

Capital Market Liberalization and Development

Edited by

José Antonio Ocampo and Joseph E. Stiglitz

OXFORD
UNIVERSITY PRESS

OXFORD

UNIVERSITY PRESS

Great Clarendon Street, Oxford OX2 6DP

Oxford University Press is a department of the University of Oxford.
It furthers the University's objective of excellence in research, scholarship,
and education by publishing worldwide in

Oxford New York

Auckland Cape Town Dar es Salaam Hong Kong Karachi
Kuala Lumpur Madrid Melbourne Mexico City Nairobi
New Delhi Shanghai Taipei Toronto

With offices in

Argentina Austria Brazil Chile Czech Republic France Greece
Guatemala Hungary Italy Japan Poland Portugal Singapore
South Korea Switzerland Thailand Turkey Ukraine Vietnam

Published in the United States
by Oxford University Press Inc., New York

© Oxford University Press 2008

The moral rights of the authors have been asserted
Database right Oxford University Press (maker)

First published 2008

All rights reserved. No part of this publication may be reproduced,
stored in a retrieval system, or transmitted, in any form or by any means,
without the prior permission in writing of Oxford University Press,
or as expressly permitted by law, or under terms agreed with the appropriate
reprographics rights organization. Enquiries concerning reproduction
outside the scope of the above should be sent to the Rights Department,
Oxford University Press, at the address above

You must not circulate this book in any other binding or cover
and you must impose the same condition on any acquirer

British Library Cataloguing in Publication Data
Data available

Library of Congress Cataloging in Publication Data
Data available

Typeset by SPI Publisher Services, Pondicherry, India
Printed in Great Britain
on acid-free paper by
Biddles Ltd., King's Lynn, Norfolk

ISBN 978-0-19-923058-7
978-0-19-923844-6 (Pbk.)

10 9 8 7 6 5 4 3 2 1

2

The Benefits and Risks of Financial Globalization

*Sergio L. Schmukler*¹

2.1 Introduction

The recent wave of globalization has generated an intense debate among economists, attracting both strong supporters and opponents. This chapter outlines the benefits and risks of financial globalization for developing countries. The chapter revisits the arguments and evidence that can be used in favor of and against globalization, as well as policy options.

In this chapter, financial globalization is understood as the integration of a country's local financial system with international financial markets and institutions. This integration typically requires that governments liberalize the domestic financial sector and the capital account. Integration takes place when liberalized economies experience an increase in cross-country capital movement, including an active participation of local borrowers and lenders in international markets and a widespread use of international financial intermediaries. Although developed countries are the most active participants in the financial globalization process, developing countries (primarily middle-income countries) have also started to participate. This chapter focuses on the integration of developing countries with the international financial system.²

¹ I thank David Dollar, Chang-Tai Hsieh, Rick Mishkin, and José Antonio Ocampo for several helpful comments on earlier versions of this work. I am grateful to Juan Carlos Gozzi Valdez, Marina Halac, and Pablo Zoido-Lobaton for excellent research assistance. The opinions expressed in this chapter represent those of the author(s) and not necessarily those of the Initiative for Policy Dialogue or the World Bank.

² In this paper, developing countries are all low- and middle-income countries as defined by the World Bank. Emerging markets are middle-income developing countries.

From a historical perspective, financial globalization is not a new phenomenon, but today's depth and breadth are unprecedented.³ Capital flows have existed for a long time. In fact, according to some measures, the extent of capital mobility and capital flows 100 years ago is comparable to that of today. At that time, however, only few countries and sectors participated in financial globalization. Capital flows tended to follow migration and were generally directed towards supporting trade flows. For the most part, capital flows took the form of bonds, and they were of a long-term nature. International investment was dominated by a small number of freestanding companies, and financial intermediation was concentrated on a few family groups. The international system was dominated by the gold standard, in which gold backed national currencies.

The advent of the First World War represented the first blow to this wave of financial globalization, which was followed by a period of instability and crises ultimately leading to the Great Depression and the Second World War. After these events, governments reversed financial globalization, imposing capital controls to regain monetary policy autonomy. Capital flows reached an all-time low during the 1950s and 1960s. The international system was dominated by the Bretton Woods system of fixed but adjustable exchange rates, limited capital mobility, and autonomous monetary policies.

As Mundell (2000) argues, the 1970s witnessed the beginning of a new era in the international financial system. As a result of the oil shock and the breakup of the Bretton Woods system, a new wave of globalization began. The oil shock provided international banks with fresh funds to invest in developing countries. These funds were used mainly to finance public debt in the form of syndicated loans. With the disintegration of the Bretton Woods system of fixed exchange rates, countries were able to open up to greater capital mobility while keeping the autonomy of their monetary policies. The capital flows of the 1970s and early 1980s to developing countries preceded the debt crisis that started in Mexico in 1982. To solve the debt crisis of the 1980s, Brady Bonds were created, swapping bank debt in default with new bond debt. This led to the subsequent development of bond markets for emerging economies. Deregulation, privatization, and advances in technology made foreign direct investment (FDI) and equity investments in emerging markets more attractive to firms and households in developed countries. The 1990s witnessed an investment boom in FDI and portfolio flows to emerging markets.

³ Several authors analyze different measures of financial globalization, arguing that there were periods of high financial globalization in the past. For a review of this literature see Baldwin and Martin (1999).

Today, despite the perception of increasing financial globalization, the international financial system is far from being completely integrated.⁴ There is evidence of persistent capital market segmentation, home country bias, and correlation between domestic savings and investment. The recent deregulation of financial systems, the technological advances in financial services, and the increased diversity in the channels of financial globalization make a return to the past more costly and therefore more difficult.⁵ Financial globalization is unlikely to be reversed, particularly for partially integrated economies, although the possibility of that happening does still exist.

The potential benefits of financial globalization likely will lead to a more financially interconnected world and a deeper degree of financial integration of developing countries with international financial markets. The main benefit of financial globalization for developing countries is most likely the development of their financial system, which involves more complete, deeper, more stable and better regulated financial markets. As discussed in Levine (2001), a better functioning financial system with more credit is important because it fosters economic growth.⁶

Financial globalization also carries some risks. These risks are more likely to appear in the short run, when countries first open up. One well-known risk is that globalization can be related to financial crises. The cases of the 1997–8 Asian and Russian crises, as well as those in Brazil in 1999, Ecuador in 2000, Turkey in 2001, Argentina in 2001, and Uruguay in 2002, are just some examples that captured worldwide interest. There are various links between globalization and crises. If the right financial infrastructure is not in place or is not put in place while integrating, liberalization followed by capital inflows can debilitate the health of the local financial system. If market fundamentals deteriorate, speculative attacks will occur with capital outflows generated by both domestic and foreign investors. For successful integration, economic fundamentals need to be strong and remain so. Strong fundamentals gain relevance because, other things equal, financial globalization tends to intensify a country's sensitivities to foreign shocks. Accordingly, local

⁴ Frankel (2000) argues that 'though international financial markets, much like goods markets, have become far more integrated in recent decades, they have traversed less of the distance to perfect integration than is widely believed.'

⁵ Mussa (2000) emphasizes the power of new technology and the powerlessness of public policy in the face of the current evolution of financial flows. He argues that public policy 'can spur or retard them, but it is unlikely to stop them.' He also claims that the last backlash against globalization was cemented on two world wars and a great depression and affirms that the likelihood of that happening again is low.

⁶ For more than a century, the importance of capital markets for economic growth has been emphasized. Historically, the literature focused on the role of banks, beginning with the views of Bagehot (1873) and Schumpeter (1912). More recently, empirical work, such as Levine and Zervos (1998), documents the positive link between financial development (represented by different measures) and growth.

markets need to be regulated properly and supervised. Moreover, international market imperfections, such as herding, panics, and boom–bust cycles, and the fluctuating nature of capital flows can lead to crises and contagion, even in countries with good economic fundamentals. Another risk of globalization is the segmentation that it can create between those able to participate in the global financial system and those that need to rely on domestic financial sectors.

The net benefit of financial globalization for developing countries can be large, even despite the risks. But globalization also poses new challenges for policymakers. One main challenge is to manage financial globalization in a way that allows countries to take full advantage of the opportunities it generates, while minimizing the risks it implies. This is important because financial globalization is likely to deepen over time, led by its potential benefits. Another challenge of globalization is that, in a more integrated world, governments are left with fewer policy instruments. Thus, some type of international financial cooperation becomes more important.

The organization of this chapter is as follows. Section 2.2 discusses the recent developments and main agents of financial globalization. Section 2.3 studies the effects of financial globalization on the domestic financial sector. Section 2.4 analyzes the potential costs associated with globalization and discusses the net effects. Section 2.5 analyzes the policy options available to deal with financial globalization. Section 2.6 concludes and discusses the policy implications.

2.2 Financial Globalization: Latest Developments and Main Agents

The last 30 years witnessed many changes in financial globalization. New technological advances and the liberalization of the domestic financial sector and the capital account have led to new developments. The main agents driving financial globalization are governments, private investors and borrowers, and financial institutions.

2.2.1 *Latest Developments in Financial Globalization*

The new nature of capital flows and the increasing use of international financial intermediaries constitute two of the most important developments in financial globalization.

Figure 2.1 shows that net capital flows to emerging economies have increased sharply since the 1970s. The composition of capital flows to developing countries changed significantly during this period. The relative size of official flows more than halved, while private capital flows became the

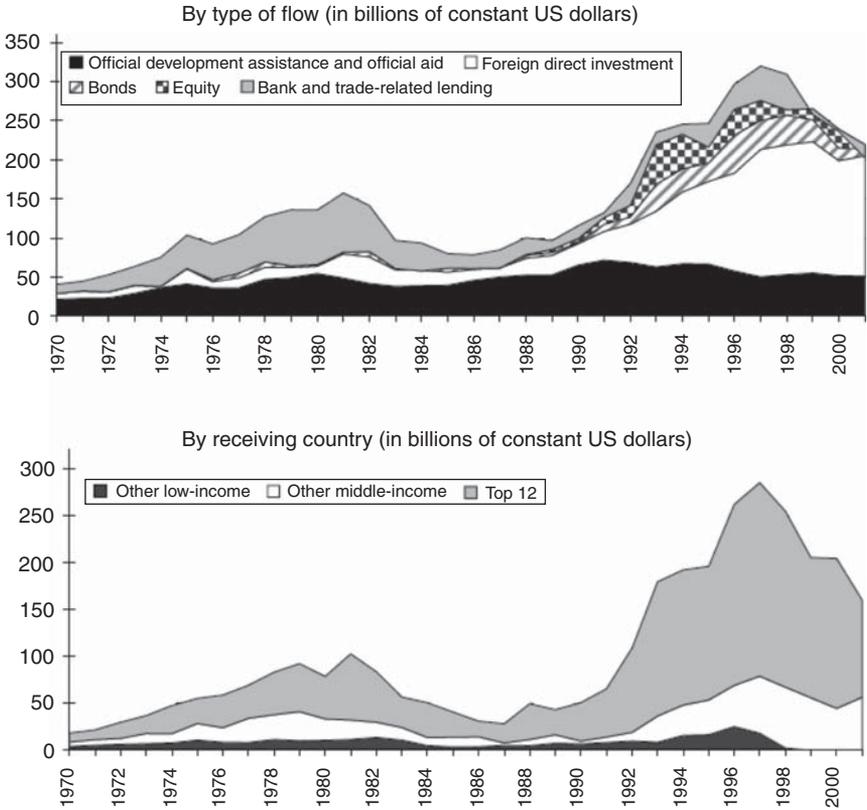


Figure 2.1. Net capital flows to developing countries 1970–2001

Notes: The figures display net capital flows to developing countries. The top panel plots the evolution of private capital flows and official capital flows. Private capital flows are disaggregated into foreign direct investment, portfolio bond flows, portfolio equity flows, and bank and trade related flows. The bottom panel depicts the distribution of private capital flows among developing countries. The top 12 receiving developing countries are: China, Brazil, Mexico, South Korea, Argentina, Malaysia, Chile, India, the Russian Federation, Thailand, Turkey, and South Africa.

The variables included are: total private capital flows, foreign direct investment (net inflows in reporting country), portfolio investments—bonds and equity, bank and trade-related lending, and official development assistance and net official aid. All these variables are deflated using the US GDP deflator, the base year is 1995.

Source: World Bank, World Development Indicators 2003 (WDI).

major source of capital for a large number of emerging economies. The composition of private capital flows also changed markedly. FDI grew continuously throughout the 1990s. Figure 2.1 also shows the abrupt decline in capital flows to emerging markets following the Asian and Russian crises of 1997–8 and the Argentine crisis in 2001.

Even though net private capital flows to developing countries increased in recent years, private capital does not flow to all countries equally. Some countries tend to receive large amounts of inflows, while other countries receive little foreign capital. Figure 2.1 also shows that while capital flows to developing countries increased in general, the top 12 countries with the highest flows are receiving the overwhelming majority of the net inflows. Moreover, the top 12 countries are the ones that experienced the most rapid growth in private capital flows during the 1990s. As a consequence, the share of flows dedicated to low-income and middle-income countries (outside the top 12) has decreased over time.⁷ This is important because if countries benefit from foreign capital, only a small group of countries are the ones benefiting the most. The unequal distribution of capital flows is consistent with the fact that income among developing countries is diverging, although the causality is difficult to determine.

The second development is the internationalization of financial services, which means the use of international financial intermediaries by local borrowers and investors. This internationalization is achieved through two main channels. The first channel is an increased presence of international financial intermediaries, mainly foreign banks, in local markets. The second channel involves the use of international financial intermediaries by local borrowers and investors; these international financial intermediaries are located outside the country. One example of the latter channel is the trading of local shares in major world stock exchanges, mostly in the form of depositary receipts.

Figure 2.2 presents evidence of the increased participation of companies from developing and developed countries in the US equity markets using depositary receipts. Companies from developing countries have been actively participating in the US equity markets since the early 1990s. The data show that the top six middle-income countries with the highest participation capture most of the activity among middle-income countries. As argued above in the case of capital flows, this might be creating a divergence among developing countries. If capital raised in international capital markets brings benefits to recipient countries, for example because the cost of capital is lower or because a longer maturity structure can be achieved, a group of middle-income countries has been benefiting more than other developing nations.

2.2.2 Main Agents

There are four main agents of financial globalization: governments, borrowers, investors, and financial institutions. Each of them is helping countries become more financially integrated.

⁷ The share of private capital flows received by the 12 top countries decreased in 2001 as a consequence of the Argentine crisis and a reduction of international flows, mainly to Brazil and China.

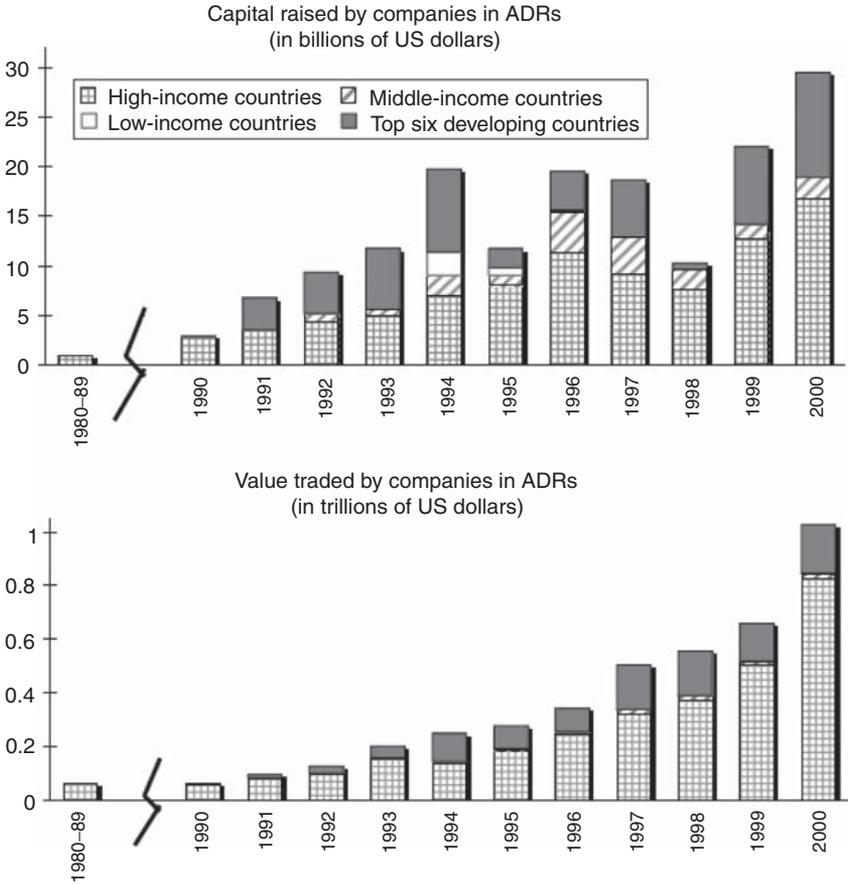


Figure 2.2. Internationalization of emerging stock markets

Notes: The figures illustrate the amount of equity capital raised by developing countries in international capital markets and the volume traded by developing countries ADRs during the 1990s. In these figures, the top six developing countries include Argentina, Brazil, China, India, South Korea, and Mexico; these countries were selected in accordance to their total capital raised during the period 1980–2000. High-income countries include Australia, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Israel, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Singapore, Slovenia, Spain, Sweden, Switzerland, Taiwan, and the United Kingdom. Middle-income countries include Bahrain, Chile, Colombia, Croatia, the Czech Republic, the Dominican Republic, Egypt, Estonia, Hungary, Jordan, Kazakhstan, Latvia, Lebanon, Lithuania, Malta, Morocco, Papua New Guinea, Peru, the Philippines, Poland, Romania, Russia, the Slovak Republic, South Africa, Sri Lanka, Thailand, Tunisia, Turkey, Uruguay, and Venezuela. Low-income countries include Ghana, Indonesia, Malawi, and Pakistan.

Source: Bank of New York.

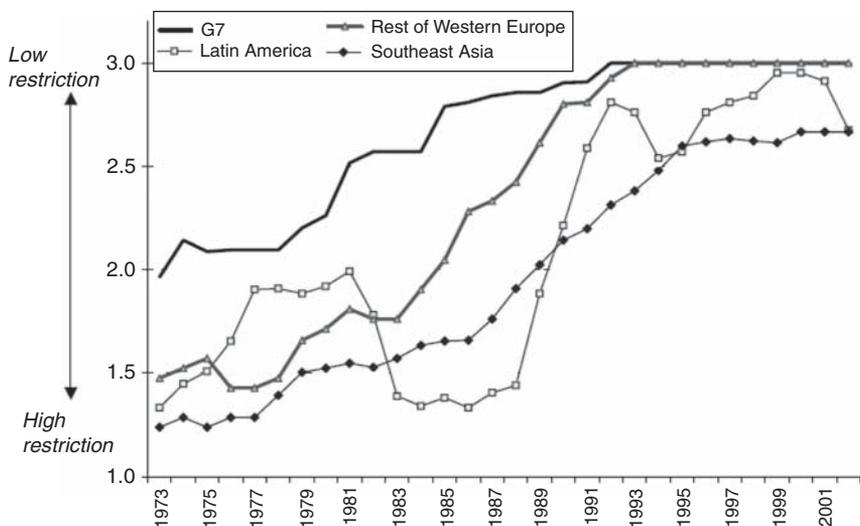


Figure 2.3. Financial liberalization in developed and developing countries (index)

Notes: The liberalization index is calculated as the simple average of three indexes (liberalization in the capital account, domestic financial system and stock market) that range between 1 and 3, where 1 means no liberalization and 3 means full liberalization. These data are then aggregated as the simple average between countries of each region. Figures correspond to annual averages calculated from monthly data.

Source: Kaminsky and Schmukler (2002).

Governments are one of the main agents of financial globalization. Governments allow globalization by liberalizing restrictions on the domestic financial sector and the capital account of the balance of payments. In the past, governments regulated the domestic financial sector by restricting the allocation of credit through controls on prices and quantities. Governments also imposed several constraints on cross-country capital movements. The list of instruments used to restrict the capital account is rather extensive, including restrictions on foreign exchange transactions, derivative transactions, lending and borrowing activities by banks and corporations, and the participation of foreign investors in the local financial system.

Even though the domestic financial sector and the capital account were heavily regulated for a long time, Kaminsky and Schmukler (2002) show how the restrictions have been lifted over time. Figure 2.3 presents the evolution of their index of financial liberalization that takes into account restrictions on the domestic financial system, the stock market, and the capital account. The figure illustrates the gradual lifting of restrictions in developed and emerging countries during the last 30 years. Although there has been a gradual lifting of restrictions over time, there were periods of reversals, in which restrictions

were reimposed. The most substantial reversals took place in the aftermath of the 1982 debt crisis, in the mid-1990s, and after the Argentine crisis in Latin America.

Borrowers and investors, including households and firms, have also become main agents of financial globalization. By borrowing abroad, firms and individuals can relax their financial constraints to smooth consumption and investment, which allows them to invest when poor and repay when rich and to better withstand adverse shocks.⁸ Firms can expand their financing alternatives by raising funds directly through bonds and equity issues in international markets and thereby reducing the cost of capital, expanding their investor base, and increasing liquidity. More financing alternatives help foreign investors overcome direct and indirect investment barriers. International investors, as argued in Obstfeld (1994) and Tesar and Werner (1998), have taken advantage of financial globalization to achieve cross-country risk diversification.

Financial institutions, through the internationalization of financial services, are also a major driving force of financial globalization. As discussed by the International Monetary Fund (IMF 2000), changes at the global level and changes in both developed and developing countries explain the role of financial institutions as a force of globalization. At a global level, the gains in information technology have diminished the importance of geography, allowing international corporations to service several markets from one location. In developed countries, increased competition has led banks and other non-bank financial firms to look at expanding their market shares into new businesses and markets and attracting customers from other countries, which allows them to diversify risk. Decreasing costs due to deregulation and technical improvements were accompanied by more competition. Moreover, the liberalization of the regulatory systems has opened the door for international firms to participate in local markets. Macroeconomic stabilization, better business environment and stronger fundamentals in emerging markets ensured a more attractive climate for foreign investment.

2.3 Financial Globalization and Financial Sector Development

Financial globalization can lead to the development of the financial system. A well-functioning financial sector provides funds to borrowers (households, firms, and governments) who have productive investment opportunities. As discussed in Mishkin (2003), financial systems do not usually operate as desired because lenders confront problems of asymmetric information, which can lead to adverse selection and moral hazard.

⁸ To the extent that savings from developing countries are invested abroad, these nations can also achieve cross-country risk diversification.

Financial globalization can help improve the functioning of the financial system through two main channels. First, financial globalization can increase the availability of funds. Second, financial globalization can improve the financial infrastructure, which can reduce the problem of asymmetric information. As a consequence, financial globalization can decrease adverse selection and moral hazard, enhancing the availability of credit.

Regarding the first channel, in a financially integrated world, funds can flow freely from countries with excess funds to countries where the marginal product of capital is high. In this context, both foreign institutions and individuals might provide capital to developing countries if they expect these countries to grow faster than developed economies. As a consequence, countries can smooth consumption and make investments financed by foreign capital. This flow of capital from developed to developing countries is reflected in the large current account deficits typically observed in many developing nations.

The effects of capital flows on financial development take place because new sources of funds and more capital become available. New sources of funds mean that borrowers not only depend on domestic funds, they can also borrow from foreign countries willing to invest in domestic assets. The capital available from new sources means that market discipline is now stronger both at the macroeconomic level and at the financial sector level, as now local and foreign investors enforce market discipline on private and public borrowers. Foreign capital is particularly effective in imposing this kind of discipline given its footloose nature; foreign capital can more easily shift investment across countries. Domestic capital tends to have more restrictions to invest internationally.

Thanks in part to the availability of more capital, developing economies have developed their stock and bond markets as well as some of their local financial service industry. Capital markets have developed, in the sense that more domestic equity and bonds are issued and traded, but this does not imply that all domestic financial institutions have become more important. Borrowers and investors can just use international financial intermediaries, like stock exchanges and banks, to conduct their financial transactions. In fact, domestic financial institutions can actually shrink due to competition with international financial institutions. For example, local banks obtain a lower share of the domestic market. Moreover, as Claessens et al. (2002) argue, many stock markets are shrinking as trading moves from domestic markets to major global stock exchanges, as illustrated in Figure 2.4.

The second channel of financial globalization is an improved financial infrastructure. An improved financial sector infrastructure means that borrowers and lenders operate in a more transparent, competitive and efficient financial system. In this environment, problems of asymmetric information are minimized and credit is maximized.

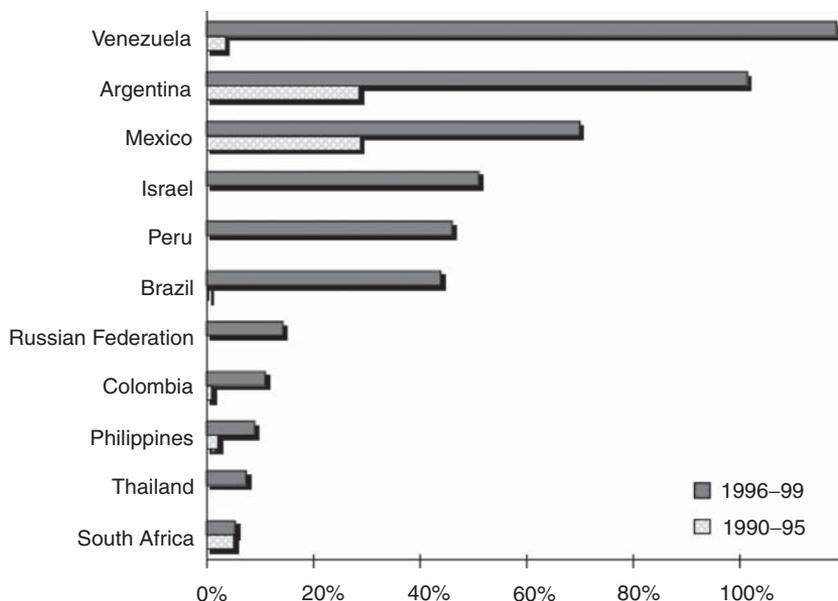


Figure 2.4. Share of trading in international markets to local markets in selected countries

Notes: The figure illustrates, for a group of selected countries, the equity trading in international markets relative to the domestic markets. The figure plots the average ratio of ADR trading in New York over the total value traded in the domestic markets for the years 1990-95 and 1996-99.

Source: Bank of New York (for ADRs) and International Financial Corporation Emerging Markets Fact Book.

In theory, there are different ways financial globalization can create improvements in the financial sector infrastructure. First, financial globalization can cause greater competition in the provision of funds, which can generate efficiency gains. Second, the adoption of international accounting standards can increase transparency. Third, the introduction of international financial intermediaries pushes the financial sector towards the international frontier. Fourth, Stulz (1999) argues that financial globalization improves corporate governance; new shareholders and potential bidders force a closer monitoring of management. Fifth, Crockett (2000) claims that the increase in the technical capabilities for engaging in precision financing results in a growing completeness of local and global markets.

Foreign bank entry is another way through which financial globalization can improve the financial infrastructure of developing countries. Mishkin (2003) argues that foreign banks enhance financial development for at least three main reasons. First, foreign banks have more diversified portfolios as they have access to sources of funds from all over the world, which means

that they are exposed to less risk and are less affected by negative shocks to the home country economy. Second, foreign entry can lead to the adoption of best practices in the banking industry, particularly in risk management but also in management techniques, which leads to a more efficient banking sector. Third, if foreign banks dominate the banking sector, governments are less likely to bail out banks when they have solvency problems. A lower likelihood of bail-outs encourages more prudent behavior by banking institutions, increased discipline, and a reduction in moral hazard. The World Bank (2001) discusses this topic in greater depth.

2.4 Risks and Net Effects of Globalization

Although financial globalization has several potential benefits, financial globalization also carries risks. The recent stream of financial crises and contagion after countries liberalized their financial systems and became integrated with world financial markets might lead some to suggest that globalization generates financial volatility and crises.

Even though domestic factors tend to be key determinants of crises, there are different channels through which financial globalization can be related to crises. First, when a country liberalizes its financial system it becomes subject to market discipline exercised by both foreign and domestic investors. When an economy is closed, only domestic investors monitor the economy and react to unsound fundamentals. In open economies, the joint force of domestic and foreign investors might generate a crisis when fundamentals deteriorate. This might prompt countries to try to achieve sound fundamentals, though this might take a long time. Furthermore, investors might overreact, being overly optimistic in good times and overly pessimistic in bad ones. Therefore, small changes in fundamentals, or even news, can trigger sharp changes in investors' appetite for risk.

Second, globalization can also lead to crises if there are imperfections in international financial markets. The imperfections in financial markets can generate bubbles, herding behavior, speculative attacks, and crashes, among other things. Imperfections in international capital markets can lead to crises even in countries with sound fundamentals. For example, if investors believe that the exchange rate is unsustainable they might speculate against the currency, which can lead to a self-fulfilling balance of payments crisis regardless of market fundamentals. This is largely illustrated in the literature following Obstfeld (1986).⁹ Imperfections can also deteriorate fundamentals. For example, moral hazard can lead to overborrowing syndromes when economies

⁹ Note that self-fulfilling crises can also take place in a closed domestic banking sector as shown in the literature following Diamond and Dybvig (1983).

are liberalized and there are implicit government guarantees, increasing the likelihood of crises, as argued in McKinnon and Pill (1997).¹⁰

Third, globalization can lead to crises due to the importance of external factors, even in countries with sound fundamentals and even in the absence of imperfections in international capital markets. If a country becomes dependent on foreign capital, sudden shifts in foreign capital flows can create financing difficulties and economic downturns. These shifts do not necessarily depend on a country's fundamentals. Calvo et al. (1996) argue that external factors are important determinants of capital flows to developing countries. In particular, they find that world interest rates were a significant determinant of capital inflows into Asia and Latin America during the 1990s. Economic cyclical movements in developed countries, a global drive towards diversification of investments in major financial centers, and regional effects tend to be other important global factors.

Fourth, financial globalization can also lead to financial crises through contagion, namely by shocks that are transmitted across countries.¹¹ Three broad channels of contagion have been identified in the literature: real links, financial links, and herding behavior. Real links have usually been associated with trade links. When two countries trade among themselves or if they compete in the same external markets, a devaluation of the exchange rate in one country deteriorates the other country's competitive advantage. As a consequence, both countries will likely end up devaluing their currencies to balance their external sectors. Financial links exist when two economies are connected through the international financial system. One example of financial links is when leveraged institutions face margin calls. When the value of their collateral falls, due to a negative shock in one country, leveraged companies need to increase their reserves. Therefore, they sell part of their valuable holdings in the countries that are still unaffected by the initial shock. This mechanism propagates the shock to other economies.¹² Finally, financial markets might transmit shocks across countries due to herding behavior or panics. At the root of this herding behavior is asymmetric information. Information is costly so investors remain uninformed. Therefore, investors try to infer future price changes based on how other markets are reacting. In this context, a change in

¹⁰ The arguments that claim that market imperfections are the cause of crises when countries integrate with financial markets imply that imperfections are more prevalent in international markets than in domestic markets. Imperfections in financial markets can exist even in closed countries. If imperfections are more important in domestic markets than in the foreign markets, as one can expect given their degree of development, financial globalization does not have to lead to crises.

¹¹ Dornbusch et al. (2000) survey the literature on contagion. Further references can be found at: www.worldbank.org/contagion.

¹² Another example of financial link is when open-end mutual funds foresee future redemptions after there is a shock in one country. Mutual funds need to raise cash and, consequently, they sell assets in third countries.

Thailand's asset prices might be considered useful information about future changes in Indonesia's or Brazil's asset prices with investors reacting accordingly, even when fundamentals do not warrant it. Additionally, in the context of asymmetric information, what the other market participants are doing might convey information that each uninformed investor does not have. This type of reaction leads to herding behavior or panics.

2.4.1 *Evidence on Crises and Contagion*

Though crises can be associated with financial liberalization, the evidence suggests that crises are complex. They are not just the consequence of globalization. The evidence indicates that crises have been a recurrent feature of financial markets for a long time, both in periods of economic integration and in periods of economic disintegration. Bordo et al. (2001*b*) study the frequency, duration, and impact of crises during the last 120 years and find the frequency of crises since 1973 has been double that of the Bretton Woods and classical gold standard periods and is rivaled only by the crisis-ridden 1920s and 1930s. However, they also find little evidence that crises have grown longer or output losses have become larger. Furthermore, evidence suggests several causes of financial crises, many of which are related to domestic factors. Frankel and Rose (1996) argue that domestic factors such as slow growth and a boom in domestic credit increase a country's likelihood of experiencing a financial crisis.¹³

The evidence also suggests that different channels of contagion have played important roles in the transmission of crises. Eichengreen et al. (1996), Glick and Rose (1999), and Forbes (2000) argue that trade links are important. Financial and non-fundamental links are also very important to understand contagion. Kaminsky and Reinhart (2000) argue that the contagion of Argentina and Brazil from Mexico in 1994, and that of Indonesia from Thailand in 1997–8, are best explained by financial sector linkages among these countries, in particular banks and international capital markets. Kaminsky et al. (2004) highlight the role of mutual funds and point out that in the aftermath of the Russian default in 1998 Malaysia suffered average mutual funds sales of 30 percent and the Czech Republic of 16 percent. The evidence is also consistent with contagion unrelated to fundamentals, either financial or trade related. Kaminsky and Schmukler (1999) and Favero and Giavazzi (2000) suggest that herding behavior can be a driving force of contagion.

¹³ Kaminsky and Reinhart (1999) argue that crises occur mostly due to domestic factors, as the economy enters a recession following a period of prolonged boom in economic activity fueled by expanded credit, capital inflows, and an overvalued currency. Caprio and Klingebiel (1997) stress the importance of both macroeconomic and microeconomic factors in determining banking crises.

The evidence shows, furthermore, that financial crises are costly. For example, during the period 1973–97, there were 44 crises in developed countries and 95 in emerging markets, with average output losses of 6.25 and 9.21 percent of GDP respectively (see Bordo et al. 2001b; and Bordo and Eichengreen 2002). Moreover, the literature suggests that crises do not hit all groups of people equally, despite the overall negative impact on output. Crises affect disproportionately different ranges of the income distribution, hurting particularly the poor through adverse income and employment shocks, high inflation, relative price changes, and public spending cutbacks.¹⁴

2.4.2 *Net Effects*

The previous sections argued that globalization can bring benefits through the development of the domestic financial system. But globalization can also be associated with crises and contagion (and also with market segmentation). As discussed in Obstfeld (1998), this is inescapable in a world of asymmetric information and imperfect contract enforcement. Though many crises are triggered by domestic factors, and countries have had crises for a long time (even in periods of low financial integration), it is the case that globalization can increase the vulnerability of countries to crises. In open economies, countries are subject to the reaction of both domestic and international markets, which can trigger fundamental-based or self-fulfilling crises. Moreover, the cross-country transmission of crises is characteristic of open economies. Completely closed economies should be isolated from foreign shocks. But when a country integrates with the global economy, it becomes exposed to contagion effects of different types and, more generally, to foreign shocks.

Is the link between globalization, crises, and contagion important enough to outweigh the benefits of globalization? The evidence is still scarce, but it is far from clear that open countries are more volatile and suffer more from crises. The evidence suggests that, in the long run, volatility tends to decrease following liberalization and integration with world markets, probably because of the development of the financial sector. The evidence holds even when including crisis episodes, which might be considered particular events.

Any potential increase in volatility tends to occur in the short-run, immediately after liberalization begins. When countries first liberalize their financial sector, volatility and crises might arise, particularly in countries with vulnerable fundamentals. If the domestic financial sector is not prepared to cope with foreign flows and is not properly regulated and supervised, financial liberalization can lead to domestic crises. This is shown in Figure 2.5, which displays the typical boom–bust episode in stock markets. Kaminsky and Schmukler (2002) show that three years after liberalization the cycles in the stock market become

¹⁴ See, for example, Ferreira et al. (1999).

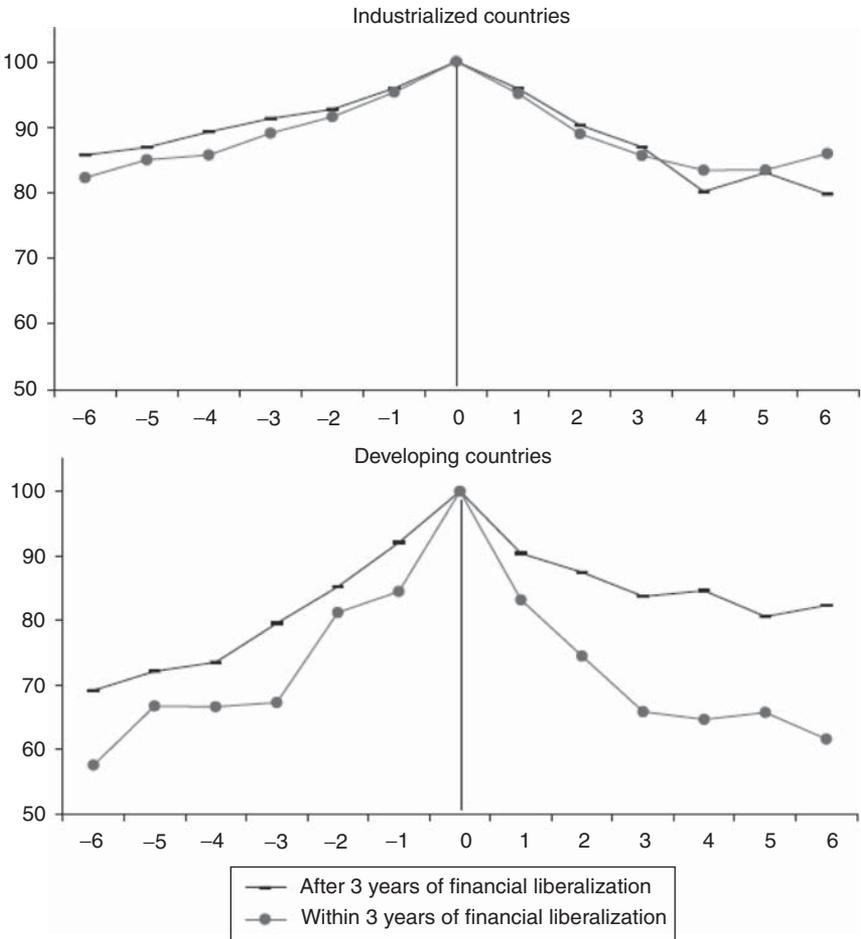


Figure 2.5. Average boom–bust cycles and financial liberalization

Notes: The figures show the average boom–bust cycle in financial markets for selected countries. Date 0 is the date of the peak in stock market prices. All stock market indices are normalized to 100 at the peak. Countries comprising industrialized countries are Canada, France, Germany, Italy, Japan, the United Kingdom, the United States, Denmark, Finland, Ireland, Norway, Portugal, Spain, and Sweden. Countries comprising developing countries are Argentina, Brazil, Chile, Colombia, Mexico, Peru, Venezuela, Hong Kong, Indonesia, Korea, Malaysia, the Philippines, Taiwan, and Thailand. Financial liberalization occurs when countries substantially lift the restrictions on cross-country capital movements.

Source: Kaminsky and Schmukler (2002).

less pronounced, while they become more pronounced in the aftermath of liberalization.

There is also some evidence on the positive impact of financial liberalization on output growth. Bekaert et al. (2001) estimate that output growth

has increased about one percentage point following liberalization. Although financial liberalization spurs financial development, they show that measures of financial development fail to fully drive out the liberalization effect. Furthermore, Tornell et al. (2003) show that financial liberalization leads to higher average long-run growth even though it also leads to some crises and to boom–bust cycles.

2.5 Policy Options

There are different views on how governments can maximize the benefits of globalization and minimize its risks. As discussed above, one of the most important benefits of financial globalization is the development of the financial sector. This development tends to lead to deeper and less volatile financial markets. But, on the other hand, globalization can also be associated with some costs. The most important one involves a higher sensitivity to crises and contagion. The gains are likely to materialize in the long run, while the costs will tend to be more prevalent in the short run. In all the aspects of globalization, the action or inaction of governments can be important.

2.5.1 *Three Views on the Role of Government*

In the past, conventional wisdom favored unfettered capitalism, but the fact that globalization has been associated with crises and contagion has led many economists to believe that some degree of government intervention can be beneficial. Many economists would now agree that financial integration with the rest of the world is beneficial in the long run. However, the recent experience with crises and contagion has generated large disagreements about how to integrate and about what policies to recommend. These recent episodes have even led some economists to suggest isolating countries from the international financial system, or delaying integration for those countries that are closed. In sum, there are different views on what governments should do regarding financial integration.

A first view argues that government intervention is at the root of recent crises. This view believes that international capital markets are efficient and developed (or at least international financial markets are more efficient than financial markets in developing countries). Therefore, countries with underdeveloped financial markets would benefit from full financial liberalization, with minimal government intervention. Certain types of government intervention create distortions that can lead to moral hazard and crises. For example, Akerlof and Romer (1993) show that government guarantees can induce firms to go broke at society's expense (looting). They claim that once looting becomes established in one sector, it can distort production in other sectors.

A second view claims that cross-country capital flows should be restricted. According to this view, inefficient international financial markets debilitate the argument for unregulated financial integration. Anomalies such as asymmetric information, moral hazard, asset bubbles, speculative attacks, herding behavior, and contagion are present in international financial markets. So economies open to capital flows suffer the consequences of these imperfections. The recent crises showed that international financial markets punished similarly countries with different fundamentals and policies. Given this evidence, Krugman (1998), Tobin (2000), and Stiglitz (2000) argue that government intervention to restrict cross-country capital movements can be socially beneficial. Moreover, Stiglitz (1999) calls for developing countries to put some limits on capital inflows to moderate excessive boom-bust patterns in financial markets. Ocampo (2003) argues that two instruments can be used together to manage capital account volatility in developing countries—capital account regulation and counter-cyclical prudential regulation. Several economists, then, argue that governments can mitigate the cost of volatile capital flows—reducing excessive risk taking and making markets less vulnerable to external shocks—and still pursue integration with international financial markets.

A third view concentrates on risk management. This view focuses on strengthening the domestic financial sector and sequencing financial liberalization. This view argues that opening a weak domestic financial sector to large capital movements is potentially risky. If the domestic financial sector does not manage risk properly, does not have sufficient reserves and capital, or does not have the right incentives, large capital inflows and outflows can create severe problems in the domestic financial sector. Foreign competition can also debilitate local financial intermediaries. Since financial crises can be very costly, this view proposes an adequate regulation and supervision of the domestic financial system without distinguishing between capital that is foreign in origin and capital that is domestic. Additional proposals include the use of counter-cyclical fiscal policy, the stability of prices, the active management of reserve requirements, and the implementation of contingent liquidity arrangements. Also, improved prudential regulation and increased market discipline, through more transparency and information, have been recommended as a way to avoid excessive risk taking.

2.5.2 *Fewer Policy Instruments*

One of the main consequences of globalization for policymaking is that the number of instruments at a country's disposal diminishes when the economy is integrated. When the domestic financial system integrates with the rest of the world, it is more difficult for countries to monitor and regulate the transactions outside its borders. For example, local authorities are able to

regulate the activities of the local subsidiary of an international bank, but it is more difficult to regulate the parent company and subsidiaries in other countries, which can be linked to the local bank. Also, the ability of capital to move freely in and out of the country makes government intervention more difficult to enforce. As countries become more integrated, the need for some kind of international financial cooperation grows.

The rest of the section illustrates, with two examples, how financial globalization influences the options available to policymakers. These policies have received significant attention in the discussions surrounding crises and financial globalization. The policies discussed below are the ones related to risk management and the choice of monetary and exchange rate regimes.

Before discussing examples of two policies, it is useful to mention the policies related to capital controls, which have received wide attention. The proposals on capital controls are designed to reduce the probability or mitigate the effects of sudden shifts in foreign capital. These proposals suggest that international capital flows should be restricted in particular and judicious ways. There is a large body of research on the effects of capital controls. This research is inconclusive about the effectiveness of capital controls. Some research suggests controls work as expected. Other research finds no impacts, or even negative impacts of such controls, or just temporary effects that dissipate over time. Since the evidence is inconclusive, we focus on two other policies about which there appears to be growing consensus.

RISK MANAGEMENT

As an alternative to capital controls, some economists have proposed focusing on managing risk by regulating and supervising the financial system, without distinguishing between domestic and foreign capital. When economies are partially integrated with the rest of the world, distinguishing between domestic and foreign capital becomes more difficult. That is why capital controls tend to be ineffective. In this case, governments can benefit by focusing on the stability of the overall financial sector to avoid financial crises or to make crises less costly. If there are imperfections in capital markets, it becomes even more important to avoid excessive risk taking, particularly maturity risk and currency risk, which have played central roles in recent crises. So the discussion shifts towards risk management.

Governments might want to regulate and supervise financial systems to ensure that the financial sector is managing risk well. Governments might want to avoid large asset-liability mismatches, like unhedged foreign exchange borrowings invested in non-tradable sectors and short-term assets for long-term investments, which can leave banks vulnerable to exchange rate depreciations and to interest rate surges. Also, regulation and supervision should ensure that banks are sufficiently capitalized with appropriate loan classification and adequate loan loss provisions. Transparency for investors

and depositors through mandatory public disclosure of audited financial statements will help enforce market discipline. The removal of explicit or implicit government guarantees and sharing risk with investors will decrease the potential for moral hazard. The World Bank (2001) discusses in more detail the regulations of the financial sector in an integrated economy.

Financial sector policies also should be accompanied by the right incentives for sound corporate governance. Clear rules and adequate financial disclosure help regulators and market participants monitor corporations, which pushes corporations to achieve good practices. Clear governance rules help prevent insider and group lending not subject to loan evaluation and creditworthiness standards. Developed corporate bond and equity markets help companies obtain external financing, become more transparent, and be subject to market discipline.

Proper risk management helps to avoid and manage crises. First, as a preventive measure, countries with solid financial sectors will probably suffer fewer crises and less pronounced recessions. Second, countries with sound financial sectors will have more flexibility to cope with external shocks and to take corrective measures during a crisis. Countries with a solvent banking sector and low corporate leverage ratios will be able, to some extent, to raise interest rates to contain speculative attacks on the exchange rate. Countries with large foreign exchange reserves and access to contingent liquidity facilities will be able to inject liquidity in the system, avoiding credit squeeze and bank runs.

The recent experiences with crises and contagion stress the importance of adequate risk management. Kawai et al. (2005) argue that one of the more important lessons of the East Asian crisis was that highly leveraged and vulnerable corporate sectors were a key determinant of the depth of the crisis. Currency devaluations suddenly inflated the size of external debt (measured in terms of the domestic currency) and debt service obligations, thereby driving the domestic corporations into financial distress. High interest rates also sharply increased domestic debt service obligations of the corporations. These vulnerabilities affected the banks with exposures to the corporations. Krugman (1999) argues that company balance sheet problems may have a role in causing financial crises. Currency crises lead to an increase in foreign denominated debt, which combined with declining sales and higher interest rates weaken the corporate sector and, in turn, the financial system. Johnson et al. (2000) also show how weak corporate governance might hamper the economy and lead to currency depreciations and recessions.

MONETARY AND EXCHANGE RATE POLICY

The choice of exchange rate regime (floating, fixed, or somewhere in between) has been a recurrent question in international monetary economics. Obstfeld

and Taylor (2003) argue that the different historical phases of financial globalization can be understood in terms of the so-called impossible trinity.¹⁵ According to this proposition, a country can consistently pursue only two out of the three policy objectives: free capital mobility, a fixed (or highly stable) nominal exchange rate, and an autonomous monetary policy. Obstfeld and Taylor explain that international capital mobility has, thus, prevailed in periods of political support either for subordinating monetary policy to exchange rate stability (as in the gold standard, 1880–1914), or for giving up exchange rate stability so as to enable monetary policy to pursue domestic objectives (as in the post-Bretton Woods era, 1971–2003). In contrast, when countries attempted simultaneously to target their exchange rates and use monetary policy in pursuit of domestic objectives (e.g., to combat the slowdown of economic activity in the interwar period), they had to impose controls to curtail capital movements (as in the interwar, 1914–45, and Bretton Woods, 1945–71 periods). After the crises of the 1990s, economists have become in favor of corner exchange rate regimes, according to which countries will either firmly fix their exchange rate or follow a flexible regime without pre-commitments, allowing for free capital movements.

By fixing the exchange rate, countries tend to then reduce transaction costs and exchange rate risk that can discourage trade and investment. At the same time, a fixed exchange rate has been used as a credible nominal anchor for monetary policy. On the other hand, a flexible exchange rate allows a country to pursue independent monetary policy. A flexible exchange rate allows countries to respond to shocks through changes in the exchange rate and interest rate to avoid going into recession. Under the combination of fixed exchange rates and complete integration of financial markets, monetary policy becomes completely powerless. Any fluctuations in the currency or currencies to which the country fixes its exchange rate will impact the domestic currency. Under a fixed exchange rate regime, other variables need to do the adjustment.

Even though countries can choose a flexible exchange rate regime, some papers have argued that countries are not allowing their exchange rates to move in part because of the high degree of financial globalization. Among others, Calvo and Reinhart (2002) argue that there exists ‘fear of floating’ that prevents countries with *de jure* flexible regimes from allowing their exchange rates to move freely. According to this view, factors like lack of credibility, exchange rate pass-through, and foreign currency liabilities prevent countries from pursuing an independent monetary policy, regardless of their announced regime. Therefore, many countries, even if formally floating, are *de facto* importing the monetary policy of major currency countries, much as

¹⁵ The concept of an impossible trinity is not new. It dates back, at least, to the work of Mundell in the 1960s.

those with pegs. In fact, the empirical evidence seems to suggest that countries are not able or do not choose to pursue a completely independent monetary policy. Still, there are credible ways to adopt a flexible regime if the right monetary institutions are in place and if countries can commit to an inflation targeting policy, as discussed in Bernanke and Mishkin (1997) and Mishkin (2000).

After the fall of the Argentine peso peg, debate shifted again. Economists are now disregarding peg regimes that fall short of dollarization or euroization. Moreover, a one-dimensional emphasis on pure fix versus float dilemma now seems insufficient and can even be misleading. It would be more productive to focus on the weak currency problem that plagues most emerging economies and on the need to build healthy links between money and financial intermediation, while establishing adequate flexibility—including in financial contracting, to facilitate adjustment to shocks. De La Torre et al. (2002) and Calvo and Mishkin (2003) also highlight the importance of strengthening institutions. They argue that the choice of exchange rate regime is likely to be of second order importance to the development of good fiscal, financial, and monetary institutions in producing macroeconomic success in emerging market countries. A focus on institutional reforms rather than on the exchange rate regime may encourage emerging market countries to be healthier and less prone to crises.

2.6 Conclusions

In the last decades, countries around the world have become more financially integrated, driven by the potential benefits of financial globalization. One of the main benefits of financial globalization is the development of the financial sector. Financial markets become deeper and more sophisticated when they integrate with world markets, increasing the financial alternatives for borrowers and investors. Financial markets operating in a global environment enable international risk diversification and leveling of consumption. Although financial globalization has several potential benefits, financial globalization also poses new challenges. The crises of the 1990s, after many countries liberalized their financial system, have challenged the ideas stressing the gains of globalization. Countries become exposed to external shocks and crises, not only generated in their own country, but also from contagion effects. In the initial stages of liberalization, if the right infrastructure is not in or put in place, financial liberalization can lead to increased risks. Moreover, in a financially integrated economy, policymakers have fewer policy instruments to conduct economic policy.

The recent experiences with financial globalization yield some useful lessons for policymaking.

2.6.1 *Countries Can Benefit from Globalization*

Countries can benefit from financial globalization and should take advantage of it. Financial liberalization can have positive effects on the financial system. At the same time, the evidence does not suggest that financial volatility increases after financial liberalization. While it is true that crises have had a very large impact on growth in some countries like Indonesia, in other cases, the recovery has been rapid, as in South Korea and Mexico. Also, it would be hard to argue that economies would have grown as fast as they did if they had remained closed.

Though the potential benefits can be large, we are far from full financial globalization. Even in open countries there is still an important home bias. Given the potential benefits of globalization, the scope is for a much deeper financial globalization and for much larger gains. Many countries are already partially open and the prospect is for an increased globalization of financial markets. Paradoxically, increased globalization can reduce the scope for risk diversification, because integrated financial markets tend to be more correlated.

2.6.2 *Importance of Sound Fundamentals and Strong Institutions*

Sound macroeconomic and financial fundamentals are key to lowering the probability of crises and contagion and to be able to manage crises more effectively. Preventing currency and banking crises should be one of the primary objectives of any policymaker because of the high cost of crises. This is more important in a world of free capital mobility, because both foreign and domestic investors exercise market discipline and because foreign crises might have contagion effects at home. Attacks on currencies can occur whenever confidence is lost, even if a country has sound fundamentals. A crisis in a foreign country can rapidly trigger a crisis at home. Weak fundamentals tend to scare investors more easily and make crisis management more difficult. Countries with bad fundamentals, for example with large fiscal deficits and public debt, have fewer instruments to use in the midst of a crisis. Therefore, countries should focus on key policies that help them prevent and manage crises. These policies include avoiding large current account deficits financed through short term private capital inflows and large asset-liability currency mismatches.

Improving the contractual and regulatory environment is also important. Better institutions make an emerging country more fit to join in the financial globalization process. In particular, they increase the capacity of the domestic financial system to intermedicate prudently large international capital flows. Also, improvements in the contractual and regulatory framework can enhance

the access of resident corporations (at least in the case of larger countries and for the larger corporations) to financial services supplied abroad.

2.6.3 *Initial Conditions Matter*

Measures to isolate countries (like capital controls) are unlikely to work in the long run, particularly in countries that are partially integrated with the world economy. When there were attempts to isolate already open economies, investors have tended to find ways to avoid the restrictions over time. It is much easier to isolate countries with low levels of integration.

Initial conditions matter. The effectiveness of policies relies on the degree of integration with world markets. Countries with a relatively low degree of integration with world capital markets, like China and India, and with underdeveloped financial markets are more able to delay or revert the process of financial globalization than countries already partially integrated. Countries with a low level of integration should ensure that their financial sector is prepared to cope with open capital markets. If the domestic financial sector does not manage risk properly, does not have sufficient reserves and capital or does not have the right incentives, large capital inflows and outflows can create severe problems. However, it is not the case that all the conditions need to be met before governments liberalize the financial sector. As the discussion on sequencing shows, the process of integration itself can in some ways help improve the conditions of the domestic financial sector.

When countries develop, more comprehensive policies for risk management will be needed. These measures should try to avoid imperfections in capital markets and the build up of vulnerabilities. In more developed economies, the distinction between foreign and domestic capital becomes increasingly difficult. As the economy becomes integrated with the rest of the world, constraints to capital movements are less effective since they can be easily circumvented. Therefore, a more comprehensive approach will be needed to build solid financial economies. This approach involves proper regulation and supervision of the financial system.

2.6.4 *Need for International Financial Cooperation*

As economies become more integrated, governments have fewer policy instruments and must rely more on international financial policies. For example, governments tend to have fewer options about their monetary policy and exchange rate policy. In open economies there is a higher transmission of international interest rates and prices to the domestic economy. Moreover, bank regulation and supervision by one government is more difficult when liabilities and prices are denominated in foreign currency and when the

banking sector is part of an international banking system. Also, in the midst of contagious crises, governments tend to lack sufficient resources to stop a currency attack, and an individual government can do little to stop crises being originated in foreign countries. In these cases, international financial coordination can help individual governments achieve their goals.

There are different policies in which there is scope for cooperation. One policy is the timely mobilization of external liquidity of sufficient magnitude to reverse market expectations in a context of sound policies. That liquidity usually comes from the international financial institutions. Given the magnitude of capital flows and the clustering of crises, isolated actions of individual governments or institutions are not sufficient to gain the required confidence. A coordinated action among governments and the international financial institutions is necessary to overcome crises and contagion, at both regional and global levels. To minimize potential moral hazard, it would be necessary to involve the private sector so that private international investors share in the costs as penalty for excessive risk taking.

Another policy that requires international coordination is to build a strong international financial architecture to prevent and manage, in a systematic way, financial crises. Even though there are different meanings of this architecture, in general terms it refers to international arrangements for mutual consultation, monitoring and collaboration, covering a broad range of subjects of economic policy and possible financing in the event of crisis. The international financial architecture is still under construction. The initiatives under consideration focus on crisis prevention, crisis management and crisis resolution. The current initiatives include setting international standards for transparency and information dissemination, bank supervision and regulation, disclosure in securities markets, accounting and auditing rules, bankruptcy procedures, and corporate governance. The new initiatives also include private sector involvement in financing packages to complement IMF resources and to discourage the moral hazard that can be associated with bailouts.

2.6.5 Challenge: How to Integrate

One of the main challenges of financial globalization is integrating a country into the world financial system. Some economists would argue that the main challenge is to integrate all sectors and countries that do not participate in the globalization process. Though financial globalization can bring about many positive benefits, not all countries, sectors, or firms have access to global financial markets and services or can take advantage of the benefits induced by globalization. Among developing nations, only some countries receive foreign capital, particularly middle-income countries. Within each country, investment is concentrated in certain sectors. Selected companies can obtain

foreign funds. The lack of participation in the financial globalization process might put countries, sectors, and companies in disadvantageous positions. There is no easy solution to integrate them.

Other economists would argue that the main challenge of globalization is to selectively integrate with the world economy and to adopt active capital account regulation. These measures would help to minimize the risks of crises and reduce the impact of fluctuations in the international financial markets. Future research might shed light on what strategies are optimal for different countries. Furthermore, future research might yield specific recommendations on how to broaden the extent of integration, or alternatively, which particular policies are best suited to regulate cross-border financial flows.

References

- Akerlof, G. A. and Romer, P. M. (1993). 'Looting: the Economic Underworld of Bankruptcy for Profit'. *Brookings Papers on Economic Activity*, 2: 1–73.
- Bagehot, W. ([1873]1962). *Lombard Street*. Homewood, IL: R. D. Irwin.
- Baldwin, R. E. and Martin, P. (1999). 'Two Waves of Globalization: Superficial Similarities, Fundamental Differences', in H. Siebert (ed.), *Globalization and Labor*. Tübingen: Mohr Siebeck.
- Bekaert, G., Harvey, C., and Lundblad, C. (2001). 'Does Financial Liberalization Spur Growth?' NBER Working Paper 8245.
- Bernanke, B. and Mishkin, F. (1997). 'Inflation Targeting: A New Policy Framework for Monetary Policy?' *The Journal of Economic Perspectives*, 11/2: 97–116.
- Bordo, M. and Eichengreen, B. (2002). 'Crises Now and Then: What Lessons from the Last Era of Financial Globalization?'. NBER Working Paper 8716.
- Klingebiel, D., and Martinez Peria, M. S. (2001). 'Is the Crisis Problem Growing More Severe?' *Economic Policy*, 16/32: 51–82.
- Calvo, G. and Mishkin, F. (2003). 'The Mirage of Exchange Rate Regimes for Emerging Market Countries'. NBER Working Paper 9808.
- and Reinhart, C. (2002). 'Fear of Floating'. *Quarterly Journal of Economics*, 117/2: 379–408.
- Calvo, S., Leiderman, L., and Reinhart, C. (1996). 'Inflows of Capital to Developing Countries in the 1990s'. *Journal of Economic Perspectives*, 10/2: 123–39.
- Caprio, G. and Klingebiel, D. (1997). 'Bank Insolvency: Bad Luck, Bad Policy, or Bad Banking?' *World Bank Economic Review*.
- Claessens, S., Klingebiel, D., and Schmukler, S. (2002). 'The Future of Stock Markets in Emerging Economies'. *Brookings-Wharton Papers on Financial Services 2002*, 167–202.
- Crockett, A. (2000). 'How Should Financial Market Regulators Respond to the New Challenges of Global Economic Integration?' Paper presented at the Federal Reserve Bank of Kansas City conference Global Economic Integration: Opportunities and Challenges, Jackson Hole, WY, August.
- De la Torre, A., Levy Yeyati, E., and Schmukler, S. (2002). 'Financial Globalization: Unequal Blessings'. *International Finance*, 5/3: 335–57.

- Diamond, D. W. and Dybvig, P. H. (1983). 'Bank Runs, Deposit Insurance, and Liquidity'. *Journal of Political Economy*, 91: 401–19.
- Dornbusch, R., Park, Y., and Claessens, S. (2000). 'Contagion: Understanding How it Spreads'. *World Bank Research Observer*, 15/2: 177–97.
- Eichengreen, B., Rose, A., and Wyplosz C. (1996). 'Contagious Currency Crises'. *Scandinavian Journal of Economics*, 98/4: 463–84. (Also reprinted in T. M. Andersen and K. O. Moene (eds.) (1997). *Financial Liberalization and Macroeconomic Stability*. Oxford: Blackwell.)
- Favero, C. A. and Giavazzi F. (2000). 'Looking for Contagion: Evidence From the ERM'. NBER Working Paper 7797.
- Ferreira, F., Prennushi, G., and Ravallion, M. (1999). 'Protecting the Poor from Macroeconomic Shocks: An Agenda for Action in a Crisis and Beyond'. World Bank Working Paper 2160.
- Forbes, K. (2000). 'The Asian Flu and Russian Virus: Firm-Level Evidence on How Crises Are Transmitted Internationally'. International Monetary Fund Seminar Series 2000–49 October, 1–57.
- Frankel, J. (2000). 'Globalization of the Economy', in J. Nye and J. Donahue (eds.), *Governance in a Globalizing World*. Washington, DC: Brookings Institution Press.
- and Rose, A. (1996). 'Currency Crashes in Emerging Markets: An Empirical Treatment'. *Journal of International Economics*, 41/3–4: 351–66.
- Glick, R. and Rose, A. (1999). 'Contagion and Trade: Why are Currency Crises Regional?' *Journal of International Money and Finance*, 18/4: 603–17.
- International Monetary Fund (IMF) (2000). 'International Capital Markets'. Washington, DC: IMF.
- Johnson, S., Boone, P., Breach, A., and Friedman, E. (2000). 'Corporate Governance in the Asian Financial Crisis'. *Journal of Financial Economics*, 51/1–2: 141–86.
- Kaminsky, G. and Reinhart, C. (1999). 'The Twin Crises: Causes of Banking and Balance of Payments Problems'. *American Economic Review*, 89: 473–500.
- (2000). 'On Crises, Contagion, and Confusion'. *Journal of International Economics*, 51/1: 145–68.
- and Schmukler, S. (1999). 'What Triggers Market Jitters? A Chronicle of the East Asian Crisis'. *Journal of International Money and Finance*, 18: 537–60.
- (2002). 'Short-Run Pain, Long-Run Gain: The Effects of Financial Liberalization', World Bank Working Paper 2912.
- , Lyons, R., and Schmukler, S. (2004). 'Managers, Investors, and Crisis: Mutual Fund Strategies in Emerging Markets'. *Journal of International Economics*, 64/1: 113–34.
- Kawai, M., Newfarmer, R., and Schmukler, S. (2005). 'Crisis and Contagion in East Asia: Nine Lessons'. *Eastern Economic Journal*, 31/2: 185–207.
- Krugman, P. (1998). 'Saving Asia: It's Time to Get Radical'. *Fortune*, 138: 74–80.
- (1999). 'Balance Sheets, the Transfer Problem, and Financial Crises'. Manuscript, Massachusetts Institute of Technology.
- Levine, R. (2001). 'International Financial Liberalization and Economic Growth'. *Review of International Economics*, 9/4: 688–702.
- and Zervos, S. (1998). 'Stock Markets, Banks, and Economic Growth'. *American Economic Review*, 88/3: 537–58.
- McKinnon, R. and Pill, H. (1997). 'Credible Economic Liberalizations and Overborrowing'. *American Economic Review*, 87/2: 189–93.

- Mishkin, F. (2000). 'Inflation Targeting in Emerging Market Countries'. *American Economic Review*, 90/2: 105–9.
- (2003). 'Financial Policies and the Prevention of Financial Crises in Emerging Market Countries', in M. Feldstein (ed.), *Economic and Financial Crises in Emerging Market Countries*. Chicago: University of Chicago Press.
- Mundell, R. (2000). 'A Reconsideration of the 20th Century'. *American Economic Review*, 90/3: 327–40.
- Mussa, M. (2000). 'Factors Driving Global Economic Integration'. Paper presented at the Federal Reserve Bank of Kansas City conference 'Global Economic Integration: Opportunities and Challenges'. Jackson Hole, WY, August.
- Obstfeld, M. (1986). 'Rational and Self-fulfilling Balance of Payments Crises'. *The American Economic Review*, 76/1: 72–81.
- (1994). 'International Capital Mobility in the 1990s', in P. B. Kenen (ed.), *Understanding Interdependence: The Macroeconomics of the Open Economy*. Princeton: Princeton University Press.
- (1998). 'The Global Capital Market: Benefactor or Menace?' *Journal of Economic Perspectives*, 12: 9–30.
- and Taylor, A. M. (2003). 'Global Capital Markets', in M. D. Bordo, A. M. Taylor, and J. G. Williamson (eds.), *Globalization in Historical Perspective*. Chicago: University of Chicago Press.
- Ocampo, J. A. (2003). 'Capital-Account and Counter-Cyclical Prudential Regulations in Developing Countries', in R. Ffrench-Davis and S. Griffith-Jones (eds.), *From Capital Surges to Drought: Seeking Stability for Emerging Economies*. London: Palgrave/MacMillan.
- Schumpeter, J. A. (1912). *Theorie der Wirtschaftlichen Entwicklung*. Leipzig: Dunker & Humblot. (*The Theory of Economic Development*, trans. by R. Opie. Cambridge, MA: Harvard University Press, 1934.)
- Stiglitz, J. E. (1999). 'Bleak Growth for the Developing World'. *International Herald Tribune* (10–11 April), 6.
- (2000). 'Capital Market Liberalization, Economic Growth, and Instability'. *World Development*, 28/6: 1075–86.
- Stulz, R. (1999). 'Globalization, Corporate Finance and the Cost of Capital'. *Journal of Applied Corporate Finance*, 12/3: 8–25.
- Tesar, L. and Werner, I. (1998). 'The Internationalization of Securities Markets Since the 1987 Crash', in R. E. Litan and A. Santomero (eds.), *Brookings-Wharton Papers on Financial Services*. Washington, DC: Brookings Institution Press.
- Tobin, J. (2000). 'Financial Globalization'. *World Development*, 28/6: 1101–4.
- Tornell, A., Westermann, F., and Martínez, L. (2003). 'Liberalization, Growth, and Financial Crises: Lessons from Mexico and the Developing World'.
- World Bank (2001). *Finance for Growth: Policy Choices in a Volatile World*. Policy Research Report. Washington, DC: World Bank.