991 to its third stage, monetary unification. The founding members of EMU were selected on the basis of assessments, made by the European Monetary Institute (the forerunner of the European Central Bank) and the European Commission, as to whether they had met the Maastricht Treaty's economic convergence criteria in 1997. Members were required to have had government deficits and total debt that were no greater than 3 percent and 60 percent of gross domestic product (GDP), respectively. In addition, their inflation rates and long-term interest rates had to have been within 1.5 and 2 percentage points, respectively, of the average of the three EU countries with the lowest inflation and interest rates. Finally, members' currencies must also have stayed within the EU Exchange Rate Mechanism bands for 2 years.

Twelve of the 15 EU members wished to participate in EMU from its inception, and 11 of these were found to satisfy the criteria (only Greece was not). This, in part, reflected remarkable progress toward fiscal consolidation, since the targets had seemed out of reach for members such as Italy a mere year or two before. Of the other three EU countries, Denmark and the United Kingdom had opted not to join EMU for the time being, whereas Sweden had chosen not to qualify by remaining out of the Exchange Rate Mechanism.

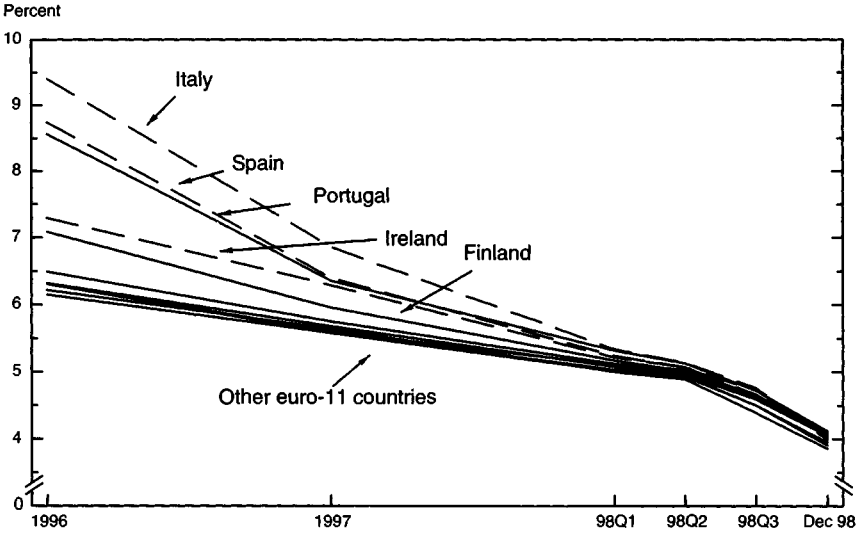
The remarkable convergence of financial conditions in the European countries is clear from data on the 11 EMU countries' short-term and long-term interest rates (Charts 7-1 and 7-2), which show a sharp convergence after 1996. Differences in interest rates across countries can be due to two major factors: a currency premium related to the risk of devaluation, and a country premium related to the possibility of default on the public debt. With monetary union to start in January 1999, short-term interest rates had converged by late 1998, as currency risk was eliminated (default risk is already close to zero for very

Chart 7-1 **European Short-Term Interest Rates**
As European Monetary Union approached, short-term interest rates in the euro-11 area fully converged.



Note: Other euro-11 countries include Austria, Belgium, Finland, France, Germany, and the Netherlands.
Source: European Central Bank.

Chart 7-2 **European Long-Term Interest Rates**
Long-term interest rates have sharply converged with the approach of European Monetary Union.



Note: Other euro-11 countries are Austria, Belgium, France, Germany, Luxembourg, and the Netherlands.
Source: European Central Bank.

short-term public debt). Even after monetary union, differences among long-term interest rates may remain, as different EMU countries with different stocks of public debt may be perceived as having different default probabilities. However, long-term interest rates among the 11 countries (collectively called the euro-11 area) had converged quite sharply by the fall of 1998 as well.

In July 1998 the European Central Bank came into existence. On January 1, 1999, a single currency, the euro, was created as the currency of the 11 EMU countries. On the same date the European Central Bank took control of monetary policy in these countries. Existing national notes and coins will continue to circulate until euro cash is introduced, but the mark, the franc, the lira, and the rest are no longer separate currencies. Rather they are "nondecimal denominations" of the euro, locked in to it at permanent conversion rates. (By analogy, U.S. dollar bills are issued in the 12 Federal Reserve districts around the country and carry a circular seal with a letter inside denoting the district from which they come. However, Europeans will continue for some time to be far more aware of the geographic origin of the currency they carry than Americans are.) Only in 2002 will euro cash enter into circulation and national currencies be phased out. This transition period is necessary because authorities need time to print the banknotes and mint coins. Retailers and banks also want time to prepare, and governments have to consider how to change their services over to the use of the euro.

Although euro cash will be introduced only in 2002, many changes will occur in the 3 years between now and then. Government bonds issued after 1999 will be denominated in euros. Almost all outstanding issues of marketable government debt by the participating countries were redenominated in euros at the end of 1998. Moreover, several large European companies plan to begin accounting in euros in 1999. Such a move may lead smaller firms to follow. Even businesses that do not switch their internal accounting to euros may quote prices in euros for trading before 2002. Consumers and the public sector are likely to be using national currency units until 2002. In general, European governments agreed that there will be no compulsion and no prohibition in the use of the euro between 1999 and 2002.

THE BENEFITS AND POTENTIAL COSTS OF EMU

EMU offers several potential benefits. Transactions costs in trade among the members will be lowered, as exchange rate risk and currency transactions within Europe will both be eliminated; the ensuing goods market integration and enhanced price competition will be beneficial to consumers. Integrated European financial markets will be broadened and deepened. Price discipline will be preserved by the independent European Central Bank, which is committed to price stability. It is hoped that fiscal discipline will also result, since, as the

members agreed in a separate Growth and Stability Pact, membership requires maintenance of a disciplined fiscal policy. (According to the pact, fines may be imposed on countries found to be running excessive deficits.) Participation in EMU thus eliminates national monetary policy and limits the scope of fiscal policy as a stabilization tool. This loss of macroeconomic tools to address cyclical unemployment makes more urgent the need for European structural reforms, for example to increase flexibility in the labor market. In this sense it is hoped that EMU might serve as discipline to nudge European countries to implement structural reforms more rapidly and eliminate impediments to sustained growth.

The creation of a large region of monetary stability is a commendable culmination of the 50-year process of economic, social, and political integration that has taken place in Europe. Indeed, the original motivation for economic integration in Europe was to ensure that the countries in the heart of Europe, which had fought three major wars over the preceding 100 years, never do so again. This is one reason why, in historical perspective, European integration has always been in the political interest of the United States. But the United States will also benefit in an economic sense, as a trading partner with Europe, from strong economic performance there, which the single-currency project may enhance in the long run. As long as Europe remains open to trade, what is good for Europe economically is good for Americans.

However, EMU also entails some potential costs. Most important, the loss of monetary autonomy deprives countries of a tool to respond to asymmetric national shocks —unexpected economic developments that affect some countries differently than others. Similarly, exchange rate changes are another instrument for coping with such shocks, but with EMU this tool will also no longer be available. Without these tools, flexibility of wages and labor mobility across regions and industries are the major mechanisms of adjustment. But labor mobility is much lower among the nations of Europe than, for example, among the American States. Fiscal policy can also play a stabilization role, but again, the rules for EMU membership constrain countries' ability to use that tool. Finally, Europe also lacks a centralized system of taxes and transfers comparable to that of the United States to cushion against regional and national shocks. Limited labor mobility, structural labor market rigidities, and decentralized and constrained fiscal policies could imply that Europe does not satisfy the criteria for an optimum currency area (Box 7-2) as clearly as do the States of the United States.

Although these potential costs of EMU have some relevance, some of the objections to EMU have been exaggerated. For example, although monetary policy is a potent policy tool for mitigating cyclical unemployment (that caused by shocks affecting aggregate demand for a country's goods and services), it has little long-run impact on

Box 7-2.—Is Europe an Optimum Currency Area?

The theory of optimum currency areas provides a set of criteria by which to identify groups of countries that are likely to benefit from membership in a common monetary union. Some research suggests that the nations of the European Union are less well suited to a common currency than are, for example, the States of the United States. Yet Europe is becoming increasingly integrated over time, and this may tip the balance in the direction of satisfying these criteria in the future.

Common rather than national shocks. Why do countries ever need independent currencies? If a country (or other geographic region) suffers an adverse shock, such as a fall in demand for its products, it may want to follow a more expansionary monetary policy, to stimulate demand and head off unemployment. Yet it cannot do so if it does not have an independent currency. Conversely, only common shocks can be properly addressed by a unionwide change in monetary policy.

For example, in the early 1990s Germany experienced a sudden increase in interest rates, as a result of unification, which led to an increase in western German spending in the eastern länder. It was difficult for other European countries to accept this increase in German interest rates, because it did not suit their own economic conditions. The resultant strains broke apart Europe's Exchange Rate Mechanism in 1992-93, although it was later restored.

A high degree of labor mobility. Labor mobility is an important criterion for an optimum currency area: a region that has this means of adjustment available has less need for monetary independence. In the event of an adverse shock in one country, workers can simply move to other countries or regions with stronger economies. Although this might not appear to be an attractive solution, it turns out that interstate migration is the most rapid means of adjustment (more rapid than changes in wage levels, for example) to economic downturns within the United States. Labor mobility among the European countries is much lower than in the United States. Thus, by the labor mobility criterion, European countries are less well suited to a common currency than are the American States.

The existence of a federal system of fiscal transfers. When disparities in income do arise in the United States, Federal fiscal policy helps narrow them. One recent estimate suggests that when a region's income per capita falls by $1, the final reduction in its disposable income is only 70 cents. The difference, a 30 percent Federal cushioning effect, comes about both through an automatic decrease in Federal tax receipts and

Box 7-2.—*continued*

through an automatic increase in unemployment compensation and other transfers. The cushioning effect has been estimated at a lower 17 percent in the case of the Canadian provinces. European countries have greater scope for domestic fiscal stabilization than do American States. There are also some cross-country fiscal transfer mechanisms. But neither the fiscal transfer mechanisms already in place within the European Union nor those contemplated under EMU (the so-called cohesion funds) are as large as those in the U.S. or the Canadian fiscal system.

At least by the theoretical criteria of labor mobility and availability of fiscal transfers, then, the European Union is not as good a candidate for a monetary union as the United States. European countries may be less adaptable to adverse shocks than American States. This suggests that, if shocks occur in the coming decade that affect EU members as differently as did the German unification shock of the early 1990s, governments in those countries adversely affected could experience popular resentment against what for them will be the insufficiently expansionary monetary policies of the rest.

The prospects for EMU. There is good hope, however, for a successful EMU. The degree of integration among the EU countries is increasing decade by decade. International labor mobility, for example, is likely to be higher in the future than in the past. The Schengen convention now allows free movement of citizens among a subset of European countries. Thus, the European countries may come to satisfy the textbook criteria of an optimum currency area in the future, even if they do not do so fully now.

unemployment caused by such structural rigidities as labor market inflexibility or real wage rigidity. Such conditions result in high levels of the full-employment unemployment rate (the lowest rate of unemployment consistent with stable inflation—also called the nonaccelerating-inflation rate of unemployment, or NAIRU) in many European countries and in such chronically depressed regions as southern Italy. These problems must be addressed through structural reform, with or without monetary union.

Second, the scope for fiscal expansion is also limited in Europe, because fiscal deficits and debt-to-GDP ratios remain high in a number of countries. Fiscal consolidation must therefore continue with or without EMU; in this sense, EMU may not be a strong constraint.

Third, asymmetric shocks and limited factor mobility may diminish over time as EMU itself leads to greater real integration among the European economies (see Box 7-2). For example, as intra-European trade continues to grow in response to European integration and EMU, the creation of a common free market for goods, services, and factors of production could make idiosyncratic national shocks less prevalent, if it reduces the geographical concentration of industries in certain countries.

Finally, it has been argued that EMU is likely to exert discipline in favor of structural reform. As there will be no national monetary and exchange rate policies, and fiscal policy autonomy will be constrained, the ability to use instruments of macroeconomic policy to delay structural market reforms will be reduced; governments will then have stronger incentives to pursue policies that further long-run economic growth. Critics of this view contend, however, that EMU could actually slow the drive for structural reforms: because reforms are socially costly, the flexibility deriving from monetary, exchange rate, and fiscal discretion could ease the transition costs as resources are reallocated. With EMU, the absence of these social shock absorbers may slow structural reform.

THE EURO AS AN INTERNATIONAL CURRENCY AND THE IMPLICATIONS FOR THE DOLLAR

Monetary union in Europe is a positive development that could simultaneously benefit the continent itself, the United States, and the world economy. Some have expressed concern, however, that a strong European economy and the emergence of the euro as an alternative international currency, rivaling the dollar, are likely to harm the United States. Such concerns are largely misguided. The United States has long benefited from a prosperous, growing Europe, and ever since the Marshall Plan, U.S. policy has supported the development of strong market economies on that continent. The United States will benefit from an open and integrated economic area in Europe. American producers will be able to export to a large, integrated European market with no cross-national restrictions on trade. U.S. firms producing in Europe will benefit from the lack of exchange rate volatility, common standards for goods and services, and a large, open market. Indeed, U.S. corporations have more experience selling into a large, unified market than do their European counterparts. American financial institutions, in particular, are already quite competitive in commercial and investment banking services and securities products and can benefit from the opportunities provided by the broadening and deepening of integrated European financial markets.

The emergence of the euro as an international currency should not be viewed with alarm, for a number of reasons. Even if the euro emerges as a strong international currency, the negative effects on U.S. economic welfare are likely to be small and outweighed by the

advantages of EMU to U.S. residents, as already described. And in any case the euro is unlikely to rapidly displace the dollar as a major international currency, given that the foundations of the successful performance of the U.S. economy remain intact. International currency status does not automatically follow from a currency's possession of a large home base.

The Functions of an International Currency

What does it mean to be a major international currency, and is it likely that the euro will become one? A currency has three main uses: it can be used as a means of payment, as a unit of account, and as a store of value. An international currency is simply one that is also used outside its home country for these three purposes. Within each of the three functions, an international currency has both official and private uses.

In money's *store-of-value* function, investors decide how much of their wealth to hold in the form of assets denominated in various currencies. Will public and private investors hold a fraction of their portfolios in assets denominated in euros? If they hold a fraction that exceeds the sum of the fractions previously occupied by the German mark and the other disappearing European currencies, a portfolio shift would occur, leading to greater demand for euros. This, in turn, could cause an appreciation of the euro. However, whether euro-denominated assets do acquire a higher share of portfolios will depend on various economic factors. These include the inflation rate in the euro area, confidence in the value of the euro relative to the dollar and the yen, the rate of return on euro-denominated assets, and economic growth in Europe, as well as political factors.

The official side of the store-of-value use is that central banks hold currencies as foreign reserves. The euro's emergence raises the possibility of greater diversification of these reserves away from the dollar toward the euro. In the 1970s and 1980s, the dollar's share of reserve currency holdings gradually shrank to make room for the mark and the yen. This trend was suspended, or even reversed, in the 1990s. But it could resume in the 2000s to make room for the euro. Such diversification away from the dollar would depend in part on the same risk-reward considerations as matter for private use. Countries with strong economic fundamentals, sound currencies, and low inflation are more likely to have their currency used as an international currency. As long as the United States maintains a strong economy, international demand for dollars will remain strong.

A *unit of account* is a reference scale for quoting prices, which is distinguishable from the actual currency in which assets are held or payments made. For the private sector an international currency functions as a unit of account through its use in invoicing imports and exports. Presently, the dollar plays a dominant role in invoicing around the world, especially for primary commodities like oil. Invoicing within Western

Europe will henceforth be mostly in euros, but the euro may also come to be used even more widely in Central and Eastern Europe, the Middle East, and Africa, areas of substantial and increasing trade with Europe.

One official use of international currencies that can be classified under the unit-of-account function is as a major currency to which smaller countries can peg their exchange rates. Non-EMU European countries, particularly those in Central and Eastern Europe, are likely to consider pegging their currencies to the euro for two reasons: because they undertake more of their trade and finance with the EU countries than with the United States, and because they aspire to eventual membership in EMU. If this happens, greater use of the euro by these countries as an intervention currency will increase official demand for euros. The unit-of-account, store-of-value, and means-of-payment functions are thus interrelated.

Currently, the dollar is the primary vehicle currency in foreign exchange trading, which is one example of the use of a currency as a *means of payment*. A trader who wishes to exchange one minor currency for another usually has to exchange the first currency for one of the major currencies, and then exchange that currency for the currency he or she ultimately wants to buy. Traders today are more likely to use the dollar as the intermediate, or vehicle, currency than to go through some other major currency or to be able to find a counterparty for a direct cross trade. (See Box 7-3 on the role of different international vehicle currencies.)

The use of a currency by the private sector as a means of payment in international trade and finance depends on economies of scale in payments systems. As in the case of a domestic currency, increasing returns to scale in payments are significant: it is easier and cheaper to use the same currency that everyone else uses. In this regard the advantages of incumbency and inertia favor the dollar even as the euro's natural home grows to be as large as that of the dollar.

In short, although it is likely that the euro will become an international currency, it is unlikely that the dollar will be replaced anytime soon in its role as the leading international currency.

Is it Good or Bad to Be an International Currency?

Does it matter whether the dollar remains the leading international currency? One should not overemphasize the decidedly modest benefits that having an international currency provides to a country.

Advantages of having a key currency. At least five advantages accrue to a country from having its currency used internationally. The first is convenience for the country's residents. It is certainly more convenient for a country's exporters, importers, borrowers, and lenders to be able to deal in their own currency rather than in foreign currencies. The global use of the dollar, like the increasingly global use of the English language, is a natural advantage that American businesses may take

Box 7-3.—How Does the Dollar Rank Today Against Other International Currencies?

Most measures show a gradual decline in international use of the dollar in recent decades. Reserve currency use, perhaps the best measure, is shown in Chart 7-3. The dollar's share of central bank reserve holdings declined from 76 percent in 1973 to 49 percent in 1990. This reflects a gradual shift of central bank portfolio shares into marks and yen. However, the dollar's share in reserve holdings has been relatively flat in the 1990s, amounting to 57 percent in 1997.

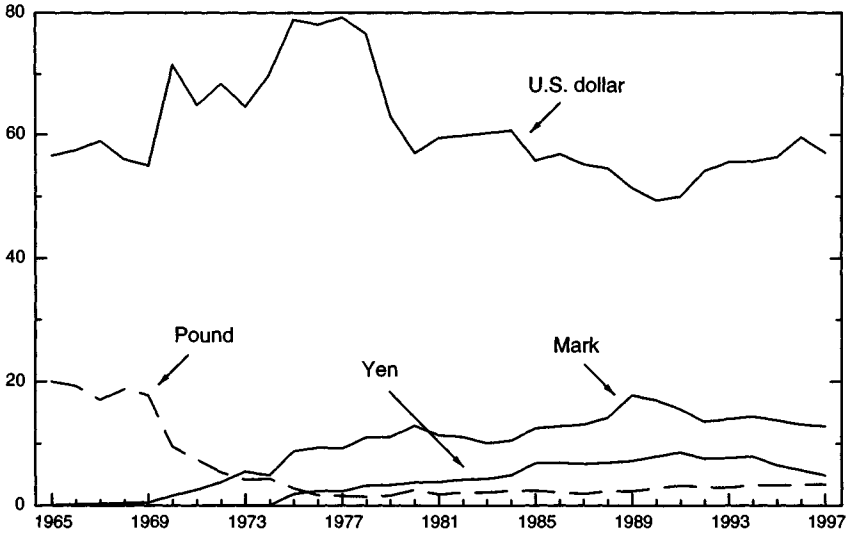
Other major measures of international currency status, as of the eve of the birth of the euro, are shown in Table 7-1. They tend to present the same picture: the dollar still leads, despite a gradual decline in its use versus the mark and the yen over the last 30 years. The dollar is still more important than its three or four closest rivals combined.

The first column in Table 7-1 reports the popularity of major currencies among smaller countries choosing a peg for their currencies. The dollar is the choice of 39 percent of these countries. Three currencies (those of Bosnia, Bulgaria, and Estonia) were pegged to the mark last year, however. Elsewhere, the French franc was, after the dollar, still the most common choice as a peg, accounting for 29 percent of countries using pegs; these countries are principally in Africa, owing to a special set of arrangements with the French treasury. The euro is inheriting this role of the mark and the franc. It is still the case that no currencies anywhere are pegged to the yen. The dollar was the currency either bought or sold in fully 87 percent of trades in global foreign exchange markets in April 1998 . This figure (like the share of reserves held in dollars) should automatically go up in 1999, as EMU eliminates intra-European transactions among member currencies.

The various measures of the use of currencies to denominate private international financial transactions—loans, bonds, and deposits—also still showed the dollar as the dominant currency, with a 54 percent share.

Figures on the use of international currencies as substitutes in local cash transactions are not generally available. According to estimates, however, the leader has been the dollar, for which internationally circulating cash has been estimated by the Federal Reserve at 60 percent of currency outstanding. International circulation of the mark has been estimated by the Bundesbank (Germany's central bank) at 35 to 40 percent of the German currency outstanding, but because the outstanding stock of marks is much smaller than that of dollars, the mark's share of total currency in international circulation is smaller than this figure would suggest.

Chart 7-3 **International Use of Major Currencies**
Although official use of the dollar is below its peak in the mid-1970s, it remains much more widely used than the other major currencies.
Percent of official holdings of foreign exchange (end of year)



Source: International Monetary Fund.

TABLE 7-1.— *The Importance of Major Currencies on the Eve of the Introduction of the Euro*
[Shares in international use]

Currency	Pegging of minor currencies	Foreign exchange reserves held by central banks	Foreign exchange trading in world markets[1]	International capital markets	International trade	Cash held outside home country
U.S. Dollar	0.39	0.57	0.87	0.54	0.48	0.78
Deutsche mark	.06	.13	.30	.11	.16	.22
Japanese yen	.00	.05	.21	.08	.05	(2)
Pound sterling	.00	.03	.11	.08		.00
French franc	.29	.01	.05	.06	}.15	.00
Other EMS currencies	.04	(2)		(2)		.00
ECU	.00	.05	}.17	.01	.00	.00
Other/unspecified	.22	.15	.29	.12	.16	(2)

[1] Shares add to 2.00 because in each currency transaction there are two currencies traded.
[2] Not available.

Sources: Various international agencies (including International Monetary Fund, Bank for International Settlements, and Organization for Economic Cooperation and Development) and other sources.

for granted. But the benefits from having one's country's currency used as a unit of account should not be overemphasized. Invoicing U.S. imports in dollars does not necessarily shift the currency risk from the buyer to the seller, as the dollar price sometimes can change quickly when the exchange rate changes.

A second possible advantage is increased business for the country's banks and other financial institutions. However, there need be no firm

connection between the currency in which banking is conducted and the nationality of the banks conducting it (or between the nationalities of savers and borrowers and the nationality of the intermediating bank). British banks, for example, continued to do well in the Eurodollar market long after the pound's international role had waned. Nevertheless, it stands to reason that U.S. banks have comparative advantage in dealing in dollars.

Having an international currency may confer power and prestige, but the benefits therefrom are somewhat nebulous. Nevertheless, historians and political scientists have sometimes regarded key currency status and international creditor status, along with such noneconomic factors as colonies and military power, as among the trappings of a great power.

Some view seigniorage as perhaps the most important advantage of having other countries hold one's currency. Seigniorage derives from the fact that the United States effectively gets a zero-interest loan when dollar bills are held abroad. Just as a travelers' check issuer reaps profits whenever people hold its travelers' checks, which they are willing to do without receiving interest, so the United States profits whenever people in other countries hold dollars that do not pay them interest. International seigniorage is possible wherever hyperinflation or social disorder undermine the public's faith in the local currency, leading them to prefer to hold a sound foreign currency instead. And today the dollar is the preferred alternative. (Illegal activities are another source of demand for cash, of course.)

How much does the United States gain from seigniorage? One way to compute cumulative seigniorage is to estimate the stock of dollars held abroad and calculate the interest that would otherwise have to be paid on this "loan" to the United States. Foreign holdings of U.S. currency are conservatively estimated at 60 percent of the total in circulation. With total currency outstanding in mid-1998 at $441 billion, foreign holdings are about $265 billion. Multiplying this figure by the interest rate on Treasury bills yields an estimate for seigniorage of about $13 billion a year.

A final advantage is the ability to borrow in international capital markets in one's own currency. Some have argued that the United States' financing of its current account deficit through foreign borrowing has been facilitated by the ability to issue dollar-denominated liabilities, and the concern has been expressed that this ability may be hampered by a loss of reserve currency status. This concern is probably overdone, however. First, many industrial countries whose currency is not a key currency are able to borrow in domestic currency. Second, countries with larger current account deficits than the United States (as a share of their GDP) have regularly and persistently financed such imbalances with borrowing in foreign currency rather than their own. Countries become unable to borrow to finance current account imbal-

ances when such imbalances become unsustainable. The fact that borrowing may occur in domestic or foreign currency has little to do with such sustainability.

Disadvantages of having a key currency. Having an international currency confers at least two disadvantages on a country. These drawbacks explain why Germany, Japan, and Switzerland have in earlier decades been reluctant to have their currencies held and used widely outside their borders.

The threat of large fluctuations in demand for the currency is one disadvantage. It might be that the more people around the world hold an international currency, the more demand for that currency will vary. Such instability of demand, however, is more likely to follow from the increase in capital mobility than from key currency status per se. In any case, central banks are particularly concerned that internationalization of their currencies will make it more difficult to control their money stocks. This problem need not arise if they do not intervene in the foreign exchange market. But the central bank may view letting fluctuations in demand for the currency be reflected in the exchange rate as just as undesirable as letting them be reflected in the money supply.

The second disadvantage is an increase in average demand for the currency. This is the other side of seigniorage. In the 1960s and 1970s the Japanese and German governments were particularly worried that, if domestic assets were made available to foreign residents, an inflow of capital might cause the currency to appreciate and render the country's exporters uncompetitive on world markets. Some Europeans today express the same concern about the euro.

What Factors Determine International Currency Status?

Will the dollar maintain its global role in the foreseeable future? The answer depends on four major conditions that determine whether a currency is used internationally.

Patterns of output and trade. The currency of a country that has a large share in world output, trade, and finance has a natural advantage. The U.S. economy is still larger than the euro-11 economies combined. If the United Kingdom and the other remaining EU members (Denmark, Greece, and Sweden) join EMU in the future, however, the two currency areas will then be very close in size.

History. There is a strong inertial bias in favor of using whatever currency has been the vehicle currency in the past. Exporters, importers, borrowers, lenders, and currency traders are more likely to use a given currency in their transactions if everyone else is doing so. For this reason, the world's choice of international currency is characterized by multiple stable equilibria; that is, any of several currencies could fill that role under certain conditions. The pound remained an important international currency even after the United Kingdom lost its position

as an economic superpower early in this century. In the present context the inertial bias favors the continued central role of the dollar.

The country's financial markets. Capital and money markets must be not only open and free of controls, but also deep, well developed, and liquid. The large financial marketplaces of New York and London clearly benefit the dollar and the pound relative to the mark and the yen. It remains to be seen whether EMU will turn Frankfurt or Paris into one of the top few world financial centers.

Confidence in the value of the currency. Even if a key currency were used only as a unit of account, a necessary qualification would be that its value not fluctuate erratically. In fact, however, a key currency is also used as a form in which to hold assets (firms hold working balances of the currencies in which they invoice, investors hold bonds issued internationally, and central banks hold currency reserves). For these purposes, confidence that the value of the currency will be stable, and particularly that it will not at some point be inflated away, is critical.

In the 1970s the monetary authorities in Germany, Japan, and Switzerland established a better track record of low inflation than did the United States, which helped their currencies to achieve greater international currency status. Given the good U.S. inflation performance more recently, this is no longer such a concern.

What Is the Prognosis for the Dollar and the Euro?

In light of these desiderata for a would-be international currency, is it likely that the euro will rival the dollar as the leading international currency? The euro automatically inherits the roles of the ecu, the mark, the French franc, and other currencies of the European Monetary System. Subsequently, the euro's share will probably gradually rise, moving in the direction of Europe's share of output.

The odds, however, are against the euro's rapidly supplanting the dollar as the world's premier currency. It is not that the dollar is ideally suited for the role of everyone's favorite currency. An international currency is one that people use because everyone else is using it. Two of the four determinants of reserve currency status—highly developed financial markets and historical inertia—support the dollar over the euro. The third, economic size, is a tie (or will be if the United Kingdom joins EMU). The fourth determinant is also a tie, as both Europe and the United States have pursued stable monetary policies aimed at keeping inflation low.

The widespread use of the U.S. dollar as an international currency—for holding reserves, pegging minor currencies, invoicing imports and exports, and denominating bonds and lending—is testimony to the strength of the U.S. economy and the confidence with which it is viewed around the world. But the direct economic benefits deriving from this international role are limited. The welfare of a country is measured by its ability to produce a large quantity of goods and ser-

vices in demand, and to provide its citizens with sustained increases in real income and consumption opportunities. Whether a country's currency is an international currency or not has little to do with such long-run well-being, as the experience of many successful economies whose currencies do not have international roles attests. An economically strong and healthy United States that is also a leader and champion of sound economic policies has led, as a by-product, to a strong international role for the U.S. dollar.

CONCLUSION

Reforms are under way to create a strengthened international financial architecture for the global marketplace in the next millennium, one that captures the full benefits of international capital flows and global markets, minimizes the risk of disruption, and protects the most vulnerable.

The United States has worked intensively with key emerging markets, other industrial countries, and the relevant international organizations to put in place the building blocks of this new architecture. The reforms recommended by the G-22 and adopted by the G-7 are an important starting point. The United States and its G-7 partners have also agreed to do more to build a modern framework for the global markets of the 21st century and to limit the swings of boom and bust that destroy hope and diminish wealth. For these reasons they have also committed themselves to initiate new work on a number of other important areas, to identify additional steps to strengthen the international financial architecture. All these reforms will ensure that the unprecedented growth and the increase in welfare and opportunity experienced in the 50 years after the creation of the Bretton Woods system are maintained in the future.

Meanwhile the United States salutes the formation of the European Monetary Union. The United States has much to gain from the success of this momentous project. Now more than ever, America is well served by having an integrated and prosperous trading partner on the other side of the Atlantic. Europe should benefit from a single currency that supports these ends—and if Europe benefits, the United States gains as well.