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Centre for the Study of Globalisation and Regionalisation (CSGR), University of Warwick, Coventry, CV4 7AL, United Kingdom. URL: http://www.csgr.org

Globalization: A Guide for the Concerned Policymaker

Dilip K. Das[1]

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Abstract

Although rolling back of globalization is feasible, the author contends that techno-economic forces will ensure its further expansion. The world economy will be more integrated tomorrow than today. Increasing number of countries and policy mandarins have begun to see the welfare effects of globalization and the constituency for it much larger than that against it. However, capitalizing from it is a challenge because globalization does entail some downside risks. This paper focuses on macroeconomic challenges emanating from the on-ward march of globalization. In the recent past, it has been observed that several globalizing economies suffered from volatility. Therefore, the author devotes a large part of this research to the vexing issue of volatility and how to manage it.

Key Words: global integration, trade, global finance, macroeconomic policy, volatility

Address for correspondence
Dr Dilip K Das
Suite 408
330 Adelaide Street East
Toronto, Ontario, M5A 4S9
Canada
Email: dk_das@hotmail.com

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1 Introduction

In the wake of the Seattle ministerial of the WTO, globalization as a concept has acquired considerable emotive force. It has fervent supporters and equally harsh critics. Little wonder then that it does not have a widely accepted definition. The term is used as a portmanteau -- as license for description, analysis, approval, and abuse. Accordingly, the surrounding literature is multidisciplinary at best, confused at worst.

Economists are as divided as anyone over this topic. Many of those affiliated with international organizations like the International Monetary Fund, the World Bank, and the World Trade Organization incline to view global economic integration enhances individual welfare and generally believe that economies that integrate have better prospects for economic development. Their assessment is founded on the neoclassical presumption that market allocations are more efficient in a globally integrated world.[2]

In contrast, independent analysts (along with not a few international civil servants) question whether the globalization of trade and finance is an engine of growth. The foundations of economic growth (good government, the construction of a civil society, the institutions that facilitate the accumulation of human and physical capital) are built at home, they argue, and a development strategy concerned only to promote international trade and investment can be a dangerous diversion from this more fundamental task (Rodrik 2001). They warn of worrisome implications for the ability of societies to manage economic change. They point to alarming trends in the distribution of income. They emphasize the associated rise in financial volatility and economic insecurity, highlighting the emerging-market crises of the 1990s and the political turmoil that followed in their wake.

Any attempt to sort through these issues requires being clear and explicit on what we are talking about. For present purposes we define globalization as the extension beyond national borders of the same market forces that have operated for centuries at national and subnational levels. A more elaborate definition would distinguish the extension beyond national borders of markets in

[2] Studies making the case that globalization is associated with growth include Dollar (1992), Ben-Davis (1993), Lee (1993), Sachs and Warner (1995), Harrison (1996), Wacziarg (1998) and Edwards (1998).

goods and services (including capital services), on the one hand, from the adaptation of the national and sub-national economies, on the other. It would develop the following points.[3] Globalization promotes a tendency for firms and other market participants to think, plan, operate, and invest for the future with global and not merely local opportunities in mind. While declining costs of transportation and communication are integral to this process, the principal driver is set of conscious policies, at the national and international levels, aimed at promoting the liberalization of international investment and trade.

So much for preliminaries. We proceed now to a more detailed look at the historical background and then the effects.

2 Facets of Globalization

The contemporary world trading system, which can trace its origins to the proposal to found an International Trade Organization after World War II and the negotiation of the General Agreement on Tariffs and Trade, is now half a century old. At the time of genesis in 1947, the GATT agreement was signed by 23 nations. 62 countries participated in the Kennedy Round (1964-67), 102 in the Tokyo Round (1973-79) and 123 in the Uruguay Round (1968-94). The WTO was established in 1995.[4] As of July 2001, the WTO had 142 members, with additional 26 countries waiting in the wings (Das, 2001). The WTO's political and legal base is broader than that of the GATT. While the WTO inherited all the MTN related knowledge and decisions of the GATT, its obligations are applicable to a much larger share of global trade. The WTO has consolidated various provisions of the dispute settlement mechanism (DSM) that existed under the GATT and made it more cohesive and efficient. In addition, membership of the WTO is larger than that of the GATT, particularly the developing economies are much better represented in the new system. The WTO's Trade Policy Review Mechanism (TPRM) provides regular monitoring of trade policies of the member economies, while the biennial ministerial provides political leaders an opportunity to review the work of the WTO and provide it with necessary redirection.

[3] Henderson (1999) has posited a definition along these lines.

[4] The Marrakesh Agreement was formally adopted on 15 April 1994 and the WTO was born on the 1st of January 1995. Its annual budget is approximately $90 million and total personnel strength close to 5000. In April 2001, the WTO had 140 members.

The liberalization of international transactions has gone a long way in the course of this half century to transform the global economic landscape. Over 45 percent of global output is now exported, compared to only 7 percent in the 1950s and about 32 percent in the 1970s (See Table 1; Figure 1). The volume of merchandise trade worldwide is some 16 times what it was in 1950; by comparison, global output is 5 1/2 times what it was then. Over the most recent decades, trade in goods and services grew twice as fast as global GDP.[5]

A growing number of developing economies recognized the value of economic liberalization and outward orientation and began liberalizing their economies during the 1980s. Some did so unilaterally, while others moved in this direction with impetus from the International Monetary Fund and the World Bank, which conditioned their financial assistance on reforms designed to liberalize transactions and open the economy to the rest of the world. As a result, developing economies now participate in international trade very significantly. The WTO league tables for 1999, which list the 50 largest traders in the world, include twenty non-OPEC developing countries (WTO, 2000). Among the top 20 are China (number 9), Hong Kong SAR (11), South Korea (12), Mexico (13), Taiwan (14), Singapore(15), and Malaysia (18). Accounting for 3.5 percent of world trade in 1999, China is the single largest developing country exporter.

Table 1 here

Table 2 here

What is true of trade is true of services. Exports of commercial services quadrupled in the course of the 1980s and 1990s from US $364 billion to US $1350 billion.[6] (See Table 2; Figure 3). Asia's exports in commercial services increased especially rapidly in the 1990s. As a proportion of the world total, they rose from 16.7 percent to 22.6 percent between 1990 and 1997 (before declining to 19.5 percent in 1999 due to the Asian crisis).

[5] According to the World Trade Organization (WTO) the value of world merchandise exports was $5.47 trillion in 1999 (WTO, 2000).

[6] Commercial services include transportation and travel services and a third category called "other commercial services". The last named category includes financial services, banking, insurance, construction, and computer and information services.

More intense international competition in the production of business services means reductions in input prices and improvements in input quality for downstream industries. Sourcing inputs from abroad has become common practice.[7] Ironically, it means that there is a sense in which the integration of the world economy has thus led to the disintegration of production processes. It is estimated that by the early 1990s a third of all manufactures trade (approximately $800 billion) was in parts and components. This phenomenon created an expanding web of global production networks that connected transnational corporations (TNCs) and their subsidiaries to independent designers, components producers, and parts distributors, in a process that has been variously described as "slicing the value chain" (Krugman (1996), "delocalization" (Leamer,1996), and "kaleidoscope comparative advantage" (Bhagwati and Dehejia 1994). These production networks offer participating firms access to new markets, facilitate the development of new commercial relationships, and encourage the transfer of technology. Advances in information technology (in particular, the Internet) have helped by integrating firms from developing economies into global production networks (WB, 2000).

Foreign investment is of course a major factor shaping the global economy. Net flows as a percentage of global GDP rose from 0.48 percent to 0.65 per cent over the in the 1970s, to 1.01 percent in 1990 and fully 2.25 percent in 1998.[8] The manufacturing and service sectors have been the main destinations of FDI, although newly-privatized utilities have also been powerful attractors. French companies have invested in UK railways and utilities. Electricity generators and distributors from the US have gone global. Enron, the US gas company, broke traditional industry barriers within the energy sector and turned into generator and distributor of power. Hopewell, a Hong Kong property developer firm, is building power stations in China.

[7] Two of the best examples of outsourcing are Barbie dolls and Nike shoes. The full range of activities that are outsourced by Mattle (manufacturer of Barbie dolls) and Nike are a part of their large value chain, which include all activities from the conception of the product to its final delivery. Barbie dolls and Nike shoes are truly global products. Two Barbie dolls are sold every second somewhere in the world.

[8] Global FDI as a proportion of global investment rose to equally impressive levels. Between 1970 and 1980, the rate of increase was slow (from 2.40 percent to 2.75 percent) but after 1980 the rate of increase was steep. In 1990, it was 4.40 percent of the GDI, and it further rose to 7.13 percent in 1997 (See Table 1; Figure 2). During the late 1980s, the global level of FDI was $173 billion.

Transnational corporations (TNCs) have become powerful agents of market integration and conduits for FDI. International production by TNCs, now numbering some 63,000 parent firms with roughly 700,000 foreign affiliates, span virtually all countries and economic activities.

The 1990s also saw considerable geographical broadening of FDI. While in the 1980s FDI was dominated by flows within the OECD, in the 1990s FDI flows to non-OECD countries increased both absolutely and as a portion of the total. A large part of these flows are accounted for by a small number of Asian and Latin American economies. China is the largest developing country recipient, but other large FDI destinations include Argentina, Brazil, Chile, Indonesia, Malaysia, Mexico, and Thailand. Eastern Europe has also been attracting growing quantifies of FDI, especially with the progress of its accession negotiations with the European Union.

Newly industrialized economies like Hong Kong SAR, Korea, Singapore and Taiwan, for their part, have become substantial FDI suppliers. Large multinational enterprises from these countries are globally recognized names: examples include Daewoo, Hyundai, Samsung, Evergreen, TSMC, Hutchison Whampoa, the Li Ka-Shing group, and Hopewell Holdings. Russia's newly privatized oil companies are among the largest in the world.[9]

Finance is the area where globalization has come closest to creating a seemlessly integrated global market. Financial firms headquartered in the advanced industrial countries increasingly exhibit global reach. In an early survey of international financial markets, Mussa and Goldstein (1993) found that global financial linkages among the advanced industrial countries had tightened significantly over the course of the 1980s. While developing economies, especially emerging market economies, were also integrating themselves into global financial markets, this part of the process was proceeding at a slower pace. In the 1990s this process accelerated significantly. Whereas only some $50 billion of private portfolio capital flowed into emerging markets in 1990, by 1996 this number had soared to $227 billion (before declining somewhat as a result of financial crises in Asia and elsewhere (see Table 6).

[9] In terms of the value of reserves, Gazprom, the state-backed Russian monopoly, is by far the largest gas company in the world.

By the mid-1990s private capital market flows to developing economies in general had come to dwarf official flows. Net private capital flows to developing economies peaked at $358.7 billion in 1997, the year Asian crisis struck (WB, 2001). [10] In 1990, this level was $100.8 billion. The 1997 level was almost four times higher than the peak reached during the 1978-82 commercial lending boom (Das, 1999: WB, 1997). Since the financial crisis of 1997, developing countries have not been able to access external capital to the same extent as in the recent past: net capital flows declined to $246 billion in 1999. However, in the wake of a strong recovery that began in 1999, private capital flows strengthened in 2000 and reached $299.3 billion. For all appearances, this is the resumption of the march of financial globalization.

3 Driving Forces Behind Globalization

Why did globalization gain such momentum in the 1990s and not in earlier decades? The decline in transportation and communications costs has been ongoing. In addition there was a dramatic fall in the cost of transmitting information, increase in the power of information processing leading to plummeting costs of computing, and shift from analog to digital information technologies that has joined the telecommunications and information processing industries and merged market segments of the information industry. These technological changes all played a role in the spread of globalization. However, the process would have not progressed as it did had this period not been a period of equally far-reaching changes in the policies pursued by the nation states.

We are referring of course to the collapse of socialist economic systems in the Soviet bloc and of state-led policies of import substitution elsewhere. The result was that policymakers in a growing number of countries became increasingly predisposed toward the benefits of economic liberalization. Beginning with Chile in the mid-1970s, China in late-1970s and then Mexico and Argentina after 1982, developing countries began liberalizing their markets, opening their economies, and welcoming foreign direct investment. The legitimacy of many of the activities in which national governments had engaged — running public enterprises, administering trade monopolies, applying exchange and price controls, monopolizing the provision of infrastructure and public services — was increasingly challenged. To be sure, the momentum that globalization

[10] Net resource flows imply capital inflows net of amortization payments.

gathered in the 1990s was not due to any sudden recognition of the efficacy of market forces. Rather, it was a decentralized, bottom-up process embraced by policy mandarins because of collapse of alternative visions.

A small number of developing economies were in the vanguard of those pursuing these market-oriented policies. They performed exceedingly well – so well that the World Bank came to refer to them as "high-performing economies." They managed to raise per capital incomes and improve living standards dramatically by deregulating their economies and opening to global markets. The four East Asian "dragons" (Singapore, Hong Kong, Taiwan and South Korea) are the most prominent examples. All were typically impoverished developing economies in the 1950s. Overcoming significant obstacles, they all managed to achieve high grow rates and attain standards of living that approached (or, in the cases of Singapore and Hong Kong, rivaled) those of the advanced industrial nations.

The success of the high-performing economies had an important demonstration effect. By the mid-1980s (following the launch of the Uruguay Round of GATT negotiations), this had spurred unilateral trade liberalization in a significant number of developing countries. In addition to liberalizing their trade, many developing countries undertook substantial liberalization of their investment regimes with a view towards incorporating FDI (and, in some cases, portfolio capital inflows) into their development and growth strategies.[11]

As alluded to in Section 2, the expanded role of the WTO is providing momentum to globalization. Another institution that indirectly underpins globalization is the International Monetary Fund (IMF). The Fund was established to promote international monetary co-operation, exchange stability, and orderly exchange arrangements to foster economic growth and high levels of employment. The IMF now has virtually universal membership.[12] It fulfils its surveillance responsibilities by appraising members' exchange rate policies within the framework of a comprehensive analysis of the general economic situation and policy strategy of

[11] Specifically, 60 countries made a total of 145 regulatory changes relating to FDI and trade liberalization (WIR, 1999).
[12] In April 2001, the IMF had 183 members.

each member. A good deal of institutional harmonization, within countries and not just at the border, is being promoted by the IMF.

4 Problems for Macroeconomic Policy

In a globally integrating economy, slowly or rapidly, there is a greater need for a cohesive and stable macroeconomic regime than in an economy that is not integrating globally. A failure to evolve one would lead to an individual country suffering from exogenous shocks, even periodic crises. The end result could be slow long-term growth due to an inability to efficiently compete in an increasingly integrated world economy. Stability of the macroeconomic regime is to be judged by real variables (e.g. output and employment growth) not by nominal variables (e.g. prices or money supply growth, or its neo-Keynesian descendent, nominal GDP). Macroeconomic policy regime will be stable if fiscal, monetary and exchange rate policies aim at ensuring a continuous and sustainable expansion of aggregate demand, with flexibility to counteract external shocks if the need arises (Kitson and Michie, 1999). Counter cyclical policies have enormous significance in economies that are open to external shocks in a globally integrated economy.

It is evident from the experiences of the 1990s that a proactive economic policy at the national level has large payoff at in a globally integrating economy. It is also evident that national policy inaction has larger costs. Thus national policy action is rendered more important by globalization, not less. At the same time, national policy action is made more difficult. As national economies become more and more integrated, economic governance and macroeconomic policy become less associated with the formal structure of the state. It becomes increasingly associated with the competitive forces in the marketplace, involving both policy makers and private-sector actors. Thus, state becomes part of the market, and market forces have to be taken into account while in its macroeconomic decision making process.

Brisk globalization of financial markets is likely to have a great deal of influence over domestic policy. Free inflows of capital would limit the possibility of having independent exchange rate and monetary policies. Free inflows of capital are likely to constrain expansionary domestic policies. The forex markets will react and depreciate the currency as a reaction to domestic

monetary expansion, which would raise real wages. Globalization of finance is likely to constrain the policy capacity of the state, both directly and indirectly. One important respect in which it is likely to happen is that capital mobility would undermine domestic regulation, beginning with the financial regulatory systems. Regulatory structure and government agencies set up to prevent or counteract market failure become less effective when both the price of capital and flow of capital is being determined globally. This creates financial pressure for deregulation, which in turn further promotes globalization. Secondly, financial globalization impinges upon domestic political forces and economic agents, both public and private sector, alter their behavior in order to adapt to and take advantage of new financial imperatives. These changes have affected a surprisingly wide number of actors and policy networks. A new deregulatory consensus has emerged among them (Grummett, 1996). Therefore, national governments and institutional structures have increasingly begun to adjust to the perceived need of financial efficiency. A clear knock-on effect is a more market-oriented bureaucracy and institutional structure.

As the financial integration increased, market agents began to have more choice about what currency to use, and they became deterritorized. With accelerating cross-border business and financial transactions, governments found that they could no longer control the use of currency by their own citizens or others. Policy and management issues, therefore, slipped from the hands of state to market forces. Policy makers' role became increasingly more challenging. However, state is still the supplier of domestic money, therefore demand management authority of the state has remained in tact. Several currencies have come to be employed outside their country of origin. Their use has either globalized or regionalized. When currencies are used outside their country of origin for transactions between nations they are said to be internationalized; when they are used within foreign states it is described as currency substitution (Mizen and Pentecost, 1996). Both currency internationalization and currency substitution result from market rivalry. This is a Darwinian process of natural selection, where essentially the forces of demand determine that some currencies like the dollar or the deutschmark are more attractive and reliable than others. Deregulation has substantially expanded the array of effective currency choice. In a globalized setting state is not totally neutralized, although it does not control policy as much as it did in the past. The authority of the policy maker is to be shared symbiotically between

governments and market agents, the guiding factor being the invisible hand of competition (Cohen, 2000).

As TNCs play a much greater role in contemporary globalization that they did in the 19th century globalization, it has enhanced the role of the governments in terms of making their economies more attractive as an investment destination and maintaining social peace. Policy makers realize that ignoring TNCs amount to losing opportunities for acquiring capital and technology. In portraying their countries as ideal locations for global investment and business, countries need to highlight the available resources. To this end, advertisements and special sections in economic, business, and financial newspapers is a common feature. The resources and special features that they highlight include location, abundant natural resources, strong infrastructure, vibrant capital markets, inexpensive and high quality labor force. It is believed by some that governments in their eagerness to attract TNC investment dilute their labor, environmental standards, and health and safety laws. It has come to be known as “races to the bottom”. However, Spar and Yoffie (2000) found this charge incorrect. This could be true during the period when TNC investments were primarily in the extractive sectors or labor-intensive industries. At present, they increasingly invest in high-technology sectors because this is where their ownership-based advantages lie. Also, as nearly 60 percent of the TNC investment flows are between industrialized countries with comparable levels of labor and environmental standards, races to the bottom are not possible. Since the traditional advantages of countries, namely, cheap labor, or low environmental standards and neither highly valued by TNCs nor relevant to them, policy makers face a generic challenge to devise new policies to attract knowledge- and technology-intensive FDI (UNCTAD, 1997).

The ability to attract fresh TNC investments varies across countries and across industries. A good example is China and Russia, both of which have huge untapped markets which TNCs covet. However, China has been a favored destination for FDI, while Russia is not an attractive destination so far. Although both the economies lack policy transparency, TNCs find China more attractive because of its well-functioning markets, and stable and predictable policy-making environment. Hart and Prakash (2000) provide the following advice to policy makers in this regard: (i) policy makers should not allow their countries to be used as pawns in global inter-

TNC warfare; (ii) policy makers need to carefully scrutinize claims that everyone wins or loses when FDI flows into their country on a case-by-case basis, and (iii) policy makers need to retain policy autonomy to maximize the benefits of FDI flows and to safeguard the interests of non-business societal actors.

Fiscal policies are known to affect globalization. Tax incentives, or legal tax avoidance, are known to move capital globally. Tax avoidance can be both a causal factor behind gobalization as well as its effect. As global integration expanded, many thoughtful scholars commented on the eroding policy making capabilities of the nation-state. Lawrence, Bressand and Ito (1996) drew attention to the changing capacity of the nation-state "to tax and spend". As the factors of production can earn higher rent by crossing the border, *ceteris paribas r*ational economic agents would do so if the borders are open. Labor movement may not be swift because individuals offering their labor services would not like to abandon a familiar environment, in spite of incentives, and web of social connections simply to earn higher material rewards elsewhere. This is a stylized constraining view of capital and labor mobility and their fiscal implications. Although capital and skilled labor mobility story in a globally integrating economy is not new, governments do not lose their fiscal powers completely (Kudrle, 2000). This is because even after moving, an individual continues to reside in one jurisdiction or the other and unless his or her earnings are hidden, he or she faces a tax liability. The same logic applies to globalizing capital.

The flip side of this coin is that tax and expenditure apparatuses are highly inefficient in many countries. On occasions, states have been blamed for predatory practices. Individuals and corporate escape from its clutches as both a just response to, and visible warning about, current state practices. In a globally integrated world, firms and highly mobile and skilled individuals will encounter rising incentives to move away from high-tax jurisdictions that are not providing a compensating level of public services. This would intensify pressure on governments to search for most cost-effective ways of delivering services and to eliminate funding of unnecessary programs and subsidies (Litan and Niskanen, 1998).

5 Vexing Volatility

As they integrate into the world economy, emerging markets inevitably become exposed to disturbances from outside their borders.[13] And as they become integrated into global markets, they become susceptible to contagion-related spillovers from national, regional and global financial crises.[14] This does not mean that the costs of globalization necessarily swamp the benefits, but it points to the need to develop institutions and pursue policies aimed at limiting volatility and minimizing the consequences.[15]

5.1 Effects of Volatility.

There is now extensive evidence of the costs of macroeconomic volatility.[16] Ramey and Ramey (1995) estimate that a unit increase in the standard deviation of the innovation in GDP reduces the rate of growth of GDP per capita by one-fifth of one per cent per annum. Easterly and Kraay (1999) also find that an increase in the standard deviation of growth reduces the average annual rate of per capita growth by roughly the same order of magnitude as Ramey and Ramey.[17] Upon controlling for other determinants of the secular rate of growth that are standard in the empirical literature, IDB (1995) finds that growth depends negatively on the volatility of the terms of trade, the volatility of the real exchange rate, the volatility of monetary policy, and the volatility of fiscal policy.[18] Using data ending in 1992, IDB estimates that real GDP (measured in growth

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[13] For example, the slump in global semiconductor prices, an instance of an adverse terms-of-trade shock, is blamed for undermining the health of the Korean economy in the run-up to its 1997-8 crisis (Goldstein 1998).

[14] The fact that China and the whole of South Asia did not succumb to the Asian crisis has been ascribed to the fact that they had retained capital controls and consequently was not deeply integrated into global financial markets. More generally, Eichengreen, Rose and Wyplosz (1995) have shown that countries are more likely to be able to contain speculative pressure when they are not yet integrated into global financial markets.

[15] While the view that openness is a source of volatility is commonplace (and will strike many readers as intuitive), the evidence is mixed. Kraay (1998) analyzes the connections between financial openness and the volatility of capital flows and fails to detect a consistent effect.

[16] A compendium of research on this topic is Interamerican Development Bank (1995).

[17] Obvious issues arise about the direction of causality underlying all of these correlations which should be borne in mind when interpreting the results.

[18] The largest effects are associated with the volatility of the terms of trade and the real exchange rate. A variety of other studies (e.g. Mendoza 1994, Guillaumont, Jeanneney and Brun 1999, Easterly and Kraay 1999) have also documented this association between terms-of-trade volatility and growth.

rates) was half again as volatile in East and South Asia as in the advanced industrial countries.[19] De Ferranti et al. (2000), upon updating these calculations through the end of the 1990s (thereby including the Asian crisis), predictably find a larger differential: real GDP volatility has been fully twice as volatile in East Asia as in the industrial countries. South Asia, for its part, lies midway between East Asia and the industrial countries according to these calculations.[20]

Does this volatility reflect external disturbances or domestic policies? For the period ending in 1992, the answer is "policies" if the comparison is with the industrial countries. On average, the external shocks experienced by East and South Asian countries were not dramatically different in magnitude than those hitting the advanced-industrial countries. The standard deviation of the change in the terms of trade was roughly the same.[21] Nor was the standard deviation of international capital flows as a percentage of GDP dramatically different than in the U.S., Europe and Japan.[22] But budget deficits were relatively volatile outside the four East Asian "miracle economies" (in which the volatility of fiscal policy is indistinguishable from the advanced-industrial countries).[23] And monetary policy was relatively volatile throughout the region. The IDB's estimates imply that this volatility reduced growth in East Asia over the period 1960-1985 by about a tenth of a percent a year.[24]

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[19]In an accounting sense, much of this differential is attributable to investment (again measured in terms of its rate of growth), which was twice as volatile in the "East Asian Miracle" economies as the industrial countries over the sample period.

[20]Thus, real GDP growth volatility as calculated by de Ferranti et al. (2000) has risen from 3 per cent in the 1960s through 1980s to 4 ½ per cent in the 1990s for East Asia, but fallen from more than 2 ½ per cent to a bit more than 1 ½ per cent in South Asia over the same period.

[21]Terms-of-trade shocks can obviously be calculated in different ways, and decisions of how to do so may be import for such comparisons. Thus, de Ferranti et al. (2000) compare the volatility of the change in the terms of trade across regions and decades, but also interact this measure with the openness of the economy (to derive a measure they label "terms of trade shocks"). While terms-of-trade disturbances to South Asia in the 1990s were nearly four times as large as to East Asia according to the first measure, they were of identical magnitude according to the second.

[22]This pattern obviously changed as Asian economies opened their markets to international capital flows in the 1990s, as the 1997 crisis revealed and the updated estimates to be discussed momentarily indicate clearly.

[23]The public consumption component of the budget, however, has consistently been more volatile in East Asia than the industrial countries (de Ferrenti et al. 2000).

[24]While East Asian investment rates are high by international standards, recent empirical work suggests that they would have been higher still (by an additional two to three percentage points of GDP) if volatility had been as low as in the U.S., Europe and Japan.

5.2 Effects on growth

The negative association of volatility with growth reflects adverse impacts on productivity and investment. Productivity will suffer if unpredictable changes in relative prices render one technology appropriate but lead firms to invest in another. In the face of relative-price uncertainty, companies may hedge their bets by investing in several alternative technologies, all but one of which will less efficient and productive than the optimal technology in any state of nature. Countries where volatility is high also display relatively low investment rates, reflecting the reluctance of entrepreneurs to commit to projects when prices and macroeconomic conditions change unpredictably.[25]

It can be argued that this emphasis overlooks a major source of volatility and a key channel through which volatility exercises its adverse effect on growth, namely, financial crises. Crises are incompatible with growth: they lead to stop-go policies, interfere with the operation of the domestic financial system, cause distress in the corporate sector, and force governments to curtail public investment. According to Bordo, Eichengreen, Klingebeil and Martinez-Peria (2001), the typical post-1972 crisis cost the country in which it occurred a cumulative 8 per cent of GDP -- that is, one to two years of growth for an Asian country. Different types of crises have different output effects: the estimates of these authors suggest output costs ranging from 6 per cent for both currency and banking crises to 19 per cent for twin crises (which have both banking and currency components).

5.3 Effects on social indicators.

There is now ample evidence that volatility has undesirable consequences for income distribution, poverty, and educational attainment. The poor, unskilled and uneducated are least able to protect themselves by hedging their incomes and diversifying their investments; it stands to reason that they should suffer disproportionately from volatility. Gavin and Hausmann (1995) find, in a study of a cross-section of countries, that the volatility of real GDP has a strong negative effect on the equality of income distribution. Other studies (e.g. Guitan 1995) have similarly found that countries with more volatile rates of inflation display greater income

[25] See IDB (1995), Goldberg (1993) and Kenen and Rodrik (1986).

inequality. Moreover, there is evidence that crises and the policy adjustments they entail are particularly bad for income distribution and that their unequalizing effects are especially pronounced in middle-income countries.[26]

The same is true of poverty rates. The poor and near poor tend to be employed in sectors and activities that suffer from volatility, and cuts in social spending in times of crisis fall disproportionately on their shoulders (Morley 1994). As noted above, households near the poverty line have the least savings, the worst collateral, and the most tenuous access to credit and insurance. Moreover, volatility aggravates poverty through its negative impact on growth. Ravallion (1997) estimates that the elasticity of poverty, as measured by the proportion of the population falling below the poverty line, with respect to the growth of per capita income lies between -1.5 and -3.5. Dollar (2000) obtains similar results for a larger sample of countries. Crises are an extreme case in point, in that the elasticity of poverty with respect to income rises sharply in crisis periods. In Indonesia in 1997-8, the rate of increase of poverty is estimated to have been ten times the rate of decline in income and consumption. In Korea, the poverty rate as conventionally measured more than doubled between 1997 and 1998. Previous studies relating poverty rates to per capita incomes in Korea would have led to forecasts of barely a fifth this amount.[27]

In addition volatility is associated with low levels of educational attainment. It affects education partly through its impact on inequality: Williamson (1993) finds that more egalitarian societies (as measured by the ratio of the share of total income of the bottom 40 per cent to the share of the top 20 per cent) have higher secondary school enrollment rates. In economies that are volatile, the poor, who are already on the margin of subsistence, may be forced to withdraw their children from school so that the latter can contribute to household income, and this interruption of attendance will hinder educational attainment. Governments, forced by crises to cut social

[26]See Bourguignon, de Melo and Suwa (1991).

[27]See the discussion in World Bank (2000b). Cutler et al. (2000), in a study of several successive Mexican crises, find that crisis-related volatility worsens health outcomes. In the Tequila of 1995-6, mortality rates were 5 to 7 per cent higher than in the immediate pre-crisis years. The greatest percentage increase was among the elderly. This effect seems to operate mainly by reducing incomes and placing a heavier burden on the medical sector, rather than by forcing less healthy members of the population into the labor force or by compelling primary care-givers to go to work.

services, may be unable to sustain adequate levels of spending on schooling and to retain capable instructors. Where volatility hinders the development of financial markets, families will find it particularly difficult to insure against these risks, forcing them to rely on their children for relatively inefficient insurance. These effects are likely to be most pronounced in poorer countries suffering larger shocks: thus, it is revealing that school enrollment rates fell in Indonesia but not in Thailand or Korea in 1998 (Frankenberg, Thomas and Beegle 1999).

6. Managing Volatility.

If globalization can aggravate volatility and volatility can aggravate social ills, then it is important to adopt policies and develop institutions to limit the volatility that globalization can bring. There is an immense literature on policies for limiting volatility in emerging markets and safeguarding against crisis, if less than full agreement among the contributors. Still, there would appear to be a consensus on the following points.

First, foreign trade and investment confer substantial benefits. The positive impact on the growth of merchandise trade and FDI is now widely recognized, though the benefits of portfolio capital flows continue to be questioned. In principle, the portfolio investment permitted by capital account liberalization should relax financial constraints on growth, deepen domestic financial markets, and make direct investment more attractive by facilitating the hedging of exposures and the repatriation of profits. That said, there is concern that the interaction of portfolio capital flows with preexisting distortions can heighten volatility and create crisis risk. The results of Klein and Olivei (1999) are interpretable in this light; the authors find that portfolio capital flows stimulate financial deepening and, by inference, growth in relatively high income countries, where policy and market distortions are least, but if anything have a perverse effect on financial development in low-income non-OECD countries.

Second, as globalization proceeds, statutory restrictions on transactions on capital account will become increasingly difficult to operate without disrupting other forms of economic activity. Foreign direct investment and multinational production will lead to a growing volume of cross-border transactions by financially-sophisticated agents on the lookout for ways of circumventing controls. As small firms penetrate export markets, they will gain the ability to evade controls

through leads and lags and over- and under-invoicing. The forward march of information and communications technologies will open up avenues for evasion by households—by facilitating international financial transactions via the Internet, for example. Thus, the effective operation of capital controls will require increasingly comprehensive and invasive restrictions on economic behavior, extending to domains well beyond the financial. This is something that individuals are unlikely to welcome and something that they can effectively oppose in an age of democratization.

The bottom line is that capital account liberalization is likely to become increasingly difficult to resist as economic and financial globalization proceeds. This heightens the importance of coordinating international financial liberalization with the elimination of distortions that would otherwise cause it to heighten volatility and crisis risk. Concretely, this means the following.[28]

6.1 Strengthening the financial sector in preparation for capital account liberalization

Capital account liberalization will have net benefits only if it is preceded by measures to strengthen the domestic financial sector, remove implicit guarantees, and impose hard budget constraints on financial institutions. If bank capitalization is inadequate, managers will be inclined to excessive risk taking, and the offshore funding available through the capital account will permit them to lever up their bets. If bank liabilities are guaranteed on the grounds that widespread bank failures would be devastating to a financial system dominated by banks, foreign investors will not hesitate to provide the requisite funding. A simple explanation for why the resolution costs of banking crises have been larger in the 1980s and 1990s than in earlier decades and larger in emerging than advanced economies is the coincidence of these domestic financial weaknesses with premature capital-account opening.

Capital account liberalization thus should follow rather than precede recapitalization of the banking sector, the reinforcement of prudential supervision and regulation, and the removal of blanket guarantees. The corollary is that capital-account restrictions should remain in place until prudential supervision is strengthened and implicit guarantees are removed. Unfortunately,

[28]More details on the points that follow can be found in Eichengreen (2000a), from which this discussion draws.

maintaining barriers to capital flows and foreign financial competition may diminish the pressure for restructuring; developing countries may never achieve the nirvana where their domestic financial systems have been strengthened sufficiently to allow the capital accounts to be liberalized. This suggests using capital account liberalization to force the issue. But recent experience in Asia and elsewhere casts doubt on the notion that external liberalization which increases the urgency of complementary financial reforms will necessarily deliver the needed reforms before crisis strikes. While crisis sometimes breeds reform, it does so at a price.

6.2 Liberalize foreign direct investment as quickly as possible.

FDI is the form of foreign investment that most plausibly comes packaged with managerial and technological expertise. It is the form least likely to aggravate weaknesses in the domestic banking system. It is the form least likely to be associated with capital flight and creditor panic. This suggests liberalizing inward foreign investment as the first stage of financial-side opening. It suggests liberalizing inward FDI as quickly as possible. This advice would seem obvious but for the large number of governments that have failed to heed it. As of 1996, 144 of 184 countries surveyed by the IMF still maintained controls on FDI. One element of the Korean crisis was the government's reluctance to allow inward FDI and its readiness, in the face of foreign pressure, to instead open other components of the capital account.[29]

Skeptics like Dooley (1996) and Kraay (1998) question whether FDI is more stable than other capital flows. In fact, data on the volatility of flows (World Bank 1999) do not suggest a strong contrast between direct investment and portfolio capital. Still, there is an obvious sense in which a foreign direct investor cannot easily unbolt machines from the factory floor in order to participate in a creditor panic.[30] Admittedly, direct investors have a particular incentive to hedge by purchasing other financial assets, which they can liquidate in a crisis. They can borrow on domestic markets in order to sell short the domestic financial assets needed to take positions in

[29]Admittedly, Thailand's lifting of most restrictions on inward FDI in import-competing industries in the 1970s and on export industries in the 1980s did not prevent a serious crisis. But the problem there was that the country also opened the capital account to portfolio flows without strengthening its financial system and rationalizing prudential supervision.

[30]A recent study by Sarno and Taylor (1999), using time series data for Asian and Latin American countries and Kalman filtering methods, does in fact find that FDI flows have a larger permanent component than bank credit, equity flows, bond flows and official credit.

anticipation of a currency collapse. The implication is that the share of inward foreign investment in the form of FDI will offer some protection against financial instability in the early stages of capital account liberalization — that is, before the rest of the capital account has been opened and direct foreign investors, like others, can take positions on securities markets to hedge their exposures.[31] But the more open the capital account, the easier it becomes to arbitrage different instruments, and the less the share of FDI in total capital inflows is likely to matter in this respect.

6.3 Use of internationalization to strengthen the banking system.

The case for liberalizing FDI early in the process of external financial opening extends to the banking system. Entry by foreign banks is a low-cost way of upgrading the sector's risk-management capacity. The knowledge spillovers that figure prominently in discussions of other forms of FDI apply also to the financial sector. Moreover, insofar as foreign banks are overseen by their home-country regulators, opening the banking sector to foreign investment should raise the average quality of prudential supervision. And insofar as foreign banks are better capitalized, they are less likely to engage in excessive risk taking. For all these reasons, entry by foreign banks can accelerate the upgrading of domestic financial arrangements that is a prerequisite for further capital account liberalization (Demirguc-Kunt, Levine and Min 1998).

Equally, it is important to avoid creating artificial incentives for bank-to-bank lending. Thailand opened other components of the capital account before giving banks access to offshore funds. But it then created the Bangkok International Banking Facility, under which Thai banks borrowing offshore (and on-loaning the proceeds in foreign-currency terms) received favorable tax and licensing treatment. In part this policy is to be understood as an attempt to develop Bangkok as an international financial center. In part it reflects the government's tendency to use

[31]There are two rebuttals to this assertion. First, the correlation between the share of short-term foreign debt in capital inflows and crisis risk may be detecting symptoms rather than causes. In other words, as the risk of crisis rises for other reasons, foreign investors will shorten the length of their claims in the hope of being able to get out before the crisis finally strikes. Second, some countries may have high ratios of FDI in total inflows not because they offer attractive production platforms for foreign multinationals but because they are wholly incapable of attracting portfolio capital, reflecting unsustainable financial policies and inadequate contract enforcement. Ricardo Hausmann has made this point in a series of recent papers.

the banks as an instrument of industrial policy. Either way it is indicative of policies that are incompatible with the goal of limiting volatility.

6.4 Relying on market-friendly instruments for regulating foreign exposures.

The preceding might be taken as encouragement for governments to micro-manage the process of liberalization. But efforts to fine tune the capital account carry their own dangers. They threaten to create a heavy administrative bureaucracy conducive to rent seeking and capture. Financial development makes it progressively easier for participants to evade the authorities' efforts by relabeling positions and repackaging obligations. Interventions which rely on markets instead of bureaucrats minimize these risks. This is the attraction of the Chilean approach to capital-import taxes. The Chileans required a non-interest-bearing deposit of one year duration from investors seeking to import capital from abroad.[32] Since the deposit had to be maintained for a year, the implicit tax fell more heavily on investors with short horizons than on those prepared to stay for the long haul. It was transparent and insulated from administrative discretion. There was less scope for evasion than of taxes designed to fall on some foreign investments but not others.

There is an enormous debate over the effectiveness of these measures.[33] Some warn that avoidance is a problem. Others point to the lack of evidence that Chile's taxes limited the overall level of foreign borrowing. And still others observe that the Chileans have themselves abolished the measure, which should raise questions about its efficacy.

The third objection is misplaced in the sense that the Chilean tax remains on the books; all that has been done is to set the tax rate to zero for the time being. The rationale for doing so was that capital inflows were in particularly short supply following the Asian and Russian crises; a prudential measure that might have been desirable under other circumstances then became too expensive to operate in this period of capital scarcity.

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[32]The tax was initially set at 20 per cent in 1991, raised to 30 per cent in 1992, reduced to 10 per cent in June of 1998 and set to zero per cent in October, and the scope of capital flows to which it was applied was progressively widened. Investors could opt to pay the central bank a sum equivalent to the forgone interest without actually placing the deposit with the bank, as some in fact chose to do.

[33]A comprehensive review of the issues and literature is Ulan (2000).

More fundamentally, Chilean-style holding period taxes can be justified as a form of prudential supervision, where short-term inflows, because they are volatile, pose risks to financial stability.[34] Attempting to limit bank borrowing offshore will be futile if domestic non-financial corporations are free to borrow and to pass on the proceeds to the banks. Hence the case for an across-the-board holding-period tax on inflows on prudential grounds.[35] This should be regarded as a transitional policy to be pursued until more conventional forms of prudential supervision and regulation have been upgraded, at which point exceptional measures directed toward the capital account can come off. Chile itself can be thought of as having completed this process of upgrading in the 1980s and 1990s.

The second objection -- that there is no evidence of the measure reducing the level of capital inflows -- overlooks the fact that the goal was never to limit the level of borrowing. Rather, the goal was alter its maturity -- to limit short-term inflows as a share of total debt and a share of international reserves. And on the maturity front the evidence is compelling (see Gallego, Hernandez and Schmidt-Hebbel 1999).[36] As for the first objection, it is important to recall that such a measure, to effectively lengthen the maturity structure of the debt, need not be evasion free.

The same point -- the desirability of transparent, comprehensive, market-based taxes rather than controls -- applies equally to the outflow side. One manifestation of this fact is how Malaysia has moved from comprehensive outflow controls to an exit tax on foreign capital satisfying a

[34]This analogy is not without limitations; see Laurens and Cardoso (1998) for the relevant objections.

[35]Valdes-Prieto and Soto (1998) argue that this invocation of prudential supervision does not justify controls on non-banks. But this view overlooks the scope for arbitrage between the bank and non-bank sectors.

[36]That studies of other countries that have employed similar policies reach analogous conclusions is reassuring. See for example Cardenas and Barrera (1995) on Colombia. More generally, Calvo and Reinhart (1999) find in a 15 country panel, including Chile, that the presence of capital controls is associated with a lower share of portfolio plus short-term capital flows as a percentage of total flows. That they do not find the same when they look at portfolio flows alone suggests that the impact on short-term flows is doing most of the work.

minimum-stay requirement.[37] But not too much should be expected of outflow controls in times of crisis, given the strong incentives that then exist for avoidance.

6.5 Liberalizing stock and bond markets next.

Because bank deposits are a contractual obligation to repay at par, the withdrawal of foreign deposits can jeopardize the stability of the banking system. In contrast, when investors liquidate their positions in stock and bond markets, their actions simply show up in the prices of securities, which is less destabilizing to the financial system.[38] When banks and firms can fund themselves by floating bonds as well as issuing short-term debt, the destabilizing impact on their balance sheets of sharp changes in market interest rates will be less. And when they can fund themselves by issuing bonds denominated in domestic as well as foreign currency, the destabilizing financial impact of sharp changes in exchange rates will be reduced. This suggests developing of bond markets as a way of diversifying the sources of corporate debt, and developing stock markets as a way of avoiding excessive reliance on debt in general. It suggests liberalizing foreign access to domestic stock and bond markets before freeing banks to fund themselves offshore.

The reality is that securitized markets -- stock and bond markets alike -- are late to develop. Historically, markets in corporate bonds and debentures tend to develop before deep and liquid equity markets since their informational requirements are less (Baskin and Miranti 1997). But even they tend to develop only once a deep and reliable market has first grown up in a benchmark asset, typically treasury bonds, transactions in which provide liquidity and minimum efficient scale and whose prices provide a reference point for other issues. And the development of a deep and liquid treasury bond market in turn requires a government with a record of sound and stable macroeconomic and financial policies. Where that record is lacking, banks become

[37]In September of 1998, nonresidents were prohibited from repatriating investments in domestic-currency-denominated financial assets for a 12 month period. These quantitative controls were replaced by graduated exit levies in February 1999.

[38]In reality, things are not so simple. A stock- or bond-market crash can damage the balance-sheet position of banks and others who themselves hold stocks and bonds. It can make life difficult for entities, including the government, with funding needs and for whom the prices of their liabilities are an important signal of credit worthiness. But the single most reliable predictor turned up by the copious literature on leading indicators of currency crises is the term structure of portfolio capital inflows (Radelet and Sachs 1998; Rodrik and Velasco 1999).

the captive customers for government bond placements, which is not good for their balance sheets and in return for which they receive other favors (such as guarantees) which give rise to the financial-sector problems alluded to above.

In practice, the informational and contractual prerequisites for the development of deep and active stock markets are substantial -- even more substantial than the prerequisites for the development of deep and active bond markets. In the absence of disclosure by firms following recognized auditing and accounting practices, outsiders will be reluctant to purchase their securities for fear of market manipulation by insiders; hence, stock market capitalization and turnover will be low. In the absence of adequate contract enforcement and equitable bankruptcy procedures, investors will be reluctant to invest for fear that issuers will walk away from their obligations. And in the absence of adequate mechanisms for corporate control, investors will be reluctant to purchase minority stakes in publicly-traded enterprises for fear of being expropriated by majority stakeholders. This is why significant stock market capitalization and turnover tend to be observed relatively late in the process of financial development -- it is why this was the case historically even in countries like the United Kingdom and United States that now have some of the most advanced market-based financial systems in the world. It is why many countries, and developing countries in particular, rely on banks for intermediation services, banks having a comparative advantage through long-term relationships with their clients in assembling information and enforcing contracts.

Creating active stock and bond markets thus requires putting in place a regulatory framework mandating the disclosure of accurate and up-to-date financial information, the use of recognized auditing and accounting standards, penalties for insider trading and market manipulation, and statutes protecting the rights of minority shareholders. In the United States, putting in place these prerequisites for deep and liquid markets took several decades (Bordo, Eichengreen and Irwin 1999). Late-developing economies in Asia and elsewhere can telescope this process by importing proven regulatory technologies.[39] Still, developing deep and active stock and bond markets is a hard slog. Success will not be achieved overnight.

[39]They can also follow the example of U.S. companies prior to the emergence of deep and liquid domestic securities markets — U.S. railways, the large corporations of their time, issued bonds and debentures in London as a way of circumventing the underdevelopment of American financial markets — but this will not solve the

6.6 Accumulate reserves.

The response of many Asian countries to the volatility of 1997-8 has been to accumulate a cushion of international reserves. The strategy has met with support from academics and officials. Feldstein (1999) has encouraged emerging markets to accumulate reserves as insurance against the disruptive domestic financial effects abrupt capital outflows. Guidotti (1999) and Greenspan (1999) have similarly suggested that countries hold foreign exchange reserves equal to all the short-term debt scheduled to fall due over the next 12 months. They point to the success of countries with substantial reserves (Taiwan for example) in withstanding the Asian crisis. A recent IMF study (Bussiere and Mulder 1999) suggests that countries may want to hold even larger reserves, perhaps as much as twice those suggested by the Guidotti-Greenspan rule, and that countries that run chronic current account deficits should hold still larger reserves, as should countries seeking to limit exchange rate variability.

There are reasons to question this advice. First, even large reserves a la Taiwan are small relative to the liquidity of the markets. A confidence crisis can cause investors to try to transfer abroad not only short-term foreign liabilities but the whole of M2. Converting these claims into foreign currency is likely to be impossibly expensive for a government or central bank seeking to support a currency peg.

Moreover, large reserves can provide dangerous encouragement to the carry trade (Dooley 1998). Normally, interest rates are lower in the major money centers than in an emerging market that has recently stabilized and opened its capital account, encouraging foreign investors to funnel money into the country. The larger reserves, the more confident will be investors that they will be able to get out without suffering losses when sentiment turns and the banking system comes under pressure. Hence, the greater will be bank-to-bank lending, and the higher will be the costs of a banking crisis.

Holding reserves against short-term external liabilities is expensive, since U.S. treasury bonds bear lower interest rates than Thai or Korean bank deposits. As Grenville (1999, p.6) has put it,

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currency-of-denomination issue; it will not create an investor base with an appetite for domestic-currency-denominated issues.

Greenspan's advice "raises the issue of why this short-term debt was useful in the first place, if the proceeds of the short-term borrowing have to be stacked away in reserves (at a lower rate of return than the cost of borrowing)." The implication is straightforward: if short-term foreign borrowing comes with risks that are expensive to insure against, wouldn't it be better to avoid it in the first place?

Clearly, countries seeking protection from volatility should accumulate a cushion of reserves. But more is not always better. Even sound advice can be taken too far.

6.7 Arranging commercial credits.

The other approach to ensuring the availability of adequate liquidity in an emergency is to negotiate commercial credit lines in advance. From the standpoint of the borrowing countries, these lines would provide additional resources to insure against shocks to investor confidence. If foreign investors refuse to renew their maturing loans, the authorities can draw on their credit lines to finance the lender-of-last-resort operations appropriate for dealing with a liquidity crisis. Argentina, Mexico, and Indonesia negotiated facilities with international banks that, in return for a commitment fee, allowed them to draw hard-currency credits. These facilities typically omit the no-adverse-material-change clause that permits banks to back out of an agreement in the event of a crisis. Argentina's agreement with 13 commercial banks, finalized in December 1996, provided for a $6.1 billion contingent credit line to be accessed through a repurchase facility (drawings on which are collateralized by the deposit of an equivalent amount of peso-denominated government bonds). It has been rolled over once, with an increase in the commitment fee from approximately 30 to 60 basis points. The $2.5 billion Mexican facility, in contrast, was a pure credit line. Mexico drew its lines in September 1998 despite complaints by the bankers, who objected that there was no emergency justifying the action at the time; partly as a consequence of this dispute, the Mexican facility was not renewed. Indonesia made two drawings on its stand-by facilities, totaling $1.5 billion, most recently in April 1998.

That these credits are a form of insurance again raises the issue of how adverse selection is overcome. Argentina, Mexico and Indonesia's success in purchasing this insurance suggests that the problem of asymmetric information that might otherwise cause the market to break down can

be overcome at least partially by the posting of collateral (as in the Argentine case, where the value of that collateral is enhanced by the country's currency-board law) and by other policies that help to signal credit worthiness. That these countries succeeded in negotiating these arrangements suggests that at least some other countries showing evidence of institutional reform and a record of strong policies could do likewise. But given that other countries lacking these advantages will not be able to signal their credit quality so easily, this option may not be available to all.

Insurance unavoidably creates the danger of moral hazard, so those who advocate the use of such lines need to worry about the incentive effects. These arrangements are essentially unconditional; in contrast to IMF loans, access is not contingent on the country agreeing to specific adjustment measures. Consequently, access to additional funds may encourage some governments to engage in additional risk-taking and put off adjustment. The "penalty rate" they pay to draw these lines may be some deterrent, but there remains the question of whether it is enough. The strong steps Argentina and now Mexico are taking to strengthen their institutions and policies provides some reassurance that they will not succumb to these temptations. But it is not clear that the same will necessarily be true of other countries.

A further weakness of these arrangements is that the banks will be able to hedge their exposures. At the same time they provide additional credits, they can draw down their other exposure to the country or sell short government bills and bonds. The sell-off in the Mexican bond market that occurred when that country's government drew its lines in the fall of 1998 may have been an instance of this effect. Taken to an extreme, this "dynamic-hedging" argument suggests the country will have no additional financial resources for propping up its banking system and coping with the other consequences of a crisis. The less extreme version is that countries relying on this technique may have less insurance than meets the eye.

Thus, while commercial credits lines are not a bad idea, they are likely to be available only to countries with relatively strong policies, and the amount of money they actually make available may be less than it appears.

6.8 Strengthening monetary and fiscal institutions.

Limiting volatility in a financially globalized world requires building credible policy-making institutions. The greater the credibility of the individuals and institutions responsible for monetary policy, the less the danger that a shock will incite an investor panic and a self-fulfilling crisis. To the contrary, if policy makers have accumulated sufficient credibility, the markets will do much of the stabilizing work for them. If inflation accelerates, for example, pushing up interest rates and depressing the prices of short-term interest-bearing assets, investors anticipating that the acceleration of inflation is only temporary will buy into temporarily depressed fixed-income markets, stabilizing asset prices and interest rates. If the currency depreciates, investors will similarly purchase domestic-currency-denominated assets at their temporarily depressed prices, providing capital inflows that work to strengthen the exchange rate.

Similarly, the more credible is fiscal policy, the greater will be the capacity to pursue counter-cyclically stabilizing budgetary policies. If the fiscal authorities are committed to running budgets that are balanced over the cycle, they will be able borrow and run deficits in recessions. If, on the other hand, policy makers' intentions are suspect, they will have to cut spending and/or raise taxes in recessions, rendering fiscal policy pro-cyclical and aggravating rather than limiting volatility.

One solution is to delegate responsibility for policy to an individual or individuals with a reputation for valuing the appropriate objectives; the utility of this approach is questionable, however, so long as the policy makers in question can be arbitrarily dismissed (Drazen and Masson 1994). The alternative is to design policy-making institutions so that the individuals in question have an incentive to pursue particular objectives and the capacity to do so. Hard-and-fast rules — a currency board arrangement for monetary policy, a balanced-budget rule for fiscal policy — are the obvious way of doing so, but these lack the flexibility desirable for coping with a volatile environment. A more flexible approach is to give the policy authorities a mandate and the independence to pursue it. For monetary policy this is the well-known formula of independence for the central bank and a mandate to pursue price stability. For fiscal policy there is an analogous argument for creating an independent fiscal authority responsible for setting a

ceiling for the budget deficit and a set of rules for cutting expenditure in the event that the fiscal authorities overrun it (Eichengreen, Hausmann and von Hagen 1999).

7. Conclusion

The premise of this paper is that there exist powerful technical, economic and political forces likely to render the world economy even more globalized tomorrow than today. Globalization has been rolled back before, but only under extraordinary circumstances. And the costs today for the world economy were a sizeable number of countries to turn their backs on global markets could exceed even those incurred in the 1930s, given the decline in the cost of international transportation and communication, the spread of global production networks, and the progress made in drawing countries and regions once only marginally integrated into the world economy more deeply into the global system. Countries, their governments, and their citizens have substantial investments in globalization. Significant costs have been sunk, making it unlikely that the clock will be turned back.

The challenge is therefore how to capitalize on the opportunities for growth and development afforded by globalization while at the same time minimizing the risks. In an obvious sense this means following appropriate policies: stable macroeconomic policies, prudent financial policies, and sound regulatory policies. But appropriate policies are easier to describe than to implement. And their specifics are likely to vary over time. The more fundamental problem is thus how to develop institutions with the capacity to determine appropriate policies, implement them, and stick to them until circumstances change.

Institutions with this capacity are likely to have the following characteristics. They combine insulation from capture with accountability to their principals. They facilitate the development of a social consensus on goals and instruments and an equitable sharing of the benefits from their implementation. They allow governments to make credible commitments but also provide escape clauses designed to allow those commitments to be modified or revoked in the event of fundamental changes in circumstance.

Globalization also has a dark side. Capitalizing on globalization thus means preventing its risks from disrupting growth and development and from engendering a backlash against open markets. This means tailoring policies to contain the heightened risk of crisis and the volatility created by the integration and liberalization of financial markets. It means creating a social safety net to support those who are left behind.

To imagine the prospects for developing countries, consider Ireland, an economy that has been transformed by globalization.[40] In the 1970s and the first half of the 1980s, Irish growth was disappointing (GDP growth averaged 3.7 per cent between 1971 and 1986). The country was widely seen as the sick man of Europe, due to its slow growth, exploding debts, and chronic high unemployment. While per capita incomes, in purchasing power parity terms, were almost the same as in Asia's newly industrializing economies, there was every sign that Ireland was about to be left in the dust by the NIEs. The basis for its subsequent transformation is no secret. The government put in place sustainable macroeconomic and financial policies. It cut public spending, balanced the budget, and pared down the public debt ratio to the levels required by the Maastricht Treaty. It joined the EMS and EMU as a way of creating a bulwark against exchange rate and financial instability; it put the crisis problem behind it without resorting to controls or other devices that might have discouraged foreign investors. Tax incentives, a well-educated labor force, the reduction of labor-market rigidities, and a commitment to integrate with the European Union made Ireland an attractive platform for foreign investors seeking to establish production in Europe. Regional cooperation played a supporting role, with the Structural Funds of the European Union financing very considerable investment in and upgrading of the country's infrastructure.

Critically, the country's literate and numerate labor force, extensive university-industry cooperation, market-based financial system, and efficient infrastructure made it attractive for international companies to locate in Ireland not just assembly operations, as they did initially, but also R&D. The R&D expenditures of foreign-owned firms, as a percentage of Irish GDP, have doubled since 1986 (Barry, Bradley and O'Malley 1999). And given the nature of R&D

[40]For more details the interested reader should consult Barry (1999) and Barry and Crafts (1999).

spillovers, R&D by international firms did much to stimulate R&D by indigenous producers. As a result of these changes, Ireland is now the "tiger" of Europe, with growth accelerating since 1987 to 6.2 per cent and in the second half of the 1990s reaching levels of ten per cen per annum that would be regarded as more than respectable by a Korean economist. TFP growth, meanwhile has doubled from 2 per cent per annum in the first period (where it accounted for slightly more than half of GDP growth — in other words, the postwar Japanese pattern) to 4 per cent per annum (or nearly two-thirds of GDP growth, the Continental European pattern).[41]

Developing economies are not Ireland. Their labor and financial markets are different. The fact that it is member of the European Union sets it apart. But Ireland is an example of a country that was able to alter its policies and institutions to capitalize on globalization. In this sense it not only offers a vision of the challenges but also the opportunities facing the developing economies in the global economy of the 21st century.

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[41] Calculations are from Nugent (1998-9) for 1971-86 and 1987-97.

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Table 1

Trends in Global Trade and Investment Relative to Global Output

Year	Trade as Percentage of GDP	Trade as Percentage of Goods GDP	Net Inflows of FDI as a Percentage of GDP	Net Inflows of FDI as Percentage of GDI
1970	28.05	..	0.48	2.40
1971	28.18	..	0.50	2.46
1972	28.28	..	0.44	2.13
1973	30.97	..	0.55	2.51
1974	37.26	..	0.63	2.82
1975	34.45	..	0.54	2.51
1976	35.62	..	0.40	1.78
1977	35.63	..	0.43	1.81
1978	34.67	..	0.45	1.85
1979	37.44	..	0.54	2.22
1980	39.96	72.67	0.65	2.75
1981	40.11	71.08	0.63	2.68
1982	38.44	69.24	0.44	2.03
1983	37.82	67.21	0.41	1.91
1984	39.58	69.69	0.49	2.22
1985	38.81	68.11	0.50	2.25
1986	35.56	65.35	0.66	2.97
1987	36.16	69.10	0.93	4.00
1988	37.22	71.93	0.97	4.03
1989	38.42	72.60	1.07	4.47
1990	38.88	75.99	1.01	4.40
1991	39.34	76.01	0.69	3.07
1992	40.21	78.50	0.70	3.18
1993	39.33	78.73	0.89	4.12
1994	40.79	82.53	0.93	4.22
1995	42.90	87.55	1.13	5.06
1996	43.23	86.14	1.23	5.56
1997	45.18	92.11	1.57	7.13
1998	..	..	2.25	..

Note: FDI stands for foreign direct investment,
GDP for gross domestic product, and
GDI for gross domestic investment

Source: World Bank, *World Development Indicators 2000,* CD Rom.

Table 2

Global Exports and
Imports of Commercial Services
(in Billions of US$)

Year	Global Exports	Global Imports	Total Trade
1980	364	397	761
1985	382	396	778
1990	783	812	1595
1995	1188	1188	2375
1997	1322	1291	2613
1998	1332	1314	2645
1999	1350	1345	2695

Source: World Trade Organization, 2001. *Trade Statistics: Historical Series.* Geneva.