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R2002-036 Other #: 27 Box #: 186477B

President Wolfensohn - Briefings Books for Presidents Meetings - Meeting Materials
Speeches - Conference of the Chairman of the Federal Reserve Board - December

Conference of the Chairman
Federal Reserve Board (JDW REMARKS)

Wednesday, December 4, 1996
6:30 - 9:00 p.m.
Terrace Level, Martin Bldg of the Board of
Governors

Archive Management for the President's Office

Document Log

Reference # : Archive-01050

12/28

Edit

Print

A. CLASSIFICATION

- ☒ Meeting Material
- ☐ Trips
- ☒ Speeches

- ☐ Annual Meetings
- ☐ Corporate Management
- ☐ Communications with Staff

- ☐ Phone Logs
- ☐ Calendar
- ☐ Press Clippings/Photos

- ☐ JDW Transcripts
- ☐ Social Events
- ☐ Other

B. SUBJECT: CONFERENCE OF CHAIRMEN OF THE FEDERAL RESERVE BOARD (B) ** JDW TO MAKE REMARKS (INFORMAL & OFF-THE-RECORD)
VENUE: TERRACE LEVEL, MARTIN BUILDING OF THE BOARD OF GOVERNORS - Wednesday, December 4, 1996
CONTACT: MERPHIL KONDO OR KAY OLIVER @ 452-3875/452-3392
// FAX: 452-2827
PROGRAM:
6:30 P.M. - RECEPTION
7:00 P.M. - DINNER
AFTER DINNER - REMARKS BY JDW (NO PRESS ADMITTED)
INVITEES: THE BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM, THE CHAIRMEN AND DEPUTY CHAIRMEN OF THE TWELVE FEDERAL RESERVE BANKS, PLUS A FEW SENIOR STAFF (ABOUT 45 PERSONS)
10/31 RSVP JDW'S ATTENDANCE // PER JANE
(B) SPEAKING POINTS TO BE PREPARED BY GEOFF BERGEN //
PROGRAM GIVEN TO WENDY 10/31
EXC: GEOFF //LFG (10/31/96 10:07a)

DATE: 12/17/96

C. VPU

Corporate

- ☐ CTR
- ☐ EXT
- ☐ LEG
- ☐ MPS
- ☐ OED
- ☐ SEC/Board
- ☐ TRE

Regional

- ☐ AFR
- ☐ EAP
- ☐ ECA
- ☐ LAC
- ☐ MNA
- ☐ SAS

Central

- ☐ CFS
- ☐ DEC
- ☐ ESD
- ☐ FPD
- ☐ FPR
- ☐ HRO

Affiliates

- ☐ GEF
- ☐ ICSID
- ☐ IFC
- ☐ Inspection Panel
- ☐ Kennedy Center
- ☐ MIGA

D. EXTERNAL PARTNER

☐	IMF
☐	UN
☐	MDB/Other IO
☐	NGO
☐	Private Sector

☐	Part I
☐	Part II
☐	Other

E. COMMENTS: This brief contains the following:

- Dinner Information
- Schedule of Events
- Talking Points
- Conference Invitees
- Background Info.

File Location ☐ EXC ☐ IISC ☒ Archives	Cleared By	Date: 12/17/96
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BOARD OF GOVERNORS
OF THE
FEDERAL RESERVE SYSTEM
WASHINGTON, D. C. 20551

October 30, 1996

BOARD OF GOVERNORS
OF THE
FEDERAL RESERVE SYSTEM
96 OCT 30 AM 10:57
RECEIVED
OFFICE OF THE CHAIRMAN

Chairman Greenspan:

You asked us to remind you today to invite James D. Wolfensohn this evening to join the Conference of Chairmen at its December dinner gathering and to offer remarks after dinner. We have attached the invitation list for the Conference for your convenient reference.

Features of the dinner event:

- When: Wednesday, December 4, 1996
Reception at 6:30 p.m.; dinner served at 7:00 p.m.
Event concludes no later than 9:00 p.m.
- Where: At the Terrace Level of the Martin Building of the Board of Governors, "C" Street, NW, between 20th and 21st Streets, Washington, D.C.
- Invitees: The Board of Governors of the Federal Reserve System, the Chairmen and Deputy Chairmen of the twelve Federal Reserve Banks, plus a few senior staff. Attendance should number about 45 persons.
- After dinner: Remarks by a guest speaker on the topic of his choice, considered totally off the record. No press admitted. Taking a few questions after the remarks is always appreciated.

Thank you for extending the invitation.

Merphil Kondo and Kay Oliver

Attachment



**CONFERENCE OF CHAIRMEN OF THE FEDERAL RESERVE BANKS
at the
Board of Governors of the Federal Reserve System
Washington, D.C.
Wednesday, December 4 and Thursday, December 5, 1996**

INVITATION LIST

Chairmen

Deputy Chairmen

FEDERAL RESERVE BANK OF BOSTON

Jerome H. Grossman, M.D.
Chairman and Chief Executive Officer
Health Quality LLC
Boston, Massachusetts

William C. Brainard
Chairman
Department of Economics
Yale University
New Haven, Connecticut

FEDERAL RESERVE BANK OF NEW YORK

John C. Whitehead
Chairman
AEA Investors Inc.
New York, New York

Thomas W. Jones
Vice Chairman, President, and Chief
Operating Officer
Teachers Insurance and Annuity
Association-College Retirement
Equities Fund
New York, New York

FEDERAL RESERVE BANK OF PHILADELPHIA

Donald J. Kennedy
Business Manager
International Brotherhood of Electrical Workers
Local Union No. 269
Trenton, New Jersey

Joan Carter
President and Chief Operating Officer
UM Holdings Ltd.
Haddonfield, New Jersey

FEDERAL RESERVE BANK OF CLEVELAND

A. William Reynolds
Chief Executive
Old Mill Group
Hudson, Ohio

G. Watts Humphrey, Jr.
President
GWH Holdings, Inc.
Pittsburgh, Pennsylvania

FEDERAL RESERVE BANK OF RICHMOND

Claudine B. Malone
President
Financial & Management Consulting, Inc.
McLean, Virginia

Robert L. Strickland
Chairman
Lowe's Companies, Inc.
Winston-Salem, North Carolina

FEDERAL RESERVE BANK OF ATLANTA

Hugh M. Brown
President and Chief Executive Officer
BAMSI, Inc.
Titusville, Florida

Daniel E. Sweat, Jr.*
Program Director
The America Project
Atlanta, Georgia

David R. Jones**
President and Chief Executive Officer
Atlanta Gas Light Company
Atlanta, Georgia

FEDERAL RESERVE BANK OF CHICAGO

Robert M. Healey
Member
Illinois State Labor Relations Board
Chicago, Illinois

Lester H. McKeever, Jr.
Managing Partner
Washington, Pittman & McKeever
Chicago, Illinois

FEDERAL RESERVE BANK OF ST. LOUIS

John F. McDonnell
Chairman
McDonnell Douglas Corporation
St. Louis, Missouri

Susan S. Elliott
President and Chief Executive Officer
Systems Service Enterprises, Inc.
St. Louis, Missouri

FEDERAL RESERVE BANK OF MINNEAPOLIS

Jean D. Kinsey
Professor, Consumption Economics
Director, Retail Food Industry Center
University of Minnesota
St. Paul, Minnesota

David A. Koch
Chairman
Graco, Inc.
Minneapolis, Minnesota

FEDERAL RESERVE BANK OF KANSAS CITY

A. Drue Jennings
Chairman, President, and Chief Executive
Officer
Kansas City Power & Light Company
Kansas City, Missouri

Jo Marie Dancik
Area Managing Partner
Ernst & Young
Denver, Colorado

FEDERAL RESERVE BANK OF DALLAS

Cece Smith
General Partner
Phillips-Smith Specialty Retail Group
Dallas, Texas

Roger R. Hemminghaus
Chairman, President, and Chief Executive
Officer
Diamond Shamrock, Inc.
San Antonio, Texas

FEDERAL RESERVE BANK OF SAN FRANCISCO

Judith M. Runstad
Partner
Foster Pepper & Shefelman
Seattle, Washington

James A. Vohs
Chairman (Retired)
Kaiser Foundation Health Plan, Inc.
and Kaiser Foundation Hospitals
Oakland, California

* Director not attending.
** Substitute.

BOARD OF GOVERNORS
OF THE
FEDERAL RESERVE SYSTEM

96 OCT 30 AM 10:57

RECEIVED
OFFICE OF THE CHAIRMAN

OFFICE MEMORANDUM

DATE: December 4, 1996

TO: Mr. James D. Wolfensohn

FROM: Geoff Bergen 

EXTENSION: 85225

SUBJECT: **Your questions regarding private capital flows**

JDW:
This is the
remainder of
the info. promised
in other memo.
Jag.

1. Breakdown of countries receiving private capital flows: See attached chart from DEC.
2. The 1996 increase in private capital flows: DEC is reviewing the figures country by country, and it will take some time before they are certain. But they are confident of the figures cited (\$232 billion without Korea; \$257 billion with Korea) within a margin of error of \$10 billion either way.
3. Concerning the 1995 figure (\$197 billion, including Korea). Yes, DEC says the figure has only recently been revised upward to this level, and that it is correct.
4. Concerning the developing countries' share of GDP. In **constant dollar terms**, the developing countries' share of world GDP is currently at **20 percent** and should increase to **25 percent** by the year 2005. My DEC source also points out the following excerpt from *Global Economic Prospects*: "Developing countries already account for about one-fourth of industrial country exports. On current trends that share could rise to well over one-third by the end of the next decade. In **purchasing power parity terms**, developing countries could then account for more than **half of world output** (it is 44 percent now), and three developing countries – China, India, and Indonesia – could be among the world's six largest economies. . . By 2010, developing countries would also account for 56 percent of global consumption and 57 percent of global capital formation (again in PPP terms)."
5. Population increase: World population is indeed projected to increase by 2.5 billion to 8 billion by the year 2025.

Private flows to developing countries, 1990-96*(US\$ billions)*

	1990	1991	1992	1993	1994	1995	1996 ^a
All developing countries	44.0	57.2	92.8	157.5	154.2	179.3	231.3
Major recipients:							
China	8.1	7.5	21.3	39.6	44.4	46.5	40.9
Mexico	8.2	12.0	9.2	21.2	17.7	10.2	26.5
Brazil	0.5	3.6	9.8	16.1	12.2	20.6	14.2
Malaysia	1.8	4.2	6.0	11.3	8.9	11.9	15.7
Argentina	-0.2	2.9	5.8	16.6	8.2	9.8	14.8
Indonesia	3.2	3.4	4.6	1.1	7.7	11.8	23.0
Thailand	4.5	5.0	4.3	6.7	4.1	9.4	14.3
India	1.9	1.6	1.7	4.6	6.4	3.6	8.0
Russian Federation	5.6	0.2	10.5	3.1	0.7	0.6	2.7
Chile	2.1	1.2	1.6	2.2	4.3	4.8	4.4
Hungary	-0.3	1.0	1.2	4.7	2.8	7.5	2.0
Philippines	0.6	0.4	-0.8	2.8	4.2	4.3	6.7
Others	8.0	14.2	17.6	27.5	32.6	38.3	58.1
Low-income countries	11.9	11.4	24.6	48.7	56.9	54.1	57.0
Middle-income countries	32.1	45.8	68.2	108.8	97.4	125.2	174.3
Developing countries including Korea	45.1	62.7	100.3	166.2	162.3	197.1	255.6

^a Preliminary.

Note: The country ranking is based on cumulative 1990-96 private capital flows received.

Source: World Bank data.

Mr. James D. Wolfensohn

**Conference of Federal Reserve Bank Chairman
December 4, 1996**

Talking Points

Private Capital Flows to Developing Countries

Growth of flows: The 1990s has seen an explosion of private capital flows to developing countries. It has gone from around \$32 billion in 1989 to an estimated \$230 billion in 1996.

Composition of flows: Foreign direct investment is the largest component (estimated \$93 million for 1996). But a notable feature of this upsurge has been the growth of portfolio flows, both bonds and equities. Starting from almost nothing in 1989, portfolio flows are estimated to reach over \$90 billion in 1996. These flows have continued to increase despite higher international interest rates and the Mexican peso crisis.

Growth of stock markets: Today over 60 developing countries have stock markets, compared with half that number in 1985. Their capitalization has increased more than ten-fold over the past decade, from \$171 billion in 1985 to \$1.9 trillion in 1995. Liquidity has increased even faster: turnover rose from 26% to 85% of emerging market capitalization between 1985 and 1994. And the number of domestic companies listed on emerging markets more than doubled from around 9,000 in 1985 to nearly 19,500 in 1995.

Behind the growth. Economic growth has been on the upswing in developing countries. Their GDP is growing at 5-6 percent a year [twice the OECD rate] and we expect this growth to continue into the next century. Prospects for higher returns and opportunities for risk diversification have led to growing investment in emerging markets by institutional investors. In 1986 there were 17 emerging market country funds and 9 regional or global funds. By 1995 there were nearly 500 country funds and over 800 regional and global funds, which are allocating increasing proportions of their portfolios to emerging markets. Pension funds have followed suit.

Strong fundamentals attract investment: Countries with the strongest economic fundamentals [e.g., high investment/GDP ration, low inflation, and low real exchange rate variability] have received the largest flows as a proportion of domestic GDP. Portfolio flows remain sensitive to movements in both global and domestic interest rates, but the fundamentals are at work here too [the country credit rating, secondary bond prices, price-earnings ratios in domestic stock markets, etc.]

The benefits of this growth: This growth in investment – and in the capacity for local investment – helps developing countries. It fuels the growth of business enterprises that are bringing new prosperity, jobs and a better life around the world. It helps us at home too. U.S. exports to developing countries have more than doubled from \$91 billion in 1987 to more than \$191 billion in 1995.

Problem -- the concentration of investment: The disturbing trend is that over the period 1990-95, only a dozen countries accounted for more than 90 percent of net private flows [although countries such as Hungary, India, Poland, the Philippines and Vietnam are attracting more private capital since 1993]. The entire continent of Africa received less than \$5 billion in private capital flows in 1995, less than 3 percent of the total for developing areas.

Problem – cautious institutional investors: Despite impressive increases, the share of emerging markets in the portfolios of institutional investors remains small. Even in the US, where institutional investors have increased their exposure to emerging markets more rapidly, mutual funds and pension funds are estimated to hold an average of only 2 percent of their portfolios in emerging markets. For most other industrial countries these shares are much lower.

Variation in volatility of flows between countries: Volatility of portfolio investment has been a major concern since the Mexico Peso Crisis, although it has shown an impressive comeback since the first half of 1995. Overall volatility of private capital flows has come down in the 1990s. This suggests that markets have entered a more mature phase. Governments have shown an awareness and ability to respond quickly and aggressively to changes in market conditions. But there is also significant variation in volatility [Asia being less subject to volatility than other areas]. And markets have become more discriminating between countries on the basis of their underlying fundamentals.

The volatility of capital flows and potential vulnerability to reversals remain a concern at the level of individual countries. Venezuela and Turkey were the first to experience major capital flow reversals in the 1990s [Venezuela had a reversal of \$5.4 billion, or 9 percent of GDP from 1992-94; Turkey lost \$19 billion, or 11 percent of GNP, 1993-94]. Mexico's reversal was notable not only for being the largest in terms of magnitude [\$20.4 billion], but also for triggering large reversals in several other countries, most notably Argentina and Brazil.

The sources of vulnerability:

1. Emerging markets remain more susceptible to potential **investor herding**.
2. Many countries are trying to maintain macroeconomic stability **without strong fiscal underpinnings**. Interest rates in these countries tend to be high, attracting short-term flows, but sometimes without the necessary long-term fundamentals.

3. The **banking systems** in many recipient countries are quite fragile, and the surges in flows can greatly exacerbate these vulnerabilities. In many cases, banking systems have only recently been deregulated, the incentive framework is distorted toward excessive risk taking, banks are poorly capitalized, and prudential regulation and supervision capabilities have not yet been established.

Policy lessons from cross-country experience:

1. **Fiscal policy** needs to be even more cautious and responsive in the face of large capital inflows. This will both alleviate pressures of overheating and reduce vulnerability to large reversals.
2. There is strong merit in **curbing lending booms** associated with capital inflows while addressing the underlying weaknesses of the banking systems.
3. Development of **well-functioning capital markets** will both reduce risks of potential instability and attract a growing pool of portfolio investment.

The Response of the World Bank Group

The World Bank Group has been working hard to help our client countries (where 4.5 billion people live) meet the challenges of attracting investment and avoiding volatility. Some of you may be more familiar with the Bank than others, so perhaps I should take a minute to give you an overview of what we look like:

The IBRD and IDA. First, there is the *World Bank* itself. This is the original Bank, which was created to make loans to sovereign governments for purposes of reconstruction. Over the years it has evolved from an institution that lent mostly for infrastructure into one that lends around \$22 billion a year in all areas of development, including agriculture, the environment, health and education. The Bank has a concessional lending arm, the *International Development Association* (IDA), funded by taxpayer dollars, which lends to the poorest of poor countries [e.g., most African countries fall under IDA – for about half its total lending of around \$6 billion].

IFC. Second, there is the *International Finance Corporation* (IFC), the part of the World Bank Group that works directly with the private sector. In partnership with corporations and financial institutions, IFC works in countries where there are great investment opportunities, but where the private sector is generally unwilling to go, building a base for the local private sector to take off. Since its founding in 1956, it has provided financing to nearly 2,000 companies in 125 countries. Last year alone, IFC mobilized more than \$8 billion in support of projects worldwide with investments in infrastructure, emerging stock markets, improved regulatory environments and much more. And IFC is growing.

MIGA. Third, there is the *Multilateral Investment Guarantee Agency* (MIGA), which provides private investors going into developing countries with guarantees against

political and other non-commercial risk. Its guarantees have catalyzed foreign direct investments now totaling an estimated \$15 billion, and its on-line marketing and information service — the IPAnet — offers data and analysis on the business climate in more than 90 countries.

The changing Bank Group. As a Group, we are changing. We are increasing the level of service to our clients; creating new products; and acting as a connector and broker between governments, the private sector, and civil society. We are becoming what I have called the “Knowledge Bank,” by which I mean we will be able to use the information technology available now to make our vast store of knowledge on almost any topic in development and make it universally available. We are also working together more closely as a group. This is particularly true of our efforts in the private sector. We have created the *Private Sector Development Group*, which unifies the different areas of the Bank working on private sector issues.

What have we been doing?

Legal and policy framework. We are working throughout our client countries to help them build the legal and policy framework that will make them attractive to investors and allow real competition. [you may want to mention capacity building and anti-corruption measures in connection with this].

- **Russia** is a particularly interesting example because they have had to start from scratch with building a regulatory structure for private investment and transactions. The Bank Group, and particularly IFC, have been helping Russia design a capital market development strategy flexible enough to meet its constantly shifting conditions. Given how massive its privatization program has come, we have had to act quickly to help new capital markets handle the pressure. IFC has responded by sending experienced senior staff to advise the Russian Federal Commission for Securities Markets (a new body with ministerial status that is principal regulator of capital markets); and it has helped several regions with voucher privatization programs.
- **India** is another good example. Beginning in 1991, with our advice and support India implemented economic reforms such as investment deregulation, trade liberalization, financial reforms and tax reforms that have transformed the environment for private investment. New rules for foreign portfolio investment have made it a lot easier to participate in stock markets. As a result Foreign direct investment went from \$165 million in 1990 to more than \$600 million in 1994. Portfolio investment went from next to nothing in 1990 to more than \$4 billion in 1994.
- And we are expanding our work to improve the investment environment into new, tougher environments. At our Annual Meetings this year, IFC announced a new

initiative that will extend its reach to 24 nations where it has never worked before — such as several Central African nations.

Private sector assessments. In many countries, the structure of the private sector and the constraints to its development are not even known. Since 1992 we've been carrying out private sector assessments, and these are forming the basis of dialogue with government on joint work in policy and institutional reform. We've done over 30 of these in countries as diverse as Ghana, Indonesia, India, Poland and Egypt; and we have a half dozen more being done this year.

Building financial institutions. Financial sector development is at the core of building a business-friendly environment, and we are lending in support of both policy reforms and building the technical capacity of financial institutions to handle systemic shocks like the Mexico and Argentina crises. We are working to build up our own specialized expertise in areas like privatization of state-run banks, banking supervision, central banking, liquidity management and dealing with bad assets.

- For example, we are involved in building financial systems throughout **the former Soviet Union and Eastern Europe**. In **Russia** our support for financial institution development comes in the form of one of the largest technical assistance loans the Bank has ever made -- \$200 million -- to build the capacity of 25 core private commercial banks which will have to operate at International Banking Standard. In Poland a technical assistance project has successfully twinned Polish and international banks. In Hungary, the Bank and IFC began work to build bond and equity markets as far back as 1985, and we are now helping Hungary with a loan to build its banking supervision capacity. We are also providing significant technical assistance and advice to Latvia and Lithuania in dealing with their present financial sector problems.
- In **India**, IFC invested in the first country-wide stock brokerage, which allowed arbitrage among its 16 or so stock exchanges. IFC also helped pave the way for private sector mutual funds in India.
- I should add that at our Annual Meetings a couple of months ago, the Managing Director of the IMF, Michel Camdessus, and I announced that the Bank and the Fund would be launching a joint initiative to work together in finding ways of improving financial systems in the developing countries.

Building portfolio investment funds. In 1984, our International Finance Corporation (IFC) helped catalyze the emerging markets portfolio industry when it launched the Korea Fund [a \$60 million issue, publicly offered on the NYSE, with management by Scudder, Stevens & Clark; and underwriting syndicate led by First Boston Group, the IFC and Shearson Lehman]. Two years later the IFC helped launch the Emerging Markets Growth Fund, the first global fund targeted at emerging markets [starting with

\$50 million, by 1994 the EMGF had net assets of \$5.5 billion]. These early successes kindled the interest of investors worldwide. Since 1986, the IFC has underwritten or invested in over 30 other portfolio investment funds. For each dollar that IFC has invested in funds, other investors have provided an average of \$6.80 [i.e., IFC's own commitments of \$806 million have been associated with \$6.3 billion at initial fund capitalization].

Providing advice to our clients. Our **Foreign Investment Advisory Service (FIAS)** is a joint venture of the Bank and the IFC which for 11 years has advised governments [in about 100 countries] on investment laws and regulations, taxation, and ways to attract investors; it also helps governments establish investment promotion agencies. In China, for example, FIAS helped the government overcome its unwillingness to convert local currency earnings to foreign exchange by advising it in creating what became a national, computer-linked free market for forex. FIAS' most recent project in China has aimed to accelerate private infrastructure investments by eliminating policy and regulatory bottlenecks.

Increasing information. Finally, we are producing the information that investors need to enter new markets with adequate levels of comfort. The **Emerging Markets Data Base**, produced by IFC, has gained international recognition as the world's premier source of reliable and comprehensive information on stock markets in developing countries [it covers 44 of them]. It is the basis for The IFC Investable Indexes (IFCI), which have become the principal benchmark for emerging markets used by institutional investors. Four years ago, virtually no emerging markets investments were made on a "passive" indexed basis. Now nearly \$10 billion is managed by index. Roughly three-quarters of this is based on IFC indexes.

MASOOD AHMED

December 3, 1996

Mr. James Wolfensohn

Jim:

Further to my note of yesterday, please find attached a short brief on Private Capital Flows and Emerging Markets.

Best regards.

JB for Masood

Attachment

cc: Amar Bhattacharya

Private Capital Flows and Emerging Markets

- Private capital flows to developing countries have proven to be remarkably resilient. Despite the increases in U.S. interest rates in 1994 and the Mexico crisis in 1995, private flows have continued to grow albeit at a slower rate. Total private flows (including Korea which this year has been classified as a high income country) are estimated to have reached \$197 billion in 1995 compared with \$166 billion in 1993 (see Table 1). Preliminary indications are that private capital flows will surpass \$250 billion in 1996 (\$230 billion to low and middle income countries).
- The main reason that private capital flows have shown resilience is because a very large proportion of these flows is in the form of foreign direct investment, which is less susceptible to cyclical swings and short-term shocks. But portfolio flows have also shown an impressive recovery from the aftershocks of the Mexico crisis. Despite the large drop in the first half of 1995, portfolio flows recorded only a small decline for the year as a whole, and a significant increase in 1996 to levels that are comparable to the peak reached in 1993.
- While low interest rates in industrial countries provided an initial impetus to the surge in portfolio investment in emerging markets, our view is that these flows have reached a new phase, driven by increased financial integration. Two fundamental forces are driving the growing investor interest in and integration of developing countries:
 - higher longer-term expected rates of return following policy reforms and improved creditworthiness, and;
 - the opportunities that developing countries provide for risk diversification because of low correlations between returns in developing and industrial countries.
- These forces have been buttressed by sweeping changes in the enabling environment in both industrial and developing countries.
- Economic growth in developing countries has been on the upswing in the 1990s, and unlike in the 1980s, is expected to remain significantly stronger than in industrial countries (Figure 1). Prospects for higher returns and opportunities for risk diversification have led to growing investment in emerging markets by institutional investors (Figures 2 and 3). In 1986 there were 17 emerging market country funds and 9 regional or global funds. By 1995 there were nearly 500 country funds and over 800 regional and global funds. International and global funds are also allocating increasing proportions of their portfolios to emerging markets. Pension funds have followed suit. Even though they began to invest in emerging markets more recently, allocations of U.S. pension funds to emerging markets are now comparable to those of mutual funds, with some of the larger funds investing considerably higher proportions.

- Despite the impressive increases, the share of emerging markets in the portfolios of institutional investors remains small—well below their share in world market capitalization. Even in the United States, where institutional investors have increased their exposure to emerging markets more rapidly, mutual funds and pension funds are estimated to hold an average of only 2 percent of their portfolios in emerging markets. For most other industrial countries these shares are much lower.
- The structural forces driving capital flows to developing countries will continue to unfold, with the aging of populations providing an added new impetus over the medium and longer-term. Net private capital flows to developing countries are therefore expected to be sustained over the medium term although the rate of growth will inevitably decline. We also expect that private flows are likely to be less sensitive to small changes in international interest rates and in the current low inflationary environment, the likelihood of large increases in interest rates is low. As the events after the Mexico crisis have demonstrated, contagion effects are also not likely to be long lasting, as markets are becoming more discerning and governments more responsive to changes in market sentiment.
- The main risks of large reversals and systemic risk lie at the individual country level. Although some of the major recipients such as Chile now have a well established track record, many other countries remain vulnerable to potential reversals for three main reasons.
 - First, emerging markets remain more susceptible to potential investor herding.
 - Second, many countries are trying to maintain macroeconomic stability without strong fiscal underpinnings. Interest rates in these countries tend to be high, attracting short-term flows, but sometimes without the necessary long term fundamentals.
 - Third, the banking systems in many recipient countries are quite fragile, and the surges in flows can greatly exacerbate these vulnerabilities.
- There is, therefore, a need for a prudent stance on the part of governments despite the market orientation of the new flows. Three main policy lessons are emerging from cross-country experience in this regard:
 - First, fiscal policy needs to be even more cautious and responsive in the face of large capital inflows. This will both alleviate pressures of overheating and reduce vulnerability to large reversals.
 - Second, there is strong merit in curbing lending booms associated with capital inflows while addressing the underlying weaknesses of the banking systems.
 - And, third, development of well functioning capital markets will both reduce risks of potential instability and attract the growing pool of portfolio investment.

TABLE 1**Aggregate net long-term private capital flows to developing countries, 1989 - 1996***(Including Korea, Rep.)*

<i>(US\$ billions)</i>	1989	1990	1991	1992	1993	1994	1995	1996 ^a
Total private capital flows	40.6	45.1	62.7	100.3	166.2	162.3	197.1	256.6
Foreign direct investment	24.0	25.0	35.0	46.6	68.3	80.2	93.3	95.0
Bonds	4.1	2.5	12.8	12.5	39.6	33.5	38.8	57.7
Portfolio equity investment	3.4	3.7	7.5	14.0	50.9	35.2	35.7	49.2
Commercial banks	1.0	2.0	3.5	14.0	-0.7	11.6	33.8	47.2
Others	8.2	11.8	3.9	13.1	8.0	1.9	-4.4	7.6

a. Preliminary.

Source : World Bank data.

Aggregate net long-term private capital flows to developing countries, 1989 - 1996*(Excluding Korea, Rep.)*

<i>(US\$ billions)</i>	1989	1990	1991	1992	1993	1994	1995	1996 ^a
Total private capital flows	41.2	44.0	57.2	92.8	157.5	154.2	179.3	232.3
Foreign direct investment	23.2	24.2	33.8	45.9	67.7	79.4	91.8	93.2
Bonds	4.0	2.3	10.1	9.9	35.9	29.3	29.3	45.8
Portfolio equity investment	3.4	3.2	7.2	11.0	44.9	32.7	32.1	45.7
Commercial banks	2.2	3.0	2.8	12.5	-0.3	11.0	30.6	39.8
Others	8.5	11.2	3.3	13.5	9.2	1.8	-4.4	7.9

a. Preliminary.

Source : World Bank data.

NOTE : THE 1996 NUMBERS ARE VERY PRELIMINARY AND FOR YOUR USE ONLY.

Figure 1 Growth in developing and industrial countries, 1980-2005

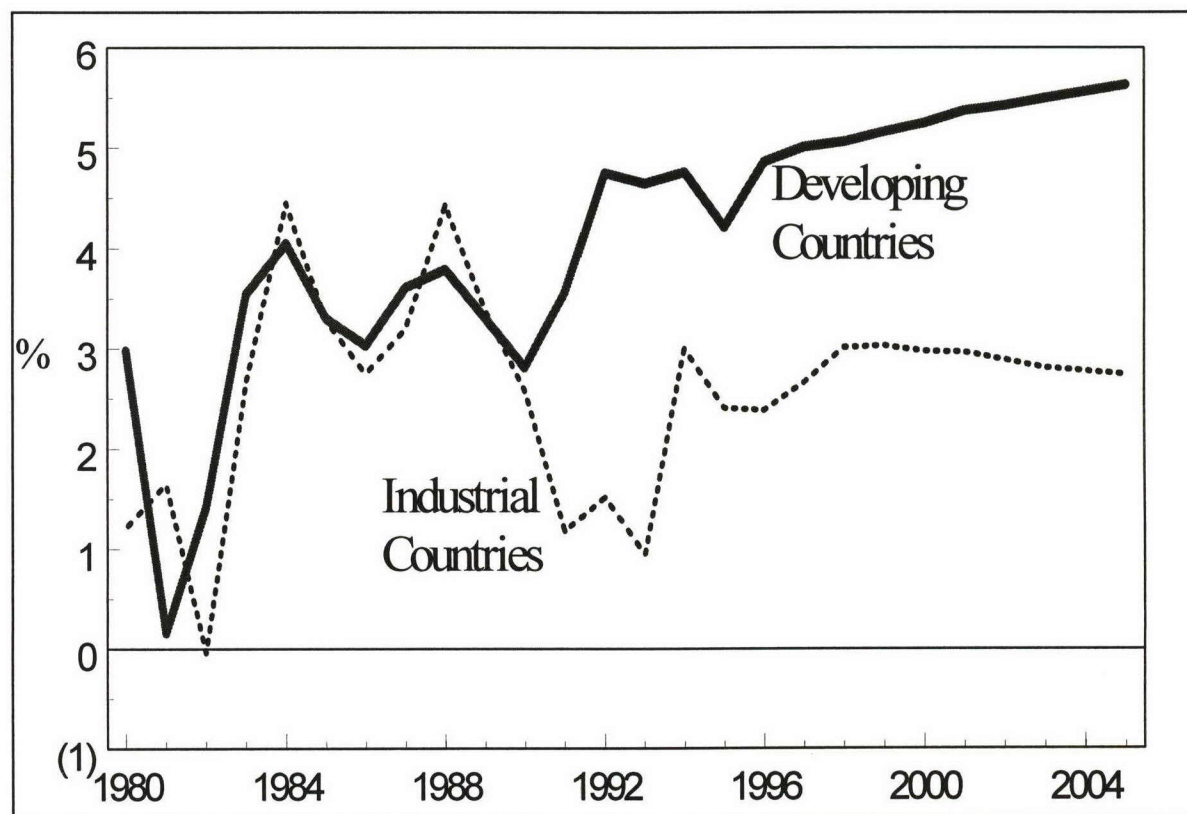


Figure 2 Emerging market and other international assets of U.S. open end mutual funds

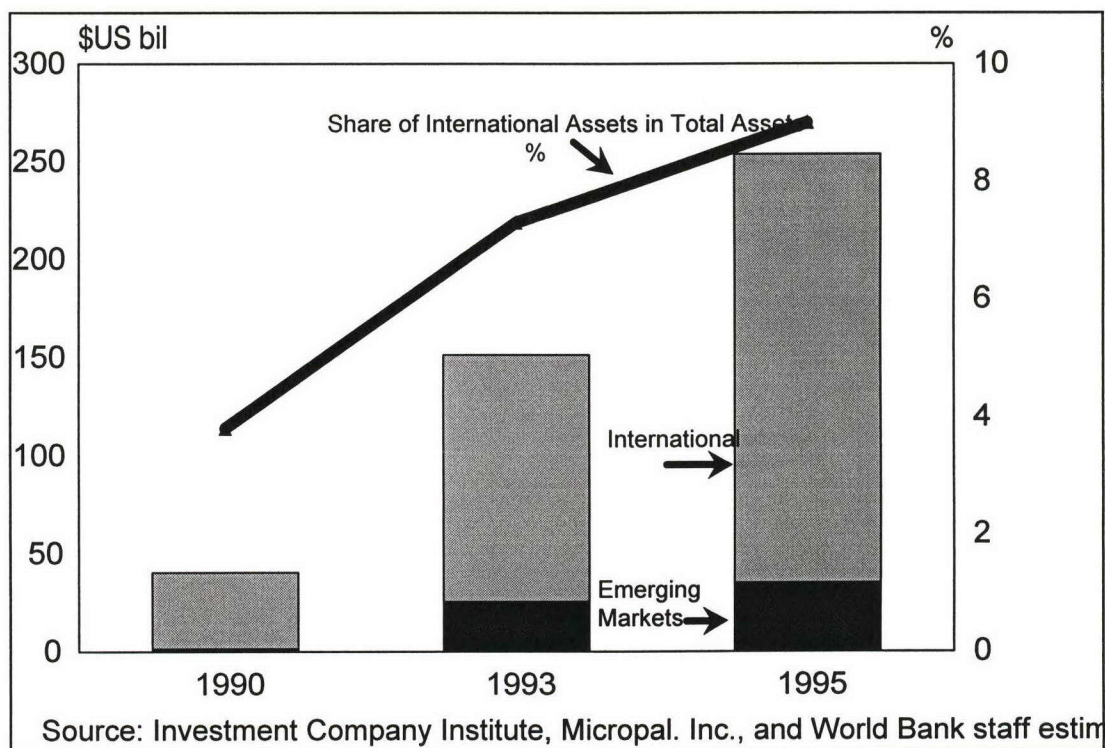
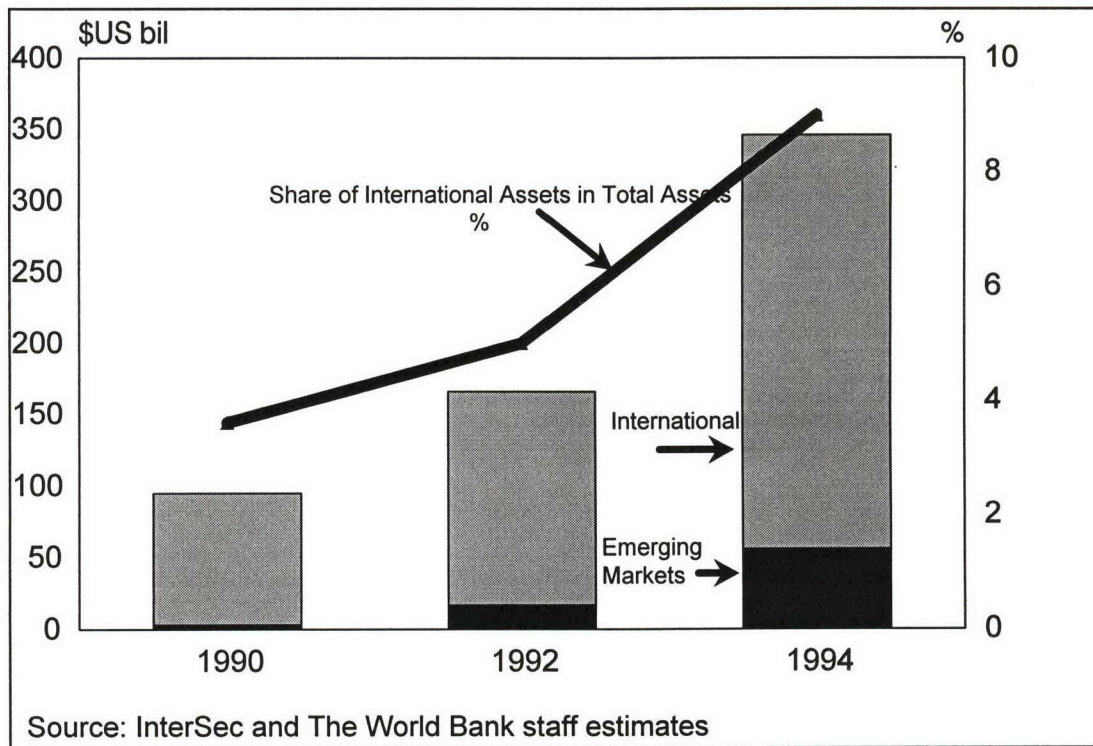


Figure 3 Emerging market and other international assets of U.S. pension funds



OFFICE MEMORANDUM

DATE: December 4, 1996

TO: Mr. James D. Wolfensohn

FROM: Geoff Bergen 

EXTENSION: 85225

SUBJECT: **Your questions regarding private capital flows**

1. Breakdown of countries receiving private capital flows: See attached chart from DEC. They are pounding out more comprehensive numbers right now.

2. The 1996 increase in private capital flows: DEC is reviewing the figures country by country, and it will take some time before they are certain. But they are confident of the figures cited (\$232 billion without Korea; \$257 billion with Korea) within a margin of error of \$10 billion either way.

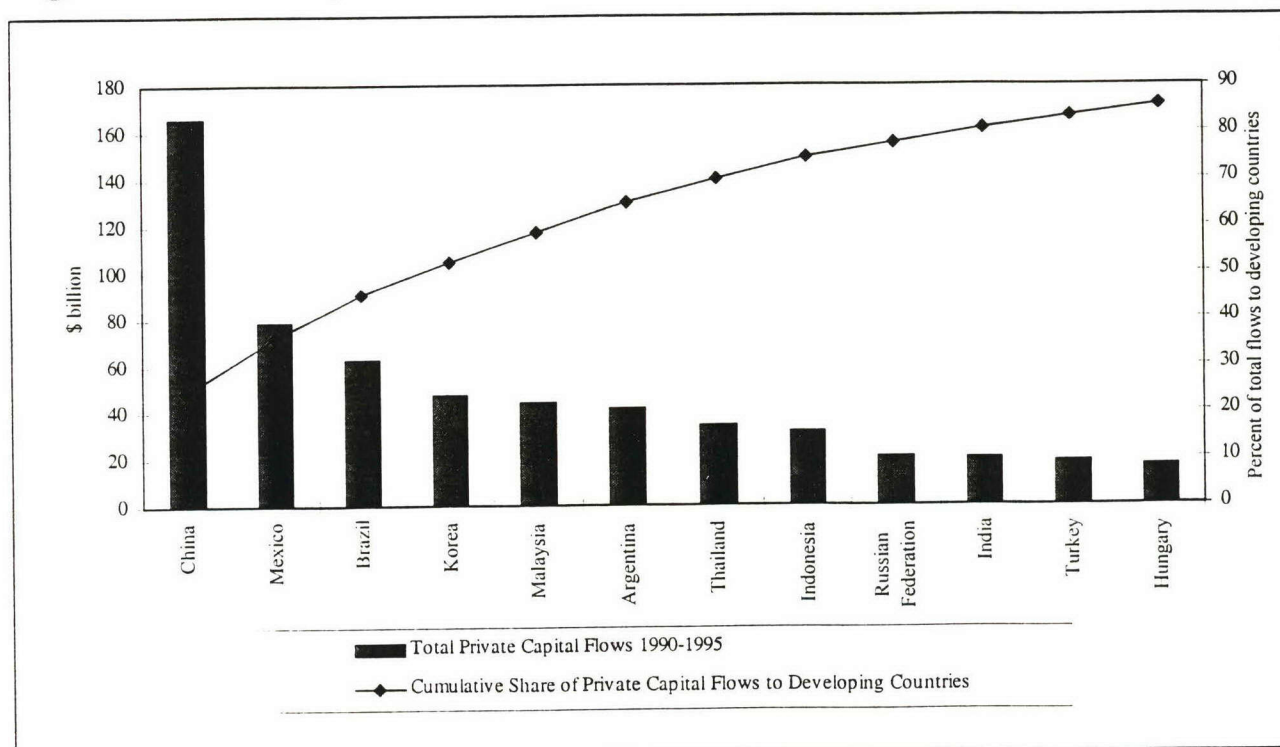
3. Concerning the 1995 figure (\$197 billion, including Korea). Yes, DEC says the figure has only recently been revised upward to this level, and that it is correct.

4. Concerning the developing countries' share of GDP. DEC is checking on this right now.

5. Population increase: World population is indeed projected to increase by 2.5 billion to 8 billion by the year 2025.

While the composition of private flows has broadened, however, their destination has become more concentrated. Only a dozen countries accounted for more than 90 percent of net private flows attracted by developing countries during 1990-95 (figure 1.3). In contrast, the top twelve recipients accounted for [75] percent of total private capital flows during 1975-82. When scaled by GDP, the distribution of the flows is less uneven, since the top twelve countries also account for [80] percent of developing country GDP. The base of recipients is also broadening steadily. Countries such as Hungary, India, Poland, Philippines and Vietnam have been attracting larger volumes of private capital flows since 1993.

Figure 1.3 Private Capital Flows Are Concentrated in a Few Countries



Source: World Bank Debtor Reporting System.

In terms of regional distribution, East Asia and Latin America account for the dominant and roughly equivalent shares of private capital flows (figure 1.4). Whereas East Asia has increased its share steadily over the past two decades, Latin America has seen a more dramatic recovery from the sharp decline during the post-debt crisis years. The Europe and Central Asia region is the third largest destination for private capital flows. Although South Asia's



OF THE
FEDERAL RESERVE SYSTEM

WASHINGTON, D. C. 20561

November 25, 1996

TO: Geoff Bergen
World Bank via FAX 202-522-1677

FROM: Merphil Kondo
Federal Reserve Board 202-452-3875

I've attached a copy of the memo we sent to Chairman Greenspan to remind him about asking Mr. Wolfensohn to dinner. It outlines the features of the event.

Also included are the Schedule of Events for this meeting of the Conference of Chairmen, the Invitation list of participants (with two substitutes noted), and the organizational guidelines for the Conference. On the latter document I listed the members of the Executive Committee, who will be seated at the dinner table with Mr. Wolfensohn and Chairman Greenspan.

As you are aware, all directors on the boards of the Federal Reserve Banks are "outside" directors; none is an officer of a Reserve Bank. They are drawn from the various sectors of the economy, and are grouped into 3 classes. One class is wholly bankers, and the other two may not be by law. In fact, the directors who comprise the class from which the Chairman and Deputy Chairman of each board are chosen by the Board of Governors may not even own shares in banks, and may not be officers, employees or directors of banks under the law.

Will you be joining us for dinner? Or will Mr. Wolfensohn be accompanied by someone else? We'd appreciate the opportunity to prepare for any staff who will accompany him.

Mr. Vincent Cremona, our Chief of Protocol, will be in contact with your offices to coordinate arrangements for Mr. Wolfensohn's appearance here. I plan to ask him to call Lai-Foong Goh to initiate coordination. Is there another person he should call instead?

I will be happy to help you in any way I can. I will be out of the office tomorrow and, of course, for the Thanksgiving weekend. I will be here on Wednesday. But you should also feel free to call my colleague, Kay Oliver, at 202-452-3392 for any assistance you require.

Attachments



OF THE
FEDERAL RESERVE SYSTEM

WASHINGTON, D. C. 20551

October 30, 1996

Chairman Greenspan:

You asked us to remind you today to invite James D. Wolfensohn this evening to join the Conference of Chairmen at its December dinner gathering and to offer remarks after dinner. We have attached the invitation list for the Conference for your convenient reference.

Features of the dinner event:

- When:** Wednesday, December 4, 1996
Reception at 6:30 p.m.; dinner served at 7:00 p.m.
Event concludes no later than 9:00 p.m.
- Where:** At the Terrace Level of the Martin Building of the Board of Governors, "C" Street, NW, between 20th and 21st Streets, Washington, D.C.
- Invitees:** The Board of Governors of the Federal Reserve System, the Chairmen and Deputy Chairmen of the twelve Federal Reserve Banks, plus a few senior staff. Attendance should number about 45 persons.
- After dinner:** Remarks by a guest speaker on the topic of his choice, considered totally off the record. No press admitted. Taking a few questions after the remarks is always appreciated.

Thank you for extending the invitation.

Merphil Kondo and Kay Oliver

Phone # (202) 452-3875 452-3392

FAX # (202) 452-2827

Attachment

Schedule of Events

for the

Conference of Chairmen of the Federal Reserve Banks
Washington, D.C.

Wednesday, December 4, 1996

5:45 p.m.

Tour of current art exhibit (optional)
The group will assemble on the street level
of the Federal Reserve's Martin Building.



6:30 p.m.

Reception
Martin Building, Terrace Level, Room L



7:00 p.m.

Dinner Meeting
Martin Building, Terrace Level, Room D
Remarks by James D. Wolfensohn, President
International Bank for Reconstruction and
Development (The World Bank)



Thursday, December 5, 1996

All plenary sessions will be held in Room E.

7:45 a.m.

Buffet Breakfast
Martin Building, Terrace Level, Room F
Executive Committee, Room H
Others, Room F



8:30 a.m.

Opening Remarks
Cece Smith, Chairman, Conference of Chairmen

Business Meeting
Report of the Executive Committee
Report of the 1996 Nominating Committee

8:45 a.m.

Roundtable discussion of current economic conditions
(Seven minutes per District)

10:15 a.m.

Current Policy Issues
The Honorable Alan Greenspan, Chairman, Board of Governors

10:45 a.m.

Break



Thursday, December 5, 1996 (Cont'd)

11:00 a.m.

Update on European Financial Integration

--Edwin M. Truman, Staff Director for
International Finance

11:35 a.m.

Outlook for Banking Legislation

--Donald J. Winn, Assistant to the Board for
Congressional Liaison

11:50 a.m.

Issues of Interest to Reserve Banks

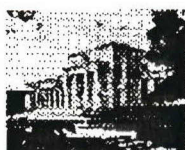
The Honorable Edward W. Kelley, Jr., Member of the
Board of Governors

1:00 p.m.

Adjournment

Buffet Lunch

Martin Building, Terrace Level, Room F



Offices of the Board of Governors and its staff are located in two buildings on C Street, N.W., between 20th and 21st Streets, directly across the street from each other. The older building is the Marriner S. Eccles Building, and the newer, more modernistic building is the William McChesney Martin, Jr., Building. Entrances to both buildings are on C Street.



The Eccles and Martin Buildings are nonsmoking buildings.

If you wish to smoke, please consult a member of the conference staff for locations of designated smoking areas.

***Location of Meeting
Sessions and Meals***

All meals and meeting sessions will take place on the Terrace Level of the Martin Building.

OFFICE MEMORANDUM

DATE: December 3, 1996

TO: Mr. James D. Wolfensohn

FROM: Geoff Bergen



EXTENSION: 85225

SUBJECT: Talking Points for conference of Federal Reserve Bank Chairmen, Dec. 4

Attached are suggested talking points for your remarks to the Federal Reserve Chairman. My apologies for their lateness. I had drawn up a draft on a different topic [the importance of the World Bank to the American economy], when I heard through Hany you wanted material on financial markets. The first section of the attached points draws on the material provided by DEC yesterday. The latter sections of the talking points are an adaptation of the material in your talking points for the Russell 20-20 Association, as they indicate what the Bank is doing to help our clients build stronger financial markets.

Mr. James D. Wolfensohn

Conference of Federal Reserve Bank Chairman

December 4, 1996

Talking Points

Private Capital Flows to Developing Countries

Growth of flows: The 1990s has seen an explosion of private capital flows to developing countries. It has gone from around \$32 billion in 1989 to an \$220 billion in 1996. These flows have continued to increase despite higher international interest rates and the Mexican peso crisis.

Composition of flows: Foreign direct investment is the largest component (\$90 billion in 1995, or 54 percent of the total). But a notable feature of this upsurge has been the growth of portfolio flows, both bonds and equities. Starting from almost nothing in 1989, portfolio flows reached around \$60 billion in 1995 (30 percent of total private flows).

Growth of stock markets: Today over 60 developing countries have stock markets, compared with half that number in 1985. Their capitalization has increased more than ten-fold over the past decade, from \$171 billion in 1985 to \$1.9 trillion in 1995. Liquidity has increased even faster: turnover rose from 26% to 85% of emerging market capitalization between 1985 and 1994. And the number of domestic companies listed on emerging markets more than doubled from around 9,000 in 1985 to nearly 19,500 in 1995.

The benefits of this growth: This growth in investment – and in the capacity for local investment – helps developing countries. It fuels the growth of business enterprises that are bringing new prosperity, jobs and a better life around the world. It helps us at home too. U.S. exports to developing countries have more than doubled from \$91 billion in 1987 to more than \$191 billion in 1995.

Problem -- the concentration of investment: The disturbing trend is that over the period 1990-95, only a dozen countries accounted for more than 90 percent of net private flows [although countries such as Hungary, India, Poland, the Philippines and Vietnam are attracting more private capital since 1993]. The entire continent of Africa received less than \$5 billion in private capital flows in 1995, less than 3 percent of the total for developing areas.

Strong fundamentals attract investment: Countries with the strongest economic fundamentals [e.g., high investment/GDP ratio, low inflation, and low real exchange rate variability] have received the largest flows as a proportion of domestic GDP. Portfolio flows remain sensitive to movements in both global and domestic interest rates, but the

fundamentals are at work here too [the country credit rating, secondary bond prices, price-earnings ratios in domestic stock markets, etc.]

Variation in volatility of flows between countries: Volatility of portfolio investment has been a major concern since the Mexico Peso Crisis, although it has shown an impressive comeback since the first half of 1995. Overall volatility of private capital flows has come down in the 1990s. This suggests that markets have entered a more mature phase. Governments have shown an awareness and ability to respond quickly and aggressively to changes in market conditions. But there is also significant variation in volatility [Asia being less subject to volatility than other areas]. And markets have become more discriminating between countries on the basis of their underlying fundamentals.

The volatility of capital flows and potential vulnerability to reversals remain a concern at the level of individual countries. Venezuela and Turkey were the first to experience major capital flow reversals in the 1990s [Venezuela had a reversal of \$5.4 billion, or 9 percent of GDP from 1992-94; Turkey lost \$19 billion, or 11 percent of GNP, 1993-94]. Mexico's reversal was notable not only for being the largest in terms of magnitude [\$20.4 billion], but also for triggering large reversals in several other countries, most notably Argentina and Brazil.

The challenge for developing countries: The challenge for developing countries varies from one to the next. For some [e.g., all of sub-Saharan Africa] the challenge is attracting investors – which means a focus on the fundamentals. For others [such as Mexico] it is how to avoid overheating [in terms of widening current account deficits, inflationary pressures and real exchange rate appreciation] and vulnerability to large reversals or private flows.

The key problem of banking systems: A major challenge throughout the developing areas is strengthening the banking systems. One of the lessons of Mexico and Argentina is that banks play an even more dominant role in financial intermediation than in industrial countries; and that their health is generally quite weak. In many cases, banking systems have only recently been deregulated, the incentive framework is distorted toward excessive risk taking, banks are poorly capitalized, and prudential regulation and supervision capabilities have not yet been established. The danger this poses is that increased openness of the financial system risks inefficient intermediation of capital inflows and risk taking by banks.

The Response of the World Bank Group

The World Bank Group has been working hard to help our client countries (where 4.5 billion people live) meet the challenges of attracting investment and avoiding volatility.

Some of you may be more familiar with the Bank than others, so perhaps I should take a minute to give you an overview of what we look like:

The IBRD and IDA. First, there is the *World Bank* itself. This is the original Bank, which was created to make loans to sovereign governments for purposes of reconstruction. Over the years it has evolved from an institution that lent mostly for infrastructure into one that lends around \$22 billion a year in all areas of development, including agriculture, the environment, health and education. The Bank has a concessional lending arm, the *International Development Association* (IDA), funded by taxpayer dollars, which lends to the poorest of poor countries [e.g., most African countries fall under IDA – for about half its total lending of around \$6 billion].

IFC. Second, there is the *International Finance Corporation* (IFC), the part of the World Bank Group that works directly with the private sector. In partnership with corporations and financial institutions, IFC works in countries where there are great investment opportunities, but where the private sector is generally unwilling to go, building a base for the local private sector to take off. Since its founding in 1956, it has provided financing to nearly 2,000 companies in 125 countries. Last year alone, IFC mobilized more than \$8 billion in support of projects worldwide with investments in infrastructure, emerging stock markets, improved regulatory environments and much more. And IFC is growing.

MIGA. Third, there is the *Multilateral Investment Guarantee Agency* (MIGA), which provides private investors going into developing countries with guarantees against political and other non-commercial risk. Its guarantees have catalyzed foreign direct investments now totaling an estimated \$15 billion, and its on-line marketing and information service — the IPAnet — offers data and analysis on the business climate in more than 90 countries.

The changing Bank Group. As a Group, we are changing. We are increasing the level of service to our clients; creating new products; and acting as a connector and broker between governments, the private sector, and civil society. We are becoming what I have called the “Knowledge Bank,” by which I mean we will be able to use the information technology available now to make our vast store of knowledge on almost any topic in development and make it universally available. We are also working together more closely as a group. This is particularly true of our efforts in the private sector. We have created the *Private Sector Development Group*, which unifies the different areas of the Bank working on private sector issues.

What have we been doing?

Legal and policy framework. We are working throughout our client countries to help them build the legal and policy framework that will make them attractive to investors and

allow real competition. [you may want to mention capacity building and anti-corruption measures in connection with this].

- **Russia** is a particularly interesting example because they have had to start from scratch with building a regulatory structure for private investment and transactions. The Bank Group, and particularly IFC, have been helping Russia design a capital market development strategy flexible enough to meet its constantly shifting conditions. Given how massive its privatization program has come, we have had to act quickly to help new capital markets handle the pressure. IFC has responded by sending experienced senior staff to advise the Russian Federal Commission for Securities Markets (a new body with ministerial status that is principal regulator of capital markets); and it has helped several regions with voucher privatization programs.
- **India** is another good example. Beginning in 1991, with our advice and support India implemented economic reforms such as investment deregulation, trade liberalization, financial reforms and tax reforms that have transformed the environment for private investment. New rules for foreign portfolio investment have made it a lot easier to participate in stock markets. As a result Foreign direct investment went from \$165 million in 1990 to more than \$600 million in 1994. Portfolio investment went from next to nothing in 1990 to more than \$4 billion in 1994.
- And we are expanding our work to improve the investment environment into new, tougher environments. At our Annual Meetings this year, IFC announced a new initiative that will extend its reach to 24 nations where it has never worked before — such as several Central African nations.

Private sector assessments. In many countries, the structure of the private sector and the constraints to its development are not even known. Since 1992 we've been carrying out private sector assessments, and these are forming the basis of dialogue with government on joint work in policy and institutional reform. We've done over 30 of these in countries as diverse as Ghana, Indonesia, India, Poland and Egypt; and we have a half dozen more being done this year.

Building financial institutions. Financial sector development is at the core of building a business-friendly environment, and we are lending in support of both policy reforms and building the technical capacity of financial institutions to handle systemic shocks like the Mexico and Argentina crises. We are working to build up our own specialized expertise in areas like privatization of state-run banks, banking supervision, central banking, liquidity management and dealing with bad assets.

- For example, we are involved in building financial systems throughout **the former Soviet Union and Eastern Europe**. In **Russia** our support for financial institution development comes in the form of one of the largest technical assistance loans the

Bank has ever made -- \$200 million -- to build the capacity of 25 core private commercial banks which will have to operate at International Banking Standard. In Poland a technical assistance project has successfully twinned Polish and international banks. In Hungary, the Bank and IFC began work to build bond and equity markets as far back as 1985, and we are now helping Hungary with a loan to build its banking supervision capacity. We are also providing significant technical assistance and advice to Latvia and Lithuania in dealing with their present financial sector problems.

- In **India**, IFC invested in the first country-wide stock brokerage, which allowed arbitrage among its 16 or so stock exchanges. IFC also helped pave the way for private sector mutual funds in India.
- I should add that at our Annual Meetings a couple of months ago, the Managing Director of the IMF, Michel Camdessus, and I announced that the Bank and the Fund would be launching a joint initiative to work together in finding ways of improving financial systems in the developing countries.

Building portfolio investment funds. In 1984, our International Finance Corporation (IFC) helped catalyze the emerging markets portfolio industry when it launched the Korea Fund [a \$60 million issue, publicly offered on the NYSE, with management by Scudder, Stevens & Clark; and underwriting syndicate led by First Boston Group, the IFC and Shearson Lehman]. Two years later the IFC helped launch the Emerging Markets Growth Fund, the first global fund targeted at emerging markets [starting with \$50 million, by 1994 the EMGF had net assets of \$5.5 billion]. These early successes kindled the interest of investors worldwide. Since 1986, the IFC has underwritten or invested in over 30 other portfolio investment funds. For each dollar that IFC has invested in funds, other investors have provided an average of \$6.80 [i.e., IFC's own commitments of \$806 million have been associated with \$6.3 billion at initial fund capitalization].

Providing advice to our clients. Our **Foreign Investment Advisory Service (FIAS)** is a joint venture of the Bank and the IFC which for 11 years has advised governments [in about 100 countries] on investment laws and regulations, taxation, and ways to attract investors; it also helps governments establish investment promotion agencies. In China, for example, FIAS helped the government overcome its unwillingness to convert local currency earnings to foreign exchange by advising it in creating what became a national, computer-linked free market for forex. FIAS' most recent project in China has aimed to accelerate private infrastructure investments by eliminating policy and regulatory bottlenecks.

Increasing information. Finally, we are producing the information that investors need to enter new markets with adequate levels of comfort. The **Emerging Markets Data Base**, produced by IFC, has gained international recognition as the world's premier

source of reliable and comprehensive information on stock markets in developing countries [it covers 44 of them]. It is the basis for The IFC Investable Indexes (IFCI), which have become the principal benchmark for emerging markets used by institutional investors. Four years ago, virtually no emerging markets investments were made on a "passive" indexed basis. Now nearly \$10 billion is managed by index. Roughly three-quarters of this is based on IFC indexes.



CONFERENCE OF CHAIRMEN OF THE FEDERAL RESERVE BANKS
at the
Board of Governors of the Federal Reserve System
Washington, D.C.
Wednesday, December 4 and Thursday, December 5, 1996

INVITATION LIST

Chairmen

Deputy Chairmen

FEDERAL RESERVE BANK OF BOSTON

Jerome H. Grossman, M.D.
Chairman and Chief Executive Officer
Health Quality LLC
Boston, Massachusetts

William C. Brainard
Chairman
Department of Economics
Yale University
New Haven, Connecticut

FEDERAL RESERVE BANK OF NEW YORK

John C. Whitehead
Chairman
AEA Investors Inc.
New York, New York

Thomas W. Jones
Vice Chairman, President, and Chief
Operating Officer
Teachers Insurance and Annuity
Association-College Retirement
Equities Fund
New York, New York

FEDERAL RESERVE BANK OF PHILADELPHIA

Donald J. Kennedy
Business Manager
International Brotherhood of Electrical Workers
Local Union No. 269
Trenton, New Jersey

Joan Carter
President and Chief Operating Officer
UM Holdings Ltd.
Haddonfield, New Jersey

FEDERAL RESERVE BANK OF CLEVELAND

A. William Reynolds
Chief Executive
Old Mill Group
Hudson, Ohio

G. Watts Humphrey, Jr.
President
GWH Holdings, Inc.
Pittsburgh, Pennsylvania

FEDERAL RESERVE BANK OF RICHMOND

Claudine B. Malone*
President
Financial & Management Consulting, Inc.
McLean, Virginia

Robert L. Strickland
Chairman
Lowe's Companies, Inc.
Winston-Salem, North Carolina

FEDERAL RESERVE BANK OF ATLANTA

Hugh M. Brown
President and Chief Executive Officer
BAMSI, Inc.
Titusville, Florida

Daniel E. Sweat, Jr.*
Program Director
The America Project
Atlanta, Georgia

David R. Jones**
President and Chief Executive Officer
Atlanta Gas Light Company
Atlanta, Georgia

FEDERAL RESERVE BANK OF CHICAGO

Robert M. Healey
Member
Illinois State Labor Relations Board
Chicago, Illinois

Lester H. McKeever, Jr.
Managing Partner
Washington, Pittman & McKeever
Chicago, Illinois

FEDERAL RESERVE BANK OF ST. LOUIS

John F. McDonnell
Chairman
McDonnell Douglas Corporation
St. Louis, Missouri

Susan S. Elliott
President and Chief Executive Officer
Systems Service Enterprises, Inc.
St. Louis, Missouri

FEDERAL RESERVE BANK OF MINNEAPOLIS

Jean D. Kinsey
Professor, Consumption Economics
Director, Retail Food Industry Center
University of Minnesota
St. Paul, Minnesota

David A. Koch
Chairman
Graco, Inc.
Minneapolis, Minnesota

FEDERAL RESERVE BANK OF KANSAS CITY

A. Drue Jennings
Chairman, President, and Chief Executive
Officer
Kansas City Power & Light Company
Kansas City, Missouri

Jo Marie Dancik
Area Managing Partner
Ernst & Young
Denver, Colorado

FEDERAL RESERVE BANK OF DALLAS

Cece Smith
General Partner
Phillips-Smith Specialty Retail Group
Dallas, Texas

Roger R. Hemminghaus
Chairman, President, and Chief Executive
Officer
Diamond Shamrock, Inc.
San Antonio, Texas

FEDERAL RESERVE BANK OF SAN FRANCISCO

Judith M. Runstad
Partner
Foster Pepper & Shefelman
Seattle, Washington

James A. Vohs
Chairman (Retired)
Kaiser Foundation Health Plan, Inc.
and Kaiser Foundation Hospitals
Oakland, California

FEDERAL RESERVE BANK OF RICHMOND

Stephen Brobeck **
Executive Director
Consumer Federation of America
Washington, DC

* Director not attending.

** Substitute.

**Revised organizational guidelines for the Conference of Chairmen
Adopted by the Conference on December 2, 1994**



CONFERENCE OF CHAIRMEN OF THE FEDERAL RESERVE BANKS

Membership

The membership of the Conference shall consist of the Chairmen of the 12 Federal Reserve Banks. The Deputy Chairmen of the 12 Federal Reserve Banks shall be invited to participate in meetings of the Conference. In the absence of the Chairman of a Federal Reserve Bank, the Deputy Chairman of the Bank shall serve as a member of the Conference.

If either the Chairman or the Deputy Chairman is unable to attend the meeting, the third Class C director of the Reserve Bank shall be invited to attend. If the third Class C director is unable to attend, then a Class B director shall be invited to attend. If neither the Chairman nor the Deputy Chairman is able to attend, then the third Class C director and a Class B director shall be invited. The third Class C director shall serve as a member of the Conference only in the absence or disability of both the Chairman and Deputy Chairman of a Reserve Bank. No Class B director may serve as a member.

Meetings

A meeting of the Conference shall be held at least once each year, or more often, upon the call of the Chairman of the Conference at the request of the Executive Committee of the Conference or of the Board of Governors of the Federal Reserve System. In the absence or disability of the Chairman, the call may be made by the Vice Chairman of the Conference.

Officers

At its last meeting each year, the Conference shall select from among its members a Chairman and Vice Chairman who shall serve until the selection of their successors at the last meeting of the Conference in the succeeding year.

Executive Committee and Other Committees

At its last meeting each year, the Conference shall select from among its members an Executive Committee, which shall consist of the Chairman of the Conference, the Vice Chairman of the Conference, and one other member of the Conference. The Executive Committee shall serve until the adjournment of the last meeting of the Conference in the succeeding year. The Chairman of the Conference shall serve as the Chairman of the Executive Committee, and in his absence or disability the Vice Chairman shall chair the Executive Committee. In order to provide for rotation in membership on the Executive Committee, at least one new member of the Committee shall be elected each year and no member of the Committee shall serve for more than three terms in succession.

The Conference may select such other committees as it may desire from time to time from among its members. If appointed at the last meeting of the Conference for the year, the committee shall serve through the adjournment of the last meeting of the Conference in the succeeding year. If appointed at any other meeting of the Conference, the committee shall serve through the adjournment of the last meeting of the Conference in the same calendar year. To the degree practicable, there shall be rotation in the membership of the committees of the Conference.

1996 Executive Committee of the Conference

Ms. Cece Smith, Chairman

Mr. A. William Reynolds, Vice Chairman

Mr. John F. McDonnell

*The Executive Committee by tradition is seated
at Chairman Greenspan's Table, as is the guest
speaker for the evening.*

FILE COPY
L per Geoff

MASOOD AHMED

December 2, 1996

Mr. James Wolfensohn

Jim:

As requested by Geoff Bergen, attached is some draft material from the forthcoming study on private capital flows as background for your presentation to the Federal Reserve Board. This is probably too detailed and unpolished for direct use and as agreed with Geoff, we will prepare a succinct note on portfolio flows and emerging markets by tomorrow.

In the meantime, however, here is a guide to the attached sections:

- The "Introduction" provides key facts and figures on the changing nature and role of private capital and an overview of the main policy challenges confronting recipient countries.
- The section on "The New International Environment" provides evidence and analysis of the structural character of the new private capital flows and implications for potential volatility. The introduction of this section contains a brief overview.
- The section on "The Effects of Integration on Domestic Financial Systems" examines the challenges of managing the financial sector in a more integrated environment. The introduction of the section summarizes the main findings.
- Finally, the section on "Preparing Capital Markets for Financial Integration" focuses on the challenges for capital market reform arising from the much higher proportion of flows that are now likely to be intermediated through capital markets. The key findings are reported in the summary and conclusions of the section (pages 72-76).

Best regards.



Attachment

cc: Amar Bhattacharya

Table of Contents

INTRODUCTION

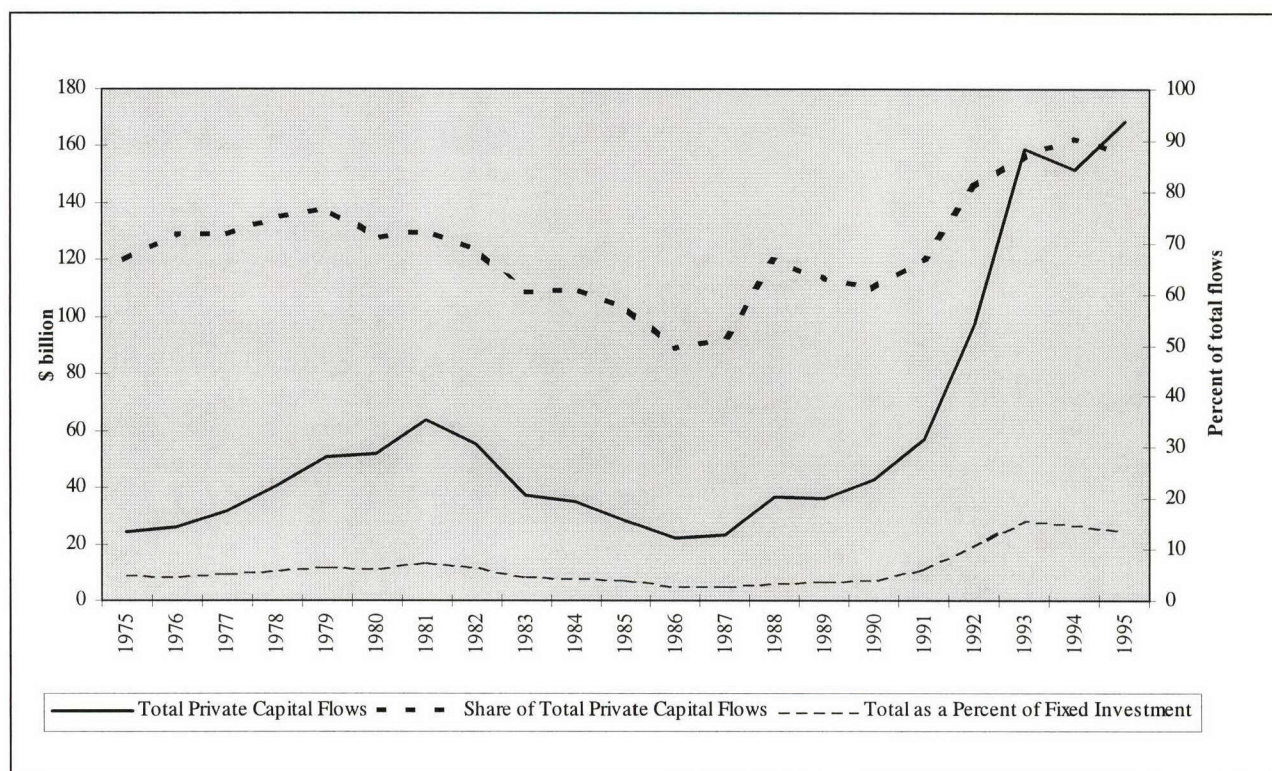
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Introduction

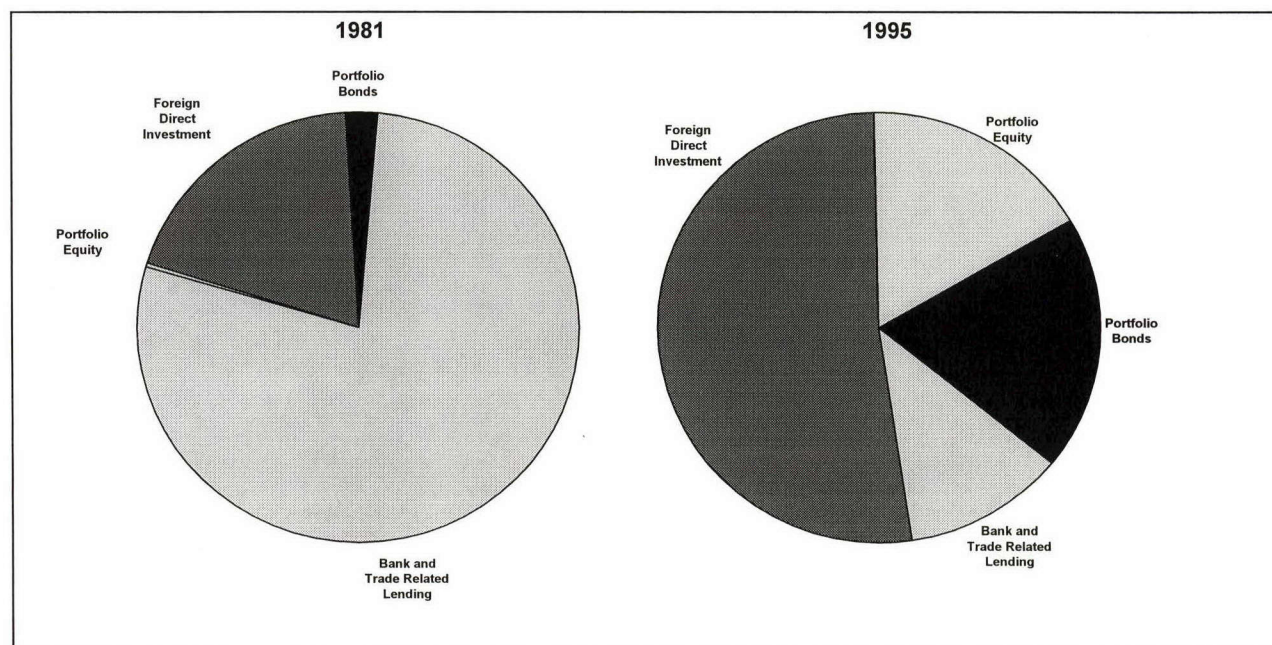
Resurgence of Private Capital Flows

The early 1990s saw a dramatic resurgence in the flow of private capital to developing countries. After declining from an annual average of [\$43] billion in 1975-82 to [\$32] billion in the post-debt crisis years of 1983-89, net private capital flows to developing countries increased almost fourfold between 1989 and 1993, reaching \$152 billion (figure 1.1). Although the rate of growth has slowed substantially since 1993, private capital flows to developing countries have continued to increase in net terms despite higher international interest rates and the Mexican peso crisis, and are estimated to have reached [\$220] billion in 1996. Private capital flows to developing countries have not only surpassed the levels reached during the peak of the commercial bank lending boom, but now dwarf official flows in terms of relative importance (figure 1.1). Their importance relative to the economies of developing countries has also increased very significantly, from 3.7 percent of developing countries' fixed investment in 1990 to 13 percent in 1995; again, almost double that attained before the debt crisis.

Associated with the surge in private flows has been a major shift in the composition of these flows (figure 1.2). Whereas traditional commercial bank lending used to account for more than 65 percent of all private flows, foreign direct investment has now emerged as the most important component of private capital flows, reaching more than \$90 billion in 1995, or 54 percent of total private flows. Another notable feature of private capital flows in the 1990s has been the growth of portfolio flows—both bonds and equities. Starting from a negligible level in 1989, portfolio flows reached [\$60] billion in 1995, or 30 percent of total private capital flows. Total equity flows—foreign direct investment and portfolio equity—now constitute more than 60 percent of total private capital flows. As a result of these changes, the composition of private flows is now much more broad based than during the 1980s.

Figure 1.1 The Surge in Private Capital Flows to Developing Countries

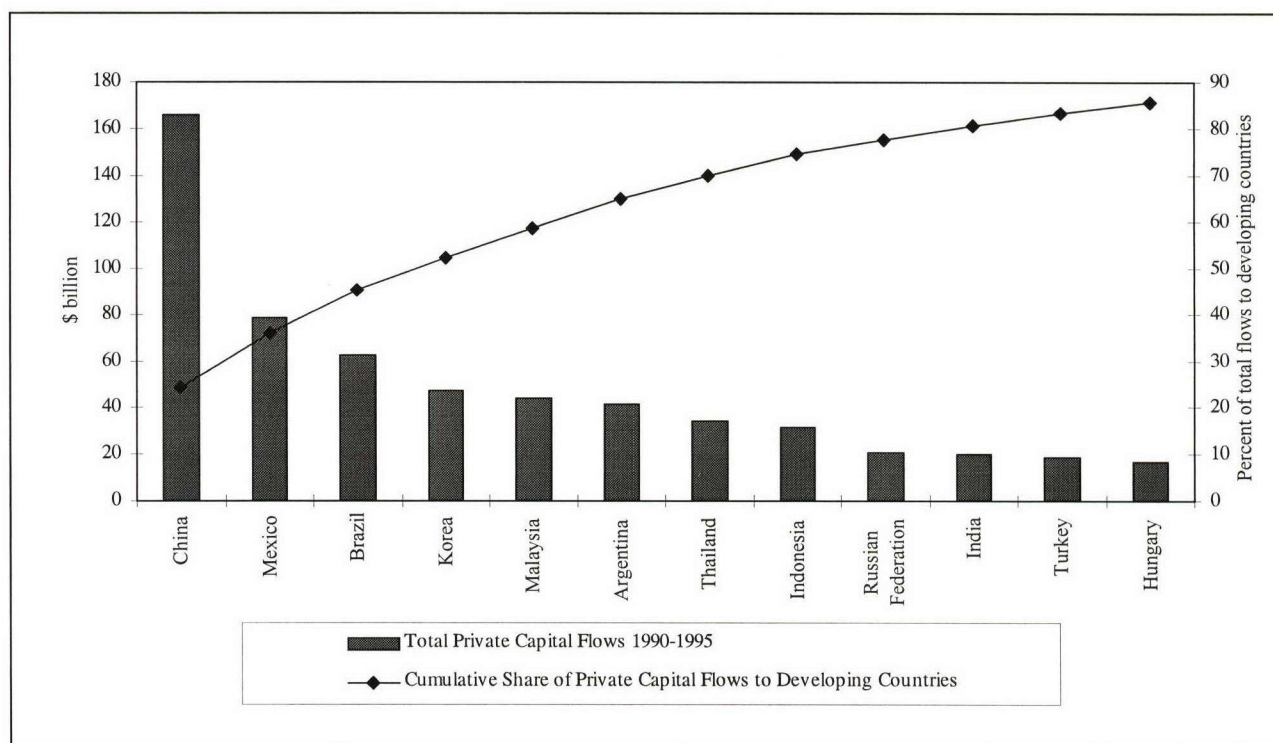
Source: World Bank Debtor Reporting System.

Figure 1.2 Changing Composition of Private Capital Flows

Source: World Bank Debtor Reporting System.

While the composition of private flows has broadened, however, their destination has become more concentrated. Only a dozen countries accounted for more than 90 percent of net private flows attracted by developing countries during 1990-95 (figure 1.3). In contrast, the top twelve recipients accounted for [75] percent of total private capital flows during 1975-82. When scaled by GDP, the distribution of the flows is less uneven, since the top twelve countries also account for [80] percent of developing country GDP. The base of recipients is also broadening steadily. Countries such as Hungary, India, Poland, Philippines and Vietnam have been attracting larger volumes of private capital flows since 1993.

Figure 1.3 Private Capital Flows Are Concentrated in a Few Countries



Source: World Bank Debtor Reporting System.

In terms of regional distribution, East Asia and Latin America account for the dominant and roughly equivalent shares of private capital flows (figure 1.4). Whereas East Asia has increased its share steadily over the past two decades, Latin America has seen a more dramatic recovery from the sharp decline during the post-debt crisis years. The Europe and Central Asia region is the third largest destination for private capital flows. Although South Asia's

share of world private capital flows has declined substantially compared to the 1980s, the level of private capital flows during 1990-95 is nevertheless higher than in the 1980s. In the case of the Middle East and North Africa and Sub-Saharan Africa, absolute levels of international capital flows have not increased substantially in the 1990s, so that their share in overall private flows has fallen sharply.

The composition of flows also varies markedly across regions (figure 1.5). East Asia traditionally has had a very high share of foreign direct investment, although in recent years portfolio flows have been the most rapidly growing component, accounting in 1995 for more than 30 percent of overall flows. In Latin America, by contrast, portfolio flows are the dominant component of overall flows, although foreign direct investment is becoming more important. South Asia has followed a pattern similar to that of Latin America, with the initial surge largely in the form of portfolio flows, followed by foreign direct investment. Europe and Central Asia, and especially Eastern Europe, has followed the East Asia pattern, with foreign direct investment initially the most important form of private capital inflows. Foreign direct investment and bank borrowing (including short-term debt) dominate in the case of the Middle East and North Africa and Sub-Saharan Africa, but this is largely because neither region has been able to tap into international bond and equity markets. Despite these differences in the composition of international private capital flows, however, the trend is toward a more balanced structure, and differences have narrowed since the early 1990s.

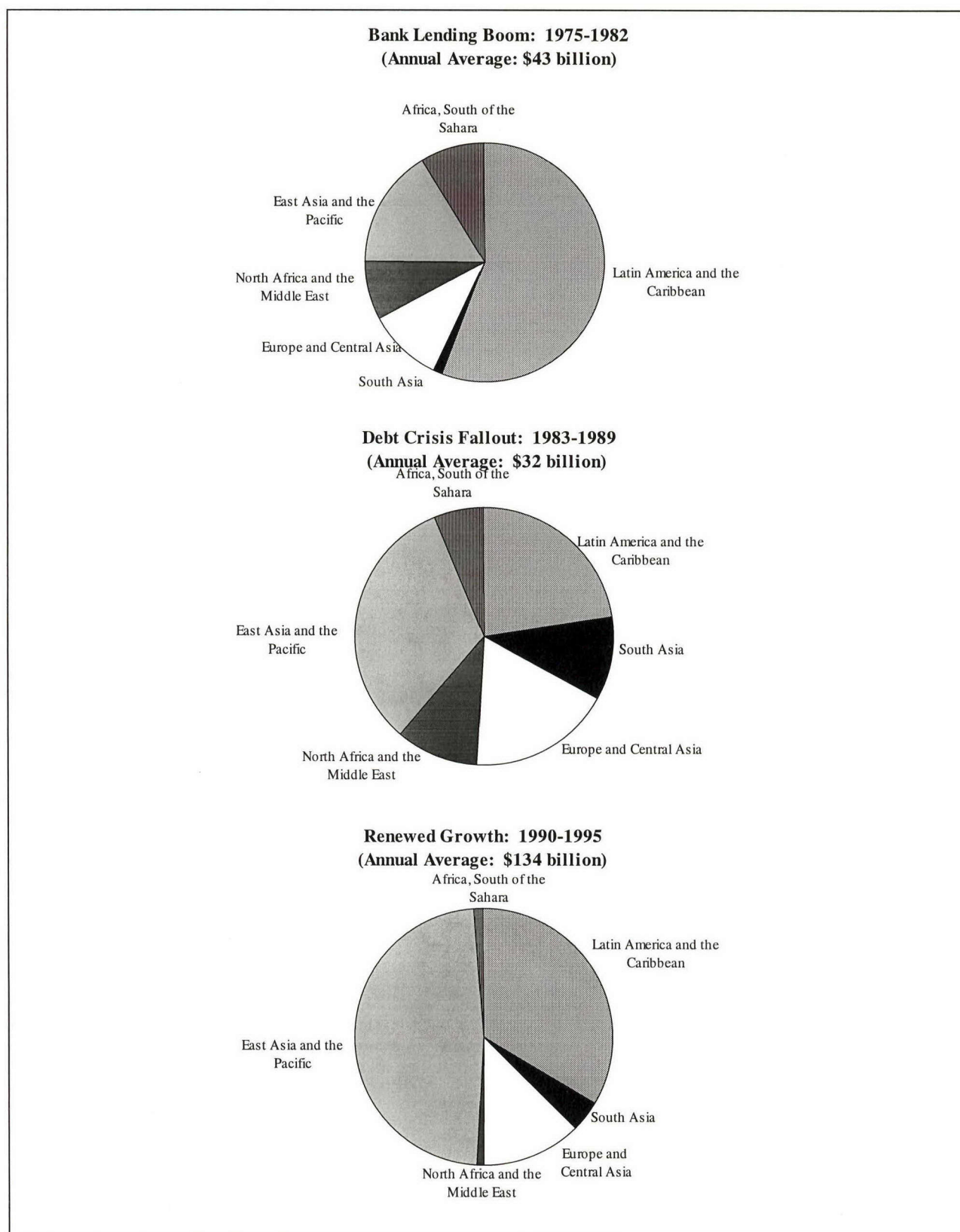
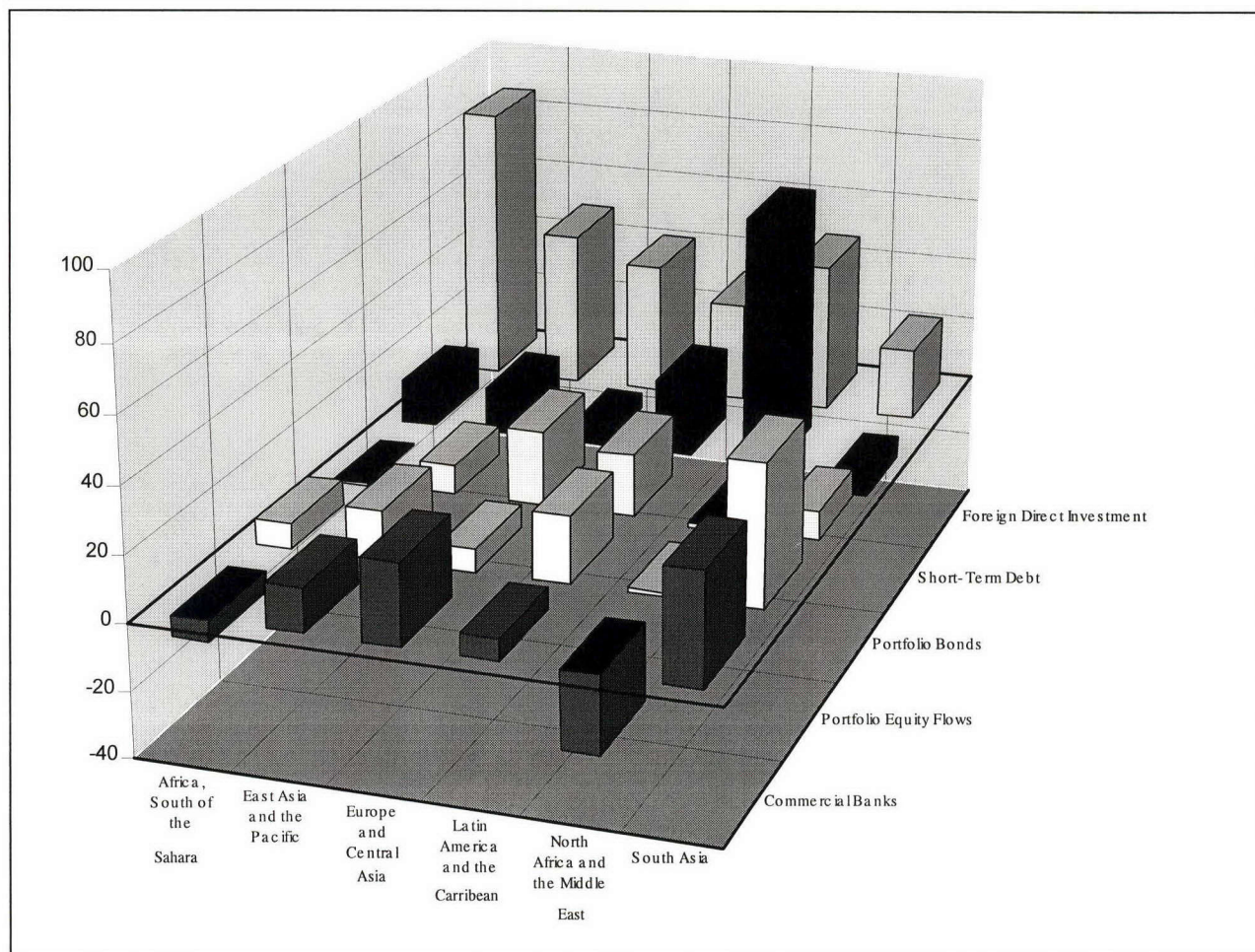
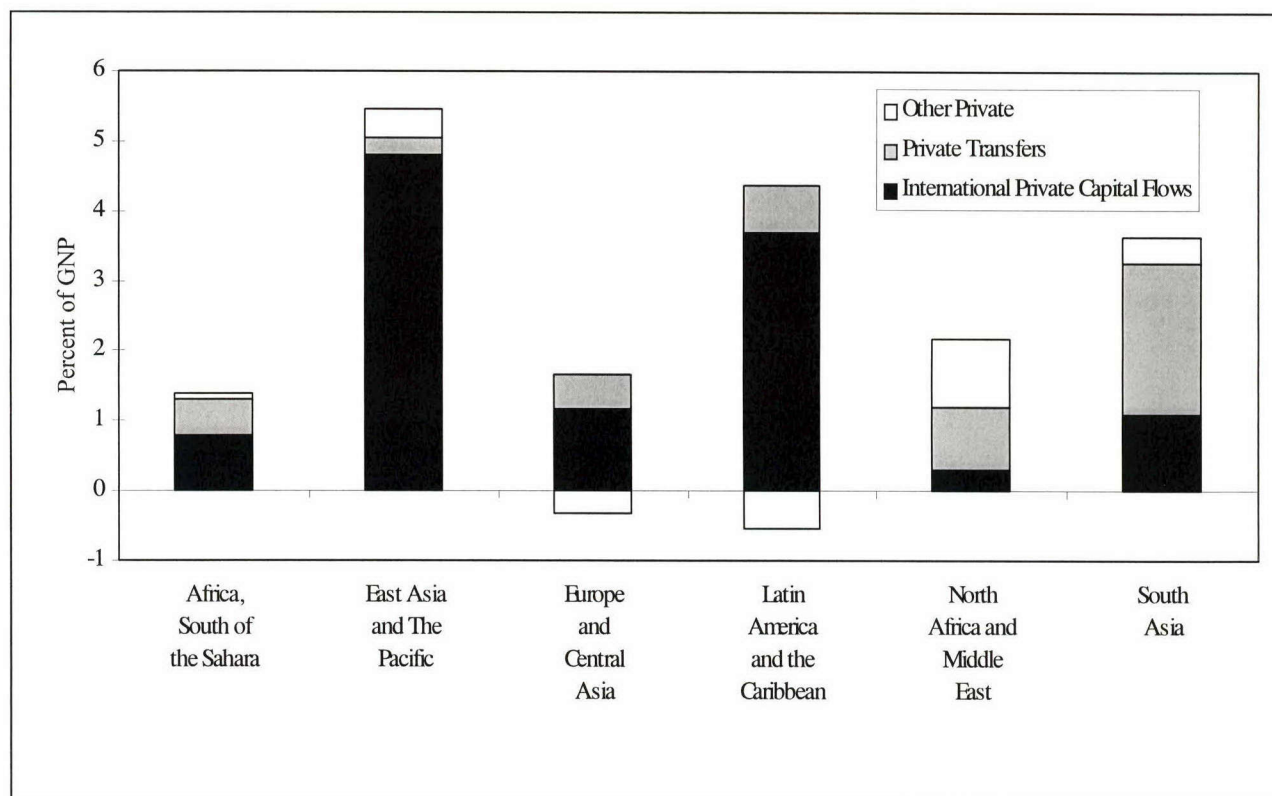
Figure 1.4 Regional Composition of Private Capital Flows

Figure 1. 5 Variation in Composition of International Private Capital Flows Across Regions, 1990-95



Source: World Bank Debtor Reporting System.

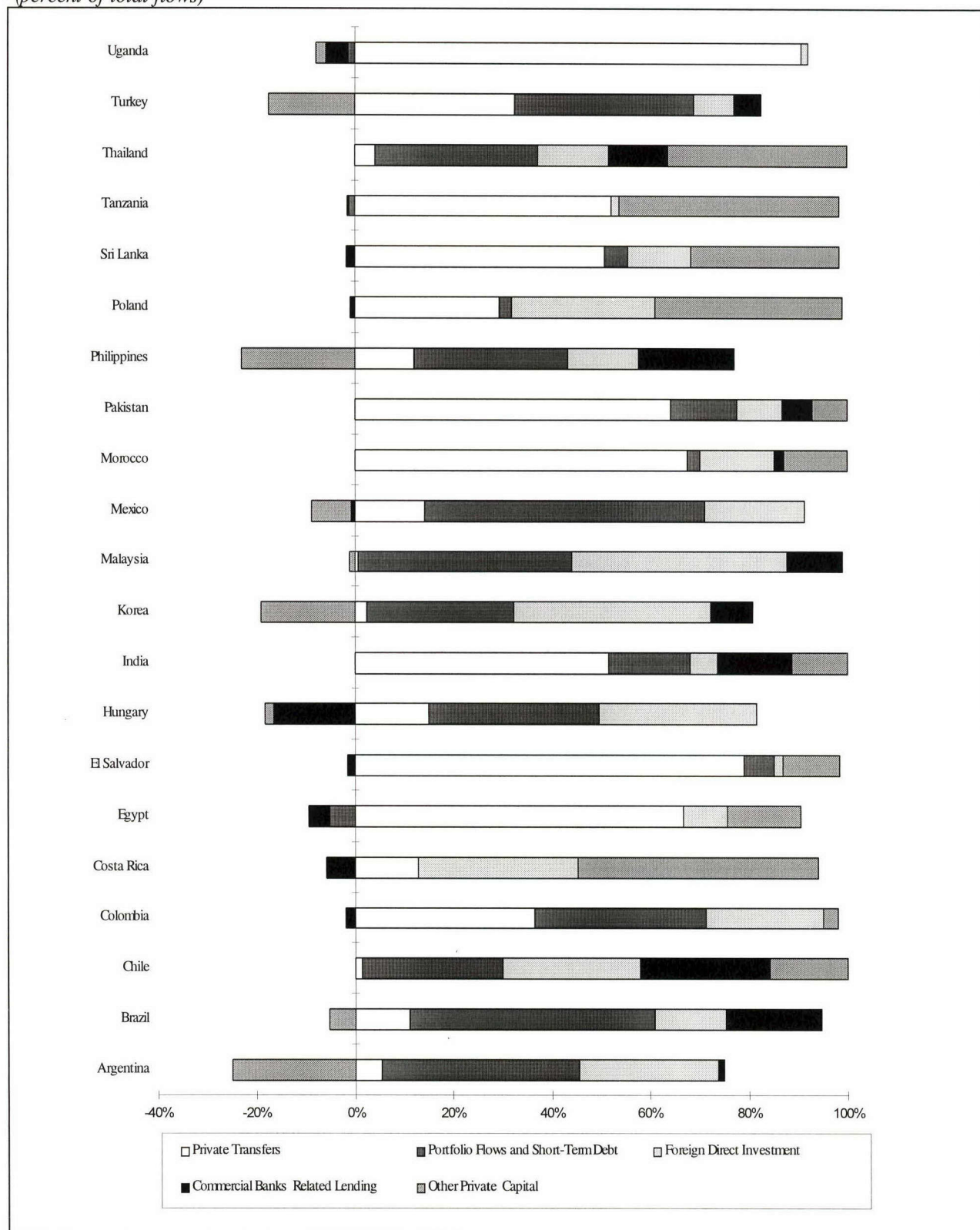
Apart from international capital flows, private transfers and other private flows (reflecting movements of capital associated with nationals including capital flight) play a very important role in several regions (figure 1.6). Such flows are, in fact, more important than recorded international private capital flows in the case of the Middle East and North Africa and South Asia. Once these private transfers and unrecorded private flows are taken into account, the differences in the ratio of private capital flows to GDP are less pronounced across regions. Overall, Sub-Saharan Africa has the lowest ratio of private flows from all sources to GDP.

Figure 1.6 Composition of Overall Private Capital Flows by Region

Source: World Bank Debtor Reporting System

The importance of these other private flows is also evident at the country level (figure 1.7). Private transfers play a dominant role in several countries in Africa (Uganda, Tanzania), the Middle East (Egypt, Morocco), and South Asia (India, Pakistan, and Sri Lanka). On the other hand, outflows of national private capital have been significant in the cases of Argentina, Korea, the Philippines, and Turkey. There are also noteworthy differences among countries in the composition of international private capital. For instance, of all the countries shown in figure 1.7, Mexico has the largest share of portfolio flows and short-term debt.

Figure 1.7 Importance and Composition of Private Flows for Selected Countries, 1990-95
(percent of total flows)



Source: World Bank Debtor Reporting System.

Growing Financial Integration

The level and the changing composition of private capital flows suggests that the current wave of private capital is a manifestation of increased financial integration of developing countries with international financial markets. In the 1980s, private sector lending was mostly in the form of bank lending and to sovereign governments. The bulk of private capital flows now is to the private sector, and is increasingly taking place through channels that link markets for capital in developing countries with their international counterparts.

Direct measures of financial integration are not feasible to construct for developing countries given that truly floating exchange rates and forward markets exist for only a small proportion of developing countries. We therefore constructed an indirect measure of financial integration, using three separate elements: a country's access to international financial markets; its ability to attract gross financing; and the level of diversification of the country's financing (Box 1.1). These indices are then used to evaluate the degree of financial integration of countries and the extent of change that has taken place between 1985-87 and 1992-94.

Two main conclusions emerge from these results:

- First, developing countries as a group have become more integrated since the mid-1980s. The number of countries that are classified as highly integrated increased from two in 1985-87 to thirteen in 1992-94, whereas the number of countries as moderately integrated increased from twenty-four to twenty-six.
- Second, the predominant number of developing countries are still in the very early stages of financial integration.

Box 1.1 Measuring Financial Integration

To assess the degree to which countries are financially integrated, we have used several measures to construct an overall index of integration. We computed the index for the periods 1985-87 and 1992-94, in order to evaluate the degree of integration that has taken place since the mid 1980s.

The first measure looks at a country's access to international financial markets. This is provided by the country risk ratings of the Institutional Investor Survey. Ratings of less than 20 are categorized as "low," ratings of greater than 50 as "high," and ratings in between as "medium."

The second measure looks at a country's ability to attract private external financing and the extent of integration already achieved by comparing the ratio of private capital flows to GDP. Countries whose flows amount to less than 10 percent of GDP were categorized as "low," countries whose flows exceed 20 percent were considered "high," and countries in between were categorized as "medium." Since financial integration implies *the linking of markets*, however, all flows were not weighted equally in this measure. Thus, a country receiving private flows primarily in the form of FDI is likely to be less integrated with world financial markets than is a country which receives flows in the form of portfolio and commercial bank lending. Portfolio flows were therefore given a weight of 5, bank flows a weight of 3, and FDI a weight of 1.

The third measure looks at the level of diversification of a country's financing, based on the composition of flows. The composition matters because they have different effects on financial integration: FDI benefits local suppliers, who may turn to foreign equity investors to obtain financing for expansion; banking inflows, which lead to a deepening of the financial system, may enhance the liquidity of stock markets and thus increase the latter's attractiveness to foreign investors; and so forth. A significant participation in all three forms of flows is desirable for balanced integration. Countries receiving a minimum of 5 percent of total flows for each type of flow were categorized as "high." Countries that received a minimum of 5 percent in two types of flows were categorized as "medium," and the remaining countries were categorized as "low."

These measures were then converted to an overall index of financial integration. As box table _ below shows, developing countries as a group have become more integrated since the mid 1980s. The number of countries falling into "high" integration category has increased sizably, as has the number of countries falling into the "medium" category.

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Table 1 Change in Degree of Financial Integration

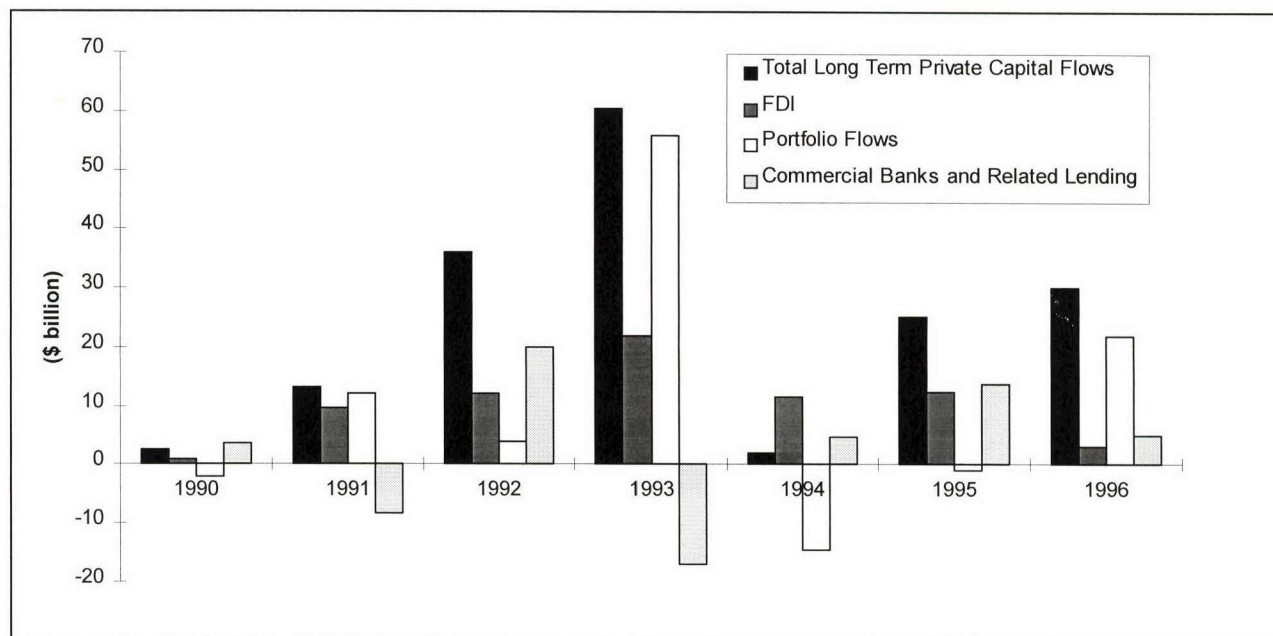
1985-87		1992-94	
<i>Korea</i>	<i>High</i>	<i>Thailand</i>	<i>High</i>
<i>Malaysia</i>	<i>High</i>	<i>Turkey</i>	<i>High</i>
<i>Thailand</i>	<i>Medium +</i>	<i>Brazil</i>	<i>High</i>
<i>Cameroon</i>	<i>Medium +</i>	<i>Argentina</i>	<i>High</i>
<i>India</i>	<i>Medium</i>	<i>Korea</i>	<i>High</i>
<i>Colombia</i>	<i>Medium</i>	<i>Indonesia</i>	<i>High</i>
<i>Niger</i>	<i>Medium</i>	<i>Malaysia</i>	<i>High</i>
<i>Kenya</i>	<i>Medium</i>	<i>Mexico</i>	<i>High</i>
<i>Papua New Guinea</i>	<i>Medium</i>	<i>Hungary</i>	<i>High</i>
<i>Indonesia</i>	<i>Medium</i>	<i>Ghana</i>	<i>High</i>
<i>Mexico</i>	<i>Medium</i>	<i>Chile</i>	<i>High</i>
<i>Egypt</i>	<i>Medium</i>	<i>Pakistan</i>	<i>High</i>
<i>Chile</i>	<i>Medium</i>	<i>Philippines</i>	<i>High</i>
<i>Sri Lanka</i>	<i>Medium -</i>	<i>Mauritius</i>	<i>Medium +</i>
<i>Philippines</i>	<i>Medium -</i>	<i>Panama</i>	<i>Medium +</i>
<i>Cote d'Ivoire</i>	<i>Medium -</i>	<i>Colombia</i>	<i>Medium +</i>
<i>Ecuador</i>	<i>Medium -</i>	<i>Jamaica</i>	<i>Medium +</i>
<i>Mauritius</i>	<i>Medium -</i>	<i>India</i>	<i>Medium +</i>
<i>Morocco</i>	<i>Medium -</i>	<i>Peru</i>	<i>Medium</i>
<i>Pakistan</i>	<i>Medium -</i>	<i>Papua New Guinea</i>	<i>Medium</i>
<i>Nigeria</i>	<i>Medium -</i>	<i>Morocco</i>	<i>Medium</i>
<i>Turkey</i>	<i>Medium -</i>	<i>Zimbabwe</i>	<i>Medium</i>
<i>Tunisia</i>	<i>Medium -</i>	<i>Cote d'Ivoire</i>	<i>Medium</i>
<i>Uruguay</i>	<i>Medium -</i>	<i>Uruguay</i>	<i>Medium</i>
<i>Zimbabwe</i>	<i>Medium -</i>	<i>China</i>	<i>Medium</i>
<i>Argentina</i>	<i>Medium -</i>	<i>Sri Lanka</i>	<i>Medium -</i>
<i>Trinidad and Tobago</i>	<i>Low</i>	<i>Suriname</i>	<i>Medium -</i>
<i>Panama</i>	<i>Low</i>	<i>Swaziland</i>	<i>Medium -</i>
<i>Zambia</i>	<i>Low</i>	<i>Honduras</i>	<i>Medium -</i>
<i>Nicaragua</i>	<i>Low</i>	<i>Paraguay</i>	<i>Medium -</i>
<i>Venezuela</i>	<i>Low</i>	<i>South Africa</i>	<i>Medium -</i>
<i>Myanmar</i>	<i>Low</i>	<i>Trinidad and</i>	<i>Medium -</i>
<i>Suriname</i>	<i>Low</i>	<i>Tunisia</i>	<i>Medium -</i>
<i>Togo</i>	<i>Low</i>	<i>Ecuador</i>	<i>Medium -</i>
<i>Tanzania</i>	<i>Low</i>	<i>Kenya</i>	<i>Medium -</i>
<i>Swaziland</i>	<i>Low</i>	<i>Cameroon</i>	<i>Medium -</i>
<i>South Africa</i>	<i>Low</i>	<i>Egypt</i>	<i>Medium -</i>
<i>Peru</i>	<i>Low</i>	<i>Togo</i>	<i>Low</i>
<i>Paraguay</i>	<i>Low</i>	<i>Mauritania</i>	<i>Low</i>
<i>Sierra Leone</i>	<i>Low</i>	<i>Myanmar</i>	<i>Low</i>
<i>Senegal</i>	<i>Low</i>	<i>Nicaragua</i>	<i>Low</i>
<i>Dominican Republic</i>	<i>Low</i>	<i>Tanzania</i>	<i>Low</i>
<i>Costa Rica</i>	<i>Low</i>	<i>Senegal</i>	<i>Low</i>
<i>Congo</i>	<i>Low</i>	<i>Sierra Leone</i>	<i>Low</i>
<i>Ghana</i>	<i>Low</i>	<i>Venezuela</i>	<i>Low</i>
<i>Gabon</i>	<i>Low</i>	<i>Niger</i>	<i>Low</i>
<i>El Salvador</i>	<i>Low</i>	<i>Nigeria</i>	<i>Low</i>
<i>China</i>	<i>Low</i>	<i>Zambia</i>	<i>Low</i>
<i>Benin</i>	<i>Low</i>	<i>Guatemala</i>	<i>Low</i>
<i>Bangladesh</i>	<i>Low</i>	<i>Burkina Faso</i>	<i>Low</i>
<i>Algeria</i>	<i>Low</i>	<i>Guyana</i>	<i>Low</i>
<i>Burkina Faso</i>	<i>Low</i>	<i>Guinea-Bissau</i>	<i>Low</i>
<i>Brazil</i>	<i>Low</i>	<i>Gabon</i>	<i>Low</i>
<i>Bolivia</i>	<i>Low</i>	<i>Costa Rica</i>	<i>Low</i>
<i>Lesotho</i>	<i>Low</i>	<i>Congo</i>	<i>Low</i>
<i>Jamaica</i>	<i>Low</i>	<i>El Salvador</i>	<i>Low</i>
<i>Madagascar</i>	<i>Low</i>	<i>Dominican Republic</i>	<i>Low</i>
<i>Mauritania</i>	<i>Low</i>	<i>Haiti</i>	<i>Low</i>
<i>Mali</i>	<i>Low</i>	<i>Madagascar</i>	<i>Low</i>
<i>Hungary</i>	<i>Low</i>	<i>Lesotho</i>	<i>Low</i>
<i>Guyana</i>	<i>Low</i>	<i>Mali</i>	<i>Low</i>
<i>Guinea-Bissau</i>	<i>Low</i>	<i>Algeria</i>	<i>Low</i>
<i>Guatemala</i>	<i>Low</i>	<i>Bangladesh</i>	<i>Low</i>
<i>Honduras</i>	<i>Low</i>	<i>Bolivia</i>	<i>Low</i>
<i>Haiti</i>	<i>Low</i>	<i>Benin</i>	<i>Low</i>

Surges, Reversals and Volatility of Capital Flows

Growing financial integration and the increased reliance on private capital have raised widespread concerns among both policymakers and market participants about the susceptibility of emerging markets to increased volatility, including potentially large reversals of private capital flows. Indeed, the decline in private flows, especially portfolio flows, following the interest rate increases in early 1994 and the Mexico peso crisis, were seen as stark reminders of the potential for such volatility.

At the aggregate level though, private capital flows to developing countries have proven to be remarkably resilient. Although portfolio flows declined sharply in 1994 and immediately after the Mexico crisis, in the end, private capital flows in aggregate recorded impressive increases in both 1995 and 1996 (figure 1.8). The main reason for the resilience of private capital flows has been the sustained increase in foreign direct investment during this period reflecting its greater resilience to cyclical swings and short-term shocks. But portfolio flows have also shown an impressive recovery from the aftershocks of the Mexico crisis. Despite the large decline in the first half of 1995, portfolio flows recorded only a small decline for the year as a whole, and a significant increase in 1996 to levels that are comparable to the peak reached in 1993.

Figure 1.8 Resilience in Private Capital Flows
(year-on-year changes; \$ billion)



Source: World Bank Debtor Reporting System, Staff Estimates.

The sustained increases in private capital flows in the face of recent shocks suggests that markets have entered a more mature phase (see World Development Finance, 1997). Governments have demonstrated an awareness and ability to respond promptly and aggressively to changes in market conditions. And markets have become more discriminating between countries on the basis of their underlying fundamentals.

However, volatility of flows and potential vulnerability to reversals remain a concern at the individual country level. Indeed, there appear to be significant differences at the country level in the experience with the initial surge of private capital, subsequent reversals and, more generally, the degree of volatility of private capital flows.

Although a surge in private capital flows during the 1990s has been common to virtually all major recipients of private capital flows, there has been considerable variation between countries in the timing, duration and magnitude of the surge (Table 1.1). Chile,

Costa Rica, Malaysia, Thailand, and until 1994, Mexico, experienced the earliest and cumulatively largest surges of private capital flows in the 1990s. At the other end, South Asian countries and those in Europe and Central Asia typically experienced the surge after 1992 and of generally smaller magnitudes. It is striking that the maximum annual surge has been higher than 5 percent of GDP for more than half of the 21 countries, and that 5 countries saw a maximum annual surge in excess of 10 percent of GDP. To put this in perspective, the oil boom of 1979-80, which is among the largest positive shocks received by a group of countries, amounted to only 3-5 percent of GDP for the major oil exporting developing countries.

Table 1.1 The Variation in the Surge in Private Capital Flows During the 1990s

<i>Country</i>	<i>Surge Period</i>	<i>Cumulative Flows/ 1994 GDP</i>	<i>Maximum Annual Flow/ GDP</i>
Argentina	1991-1994	10.9	4.8
Brazil	1992-1994	5.6	2.8
Chile	1989-1994	26.7	8.6
Colombia	1992-1994	10.2	5.3
Costa Rica	1987-1994	45.3	12.0
Hungary	1993-1994	24.8	17.6
India	1992-1994	5.6	2.6
Indonesia	1990-1994	5.5	2.5
Korea	1991-1994	7.0	2.6
Malaysia	1989-1994	46.5	23.1
Mexico	1989-1994	26.6	8.4
Morocco	1990-1994	15.9	5.1
Pakistan	1992-1993	6.3	4.4
Peru	1991-1994	20.2	10.0
Philippines	1989-1994	20.6	7.8
Poland	1992-1994	13.1	6.8
Sri Lanka	1991-1994	19.5	8.3
Thailand	1988-1994	46.6	12.3
Tunisia	1992-1994	10.6	4.6
Turkey	1992-1993	7.9	4.1
Venezuela	1992-1993	5.5	3.3

Source: World Bank Debtor Reporting System

With the surge in private capital flows has come the threat of major reversals of these flows. A number of countries have seen such reversals (Table 1.2). Venezuela and Turkey were the first to experience major capital flow reversals in the 1990s, in both cases following a loss of investor confidence in government policies. The reversal of private capital flows in the case of Mexico was notable in two respects; it was the largest in terms of magnitude, and it triggered large reversals in several other countries, most markedly in Argentina and Brazil. Although these episodes of capital flow reversals in the 1990s are larger in absolute magnitudes than similar episodes during the debt crisis, they are not significantly higher in relation to GNP or the level of reserves.

Table 1.2 Large Reversals in Private Capital Flows

<i>Country</i>	<i>Years</i>	<i>Magnitude of Reversal (US\$ billion)</i>	<i>Reversal as Percent of Foreign Exchange Reserves</i>	<i>Reversal as Percent of GNP</i>
Mexico	1994-1995	20.4	333	5
Turkey	1993-1994	19.0	306	11
Mexico	1981-1983	11.4	308	5
Argentina	1993-1994	10.2	76	4
Malaysia	1993-1994	6.4	24	11
Argentina	1981-1983	5.8	226	8
Turkey	1977-1979	5.5	860	12
Venezuela	1992-1994	5.4	58	9
Venezuela	1988-1989	3.1	104	5
Chile	1981-1983	2.8	89	9
Chile	1990-1991	2.5	41	9
Pakistan	1994-1995	2.3	79	4

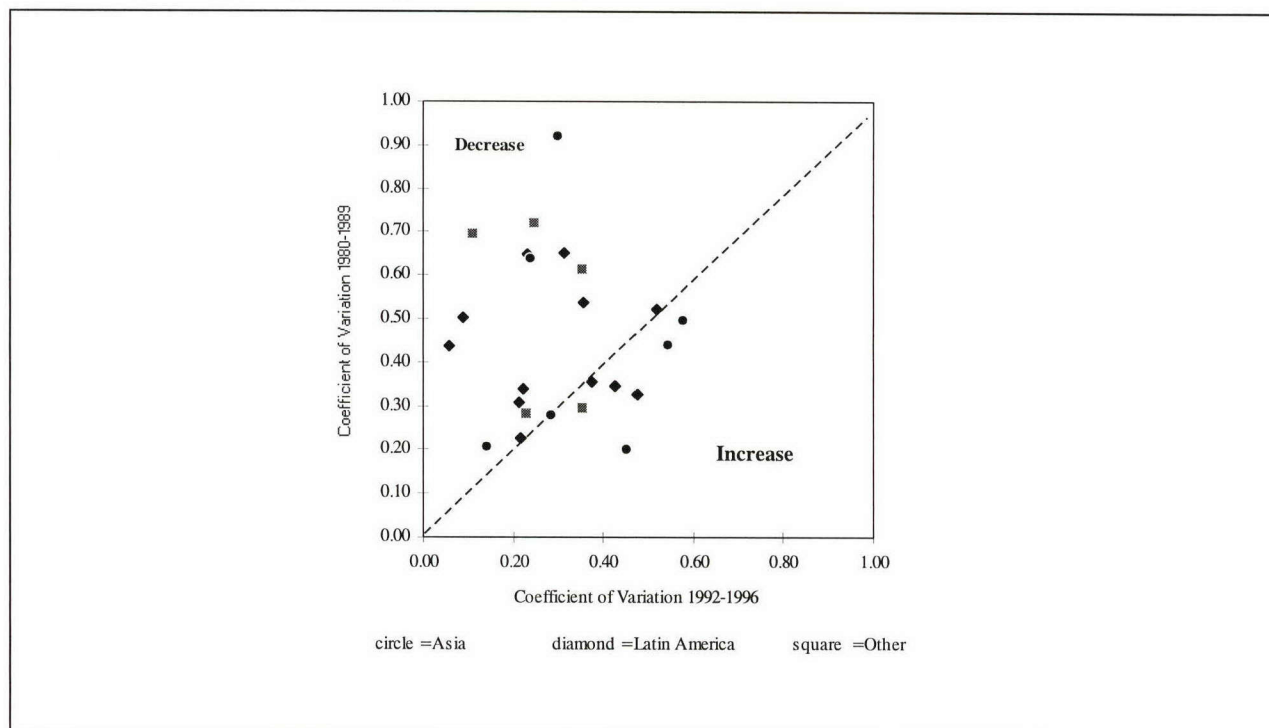
Sources: World Bank Debtor Reporting System.
IMF International Financial Statistics.

Apart from the vulnerability to major reversals, countries have been concerned about increased volatility associated with private capital flows, especially portfolio flows. What is the evidence in this regard? Overall volatility of reserves has shown no systematic increase with the increased flow of private capital in the 1990s (figure 1.9). Indeed there are more instances where reserve volatility has come down in the 1990s than where it has gone up. Of

course this could be due to the fact that developing countries vulnerability to real external shocks has come down during this period. Tables 1.3 and 1.4 present more direct evidence on capital account volatility, including for individual components of private capital flows. Several conclusions can be drawn from this evidence about the volatility of private capital flows:

- First, that volatility of the capital account and of private capital flows have tended to come down in the 1990s.
- Second, that there is significant variation in volatility between countries. Asia generally shows less volatility, and has reduced volatility by more, than Latin America.
- Third, that different types of flows show significant differences in the degree of volatility. As expected, foreign direct investment is the least volatile. Portfolio flows show a higher degree of volatility, but the level of volatility has generally tended to come down. The level of volatility of bank lending, by contrast, has gone up in part because net flows have become relatively small.
- Finally, while the level of volatility has tended to come down in the 1990s, the average level of flows is much higher in the 1990s, so that the absolute variation, and consequently its impact, is much larger than what it was in the 1980s.

Figure 1.9 Changes in Volatility of Reserves: 1980-89 and 1992-96
(based on quarterly foreign exchange reserve levels)



Source: IMF International Financial Statistics.

Table 1.3 Volatility of Private Capital Flows from the U. S.
(based on quarterly net flows; levels in \$ billion)

	<u>1980's</u>			<u>1990's</u>		
	<i>Average Level</i>	<i>Standard Deviation</i>	<i>Coefficient of Variation</i>	<i>Average Level</i>	<i>Standard Deviation</i>	<i>Coefficient of Variation</i>
Latin America						
Total Private Capital Flows	4,177	8,013	1.92	6,685	13,943	2.09
Direct Investment	421	1,495	3.55	3,216	2,084	0.65
Foreign Securities	-285	397	-1.39	1,923	3,393	1.76
Non-Bank	-74	1,359	-18.41	449	5,906	13.15
Bank	3,896	8,366	2.15	1,116	11,223	10.06
Africa and Asia						
Total Private Capital Flows	1,031	2,558	2.48	3,550	5,285	1.49
Direct Investment	411	816	1.99	1,570	875	0.56
Foreign Securities	-203	505	-2.48	1,226	1,793	1.46
Non-Bank	-12	193	-15.87	408	938	2.30
Bank	1,049	2,093	2.00	367	4,493	12.24

Source: Survey of Business, U.S. Treasury.

Table 1.4 Volatility of Capital Flows — Selected Countries
(coefficient of variation of quarterly flows)

	<i>Overall Capital Account</i>		<i>Foreign Direct Investment</i>		<i>Portfolio Investment</i>	
	<i>1980's</i>	<i>1990's</i>	<i>1980's</i>	<i>1990's</i>	<i>1980's</i>	<i>1990's</i>
Argentina	1.28	1.09	1.01	1.26	43.60	2.96
Indonesia	0.93	0.70	0.82*	0.39	3.38	1.61
Korea	-334.24	0.92	1.22	0.59	4.55	0.87
Mexico	3.85	0.66	0.47	0.62	-3.34	1.25
Pakistan	0.71	0.65	0.68	0.30**	1.39	0.76
Philippines	1.21	0.75	1.79	0.99	0.68	0.30
Sri Lanka	0.55	0.61	0.36	0.76**	0.68	0.30
Thailand	0.78	0.33	0.83	0.23**	0.68	0.30

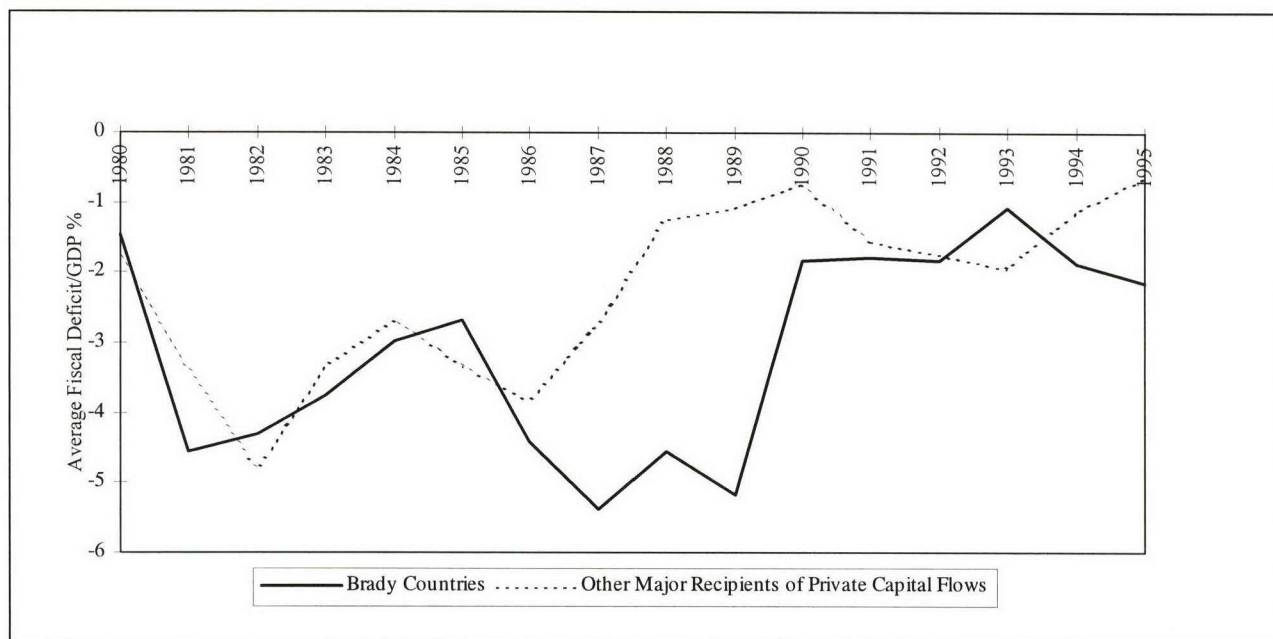
* 1981-1988

** 1990-1993

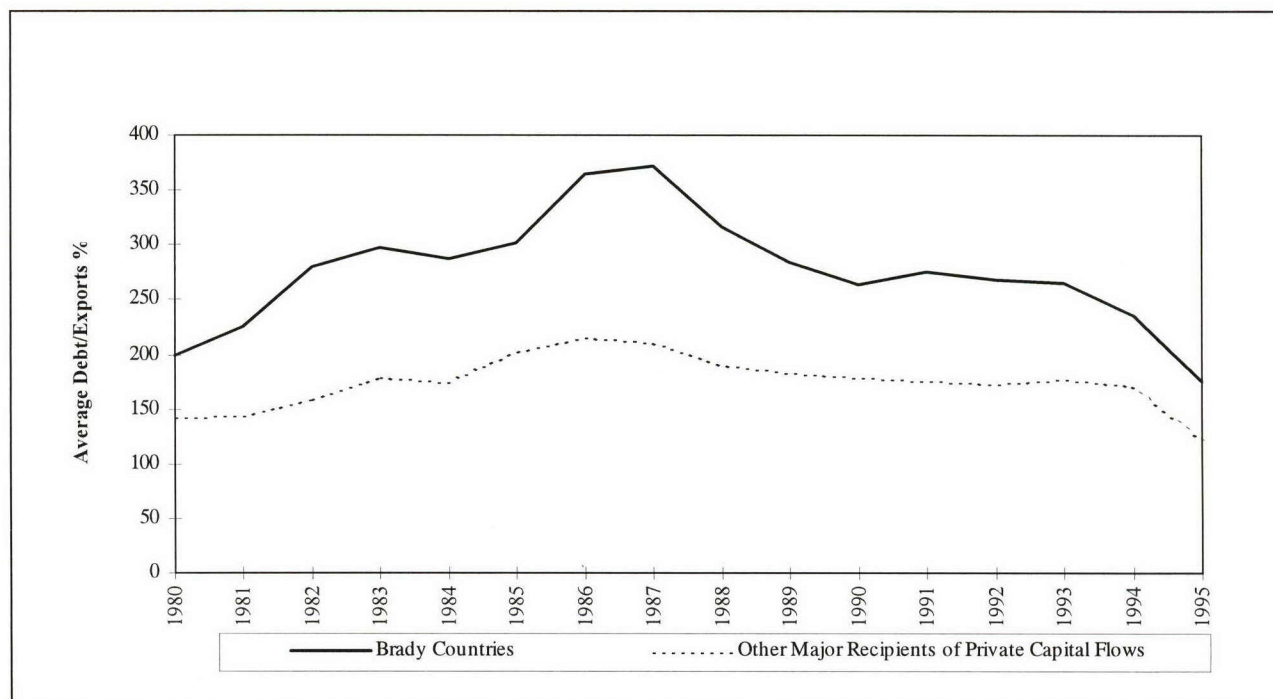
Source: IMF International Financial Statistics.

Developing Country Context and Policy Challenges

The surge in private capital flows has been underpinned by a significant improvement in fundamentals of the recipient countries. Two key areas of improvement are: fiscal performance and the sustainability of external debt (figures 1.10 and 1.11). The improvement has been particularly pronounced for the Brady countries, i.e., the group of countries that had debt workouts initiated under the Brady program. Both fiscal performance and the gains in external debt sustainability in these countries have been boosted by the decline in international interest rates in the 1990s (Dooley et al, 1995). Many of the other major recipients, including the East Asian countries and some others such as Chile, have had longer track records of sustained adjustment and have not been as burdened by debt overhangs. These countries have benefited from the largest increases in private capital flows, especially foreign direct investment.

Figure 1.10 Trends in Fiscal Performance

Source: IMF, *World Economic Outlook*.

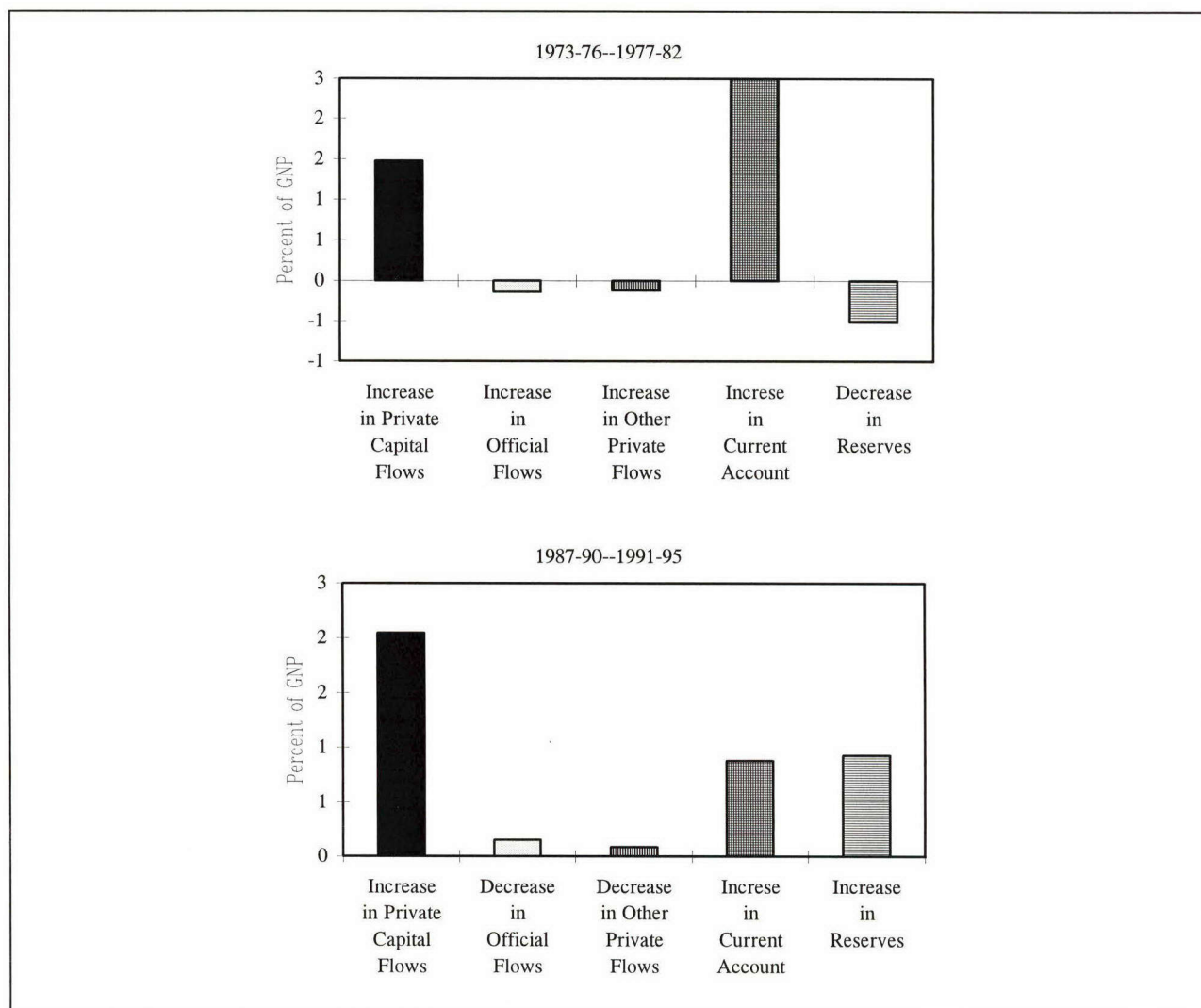
Figure 1.11 Developing Country Indebtedness

Source: World Bank Debtor Reporting System.

The large volume of private capital inflows attracted by developing countries during 1990-95 has been absorbed very differently than during the previous lending boom (figure 1.12). Less than half has been reflected on average in a widening of the current account deficit. This is because a very large share of the capital inflows has been absorbed so far in the form of reserve accumulation. This outcome reflects a conscious effort by many countries to avoid excessively large current account deficits and the buildup of potential vulnerability to reversals in capital flows. The flip side of this policy choice has been the challenge of managing inflationary pressures arising from increases in the monetary base.

Figure 1.12 Where Did All the Capital Go?

(Average for all developing countries)

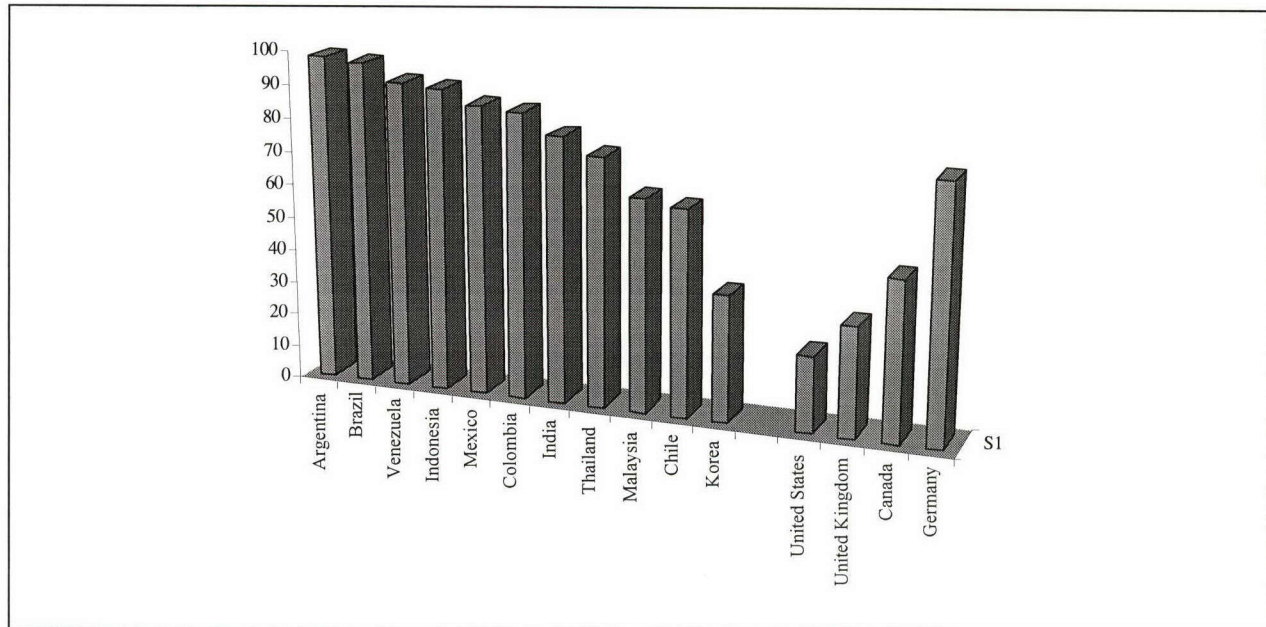


Although circumstances vary across countries (including the causes of the capital inflows), large scale capital inflows and growing financial integration raise three main macroeconomic challenges for current and prospective integrating countries:

- First, how to avoid overheating (in terms of widening current account deficits, inflationary pressures and real exchange rate appreciation) given the often large magnitude of capital inflows.
- Second, how to avoid vulnerability to large reversals of private flows and potential liquidity crises of the kind suffered recently by Mexico.
- And, third, how to adapt the instruments and mix of macroeconomic policies to be able to achieve macroeconomic objectives in a more integrated setting.

Recent difficulties faced by the banking systems in Mexico and Argentina have underlined the importance of the soundness of the banking system to ensuring macroeconomic and financial stability in a more integrated environment. In this regard, two contrasting facts stand out about the banking system in developing countries. First, that they play an even more dominant role in financial intermediation than in industrial countries (figure 1.13). Second, that the health of the banking system is much weaker in developing countries (figure 1.14). In many instances, the banking systems have only been recently deregulated, the incentive framework is distorted towards excessive risk taking, banks are poorly capitalized, and the prudential regulation and supervision capabilities have not yet been established. Increased openness of the financial system under these circumstances poses considerable danger that capital inflows will be inefficiently intermediated and that the banking system will incur additional risks, thereby not only undermining the benefits of capital inflows, but potentially magnifying macroeconomic and financial sector vulnerability.

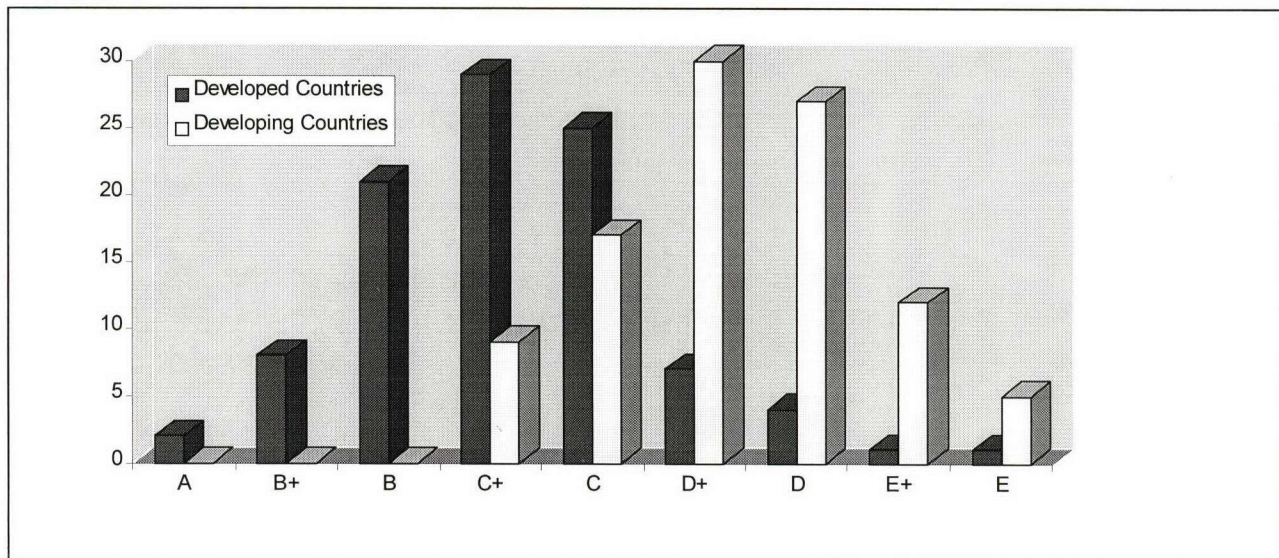
Figure 1.13 Banks Account for a Relatively High Share of Financial Intermediation
(Percent of Total Intermediation)



Source:

Figure 1.14 Health of Banking System

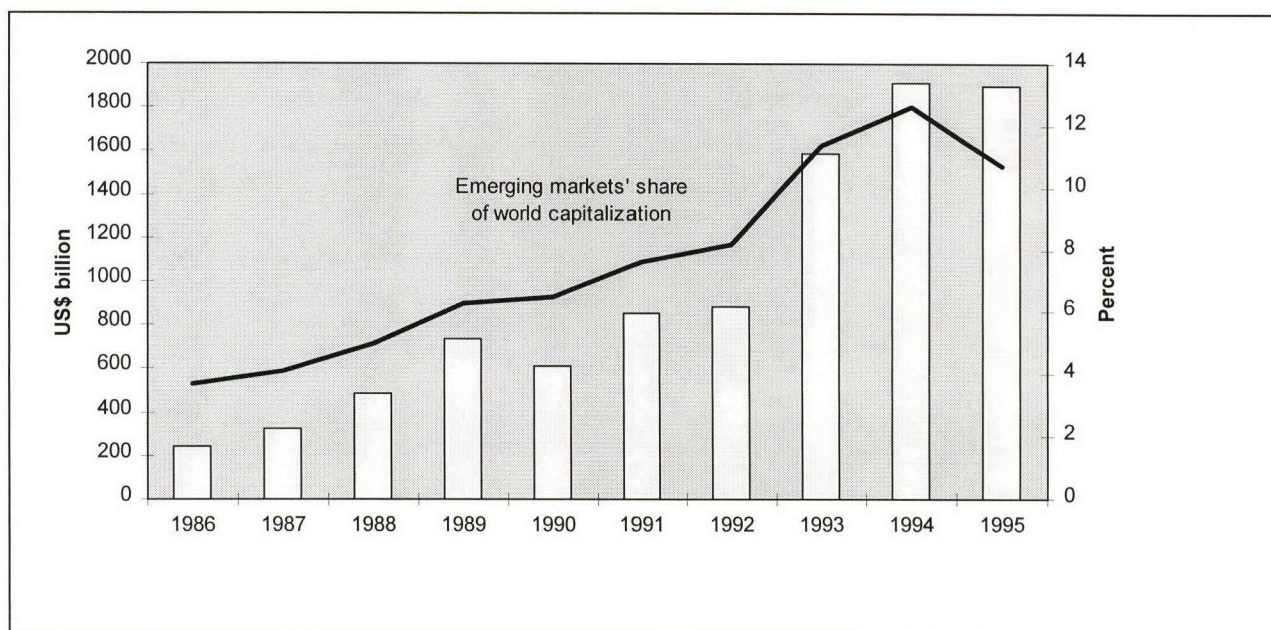
(Moody's Bank Financial Strength Ratings for Selected Countries, May 1991; percent of total rated banks)



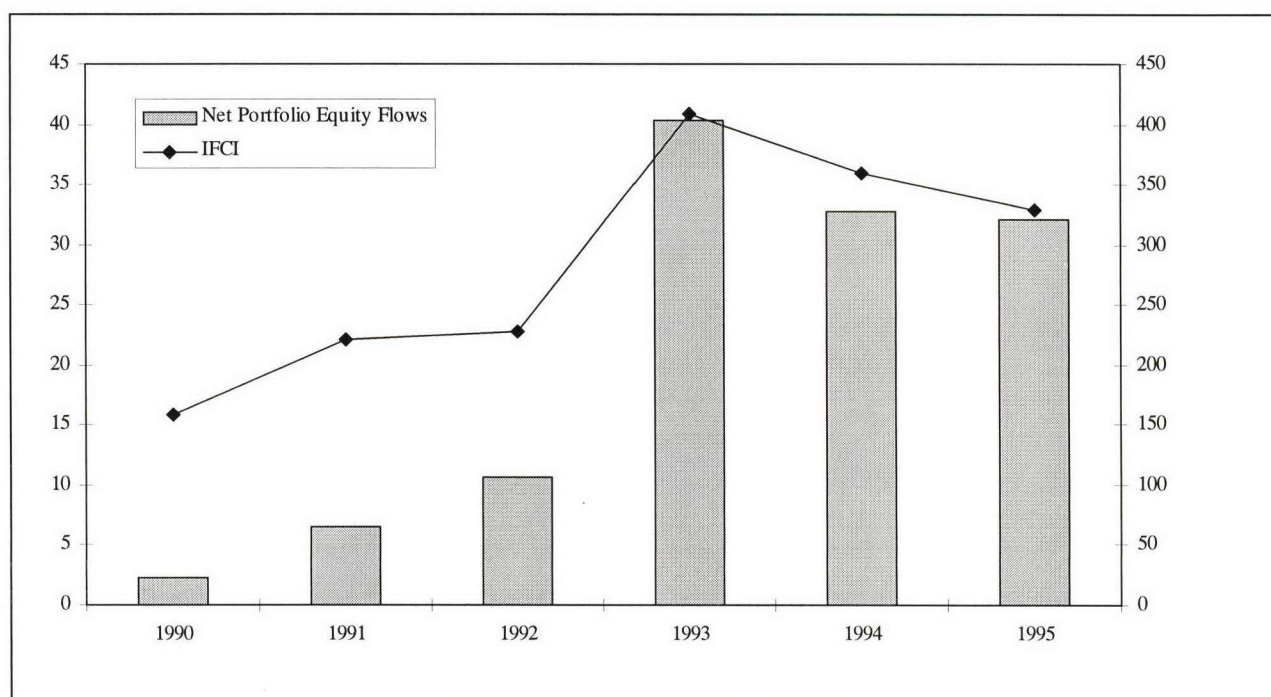
Source:

The fragility of the banking system can also become an important constraint for macroeconomic policy. For instance, in the case of both the Mexican and Venezuelan financial crises, the authorities were reluctant to raise interest rates in the face of a loss of reserves because of concerns about its effects on the health of the banking system. Unsettled macroeconomic conditions, in turn, can have severe repercussions on the domestic banking system. Most major banking crises have been preceded by a deterioration in the macroeconomic environment (Reinhart and Kaminski, 1996). An important challenge facing developing country policymakers, therefore, is how to manage the joint process of external financial liberalization and domestic financial sector reform, especially where macroeconomic conditions are still unsettled.

Although the banking system remains the main conduit for the domestic intermediation of private capital inflows, capital markets in developing countries are playing an increasingly important role with the growth in portfolio flows. Accompanying the surge in portfolio equity flows to developing countries has been a spectacular increase in the size and trading volumes of many emerging equity markets (figure 1.15 and 1.16). By the end of 1994 the combined market capitalization of eighteen major developing countries included in the IFC Emerging Markets Index had grown to thirteen times its size in 1985, rising from \$95 billion to \$1.2 trillion (from 7 percent to 43 percent of GDP on average). While market capitalization relative to GDP is still much smaller on average in developing than in industrial countries, that difference narrowed sharply between 1985 and 1994.

Figure 1.15 Growth of Emerging Capital Markets, 1986-95

Source: IFC, *Emerging Markets Factbook* 1996.

Figure 1. 16 International Flows Have Provided Impetus to Emerging Markets

Source:

The surge in portfolio flows and increased foreign presence in developing country markets has provided a boost to financial sector depth and liquidity and has been an important force in stimulating market reform and institutional development. Many emerging markets have made dramatic progress in reforming their markets, especially with respect to market infrastructure. There is, however, still a substantial gap between emerging and developed markets even for the more progressive countries in East Asia and Latin America. Developing countries face a continuing challenge to develop and deepen their capital markets so as to be able to tap the growing pool of portfolio investment and minimize the risks of potential volatility.

* * * * *

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The New International Environment

Introduction

The sustained increase in private capital flows to developing countries despite the cyclical recovery in industrial countries suggests that these flows have reached a new phase, driven by increased financial integration. Two fundamental structural forces are driving the growing investor interest in and integration of developing countries: improvements in longer-term expected rates of return, following policy reforms and strengthening creditworthiness, and the opportunities developing countries offer for risk diversification because rates of return in these countries are not very closely correlated with rates of return in industrial countries.¹

While higher expected returns were the driving force of private flows to developing countries during the late 1970s and early 1980s—before the onset of the debt crisis—a new force associated with the flows of the 1990s has been portfolio diversification. Opportunities for diversifying risk in developing countries began to emerge in a significant way in the late 1980s and early 1990s, as equity markets in these countries started to broaden and deepen. That private capital flows in the 1990s are being driven by considerations of risk diversification as well as expectations of higher returns is reflected in the fact that developing countries have now become recipients of portfolio equity flows—the form of investment for which risk diversification is most important—and that gross flows are sizably larger than net flows.

Another change since the 1980s is the magnitude and speed of response of private capital to new opportunities. This is due to changes that have taken place in the *enabling environment* of both industrial and developing countries; that is, in the economic and regulatory conditions that influence production and govern the operation of capital markets.

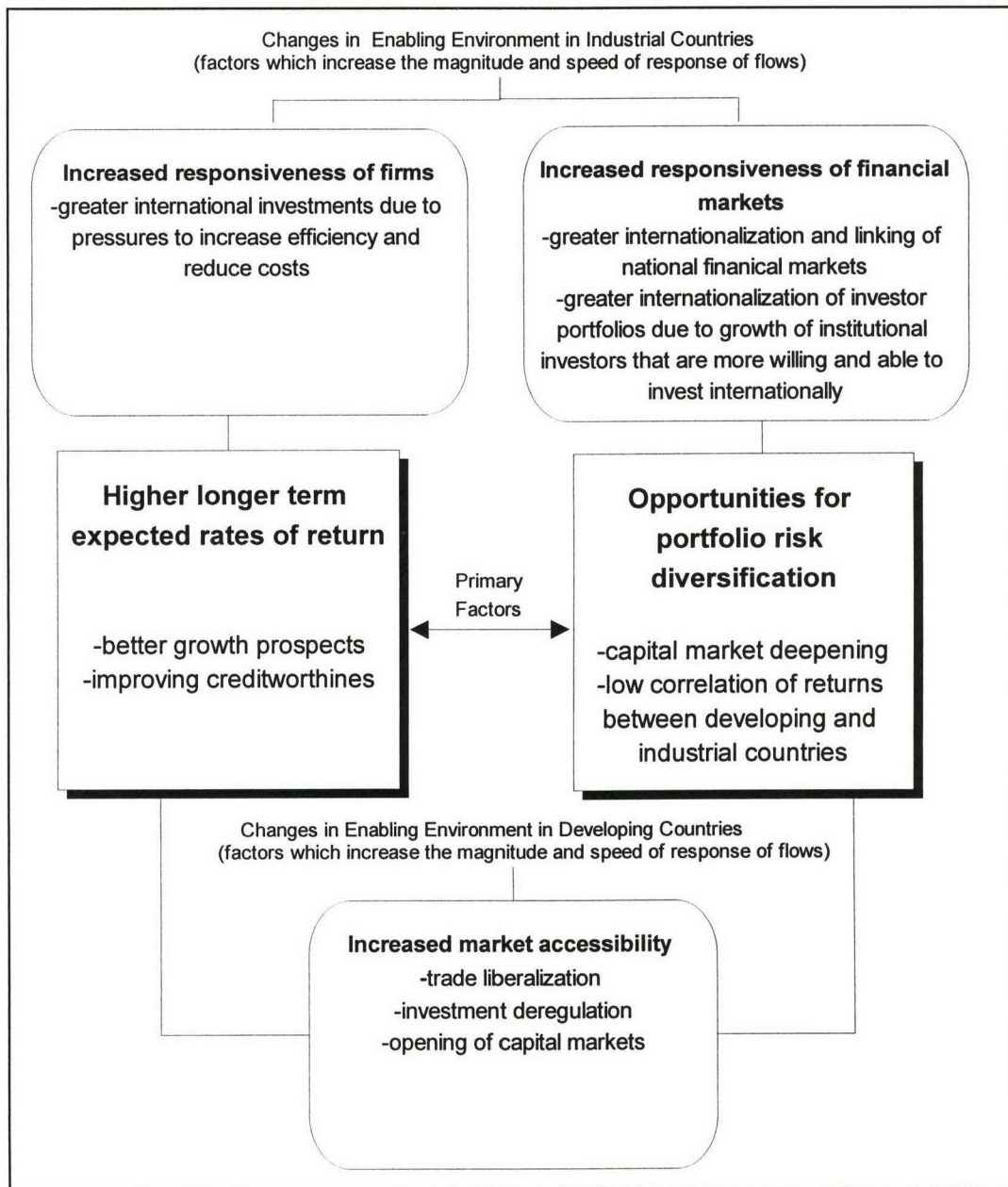
¹ So while rates of return would tend to fall in say, Germany if they fall in the United States, rates of return in countries in Asia would be much less affected because these countries are less integrated with industrial countries.

In industrial countries two key developments have encouraged cross-border investment. First, competition and rising costs in domestic markets, along with falling transport and communications costs, have caused firms to look for opportunities to increase efficiency and returns (profits) by producing abroad. This is leading to the progressive globalization of production and to the growth of “efficiency seeking” foreign direct investment (FDI) flows. Second, financial markets all have been transformed over a span of two decades, from relatively insulated and regulated national markets to a globally integrated market. This has been brought about by a mutually reinforcing process of advances in communications, information, and financial instruments and by progressive internal and external deregulation of financial markets. An important facet of the globalization of capital markets has been the growing importance of *institutional investors who are both willing and able to invest internationally*.

The enabling environment in many developing countries is also changing rapidly through the progressive lowering of barriers to trade and foreign investment, the liberalization of domestic financial markets and the removal of restrictions on capital movements, and the implementation of privatization programs. This has meant that private capital flows now have both the ability to move more easily and more opportunities for investment. Figure 2.1 summarizes the key elements in the process that is underway.

Of all types of capital flows, foreign direct investment has responded most vigorously to the improving economic environment in developing countries. What is also striking however, is the growth of portfolio bond and equity flows. Whereas developing countries attracted barely any portfolio flows a decade ago, in the past five years they have received almost 30 percent of global equity flows. This growth was first stimulated by mutual funds which were at the forefront of emerging market investments. More recently, pension funds have followed suit, either investing through mutual funds or directly on their own account. As a result, institutional investors now form a very important part of the investor base in emerging markets.

Figure 2.1 Structural Forces are Driving Private Capital to Developing Countries



These private capital flows and the process of financial integration hold significant potential benefits for developing countries, as will be discussed in Chapter 3. However, the new types of investors and their greater latitude to respond to changes in economic conditions, have raised concerns about how these capital flows might behave. In particular, given the speed and magnitude with which private capital flows can respond to actual or perceived changes—whether

global or domestic in origin—these flows can exhibit considerable on-going volatility, with adverse consequences on the domestic economy.

There is a perception that much of this volatility emanates from the international environment, arising from three factors in particular:

- movements in international interest rates and other asset returns. Private capital flows to emerging markets are considered to be particularly affected by changes in international interest rates because investors regard these markets as marginal.
- investor herding behavior. The new investor base of developing countries—dominated by institutional investors—is widely thought to be prone to herding behavior, arising from its incentive structure and the relatively limited information available on developing country investments.
- contagion or spillover effects from events in other emerging markets. The likelihood of contagion is also seen to be high in the current international environment, in part because of features in the current investor base.

This chapter looks at all of these issues. Section II analyses, empirically, the factors driving private capital flows to developing countries, and argues that private capital flows are increasingly being driven by forces that are creating permanent structural changes in international capital markets. Section III looks at the nature of these structural forces. Section IV analyses the effects of these forces on the growth in emerging market investments. Based on an understanding of the structural forces at play, section V then assesses whether private capital flows can be expected to be sustained. Finally, section VI analyses the implications of the changing international environment for the volatility of private capital flows to developing countries.

The Structural Character of New Private Capital Flows

As private capital flows to developing countries began to surge in the early 1990s coinciding with declining global interest rates, it was generally assumed that these flows were being driven primarily by cyclical conditions in industrial countries. This assumption was supported by early econometric analyses (see Box 2.1).

The persistence of these flows in spite of global interest rate increases in 1994 and the Mexico peso crisis in 1995, however, suggests that they are being driven by more than global cyclical factors. Indeed more recent analyses (reported in Box 2.2) show that:

- Countries with the strongest economic fundamentals, such as a high investment/GDP ratio, low inflation, and low real exchange rate variability—factors which affect the longer run rates of return to investors—have received the largest flows as a proportion of domestic GDP. At the other end, countries with very weak fundamentals have not attracted private flows at all.
- Global interest rates are not significant in explaining FDI flows, which have been the largest component of private flows to developing countries. These flows are more sensitive to countries' macroeconomic fundamentals.
- International interest rates were an important (statistically significant) factor in driving other private capital flows to developing countries during 1990-93.²
- The role of international interest rates, though, has declined and country-specific factors have become more important. There is moreover, a sizable difference among regions. Whereas international interest rates had the same degree of influence on portfolio flows to both East Asia and Latin America during 1990-93, their influence on portfolio flows to East Asia in particular, has declined.

² The analysis suggests that the decline in global interest rates in 1990 provided a strong impetus to private flows (especially portfolio flows) to developing countries, the allocation of which was determined largely by economic fundamentals. This is corroborated by the second piece of analysis which shows that there was large co-movement of U.S. portfolio flows to developing countries and that this co-movement was correlated with U.S. interest rates. In other words, U.S. interest rates appear to have had an important bearing on portfolio capital movements to developing countries during 1990-93.

- However portfolio flows remain quite sensitive to cyclical or temporary factors—to both movements in global interest rates and changes in domestic interest rates.
- Despite the fact that portfolio flows still exhibit a relatively high degree of cyclicality, however, portfolio flows to both Asia and Latin America show a clear upward trend since 1992/93. Thus, even in portfolio flows, other factors are at work.

Box 2.1 Are Private Capital Flows a Cyclical and Temporary Phenomenon? The Early Literature

There had been considerable debate on whether the surge in private capital flows to developing countries since the early 1990s is essentially a temporary phenomenon, driven in large part by cyclical factors in the international economy, or the result of longer-term structural changes, which would suggest that private capital flows will be sustained.

More precisely, the debate had been about the relative importance of “push” factors (factors in the global economy) and “pull” factors (factors in emerging markets) in explaining the surge in private capital flows. But since studies identified the push factor as global interest rates, and the pull factors the improvements in countries’ economic fundamentals, the arguments were also effectively been about the relative importance of cyclical factors (at the international level) versus structural factors (at the country level).

In a seminal article, Calvo, Leiderman, and Reinhart (1992) looked at whether private capital flows to Latin America were driven primarily by cyclical factors in the international economy or by improvements in countries’ economic fundamentals during the period 1988-91. Taking international reserves and the real exchange rate as proxies for private capital flows, they analyzed the degree of co-movement in these variables using principal component analysis. They found that there was a significant co-movement among countries’ foreign reserves and among their real exchange rates, and that the degree of co-movement increased in 1990-91 compared to 1988-89. They also found that the first principal component of both reserves and the real exchange rate exhibited a large bivariate correlation with several U.S. financial variables, including interest rates. This suggested that the main factor driving private flows to Latin America was the cyclical downturn in industrial countries and the associated decline in global interest rates.

Chuhan, Claessens, and Mamingi (1993), on the other hand, included Asian countries in their analysis. They found that while improvements in countries’ economic fundamentals—the country credit rating, secondary bond prices, the price earnings ratio in domestic stock markets, and the black market premium—were as important as cyclical factors in attracting portfolio flows to Latin America, these domestic factors were three to four times more important in explaining capital inflows to Asia.

However, since the CCM study considered country creditworthiness as being solely determined by improvements in the domestic economy (whereas, in reality, global interest rates also affect country creditworthiness), the study may have overstated the proportion that could be attributed to improvements in domestic fundamentals, as argued by Fernandez Arias (1994). By decomposing the improvements in creditworthiness into those arising from the decline in global interest rates and those arising from improvements in the domestic environment, he found that global interest rates accounted for around 86 percent of the increase in portfolio flows for the “average” emerging market during the period 1989-93.

On balance then, the prevailing view in the early 1990s was that cyclical factors in the international environment were the driving force of private flows to emerging markets. More recent work however suggests that there some structural forces at work (see Box 2.2).

¹ International reserves and real exchange rates were used as proxies because of a lack of monthly data on aggregate private capital flows

Box 2.2 Are the New Private Capital Flows Cyclical or Structural? Recent Empirical Evidence

1. To assess the importance of international interest rates on private capital flows to developing countries, a panel regression (which uses both cross country and time series data) of total private long-term capital flows/GNP was run on total investment/GNP, private consumption/GNP (if private investors consider private savings to be a sign of confidence in a country's prospects, the expected sign on this coefficient is negative), the stock of total external debt minus international reserves/GNP, volatility of the real effective exchange rate, a dummy for the successful completion of a Brady deal, real export growth, the twelve month U.S. treasury bond rate and a dummy for U.S. interest rates during 1990-93.¹

$$F = a + 0.097*INV_{it-1} - 0.087*CONS_{it-1} - 0.036*DRES_{it-1} - 0.000036*VRER_{it-1} + 0.00355*DBRAD$$

(1.68)** (1.71)** (4.30)*** (2.24)** (0.52)

$$+ 0.000107*EXPG_{it} + 0.000366*IUS_t - 0.000746*IUSD_t + 0.435*F_{it-1}$$

(0.57) (0.34) (1.24) (6.0)*** adjusted R² = 0.48

- The results show therefore that countries with strong economic fundamentals have received the largest magnitude of private flows relative to the size of their economies.

If foreign direct investment flows (FDI) are *excluded* from the regression, the following results are obtained:

$$F = a + 0.0115*INV_{it-1} - 0.069*CONS_{it-1} - 0.031*DRES_{it-1} - 0.000019*VRER_{it-1} + 0.00569*DBRAD$$

(2.43)*** (1.62)** (4.39)*** (1.44)* (1.01)

$$- 0.000058*EXPG_{it} + 0.001060*IUS_t - 0.001002*IUSD_t + 0.356*F_{it-1}$$

(0.37) (1.17) (2.02) (4.94)*** adjusted R² = 0.46

- The results confirm that, except for foreign direct investment, the downturn in U.S. interest rates during 1990-93 was a significant factor in explaining flows to developing countries, although domestic economic factors were also important.

2. To explore the influence of global interest rates on portfolio flows in particular, we analyzed the extent to which portfolio flows from the United States to 12 emerging markets in Latin America and East Asia moved together, and the degree to which this co-movement was related to U.S. interest rate movements. Co-movement in flows was measured by the first principal component of the flows. The analysis was done for countries in each region separately and then in aggregate, as is shown in Box Table 2.1.²

Box Table 2.1 : Co-movement of U.S. Portfolio Flows to Emerging Markets³

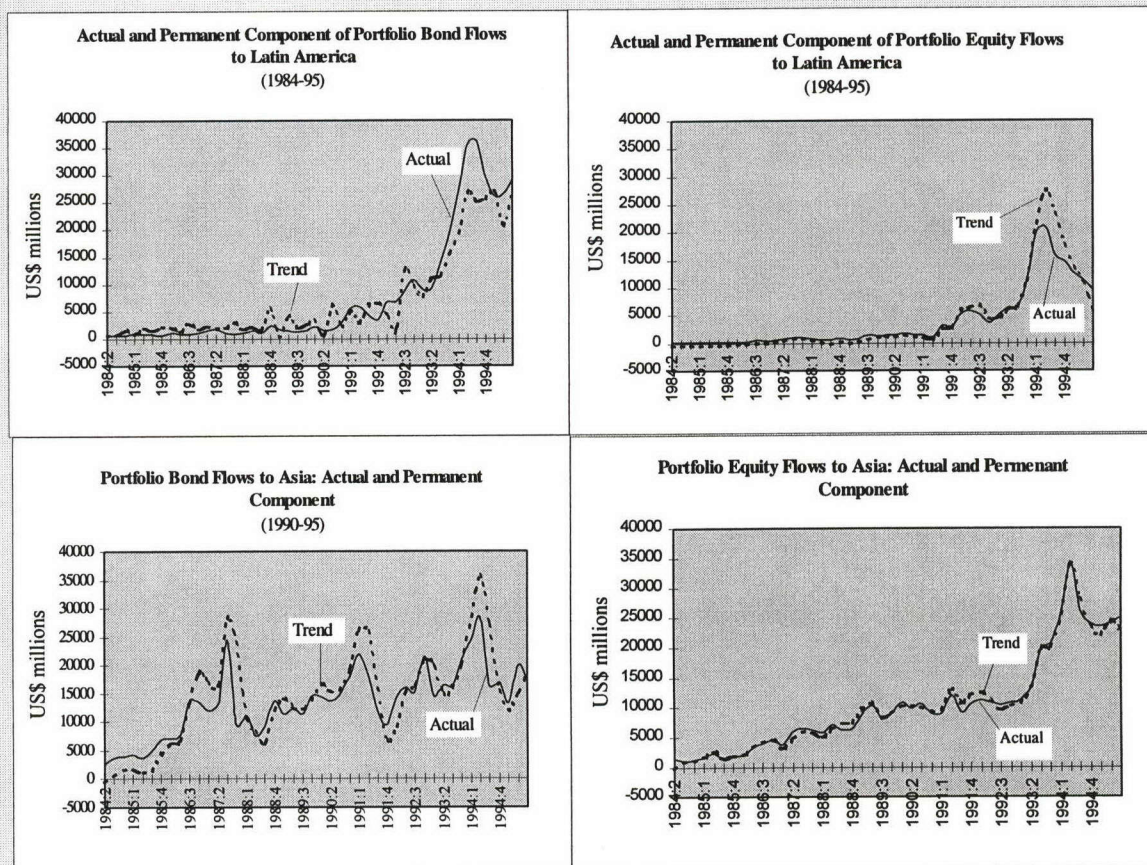
Region	1990-93			1993-95		
	Principal component of flows (PC)	Correlation with PC of interest rate	Correlation with PC of interest rate & stock market returns	Principal component of flows	Correlation with PC of interest rate	Correlation with PC of interest rate & stock market returns
Latin America	0.813	-0.60	-0.60	0.548	0.33	0.31
Asia	0.675	-0.59	-0.58	0.408	0.25	0.25
Total	0.755	-0.61	-0.60	0.455	0.28	0.26

³ Measured by the first principal component.

- The results show that there was a high degree of co-movement in flows during 1990-93 for both regions, and that this co-movement was related to movements in U.S. interest rates. Therefore, this analysis supports the hypothesis that U.S. interest rates played an important role in driving portfolio flows during 1990-93.
- Since 1993, however, there has been a decline in the co-movement of portfolio flows to both regions, suggesting that country-specific factors are becoming more important.
- The decline in the co-movement of flows after 1993 is especially marked for East Asia.

Continued..

3. Portfolio flows may also be susceptible to *domestic* cyclical or temporary factors. In order to assess the relative importance of cyclical (whether of international or domestic origin) and structural factors in driving private flows, we decomposed portfolio bond and equity flows from the United States to Latin America and Asia into their trend/cycle components. Since the structural factors that may be underlying private capital flows—such as global financial innovations or productivity improvements in recipient countries—do not occur in a predictable manner, they would be ill-captured by a deterministic trend. We therefore used the Beveridge-Nelson methodology, which entails fitting a stochastic trend (the component of the flow which, in a statistical sense, is not expected to reverse), off which the temporary or cyclical components are measured.



- The results show that the cyclical component for bond flows is higher than for equity flows in both regions. On average, during 1990-95, 40 percent of portfolio bond flows to Latin America and 16 percent of bond flows to Asia were temporary or cyclical. For equity flows the proportions were 13 percent for Latin America and 5 percent for Asia.
- Portfolio flows to Latin America show a much higher degree of cyclicity.
- Despite the relatively high degree of cyclicity, there is a clear upward structural trend in portfolio flows to both regions. The structural trend in flows to Latin America begins around 1992/93. Although flows to Asia show an upward trend that began earlier, the rise in equity flows is more dramatic from 1992 onward.

¹. Hernandez and Rudolph (1995).

². See Calvo, Leiderman, and Reinhart (1992) for the analysis using reserves and real exchange rates as proxies for capital flows to Latin America during 1988-93

Notes: * variable significant at the 10% level; ** significant at the 5% level, *** significant at the 1% level.

The Structural Forces Driving Private Capital Flows to Developing Countries

Higher Expected Rates of Return and Portfolio Diversification: The Primary Forces

The structural trend now evident in private capital flows is being driven by two fundamental forces: higher longer-term (as opposed to short-term or cyclical) expected rates of return in developing countries, and the opportunity for risk diversification.

Expected rates of return are higher in developing countries...

Traditional economic theory predicts that, in general, long-term returns to investment will be higher in countries that have a low stock of capital relative to labor and hence a high marginal product of capital. Because savings tend to be a function of per capita income, savings are lower in developing countries than in industrial countries, and so therefore is the stock of capital. Consequently the marginal product of capital and rate of return on investment can be expected to be higher in developing countries and if foreign capital is free to move, it will flow to these regions until the rates of return are equalized across countries.³

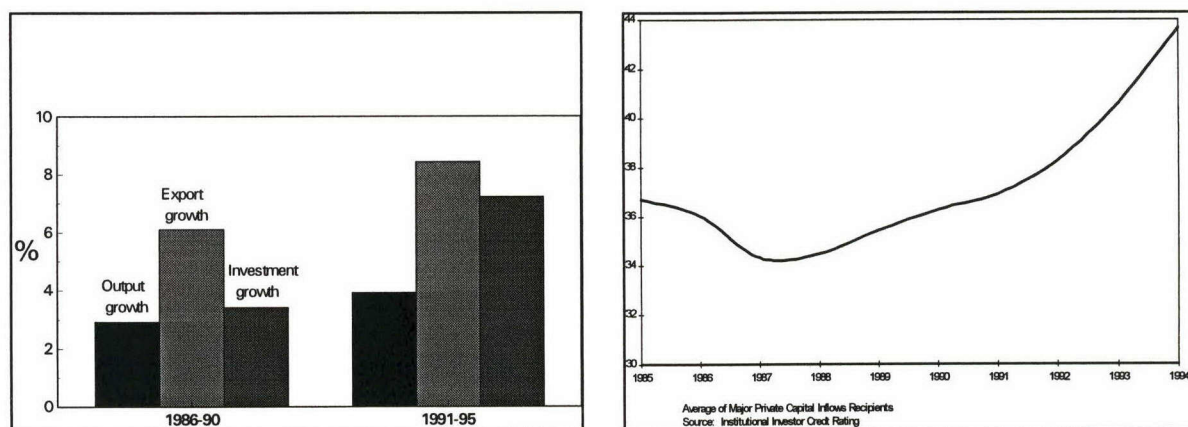
The expectation of higher rates of return was the force driving private capital to developing countries in the late 1970s and early 1980s. However, with the deterioration in the external macroeconomic environment for developing countries in the early 1980s, including the sharp rise in global interest rates, recession in the industrial countries, and the onset of the international debt crisis, macroeconomic performance and the creditworthiness of developing countries declined dramatically. This, in turn, severely reduced the expected rates of return to investment for foreign investors, for whom creditworthiness—or a country's capacity to make available resources for external payments—is very important.⁴

³ In the starkest versions of the savings-investment balance models, investors are assumed to be risk neutral. In reality however, foreign investors are likely to be concerned about exchange rate risk and country default risk, so that capital will flow until domestic interest rates, adjusted for expected exchange rate depreciation and country risk, are equal to world interest rates.

⁴ A high default risk increases the likelihood of non-compliance with contractual payments—either explicitly or implicitly through, for example, discriminatory taxes against the foreign investor. Declining creditworthiness therefore increases the variability and reduces the expected rates of return to the foreign investor. In contrast, domestic investors are concerned only about returns to the individual project.

In the mid-1980s however, the macroeconomic performance and creditworthiness of developing countries started improving again, and this trend accelerated in the early 1990s. In the past five years, (1990-95), developing countries have seen a decline in inflation, higher growth of output and exports, higher growth in investment and more productive investment (Figure 2.2). The more stable domestic macroeconomic environment, has, in turn, improved prospective rates of return to investment in general,⁵ while the growth in earnings capacity (as manifested in the growth of output and exports), and reduction in the stock of external liabilities in many of the heavily indebted middle income countries (following the implementation of the Brady Plan), has reduced country risks for the foreign investor. All of these elements have resulted in an increase in the expected rates of return in these countries.

Figure 2.2 Macroeconomic Performance in Developing Countries has Improved Considerably, as has Their Creditworthiness



Sources: World Bank staff estimates

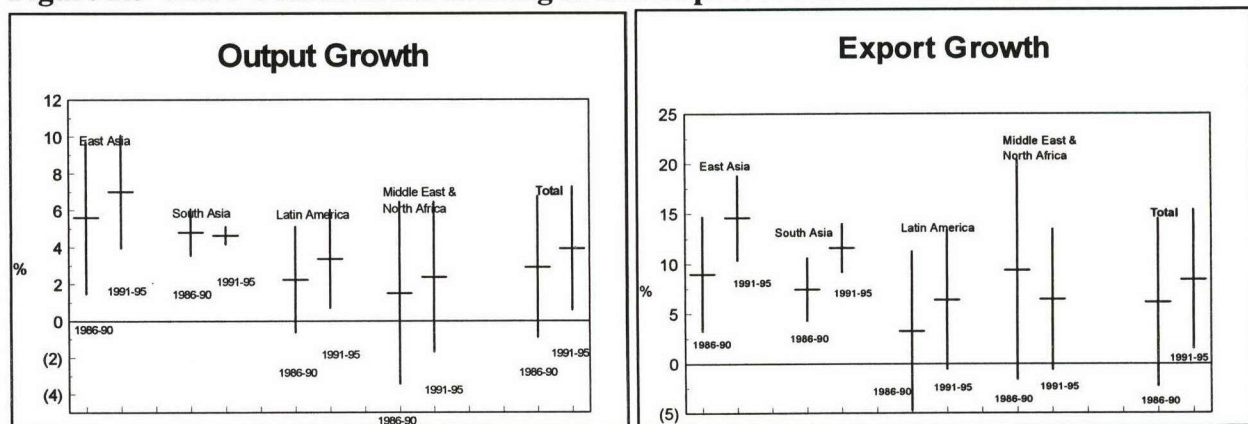
Underpinning these improvements in developing countries' economic performance has been the systematic adoption of macroeconomic stabilization programs and structural reforms in order to promote greater resilience of their economies to external shocks. A key element of the stabilization programs has been sustained fiscal adjustment, as a result of which, structural fiscal deficits have declined on average from _ percent in 1985 to _ percent in 1995. The structural reforms, consisting of trade liberalization, investment deregulation, and financial sector

⁵ Macroeconomic stability has been found to be a very important determinant of investment. Macroeconomic volatility is estimated to have reduced developing country growth between 1960 and 90 by as much as 0.9 percentage points per annum (Schmidt-Hebbel 1995).

liberalization, have promoted more private sector activity and outward-oriented economies. In addition, low interest rates since the mid-1980s, and a further cyclical decline in the early 1990s, provided impetus to the improvements in economic performance and creditworthiness. In principle, international interest rates can affect country creditworthiness through two main channels. First, since creditworthiness reflects the present value of the resources available for external payments, it is directly sensitive to investor's discount rate, i.e. to international interest rates (Fernandez-Arias, 1994). A decline in international interest rates increases the present value of resources available for external payments and therefore country creditworthiness. Second, international interest rates can affect a country's debt burden if debt is held at variable interest rates. Hence a decline in international interest rates can reduce a country's external debt burden.

These reforms have meant that, unlike the growth of the late 1970s—which was largely inward oriented and led by public investment—the growth of developing countries in the 1990s is more broad based and led by exports. What is also noteworthy is that the improvements in economic performance and creditworthiness are being shared by a growing number of developing countries. As Figure 2.3 shows, not only has the median growth rate of output and exports increased, but this growth has been shared more equitably across countries (the dispersion around the mean has declined in every region in the past five years relative to the late 1980s).

Figure 2.3 More Countries are Sharing in this Improved Economic Performance



Sources: World Bank staff estimates

...and there are also important opportunities for risk diversification

The second force behind the structural trend in private capital flows is investors' need for portfolio risk diversification. Investors can benefit from holding emerging market equities because returns in emerging markets tend to exhibit low correlations with industrial country returns—i.e. they tend not to move in tandem with those of industrial countries. By holding an asset whose returns are not correlated with the returns of another asset, investors can raise the overall return on their portfolio without increasing the risk (variance), or alternatively, reduce the risk without reducing the mean return on the overall portfolio.

The opportunity for portfolio diversification offered by emerging markets is a relatively recent phenomenon, which has developed as capital markets in these countries have deepened and broadened. As discussed in chapter 6, by the end of 1994, the combined market capitalization of the 18 major developing countries that comprise the IFC Emerging Markets Index was, at US\$ 1,245 billion, thirteen times higher than it was in 1985.⁶ As a ratio of GDP, the average market capitalization of these countries rose from 7 percent to 42 percent of GDP during the period. Turnover ratios reveal the same trends, increasing approximately twofold between 1985 and 1994.⁷

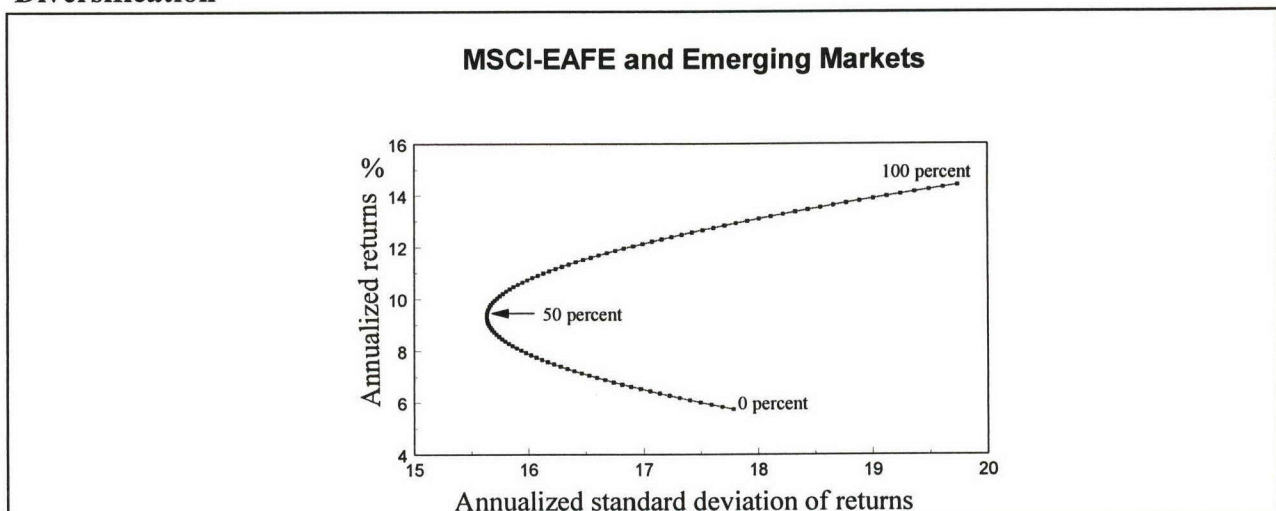
As a result of this growth, financial markets in developing countries are now beginning to provide foreign investors with significant opportunities to diversify into investments that have low correlations with their investments in industrial country markets. The following example illustrates the potential gains to investors that arise from these low correlations. Assume that an investor's international holdings are allocated across countries according to the proportions

⁶ The growth and development of stock markets is, in general, very dependent on the availability and disclosure of high quality information. This may explain why stock markets tend to become more important in the financial structure of economies as the latter develop: companies become larger and countries develop the requisite accounting and disclosure standards. (Mishkin (1996) for example, discusses how securities markets are more prone to problems of asymmetric information and adverse selection, than are commercial banks—so that the development of the securities markets is likely to evolve after that of the banking sector). Demirguc-Kunt and Levine (1996) provide evidence on how the financial structure differs across countries and changes as countries develop economically.

⁷ As argued in Chapter 6, foreign investors themselves have made a significant contribution to this development—and the process has been self reinforcing. As these investors have entered the market, they have contributed to their deepening, which in turn, has increased their attractiveness as markets.

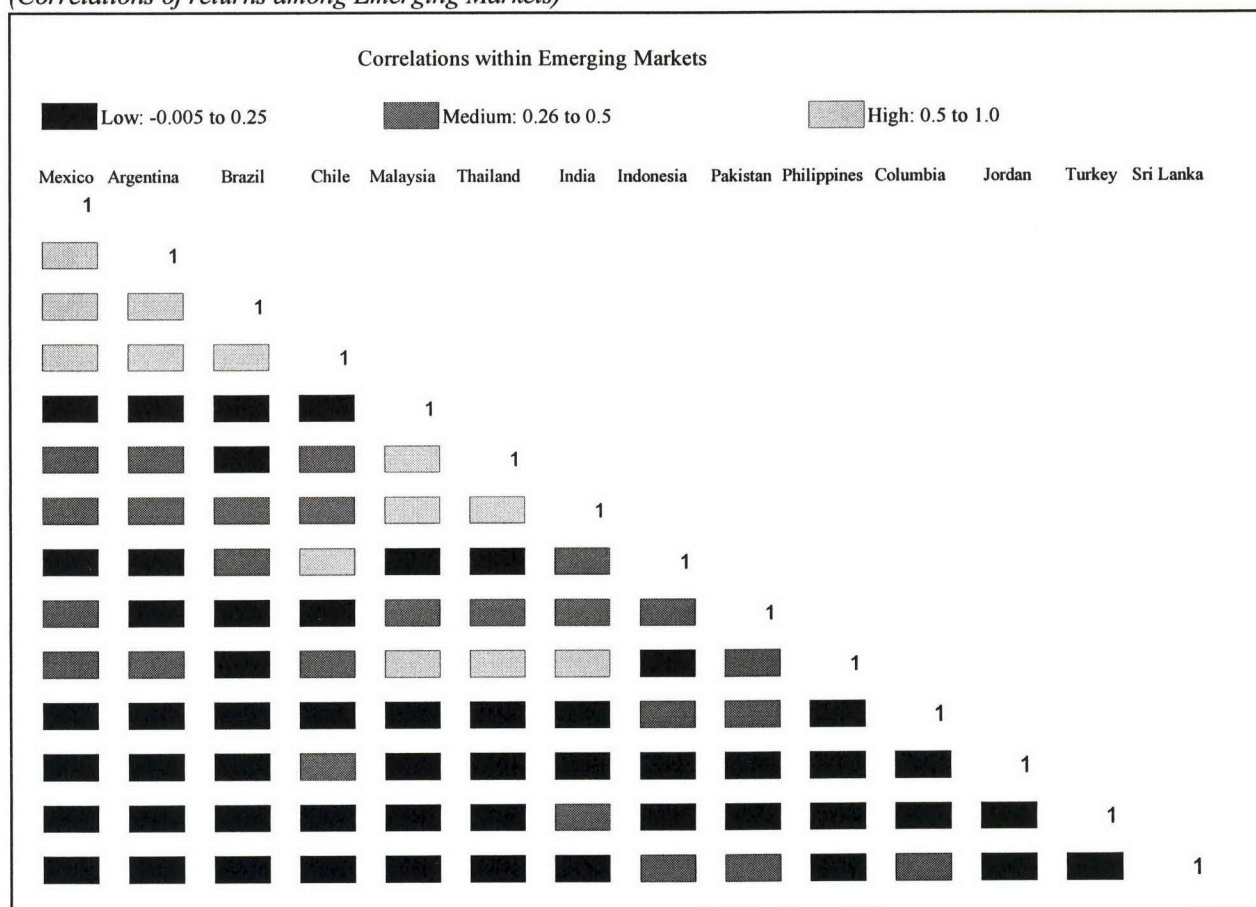
implied by the MSCI-EAFE Index. Based on the current correlations between the returns of stocks in the MSCI-EAFE index and those in the IFC Emerging Market Investible Index, this investor could both increase the returns and reduce the risks on his overall portfolio if he reallocated up to 50 percent of his portfolio of international holdings to emerging markets according to the country allocations implied by the IFC index (Figure 2.4). Moreover, given that returns among emerging markets exhibit low (and often negative) correlations with each other (Figure 2.5), greater diversification within emerging markets than that implied by the overall IFC Emerging Markets Index could reduce portfolio risks even further.

Figure 2.4 Emerging Markets Offer Considerable Potential for Portfolio Risk Diversification



Source: World Bank staff estimates

Figure 2.5 Diversifying within Emerging Markets could Further Reduce Portfolio Risks
(Correlations of returns among Emerging Markets)



Notes: Correlations computed using IFC Emerging Market Investible Index returns during January 1990-August 1996.

The Changing Enabling Environment in Industrial Countries

The strong response of private capital flows to the structural forces described above has, in large part, been due to changes that have taken place in the enabling environment in both industrial and developing countries during the 1980s and 1990s. In industrial countries, the changes have been two broad areas. First, in the real sector, increasing competition and rising costs at home, combined with falling transport and communication costs, has heightened firms' responsiveness to opportunities to increase efficiency and reduce costs by locating investments abroad. This is leading to the progressive globalization of production and has spurred the growth of "efficiency seeking" FDI. Second, in financial markets, a self-reinforcing process of competition, deregulation, technological advances, and financial innovations has increased the responsiveness of investors to international investment opportunities. This process is rapidly

leading to the linking of domestic markets into one global market. These two forces are discussed below.

Globalization of production is making firms more responsive to new opportunities...

The 1980s and 1990s have witnessed the progressive globalization of the production process. Competitive pressures from unilateral and successive rounds of multilateral trade liberalization, and stagnant demand combined with rising costs at home, have encouraged firms to seek new markets and increase efficiency. Initially, this involved the location (or relocation) of the full range of production activities to a low cost country. More recently, the drive for increased efficiency has involved breaking up of the production process into discrete segments and locating each of these segments in the best location in terms of cost and productivity considerations. In turn, this process is spurring the growth of “efficiency driven” foreign investment flows, which often encompasses a wide range of corporate functions and takes place in a broad number of industries with different levels of factor or skill intensity.

The globalization of production has been made possible by recent technological changes and reductions in transport and communications costs. A good example of this is the automobile industry. Toyota, for example, has rationalized its production on an ASEAN-wide basis, with affiliates in each country specializing in the production of different parts and components that are subsequently exported to the country where the final assembly takes place. Similarly, General Motors plans to establish a materials and components purchasing office in Poland which would be responsible for parts purchases for all its European affiliates.

This process is, moreover, self perpetuating: heightened competition is driving firms to invest abroad based on efficiency considerations, and growing foreign direct investment is making firms more competitive, thereby intensifying the competition. As a result, *firms are becoming increasingly responsive to new opportunities that can strengthen their competitiveness*—in particular they are looking to invest in markets which offer macroeconomic stability, supportive regulatory frameworks, well developed infrastructure (transport and

telecommunications) low costs in relation to productivity of the labor force and more open trade regimes which can facilitate the import and export of intermediate components.

As a result, a significant proportion of current global foreign direct investment flows can be characterized as efficiency seeking flows. The importance of this type of FDI flows is evident in the fact that the sales of foreign affiliates to the parent transnational corporation and to other affiliates of the same parent company, as a share of worldwide sales of affiliates, is high and has increased somewhat over the past decade. Moreover the increase has been more pronounced with regard to the sales of affiliates in one host country to affiliates in other host countries—concurring with the specialization in production process implied by the more recent type of efficiency seeking FDI.

And financial markets are becoming more responsive, driven by the linking of domestic markets...

The financial markets in industrial countries have also changed significantly during the 1980s and 1990s. Driven by the self-reinforcing process of competition and financial innovation, along with deregulation and technological change, they have become increasingly global in nature. Foreign exchange markets were the first to internationalize in the late 1970s, followed by bond markets in the 1980s, and equity markets in the 1990s.

The internationalization of foreign exchange markets began in the late 1970s, after the collapse of the Bretton Woods system of fixed exchange rates in 1973. The internationalization of bond markets however, only gathered momentum during the 1980s, when low inflation, and positive real interest rates and the yield curve made long-term bonds appealing to investors. At the same time, funding costs from banks rose for a variety of reasons. The general deflation in the 1980s and the international debt crisis placed pressures on the performance of banks' assets, while higher reserve requirements, capital and overheads, increased their intermediation costs. The combination of these factors placed pressures on their balance sheets and caused them to raise their lending rates. As a result, prime borrowers such as governments and large corporations, found it cheaper to raise funds directly from investors through the securities

markets. This internationalization of securities markets began with the strengthening of the offshore Eurobond market. The fact that the Eurobond market was exempt from many of the regulations of domestic markets—especially with regard to taxation—meant that prime issuers could usually raise funds at lower costs than in domestic markets while investors often received higher rates of return than they did in their own regulated domestic markets.

Largely in response to market pressures, governments began to deregulate domestic financial markets by the mid-1980s. This contributed to greater convergence of issuing costs between offshore and onshore markets, thereby encouraging corporations and governments to move their capital raising activities from offshore markets to the major domestic markets, while leading to the progressive internationalization of the latter. For example, in Japan the regulations on the Samurai bond market were relaxed in 1983, the first Shogun bond was issued in 1985 and restrictions on domestic and Euro Yen Commercial Paper by non residents were relaxed in 1988. In the United States, the 30 percent withholding tax on interest income to foreigners was eliminated in 1984, and in Germany, the tax on foreign investors' income from bonds was eliminated in 1984, restrictions on foreigners on the purchase of Federal bonds in the primary market were lifted in 1988 and the rules for Deutsche Mark bonds eased in 1989. (Annex 2.1 lists the key domestic and international financial deregulations)

Equity markets started to globalize much more recently, essentially in the early 1990s. They have been slower to globalize for several reasons. First, equities are much less liquid than bonds, in part because the valuation of the equity of a company is very specific to the circumstances of that company, making shares intrinsically more difficult to trade. Second, the information and infrastructure needed for investors to undertake global investments in equities (for example, comparable accounting standards and global settlement and custodial services) are only now being developed. What has driven the process of internationalization of equity markets is the more active stance of institutional investors, as discussed in more detail in the next subsection. Unlike the bond markets, neither multinational commercial banks (which were an important force in the internationalization of the bond markets) nor the issuers themselves (i.e. multinational corporations) have played a significant role in the process.

In fact, the relative illiquidity and volatility of equities has meant that multinational commercial banks, which are highly leveraged institutions, have generally been averse to holding equities (foreign or domestic) in any significant amounts. And, multinational corporate issuers have not been particularly interested in listing abroad, because the price of equities is generally driven by investors in their own countries, who hold the bulk of the company equities and know most about them. As discussed below, however, institutional investors, who during the 1980s concentrated more on domestic equities and held the bulk of their international investments in the form of bonds and currencies, are now rapidly increasing their holdings of foreign equities. And, in tandem, governments have been progressively deregulating domestic stocks markets to foreign investors (Annex 2.1). This is providing the impetus for the internationalization of domestic stock markets.

Financial innovations during the 1980s and 1990s have also played a key role in the internationalization of financial markets. Specifically, the last two decades has seen the growth of forward based contracts (forwards, swaps and futures), option-based contracts (options, caps, floors swaps and options on futures), and even more recently, structured derivative securities (structured securities, stripped securities and securities with options) (see Annex 2.2). These innovations can lower funding costs, enhance yields, or unbundle some of the characteristics of securities, such as their price risk, credit risk, country risk, and liquidity, to tailor to the needs of different investors to hedge price, interest rate and exchange rate risks. As a result, these innovations have made it more attractive for borrowers to raise capital in foreign markets and for investors to make cross-border investments. For example, the use of interest rate swaps in conjunction with currency swaps has resulted in an increasingly global bond market. And, more recently, financial innovations have been promoting the internationalization of equity markets. For example, foreign investors are now using equity swaps, in which a domestic agent passes on the gains or losses from holding domestic equities to the foreign investor for a fee. This allows the foreign investor to avoid having to pay for high local execution costs or falling victim to insider trading practices (McKinsey, 1994). (Annex 2.1 lists the adoption of key financial

innovations in securities markets, and Annex 2.2 shows the growth in the use of derivative instruments in recent years).

Technological advances have reinforced the effects of deregulation and financial innovations in internationalizing markets, by increasing efficiency in gathering and disseminating information and in processing transactions. In particular, low cost telecommunications have been instrumental in linking financial markets and have made possible 24 hour trading, which, in turn, has brought greater breadth and depth to trading. It can be argued that improved communications also encourages financial institutions to continue to develop new instruments to meet the needs of end-users in previously isolated markets (Honeygold, 1987).

The evolution in electronic technology has greatly enhanced the efficiency of stock markets, just as the Euroclear and CEDEL standard clearing mechanisms have provided a low cost dealing and delivery in the Eurobond market. For example, NASDAQ, which originated as an over-the-counter (OTC) market for smaller firms unable to meet the stringent requirements and high listing costs of the major exchanges, now provides for private firms to make block sales by linking their customers together through computer terminals, at high speed and with low transactions costs. Moreover, for small scale operations, it has been possible, since the end of 1984, to complete instantaneous transactions of orders up to 500 shares through computer to computer transmission via the Small Order Execution System. Similarly, in Japan the CORES (Computerized Order Routing and Execution System) handles all but the largest stocks (which are still traded on the trading floor). In the UK, SEAQ International (Stock Exchange Automated Quotations System), introduced in 1985, is linked to NASDAQ in the U.S. and provides mutual on-screen access to the top 300 quotations in each market. Market makers can thereby display current prices around the world, improving the efficiency of trades.

...and the growing importance of institutional investors

The other aspect of the change in the enabling environment in industrial countries has been the growth of institutional investors, which have been responsible for channeling household savings away from commercial banks into the securities markets. These investors, both able and willing to invest abroad, have increased the magnitude of the response of private capital flows to the fundamental forces driving these flows, i.e. cyclical and long-term relative rates of return, and new opportunities for portfolio diversification.

The growing importance of institutional investors in channeling household savings has been the result of the same forces—competitive pressures, deregulation, technological advances, and financial innovations—that have affected the markets on the issuing side. One type of innovation—securitization—(broadly defined as the process of matching savers and creditors through financial markets as opposed to closed market credits via banks and other financial institutions)—has played a particularly important role (Gardner, 19__). Specifically, securitization has meant the creation of instruments, (including the conversion of loans into securities—or secondary securitization) that can be issued and traded directly on market. Because securitized assets are more cost effective than bank loans, they have facilitated the growth of institutional investors that invest and trade these assets at the expense of commercial banks, whose primary business remains in making loans. In particular:

- Mutual funds, which had already grown substantially in the 1950s and 1960s, attracted more savings and thereby became more important in the financial markets during the 1970s by offering money market funds. Investors found these funds an attractive alternative to the regulated deposit rates of commercial banks when market interest rates rose. In the 1980s, following the success of money market funds, mutual funds began to invest in bonds, both domestic and international, and gradually in domestic equities. This both reinforced, and was reinforced, by the securitization that was taking place.
- Pension funds have also become increasingly important, because of broader pension coverage and—particularly since the 1970s—because of the rising value of contributions. The growth in pension assets was especially stimulated by changes in pension and tax laws. For example,

in the United States, federal tax law allows companies to deduct their contributions to employee pensions plans. Moreover, employee contributions are not taxed, and interest on pension assets are not taxed until retirement. Therefore, both employers and employees have an incentive to save through a pension plan, as opposed to forms of savings, which are taxable (Sellon 1992). Given the long-term nature of their commitments (i.e., to pay retirement benefits), pension funds tend to invest in long-term instruments, including corporate equities and long-term bonds. As in the case of mutual funds, therefore—indeed, arguably more so—the growing importance of pension funds and the process of securitization have been mutually reinforcing.

There are fundamental advantages offered by institutional investors, that explain their appeal to individual investors and that suggest that their role will continue to expand. Pension and mutual funds in particular, provide individual investors with a low-cost method of diversifying their portfolios by pooling funds with many other investors to purchase a number of different assets. At the same time, technological advances have greatly reduced the costs of dealing with a large number of investors.

This trend towards greater institutionalization of household savings away from banks and self-directed investment, is very evident in the three countries that are major sources of funds—Japan, the United States, and the United Kingdom (Figure 2.6). In the latter two, where this trend has been most pronounced, the share of household savings channeled to mutual and pension funds doubled between 1975 and 1994. However, continental Europe, with the exception of the Netherlands and Switzerland, has seen much more modest shifts to institutional investors. These varying trends largely reflect country-specific factors such as the differential pace of deregulation, and different tax policies.

The variation across countries notwithstanding, there is a clear trend towards the institutionalization of savings in industrial countries. Altogether, pension funds, insurance

companies, and mutual funds in seven major industrial countries⁸ had assets close to \$17 trillion in 1994, compared with \$5.3 trillion in 1985.⁹ Institutional investors now dominate the financial landscape, especially the capital markets. In the United States, for instance, institutional investors are now estimated to account for more than 49 percent of United States equities compared with 16.5 percent three decades ago.

One reason for the success of pension and mutual funds is that individual investors are offered the benefits of professional management. Through the expertise of specialized investment advisors or fund managers, individual investors can realize higher returns from more a diversified and more international portfolio than they could get by themselves, without having detailed knowledge of the countries and individual companies issuing the securities. The trend toward international diversification by institutional investors has been particularly pronounced in the United States, but it is also happening in other major industrial countries to varying degrees.

Within institutional investors, though, a distinction should be made between the international behavior of pension funds and of mutual funds. Mutual funds, which are driven by profits and are subject to relatively few regulations, increased their international exposure much earlier and have always had a higher proportion of international assets. They have not, consequently, internationalized much more during the 1990s, except in the United States, where the international share of the mutual fund portfolio rose from 3.8 percent in 1990 to 8.9 percent in 1994.

Pension funds, on the other hand, have always been heavily regulated because of their fiduciary responsibility to deliver promised benefits. Consequently, these pension funds have tended to be more cautious in their investment strategies. Moreover, given their orientation toward long-term investments, they have tended to focus on long-term instruments. The international diversification of pension funds therefore did not begin until the 1980s, as the long-

⁸ US, Japan, UK, Canada, Germany, France, and the Netherlands.

⁹ There is some double counting entailed, pension funds typically make a significant proportion of their investments through intermediaries, including other institutional investors. For instance, in Europe and the United

term securities markets become internationalized and as governments began to deregulate their investment allocations.

The trend toward greater international diversification by pension funds has been common to most industrial countries, with the exception of Germany and a few other European economies.¹⁰ The degree of international diversification among pension funds also varies significantly however, ranging from 24 percent of total assets in the United Kingdom, to around 17 percent for Canada and the Netherlands, to 9 percent for the United States, and to a low of 5-6 percent for Germany and France (Figure 2.7). Moreover, with the exception of the United States and Japan, the international exposure of pension funds remains significantly lower than that of mutual funds.

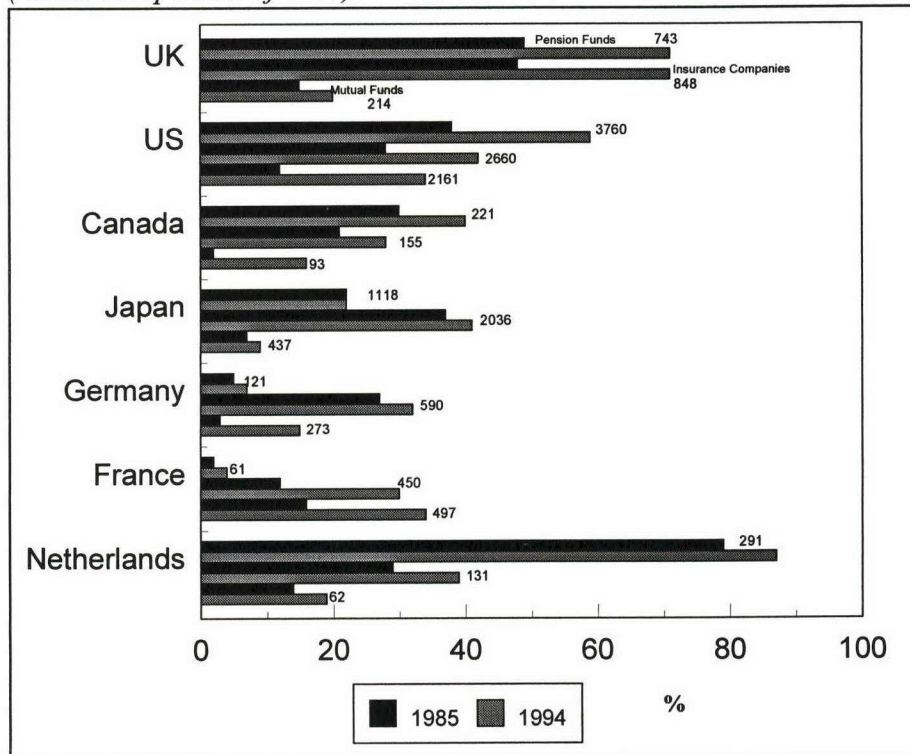
The third type of institutional investor, insurance companies, generally have had even lower international exposure. One reason for their preference for domestic assets may be their need to match assets and liabilities—including currency composition—in the short term (Davis, 1991). However, with the exception of Japan and the United States, even insurance companies have seen small increases in international assets.

Overall, the combination of the growth in the asset base of institutional investors, and the growing internationalization of these assets, has meant a rising volume of international investments by institutional investors. For example, total assets of pension funds at the global level are estimated to have increased from \$4.3 trillion in 1989 to \$7 trillion in 1994. At the same time, the share of non-domestic investment in their portfolios rose from around 7 percent in 1989 to 11 percent in 1994. Together, this has resulted in an increase in total international investments by pension funds from \$302 billion in 1989 to \$790 billion in 1994, with the growth in asset base contributing to around 40 percent of the increase in international investments, and greater international diversification contributing around 60 percent of the increase.

States pension funds account for about half of mutual fund assets. In Japan, pension funds make most of their investments through insurance companies and trust banks.

¹⁰ Such as Norway, Sweden, and Spain.

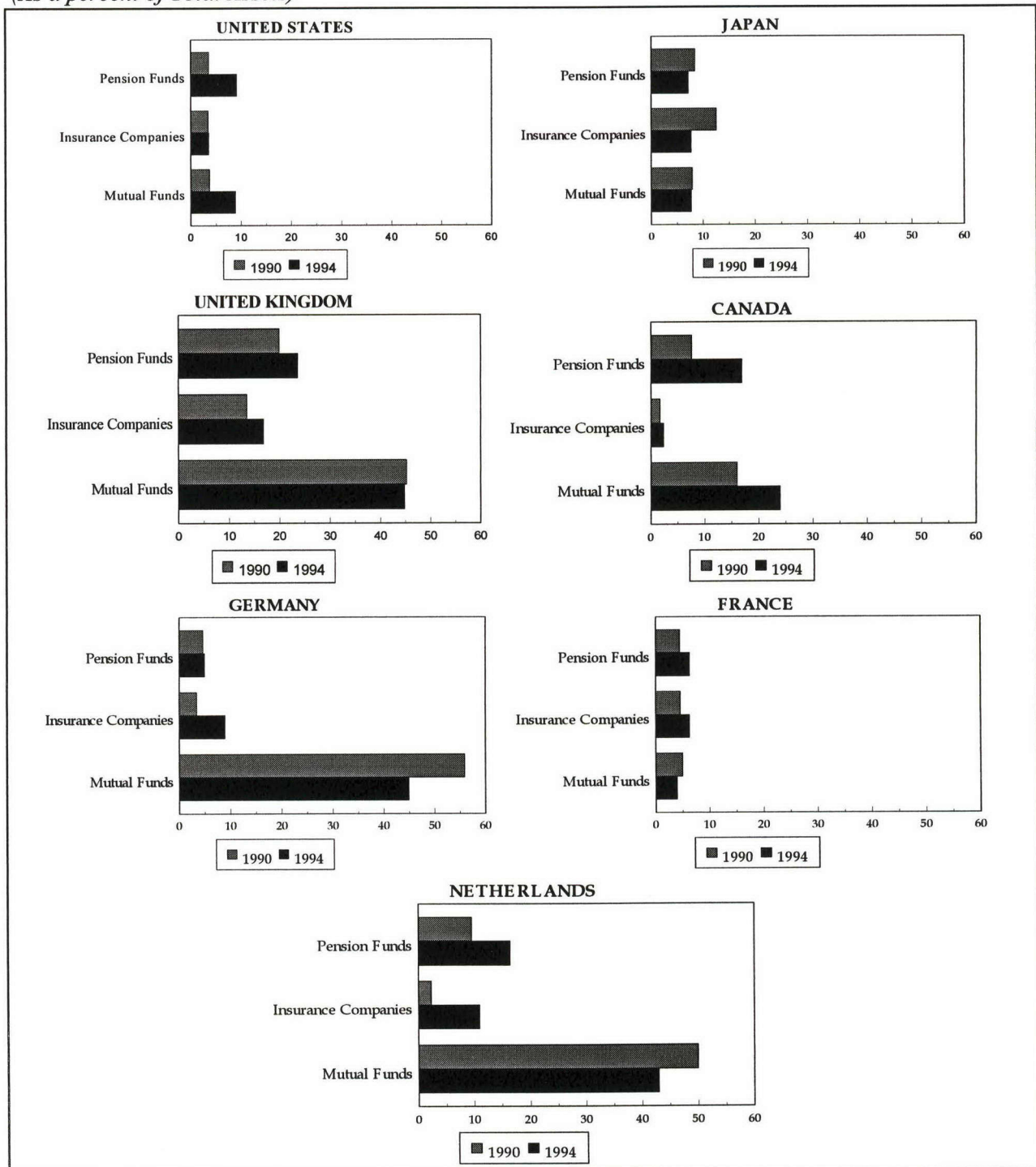
Figure 2.6 The Institutionalization of Savings is Increasing
(Assets as a percent of GDP)



Note: Figures refer to the size of assets in US\$ billion. For the U.S., assets refer to U.S. open end mutual funds only.

Sources: InterSec; IMF, International Financial Statistic; Investment Company Institute; Investment Funds Institute of Canada; UK Association of Unit Trusts and Investment Funds and Nederlandsche Bank.

Figure 2.7 International Diversification has Increased, but Varies by Type of Institutional Investor and by Country
(As a percent of Total Assets)



Notes: For France the data on mutual funds is for 1993. Data for United States and Canada only for life insurance.

Sources: InterSec; WM Company; Nederlandsche Bank; InterSec; American Council of Life Insurance; Bank of Canada Review; Investment Company Institute; UK Association of Unit Trust Investment Funds; The Investment Funds Institute of Canada; The Investment Trusts Association of Japan.

The Changing Enabling Environment in Developing Countries

The changes in the enabling environment of industrial countries have meant that economic agents in industrial countries—both firms and portfolio investors—have become progressively more responsive to opportunities to earn higher rates of return or diversify risks through international investments. And, as discussed in the previous section developing countries have begun to offer such opportunities as their creditworthiness and rates of return have improved. What has enabled these forces to be translated into actual investments has been the concomitant changes in the enabling environment of developing countries.

At the most aggregate level, the most important enabling factors are simply whether private capital is permitted to flow into a country, and whether the restrictions on the repatriation of profits (income) and capital are prohibitive. The 1980s and 1990s has witnessed a progressive dismantling of barriers to capital account mobility in developing countries as a group. During 1991-93 alone, 11 developing countries undertook full or extensive liberalization of their exchange restrictions, 23 liberalized controls on foreign direct investment flows, 15 eased controls on portfolio inflows and 5 eased restrictions on portfolio outflows. By the end of 1995, 35 developing countries had fully open capital accounts.

Whereas trade liberalization associated with the Uruguay Round has received much attention, significant progress has been made in parallel on investment treaties, relevant for foreign direct investment. In fact, half of all investment codes and bilateral treaties have been drawn up in the 1990s, as have several important multilateral agreements.¹¹

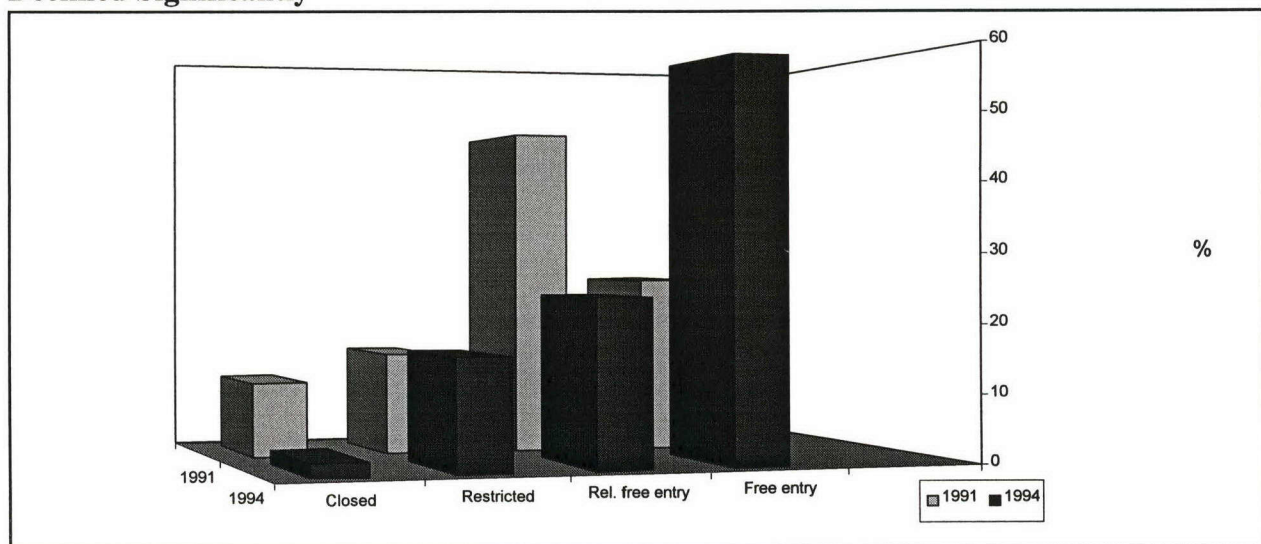
Whereas previously most national investment codes and bilateral investment treaties imposed few restrictions on the recipient countries with respect to market entry, recent laws and

¹¹ These include the General Agreement on Trade in Services (GATS) which sets standards for market entry and for the uniform treatment of firms—whether domestic or foreign; the Agreement on Trade Related Investment Measures (TRIMS), (which excludes services), which imposes equal treatment of all firms; and the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) which is beginning to address the issue of protection of intellectual property rights—a factor that is particularly important for many high technology transnational companies (World Debt Tables, 1997).

agreements have emphasized the free flow of investment. Many of the recent laws and agreements also contain provisions for the settlement of disputes, usually providing for several different mechanisms for their resolution—ranging from direct negotiations between the disputing parties to arbitration proceedings in which investors and host States may participate on equal footing (World Debt Tables, 1997).

The liberalization of restrictions on portfolio capital have also translated into significant changes in the stock markets of developing countries. As recently as the beginning of 1991, only 26 percent of emerging stock markets could be categorized as having free entry for foreign investors, while 11 percent were closed to foreign investors. By the end of 1994, 58 percent of all stock markets had free entry for foreign investors while only 2 percent remained closed (Figure 2.8).

Figure 2.8 Entry Restrictions for Foreign Investors in Emerging Stock Markets have Declined Significantly



Notes: Free Entry—no significant restriction to purchasing stocks. Relatively Free Entry—some registration procedures required to ensure repatriation rights. Restricted—foreigners restricted to certain classes of stocks or only approved foreign investors may buy stocks. Closed—closed or access severely restricted. Source IFC Emerging Stock Market Factbooks.

Sources:

In addition to the easing of regulations pertaining to the movement of private capital, structural changes in developing countries have meant a significant expansion of areas for potential foreign investor involvement. In particular, as part of their structural reform programs, many developing countries have deregulated their investment regimes and reduced the role of the

public sector in directly productive sectors, with a view to allowing greater participation of private investors. One manifestation of this has been the gradual reduction of the share of state owned enterprise investment in total domestic investment. Thus, for the group of countries that have been the primary recipient of private capital flows, the average (unweighted) share of state owned enterprises in gross domestic investment has fallen from around 25 percent in the late 1970s to 17 percent in 1991. At the same time, countries have deregulated to allow greater foreign participation in these sectors.

Foreign investor involvement in developing countries has been further boosted by the privatization of state-owned enterprises. Of the \$112 billion of privatization proceeds that developing countries received during 1988-94, almost 42 percent was from foreign investors. While the early privatizations were largely in the form of foreign direct investment, there has also been a steady increase in the participation of portfolio investors in these privatizations. Indeed, in 1994, portfolio investors accounted for over 50 percent of the foreign participation.

Finally, trade liberalizations by developing countries have provided an impetus to foreign direct investment flows in particular. As discussed earlier in this chapter, a large proportion of FDI flows to being driven by considerations of production efficiency. As a result trade regimes in developing countries have become more important. Following unilateral and successive rounds of multilateral trade liberalizations since the mid-1980s, there has been a progressive dismantling of trade barriers in developing countries. Classifying an “open” trade regime as one which fulfills the following criteria: non-tariff barriers covering less than 40 percent of trade, average tariff rates of less than 40 percent, a black market exchange rate that is depreciated by less than 20 percent relative to the official rate, the lack of a state monopoly on exports and a non-socialist economic system—one finds that 42 developing countries could be categorized as having an open regime by 1994 (Sachs and Warner, 19__).

The Outcome of Structural Changes: Growing Investment in Emerging Markets

The changes in the enabling environments both in industrial and developing countries have made private capital more responsive to the underlying forces that are driving this capital to developing countries. For FDI, the driving factor has been the sustained improvements in domestic economic fundamentals. For portfolio flows, the initial impetus was the cyclical decline in global interest rates, but, as improvements in economic fundamentals and creditworthiness began to take hold, and as the new investor base has become more familiar with emerging market investments, the impetus has become the long-term rates of return and opportunities for portfolio risk diversification. All of these factors were responsible for the surge of private capital to developing countries in the 1990s.

Foreign Direct Investment. Developing countries have seen an almost fourfold increase in foreign direct investment flows in just five years—from US\$ 25.0 billion in 1990 to over US\$ 90 billion in 1995. Indeed, the growth of foreign direct investment flows to developing countries has been much faster than the growth of foreign direct investment flows to industrial countries. As a result, developing countries' share of global foreign direct investment flows has increased very significantly in the 1990s: rising from 12 percent in 1990 to around 36 percent in 1995.

The nature of the foreign direct investment flows that developing countries have been receiving since the late 1980s has changed significantly. In the 1970s and early 1980s, resource extraction and import substitution were the primary motives for FDI to developing countries. In contrast, a high proportion of FDI flows now going to developing countries can be characterized as being efficiency seeking, associated with the globalization of production. Moreover, whereas initially these efficiency seeking flows were mainly directed towards the basic manufacturing, these flows are now increasingly going into high value-added and more skill intensive manufacturing sectors. Developing countries are also increasingly seeing foreign direct investment flowing to the services sectors, including for the provision of infrastructure services. Opportunities for investments in services and infrastructure have expanded significantly both as a

result of the stronger economic growth as well as investment deregulation in developing countries.

The changing nature of the FDI flows to developing countries is reflected in the regional destination of FDI flows and the relative selectivity in terms of country destination. East Asia has accounted for the lion's share of FDI flows to developing countries, accounting for over 50 percent of total FDI flows to developing countries in the 1990s. As mentioned earlier, efficiency driven flows are sensitive not only to the strength of countries' macroeconomic fundamentals and domestic market considerations, but also to the supporting infrastructure (both regulatory and physical) and the quality and productivity of the labor force in relation to the cost. East Asian markets have therefore been primary recipients of such flows. East Asia, with its strong economic growth, is also providing growing opportunities in services and infrastructure. Latin America has been the second largest recipient of foreign direct investment flows (accounting for 26 percent of FDI flows). Although in the early 1990s, a sizable proportion of these flows were the result of one-off privatizations, countries in Latin America are also becoming recipients of efficiency driven FDI.

Portfolio Flows. Despite a dramatic increase of portfolio flows from institutional investors into emerging markets, information on emerging market placements by such investors is fragmentary, and it is difficult to put together a comprehensive and consistent set of data on the changing character of these flows. For mutual funds, the available information suggests the following sequence. Initially, in the mid-1980s, investment in emerging markets was in the form of closed-end funds, including country funds, which pioneered the flow of private investment to emerging stock markets. Close-end funds are well-suited to emerging market conditions since they automatically regulate redemption risk, which can be especially large in less liquid markets. As emerging markets have become more established, more and more open-end emerging market funds have been set up. In the third stage, emerging markets have begun to figure in the allocations of international investment funds, and finally of global funds. In all three stages, however, mutual fund investments in emerging markets have remained highly skewed towards

portfolio equities, with debt- oriented mutual funds accounting for less than 10 percent of mutual fund assets in emerging markets.¹²

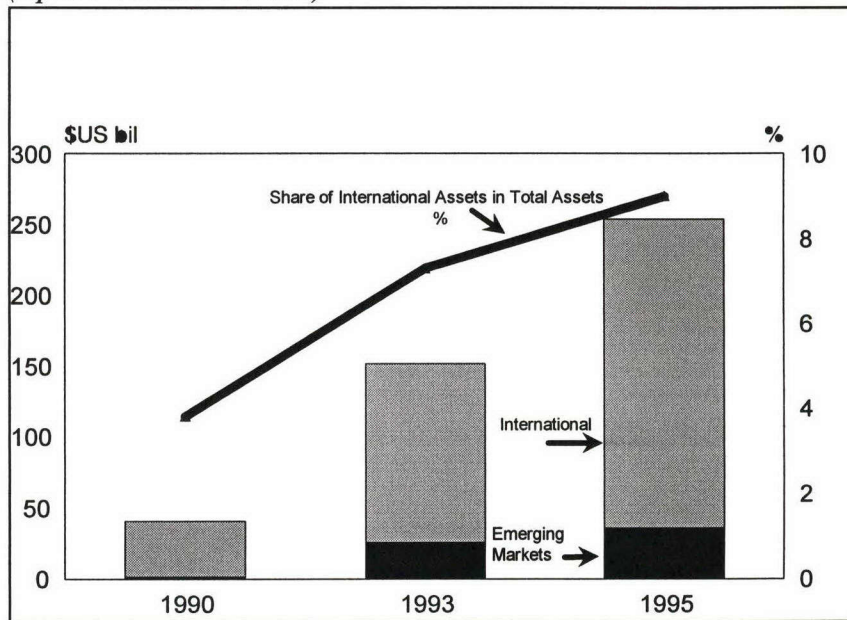
The growth in mutual funds over the last decade has in fact been dramatic. In 1986, there were 17 emerging market country funds and 9 regional or global emerging market funds. By 1995, this had expanded to 471 country funds and 816 regional and global emerging market funds. Whereas initially as mentioned these were mainly closed-end funds, by 1995 around 50 percent of all funds were open ended. The combined assets of all closed and open-end emerging market funds increased from \$1.9 billion in 1986 to \$10.3 billion in 1989 to an estimated \$131 billion in 1995. In addition to the dedicated emerging market funds, international funds have also increased their allocation to emerging markets. Surveys suggest that international funds based in the U.S. have increased their allocations to emerging markets from a bare 2 percent of their portfolios in 1989 to 12 percent in 1995 and that U.S. global funds now hold around 3 to 4 percent of their portfolios in emerging markets. International and global funds together now account for an estimated 30-40 percent of the emerging market assets held by U.S. mutual funds.

These trends have meant that emerging markets are accounting for a rising proportion of international investment by mutual funds—more than 30 percent of new international investments by U.S. mutual funds went to emerging markets during 1990-94. Since international investment itself has been rising, the share of emerging market assets in total mutual fund assets has risen quite sharply. In absolute terms, U.S. based open-end mutual funds alone had around \$36 billion in emerging markets at end 1995 (Figure 2.9). Yet, despite this impressive increase, the share of emerging markets in the portfolios of mutual funds remains small. Emerging markets still account for only about 2 percent of total mutual fund assets in the U.S. Although emerging market exposure of U.K. mutual funds is higher—in the range of 3.0 to 4.0 percent, mutual funds in Japan and the rest of Europe still have negligible exposure to emerging markets (Figure 2.10).¹³

¹² The main holders of emerging market debt (Brady bonds, Eurobonds, global bonds, and Yankee bonds) are commercial and investment banks, hedge funds, and a few of the larger insurance companies and pension funds.

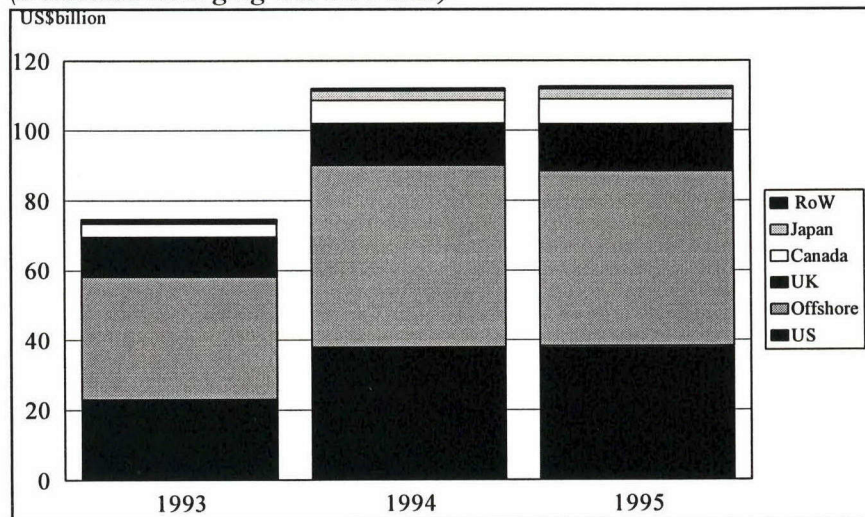
¹³ Other than the U.S. and U.K., most emerging market funds or international funds with emerging market exposure are, for tax reasons, domiciled in offshore centers

Figure 2.9 International and Emerging Market Assets of U.S. Mutual Funds has Increased
(Open-End Mutual Funds)



Source: Micropal, Inc.; World Bank staff estimates.

Figure 2.10_ But Mutual Fund Investments in Emerging Markets Are Still Low
(Dedicated Emerging Market Funds)



Source: Micropal, Inc., Association of Unit Trusts and Investment Funds; Investment Funds Institute of Canada; Investment Trusts Association of Japan; World Bank staff estimates.

In regard to pension fund investment in emerging markets, a survey of pension funds undertaken for this report confirms that such investments are a relatively recent phenomenon (Box 2.3). Almost 60 percent of the pension funds surveyed initiated exposure in emerging markets after January 1994. Interestingly, the proportion is exactly the opposite for the larger pension funds (assets greater than \$1 billion); i.e., 60 percent had initiated exposure prior to January 1994. Larger pension funds tend to have higher exposure to emerging markets than do smaller funds, and corporate and endowment funds typically have much higher exposure than do government and union funds.

Box 2.3 Pension Funds in Emerging Markets

Pension Fund Interest in Emerging Markets

Over 60 percent of pension funds who are invested in emerging markets, started investing at the beginning of 1994. Large corporate pension funds have had the longest exposure to emerging markets, with around 8 percent having invested in emerging markets since 1986/87.

Exposure in Emerging Markets

On average, U.S. pension funds hold around 1.5-2.0 percent of their portfolios in emerging market assets. This average, however, masks a wide disparities among different types of pension funds. The average for endowment funds is around 5 percent, and that of larger corporations around 3 percent—with a few very large corporations holding up to 7 percent of their portfolios in emerging markets. On the other hand, the average for government funds is currently around 1 percent.

Investment Motives

Around 40 percent of pension funds are interested in investing in emerging markets for the higher expected returns that these markets offer, while just under 40 percent consider both portfolio diversification and higher expected returns as important factors. Around 18 percent—which includes the larger corporations—are investing in emerging markets primarily with a view to diversifying portfolio risks.

Investment Vehicles

Over half the pension funds invest in emerging markets by buying into existing (mutual) funds. The remainder give specific mandates to managers. Less than 5 percent of pension funds manage emerging market investments themselves. Buying into existing funds is considered better for liquidity reasons and is also less expensive than specific mandates, given the current size of the allocations in emerging markets. The majority of the pension funds who invest through mutual funds, do so by buying into global funds (over 50 percent) and regional funds (23 percent). Only 5 percent buy into country funds.

Types of Investment

Almost all investments by pension funds are in the form of equity. Debt exposure is still minimal—with only the largest pension funds likely to hold emerging market debt instruments.

Policy Allocation and Investment Strategy

Only a small proportion of pension funds treat emerging markets as a separate asset class in their policy allocations. Most invest in emerging markets as a part of their international allocations. Those pension funds which do consider emerging markets as a separate asset class in their policy allocations, leave the country selections to the fund managers. Annual reviews of policy allocations is the most common (over 30 percent). Less than 25 percent undertake quarterly reviews, and around 15 percent undertake monthly reviews. Changes to policy allocations, however, are a lot less frequent. Over 70 percent of pension funds undertake changes to their policy allocations every 2-3 years, and 13 percent every 3-5 years. Only 3 percent change their policy allocations annually.

Selection and Evaluation of Managers

Pension funds who employ outside managers, generally choose their managers on the basis of a combination of track record and total assets under management. And, for emerging markets, “track record” refers as much to the length of a manager’s experience as to his performance. Around 40 percent of pension funds stated that the managers they selected employed a primarily “top down” approach, with another 28 percent employing managers who have a primarily “bottom up” approach to investing. Less than 3 percent of pension funds use an index alone for country allocations. The bulk of the pension funds evaluate their managers on the basis of performance relative to an index of choice as well as relative to their peers. Around 35 percent evaluate their managers relative to indices alone.

Outlook for Pension Fund Investments in Emerging Markets

Over 43 percent of pension funds plan to increase their exposure to emerging markets over the next 2-3 years—of which the majority (60 percent) plan to increase their exposure marginally (at about 20 percent over their current levels) while the remaining 40 percent expect to increase their investments by 50 percent over their current levels. Around 57 percent of pension funds expect to maintain their current levels of exposure. The rest have just increased their allocation to emerging markets.

Although reliable data are not available, the results of two surveys ¹⁴ suggest that U.S. pension funds currently have about 2.0 percent of their total assets invested in emerging markets (Figure 2.11).¹⁵ Thus, even though pension funds in the United States began to invest in emerging markets more recently than did mutual funds, their allocations are only slightly lower. Only a fraction of these funds, however, actually have a policy of allocating to investment emerging markets. And those that do treat all emerging markets as a single asset class and generally leave country allocation to the manager of the mutual fund or to an outside manager with a specific mandate.

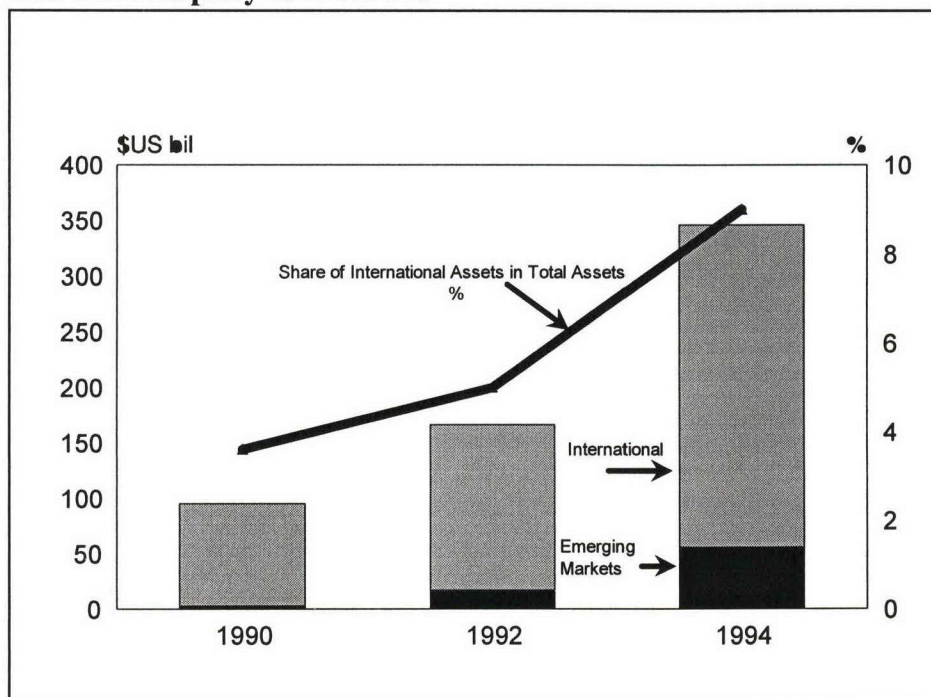
More than half of the pension funds invest through mutual funds. In fact, whereas retail investors, especially high net worth individuals, were the primary force in the early expansion of mutual funds into emerging markets, pension funds have rapidly become the dominant source of funds for mutual funds to invest in emerging markets, especially in the United States. The remainder of pension funds (around 41 percent) give the management of their assets to outside managers, who determine country allocations. Less than 5 percent of pension funds manage their emerging market investment in-house.

In absolute terms, U.S. pension funds are estimated to hold between \$50 and \$70 billion in emerging market exposure. Indeed, U.S. pension fund investments in emerging markets, including investments made on their behalf by mutual funds, have been an important factor in propping up investment flows to emerging markets during 1994 and 1995. As with mutual funds, most pension fund assets are in the form of portfolio equities.

¹⁴ The survey undertaken for this study, and emerging market allocations of the Frank Russell universe.

¹⁵ This is much higher than what had been previously estimated; i.e., IMF (1995) put the figure at 0.5 percent and Chohan (1994) at 0.2 percent.

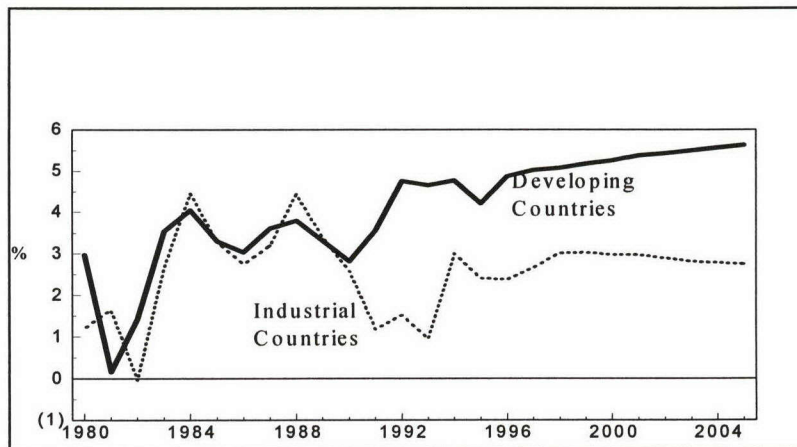
Figure 2.11 International and Emerging Market Assets of U.S. Pension Funds Has Increased Rapidly in the 1990s



Source: INTERSEC and World Bank staff estimates

The Prospects for Private Capital Flows

These structural changes underlying capital flows are at an early stage and still unfolding. With the broadly favorable external environment and the expectation of sustained macroeconomic and regulatory reforms, developing country growth is expected to further accelerate over the next ten years—from the 5.0 percent per annum seen during 1991-94 to about 5.4 percent (World Bank 19__). This would constitute an increase in the growth rate of two percentage points per annum over 1981-90. But, unlike the 1980s, when developing and industrial countries grew at about the same rate, developing country growth is expected to be significantly stronger than that of industrial countries over the next decade (Figure 2.12).

Figure 2.12 Developing Country Growth is Expected to Remain Strong

Note: Excludes FSU and Eastern Europe.

Source: World Bank staff estimates

These trends imply that developing countries will continue to provide investors with the opportunity to earn high rates of return while diversifying portfolio risks. Indeed, these opportunities should increase both as a result of the deepening of structural changes in countries which have already begun the process, and also as other countries embark on the course of structural reform and liberalization.

Developing countries will provide growing opportunities for portfolio investors in particular, as their share of world market capitalization—currently around 10 percent—rises further. As financial markets in emerging markets are not fully developed (on average, the financial sector only accounts for __ percent of GDP in developing countries as compared to an average of __ percent of GDP in industrial countries), further financial deepening—including that of capital markets—can be expected. Second, the fact that developing countries are expected to grow significantly faster than industrial countries over the next decade or so, implies that their share of world market capitalization will be rising. Finally, the broadening of the base—as more developing countries undertake reforms and liberalize—will contribute to the rising share of developing countries' in world market capitalization.

At the same time, the changes in the enabling environment of industrial countries which have increased the responsiveness of capital flows to these opportunities are also expected to continue. In particular, all the forces discussed in Section III—deregulation and breakdown of barriers, technological change and financial innovation—continue to evolve and, as in the past, will keep reinforcing one another, creating on-going pressures for further integration. Internal and external financial deregulation are far from complete in both industrial and developing countries. Although it is difficult to speculate on the nature of future innovation and technological change, competitive pressures and increasing integration are stimulating investments in technology that are likely to continue to reduce transactions cost and make distant markets more accessible to small as well as large investors. Such innovations will make policy-induced barriers less effective, spurring even more deregulation and competition. The pace of change will be particularly rapid for developing countries, given their more nascent and insulated financial systems.

Given these trends and the fact that the share of emerging markets in industrial country portfolios remains very small, there is still considerable room for an expansion of mutual fund investments in emerging markets. This expansion is likely to take place as the emerging market share of world market capitalization—continues to rise.¹⁶

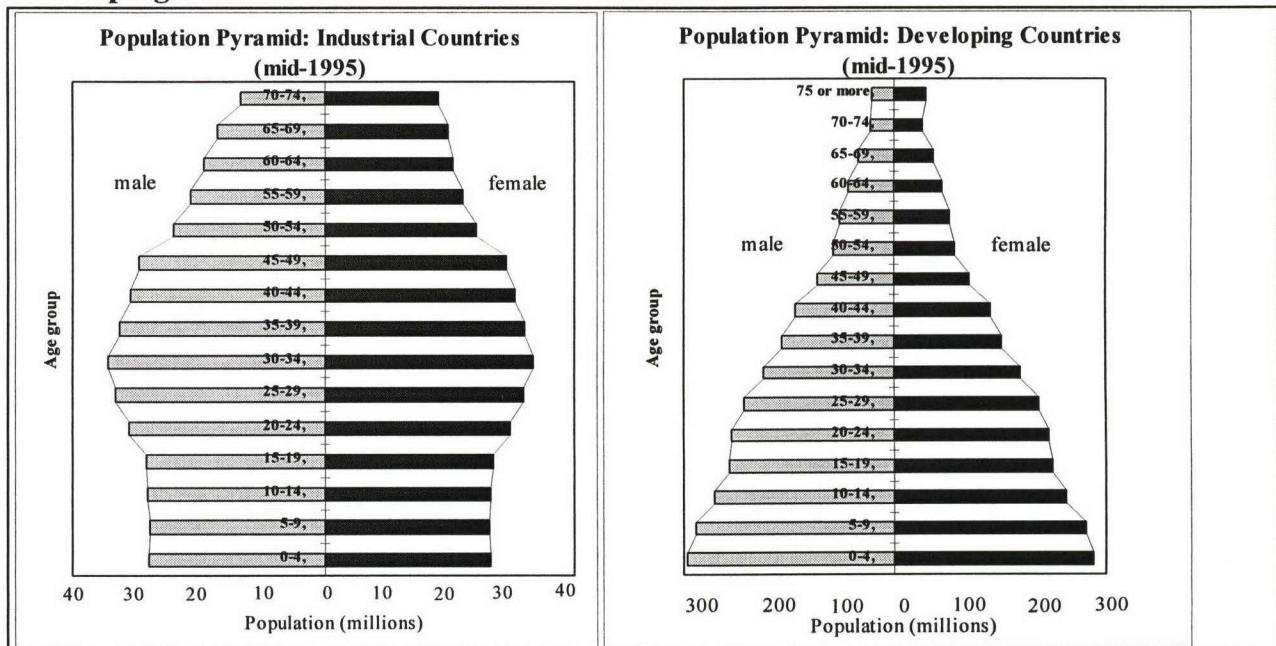
Aging in Industrial Countries: A New Force

There is, in addition, an important new factor that will provide further impetus to these underlying trends—the demographic shift underway in industrial countries. Industrial countries now have a pronounced bulge in their demographic structure, reflecting the aging of the baby

¹⁶ The existence of “home bias”—or a preference for home assets—may mean that investors will continue to hold smaller shares of emerging market assets than that implied by the latter’s share of world market capitalization. Many possible reasons have been put forward for the existence of home bias, such as the fact that optimal portfolio calculations do not take into account factors like the importance of non-traded goods, the role of human capital, transactions costs, and the ability to achieve quasi-international diversification by holding shares in domestic multinationals. These factors may explain part of the home bias, but by no means the full extent of it. To the extent that home bias exists because investors are not sufficiently familiar with emerging markets, home bias can be expected to diminish over time. At a minimum, the share of emerging market assets in investors’ holdings of international assets will rise.

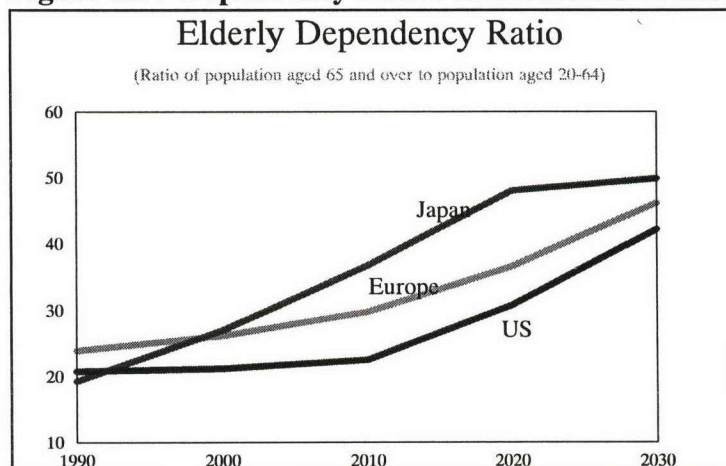
boom generation and declining birth rates (Figure 2.13). This will lead to a steady rise in the proportion of elderly to active population in all industrial countries, although the pace of this increase is most pronounced in Japan (Figure 2.14). As Figure 2.13 also shows, this is in sharp contrast to the situation in developing countries, whose clearly pyramidal structure reflects a much younger population.¹⁷

Figure 2.13 There are Large Differences in the Demographic Structures of Industrial and Developing Countries



Sources:

Figure 2.14 Dependency Ratios in Industrial Countries Will Rise Significantly



Sources:

¹⁷ The demographic shift is more advanced, however, in China and some Latin American countries.

There are three broad implications of this difference in demographic patterns. First, the aging of populations in industrial countries could lead to an increase in savings in the short to medium-term. Second, aging and the associated slowing of labor force growth, is likely to exert downward pressures on the rate of return to capital relative to that of labor in industrial countries. Given the demographic structure in developing countries, the reverse can be expected there. Thus, differences in demographics are likely to reinforce the differentials in the expected rates of return to capital between industrial and developing countries. Both these factors should provide a stimulus for capital to flow to emerging markets. Third, the aging of population in industrial countries is leading to pressures for pension reform. These reforms are likely to result in greater responsiveness on the part of pension funds to investment opportunities in developing countries.

Aging, Savings and Rates of Return

The aging of populations in industrial countries is likely to affect the rates of return to capital in these countries through two channels. First, aging could lead to some increase in savings in industrial countries over the short to medium term. Second, aging can be expected to affect the rate of return to capital through changes in the labor market.

Effects through Savings: Although the impact of aging on savings remains contentious,¹⁸ there is reasonable basis to suggest that the demographic patterns in industrial countries are likely to lead to some increase in aggregate savings in industrial countries over the next ten to fifteen years, before leading to a decline.¹⁹

There are many channels through which aging can potentially affect savings. Since households are the primary savers in an economy, the effects of aging on private or household savings is particularly important.

¹⁸ According to the findings of some studies (Kotlikoff et al), aggregate savings in industrial countries have already peaked, and can be expected to show continued declines

¹⁹ Of course, aging is only factor to affect savings rates and the aggregate level of savings.

- First, economic theory postulates that the savings rate varies by the age-profile of economic agents and households. In particular, the standard model (Modigliani) postulates a hump shape life-cycle saving profile of households—that is, households save until retirement and then dissave. Empirically, however, the latter—that is dissaving in the elderly—is not observed: indeed the rate of savings of the elderly is positive in almost all industrial countries.
- Second, in addition to the age effect, there is a “cohort” effect. That, is different age groups differ by birth cohort, and this may lead to different savings behavior among cohorts, based on the differences in their earnings histories and investment opportunities. A comparison of the savings rates of different cohorts reveals that later cohorts (younger generations) have recently had a higher saving rate than did earlier cohorts. In particular, the baby boom generation in the U.S. has had a higher savings rate at every age compared to the cohort born one generation earlier.
- Third, since savings is a product of the savings rate and income, savings are also affected by age and cohort specific incomes. In general, the age category at which the savings rate tends to peak—45-64, is also when incomes peak. This means that the age composition effect is reinforced by the age distribution effect. That is, because incomes as well as savings are highest in the 45-64 age category, a shift of the population weight into this category will raise the annual flow of savings more than proportionately to the savings rate.

Based on these factors, the projected population structure in industrial countries can be expected to lead to an increase in private savings over the next ten to fifteen years in the OECD as a whole. First, the aging of populations will put more households into the high savings age category and fewer households in the low savings age category. Focusing on the U.S., Germany and Japan—which together account for two thirds of OECD wealth—the following trends are expected (Borsch-Supan). In the U.S., over the next ten to fifteen years more households will be entering the 45-64 age group—the age group at which the savings rate is the highest. In Japan, the savings rate is found to be monotonically increasing with age, so an increase in the savings rate is also expected there. In Germany however, the effect of aging on the savings rate is ambiguous because although aging results in a fewer number of households in the below age 37

category (when savings rates are low) it also results in a larger number of households in the saving trough after retirement. Second, the positive age effects on the savings rate is reinforced by the age income distribution effect, particularly in the U.S.²⁰, where a growing number of households will fall in the 45-64 age group—the age group at which income also peaks. Third, as mentioned, there is a strong cohort effect, especially in the U.S. where it is the baby boomers—who have had high savings rates throughout—that are entering the peak savings and income age.²¹

The combination of age and cohort effects is expected to lead to a mildly decreasing aggregate savings rate in Germany, and a mildly increasing aggregate savings rate in Japan, but a relatively strong increase in the U.S. aggregate savings rate, from 4.7 percent in 1990 to 5.4 percent in 2000, and 5.8 per cent in 2010. Overall, the age composition effect and cohort effect is expected to lead to an increase in the volume of aggregate savings for OECD as a whole over the next ten to fifteen years: from US\$ 1.015 billion in 1990 to 1.4 billion in 2010.²²

While these factors could lead to an increase in the level of private savings²³ over the next ten to fifteen years, what happens to aggregate savings in industrial countries depends on the implications aging will have on public savings, and on the interaction between private and public savings.

As discussed below, the aging of populations will have significant implications for public expenditures. In particular, meeting the pension fund obligations under the current Pay-As-You-Go (PAYG) pension systems will have significant repercussions on the fiscal deficit. In addition,

²⁰ The effect is slightly negative in Germany, due to the early retirement age.

²¹ In 1990, the vanguard of the U.S. baby boom generation was 44 years old, while the youngest baby boomers were 27. In the year 2010 therefore, the baby boomers will be between ages 45-64.

²² These effects were channeled through age and cohort specific household rates, savings rates and disposable household incomes and allows for population growth.

²³ Aging could also affect the demand for private investment, and hence net private savings. However, there is little empirical basis on which to assess the direction and magnitude of these effects. One channel is through the labor market and the effects on the relative rate of return to capital. As discussed below, the slowdown in labor force growth is likely to place downward pressures on rates of return to capital in industrial countries. In a closed economy setting, this could have feedback effects, reducing the savings rate. However, in an open economy—with

aging is likely to increase expenditures on health. Empirical evidence from the U.S. and Japan shows that social expenditures on health increase almost exponentially with age. And, while aging also means a decline in the proportion of children and hence public expenditures on schooling, such offsetting effects are not likely to be large. However, there is a strong commitment to reducing fiscal deficits in industrial countries. Indeed, recognition of the potential problem has already begun to spur pressures for pension reforms. It is highly unlikely therefore that public savings will decline significantly in industrial countries. Indeed, pension reforms, including a move to a partially funded system, should result in an increase in public savings. Unless private sector behavior completely offsets this increase in public savings (i.e. unless there is full Ricardian equivalence), aggregate savings in industrial countries should rise somewhat in the short to medium term.

Effects through the Labor Market: As mentioned, the demographic patterns, and the attendant slowdown in the growth rate of the labor force, is also likely to affect rates of return to capital in industrial countries. More specifically, because the slower labor force growth implies few workers per unit of capital, the returns to labor with respect to other factors—namely capital will rise. As the reverse is occurring in developing countries, the differences in demographics between the two regions can be expected to contribute to the differential in the relative rates of return to capital between industrial and developing countries.

Both the developments in industrial country savings as well as the changes in the labor market should provide further stimulus to investments in emerging markets.

the possibility of investing in regions with higher rates of return to capital, such as emerging markets—such feedback effects are less likely.

Aging and Pressures for Pension Reform in Industrial Countries

The growing recognition of the burden that pension obligations under the current system will place on fiscal positions in industrial countries and the need to address the problem using the window of opportunity during the next 10 to 15 years, has spurred pressures to reform the existing pension systems. In particular there are pressures to a) a move away from PAYG systems to more funded systems; b) to privatize pension schemes, through both an increasing reliance on private employer and individual schemes—the so-called second and third pillars of old age security (World Bank 1994)—as well as through greater private sector management of public pension schemes; and c) to deregulate the investment allocations of pension funds to enable them to earn higher returns on their investments. All three factors are likely to result in greater response to investment opportunities in emerging markets (Box 2.4).

The United Kingdom and the United States have been at the forefront of the shifts discussed above, but Japan and most of continental Europe are also beginning to establish market-oriented private schemes. In Japan, the Government began to implement a series of reforms over the past three years aimed at improving the incentives for private and individual programs, and for changing the investment rules in a way that will lead to greater international diversification.²⁴ Pension reform has also been high on the agenda of the European Union (EU), but it has been a contentious issue. The Pension Fund Directive, which was aimed at liberalizing cross-border management and investment of pension funds, was withdrawn in 1994. However, shortly thereafter the European Commission issued a communication which seeks to ensure that there no national restrictions on fund managers and to carefully define investment rules and levels of prudential control so that there are no undue restrictions on these grounds (Harrison 1995). Many European governments have started to ease investment restrictions, but this will be a slow process, in part because of strong political opposition in France, Italy, and Spain. Even if the pace of reform is uncertain, however, the direction is clear.

²⁴ The two main changes are: liberalization of the rules that apply to Japanese corporate pension funds on the use of foreign fund managers, and relaxation of the restriction on investment, including foreign investment, on all fund managers.

Box 2.4 Pension Reforms and Implications for Investments in Emerging Markets

Under the current pension structure in industrial countries—which is dominated by public, defined-benefit schemes that are either partially funded (Japan, Sweden, United States) or financed on a pay-as you-go (PAYG) basis—the rising dependency will become a very significant fiscal burden. Under a PAYG system, the defined benefits to pensioners are not actuarially tied to contributions and are usually financed largely from a payroll tax (on a pay-as-you go basis). Meeting the defined benefit obligations in the face of a rising dependency ratio will require either further increases in the fiscal deficits or higher tax rates on the active population.¹ It is estimated that if the current PAYG system remains unchanged, then the present value of the benefits scheduled to be paid between now and the year 2150 exceeds the present value of expected contributions by two to three times the current value of GDP for most OECD countries—implying of course, a very significant fiscal burden. If this were to be financed by a payroll tax, it would mean a tax increase of about 15-20 percentage points (World Bank 1994). Among the major industrial countries, the magnitude of the unfunded liabilities are especially large in the case of Japan, France, Germany, and Italy.² Recognition of this problem is spurring pressures for pension reform. These reforms are likely to result in a greater response on the part of pension funds to investment opportunities emerging markets for several reasons.

- First, a move to more fully funded systems will entail a one time hike in the current contribution to amass a temporary surplus to be used to pay the rising pension benefits.³ Increased pension payments are likely to increase total long-term savings available for investment, unless households cut back on other forms of personal savings or increase borrowing.
- Second, the privatization of pension schemes will result in more diversified institutional investments, including into international markets. Whereas publicly managed pension schemes are usually obliged to invest in government or government-related securities, privately managed pension schemes—in which workers or employers choose their fund managers—do not face this restriction. They have the incentive to allocate capital to investments that offer the best risk/yield combination, regardless of whether the securities are public or private. As a result, they are able to benefit from international management expertise and international diversification in investments. Indeed, it is the privately managed pension schemes that have accounted for the growth of pension fund investments in emerging markets.
- Finally, pension funds in most countries currently face some restrictions on international investments. As these regulations are progressively liberalized, we can expect to see greater international investments by pension funds.

¹ Under a pure pay as you go system, the benefits received by current retirees determine the taxed paid by current workers. If the system is financed by a payroll tax, the contribution or payroll tax rate C depends on the benefit rate B (average benefit/average wage) times the dependency ratio (beneficiaries/ covered workers).

² Among other industrial countries, the southern European countries (Spain, Greece, Portugal) all have large unfunded liabilities.

³ When the interest rate at which capital accumulation is rewarded is greater than the rate of wage growth (which is likely if pension funds invest greater amounts in emerging markets), fully funded pension schemes have a cost advantage over PAYG systems. That is, the contribution rate will be lower under the former.

(to be completed)

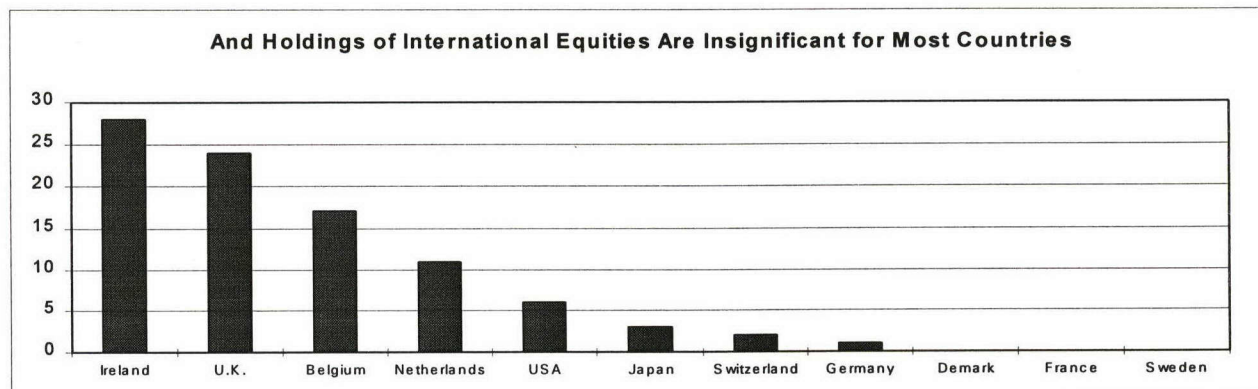
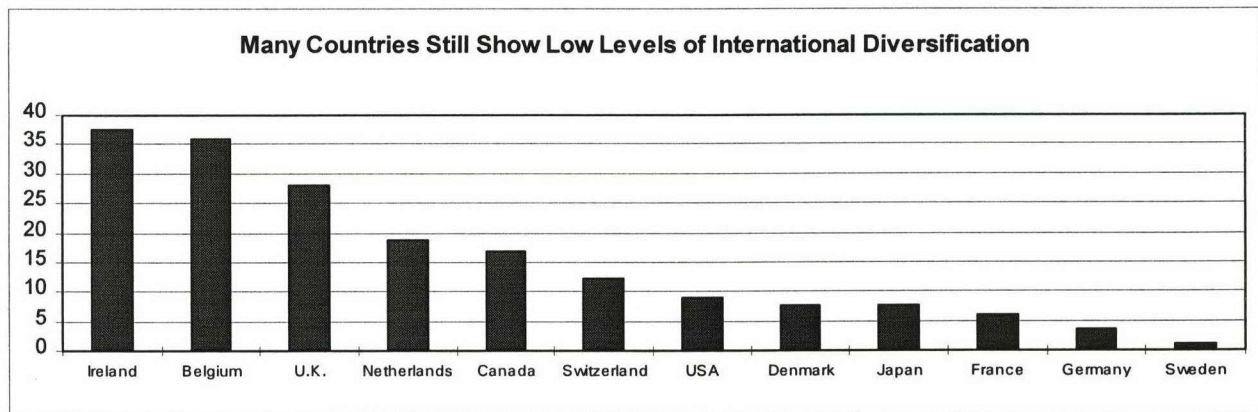
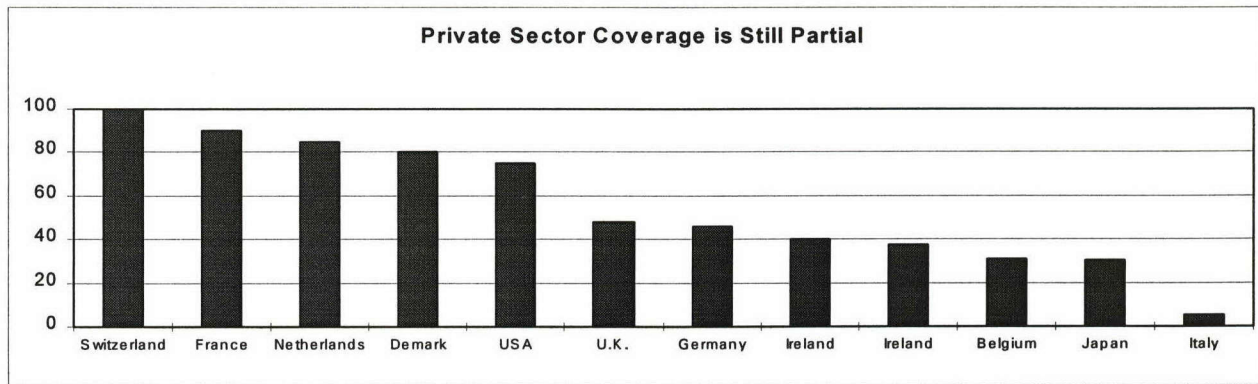
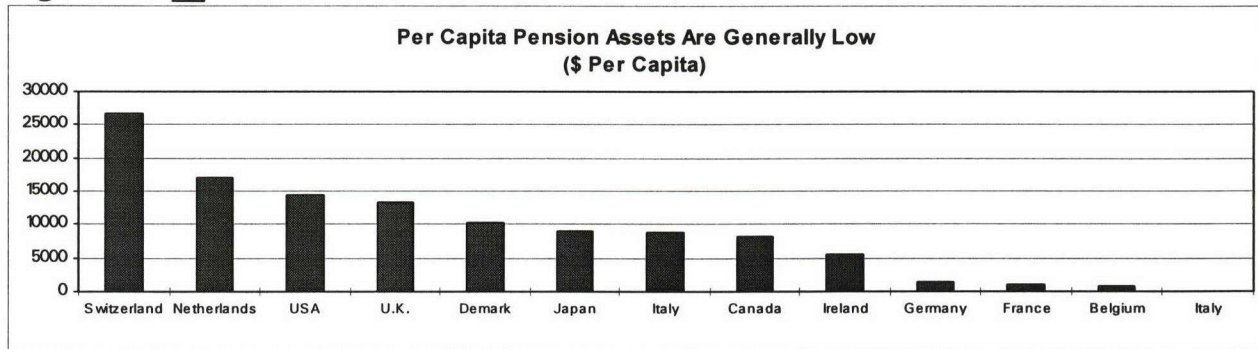
Box 2.5 Current Restrictions on Pension Funds' Foreign Investments

Belgium	
Denmark	Maximum of 40% in "high risk" assets which includes foreign equities.
Canada	Ceiling on foreign investment raised from 10% to 20% during 1990-95.
France	- Ceiling: Maximum proportion of assets invested in shares (or mutual funds invested in shares) is 65%. - Foreign investment permitted only if legal title of ownership remains in France. - Currency matching—at least 80 % of assets must be invested in same currency as liabilities.
Germany	- Ceiling: Maximum 6% in non European Union bonds and maximum 6% in non-European Union equities 80 % of assets must be invested in same currency as liabilities
Italy	Investment policy of the new private funds determined by board of directors of a fund and tends to be restricted to insurance policies, property, government bonds and bank deposits.
Netherlands	Ceiling none. Prudent man rule applies. Recent deregulation (as of 1.1. 1996) of ABP (the civil servants' fund and the largest pension fund in Europe).
Portugal	Maximum of 40% in foreign equities, listed in the European Union, New York or Tokyo only.
Spain	Ceiling: none
Sweden	Dictated by use of book reserves and insurance company management
Switzerland	- Ceiling: Maximum foreign equities 25% - Maximum foreign currency bonds 20% - Maximum Swiss Franc bonds (by foreigners) 30% - Total bonds (excluding Swiss borrowers) 30%
United Kingdom	Ceiling: none. Other: "Prudent man rule applies—trustees must invest assets in a prudent manner and in the most appropriate way for the membership.
Japan	Ceiling: Maximum of 30% in foreign currency denominated assets (part of 5:3:3:2 rule). Previously this rule applied to portfolios managed by individual asset managers, rather than to the pension fund as a whole (old requirements still apply to Tax Qualified Pension Plan assets (TQFP)). Also Employees' Pension Fund Plans which are considered to have sufficient management competence and experience may be exempted now from the 5-3-3-2 rule on overall assets. Further deregulation planned.
United States	Ceiling: none. Prudent man rule applies.

The magnitude of the potential increase in private pension funds and its impact on developing countries can be assessed from Figure 2.15. The size of pension fund assets are extremely uneven across industrial countries and generally quite modest on a per capita basis. With aging, per capita and total pension assets will need to rise sharply. This increase can come

in two ways: increases in contributions and increases in coverage. The coverage levels of private schemes, meaning the proportion of private sector employees covered by corporate pension funds, are still quite low in most industrial countries and therefore have significant potential for expansion. In fact, with pension reform, private pension fund assets are likely to increase many fold, especially in Japan and Europe. The European Federation for Retirement Provision (1996) estimates that the combined EU pension fund asset base could expand nine fold over the next twenty-five years.

Figure 2.15



Sources:

The growth of pension assets in conjunction with the growing trend towards international diversification should result in substantial new international investments. An increasing proportion of such new international holdings are likely to be in the form of equities, including emerging market equities. International diversification, and holdings of international equities in particular, are currently impeded by a number of factors. These include: binding restrictions on holdings of foreign assets and/or international equities (Germany, Japan, France, Spain); cultural biases against equity investments (parts of Europe); and restrictions on the use of international fund managers and advisors who tend to push aggressively for international diversification, and in particular, a higher proportion of holdings of international equities (much of Continental Europe and Japan). All of these factors are in the process of change, albeit gradually. Pension funds, therefore, are likely to be a major force in further international diversification, and, in particular, in the demand for portfolio equities from developing countries. Today pension funds hold about \$70 billion of emerging market assets. This could rise very considerably over the next decade.

Volatility Arising from the International Environment

While private capital flows and the process of financial integration holds significant potential benefits (as will be discussed in Chapter 3), one very important concern that developing countries have is that the volatility of these flows can have serious repercussions on the domestic economy. These concerns have been heightened in the current international environment in which new types of investors—investing in portfolio flows, which are a new form of investment for emerging markets—can and do respond more quickly to changing conditions. This chapter deals with factors in the international economy which can contribute to the volatility of flows and asset prices in emerging markets.

Two key questions arise with respect to volatility emanating from the international environment. First, what are the main factors that affect the volatility of flows and asset prices in emerging markets? And second, how significant are these factors in terms of their impact?

Three factors in the international environment have been identified as having an important bearing on the volatility of flows and asset prices in emerging markets. The first is movements in international interest rates and changes in stock market returns in industrial countries. The second is potential foreign investor herding, which means investors follow each other in investment decisions—irrespective of whether the particular investment decision is warranted by changes in economic fundamentals. Such behavior leads to an excess volatility of flows and asset prices—that is, volatility that is not related to, or is in excess of, changes in economic fundamentals. The third factor is contagion, when events in one emerging market change investors' behavior in other emerging markets, regardless of whether the economic fundamentals of the latter have been affected or not.

The Role of International Interest Rates

Private capital flows to emerging markets are seen as being particularly prone to movements in international interest rates (and other asset returns), because foreign investors still think of emerging markets as marginal investments. The presumption is that because they consider investments in emerging markets as a means of adding higher returns to their portfolios only when their mainstream investments—those in industrial countries—are underperforming, investments in emerging markets will be very sensitive to changes in industrial countries' interest rates.

The evidence suggests, however, that this presumption is true only for portfolio flows and not for FDI, which accounts for more than 50 percent of all flows to developing countries. In fact, based on the estimated relationship between private capital flows to developing countries and U.S. interest rates and countries macroeconomic fundamentals that is reported in Box 2.2, we find that movements in U.S. interest rates only account for around 1 percent of the observed

variation²⁵ in private flows—as compared to 32 percent accounted for by changes in countries' macroeconomic fundamentals.

In part, the relatively low sensitivity of aggregate flows to changes in international interest rates is due to the fact that foreign direct investment flows—especially those that occur as part of the globalization of production—are driven by firms' considerations of long-term profitability. Such flows are therefore much more responsive to changes in the investment environment of the host country than to temporary fluctuations in interest rates. Cyclical changes in interest rates may affect the start of a FDI project. It may also change the form of the financing package, but temporary movements in interest rates are unlikely to affect the magnitude of the flows associated with the project.

Portfolio flows, on the other hand, are quite sensitive to changes in interest rates. Because a portfolio investor buys a bond or shares in a company to get a rate of return, portfolio flows are highly sensitive to differentials in rates of return among countries. Moreover, should the rates of return rise elsewhere, portfolio investors, unlike FDI investors, can divest themselves of their stock of equities or bonds relatively easily at the market price for those securities. For FDI investments, on the other hand, the value of the project is not public information, so an investor who wants to sell may not get the fair price due to problems of asymmetric information. Hence FDI investments are much more costly to reverse than are portfolio investments.²⁶

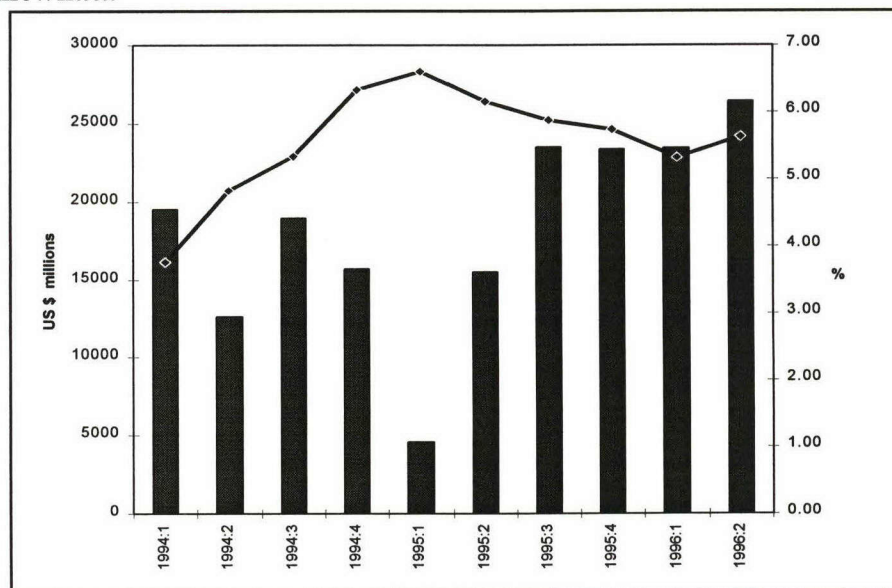
Portfolio flows are also more volatile than FDI because portfolio investors consider emerging markets as marginal investments. When international interest rates rose in the first quarter of 1994 (for the first time since 1990), portfolio flows to emerging markets declined sizably. Despite the further increases in interest rates however during the year, portfolio flows to

²⁵ A variance decomposition shows that domestic macroeconomic factors as a block account for 32 percent of the variation in flows in the short-run and 66 percent in the long-run, while U.S. interest rates account for 1 percent in the short-run and 2 percent in the long-run.

²⁶ The distinction between FDI and portfolio flows should not however, be exaggerated. It has been argued, for example, that an FDI investor who wants to get out of a country can borrow on the domestic market against his investment and then take his money out. And sustained shocks, such as deterioration of a country's longer-term economic fundamentals, can lead to a reduction in reinvested earnings and a faster repatriation of earnings, as a means of disinvesting.

emerging markets recovered by the third quarter. And, although portfolio flows declined sharply again during the first quarter of 1995 when there was another sharp increase in interest rates, this period also coincided with the Mexico crisis. In fact, the recovery in portfolio flows in the second quarter of 1995 was sharper than the recovery following the interest rate increase in the first quarter of 1994, despite the fact that interest rates were around 2 percentage points higher in 1995. International interest rates rose again in early 1996, with seemingly little effect on portfolio flows to emerging markets. The effect of global interest rates on portfolio flows appears therefore to have declined somewhat (Figure 2.16). This is most likely because institutional investors are becoming more familiar with emerging markets and increasingly consider them to be mainstream investments.

Figure 2.16 International Interest Rates Affect Portfolio Flows, but Their Influence has Declined Somewhat..



Despite the decline in sensitivity, however, movements in international interest rates—if they are sizable—will undoubtedly continue to affect the volatility of portfolio flows to emerging markets. At the country level, if portfolio flows account for a sizable proportion of total flows, movements in global interest rates could translate into sizable volatility in flows and in domestic macroeconomic variables.

Investor Herding

A second factor that has recently received a great deal of attention as a cause of volatility in portfolio flows and asset prices is herding on the part of foreign investors. Investor herding is generally attributed to problems of asymmetric information. It has been suggested that the current structure of the investor base—in which the assets of primary investors (retail investors and pension funds), are managed externally by fund professional managers—is particularly susceptible to herding behavior (Box 2.5). The essence of this argument is that fund managers will tend to follow the investment decisions of other fund managers in order to show clients that they know what they are doing. If they follow other fund managers' decisions and the investment turns out to be unprofitable, they are more likely to be thought of as having been unlucky than as unskilled, since other fund managers will have made the same mistake. Given that such a high percentage of household savings is now channeled through institutional investors which employ professional fund managers (it is estimated that 14 percent of household assets and 60 percent of pension fund assets are managed externally), the potential for such behavior clearly exists.

Herding behavior may also be stronger in emerging markets because the investors are less familiar with these markets, and will thus be reluctant to rely solely on their own assessment of the fundamental value of an investment project. Under these circumstances, they will at least partly adjust their bid/ask prices according to the observed bid/ask prices of other investors (Topol 1991).

Box 2.5 Is the Current Investor Base Prone to Herding?

Herding on the part of investors is generally explained by a variety of asymmetric information problems. For example, it has been argued that asymmetric information between fund managers and the primary investors (retail investors or pension fund managers) can give rise to “principal/agent” problems and result in herding behavior by fund managers (see Scharfstein and Stein, 1990). The reasoning is as follows. Fund managers can be either highly skilled or of low abilities. Highly skilled managers will tend to receive informative signals about the value of an investment, while those of low ability will receive purely random signals. Since the ability of fund managers (the agents) cannot be determined with certainty, they need to signal the quality of their abilities to the primary investor (the principal). And, as the investment decisions of highly skilled managers will tend to be correlated (because they are all observing the same piece of “truth”), whereas the decisions of low-ability managers will not (their signals will be random), it pays for an individual fund manager to make the same investment decision as other fund managers in order to signal that he is a manager of high skill. Even if the investment turns out to be unprofitable, an unprofitable decision is not as bad for the reputation of a fund manager when others make the same mistake—in a world in which there are systematically unpredictable components of investment value, they can all share in the blame.

Thus, even if a fund manager’s own information suggests that an investment has negative expected value, he may choose to pursue it if other fund managers have done so. Conversely, he may choose not to undertake an investment even if he believes it to have a positive expected value if other fund managers have chosen not to make the investment.

To the extent that household and pension fund assets are managed externally by professional fund managers (that is to the extent that a principal/agent setup exists)—and to the extent that the performance of a fund manager is evaluated relative to that of other fund managers—incentives to herd out of reputational concerns can clearly exist. It is estimated that 14 percent of the assets of individuals and about 60 percent of pension fund assets in the major industrial countries are managed through fund managers.¹ In general, though, the performance of a fund manager tends to be evaluated both in relation to the performance of other fund managers, and relative to an appropriate index.² The fact that managers are also evaluated relative to an index may somewhat dampen the incentives to herd out of concerns for reputation.³ In addition, since fund managers’ salaries depend on the returns they achieve, they will clearly also attach weight to the profitability of their investment decisions. Their salaries are usually a percentage of the assets under their management, which, in turn, is a function of their performance over the preceding two years or so. Third, there may be a “superstar” effect (see Rosen 1981), where the top-ranked fund managers earn disproportionately higher wages. For managers ranked in or near the top 100, the incentives to herd will also be much lower.

¹ These include bank managers, and insurance managers as well as mutual fund managers. INTERSEC.

² If the fund manager is specialized emerging market funds, for example, his performance may be evaluated relative to the performance of the IFC emerging market index or an index in which emerging markets have a large weight. In a survey undertaken of pension funds in the U.S., only 8.5 percent of respondents stated that they used peer evaluation exclusively, while 35 percent said they used indices alone, and 53 percent a combination of both.

³ Although if foreign investors account for a significant proportion of a country’s market capitalization, then their herding actions could influence the index as well.

While the theory of investor herding is plausible, it is difficult to demonstrate empirically. Studies that have looked at the changes in the stock holdings of U.S. investors investing domestically (Lakonishok, Shleifer, and Vishny), to gauge whether there is any herding behavior (as indicated by positive feedback trading or buying stocks whose prices are rising and selling

those whose prices are falling). These studies find little evidence to support the existence of herding or positive feedback trading, except in small cap stocks.

It is difficult, given the paucity of data, to analyze investor behavior in emerging markets based directly on buying and selling patterns for individual stocks. A way to assess whether foreign investors herd in emerging markets, though, is to look at the behavior of stock market prices and returns. If investors herd, changes in stock market prices/returns in one period will tend to be accentuated in the next period, so that prices will tend to exhibit periods of upward and downward swings (i.e. prices will tend to be somewhat predictable), leading to excess volatility.

Table 2_ compares the behavior of asset returns in a sample of emerging markets in the period before institutional investors became important in these markets with the period since they have become important. As the table shows, most emerging markets have seen an increase in the predictability of stock market returns, which have coincided with increased foreign institutional investor presence. This is suggestive of some investor herding.

Table 2_

Country	Threshold Date	Measure of Market Inefficiency Prior to Large Foreign Investor Presence	Measure of Market Inefficiency Following Increased Foreign Investor Presence

Note: Measured by a variance ratio test. If prices exhibit a random walk—i.e. if the current price is the best forecast of future prices, a stock market is said to be efficient. In this case, investors cannot earn abnormal profits on the basis of an analysis of past price patterns (i.e. prices are not predictable). If prices do exhibit a random walk, the variance ratio should be equal to one. A variance ratio of less than one indicates negative autocorrelation in prices and returns. Investor herding is not the only reason why stock market prices may exhibit predictability however (other reasons include market microstructure-related issues such as infrequent trading or time varying risk premia), so evidence of price predictability should not necessarily be taken as evidence against stock market inefficiency. We take a significant increase in price predictability which coincides with an increase in foreign investor presence to be indicative of foreign investor herding.

There is also some evidence that movements in Brady bond prices have some spillover effects on local stock market prices and returns (Box 2.6). In particular, movements in Brady bond prices affect emerging market stock prices over and beyond what is justified by changes in the country's economic fundamentals. This result is consistent with less informed investors (possibly foreign) inferring information about changes in a country's economic conditions from

movements in Brady bond prices, and overreacting or herding in emerging equity markets in response to these price movements.

Box 2.6 Do Investors Overreact to Changes in Brady Bond Prices?

One possible factor that has been widely cited as a cause for market inefficiency and excess volatility in emerging markets is herding by investors, particularly international investors, whose access to information may be limited.

When such information does become available, investors may overreact, so that stock price movements in emerging markets are greater than would be justified by the subsequent impact of the news on dividends. One such example is the discount on Brady bonds. It has been suggested that investors in emerging markets often watch changes in Brady bond prices to infer information about changes in countries' economic fundamentals, but that they tend to overreact to these changes in prices.

This proposition was tested by examining whether there was excess volatility in stock markets and whether this excess volatility was correlated with movements in Brady bond discounts (prices).¹ Efficient market hypothesis suggests that stock prices should be equal to the discounted present value of future dividends. The extent to which the volatility of actual stock prices exceeds the volatility of the theoretical stock prices, is the measure of excess volatility.

In 7 out of the 8 emerging markets we examined, stock market prices were found to exhibit excess volatility which were correlated with movements in Brady bond prices (see Table _). This suggests that investors may indeed overreact, or herd, in response to movements in the price of Brady bonds.

<i>Country</i>	<i>Coefficient measuring effect of Brady Bond prices on excess volatility</i>
Argentina	0.59*
Brazil	0.37*
Chile	0.30
Jordan	0.03*
Mexico	0.59*
Philippines	0.47*
Nigeria	0.47*
Venezuela	0.20*

Note: Significant at the 5 percent level.

¹ Using the methodology developed by Campbell and Shiller (1988). In the test we examined the relationship between the actual dividend/price ratio p , and the theoretical dividend price ratio p^* , equal to the present discounted value of the growth of dividends Dd . The methodology is such that all information relevant to forecasting Dd is included in p^* . Therefore divergences between the actual price/dividend ratio and the theoretical price/dividend ratio, which is correlated with movements in Brady bond prices, is evidence of overreaction in equity prices to movements in Brady bond prices. A significant positive coefficient indicates that stock market prices p , rise above the theoretical prices p^* , when there is "good" news in Brady bond prices.

The key question, however, is whether such herding behavior leads to significant volatility in asset prices and returns in emerging markets. Studies which have compared the behavior of asset returns in emerging markets with those in industrial countries have found that, while emerging markets do exhibit greater volatility, and while there is evidence in these markets of large swings in asset returns—which is consistent with investor herding—such volatility in

emerging markets is only moderately higher than in industrial countries (Richards, 1996). Thus, while emerging markets may arguably be more prone to investor herding than industrial country markets, such behavior is not leading to significantly higher absolute volatility in these markets.

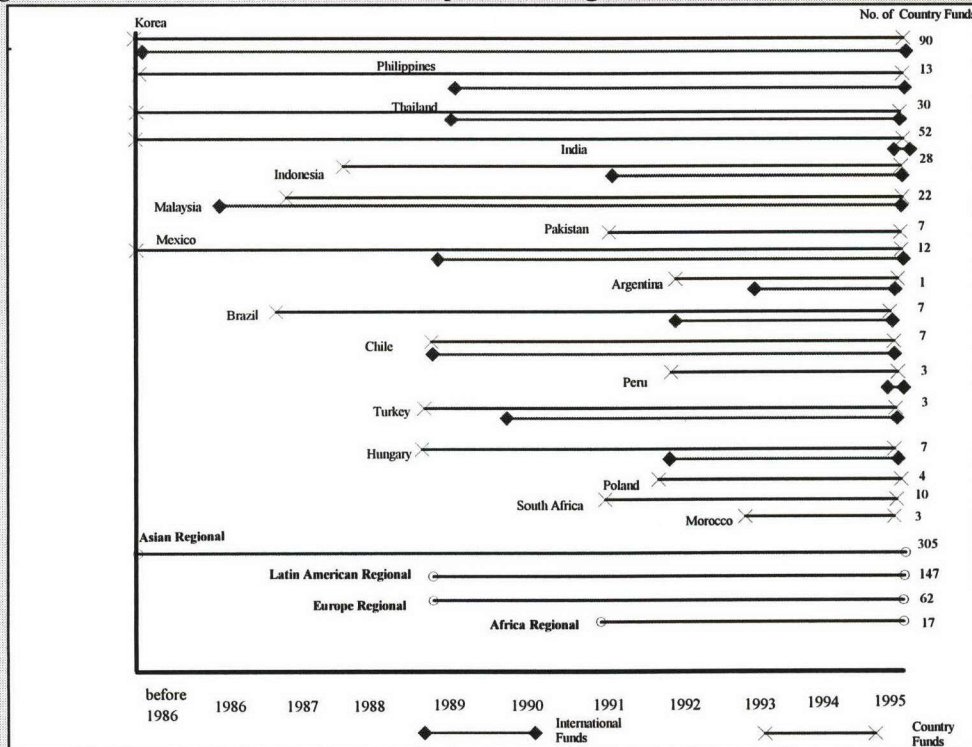
Moreover, several factors suggest that emerging markets should become less susceptible to foreign investor herding as these markets become more integrated.

- The conditions under which emerging market investments are undertaken are changing rapidly. In particular, institutional investors are becoming more familiar with emerging markets—as evidenced by the significant increase in both the volume and quality of broker research into emerging markets over the past four to five years. The potential for herding should diminish as better macroeconomic, industry and company information becomes available to foreign investors—a process which is likely to occur as a result of financial integration and capital market development.
- The form of investor participation changes and broadens as countries become more integrated (see Box 2.7). In the very initial, or “pre-emerging” stage of integration, the likelihood of herding is low because investors are specialized and dedicated. Countries in the newly emerging stage are more vulnerable to herding because investments are in a less dedicated form and investors are investing in an environment of possible asymmetric and incomplete information. Finally, as markets become more mature and integrated, the investor base tends to become more heterogeneous and better informed, dampening the potential for excess volatility at the country level.

Box 2.7 The Form in which foreign investors participate in Emerging Markets will Vary with the Extent of Financial Integration.

In the very early stages of financial integration, foreign participation tends to be in the form of boutique investment funds. These funds are usually not very large, and their investment objectives are generally quite narrowly defined; they are looking for selective opportunities in specialized markets. The investments of these funds therefore tend to be based on detailed country, sector, and company knowledge. At this stage, therefore, the likelihood of herding is low.

Box Figure 2.1: The Form of Investor Participation Changes as Countries become More Integrated



As countries reach the newly emerging stage, investor participation broadens. For most emerging countries, the process is one of first having country funds—which are relatively dedicated money—and then entering regional funds and global emerging market funds (Figure). In the latter cases, investments are made across a region or across several emerging market regions, and the funds are correspondingly less dedicated at the country level. At this stage, moreover, investments tend to be based on an active discretionary allocation strategy at the country level. With less dedicated flows and the possible problem of asymmetric and incomplete information among fund managers (particularly since there are less specialized managers participating), there is a greater potential of herding behavior.

Finally, as markets become more mature, more integrated, and better known to investors, there appear to be two opposing forces at work. First, the investor base broadens further, with global fund managers also investing in these countries. These fund managers are, *ceteris paribus*, less likely to have detailed knowledge at the country and stock levels than are specialized emerging market managers. On the other hand, as mentioned above, at this stage, the level and quality of information available to investors in general is much greater at the country, sector, and stock levels. This dampens the tendency for excess volatility.

- As markets become more integrated, another factor comes into play: inefficiencies at the country will have been exploited, so that excess returns are made not at the country level but at the level of individual stocks. Accordingly, fund managers' investment strategies will tend to move away from top-down allocation and active management at the country level, to bottom-up allocation and active management at the stock level. That is, their strategies will combine more passive, indexed based investment at the country level with the active selection of stocks. The potential for herding at the country level should therefore diminish, even if it remains at the level of individual stocks. Investors at this stage of integration are also more likely to be more tactical in the timing of their investments (selecting national markets according to current levels of key benchmark asset returns relative to their long-run equilibrium value), thereby acting, from the country's perspective, in a more countercyclical manner.

In general, therefore, the potential for volatility arising from foreign investor herding can be expected to follow an inverted U shaped curve, as countries move from the “pre-emerging” stage of financial integration to the mature emerging stage. It is likely to be highest when countries are in the newly emerging stage of financial integration. The factors underlying this process are summarized in Box 2.8 below. What is more, the experience of industrial countries which integrated with international capital markets relatively more recently—Spain, Portugal and Greece—suggests that the peak of herding behavior and associated increase in excess volatility appears to last for a relatively short period (Figure 2.17).

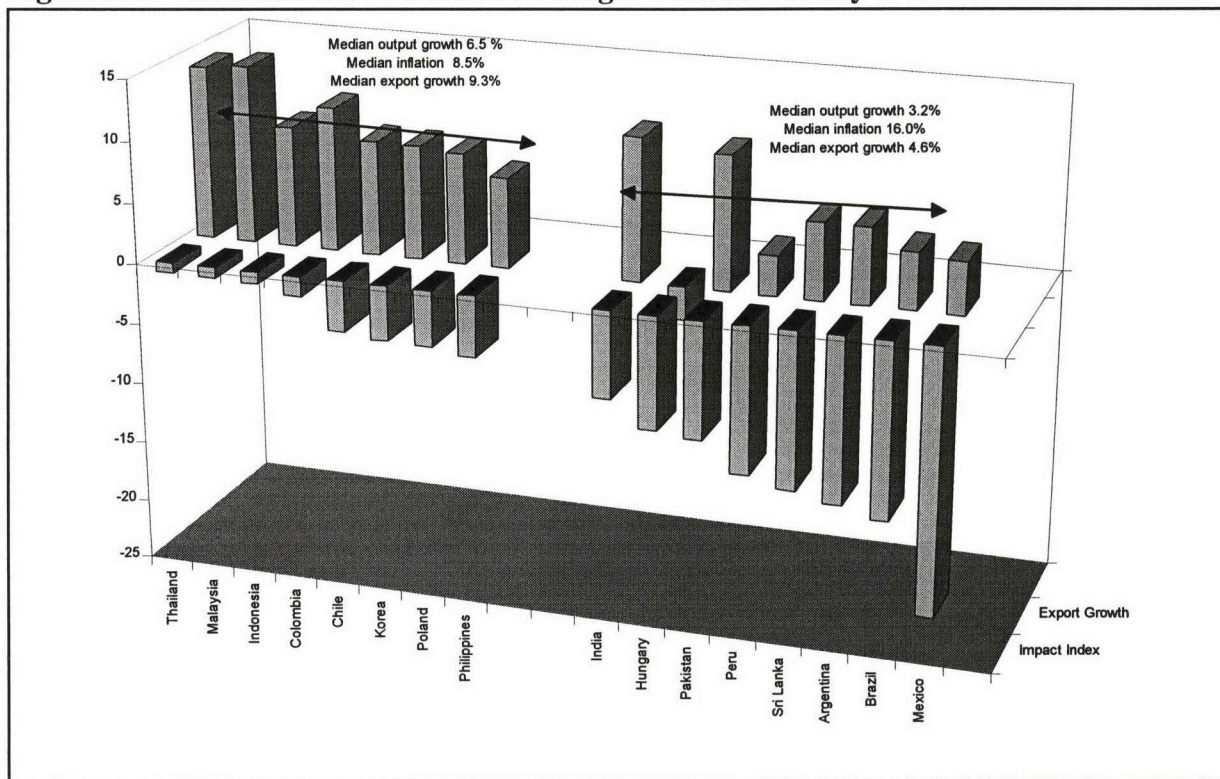
[Figure 2.17]

Box 2.8 Volatility in Various Stages of Financial Integration

<i>Investor Market Structure and Conditions</i>			
	<i>Pre-Emerging</i>	<i>Newly Emerging</i>	<i>Mature Emerging</i>
Factors that can increase volatility		Countries begin to have regional and emerging market funds which are less dedicated at the country level. Also, most investors in these emerging markets, while perhaps using an index as a benchmark, are likely to have a discretionary allocation strategy. This will typically involve looking at macroeconomic conditions in countries (a top-down approach), but also considerations of market liquidity and what other investors in the market are doing. This strategy may be prone to herding behavior.	In addition to managers of country, regional, and emerging market funds (and managers with these specialized mandates), there will also be global fund managers, who, unlike the specialized managers, may be operating on relatively little information at the country level.
Factors that can dampen volatility	Boutique investors undertake careful stock analysis for a select group of countries, which have such low market capitalization that they are not in any international index.	In the early stages of the newly emerging markets, there are dedicated (country) funds. Although in later stages there will be less dedicated money and higher risks of herding, in practice active managers undertaking discretionary allocations typically tend to take only small bets off the index. Therefore even if there is a risk of herding, the absolute magnitudes of flows are not likely to be large.	As markets become better known to investors and more information is available, the specialist or knowledgeable managers are in a better position to undertake tactical asset allocations (which involves selecting national markets according to current levels of key benchmark asset returns relative to their long-run equilibrium), which are likely to have some countercyclicality and dampen volatility. As markets become large enough to enter the global index and inefficiencies at the country level have been exploited, investors are more likely to use the index to allocate over countries (i.e., to undertake passive investing), and to use stock picking as a means of adding to the value within country allocations. This is likely to reduce the risk of herding at the country level.

Cross-country Contagion

Pure contagion arises when shocks in one country affect investments in another, even if the economic fundamentals of the latter have not changed. From the country's perspective, such changes would constitute excess volatility. Investors' reactions to the Mexico crisis that erupted in the last quarter of 1994, was an example of contagion. Because investors were not sufficiently discriminating among emerging markets, portfolio flows to almost all emerging markets declined very sharply in the first quarter of 1995. International equity and bond issues by emerging markets declined by around 86 percent in the first quarter of 1995 over the previous quarter. Moreover, all regions were hit significantly—although Latin America was the most affected. In fact, the only countries which issued international bonds of any significant magnitude in the first quarter of 1995 were Korea and Portugal. By the second quarter of 1995 however, many emerging markets had returned to the international financial markets, and there was a much greater differentiation in the terms of borrowing. This initial contagion was also reflected in equity prices in emerging markets. Almost all emerging markets saw declines in domestic equity prices during the first quarter of 1995. However, by May, countries whose macro-economic fundamentals were relatively strong, saw a recovery in prices. In fact, evidence suggests that the magnitude and duration of the decline in stock market prices was related to countries' macroeconomic fundamentals—as manifested by their average inflation rate, growth of output and of exports before the onset of the crisis—i.e. during 1990-94 (Figure 2.18).

Figure 2.18 Investors Differentiated Among Countries Shortly after the Mexico Crisis

Notes: The impact index measures the magnitude and duration of the decline in domestic stock market prices from December 16, 1994 to end May 1995.²⁷

Thus, while there is evidence of contagion arising from investors' behavior, international markets appear to have discriminated among countries relatively quickly. Even if investors are being more discriminating however, there are two factors related to the investment strategy (rather than behavior) of institutional investors and to the structure of the current investor base, which are seen as having the potential to contribute to contagion.

- Institutional investors appear to invest in emerging markets using a two-step allocation process, in which they first allocate a proportion of their portfolio to emerging markets as an asset class, and then allocate among individual emerging markets within this. Asset returns in one emerging market are therefore evaluated on the basis of returns to both the world

²⁷ The impact index was constructed by multiplying the percentage decline in prices from 16 December 1994 to the period of the maximum fall in prices and the duration of the decline up to end May 1995. A regression of the impact index on export growth and a dummy (which took value 1 if either inflation was below 10 % or if output growth was over 6.5% when inflation was above 10%, and 0 otherwise), yielded the following result. $\text{ind} = 14.7 - 4.96 \cdot \text{DUM} - 0.61 \cdot \text{EXPGR}$ adjusted $R^2 = 0.48$

(-1.79)* (-2.03)*
* significant at 10% level.

portfolio and a broad emerging market portfolio. Under these circumstances, shocks that lead to any changes in asset returns in one emerging market will lead to changes in investment allocations to other emerging markets. (Buckberg 1995) However, the magnitude of contagion arising from this process is likely to be small, since it involves portfolio rebalancing within the overall allocation to emerging markets as an asset class, which itself is still relatively small.²⁸

- A high likelihood of contagion also derives from the existence of open-end mutual funds investing in emerging markets. Such funds may be forced, by capital losses in one country, to sell holdings in other countries, either in order to keep its country shares in the correct proportions or to meet investor redemptions.²⁹ Evidence shows, for example, that following the Mexico crisis, U.S. mutual funds sold shares in all emerging regions—including Asia. In the longer-run, though, fund managers were able to substitute between regions, reallocating a bigger share of their portfolios to the assets of the regions where macroeconomic fundamentals were perceived to be strong. Thus, contagion arising purely from the nature of open-end mutual funds appears to be short lived.³⁰

In sum, a shock in one emerging market may well lead to some volatility in flows and asset prices in other emerging markets. However, experience suggests that such contagion will be short lived—lasting only until investors have re-evaluated the prospects in individual emerging markets.

²⁸ Buckberg (1996) finds that emerging market returns are determined by both world market returns (which include industrial countries) and by other emerging market returns. In fact, evidence suggests that emerging markets are more sensitive to returns in other emerging markets than to returns on the world portfolio for 12 out of the 13 countries. Note that contagion arising from portfolio rebalancing implies a positive shock to other emerging markets when one emerging market is hit negatively.

²⁹ An open-end mutual fund, unlike a closed end fund, must sell its underlying shares to meet investor redemptions.

³⁰ See Schmukler and Frankel, (1996).

The principal concern that developing countries have had is volatility arising from movements in international interest rates. Recent experience has shown that private capital flows to developing countries are not as sensitive as feared to small changes in U.S. interest rates. And the likelihood of large increases are considered to be low, because industrial countries are now operating in a low inflation environment and hence are unlikely to require sharp corrections in the monetary stance.

At the individual country level, there is a possibility of investor herding, but such excess volatility is not expected to be long lasting. A more important source of volatility at the country level is individual country policies as discussed below.

Volatility or reversals in flows in one country is not expected to result in long lasting contagion effects either. A rapid maturing of markets appears to be taking place, with foreign investors becoming more discerning.

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The Effects of Integration on Domestic Financial Systems

Introduction

The banking system plays a leading and catalytic role in the process of financial integration and is one of the main channels through which the benefits accruing from this process materialize. Because banks dominate financial intermediation in developing countries (table 5.1), they end up directly or indirectly intermediating a large proportion of private flows, and are also the most important channel for macro-financial linkages. At the same time, however, banks can be affected by macroeconomic volatility and structural changes associated with the process of financial integration. The main structural changes affecting banks that result from financial integration are an increase in competition and exposure to new sources of risk.¹

Developing countries typically undertake external financial liberalization from an initial position where neither the necessary macroeconomic nor the necessary domestic financial sector conditions have been established. An important challenge, therefore, is for countries simultaneously pursue external financial integration and domestic financial sector reform. Experience shows that a poorly managed process of financial integration can weaken the banking sector, constrain macroeconomic policy, and contribute to macroeconomic vulnerability. Macroeconomic instability can, in turn, undermine the health of the banking system, and in the extreme, lead to banking crises.

The risks of financial sector distress increase with financial integration in two ways. First, banks have easier access to funds and are therefore able to expand lending much more quickly and incur risks in their portfolios that they may not be prepared to manage. Second, circumstances can change much more quickly with financial integration—capital flows can suddenly reverse—creating macroeconomic and financial sector distress that carries high

¹ Increased competition occurs because of new—foreign—banks and other non-bank financial intermediaries, while new risks appear in the form of new instruments and investment opportunities. The new sources of risk comprise not only credit risk but also currency, settlement and payments, interest rate, and country risk.

economic and social costs.² In addition to the direct costs of bailing out failed banks, the sudden loss of liquidity in the banking sector can amplify economic downturns (Box 5.1). Such distress can severely set back economic reforms, as was the case with several Latin American countries following the debt crisis of 1982. Consequently, a country's ability to maintain the health of its banking system will determine to a large extent whether it is able to realize the benefits of financial integration and avoid its pitfalls.

To distill lessons for financial sector reform in the face of growing financial integration, this chapter looks at the role that banking systems have played in the process of financial integration, and how they have, in turn, been affected by this process. The chapter draws on the experience of a wide range of country episodes during the 1980s and 1990s, when countries received substantial capital inflows as a result of integration. The sample analyzed here differs from that used in other chapters in that it includes both developed and developing countries, and in the case of some developing countries more than one episode is studied.³ The purpose of using a different sample is to highlight the role of the banking sector in the process of financial integration. A detailed description of the sample of country episodes is provided in Annex I.

A number of important conclusions emerge from this wide-ranging country experience:

- First, that countries which received substantial capital inflows as part of the process of financial integration also typically experienced a lending boom, reflecting higher levels of direct and indirect intermediation of capital flows by the banking system.
- Second, countries in which the lending booms were greater typically experienced a significant increase in macroeconomic vulnerability, as indicated by: a widening of the current account deficit above what one would expect based on the size of the inflows, relatively large consumption booms, and underinvestment.

² For example, it has been estimated that the banking crisis in Venezuela in 1993 cost the public sector (measured by the size of the official intervention) about 16 percent of GDP (Bank for International Settlements, 1996).

³ The country episodes analyzed here include Argentina 1979-82 and 1992-93; Brazil 1992-94; Chile 1978-81 and 1989-94; Colombia 1992-94; Finland 1987-94; Indonesia 1990-94; Malaysia 1980-86 and 1990-94; Mexico 1979-81 and 1989-94; Norway 1984-89; the Philippines 1978-83 and 1988-94; Sweden 1989-93; Thailand 1978-84 and 1988-94; and Venezuela 1975-80 and 1991-93.

- Third, lending booms were often associated with an increase in financial sector vulnerability despite the fact that booms tended to improve bank profitability in the short-term.
- Fourth, countries in which lending booms were associated with an increase in *both* macroeconomic and financial sector vulnerabilities typically experienced banking crises.
- And fifth, countries that took actions to restrain the lending boom, and/or pursued prudent macroeconomic policies, fared well and avoided major crises.

Based on these findings, the chapter draws the following main policy conclusions:

- Extremely weak initial conditions in both the macroeconomy and the financial sector may warrant a cautious approach toward external financial liberalization.
- Financial integration makes it imperative for countries to move aggressively to create a prudent incentive and institutional framework for their banking systems, given the larger volume of funds that will be intermediated and the greater risks of vulnerability from the increased magnitude and speed of market reaction.
- A strong macroeconomic stance, and especially a strong fiscal position, can help prevent or postpone financial sector distress.
- Due to the high costs of a banking crisis (Box 5.1), and the time needed to improve the macroeconomic position and strengthen the banking system by addressing the underlying policy and institutional framework, a strong case can be made for containing the lending booms associated with the early stages of financial integration, in order to avoid a sharp increase in macroeconomic and financial sector vulnerabilities.
- Finally, given the increased susceptibility to banking crises, countries should put in place mechanisms that enable policymakers to deal with such crises promptly and effectively. Delaying the actions necessary to contain a crisis will only increase its costs.

The rest of the chapter is organized in three sections. We first examine the extent to which the surge in private capital flows following the opening of the capital account causes an increase in bank lending, and how the lending boom exacerbates macroeconomic vulnerability. We then analyze the reasons for increased vulnerability of the banking sector following a surge

in capital flows and the subsequent lending boom. Next, we integrate the analysis of the two previous sections by comparing macroeconomic and financial sector vulnerabilities in countries that have experienced systemic banking crises with those that have not, and summarize the major policy lessons relevant for countries undergoing financial sector reforms along with integration. These lessons extend previous work on financial sector reform by adding the factor of integration, which makes financial sector reform infinitely more complicated. The discussion ends with the analysis of the most effective measures for managing a banking crisis in an integrated environment.

Table 5.1 Bank Share in Financial Intermediation in Selected Countries

<i>Bank Share in Financial Intermediation, 1994 (%) ¹</i>	
India	80
Hong Kong	94
Korea	38
Singapore	71
Taiwan	80
Indonesia	91
Malaysia	64
Thailand	75
Argentina	98
Brazil	97
Chile	62
Colombia	86
Mexico	87
Venezuela	92
United States	23
Japan	79
Germany	77

(1) Assets of banks as a percentage of the total assets of banks and nonbank financial institutions. Source: Bank for International Settlements, 1996.

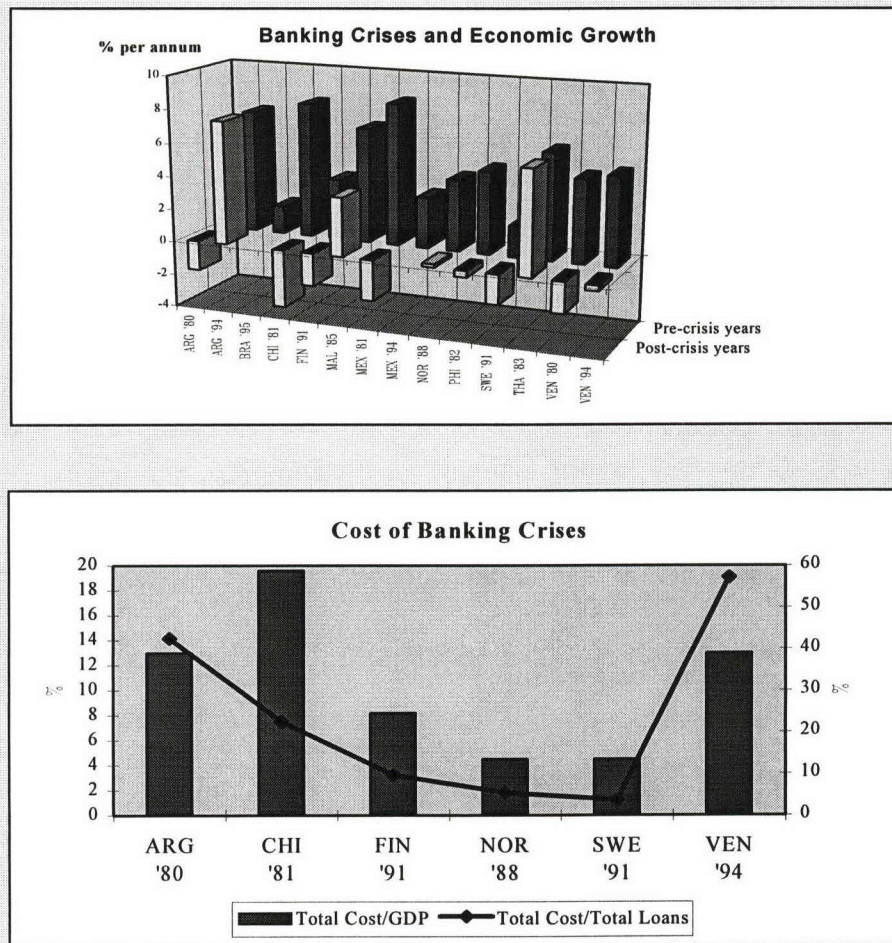
Box 5.1 The Cost of Banking Crises

Policy makers are concerned about banking crises because of the high cost these usually imply in terms of lower economic growth and the political consequences of allocating losses among bank stockholders, creditors, depositors, and taxpayers. It is important to note, however, that the direct economic cost of a banking crisis derives from the decrease in economic activity and growth that results from a reduction in the total volume—or a more inefficient intermediation—of loanable funds, and that the allocation of losses has primarily distribution effects (usually very important) but on its own does not imply an economic (deadweight) loss. Nevertheless, the allocation of losses is important because it changes the incentives of the different groups of economic agents affected by it and, through this, can lead to lower investment and growth. For example, forcing the corporate sector to repay their past due loans, though considered fair practice (this partly depends on what is considered to be the primary cause of the financial difficulties faced by the corporate sector¹), may be counterproductive for the purpose of facilitating the economic recovery. Indeed, in the presence of a debt overhang problem entrepreneurs may decide not to start new—or to discontinue old—investment projects, because from a private point of view it may not be worth investing in projects whose profits will benefit the firm's creditors (banks). Similarly, allowing banks to recover their losses by increasing spreads, i.e., taxing depositors and debtors in good standing, will reduce the volume of funds intermediated through the banking system and may lead to lower investment and growth.

Quantifying the economic losses associated with a banking crisis is a cumbersome task, mainly because it is not clear how to separate the decrease in economic activity which is due to the banking crisis per se, from that which is due to other exogenous factors (e.g., terms of trade shock). In fact, a banking crisis may result from a decrease in economic activity due to other factors, with the banking sector playing a key role in amplifying the effect of the exogenous shock on aggregate output. The first chart in the figure shows the average output growth in the country episodes in our sample where a banking crisis occurred, for the pre-crisis, crisis and post-crisis years. Despite the fact that economic growth overestimates the cost of banking crises, the figure suggests that, in general, the slowdown in economic activity is quite significant. The country episodes shown in the figure experienced, on average, a positive growth of about 5 percent per annum in the pre-crisis period, and negligible economic growth in the crisis and post-crisis years, implying a fall in output growth of 4.8 percent per annum.

The allocation of losses, usually used as a measure of the cost of banking crises, are also quite significant. The second chart in the figure shows the cost of restructuring banking systems after the crisis, measured by loans from the Central Bank to commercial banks and other rescuing measures, for some of the country episodes in our sample. The average cost for the episodes shown in the chart is about 10 and 23 percent of GDP and total loans, respectively. These figures appear strikingly high when compared with the cost of the Savings and Loans restructuring program in the US, which up to 1991 reached 5.1 and 7.8 percent of GDP and total loans, respectively (Rojas-Suárez and Weisbrod, 1995).

¹ If the ultimate cause of the banking crisis is the implementation of 'wrong' economic policies by the authorities, then it can be argued that the corporate sector is not fully responsible for defaulting in their debt.



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How Bank Lending in an Integrated Environment Leads to Macroeconomic Vulnerability

This section focuses on the interaction between capital flows and bank lending. We explore the role of bank lending in propagating and amplifying the effects of international financial integration on macro variables. In particular, we focus on how bank lending can make the economy vulnerable to shocks that can affect market sentiment toward a country and ultimately trigger a banking—and sometimes a balance of payments—crisis. We begin with a general discussion of the role of banks in the macroeconomy, in which we highlight the interaction between bank credit and capital flows. Finally, the section looks at the problems a number of countries have experienced as they become more financially integrated.

The Role of Banks in the Macroeconomy

Financial intermediaries play a crucial role in the process of economic development and growth by channeling savers' money to more productive uses in an economy. This activity is most valuable when savers are far apart from potential investors, as when the household sector—as opposed to the corporate sector—is the main source of savings. Financial intermediaries perform the task of efficiently channeling funds by screening and selecting investment projects and transforming assets, usually from short-term deposits to long-term investments, but more generally, from illiquid to liquid assets.⁴ The fact that banks overcome informational problems between lenders and borrowers and facilitate the creation of liquidity gives them a unique role in the economy (Diamond 1984, Ramakrishnan and Thakor 1984).

There has been extensive research on the role of bank credit in the macroeconomy and its importance in propagating and amplifying business cycles (Bernanke 1983; Bernanke and Blinder 1988; Bernanke and Gertler 1989). The role of the banking sector has attracted the attention of researchers because periods of sharp contraction in bank credit have always been accompanied by slow or, more often, negative economic growth. Similarly, periods of rapid expansion in bank credit seem to coincide with high economic growth. This observation has led to the conclusion that bank credit, and not just monetary balances, affect macroeconomic performance, far beyond what standard macroeconomic models suggest.⁵

Not only have studies on the role of the banking sector focused on the positive correlation between economic and credit growth, but they have also helped to explain the dynamic interaction between the financial and real sectors (Kindleberger 1978, Hubbard 1991, Feldstein 1991). For example, a positive development in the real sector that raises expectations about the future will increase firms' willingness to invest, induce them to borrow more, and cause an

⁴ It is important to distinguish conceptually the term of an investment from its liquidity. A long-term investment (long-term bonds or stocks) can be liquid if investors can sell their holdings without forcing the dismantling of the factory that was financed with the securities.

⁵ This school of thought—advocated by Bernanke, among others—highlights the importance of bank credit as a channel of monetary transmission. This theory assigns a more relevant role to banks than standard macroeconomic (IS-LM) models do.

expansion in bank credit. This process leads to a lending boom which, in turn, enables market participants to increase their level of expenditure and accelerates economic growth. The increase in economic growth reinforces the expansion of lending and spending by validating economic agents' expectations about the future. The state of euphoria triggered by the initial increase in spending also leads to an increase in asset prices and financial wealth, which increases households' aggregate consumption and further reinforces the process. At the same time, however, the economy as a whole becomes more vulnerable to adverse shocks due both to the increase in indebtedness of firms and households, and to the risk of a collapse in asset prices, which would reduce borrowers' financial wealth and thereby affect the financial health of banks. Under these circumstances, a negative shock will lead economic agents to believe that the current conditions are no longer sustainable, inducing them to cut their spending on consumption and investment and thereby slowing economic growth. Firms and households will then have difficulty servicing their debts, asset prices will plunge, and banks will suddenly encounter financial problems. In sum, not only is bank credit subject to boom-bust cycles, but the banking sector amplifies the magnitude of the macroeconomic cycle (Calomiris 1995; Calomiris and Gorton 1991; Minsky 1995), which in turn amplifies the bank's problems.

The same logic applies to the case of more integrated economies—for a review of recent developments in the literature see Box 5.2. In particular, because the surge in private flows that usually accompanies integration can be explained, in part, by the implementation of reforms in the financial sector, the real economy (trade, fiscal), or both—which, in turn, improve the country's economic prospects—the increase in private flows usually occurs along with the rise in expectations about the future. At the same time, the surge in flows provides the additional resources needed to finance an increase in aggregate investment. These two elements together create the necessary ingredients for triggering a lending boom, especially if the external resources are either directly or indirectly intermediated by the domestic banking industry.

As long as the surge in private flows is not fully sterilized, a capital-recipient economy will experience an increase in liquidity, which will facilitate a surge in bank credit and create a lending boom. In this context, a banking industry operating under sub-optimal conditions may

exacerbate the country's macroeconomic vulnerabilities and eventually lead to financial distress or crisis. In particular, if an increasing level of funds flowing into a country are intermediated by an undercapitalized and poorly regulated banking sector that is too prone to risk taking, the economy is likely to consume and import too much, invest too little and, therefore, become increasingly vulnerable to shocks.

Box 5.2 Bank Credit and International Financial Integration: Recent Developments

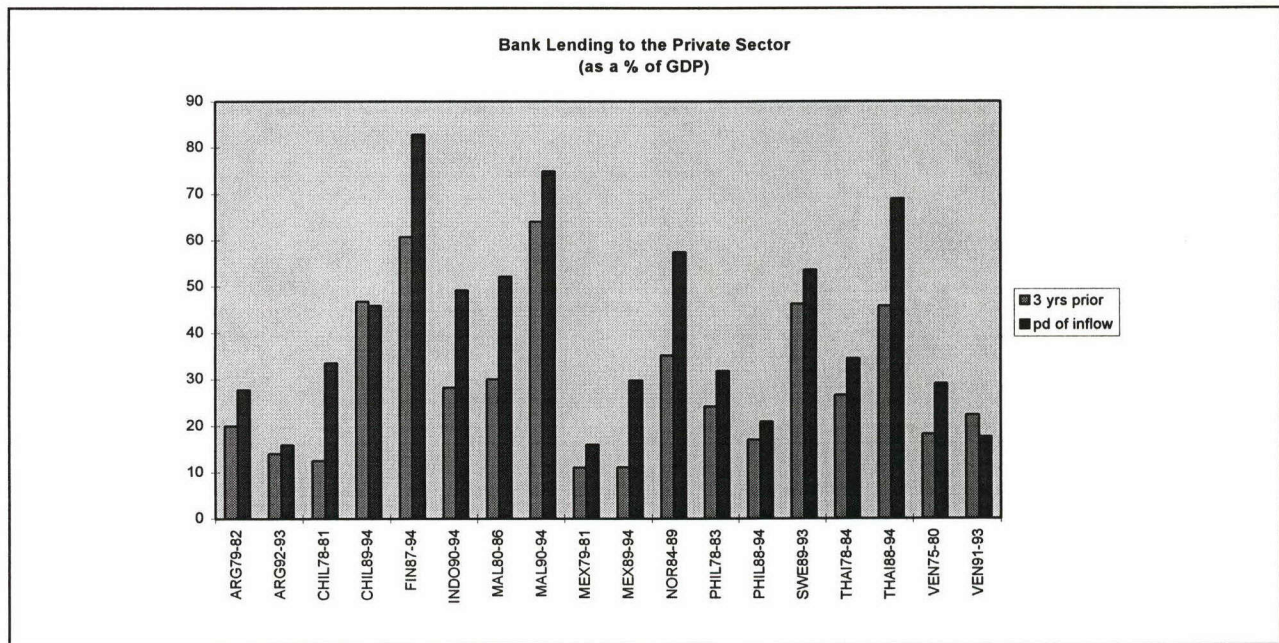
Despite the extensive literature documenting boom-bust cycles in bank lending and the associated fluctuations in economic activity, these issues have only recently been investigated in the context of the financial integration process. In general, the conclusions that emerge from reviewing this literature appear to be straightforward. First, although the presence of foreign credit may result in larger cyclical fluctuations than could otherwise occur, it is the domestic banking sector that amplifies the magnitude of the macroeconomic cycle. And second, the domestic banking sector exacerbates the vulnerabilities in the emerging economies.

For example, in a recent paper Sachs and others (1996) conclude that the impact of the Mexican peso crisis of December 1994 on other emerging economies—the so called “tequila effect”—can be partly explained by the level of private sector debt held by the countries' banking systems. In other words, developing countries in which bank credit was growing rapidly during the surge in private flows in the early 1990s were more vulnerable to the shocks of the Mexican crisis. Similarly, recent work by Kaminsky and Reinhart (1996) and Hausmann and Gavin (1995) provide empirical evidence that the boom-bust cycles in domestic bank credit, asset prices, and economic activity resemble and precede those in the external accounts. This suggests that even in more financially integrated economies, the domestic banking sector is still partly responsible for cyclical swings. Finally, Goldfajn and Valdés (1996) use an elaborated model to show that in a financially integrated economy the existence of a domestic banking system exacerbates capital movements from abroad and, therefore, amplifies the magnitude of external shocks.

Capital Inflows, Bank Credit, and Macroeconomic Vulnerability: Country Experiences

The experience of different countries that have become increasingly integrated in recent years confirms that a lending boom usually accompanies a surge in private flows. Figure 5.1 shows the ratio of bank lending to the private sector as a share of GDP, in the years prior to and during the surge in capital inflows for a number of countries in the 1980s and 1990s. In all except two episodes in the sample (Chile and Venezuela in the 1990s), the share of bank lending to GDP was higher in the inflow periods than in the years prior to the inflow. For all countries and all episodes taken together, the average lending-to-GDP ratio during the years prior to the inflow surge was 29.6 percent. During the inflow periods, the average lending-to-GDP ratio was 41.2 percent.

Figure 5.1 Bank Lending to the Private Sector has surged during Inflow Periods



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As the analysis in the previous section suggests, it is expected that countries in which the banking sector intermediates proportionately larger inflows will become more vulnerable to macroeconomic shocks which, in turn, can affect the market sentiment toward a country and trigger a balance of payments crisis. The crisis may not take place if prices adjust (through a devaluation or a fall in the price of stocks or other assets), but it is the ultimate reason why prices change.

To illuminate this issue, we can look at the experience of countries that in recent years have received significant capital inflows while becoming more integrated. For all the countries in our sample the evidence suggests that the current account deficit, on average, increased during periods of high capital inflows, and that the increase was proportionally larger in those country episodes where bank and non-bank credit to the private sector grew the most during the inflow period. Conversely, the current account deficit was proportionally smaller, given the size of the capital inflow, in those country episodes that experienced the smallest expansion in bank and non-bank credit (see Box 5.3) Consistently, and subject to the fact that several policies can affect

the level of the real exchange rate (chapter 4), in our sample the country episodes showing the greatest real exchange rate appreciation are also the ones in which bank credit grew the most.⁶

Box 5.3 Excessive Bank Lending Tends to Increase the Current Account Deficit

The experience of the country episodes in our sample shows that, as expected, the current account deficit, on average, increased during periods of high capital inflows (figure A). More importantly, figure B below shows that, in general, the increase in the current account deficit was proportionally larger, given the size of the capital inflow, in those country episodes where bank and non-bank credit to the private sector grew the most during the inflow period (the measure of 'proportionality' is indicated by the solid line in chart B). Countries such as Chile (1978-81), Malaysia (1980-86), Mexico (1979-81, 1988-94), Thailand (1978-84), and the Philippines (1978-83) exhibited larger current account deficits than expected, given the size of the inflows they received. These countries also experienced a larger increase in bank lending than the remaining country episodes in the sample. The average excess deficit ratio (i.e., the ratio of the actual current account deficit to that predicted by the size of the inflows) for the country episodes mentioned above was 1.4 and their average increase in lending was 15 percentage points of GDP. For the rest of the country episodes shown in the chart the average deficit ratio was 0.66, while the average increase in lending was 6.1 percentage points of GDP.

To summarize, figure B seems to indicate that the countries that exhibited the largest current account deficits following the surge in inflows were those that experienced the largest increases in bank lending. In particular, for the sample of country episodes shown in the figures it follows that an increase in private capital flows of, say, 10 percentage points of GDP, leads to a worsening in the current account balance of about 3.2 percentage points of GDP, on average. Nevertheless, the latter increases to about 4.8 percentage points of GDP (an increase of about 50 percent) for those countries that experienced an increase in bank lending above the sample average. This result follows from the following regression:

$$\text{cad} = 1.99 + 0.324 \cdot \text{kaflow} + 0.161 \cdot (\text{kaflow} \cdot \text{dbank})$$

(2.97) (2.38) (1.35)

where cad is the current account deficit (as a share of GDP), kaflow is the share of private flows to GDP, dbank is a dummy which equals 1 for those country inflow episodes where the increase in bank lending exceeded the sample average (t-statistics are in parentheses). Note that the coefficient on the interactive term is significant at 10%.

⁶ The country episodes showing the greatest appreciation of the real exchange rate are Brazil (1992-94), Chile (1978-81), and Mexico (1979-81, 1988-94).

Box 5.3 (cont...)

Figure A: Private Capital Inflows and Current Account Balance

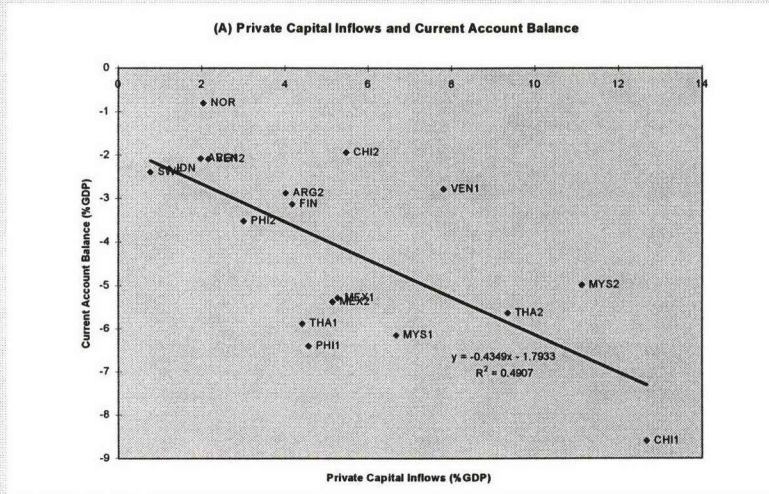
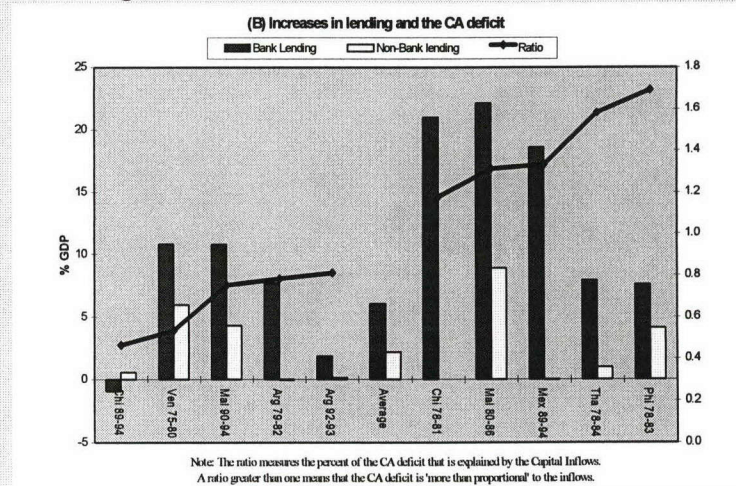


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Figure B: Increase in Lending and Current Account Deficit



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The banking sector plays a leading role in the allocation of loanable funds among economic sectors, and is partly responsible for the overheating and increased macroeconomic vulnerability that may result from the surge in private capital flows. The challenge for policymakers then, is to somehow control the effects of private capital inflows, which have the potential to finance an increase in either aggregate investment or consumption, or both. Although an increase in investment does not guarantee a higher rate of economic growth, it is certainly preferable to an increase in aggregate consumption, which can lead to an overheating of the economy and, in the extreme, to a bursting of the optimistic bubble which justified the flows.

The experience of countries that have recently become more financially integrated shows that inflows of foreign capital have been used to finance an increase in both investment and private consumption. In addition to observing a positive association between investment and capital inflows, in a number of the country episodes in our sample the increase in investment was smaller than that predicted by the size of the inflows. This result occurred precisely in those country episodes where the increase in bank and non-bank lending was among the largest. Similarly, the increase in private consumption was also proportionally larger, given the size of the capital inflow, in the group of country episodes that had the largest increase in bank and non-bank lending (see Box 5.4). It is important to note that all the country episodes where bank and non-bank lending grew the most ended in a banking crisis. The conclusion to be drawn here is that one of the ways in which a poor bank intermediation process can exacerbate macroeconomic vulnerability, in the context of increased financial integration, is by decreasing the investment that would result from an increase in capital inflows, and by increasing bank lending for consumption purposes.

Box 5.4 Excessive Bank Lending Can Lead to Under-Investment and Over-Consumption

The country episodes in our sample show that private capital inflows have been used to finance an increase in both investment and private consumption as illustrated by the positive slope of the regression lines in figures A and C below. Although the correlation between investment and inflows was positive, however, the increase in investment was smaller than that predicted by the size of the inflows in a number of countries: Sweden (1989-93), Norway (1984-89), Mexico (1989-94), Finland (1987-94), Chile (1978-81), and Argentina (1979-82). Furthermore, the increase in investment appears to have been lower than it could have been, given the size of the inflows, precisely in those countries where the increase in bank and non-bank lending was largest. Under-investment, measured as the difference between the predicted and the actual investment in a regression of the change of investment against inflow size, is shown in figure B. For the country episodes mentioned above, the under-investment averaged 3.6 percentage points of GDP, while the increase in bank lending averaged 16.5 percentage points of GDP. For the remaining countries and episodes in our sample, these variables averaged -1.8 percent and 9.06 percent, respectively. It is important to note that in all the country episodes identified above, the lending boom episode ended in a banking crisis. Moreover, for the country episodes in our sample, regression analysis indicates that an increase in private capital inflows of, say, 10 percentage points of GDP leads to an increase in gross investment by almost the same amount. However, the increase in investment drops to about half this figure (the magnitude of this increase is reduced by 4.7 percent of GDP) in those country episodes where the increase in bank lending has been higher than average.

An increase in bank lending following a capital inflow surge can exacerbate macro vulnerability by reducing potential investment and financing a consumption boom. This was, in fact, observed in the inflow episodes studied in this chapter. Figures C and D show that the increase in private consumption was proportionally larger, given the size of the inflows, in the group of countries that had the largest increase in bank and non-bank lending. Excess consumption is defined as the difference between actual consumption (as a share of GDP) and the consumption share predicted on the basis of the inflows received by each country. Argentina (1979-82), Finland (1987-94), Mexico (1989-94), Norway (1984-89), Sweden (1989-93), and Venezuela (1975-80), all country episodes that ended in a banking crisis, exhibited increases in consumption larger than those predicted by the size of their inflows. At the same time, the average increase in bank lending in these countries was more than two percentage points higher than in the remaining countries combined.¹ Thus for the country episodes in the sample, the empirical evidence verifies that increases in bank lending amplify the positive effect of inflows on private consumption and, therefore, increase the vulnerability of the economy.

¹ It is important to note that the group average is only 2 percentage points higher than the remaining countries in part because of Sweden, a country in which the increase in non bank lending is significantly higher than that in bank lending

continue...

Figure A

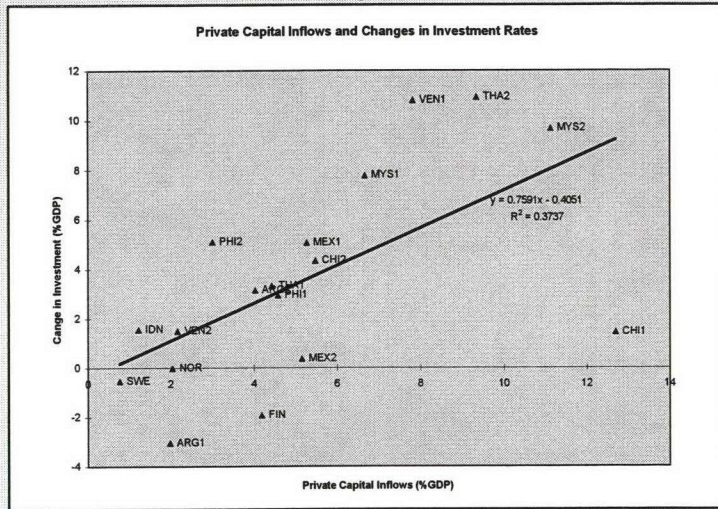


Figure B

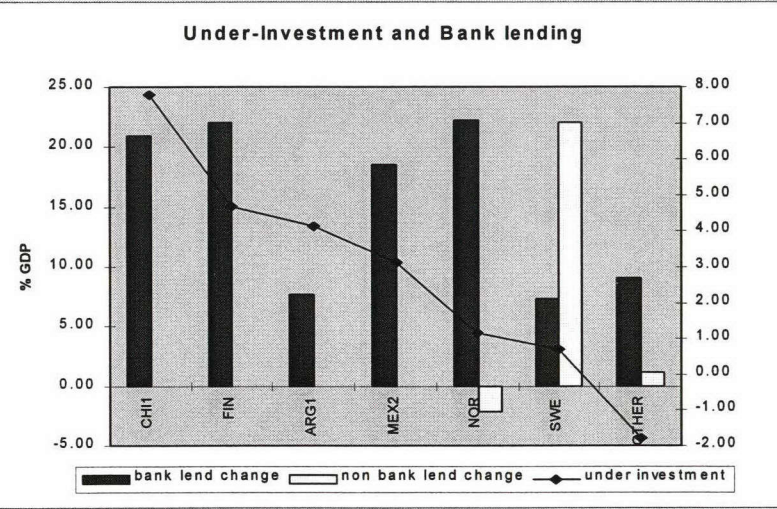


Figure C

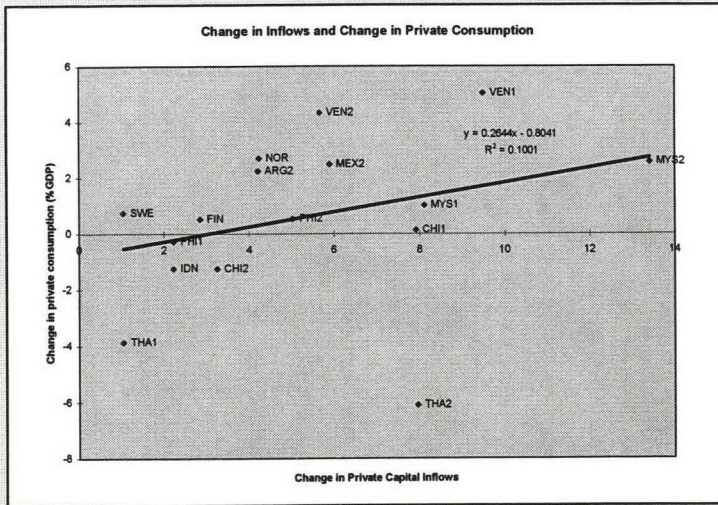


Figure D

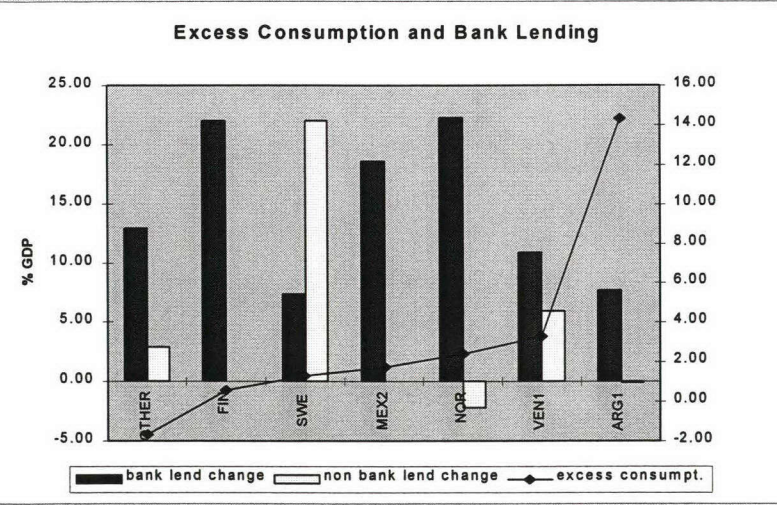


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The discussion above suggests several things.

- First, countries experiencing a surge in private capital inflows tend to also experience a lending boom, but the magnitude of the boom differs significantly among them.
- Second, countries experiencing the highest increase in bank and non-bank lending are also those in which macroeconomic vulnerabilities—measured by the increase in the current account deficit, excess consumption, and underinvestment—are exacerbated the most.
- And third, countries with the largest lending booms during an inflows episode are usually the same ones that later experience a banking crisis. All of this may imply that a rapid growth in bank lending should be avoided, or at least watched closely by the economic authorities in emerging countries.

The few exceptions to these rules in our sample were countries that went into their inflow episodes with both a low degree of initial monetization and careful macroeconomic management (see Box 5.5).

Box 5.5 Bank Lending Booms and Overheating: The importance of Fiscal Policy

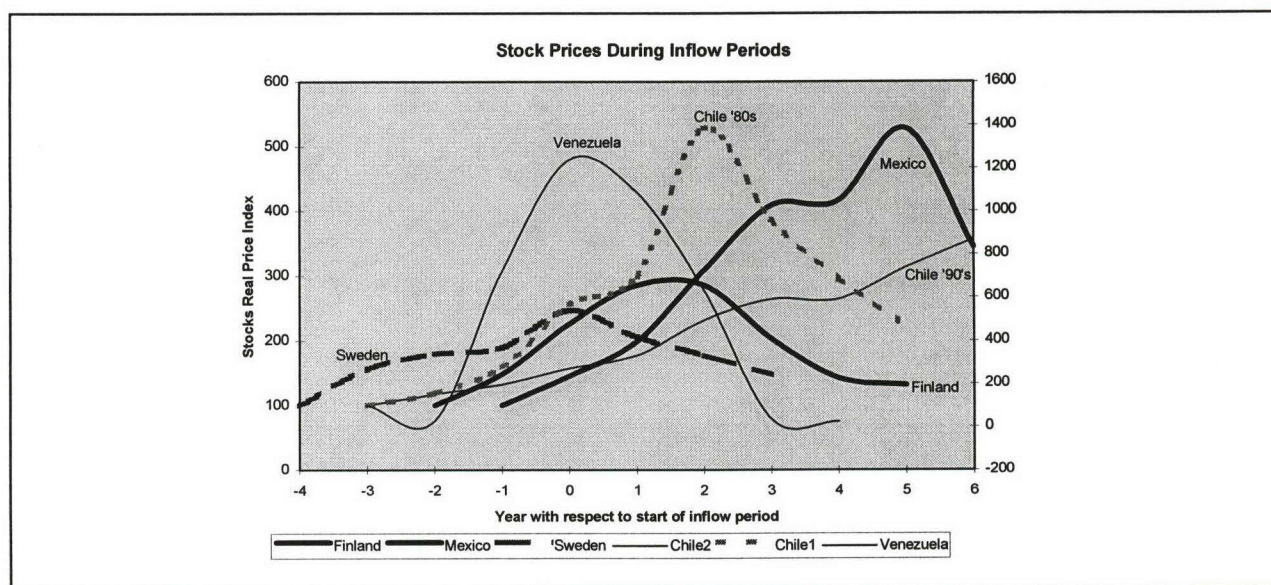
Two exceptions to the boom-bust cycle were Indonesia (1990-94) and Thailand (1988-94). These two countries experienced a significant increase—20 percent or more of GDP—in bank and nonbank lending during the inflow period, yet neither has undergone a banking crisis yet or suffered from a worsening in macroeconomic fundamentals. This can be attributed to at least two factors. First, both countries had a relatively low degree of monetization and shallow financial markets at the beginning of the inflow episode—bank lending to GDP was below 30 percent prior to the inflows, while all other countries averaged above 30 percent prior to the surge in inflows. Second, these countries have had careful macroeconomic management over time. A low degree of initial monetization implies that financial assets may increase proportionally more than aggregate output without necessarily causing an increase in aggregate spending. Similarly, careful macroeconomic management implies that bank credit can expand without creating the standard symptoms of overheating. In fact, both countries had a significant improvement in their fiscal stance during the inflow period, as measured by the government surplus, which increased by 2.24 and 6.7 percent of GDP between the pre-inflow and inflow period in Indonesia and Thailand, respectively.

Capital inflows and lending booms may also exacerbate economic vulnerabilities and ultimately lead to crisis by inducing an increase in asset prices. This is a common outcome in most country episodes, especially when the domestic and external financial sectors have been rapidly liberalized, and its most clear manifestation is through the prices of stocks and real estate (land). The rise in asset prices exacerbates vulnerabilities because it increases financial wealth

and thereby can raise the level of households' indebtedness and consumption. Indeed, households often use their newly appreciated assets as collateral for new loans. If the surge in prices proves to be unsustainable, which is also a common outcome toward the end of an inflow period (see figure 5.2), then the economy will need to adjust to a lower level of aggregate spending. Most importantly, banks' nonperforming assets will rise as overindebted households start defaulting on their debts, and in many cases the value of assets used as collateral will be insufficient to cover the banks' losses. The plunge in asset prices will leave banks in a weaker financial situation and may even lead to crisis.

Capital inflows can also weaken the banking sector in other ways. These are discussed in the next section.

Figure 5.2 Stock prices during inflow periods



How Bank Lending in an Integrated Environment Leads to Financial Sector Vulnerability

The surge in private capital flows that accompanies financial integration in developing countries usually leads to an increase in monetization and to banks intermediating a larger volume of funds. The increased financial intermediation, especially when it occurs over a short

period of time, not only can exacerbate macroeconomic vulnerability, as discussed in the previous section, but may also exacerbate microeconomic problems, especially when the banking system suffers from initial distortions and weaknesses. These microeconomic problems are important not only because banks could face financial distress and, eventually, crisis—which, in turn, could mean the derailment of the entire macroeconomic and fiscal stabilization program (Velasco 19xx)—but also because financial fragilities may impose constraints on the implementation of other economic policies. For example, the weak financial conditions in the banking industry in Mexico during 1993-94 restrained the government from increasing domestic interest rates, a policy needed to prevent the loss of international reserves.

In this section we discuss the ways in which international financial integration has affected the banking industry in countries that have liberalized their capital accounts. First we present the conceptual framework for thinking about this issue and discuss the indicators used to evaluate the performance of the banking sector in countries receiving capital inflows. We then describe the different country episodes, and finally, present our major conclusions from these country experiences.

Lending Booms and Banking Sector Vulnerabilities

A fast-growing banking industry will become more vulnerable if it is unable to evaluate the risks of increased lending (because of lack of trained personnel), and if its greater risk exposure is not accompanied by an improved ability to absorb negative economic shocks. Two common indicators of banks' ability to absorb shocks are their capitalization rates, measured as the stock of capital relative to the stock of bank assets, and their level of provisioning, measured as the provisions made for future losses as a share of the stock of total loans. An increase in provisions against future losses reduces the probability that banks could go under if borrowers default on their loans. An increase in the capital-asset ratio reduces the likelihood that banks could default on their own borrowing if investment projects turn out to be unsuccessful. (Because shareholders' potential losses increase with the size of capital-asset ratios, well-capitalized banks are usually better monitored by their shareholders and therefore hold safer

portfolios than do poorly capitalized banks). Two other indicators, related to bank's ability to withstand short-term shocks, are the liquidity of their assets and relative maturity of their assets compared to their liabilities. A lower degree of asset liquidity and a shorter maturity of liabilities relative to assets make banks more vulnerable to liquidity crises.

A booming banking industry is likely to appear less vulnerable because of an increase in profitability. However, while increased profitability may indicate improved operating conditions, in many instances it may simply be a consequence of the fact that banks are investing in riskier projects. A fast-growing banking industry has the opportunity to prevent or limit increased financial vulnerability if banks use these additional profits to increase their capitalization rates and provision against future losses.

Based on these principles we now analyze the impact of increased financial integration on the banking sectors in a number of country episodes. The analysis consists mostly of a systematic study of the behavior of several financial indicators obtained from the banks' balance sheets during the years surrounding the inflows episode. In particular, we look at profitability indices, capitalization ratios, the level of provisions and nonperforming loans, and the magnitude of exposure to foreign exchange risk. We use these indicators, in addition to indicators of banks' portfolio composition, when available, to assess the financial health, risk exposure, and resilience to shocks of these banking sectors.

Country Experiences

With respect to whether the countries used their inflow periods and lending booms to strengthen or weaken their banking industry, they can be classified into three groups: those that strengthened their banks, those that experienced a deterioration in the health of their banking sector, and those in which the banking sector's performance was mixed. Among the last group, we include countries that experienced an improvement in some indicators but a worsening in others.

Some countries strengthened their banking sector during the inflow period...

Chile, Colombia, and Malaysia all used their most recent capital inflow and lending boom periods to strengthen their banking systems.

- In **Chile** between 1990 and 1995, commercial banks were able to improve the quality of their assets by reducing more than half the stock of nonperforming loans (as a share of the total), while at the same time increasing their liquidity by about 40 percent (figure 5.3). Similarly, commercial banks reduced their foreign exchange exposure by about 30-40 percent between 1988 and 1994 (figure 5.7). It is important to note that the improvement in the financial indicators of Chile's commercial banks was achieved despite the fact that asset profitability in this period—measured by net interest margins—fell by about 25 percent (figure 5.5).
- **Colombian** banks, on the other hand, exhibited an increase of about 50 percent in net interest margins (figure 5.5), an improvement in capitalization (figure 5.4), a rise in loan loss provisions of about 70 percent (figure 5.6)—along with a worsening in asset quality, as measured by nonperforming loans, of about 40 percent (figure 5.3)—and a 50 percent decrease in the return on equity (calculated after provisions). The Colombian case is a clear example of how authorities can use a lending boom period to tighten regulations and make banks more resilient by forcing them to use the additional profits to increase their capitalization and provisioning.
- **Malaysia** also took the most recent capital inflow episode as an opportunity to strengthen its financial sector. Malaysian banks steadily increased their rate of capitalization since 1989, almost doubling it during 1989-95, despite the lack of a significant increase in profitability during the same period (figures 5.4 and 5.5).

...while in others, the health of the banking sector deteriorated...

By contrast, a number of countries have seen a worsening in their banking systems' shock absorption capacity during the capital inflows and lending boom periods; in particular,

Argentina, Brazil, Mexico, and Venezuela during the 1990s, **Sweden** during the mid to late 1980s, and **Chile** in an episode during the early 1980s.

- **Argentina and Venezuela**, for example, show a fall in loan loss provisions in the years prior to their banking crises—1995 and 1994, respectively—despite the fact that asset quality was deteriorating, as became evident in both countries after the crises began (figures 5.3 and 5.6). Furthermore, in both cases, banks' profitability (measured by net interest margin) increased in the years preceding the crisis, while in Argentina the bank's capitalization decreased by about 20 percent between 1991 and 1994 (figures 5.4 and 5.5).
- Capitalization rates in **Brazil** also fell by about 21 percent between 1991 and 1995 (figure 5.4), even though during the same period banks' profitability increased by about 35 percent and asset quality deteriorated significantly (figures 5.3 and 5.5). Banks in **Mexico**, on the other hand, although experiencing an important deterioration in asset quality (figure 5.3), along with a rise in profitability (figure 5.5) in the years preceding the 1994 crisis, increased their loan loss provisions only marginally between 1992 and mid-1994—the index rose 20 percent during this period (figure 5.6). In addition, Mexican banks suffered from a significant increase in their exposure to foreign exchange and real estate risks. Indeed, foreign exchange exposure grew about 40 percent between 1988 and 1994 (figure 5.7), while the share of banks' portfolios invested in real estate increased by about 80 percent (figure 5.8) between 1991 and 1995.
- The cases of **Chile** and **Sweden** during the 1980s are similar to those discussed above in many respects. Capital ratios of Chilean banks fell by about 50 percent between 1977 and 1980, despite the fact that banks' profitability was high in the years preceding the 1981-83 crisis (figure 5.4). Moreover, during the same period Chilean banks experienced a decline in the maturity of liabilities and an increase in foreign exchange exposure (figure 5.7). Swedish banks, on the other hand, saw a fall in their capitalization rates of about 31 percent between 1988 and 1991, and increased their foreign exchange exposure by about 50 percent between 1986 and 1990 (figures 5.4 and 5.7).

... and a third group of countries strengthened their banking sectors in some aspects while weakening them in others.

The last group of countries analyzed here were able to strengthen some aspects of their banking industry during the inflow and lending boom episodes while, at the same time, allowing a deterioration in other indicators of banking sector financial health. These countries include **Indonesia** during the 1990s, **Malaysia** during the early 1980s, and **Thailand** in both the 1980s and 1990s.

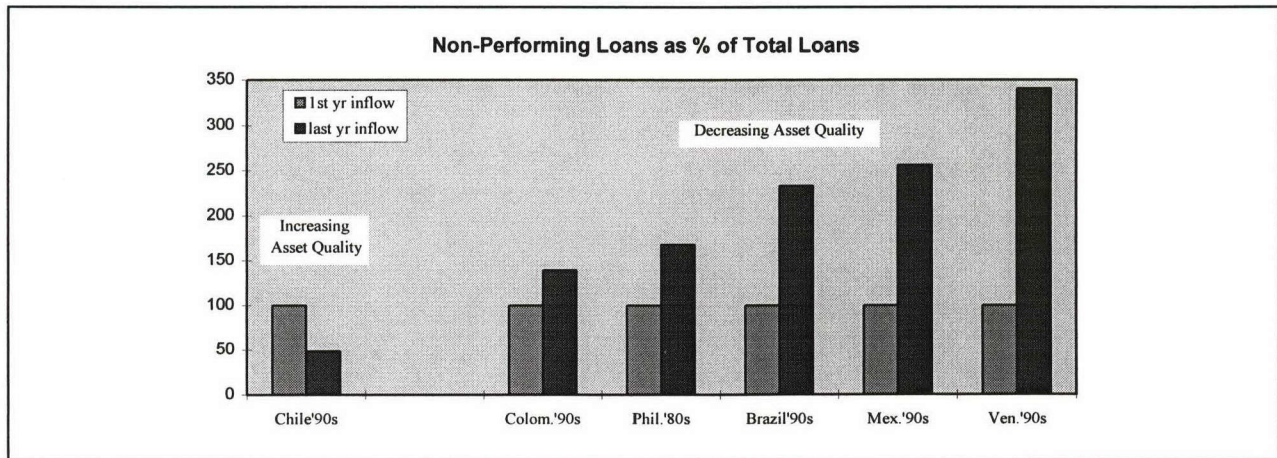
- In **Malaysia**, during the first capital inflow episode in the late 1970s and early 1980s, banks steadily increased their capitalization by about 80 percent, from an equity-over-total-assets ratio of about 3 percent in 1980 to a new high of about 5.5 percent in 1984 (figure 5.4). This increase, however, could not prevent the banking crisis that occurred in 1985-87, largely because during the inflow period banks exacerbated their vulnerabilities by overinvesting in real estate. Indeed, between 1980 and 1985 the share of Malaysian banks' portfolios represented by loans and advances to the real estate and housing sectors rose by 10 percentage points, from 25 to 35 percent, and increased further, to almost 37 percent, in 1987.
- As in Malaysia, banks in **Thailand** increased their capitalization by about 35 percent between 1989 and 1995, while during 1988-94 their profitability increased by about 49 percent and the provisioning against future loan losses rose by about 24 percent (figures 5.4, 5.5, and 5.6). However, between 1989 and 1995 Thai banks also increased their exposure to foreign exchange risk by a factor of four (figure 5.7), and further increased their exposure to real estate risk, which had been on the rise since 1985. Indeed, the share of real estate and construction loans in the portfolio of Thai banks, which increased by about 20 percent between 1984 and 1988, rose by about 41 percent (figure 5.8) between 1988 and 1995.

The case of Thailand during the 1990s differs from its earlier capital inflows episode in the 1980s in several ways. First, there was only a minor increase in Thai banks' exposure to the real estate business during the first inflow period. Second, Thai banks decreased their exposure

to foreign exchange risk between 1980 (or earlier) and 1985 (figure 5.7). And finally, the capitalization of Thai banks steadily decreased between 1978-79 and 1983, the first year of its 1980s banking crisis (figure 5.4).

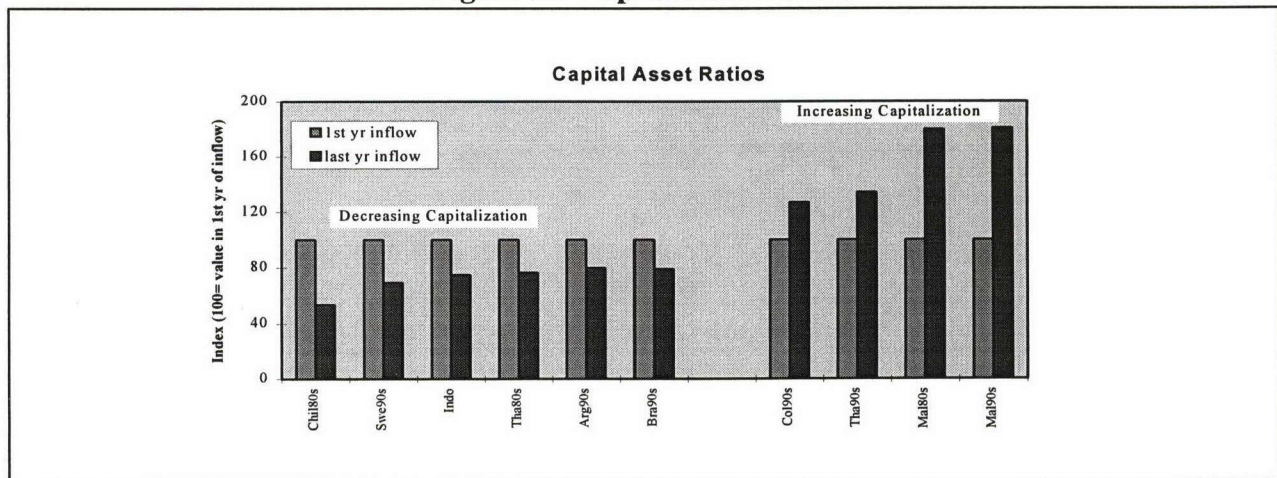
- **Indonesia's** banking sector during its most recent capital inflow episode (1990-1994) exhibits several of the symptoms of a weakening banking system, except that banks significantly increased their provisioning against future loan losses (figure 5.6). While bank provisioning increased between 1989 and 1994, however, bank capitalization decreased by about 30 percent during the same period, and foreign exchange exposure rose by 275 percent (figures 5.4 and 5.7). Moreover, between 1990 and 1995 the liquidity of the Indonesian banking system dropped by about 80 percent. As in Thailand and other countries, banks in Indonesia significantly increased their exposure to sectorial risk during its inflow episode by raising the share of loans to the service sector by more than 7 percentage points during 1989-94. More worrisome, however, is the fact that the increase in the share of loans to the service sector, typically considered to be a nontradable sector, had a negative effect on lending to the trade sector, a result that could make the overall banking system more vulnerable to variations in the value of the nominal and real exchange rate (figure 5.8).

Figure 5.3 Nonperforming Loans as a percentage of Total Loans



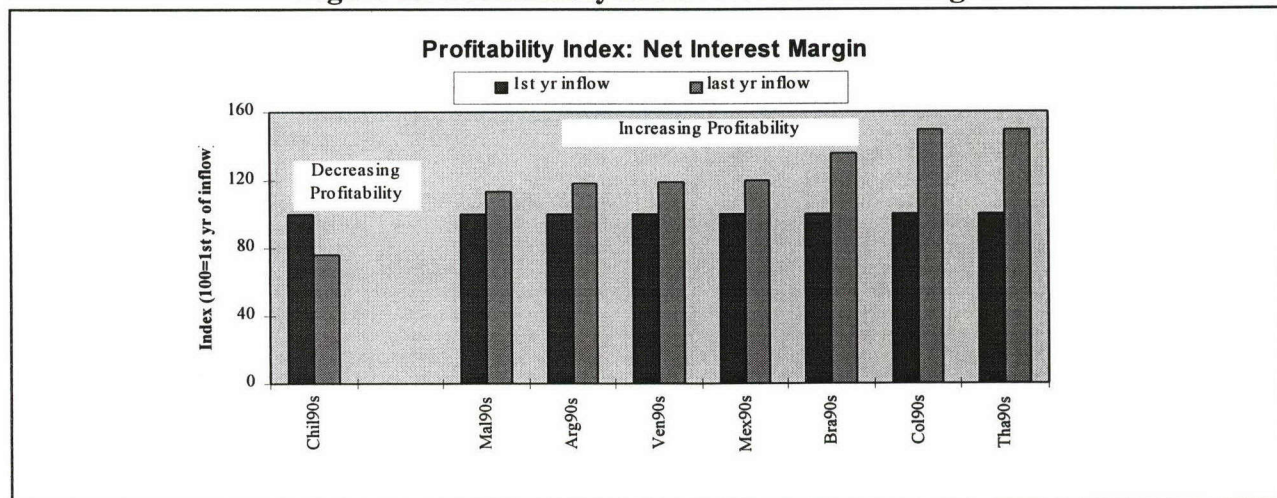
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Figure 5.4 Capital Asset Ratios



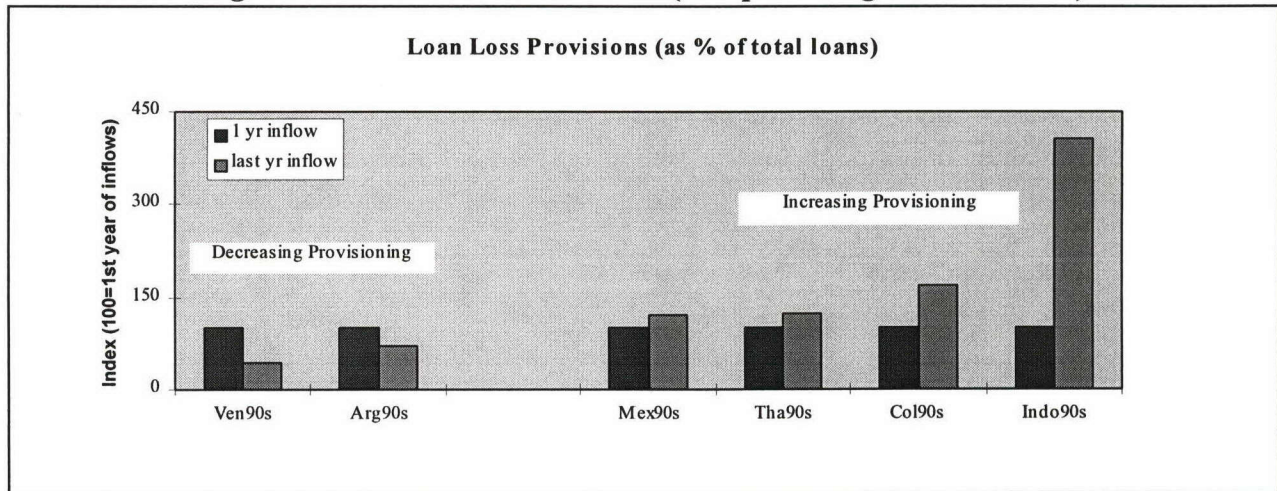
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Figure 5.5 Profitability Index: Net Interest Margin



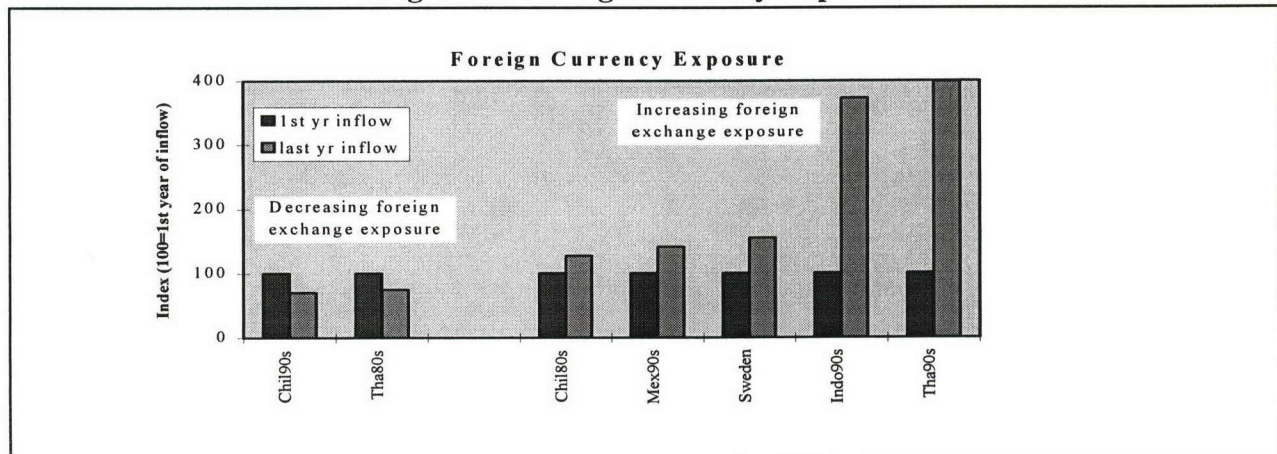
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Figure 5.6 Loans Loss Provisions (as a percentage of total loans)



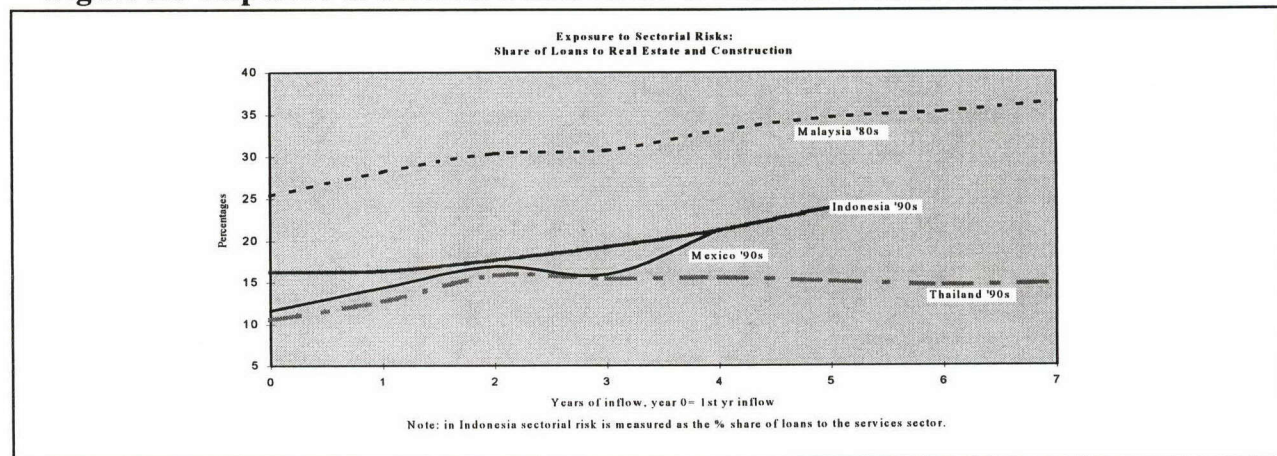
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Figure 5.7 Foreign Currency Exposure



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Figure 5.8 Exposure to Sectoral Risks: Share of Loans to Real Estate and Construction



Learning from Experience: Conclusions

Our analysis has shown that while some countries in some instances have used the surge in capital flows and lending boom period to strengthen their banking system, other countries, or even the same countries in different periods, have not. By using the increased profits that often accompany the lending surge to improve banks' health and shock endurance, some countries not only prevented the microeconomic vulnerabilities that normally surface in a fast growing industry from being exacerbated, but more importantly, may have also prevented painful banking crises. In other words, while fortifying banks' ability to react to shocks these countries may have managed to limit the size of the lending boom.

On the other hand, countries that did not improve the conditions in their banking sectors during the inflow period, but rather allowed bank lending to increase without addressing microfinancial vulnerabilities, were generally the same ones that saw a banking crisis later on.

This conclusion is clearly illustrated by comparing Chile's two attempts during the past two decades to become more financially integrated with the rest of the world. The first attempt, in 1979, ended in a major economic and financial crisis after three years, while the second, which started exactly ten years later, in 1989, has been extremely successful. In both cases Chile began the inflow period with a sound macroeconomic environment, with the only important difference between the two episodes being the exchange rate policy,⁷ a factor that resulted in banks increasing their foreign exchange exposure during the first inflow period (Valdés-Prieto 199x; De la Cuadra and Valdés-Prieto 199x) but not during the second. Nevertheless, on the microeconomic front the existence of a better regulatory and supervisory framework in Chile during the 1990s, can explain the different pattern of indicators such as bank capitalization and provisioning. Belated attempts were made to strengthen these indicators in the earlier episode, after a crisis became unavoidable, but by then it was too late (Valdés-Prieto 199x, Larraín 198x).

⁷ During the first surge in capital inflows (1979-82) the authorities used the exchange rate as a nominal anchor to reduce domestic inflation, while during the most recent episode (1989-95) they used a crawling band of increasing width.

Another conclusion suggested by the analysis is that initial conditions matter. This can be seen from those countries that have had two capital inflow episodes, and also by comparing countries in which external financial liberalization ended in a banking crisis with those that avoided a crisis. For example, the capitalization rate of banks in **Malaysia** at the beginning of its second capital inflow period (1987-88) was about twice that at the start of its first inflow period (1980), while banks' capital-asset ratios in the **Philippines** were also higher at the beginning of the second inflow period (1988) than at the start of the first (1979). Similarly, the average maturity of deposits was shorter at the beginning of the first inflow period than at the start of the second in the cases of **Chile**, **Thailand**, and the **Philippines**. Finally, when comparing two groups of countries it appears that those in which external financial liberalization led to banking crisis started with lower capitalization rates than those in which a crisis was avoided—the initial bank capital-asset ratios in the former group of countries was in the range of 2 to 5 percent, while in the latter it was 6 percent or higher. Banks in countries where a crisis occurred also started with lower liquidity than those in which financial liberalization has been successful. Although these conclusions must be interpreted cautiously, since cross-country comparisons are not necessarily valid due to differences in accounting and other rules, it is clear that countries that have been able to strengthen their banking industries during a surge in inflows—or in a period between two episodes of inflows—have been able to avoid the difficulties that today affect Argentina, Brazil, and Mexico, and that in the past have affected Chile, Malaysia, and the Philippines.

Financial Sector Reforms in the Context of Integration: Policy Lessons

In the preceding two sections we provided evidence to the effect that, in general, the negative effects of capital inflows on the macroeconomy can be amplified when an ill-functioning banking sector intermediates a larger volume of funds and no other counteracting policy—such as a fiscal policy that increases government surplus—is implemented (Box 5.5). We also showed that the surge in bank lending to the private sector may worsen the financial health of the banking sector when the industry is not well regulated and supervised and, therefore, when no steps are taken to increase bank capitalization rates or provisions against loan losses. In this section we first consolidate these lessons in order to illustrate the relationship between macro and financial vulnerabilities in the context of integration. Next, we discuss policy options that emerge from these lessons as well as from previous studies on the implementation of financial sector reforms in different countries. Our analysis adds to previous studies by bringing the issue of integration into it.

To consolidate the lessons from the previous two sections we have constructed financial and macro vulnerability indices which summarize the developments that followed the surge in capital flows in a number of countries. These indices are illustrated graphically in figure 5.9. A positive number in the chart means a deteriorating situation, and a negative number means an improving one.⁸

⁸ Both indices can take positive and negative values. The macroeconomic vulnerability index is constructed by adding the scores of countries (in each episode), which are based on their performance in terms of the current account deficit, consumption, and investment growth. For example, a country receives a score of -1 (or 0) in terms of consumption growth if consumption growth in that episode was smaller than (or equal to) that predicted by the size of the country's capital inflow. A country that scores a 3 on the macro front is one in which all macro variables indicated an increase in vulnerability. A country that scores a negative number (or 0) is one in which macro conditions improved (or stayed constant) over the period of inflows (relative to the size of the country's capital inflow). The financial index is constructed following a similar methodology. Countries' scores on the basis of the financial behavior are added. Countries that score a positive number are those in which financial conditions deteriorated over the period of inflow. The opposite is true in countries where the value of the financial index is negative. Although the indices are on a numeric scale, they should be interpreted as qualitative indicators more than as quantitative ones. In other words, the sign of both indices is more relevant than their absolute value.

Our analysis found that financial sector conditions and macroeconomic conditions generally deteriorated in tandem, that banking crises occurred in countries where macroeconomic vulnerabilities deteriorated or remained constant, and that no banking crises occurred during capital inflows episodes in which macroeconomic vulnerabilities were contained. These conclusions are consistent with the view that developments in the financial sector are, in general, a mirror image of developments in the real economy, and that the banking sector amplifies shocks that have already occurred in the real economy. Indeed, none of the country episodes included in Figure 5.9 show a worsening in macroeconomic vulnerabilities along with an improvement in the financial sector, and none of the banking crisis cases show a worsening in banking sector vulnerabilities with an improvement in macroeconomic conditions.

The evidence therefore suggests that maintaining a strong macroeconomic stance may be key to avoid a banking crisis. In particular, the cases of Indonesia (1990-94), the Philippines (1988-94), and Thailand (1988-94) suggest that having strong macroeconomic fundamentals may enable an economy to escape or at least temporarily dodge a crisis even when financial conditions are deteriorating. Specifically, the need to curb the lending boom and to apply counterbalancing macroeconomic policies to prevent excess overheating when receiving large capital inflows appears as a very clear message. Because of the long time—usually several years—that it takes to put in place a sound and reliable regulatory and supervisory framework for banks, countries can help make financial integration less destabilizing by maintaining good macroeconomic performance. This does not, however, obviate the need for strong macro *and* financial sector conditions to avoid disasters in the long run.

Figure 5.9 Macroeconomic and Financial Sector Vulnerabilities during Capital Inflow Episodes

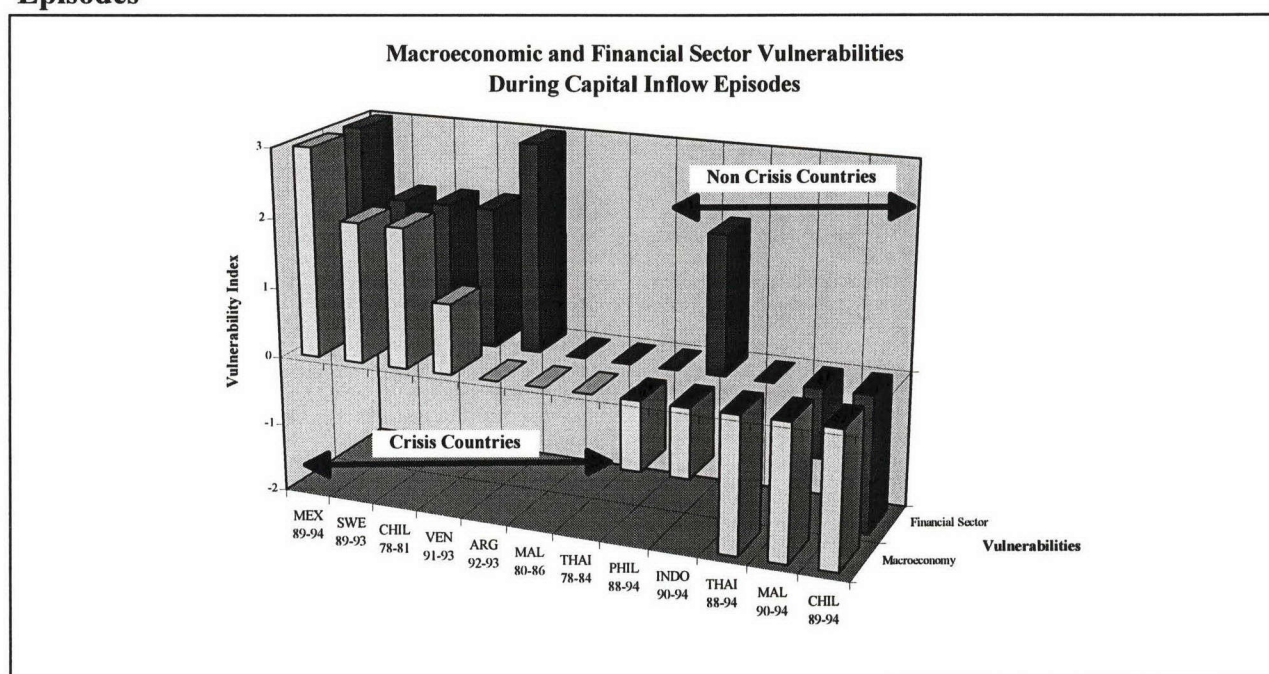


Chart 5 in m:\miniwd\...\chapter5\vulnerab.xls

In considering various policy options, it is important to understand how financial integration may affect the banking sector in countries receiving capital flows. These can be: (1) increased competition in the form of, for example, new entrants and financial disintermediation; (2) new risks in the form of new investment opportunities and instruments, but also a potentially more volatile economic environment, including the risk that flows will be suddenly reversed; and (3) access to a larger pool of foreign and domestic capital (savings), which makes it possible for banks to increase lending. These three types of effects, in conjunction with conditions in the financial sector and the macroeconomy, will determine the outcome of increased financial integration. Although integration brings important potential benefits for the developing countries, these three effects imply that potential risks and losses are greater if the process is poorly managed. This is so because in a more integrated economy the size and speed of market reactions are increased, as illustrated by the Mexican experience in early 1995 (Calvo 1996, Griffith-Jones 199X).

Financial Integration: Guiding Principles for Financial Sector Reform

By giving market participants access to a larger amount of loanable funds, new instruments and risks, and increasing market competition, financial integration exacerbates the potential for banks to undertake excess risks and incur sizable losses. Moreover, standard supervision and monitoring tools become less effective with integration because of the increased speed and magnitude of market reaction. Thus, the need to strengthen institutions and managerial skills in the banking sector, and achieve macroeconomic stability becomes even more urgent than in the case of closed economies. Financial integration puts a premium on the need of developing countries to reform the institutional and regulatory framework governing their banking industries. The policy recommendations discussed below imply a minimum set of conditions that, in an ideal world, should be satisfied before financial integration begins. Therefore, these recommendations are more relevant for countries that are not integrated.

Past attempts by both developing and developed countries to liberalize their domestic financial sectors have led to an evolving view of best practice in financial sector reform. In this section we review how financial integration affects the domestic financial sector reform agenda concerning both macroeconomic and microeconomic policies. Table 5.2 summarizes the major findings.

There are three basic principles for creating a macroeconomic environment that can sustain financial sector reform ...

In a world of increasing financial integration policymakers need to pay attention to three aspects of the macroeconomic environment to ensure successful banking sector reform: overall macroeconomic stability, the level of real interest rates, and the phase of the business cycle at the time reforms are implemented.

Macroeconomic Stability. One of the central lessons that has emerged from the experience with domestic financial sector reform is the importance of macroeconomic stability as a prerequisite for sustained reform. Because of the undesirable effects of sudden reversals of

capital flows, developing countries that liberalize their financial sectors while becoming financially integrated should therefore move quickly to achieve a stable macroeconomic environment, one in which the economy grows on a sustained basis and where the volatility in some key prices, such as the exchange and interest rates, has been reduced to internationally comparable levels. In working toward stability policymakers should aim to build macroeconomic cushions such as increase the stock of international reserves and reduce public debt. Countries with a public debt overhang problem are more vulnerable to changes in market sentiment and in variables such as interest rates or aggregate output (chapter 4).

Real Interest Rates. The main way that the macroeconomic environment affects the outcome of financial sector reforms is by changing borrowers' net worth through the level of real interest rates (Annex 2). In this context the policy recommendation is to carefully monitor interest rates and control them if reaching too high levels. The desirability of pursuing or delaying financial sector reforms in an integrated environment also depends on expectations about interest rates which can affect borrowers' and banks' net worth. It is likely that real interest rates will be low under integration due to the increased supply of loanable funds and to increased competition in banking which causes spreads to fall. These low rates will have a positive impact on borrowers' repayment capacity and through this, on banks' net worth. Therefore, based on interest rates considerations delaying reforms does not seem appropriate, since the most likely outcome will be an increase in borrowers' repayment capacity and a financially stronger banking sector. Moreover, the capacity of policy makers to control interest rates in a more integrated environment is greatly reduced and increasingly costly.

Phase of the Business Cycle. Past experience with domestic financial sector reforms has suggested that reforms should be accelerated in periods of fast economic growth and delayed when the economy slows down (Caprio and others 1994), the reason being that the banking sector—like every other economic sector—can adjust more easily to the structural changes brought by reform in periods of high profitability and growth. In the case of increased financial integration, however, this argument changes. In particular, the surge in flows that normally follows the implementation of reforms triggers a larger lending boom than in a less integrated

economy. Moreover, the possibility that the economy starts growing fast after reforms are introduced can reinforce market participants' high expectations about growth. This chain of events, as explained in previous sections, may induce additional lending and trigger overheating, which could exacerbate both macro and financial sector vulnerabilities.

In an integrating environment therefore, it might seem that financial sector reforms should be pursued during an economic slowdown rather than a recovery period because overheating and overlending are likely to be less severe if the financial liberalization process starts in an economic peak rather than a trough. Although this is plausible, it is also true that pursuing financial liberalization during a recession may lead to capital outflows rather than inflows. Therefore, it is still valid that domestic financial reform should be accelerated in periods of fast economic growth and delayed when the economy slows down, and the problems of overheating and overlending should be addressed through other policies.

...and three principles for creating a microeconomic environment to sustain financial sector reform.

Prior analyses have identified three microfinancial areas that need to be given special attention when liberalizing the financial sector: financial infrastructure and institution building, incentive structure, and the regulatory and supervisory framework.

Financial infrastructure and institution building. One lesson that emerges from past episodes of financial sector reform is the need to put in place an appropriate institutional framework establishing clear standards and rules for accounting, auditing, and legal procedures, all of which are necessary for adequate functioning of a market economy.⁹ In addition, prior experience has shown that bankers' management and risk assessment skills often become obsolete after reforms are introduced and need to be strengthened when the system is liberalized (Brock 1996, Caprio and others 1994, Caprio and Vittas 1995, and Caprio 1996). This is

⁹ Without these basic institutions the financial system as a whole, and the banking sector in particular, will not perform the function of intermediating funds properly, and will be more prone to fraud.

particularly important under integration because lack of knowledge in managing new instruments and assessing their risks increases the potential for losses due to fraudulent behavior or wrongdoing. Moreover, the lack of experience and knowledge in supervising banks in the riskier new environment increases the likelihood that such problems will remain undetected, as happened in Mexico, Venezuela, and the Nordic Countries, where the lack of supervision was a key factor in banking crisis.

The incentive structure. One important reason that banks run into financial difficulties is the presence of wrong *external* incentives—policies that can be modified by domestic economic authorities and that induce bank managers to pursue unsound banking practices (Box 5.6). One example of this, one particularly important in the context of increased financial integration, is the existence of explicit guarantees for foreign exchange. As shown by the Chilean experience of the early 1980s, and more recently by Argentina and Mexico, these guarantee mechanisms induce banks to increase their exposure to foreign exchange risk (see Annex 2). Another wrong incentive is a deposit insurance scheme that is not properly priced according to each bank's risk level, and leads depositors to put their money in institutions paying the highest interest and holding the riskiest portfolios. The solution is to correct the incentive structure and tighten bank supervision.

Increased financial integration may exacerbate this problem by giving domestic banks access to a larger supply of funds from abroad, especially if foreign deposits are covered by the (implicit or explicit) insurance. A simple way to minimize the risk that increased financial integration will exacerbate this problem is to limit deposit insurance, which will force large depositors to carefully scrutinize banks before deciding where to put their money, therefore imposing some degree of market discipline on banks. More importantly, by excluding foreign (or foreign currency denominated) deposits from the insurance mechanism, authorities force foreign lenders (usually large foreign banks or institutional investors) to scrutinize banks, exerting even more control over them. In this way market discipline complements the (imperfect) monitoring of banks exerted by domestic supervisory agencies, which may be ill equipped to effectively control risks and monitor such areas as profitability, capitalization, and

interlocking relationships between banks and the corporate sector. These issues are discussed below.

Box 5.6 Good Bankers Make a Sound and Safe Banking Industry

Wrong external incentives alone, however, are not sufficient to create a financial crises. Indeed, it has been argued that no matter how wrong the incentives, cautious bankers rarely bring their institutions to near bankruptcy situations (De Juan 198x). Banking practices depend on both *external* incentives and *internal* factors—usually unobservable and not under the control of domestic authorities—such as management’s reputation and moral track record. The main concern is that risktaking and fraud-prone individuals may enter the banking industry after liberalization occurs. In the presence of wrong incentives these individuals—as opposed to more conservative and cautious bankers—may pursue unsound lending practices and thereby exacerbate financial fragility in the banking sector. This is particularly true in the case of increased financial integration, which offers greater opportunities for fraud and wrongdoing. Thus, the problem consists of both carefully screening prospective bankers and correcting the *external* incentives facing bank managers.

The problem of screening prospective bankers implies putting in place a clear and transparent application process for bank licenses, in which all high-level managers and owners of banks are subject to careful screening of their personal business record. One important lesson concerning this issue emerges from the experience with bank privatization in Chile in the early 1980s and in Mexico in the early 1990s. In both episodes banks were privatized without attention being paid to the qualifications of the new owners or how they were financing the purchase. Because in some cases banks were bought with debt instead of equity, the new bankers had greater incentives to make risky investments with depositors’ money. Furthermore, reforms were introduced shortly after privatization occurred, giving the new management teams little time to learn how to do the business in the new environment. These developments were partly responsible for the banking crises experienced by both countries in 1981 and 1995, respectively.

Regulatory and supervisory framework

Banks’ profitability and capitalization. Experience has shown that poorly capitalized and loss making banks are more inclined to undertake excess risks than those that are well-capitalized and profitable, because in the latter case bank owners have more to lose if their risky investments turn out to be unsuccessful. Therefore, to limit excess risktaking by banks when implementing financial sector reforms, and particularly so in an integrated environment, authorities should raise capitalization requirements to levels consistent with international standards (see Annex 3). Moreover, some analysts have recently argued in favor of imposing higher capitalization rates for banks in developing countries because the economic environment in which banks operate seems to be more volatile in these countries (Gavin and Hausmann 1995, Caprio 1996).

Financial reform in an integrated environment can trigger a lending boom and temporarily increase banks profits (and risks), but can also reduce profits in the medium- and long-term by increasing market competition and giving non-banks new business opportunities while precluding domestic banks from entering these new markets. In this context, a financial deregulation process that is not carefully managed may therefore reduce banks' net worth in the medium- and long-term and induce unsound bank practices. Policymakers in liberalizing economies should proceed slowly to avoid a sharp decrease in banks profits while, at the same time, allow all market participants to compete on a level field. As argued earlier, the temporary rise in profits resulting for lending booms should be used to increase capitalization and provisions.

Cross-ownership between banks and the corporate sector. Experience has shown that a close relationship between the corporate sector and banks tends to distort the incentive for banks to protect depositors' money. More specifically, an interlocking relationship between a bank and a group of firms tends to bias the incentives of bank managers toward protecting the interests of the group of firms rather than those of depositors. In so doing, banks usually end up investing too much in the firms' assets and, therefore, do not diversify their portfolio adequately. Moreover, an interlocking relationship between a bank and a group of firms renders standard regulatory and monitoring procedures less effective, particularly in cases of financial distress, because the ways a bank can channel money to firms in a conglomerate multiplies with the size of the conglomerate, which makes prudential supervision more difficult. These problems become even more complex when both banks and corporations gain access to off-shore markets as a result of integration. The solution to this requires establishing limits on both bank holdings of stocks and on lending to individual borrowers, the latter calculated on a consolidated basis. More importantly, because of the difficulties in enforcing these regulations (especially during periods of financial distress), bank managers should be subject to severe penalties if found guilty of violating them.

Bank Supervision. Any effort to limit risktaking by banks will be ineffective if supervision and enforcement of regulations are weak. Supervision becomes more difficult in an integrated environment because of the larger pool of assets and risks involved and the fast-changing market conditions. Therefore, the need to upgrade the skill-mix and the effectiveness of the supervisory agency in an integrating environment becomes urgent.

[Insert table 5.2 here]

The Pragmatic Approach: Containing the Lending Boom while Strengthening the Banking Sector

Although, in an ideal world, the policy recommendations discussed above should be implemented before integration begins, most developing countries that are already financially integrated do not have all these prerequisites in place, implying that they need to move quickly to fix their institutional framework and put in place all the missing elements. This process can take years, however, so a strong case can be made in favor of implementing other policies to prevent vulnerabilities from being exacerbated while the missing elements are put in place. Curbing the lending boom is one remedy that is especially important in countries where the banking sector is weak and where private sector spending is biased towards consumption rather than investment. This subsection discusses some options for reducing the degree to which a lending boom can exacerbate macroeconomic and banking sector vulnerability. A summary of the discussion is presented in Table 5.3.

Macroeconomic policies. Fiscal, monetary, and exchange rate policies all can help to mitigate the lending boom. Tight fiscal policy seems to be highly effective in counterbalancing the overheating caused by the lending boom while, at the same time, preventing an increase in capital inflows because it keeps domestic interest rates at a low level (a desirable side effect). On the other hand, a tight monetary policy, while containing the increase in aggregate spending, may induce additional capital inflows because it increases domestic interest rates (Corbo and Hernández 1996). A larger volume of capital inflows will exert additional pressure on monetary balances and will increase the quasifiscal deficit of the central bank when it attempts to sterilize

the flows. Moreover, the positive effect of sterilization on domestic interest rates may significantly worsen the fiscal balance for countries having a large stock of outstanding public debt (India, Mexico). In the end, unless compensatory fiscal policies are implemented, the deteriorating financial position of the central bank—and the public sector in general if the outstanding stock of government debt is large—will cause a worsening of macroeconomic vulnerabilities. Furthermore, when banks have weak loan portfolios, an increase in domestic interest rates may aggravate their problems by increasing the stock of nonperforming assets. A recent example of this is Mexico during 1993-94.

Exchange rate policy, when directed towards maintaining competitiveness and supported by a tight fiscal policy, has proven to bias aggregate spending away from consumption and toward investment, particularly in the tradables sector (chapter 4). The use of the exchange rate as a nominal anchor, however, has been often associated with consumption booms, as in Mexico and Argentina. Not using the exchange rate policy in this manner can also help to reduce the risk that banks will overlend. Indeed, the adoption of a semi-floating exchange rate system (band), by increasing market participants' exposure to foreign exchange risk, induces a more cautious approach toward external borrowing and results in smaller capital inflows and less bank lending and overheating. This has in fact been the experience of Chile during the 1990s, as compared to that in the early 1980s.

Overall, the experience of countries that have avoided overheating during the most recent surge in capital inflows—e.g. Chile, Thailand, and Indonesia—suggests that sound macroeconomic management requires using all three policies within a consistent framework. A tight fiscal policy is key for the policy mix to be sustainable, but in the short run a tight monetary policy accompanied by small movements in the nominal exchange rate to maintain external competitiveness goes a long way toward preventing overheating and reducing vulnerability (see Chapter 4).

Microeconomic policies. Microeconomic policies directed at containing the lending boom include increasing banks' capitalization, provisioning against future losses, raising reserve

(liquidity) requirements, and imposing capital controls and ceilings on credit growth and external borrowing.

Increasing capitalization requirements, unless weighted by the risk of banks' assets, does not guarantee that banks will pursue a more sound investment and lending strategy—in fact, it could have the opposite effect and induce bankers to increase the risk in their portfolios. Therefore, countries should introduce risk-adjusted capitalization requirements such as those recommended by the Bank for International Settlements (BIS) (see Annex 3). An increase in risk-adjusted capitalization rates would induce banks to shift their portfolios towards safer assets, which would make the entire banking industry more resilient. Although this would not necessarily reduce overall bank lending, it would negatively affect lending to the riskiest activities, such as home mortgages, commercial real estate, and consumption credit.¹⁰ Excessively high capital requirements, however, could reduce banks' profitability and create other economic inefficiencies, such as inducing financial disintermediation.

Raising the minimum provisioning against future loan losses improves banks' shock absorption capacity and makes them more resilient. In addition, it may induce a portfolio shift towards safer assets—those with lower provisioning requirements—and thereby indirectly reduce overheating. More importantly, by reducing banks' net profits and capital, this policy constrains the growth in bank lending, with a direct negative effect on credit growth.

One problem with relying on provisioning and capital requirements to contain a lending boom, however, is that, especially during periods of financial distress, bank managers tend to hide their problems by underestimating the stock of nonperforming assets. It has often been observed that during periods of financial distress, banks will roll over nonperforming loans and capitalize past-due interest. Both were standard practice in Chile during the first inflows period in the early 1980s, and more recently in Mexico. In the latter case these bad practices were

¹⁰ According to current risk-based capital regulations in the United States, family residential mortgages are in the 50 percent risk category, while other real estate loans and loans to individuals are in the 100 percent risk category. (Brenadier and Hall 1995). See also Annex 3.

facilitated by rules permitting banks to declare as nonperforming only a portion of a loan if the borrower were partially meeting his payments. A more cautious approach would have been to declare the entire loan nonperforming. This problem has been particularly difficult to monitor in situations where lending goes to related parties (self lending), and it is especially acute in financially integrated economies where banks and corporations have access to off-shore markets. Therefore, for provisioning and capital requirements to be effective, it is critical to have in place a strong bank supervisory agency equipped with highly qualified staff capable of uncovering the banks' actual financial situation.

Reserve requirements, normally understood as a device to prevent liquidity crises, directly affect the amount of funds banks have available to extend credit. Therefore, increasing minimum reserve requirements will help to dampen the lending boom (although, if unremunerated,¹¹ they can act as a tax on banks (Brock 1996) and may induce them to pursue a riskier investment strategy). Reducing reserve requirements, on the other hand, may exacerbate the boom (see box 5.7).

Box 5.7 Reserve Requirements and Lending Booms

An important lesson concerning the use of liquidity reserve requirements emerges from the recent Mexican crisis. In early 1993 the economic authorities in Mexico allowed banks to meet their reserve obligations by selling securities to the central bank under a repurchase agreement, implying a *de facto* zero reserve requirement and causing a significant increase in liquidity. A direct implication of this policy was that small banks—and those with riskier portfolios—were able to increase their lending, which exacerbated both the macro and financial vulnerabilities of the Mexican economy. Conversely, in 1991 Malaysia increased reserve requirements on banks and other financial intermediaries by 1 percentage point—from 5.5% to 6.5%—to dampen the monetary impact of capital flows (Corbo and Hernández 1994).

Imposing ceilings on commercial bank lending (or credit growth) has a direct negative effect on aggregate spending and, therefore, helps to reduce overheating. This type of policy is most effective in protecting against macro and financial sector vulnerabilities if directed toward particular types of credit, such as consumption loans, credit cards, and mortgages. In recent years countries such as Malaysia and Thailand have used these restrictions (Corbo and

¹¹ This problem can be avoided by allowing banks to hold reserves in government securities which pay interest.

Hernández 1994). Conversely, countries having these restrictions in place should delay lifting them when receiving large capital inflows in order not to aggravate the overheating.

A similar rationale applies to imposing restrictions on commercial banks' external borrowing, such as those implemented in Indonesia in the early 1990s (Corbo and Hernández 1994). The use of direct capital controls on banks can be justified also because of the existence of implicit or explicit deposit insurance which country authorities do not want to extend to foreign depositors (Dooley, 1996).

Although the last two types of policies—ceilings on commercial bank lending and foreign borrowing—can be justified by the fact that commercial banks are the largest intermediaries in most countries, it is important to note that they may also cause significant economic inefficiencies. In particular, by discriminating against commercial banks they may induce financial disintermediation and thereby erode banks' profitability and increase their risk—the former because of the rise of other nonbank financial institutions and the latter because banks' prime clients start tapping into international capital markets for loans.

Indirect capital controls—those that apply to different types of foreign flows regardless of the agent intermediating the funds—put a tax on the use of foreign funds and impose a wedge between domestic and foreign interest rates. Moreover, they create important arbitrage opportunities that induce agents to look for ways to bypass the restrictions. Indirect capital controls may reduce overheating and vulnerabilities in the banking system to the extent that they affect the overall volume of intermediation, a doubtful result (see chapter 4), and if banks increase their long-term lending and this leads to an increase in investment rather than consumption (a more plausible result). Nevertheless, because evasion is usually easier for nonbanks, in the medium and long term this type of restriction erodes banks' profitability and induces disintermediation.

In sum, a variety of macro and microeconomic policies can be used to contain the lending boom and minimize the impact of private capital inflows on macro and financial sector

vulnerabilities (for example see Box 5.8). Nevertheless, discretion is advised with respect to microeconomic policies since they could be distortionary and have an adverse effect on banking in the long run.

Box 5.8 Containing the lending boom: Taxation

One argument generally overlooked in the literature that may exacerbate bank lending is tax incentives. Tax structures artificially favoring indebtedness in the corporate or household sectors—or that do not discourage incurring more debt—may lead to increases in borrowing by either sector during financial integration when credit becomes more easily available. In the presence of poor risk assessment, supervision, or management in the banking sector, the latter helps to exacerbate financial and macroeconomic vulnerability.

The experiences of Chile during the late 1970s and early 1980s, and those of the Nordic countries—Finland, Norway and Sweden—during the mid 1980s and early 1990s, clearly illustrate how tax incentives may help to artificially increase bank borrowing by the corporate sector in the former case, and by the household sector in the latter case.

The tax system in effect in Chile during 1975-84 (after a major tax reform was introduced in 1974) provided a significant tax advantage to debt financing—as opposed to equity financing—for firms.¹ By taxing dividends twice, first at the corporate level when companies paid taxes on profits, and then at the personal level when individuals paid taxes on their personal income, the Chilean tax system provided a disincentive for individuals to invest in equity and, therefore, for firms to finance their operations through equity issues. This disincentive to equity investment for individuals was decreasing on their—marginal—personal tax rate. In other words, while individuals paying taxes at a 10 percent rate (marginal) would receive as much as 67 percent more disposable income—net of taxes—when investing in a bank deposit than when buying a stock rendering the same payoffs, disposable income for individuals on a 40 percent tax rate was only 11 percent higher when buying a bank deposit (and only 3 percent higher for those in a 50 percent personal tax bracket). This tax incentive to debt financing was eliminated (and partially reversed) in the tax reform implemented in 1984. Its presence, nevertheless, during the first episode of financial liberalization and opening of the capital account, when credit became more easily available, facilitated the growth of the banking sector and helped to exacerbate financial fragility (Hernández and Walker 1993).

Similarly, the tax structure in effect in the Nordic countries when their domestic banking systems were liberalized in the second half of the 1980s, provided incentives for households indebtedness at a time when credit became more easily available due to the reforms. In particular, in all three countries high marginal tax rates—ranging from zero to 63 percent in Finland, for example—and full tax deductibility of interest payments led households to increase their borrowing in both mortgages and consumption loans. The increase in bank lending and household expenditure, in turn, reinforced the lending boom by raising real estate prices and collateral values and financing a construction boom. In the end, banks' portfolios became more exposed to cyclical sectors such as construction, real estate and services, and to exchange rate risk—due to the increase in foreign currency denominated loans (Drees and Pazarbasioglu, 1995).

Since their banking crises in the second part of the 1980s and early 1990s, all three countries have launched reforms reducing the tax rates on capital income and, therefore, the incentives for households to incur high indebtedness—Sweden in 1991, Norway in 1992, and Finland in 1993. Indeed, “[A]ll three countries currently impose a fairly low flat rate on capital income, and one can speak of a Nordic model of taxation of capital income.” (Tikka, 1993.) In the case of Finland, for example, starting in 1993 capital income is taxed at a flat 25 percent rate, and interest expenses are deductible from taxable income at the same flat rate but excluding interest paid on consumer loans other than those related with the purchase of a permanent residence. However, other earned income (e.g., wages) in Finland is still taxed at an increasing marginal rate that goes up to 62 percent. The new tax structure, however, eliminates tax arbitrage by incurring in greater debt. Continued..

In sum, though tax incentives should not be used as a main policy tool to contain a lending boom, at the margin they can exacerbate (or ameliorate) its effects and, therefore, can be thought as a complement to enhance the effect of other more permanent policies (fiscal policy, strong bank supervision) aimed to contain a quick expansion in bank lending.

¹ The tax incentive to debt financing existed prior to the 1974 tax reform. However, the state of financial repression—and credit rationing—that existed in the Chilean economy until the mid- 1970s reduces its importance for explaining the indebtedness in the corporate sector. For a more detailed analysis of these issues see Hernández and Walker, 1993.

Crisis preparedness and management

In an ideal—first best—world, all countries that become financially integrated have first put in place all the elements that allow financial markets to function smoothly and the benefits associated with integration to materialize. However, in the real world these conditions are rarely satisfied before the process of financial integration begins, and many countries begin reshaping their institutional framework—a lengthy and difficult process—after they have become integrated with the rest of the world. During this transition period strains arise in domestic financial markets that, if not properly managed, may lead to systemic crisis and large economic losses. Because financial crises imply significant losses, usually several percentage points of GDP (box 5.1), which can cause the derailment of painfully achieved macroeconomic (fiscal) stability, it is very important for a country to be able to contain the extent of any such crisis. One important aspect of bank supervision and regulation, therefore, concerns crisis preparedness and management. This subsection reviews the main lessons that emerge from the analysis of prior banking crisis episodes and highlights their relevance in the context of increased financial integration. The main conclusion is that the need to act promptly is even more urgent under integration. Table 5.4 summarizes the discussion.

Crisis preparedness. Among the objectives of banking crisis management are to quickly restore public confidence in the banking system to avoid severe reductions in liquidity, bank runs, and contagion effects; and to contain the extent of crisis to minimize its overall cost, which is usually borne by taxpayers. Experience has shown that to achieve these two objectives, policymakers need to act promptly and decisively and avoid policy reversals that increase market uncertainty. To do so, they need to identify ahead of time, the areas of

greatest vulnerability in the banking system, and have a clear plan to deal with a crisis when it occurs—i.e., a contingency plan.

One lesson that emerges from past banking crises in developing countries is that policymakers, regulators, and bank supervisors need to have the information to realistically assess the nature and magnitude of the crisis. Since incomplete or misleading information may induce wrong policy actions that could exacerbate rather than contain the crisis, they need to put special emphasis on collecting adequate data, and use these data to identify the most critical areas of weaknesses. Common areas of concern are banks' poor risk assessment¹² and management, self lending, low capitalization and insufficient provisioning for future losses, poor portfolio diversification, foreign exchange exposure, and maturity mismatches.

Such information will help in preparation of a crisis contingency plan, which can help reduce decision making time, 'trial-and-error' policies, market uncertainty, and the overall cost in the event of a crisis. In this regard the experience during the second stage of the 1994 banking crisis in Venezuela (after the collapse of Banco Latino), which involved eight financial institutions, is illuminating. Because the crisis occurred only weeks before a new administration took office, the authorities provided financial assistance to the ailing institutions but left any further action to the new administration. The delayed response exacerbated fraud and caused larger losses.

Because financial integration implies a higher speed of market reaction to any unusual developments, and wider swings in prices and quantities, the need to collect consolidated information on banks, assess their main weaknesses, and plan for possible contingencies becomes more urgent than it would be if the economy were isolated. In particular, bank supervisors need to carefully monitor off-balance and off-shore operations and the extent to

¹² Two risk areas that tend to be overlooked are the repayment capacity of public enterprises (PEs), and payment and settlement risk. Concerning the former, the implementation of macroeconomic stabilization packages aimed at reducing fiscal deficits have led PEs (e.g., in Venezuela) to default on their debt, thereby compounding bank difficulties. Regarding the latter, developed countries have recently begun to establish mechanisms aimed at addressing this problem (IMF, 1996), but developing countries still have a long way to go.

which these are used as a device to hide non-performing assets and bypass domestic regulations. Past experience has shown that lending to third parties abroad—which then re-lend the same funds to a related domestic party—is a common practice used to bypass domestic regulations against self-lending. This occurred in Chile during the early 1980s and Venezuela during the 1990s. In the latter case, however, the Venezuelan authorities had no legal powers to supervise off-balance and off-shore bank operations until 1994. Moreover, the recent Mexican and Venezuelan banking crises illustrate how off-balance transactions—involving financial derivatives—and off-shore operations can become a very important source of losses (Garber, 1995). In the case of Venezuela's Banco Latino, for example, it is estimated that one third of the \$3 billion in losses were registered off-balance (*Global Finance*, 1994).

Crisis management. Crisis management involves allocation of losses and management of failing institutions—whether and how to intervene ailing banks. In an integrated environment, policymakers need to intervene promptly and decisively in ailing institutions in order to contain the crisis and impose losses on the parties responsible—the bank owners and managers. Good judgment and discretion is needed in this process. Thus, policymakers may choose a more heterodox approach rather than a strict application of rules and pure orthodoxy (box 5.9).

Box 5.9 Orthodox versus Heterodox Bank Regulations

Prudential bank regulation is generally structured around three principles regarding bank capital, supervision, and recapitalization or exit: • bank regulatory capital must be positive and sufficient to withstand most shocks to a bank's assets; • a bank supervisory agency must have the capability to collect good information on banks' assets and liabilities; • bank supervisors or their superiors must have the power and financial resources either to recapitalize bankrupt banks or to force the liquidation of such banks. Underlying this "orthodox" approach to bank regulation is the idea that government deposit insurance—arising as a result of the need to safeguard the payments system, to protect small savers, and to prevent systemic risk of bank runs—places government financial resources at risk. Regulation of bank capital, supervision of bank balance sheets, and the recapitalization or forced exit of bankrupt banks allows the government to control its exposure to financial risk related to deposit insurance.

Orthodox principles of bank regulation are often disregarded in economies suffering from financial repression. In a financially repressed economy interest rates are controlled (often at negative real interest rates), portfolio guidelines are rigidly set, and much financial intermediation bypasses the banking system, often in the form of an unregulated curb market. The liberalization of a financial system marks a movement away from centralized control of financial resources and toward decentralized decision making by agents in the private sector.

The move to a liberalized financial system, however, does not usually take place with the necessary implementation of orthodox banking regulations. What happens instead is often a severe bending of the regulatory framework to accommodate the special circumstances surrounding the liberalization. Foremost among these is generally a significant portfolio of bad loans that threaten banks' regulatory capital. Forbearance on the part of regulatory authorities permits a delayed accounting of the problems. Forbearance occurs partly because authorities hope that bank profits in the deregulated environment will allow the bank to make provisions for the bad loans. But equally important, limited financial resources of most regulatory authorities dictate a policy of forbearance since intervention would involve an immediate large financial cost.

Low or negative net worth gives banks the incentive to undertake risky loans and investments, while liberalized access to funds gives banks the means to overborrow. During a period of a credit boom following financial liberalization, authorities almost always pay lip service to orthodox regulatory policies, even while staffs of bank inspectors are kept small, poorly trained, and powerless to alter banks' lending or provisioning practices. In addition, if financial liberalization is accompanied by a trade reform, regulators will be reluctant to discourage high-risk loans to export-oriented activities for fear of derailing the reform program of the government. During such a period, the lack of orthodoxy is primarily one of omission by monetary authorities, rather than the commission of an alternative set of policies.

When the gamble to let banks grow out of their problems fails, the formal commitment to orthodox banking regulations loses its credibility: the inability to resolve systemic solvency and liquidity problems with standard measures forces monetary authorities to react with policies that attempt to contain the crisis. Unlike orthodox policies, these heterodox policies vary widely from crisis to crisis. The common element of the heterodox policies is their attempt to distribute the costs of the crisis across different groups of actors in the economy. The imposition of capital controls prevents depositors from turning their assets into foreign assets (dollars). Many heterodox policies are aimed at debtors: preferential dollar exchange rates help debtors who borrowed in dollars, debt write downs help firms and mortgage holders, and the swap of bad bank loans for central bank bonds helps banks improve their balance sheets. All heterodox policies to help debtors and banks either involve a direct cost to the central bank or treasury, or they involve a postponing of the debt payment (or bailout) into the future.

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The imposition of heterodox policies is essentially an ad hoc bankruptcy process for much of the private sector. Unlike a formal bankruptcy process, the heterodox policies are often arbitrarily imposed and implemented with long lags after the crisis begins. The long lags are the result of poor information regarding the extent of portfolio problems, institutional inability to handle large-scale crises, and pressure by politically powerful groups to delay actions that would hurt members of the groups. The long lags will often be associated with high real interest rates that transfer wealth, in an accounting sense, from borrowers to lenders. This transfer complicates the implementation of heterodox policies to resolve the crisis, since the deadweight costs associated with the collection of taxes to pay for the transfer raise the social cost of the transfers above the narrow fiscal cost. The greatest difficulty with *ad hoc* heterodox policies is that the lack of rules can easily give rise to expectations that policies will be revised in the future in the direction of greater debt forgiveness. Such expectations may encourage a mass debtor default, even by debtors who are in a position to repay. In both Chile and Mexico, for example, programs to aid debtors initially proved insufficient to prevent the deterioration of debtors' net worth and later had to be revised with more generous terms (see below).

These considerations suggest that the set of heterodox policies be specified well in advance of any crisis. Much of Chile's 1986 banking law was motivated by the recognition that a special bankruptcy code was needed for the banking system in order to prevent the future occurrence of the disorder that surrounded the 1983 financial crisis. In addition to improved supervision and bank capital requirements, the law specifies a number of mechanisms by which bank solvency problems can be resolved without a government bailout. These mechanisms include two different voluntary recapitalization plans as well as a plan that permits depositors to choose between two types of deposit conversions into bank equity. In addition, detailed provisions in the law are made for the disposal of mortgages and other bank assets. The law has been tested in small ways during the intervention of a medium-sized bank in the late 1980s. The hope behind the law is that a detailed description of heterodox policies that will be pursued during any future banking crisis will be a deterrent to risky bank behavior today.

Principal Heterodox Policies Used During Two Financial Crises: Chile and Mexico

Chile

1983-1988: Debt Reschedulings. Two separate across-the-board debt rescheduling programs for firms and one across-the-board rescheduling for mortgage and consumer loans. The April 1983 program proved inadequate to solve the problem and was expanded in June 1984. Some loans were rescheduled again on a case-by-case basis by individual banks in 1986. Some mortgage loans were partially forgiven (up to 25 percent) in 1988 via a special refinancing facility set up by the Central Bank.

1982-1987: Purchase of Risky Loans by the Central Bank. The Central Bank purchased bad loans at par for up to 150 percent of capital and reserves of each bank. In exchange banks were given Central Bank bonds that were indexed to the CPI and paid 7 percent real. Banks were required to repurchase these loans out of earnings until 1996, when the Central Bank began negotiations that are expected to forgive about US \$1.5 billion of the outstanding debt.

1982-1985: Dollar Loans. The Central Bank established a preferential exchange rate for the repayment of dollar-denominated loans. This was a costly rescue program for the Central Bank.

1985-1987: Recapitalization of Intervened Banks. The government subsidized the purchase of new equity capital in intervened banks by small investors via a program called *Capitalismo Popular*.

Mexico

1995-1996: Debt Restructurings. Commercial, mortgage, and consumer loans have been rescheduled into UDI (CPI-indexed) loans. The UDI loans involve an interest subsidy to banks and can be carried at book value even though their sale would be at a loss.

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1995-1996: Direct Subsidies to Borrowers. Under the September 1995 ADE program credit card and mortgage obligations receive a direct interest rate subsidy from the government for a year. The original ADE program failed to resolve growing arrears and was consequently expanded in April 1996. The ADE program was at least partially created to neutralize the growing political importance of an organized debtors' movement.

1995: Dollar Loans. Following the December 1994 devaluation commercial banks in Mexico had great difficulty rolling over dollar-denominated CDs. In response, the Mexican government established a special discount window for dollar loans to banks at penalty interest rates of 25 percent.

1995-1996: Recapitalization of Intervened Banks. Following an initial temporary recapitalization program (PROCAPTE, February 1995), FOBAPROA (the Bank Liability Protection Agency) instituted a loan purchase/capitalization program for the eight intervened banks. Under the program FOBAPROA purchases two dollars of nonperforming loans for each dollar of new capital infusion.

Intervention Strategies. Policymakers have several options for managing a banking crisis, including no intervention and provision of financial assistance to ailing institutions without restraining their activities. These policies will, in most cases, exacerbate moral hazard and aggravate the crisis. The problems associated with these two policies become even more acute in financially integrated economies, a result that restrict their applicability even further (see box 5.10). Policies that are more feasible are discussed below.

Box 5.10 Nonfeasible Policies in Banking Crisis Management

A policy of no intervention is generally non credible—and therefore ineffective—unless the crisis is not systemic and involves only small financial institutions that do not threaten the stability of the financial system. Moreover, intervention may be inevitable—even if it affects only small institutions—if a deposit insurance mechanism is in place and policy makers aim to minimize the cost of crisis to the taxpayers. (This is so because the existence of deposit insurance creates a moral hazard problem by providing ailing banks with the opportunity to undertake risky investments with depositors' money in an attempt to survive, a strategy that increases potential losses). In a financially integrated environment a policy of no intervention will lead to capital flight whenever depositors suspect a (small scale) financial crisis may occur. The latter will lead to higher interest or exchange rate volatility depending on the exchange rate system, a result that exacerbates macroeconomic vulnerability. Moreover, a policy of no intervention is self-defeating since it will lead in the medium-term to the establishment of large banks because markets tend to act as if the 'too big to fail' doctrine prevails.

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Providing financial assistance—for example, through emergency (soft) loans—to banks in distress without directly intervening in their operations, like recently done in the case of eight financial institutions in Venezuela (see above), gives a competitive advantage to risky banks by subsidizing them and protects the interests of their owners and managers. In addition, if no control mechanisms are established for the use of the new fund, this policy may exacerbate problems by increasing risky lending. Thus, from an efficiency point of view this type of policy can only be justified if the ailing banks are economically viable—have a positive net worth—so that bankers have the incentives to invest the funds in a sound manner. For this outcome to occur intervention must take place at an early stage, before banks' net worth evaporates or becomes negative. On the other hand, from an equity point of view this policy can only be justified if banks problems are due to systemic risk and not to poor management, otherwise this type of policy exacerbates moral hazard problems and discriminate against sound and well managed banks. In a more integrated environment the potential losses that may result from providing cheap financial assistance without intervention to ailing banks are larger. This highlights the need for good information on banks' financial health for supervisors to quickly discriminate solvent from insolvent institutions and provide financial assistance only to the former group. Nonviable financial institutions, on the other hand, need to be intervened and restricted in their lending and risk taking activities.

- Taking over insolvent institutions and removing or restraining their management seeks to stop the practice of 'throwing good money after bad'; i.e., to prevent bankers from continuing unsound banking practices with depositors' money that, in turn, is insured by the government. In doing this is important to act promptly after distress is detected, since delays tend to induce withdrawals of noninsured deposits, as well as additional risktaking by bank managers. Analysis of the 1980s Savings and Loans crisis in the United States, for example, suggests that delaying the closure of troubled institutions—by up to 38 months on average—doubled the cost of resolving the crisis (Dellas and others, 1996). In the case of developing countries, where resolution costs appear to be higher (see box 5.1 and Suárez-Rojas and Weisbrod, 1995), it becomes even more urgent to act promptly to contain the crisis, especially in an integrated environment where bank managers have a number of channels through which they can undertake risky investments or commit fraud. In addition, in an integrated environment financial instability may lead to capital flight, which can increase macroeconomic vulnerability. In taking over insolvent institutions, bank regulators should seek to remove managers as a way of punishing them for pursuing unsound banking practices, although they may be unable to do so if manpower is scarce and there are no other teams available to run the institutions. In this case, bank managers should be severely regulated and closely monitored, while perquisites and dividends should be drastically curtailed.

- The liquidation or rehabilitation and posterior sale of intervened financial institutions should be decided based on the costs and benefits of each course of action. In general, the main benefit of rehabilitation and posterior sale—privatization—is that it preserves goodwill, while liquidation implies losing the economic value of the institution's intangible assets. Rehabilitation, therefore, may be more valuable in the case of large financial institutions with a large network of branches and some degree of specialization and know-how. On the other hand, the main advantage of liquidation is that it limits the cost of deposit insurance to only the amount of deposits covered by the insurance mechanism. Because rehabilitation and posterior sale is a lengthy process—especially if it involves a large and specialized financial institution—it usually leads to the protection of all deposits to prevent a withdrawal of funds and a disruption in credit and payments. In addition, rehabilitation and sale may be more difficult in developing countries, which lack specialized markets to dispose financial institutions, while a delayed sale may destroy some of the economic value of the intervened bank. Liquidation, too, can be problematic, especially since in a financially integrated economy it can lead to capital flight and increased volatility in either exchange or interest rates, exacerbating macroeconomic vulnerabilities. On the other hand, the privatization of ailing institutions can be facilitated in an integrated environment if foreign banks can compete in the bidding process. Therefore, increased financial integration may bias the resolution of banking crises towards intervention and posterior sale of ailing banks. For this result to be preferable to liquidation, however, it is important to minimize the losses that result from risktaking activities, which calls for early intervention and prompt action once problems are detected.

Although these conclusions are generally valid, they need to be considered with caution. For example, rushing the privatization of banks may create future troubles if the buyers are not adequately screened. The purpose should not be to sell quickly but to sell to good bankers. Therefore, it is worthwhile to take the time to assess the new owners. This was illustrated by the recent experience in Mexico, where in the early 1990s state-owned banks were sold to inexperienced bankers who in many instances incurred in large debts to finance

their purchases (box 5.6). In an integrated environment the issue of carefully screening market participants acquires special relevance because of the potential for greater losses and the larger pool of market participants, including foreign-based institutions, which may enter the banking sector without the appropriate skills or the incentives. The recent establishment of Russian-backed banks in some countries in Eastern Europe and the FSU—Hungary, Latvia—has been a matter of concern, for example, because in many cases they are only pocket banks of large state-owned enterprises, that lack the expertise to function in a modern integrated economy (Fleming and Telly 1996, Fleming and others 1996).¹³

Also, because the restructuring and privatization of banks has proven to be unsuccessful—leading to second rounds of intervention and financial rehabilitation—when the macroeconomy has been in disarray, a macro stabilization program should be implemented prior to or at the same time as bank restructuring starts. Given the greater market response and the increased number of channels through which capital outflows can occur in an integrated economy, more emphasis and higher priority must be given to achieving and maintaining macroeconomic stability when managing a banking crisis and trying to rehabilitate failed banks. In the same vein, because of the potential greater negative effects of financial distress on the macroeconomy in an integrated environment, a quicker response is needed to correct the underlying financial causes of the crisis.

Allocation of Losses—Guiding Principles. A politically difficult problem in handling a banking crisis concerns the allocation of losses. There are four groups that can be targeted: stockholders and bank managers, depositors, borrowers, and taxpayers.

- Bank owners and managers should suffer maximum losses—their institutions should be taken over and they should be removed from management. As argued earlier, however, this may be difficult to implement in countries where banking skills are scarce and

¹³ One way to minimize this risk is permit entry only to a few well-known international firms and banks with good reputations. However, this may be difficult to do in Eastern Europe and the FSU where economic activity is partly motivated on historical links.

supervisors lack experience in banking. Moreover, to effectively impose losses on owners and managers intervention must take place at an early stage—before losses reach several times the institution’s capital and the owners (using depositors’ money) have moved funds off-shore while managers have been overpaid. Imposing losses on owners and managers in an integrated environment requires early detection and prompt action.

- Regarding depositors, they rarely bear a part of the losses, especially in the case of large banks (*too-big-to-fail*), although there are exceptions to this rule; e.g., Spain, Cote D’Ivoire, and Estonia.¹⁴ It is politically costly to impose losses on depositors, although ideally governments would like to impose losses on large depositors to enhance market discipline. Trying to tax depositors in an integrated environment, however, will most likely lead to capital flight and exacerbate macroeconomic and financial problems.
- Borrowers should be targeted to the extent that seeking repayment from them does not distort their incentives to invest and undertake new projects. They should not be left with a debt overhang problem that would deter new investment and cause economic growth to decline (see box 5.1). Alternatively, in an integrated environment borrowers may seek to start new businesses off-shore.
- Taxpayers will bear less of the cost of a crisis the sooner the crisis is detected and contained. The cost to taxpayers results from the need to restore confidence in the market by bailing out borrowers and protecting depositors. The difficulties encountered in managing a banking crisis—for example estimating its actual cost and resolving incentive and other institutional problems—tends to delay policy responses and increase market uncertainty. Therefore, a prompt policy response will reduce the cost of the crisis shared by taxpayers. To the extent possible, however, the tax revenues raised to pay for the bailout should not deter economic growth in the medium and long term—for example, the authorities should avoid increasing tax collection through inflation.

In an integrated environment the allocation of losses will most likely be biased toward the less protected and informed groups—small depositors, small shareholders, and taxpayers—

¹⁴ In the recent banking crisis in Estonia, depositors lost about 40 percent of their deposits (Fleming and others 1996).

since large depositors, bank owners, and managers will often be able to move bank funds off-shore. Thus, the need to intervene promptly is even more urgent if the objective is to impose maximum losses on the largest market participants, those who have greater incentives to be well informed and for who is cheaper—proportional to their investment—to move funds from on-shore to off-shore locations.

In sum, financial integration puts a premium on the need for good and reliable information, prompt decision-making, and swift corrective action by bank supervisors. Given the greater volatility and responsiveness of financial markets in an integrated environment, and the potential for larger losses, the need to detect and contain a banking crisis at an early stage becomes even more urgent. Special attention must be paid to off-shore and off-balance transactions and to the screening of potential bankers, as well as to the need for economic authorities to put in place a contingency plan and provision adequate funding while, at the same time, maintaining macroeconomic stability. Indeed, analysis of past experience has shown that lack of appropriate funding has led bank supervisors not to intervene, but to let distressed financial institutions remain in business, which in the end increases the cost of crisis. A sound macroeconomic stance and other aspects of bank regulation may be crucial when managing a banking crisis under more stringent conditions (see Box 5.11).

Box 5.11 Crisis Management in a Constrained Setting; the Case of Currency Boards

A currency board is a monetary regime in which the domestic authority is precluded by law to issue liabilities—high power money—unless the issue is backed with an equivalent amount of international reserves. Under this system the monetary authority basically relinquishes its right to grant credit to the public or private sector and, therefore, fiscal imbalances cannot be financed through inflation tax. Although a currency board works as a fixed exchange rate system, its main difference with the latter is that it is more credible. Since a fixed exchange rate system can always be abandoned and is subject to discrete devaluations of the currency, there is no full guarantee that the value of the domestic currency in terms of foreign currency will remain constant through time. On the other hand, the main goal of a currency board is precisely that, to guarantee the full convertibility of domestic into foreign currency at a constant rate.

The main purpose of a lender of last resort, on the other hand, is to guarantee the full convertibility of a subset of bank liabilities—usually the shortest maturity ones—into domestic currency at their face value. Having such a mechanism in a fractional reserve banking system avoids bank runs and liquidity crises which, in turn, reduce the value of bank assets and lead to situations of insolvency, causing disruptions in the payments and credit systems and great economic losses. Bank runs and liquidity crises lead to insolvency because bank assets are of longer maturity than bank liabilities, and because of asymmetries of information in banking that make bank assets illiquid (Diamond, 1984). Therefore, in a fire-sale bank assets are usually heavily discounted, causing important losses for the selling bank. Bank depositors, who understand the risk of suffering a loss if a run occurs, tend to withdraw their money as soon as they suspect that a large number of other depositors may do the same.¹ In this context, an otherwise solvent bank may become insolvent if it is unable to contain a run on its deposits and is forced to sell assets at a large discount. Thus, banks are intrinsically unstable institutions subject to self-fulfilling confidence crises that may lead them into insolvency (Diamond and Dybvig 1983).

To overcome the problem of self-fulfilling confidence crises in banking countries rely on a lender of last resort which provides emergency loans to banks and guarantees full convertibility of deposits into domestic currency at face value, avoiding some of the economic costs associated with bank crises affecting otherwise solvent institutions. Although the lender of last resort can be any public entity capable to lend to troubled financial institutions, in practice this function in most countries is performed by the domestic monetary authority which does it by creating money. Therefore, unless a foreign government, central bank, or (multilateral) credit institution is willing to provide a credit line in foreign currency, a currency board will be limited in the amount that it can lend to domestic banks during a liquidity crisis. In particular, it will be able to extend credit to banks only if it holds reserves in excess to the amount required to guarantee the value of the domestic currency at the established exchange rate. In sum, the adoption of a currency board implies that the monetary authority relinquishes to its role as a lender of last resort and, unless an alternative entity assumes that role and provides the same type of insurance to bank depositors, the banking system becomes more vulnerable to liquidity crises.

The experiences of Hong Kong during the mid-1980s, and more recently Argentina during 1994-95, provide interesting episodes in which a banking crisis occurred under a currency board (quasi-currency board in the latter case). In both cases the local monetary authority was limited in the amount of credit that it was permitted to extend to banks having financial difficulties, and in the end had to recur to alternative mechanisms to contain the crisis.

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In Hong Kong several financial institutions faced difficulties starting in 1982, because of the slowdown in economic activity and the dive in stock and property prices from their peaks in 1980-81 (property prices fell between 60% and 90% and stock prices by 50%). In addition, the uncertainty surrounding the Sino-British talks regarding the political future of Hong Kong, and the currency crisis that unfolded in 1983, led to the reintroduction of the currency board system with the HK dollar pegged to the US dollar, in October of that year.² However, increasing financial difficulties in several banks and deposit taking companies forced the Hong Kong government to intervene to protect depositors. Interventions occurred during 1982-86, and consisted of the government taking over three medium size commercial banks, arranging financial support packages for other financial institutions, and providing guarantees against additional irrecoverable debts when the troubled banks were sold to private entities. Although the Hong Kong Monetary Authority could not act as a lender of last resort, the government responded by using reserves held in excess of those in the Exchange Fund, an stock whose main purpose is to stabilize and protect the value of the HK dollar. Indeed, in April 1986, after several government-led banking rescues had occurred, the total reserves were estimated to be at least HK\$35 billion, HK\$1.4 billion above the minimum required in the Exchange Fund.^{3,4}

The banking crisis in Argentina started in late 1994, when depositors began withdrawing funds from small and provincial banks and depositing in larger banks (which were perceived less vulnerable or 'too big to fail'), a shift leading to the bankruptcy of several small financial entities and the banking crisis in the provincial banks. Initially the shift affected mainly peso-denominated deposits, reflecting a loss of confidence in the currency, but later on as the crisis deepened it also affected dollar denominated deposits, reflecting lack of confidence in the banking system. The crisis ended with a total deposit withdrawal of about US\$ 8 billion between December 1994 and April 1995—equal to about 16% of total bank deposits—and the Central Bank losing about US\$ 4 billion in international reserves. In addition, the number of financial institutions decreased from 201 in December 1994 to 157 one year later, mainly through mergers and acquisitions. At the same time there was a shift toward dollar denominated deposits in large banks. Thus, between November 1994 and June 1995, the ten largest banks increased their share in total private deposits from 49 to 57 percent, while of the increase in total deposits during the second half of 1995, about 80 percent was in US-dollar denominated accounts.

The response of the Argentine authorities to the crisis comprised a significant reduction in bank reserve requirements to permit an increase in liquidity in the system, the negotiation of a financial assistance package with the multilateral institutions, and the creation of a privately financed (limited) deposit insurance mechanism. Reserve requirements were reduced so that the (25) largest banks were able to buy assets from the smallest ones. Thus, out of the approximately US\$ 8 billion loss in deposits occurring between end-December 1994 and mid-May 1995, about US\$ 3.4 billion (41%) was compensated with a fall in reserve requirements, and only US\$ 1.1 billion (13%) with a credit cut—other sources of liquidity were external credit lines, Repos and Central Bank loans to banks.

Three features of the Argentine banking system at the time of crisis and that helped to reduce its impact are worth noting. First, banks are highly capitalized. Indeed, although an 11.5 percent risk adjusted capital asset ratio is required for Argentine banks, when the confidence shock hit the economy banks had a capital asset ratio of 13.4 percent nominal and 18.2 percent when adjusted by risk (Fernández and Schumacher, 1996). Second, the increased dollarization of the economy that creates a bi-monetary system. Thus, by end 1994 about half of total deposits were dollar denominated (compared with only 21% at end 1989), and dollar denominated loans represented about 57% of the total. Third, high reserve requirements—although after the crisis these were changed for maturity related liquidity requirements ranging from 5 to 15 percent of bank liabilities. Indeed, since 1993 demand and savings deposits were subject to a uniform 40 percent reserve requirement, and the stock of liquid resources held at the Central Bank at the time of the crisis was about US\$ 9.4 billion, approximately 20 percent of total deposits.

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In sum, in order to achieve two policy objectives, namely, stability in the value of the domestic currency and in the value of a sub-set of bank liabilities, authorities in financially integrated economies must rely on other policy instruments that complement the role played by international reserves and which can help in having more resilient banks. High reserve and capitalization requirements, though effective in increasing depositors confidence, may reduce banks profitability. In this regard liquidity requirements seem to be a more efficient instrument as illustrated by the recent change of policy in Argentina. Although holding excess international reserves also seems effective to contain a banking crisis, it is important to note that such a policy is equivalent to the government having a sound fiscal stance (surplus) that allows it to have permanent access to the international credit market.

¹ The number of withdrawals needs to be large enough for the bank to run out of reserves and be forced to liquidate assets at a discount.

² Honk Kong used a currency board, with pegging of the HK dollar to the British Sterling, up to 1972.

³ The Fund is required to maintain assets equal to at least of 105 percent of the stock of debt certificates and Honk Kong dollar note issued.

⁴ Total money spent in helping Hong Kong troubled banks was estimated to be less than 10 percent of the Fund's total assets as of April 1986. Source: *Far Eastern Economic Review*, 10 April 1986.

Table 5.2 Domestic and External Financial Sector Reform: Policy Recommendations

	<i>Macroeconomic Environment: Critical Aspects</i>			<i>Microeconomic Environment: Critical Aspects</i>		
	<i>Overall stability</i>	<i>Real interest rates</i>	<i>Timing of reforms</i>	<i>Financial infrastructure</i>	<i>Incentive structure</i>	<i>Regulatory framework</i>
Domestic financial sector reform	Implement policies when the economy is stable to avoid a shortening of maturities in banks' liabilities.	Avoid sharp increases in interest rates that will reduce borrowers' repayment capacity and banks' net worth. Control interest rates if they become too high.	Implement reforms during a recovery period to facilitate the adjustment of banks to the new environment.	Put in place adequate institutions and upgrade human capital in both banks and the supervisory agencies before liberalization occurs.	Put in place a good system to screen potential bankers and limit deposit insurance coverage to small depositors only.	Impose high capital-asset ratios and proceed slowly with reforms to avoid a sharp fall in bank profits. Impose ceilings on self-lending within conglomerates.
Increased financial integration	The same recommendation applies: implementing reforms in a volatile environment will shorten the maturity of flows and induce more speculative flows. Greater weight must be given to achieving macroeconomic stability and to eliminating debt overhang.	Accelerate reforms if interest rates are expected to decline. However, controlling interest rates will be more difficult and costly.	Pursuing reforms after an economic slowdown may exacerbate the lending boom and overheating of the economy. However, other counteracting policies can be used to minimize this problem.	The same policy recommendations apply. However, because potential losses are much greater and markets react faster under integration, the need to move forward on these fronts is even greater. Increased financial integration puts a premium on reforming the regulatory and incentive structure in banking. In addition, the use of guarantees for foreign exchange should be limited.		

Table 5.3 Containing Lending Booms: Policy Options

	Macroeconomic Policies			Microeconomic Policies				
	Foreign exchange system	Fiscal policy	Monetary policy	Imposing ceilings on commercial bank lending and external borrowing	Increasing banks' reserve requirements	Increasing banks' risk-adjusted-capital asset ratios	Imposing indirect (economy-wide) capital controls	Tightening other bank regulations (provisioning for non performing loans)
Main advantages	A semi-floating exchange rate system (band) increases the market risk faced by banks and other domestic borrowers, reduces foreign exchange exposure, and may limit overall external borrowing.	Reduces overheating and help to keep interest rates low.	Helps to contain the lending boom and reduces overheating.	Limits the lending boom and the overheating. Most effective if directed toward specific uses of credit such as credit cards, consumption loans, etc.	Restricts credit growth and minimizes the risk of overlending.	Makes banks more resilient to shocks, induces sound banking practices, and may reduce the growth in lending.	Although based on preliminary findings, capital controls appear to change the composition of flows towards longer maturities. This may have the positive effect of biasing expenditures (and bank lending) toward investment rather than consumption.	Increasing provisions for future loan losses makes banks more resilient to shocks and reduces the availability of loanable funds.

Table 5.3 (continued)

	<i>Macroeconomic Policies</i>			<i>Microeconomic Policies</i>				
	<i>Foreign exchange system</i>	<i>Fiscal policy</i>	<i>Monetary policy</i>	<i>Imposing ceilings on commercial bank lending and external borrowing</i>	<i>Increasing banks' reserve requirements</i>	<i>Increasing banks' risk-adjusted capital-asset ratios</i>	<i>Imposing indirect (economy-wide) capital controls</i>	<i>Tightening other bank regulations (provisioning for non performing loans)</i>
Main disadvantages			Exacerbates capital inflows by maintaining a high level of domestic interest rates. Also, in the medium term, it deteriorates the financial situation of the central bank — and of the public sector if the stock of outstanding debt is large— and worsens macroeconomic fundamentals.	Creates a microeconomic distortion and gives non bank financial institutions an advantage over banks.	If not remunerated, the increase in reserves may induce banks to invest in riskier projects.	An excessively high capital-asset ratio will reduce creditors' efforts to monitor bank managers and can erode banks' profitability. Capital requirements are difficult to monitor if bank supervision is weak, especially in periods of financial distress.	Preliminary findings suggest that capital controls quickly become ineffective due to the important arbitrage opportunities they create. Most important, these profits usually benefit other economic agents (non-banks) and in the long term create distortions and cause economic inefficiencies.	Like capitalization requirements, provisions against future loan losses are difficult to monitor when bank supervision is weak. This problem becomes more acute in periods of financial distress when banks start rolling over bad debts and capitalizing past due interest.

Table 5.4 Banking Crisis: Policy Options

<i>Policy option</i>	<i>Major Advantages</i>	<i>Major Disadvantages</i>	<i>Main Effect of Increased Financial Integration</i>
<i>No intervention</i>	No cost to taxpayers Strengthens market discipline	Not feasible or credible, especially when failing institutions are large and/or comprise a large segment of the market May cause important economic losses if leads to disruptions in credit and payments system Promotes unfair competition because it induces a de facto “too big to fail” doctrine.	Induce depositors to put their money in off-shore banks; and, depending on the exchange rate regime, increases volatility either in capital flows and interest rates or in exchange rates
<i>Financial Assistance and Recovery</i>	Avoids runs and disruptions in payments system Preserves the economic value of bank franchising (intangible assets)	Promotes unfair competition (healthy banks have to compete for funds with failing institutions) and protects managers and stockholders of risk-taking institutions Gives wrong incentives and signals that in the long run will exacerbate moral hazard problems If left unconstrained, banks can continue investing in risky activities.	Increases the potential cost to taxpayers because of the greater possibilities for risk-taking and the increasing difficulties in monitoring.
<i>Takeover and liquidation</i>	Strengthens market discipline Limits the cost of rescue operation to only insured deposits Imposes higher losses on bank owners and managers (in the latter case only if it is possible to remove them)	May induce runs and disruptions in payments and credit if leakage of information occurs, a more likely outcome in the case of large institutions Destroys the franchise value of banks Likely to lead to a “too big to fail” type of behavior; in the end it is strictly enforced only when the failure involves a small banking institution, since supervisors are afraid to liquidate large institutions for political reasons as well as to avoid panics and runs	May induce holders of unprotected deposits to go to offshore banks; and, depending on the exchange rate regime, increases volatility either in capital flows and interest rates, or in exchange rates In an integrated environment, may become easier to liquidate bank assets More difficult to impose large losses on bank owners and managers—requires early intervention
<i>Takeover and assisted sale of failing institution</i>	Avoids runs and disruptions in payments system Preserves the economic value of bank franchising (intangible assets) Imposes higher losses on bank owners and managers (in the latter case only if it is possible to remove them)	Usually leads to protecting all deposits because significant time is needed to assess the value of assets and work out a sale, a time during which unprotected depositors can withdraw their funds If no clean-up of banks occurs before privatization, then a repetition of events leading to insolvency (and future intervention) is likely to occur A delayed sale can reduce the value of the failing institution Difficult to implement in developing countries due to shallow markets for bank assets and institutions, especially in the case of large banks More expensive to implement when accounting standards are poor and bank liabilities are not accurately reported	Increases the potential cost to taxpayers because of the greater possibilities for risk-taking, and increases monitoring difficulties It may become easier to implement in an integrated environment where foreigners are allowed to buy bank assets and failing institutions More difficult to impose large losses on bank owners and managers—requires early intervention

Annex 1

Capital Inflows, Lending Booms and Banking Crises: Country Episodes

The analysis in this chapter is based on a sub-sample of the country episodes studied in previous chapters. In particular, we study a set of countries that have experienced a surge in private capital flows at some point during the past twenty years while, at the same time, attempted to implement reforms in their financial sectors. Country episodes were selected based on the importance of the banking sector in determining the outcome of the financial liberalization and integration experiment. In other words, we include in the sample country episodes where the banking sector has played a significant role in the observed outcome. The sample selection was partly influenced by the attention that each country experience has attracted in the relevant literature. The sample of country episodes comprises both developed and developing countries, and in the case of some developing countries more than one episode is analyzed. In particular, we include episodes occurring in the early 1980s prior to the debt crisis and compare them with those occurring in more recent years. The list of country episodes included in our sample is shown in table A1.1.

Several interesting features of the country episodes analyzed here are worth discussing. First, in all the episodes—except Sweden during 1989-93—the country involved received significant private capital inflows (measured in terms of GDP). Indeed, the sample average for all the episodes (including Sweden) is almost 5 percentage points of GDP. Second, more than half of the country episodes ended in a banking crisis (fourteen out of twenty). This validates the point argued earlier that the outcome of the liberalization and integration experiment was largely affected by developments in the banking sector. Third, economic growth was significantly reduced in the years following a banking crisis—except for the case of Thailand during the early 1980s. Moreover, in most cases economic growth during the years following a banking crisis was either negligible or negative. Fourth, in all the cases where a banking crisis occurs, credit to the private sector—either from bank or non-bank financial institutions—grew in real terms at very high rates in the years prior to crisis, rates of growth usually several times that of real output. Furthermore, these periods of high growth were followed by years of very low or even negative credit expansion.

Table A1.1

Country	Inflow period	Inflow size as % of GDP	Banking crisis years	Average bank credit growth (inflow period and/or pre-crisis years)	Average bank credit growth (crisis and post-crisis years)	Average non-bank credit growth (inflow period and/or pre-crisis years)	Average non-bank credit growth (crisis and post-crisis years)	Average GDP growth (inflow period and/or pre-crisis years)	Average GDP growth (crisis and post-crisis years)
Argentina	1979-82	1.98	1980-82	14.64	13.19	6.57	-20.38	4.36	-1.79
	1992-93	4.03	1994-95	16.94	14.86	45.56	24.91	7.34	7.42*
Brazil	1992-94	2.19	1995	52.57	na	17.41	na	1.66	na
Chile	1978-81	12.68	1981-83	43.26	10.29	71.55	-33.22	8.09	-3.45
	1989-94	5.48	--	7.46	na	21.79	na	6.96	na
Colombia	1992-94	3.84	--	15.23	na	15.15	na	5.03	na
Finland	1987-94	4.18	1991-93	11.99	-7.67	na	na	3.65	-1.94
Indonesia	1990-94	1.22	--	18.59	na	na	na	6.92	na
Malaysia	1980-86	6.66	1985-88	16.53	6.32	23.41	7.18	6.87	3.52
	1990-94	11.13	--	11.54	na	11.92	na	8.65	na
Mexico	1979-81	5.27	1982-83	14.58	-25.19	-1.82	-11.38	8.47	-2.42
	1989-94	5.15	1994-95	33.47	na	15.16	na	3.06	na
Norway	1984-89	2.04	1988-89	18.71	2.22	0.02	1.49	4.29	0.19
Philippines	1978-83	4.57	1982-87	9.18	-10.84	12.48	-22.95	4.95	-0.37
	1988-94	3.01	--	11.44	na	17.55	na	3.15	na
Sweden	1989-93	0.77	1991-93	7.54	-11.98	28.67	-1.96	1.87	-1.77
Thailand	1978-84	4.42	1983-87	7.92	14.31	9.43	7.55	6.34	6.19
	1988-94	9.34	--	21.35	na	21.43	na	10.01	na
Venezuela	1975-80	7.81	1980	15.13	-2.14	16.99	3.31	4.97	-1.84
	1991-93	2.16	1994-95	-2.13	-26.81	-9.46	-31.95	5.28	-0.32

Notes: Comparison across countries are not valid due to different length periods.
*: 1994

Source: In I:\martinez\miscexel\tabledat.xls...data table

Annex 2

Government Guarantees, High Real Interest Rates, and Banking Sector Fragility

A financial system intermediates funds between savers and investors, determines the quality of investments undertaken in the economy, and provides the means of payment for many transactions. When the financial system is working well these functions increase output in the short run as well as the level and productivity of the capital stock in the longer run. The functions of the financial system are important enough that virtually all governments provide explicit or implicit guarantees to participants in the system. These guarantees may simply take the form of lender-of-last resort protection to provide liquidity during a bank run to otherwise solvent banks. Such guarantees do not protect depositors in the event that banks turn out to be insolvent. Government guarantees may extend to small savers, on the assumption that they are not sophisticated enough to monitor bank owners and managers, or may extend to banks whose failure is judged to pose a threat to the financial system. This "too big to fail" guarantee covers all the liabilities of larger banks, while leaving liabilities of smaller banks at some risk. Blanket guarantees for all banks, which are often at least implicitly extended, remove private risk associated with bank liabilities and shift that risk to the government.

The "bright" side of government financial guarantees is that they protect the payments system, prevent runs on banks, and protect depositors against losses. The "dark" side of these guarantees is that they may promote risk taking and provide overly optimistic bank owners access to financial resources with which to gamble on future economic growth. The dark side of government guarantees occurs because they operate in the same way as a put option on a bank's assets: if the value of the bank's assets falls below the value of its liabilities, the guarantee makes up the difference. Like a put option, increases in the riskiness of the asset portfolio increase the value of the guarantee to bank owners (and possibly to bank managers), since greater risk increases the potential for large upside profits while the government guarantee provides insurance to depositors that they will not be responsible for downside losses. Without a countervailing force deposit guarantees will be the source of financial instability since banks will end up attempting to maximize the value of the guarantees.

A positive franchise value of a bank as an ongoing operation, including the human capital invested in specialized knowledge of bank borrowers and industries, can counteract the incentives for risk taking associated with deposit guarantees. When a bank has positive franchise value and a healthy balance sheet, the value of the government's guarantee to a banker is relatively small because the downside risk of undertaking undue risk is largely borne by the bank. On the contrary, if the franchise value of existing banks is eroded, then is worth for bankers to assume risk-taking strategies that depend upon the put option provided by the government guarantee. When banks have the incentive to maximize the value of the government's guarantee the results can be spectacular and produce a banking crisis that may easily involve a fiscal cost of 8 percent of GDP (as in Mexico to date). Deadweight costs of taxation as well as costs associated with bankruptcy proceedings and the interruption of new lending may easily double the direct fiscal cost. Given the large potential cost associated with

government financial guarantees, it is worth keeping track of variables that may signal an environment in which banks have the incentive and opportunity to maximize the value of the government's guarantee.

A substantial rise in real interest rates almost always results in a deterioration of bank balance sheets because of the term transformation done by banks—deposits are short term while bank assets are longer term—and because higher real loan rates may deteriorate firms' finances and ultimately cause an increase in non-performing loans. If the high real rates are only transitory, then healthy banks will not be unduly affected. But if the high real rates persist, there is a danger that banks' net worth will be sufficiently compromised that the banks will find it in their interest to attempt to grow out of their problems with risky loans and investments. To understand why interest rates can be high in a country it is useful to look at two primary interest rate spreads: *the deposit rate spread*, which is the difference between the nominal domestic deposit rate and the sum of the relevant nominal international rate (usually taken to be the three month U.S. treasury bill rate) and the actual change in the exchange rate, and *the loan rate spread* (the difference between the loan rate and the deposit rate). The table below separates the deposit and loan rate spreads into their respective parts and lists the economic explanations for these spreads.

Deposit Rate Spread $i_d - i^* - \Delta e$	Macroeconomic Factors
Expected depreciation	Lack of monetary/exchange rate credibility
Deviations from interest rate parity	Exchange rate risk, imperfect capital mobility, Default risk associated with government debt, Guarantor risk associated with banking system
Loan Rate Spread $i_l - i_d$	Microeconomic Factors
Taxes on Intermediation	Reserve Requirements, Directed Credit Programs
Net Spread	Default risk, industry structure

Note: i_d = deposit rate; i^* = international rate; Δe = change in the exchange rate; i_l = loan rate.

Typically, a high deposit rate spread is accounted for by forecast errors resulting from an overprediction of domestic inflation or expectations of exchange rate depreciation. Furthermore, if the real deposit rate (the nominal rate adjusted by actual inflation) appears low while the deposit rate spread appears high, there will usually have been an appreciation of the real exchange rate combined with expectations of a future discrete depreciation, the so-called "peso problem". The peso problem is important because expectations of future exchange rate depreciation will drive up interest rates even when the government has no intention of making a sharp exchange rate adjustment. Such high rates, if maintained over a long period, will erode firms' and banks' net worth, pushing bankers to behave according to the incentives created by the dark side of the government deposit guarantees. For example, some analysts have argued that fixing the exchange rate signals an implicit government commitment to promote and guarantee the safety of long-term international borrowing at that exchange rate. This implicit guarantee makes the open capital account look inviting to foreign lenders and may encourage overborrowing in dollars when domestic interest rates are high. Remaining factors that raise the deposit rate spread are grouped under the heading of deviations from

interest rate parity and can be caused by exchange rate risk, country risk, or by imperfect capital mobility. In addition, the risk that the government may not stand by its implicit, or even explicit, guarantees to the banking system will increase the differential between the domestic deposit rate and the international rate of interest. For example, if there is a perceived probability that the government will render dollar denominated deposits inconvertible, the interest rate spread on dollar denominated deposits will rise to reflect that probability.

The loan rate spread can be decomposed into two components, the first due to taxes on financial intermediation, and the second, the *net spread*, due to the banking system itself—its structure, its costs, and its information and incentive structure. The net spread reflects the costs of banking. When banks have been sheltered from international competition for many years, net spreads are generally high. Opening the capital account will tend to lower net spreads but may also cause formerly profitable banks to become unprofitable and, therefore, start undertaking risky activities, as noted above.

To summarize, sustained high real deposit rates and loan rates are a strong signal of future trouble because such rates are usually accompanied by a rise in non-performing loans. In an integrated environment, when high real rates and weak bank balance sheets are matched with government guarantees that permit banks to borrow internationally, then the stage is set for a credit boom in which rapid credit expansion both masks underlying portfolio problems and creates the opportunity for high-risk loan strategies. During such a boom—as occurred in Chile in the late 1970s and early 1980s, the U.S. S&L industry in the 1980s, and Mexico in the early 1990s—it is difficult not to get caught up in the euphoria associated with the economic growth that is financed with bank credit. But if the boom reflects the dark side of government banking guarantees, then there will be a fiscal reckoning at the boom's end.

An Illustration of Spreads Analysis

The analysis of interest rate spreads is most useful when dollar deposit rates exist. In that case expected depreciation can be approximated by the difference between the domestic currency interest rate and the dollar deposit rate. Deviations from interest rate parity will then be picked up by the difference between the dollar deposit rate and the 3-month Treasury Bill rate.

The behavior of interest rates in Chile during its transition to democracy in 1989 and 1990 can be used to illustrate the analysis of interest rate spreads. In Chile many of the events of 1989 were centered around the upcoming December election between the candidate approved by the military and an alliance of opposition parties. The alliance won and took power in March 1990. Between March 1989 and February 1990 the nominal deposit rate rose from 12.5 percent to 45 percent on an annualized basis. During the same period the nominal loan rate rose from 19.5 to 57 percent. The rapid rise in interest rates appears to have reflected concerns over inflation as a result of expansionary macroeconomic policies during 1989, as well as uncertainty over the economic policies that would be chosen by the new

government. During most of 1990 interest rates stayed at high levels and did not come down until the beginning of 1991. The deposit rate spread became positive in July 1989 and stayed positive through January 1991, reaching a sustained level of around 20 percent during most of 1990.

During this period, the Central Bank was attempting an uneasy tradeoff between fighting inflation and preventing an appreciation of the real exchange rate. This tradeoff was especially marked at the beginning of 1990 when the Central Bank raised interest rates on its long-term indexed debt from 6.9 to 9.7 percent in order to dampen aggregate expenditure. The high interest rate policy produced an immediate appreciation of the currency (to the bottom of the Central Bank's pre-established exchange rate band) as well as short-term capital inflows which the Central Bank sterilized.

In terms of the spreads, Figure 1 shows the difference between the expected change in the exchange rate (calculated from the peso and dollar deposit rates) and the actual change in the exchange rate on an annualized basis. Figure 1 shows that from July 1989 to January 1991 the expected change in the exchange rate exceeded the actual change, often by 30 percentage points on an annualized basis. During this period market participants were betting that the Central Bank would ultimately reverse its inflation dampening policy and actively depreciate the exchange rate in order to prevent a real appreciation. The expectation proved correct and the exchange rate was allowed to depreciate at the end of 1990. After this episode, the monetary authorities revised their policies in two ways: first, the nominal exchange rate was allowed to appreciate in several discrete steps; and second, a 20 percent unremunerated reserve requirement was imposed on capital inflows in June 1991.

Figure 2 shows the position of the dollar interest rates in Chile relative to the T-Bill rate. It is easy to detect the upward shift in the dollar loan rate relative to the T-Bill rate that took place at the end of 1989. This upward shift was initially sustained by the Central Bank's sterilization policy and then later by the reserve requirement on capital inflows. In terms of the spreads analysis, this is a deviation from interest rate parity that is caused by imperfect capital mobility. Note, however, that the size of this component of the deposit rate spread is very small compared to the difference between the expected and actual exchange rate shown in Figure 1.

The high interest rate policy also affected the loan rate spread. In 1988 the loan rate spread averaged 6.06 percent, while it rose to 8.19 percent in 1989 and 8.56 percent in 1990. This increase in the loan rate spread could have increased the fragility of the banking system had it continued. Following the exchange rate depreciation at the end of 1990 and the change in stabilization policies by the Central Bank, the loan rate spread fell to 6.23 percent in 1991, or approximately its level in 1988.

Figure 1.
Expected and Actual Percentage Changes
in the Exchange Rate

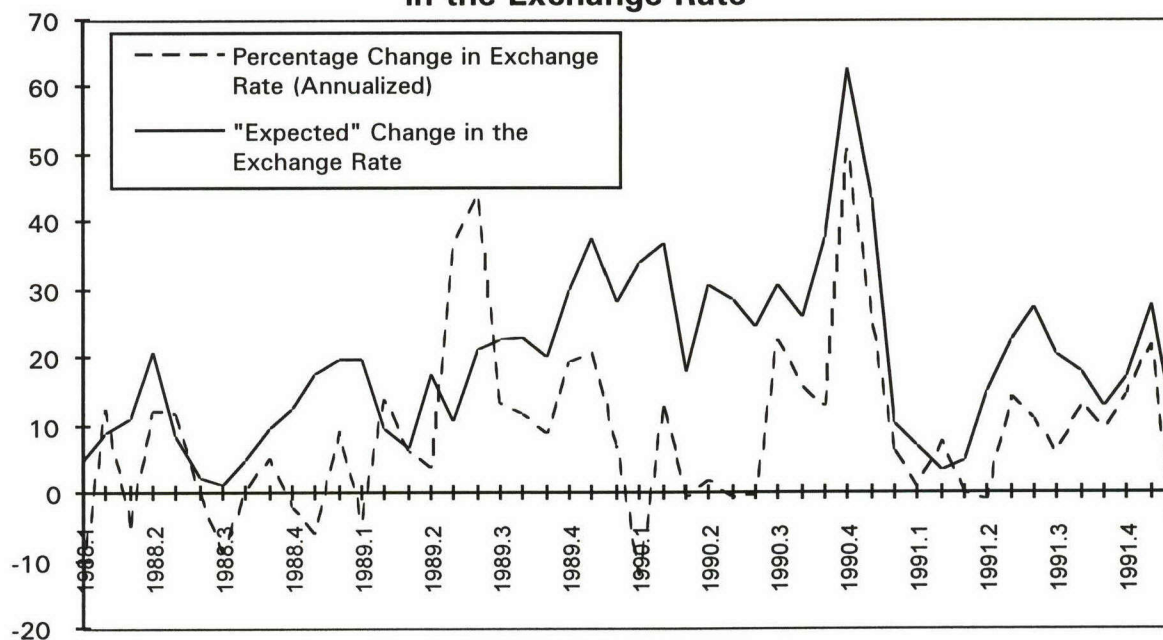
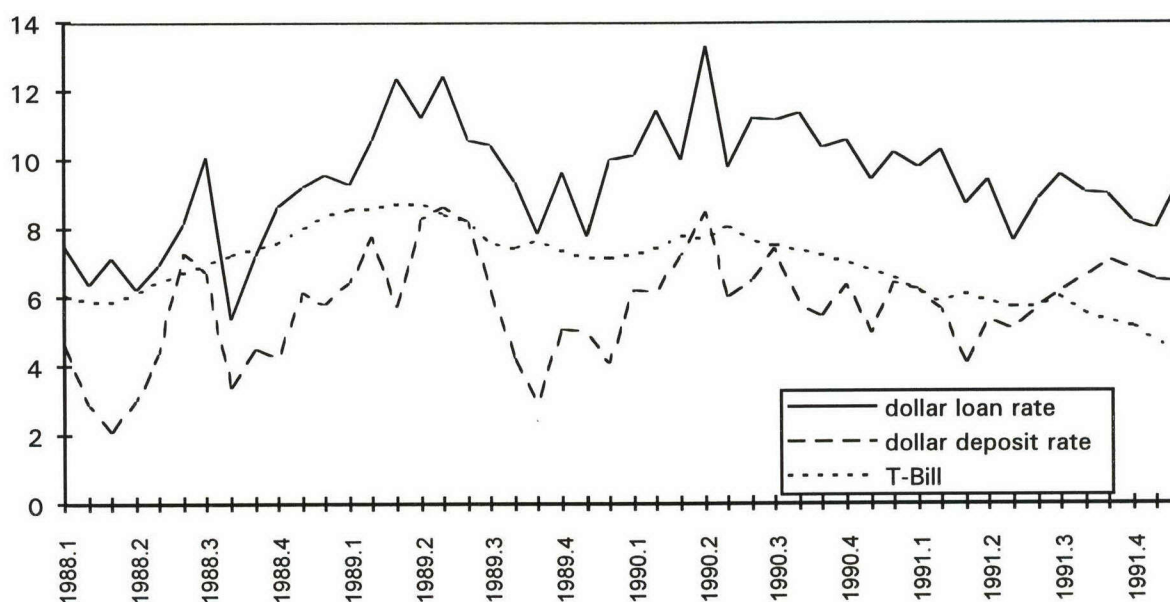


Figure 2.
Dollar Interest Rates and the T-Bill Rate



Annex 3

Risk Adjusted Capital Asset Ratios: The BIS Classification of Risky Assets

In December 1987 the Basle Committee of bank supervisors, operating under the auspices of the Bank for International Settlements, published guideline proposals for the measurement and assessment of the capital adequacy of internationally operating banks. The guidelines were approved in July 1988 by bank supervisors of twelve developed countries comprising the Group of Ten¹ plus Luxembourg and Switzerland. Under the July 1988 agreement, bank supervisors of these nations were obliged to impose a minimum risk-adjusted capital-asset ratio of 8 percent on all banks operating under their jurisdiction by the end of 1992 at the latest. Nonetheless, supervisory authorities in each country were given significant discretion in the interpretation and phasing-in of the new rules.

The main purpose of the new capitalization rules was to put internationally operating banks under similar regulatory conditions to avoid unfair competition from banks affected by a lighter regulatory burden. Nevertheless, the new capital-asset ratio guidelines addressed only *one* particular aspect of banking regulation: capital requirements needed to protect depositors against credit risk. The guidelines derived from the Basle accord dealt only with the identity of banks' debtors, but did not address other sources of risk such as interest rate risk, exchange rate risk, equities risk, or banks' overall portfolio risk—which implies taking into account the correlation between different types of bank assets and liabilities. Furthermore, the new capitalization rules did not advance, in general, in the use of market prices when valuing bank assets and liabilities.²

Although the Basle accords concerned only international banks and despite their limitations, the capitalization guidelines have been voluntarily adopted by an increasing number of countries around the world since enacted in 1987, and have been extended to regulate other financial institutions as well. For example, the European Union adopted rules similar to the Basle Accord affecting all credit institutions in 1989, while in the US the new rules affected bank holding companies and each of its subsidiaries.

The major innovations concerning capital requirements introduced in the Basle accords were: (1) assigning percentages for weighting each asset category according to their credit risk; (2) redefining the composition of a bank's primary capital—for example by excluding the general loan loss reserves from it—and (3) initiating a procedure to equate off-balance sheet items to asset equivalents based on the type of item and the initial contract terms. Off-balance sheet items comprise, for example, standby letters of credit—credit lines—or other bank commitments, swaps, options, future contracts and other contingent assets or liabilities. The

¹ The G10 comprises Belgium, Canada, France, Germany, Italy, Japan, The Netherlands, the UK, the US and Japan.

² An amendment to the 1988 Capital Accord was approved by the Basle Committee in 1995, in which banks capital requirements are adjusted to incorporate market risk as a variable in its calculation. The amendment is to take effect in 1997 (IMF, 1996).

general expression for risk-based capital requirements under the Basle accords is the following: $ACB \geq 0.08 \text{ TOWRA}$, where ACB and TOWRA stand for adjusted capital base and total weighted risk assets, respectively. ACB is the sum of allowable components of primary (Tier 1) and secondary (Tier 2) capital, subject to prescribed limits and deducting certain items. For example, while goodwill is excluded from primary capital, term subordinated debt included in secondary capital cannot exceed 50 percent of primary capital. TOWRA, on the other hand, is the weighted sum of on-balance and off-balance items as shown in the following expression:

$$\text{TOWRA} = \sum_{t=1}^s \sum_{j=1}^t (A_{ij} W_j) + \sum_{i=1}^u \sum_{j=1}^v \sum_{k=1}^w (B_{ijk} X_k W_j)$$

where A_{ij} is the value of the i^{th} asset with risk weigh W_j , and B_{ijk} is the notional principal amount of off-balance sheet activity i with risk weigh W_j and conversion factor X_k . The following table summarizes the main risk categories for on-balance sheet items as recommended in the Basle accord, and the conversion factors for off-balance sheet transactions as applied by the UK, US and Japan.

<i>BIS-recommended risk weight</i>	<i>On-balance asset item³</i>
0%	Cash, gold, loans to or fully guaranteed by OECD central governments and central banks, claims fully collateralized by cash, loans to or fully guaranteed by non-OECD central governments or central banks when denominated and funded in local currency.
Zero or 'low (below 20%)	Holdings of fixed interest securities issued or guaranteed by OECD central governments, and floating rate or index-linked OECD central government securities; claims fully collateralized by OECD central government fixed interest securities and similar floating rate securities; holdings of non-OECD central government securities when denominated and funded in local currency.
20%	Claims on multilateral development banks (or claims fully guaranteed by or fully collateralized by the securities issued by these institutions); claims on credit institutions incorporated in the OECD countries and claims guaranteed or endorsed by OECD-incorporated credit institutions; claims on or guaranteed by non-OECD incorporated credit institutions when with a residual maturity of up to 1 year; claims on or guaranteed by OECD public sector entities (excluding the central government); cash items in the process of collection.
50%	Loans fully secured by mortgage on residential property owned or rented out by the borrower.
100%	Claims on the non-bank private sector; claims on credit institutions incorporated outside the OECD with residual maturity of over 1 year; claims on or guaranteed by non-OECD governments and central banks which are not denominated in local currency and funded locally; claims on public sector enterprises; fixed assets; capital instruments issued by other banks; real estate and trade investment and all other non-specified assets.
<i>Conversion factor applied in the UK, US and Japan (%)</i>	<i>Off-balance sheet transaction³</i>
100	Direct credit substitutes including general guarantees of indebtedness, standby letters of credit, acceptances and endorsements; sale and repurchase agreements and asset sales with recourse where credit risk remains with bank; forward agreements to purchase assets including financial facilities and commitments with certain drawdown.
50	Certain transaction-related contingent items not having the character of direct credit substitutes (performance bonds, bid bonds, warranties and standby letters of credit related to particular transactions); note issuance facilities and revolving underwriting facilities; other commitments (e.g. credit lines) with original maturities of over 1 year.
20	Short-term, self liquidating, trade related contingent items (e.g., documentary credits collateralized by the underlying shipments).
0	Similar commitments with original maturity of up to 1 year or which can be unconditionally cancel at any time; endorsements of bills which have previously been accepted by a bank.

³ Source: Hall, 1993 (Chapter 8).

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Preparing Capital Markets for Financial Integration

One of the characteristics of the current phase of international financial integration, as noted in chapter 1, is that—given the changing investor base—an increasing proportion of flows to developing countries is being channeled through their capital markets in the form of portfolio equity capital. These trends will continue and even intensify over the medium term.¹ These investments represent an important opportunity for developing countries, and have been accompanied by a spectacular increase in activity in the equity markets in these countries. While the improvements in many emerging markets have been remarkable, however, most of these markets are still in the early stages of development, and need to close the gap with the more advanced capital markets to be able to compete in an increasingly integrated world. Emerging markets are also increasingly competing among themselves for new issues and investors. To attract additional portfolio flows, therefore, developing countries need to address investor concerns regarding the attributes of their capital markets that increase transaction costs and risks, especially the reliability and efficiency of the infrastructure and trading systems, and transparency and fairness. By focusing on these concerns, policymakers can also reduce their own fears that financial integration increases volatility in their capital markets and the risk of a financial crisis. This chapter will discuss the implications of financial integration for the functions and efficiency of domestic capital markets, and how policymakers can reconcile their concerns with the concerns of foreign equity of investors.

¹ As explained in chapter 1, portfolio flows are expected to increase because emerging markets are still underweight in the portfolios of industrial country investors, and investments in emerging markets would result in a significant improvement in the return-risk ratio of these investors. In addition, it is expected that an increasing share of savings in industrialized countries will be intermediated by institutional investors, and that these investors will continue to increase the share of emerging market equities in their portfolios.

The Main Issues

Financial integration represents an important opportunity for developing countries.....

Growth in market capitalization and activity. As noted above, in parallel to the surge in portfolio equity flows, the capitalization² of equity markets in many developing countries has been expanding rapidly since the mid 1980s. As shown in table 6.1, by end 1994 the combined market capitalization of 18 major developing countries included in the IFC Emerging Market index was 13 times larger than in 1985, rising from US\$ 95 billion to US\$ 1,245 billion. As a ratio to GDP, the average market capitalization of these countries had increased from 7 to 42 percent of GDP. Emerging equity markets have grown much more rapidly than developed markets in terms market capitalization. While market capitalization in emerging markets is, on average, still much smaller than in developed countries, that difference declined substantially during the past decade. Because of this growth performance, equity markets in some of the more dynamic emerging markets, in particular in East Asia, have gained in importance in domestic financial intermediation relative to banks despite continued growth in bank deposits. For example, in Thailand and Malaysia, the share of equity markets in the stock of financial savings³ increased respectively from 9 percent and 49 percent respectively, at end 1985 to 56 percent and 79 percent at end 1994. In Chile, these shares increased from 32 percent to 80 percent during this time period.

In parallel to the growth in market capitalization, the volume and value of stocks traded has also increased dramatically. The combined annual value of shares traded in the IFC index countries increased from US\$ 37 billion in 1985 to US\$ 792 billion in 1994. Since this simple measure of trading activity is affected by changes in share prices, perhaps a better measure of trading activity is the turnover ratio; that is, the annual value of trades, normalized by market

² Market capitalization is the value of the shares quoted in the market at market prices. It is a measure of the size of a market.

³ Defined as the sum of the stock of deposits in commercial banks and the capitalization of the stock market.

capitalization. This ratio indicates that trading activity in emerging markets roughly doubled between 1985 and 1994, about the same as in developed countries. Combined with the increase in market capitalization, the increase in the volume of shares traded suggests that liquidity has significantly improved in emerging markets.

Table 6.1 Stock Market Growth in Selected IFC Index Countries

	<i>Stock Market Capitalization (\$ billion)</i>		<i>Stock Market Capitalization as a Percentage of GDP</i>		<i>Trading Volume (\$ billion)</i>		<i>Trading Volume as a Percentage of Market Capitalization</i>	
	1985	1994	1985	1994	1985	1994	1985	1994
Emerging Markets								
Argentina	2.0	36.9	2.3	13.1	0.6	11.4	31.0	30.8
Brazil	42.8	189.3	19.2	34.0	21.5	109.5	50.2	57.8
Chile	2.0	68.2	12.2	130.7	0.1	5.3	2.8	7.7
Colombia	0.4	14.0	1.3	20.6	0.0	2.2	7.2	15.6
Hungary	0.0	1.6	0.0	3.9	0.0	0.3	-	16.8
India	14.4	127.5	6.9	44.0	5.0	27.3	34.5	21.4
Indonesia	0.1	47.2	0.1	26.9	0.0	11.8	2.6	25.0
Korea	7.4	191.8	7.8	50.5	4.2	286.1	56.4	149.2
Malaysia	16.2	199.3	52.0	281.6	2.3	126.5	14.4	63.5
Mexico	3.8	130.2	2.1	34.6	2.4	83.0	61.9	63.7
Pakistan	1.4	12.3	4.4	21.6	0.2	3.2	17.2	26.1
Peru	0.8	8.2	4.4	16.3	0.0	3.1	5.0	37.7
Philippines	0.7	55.5	2.2	86.6	0.1	13.9	16.6	25.1
Poland	0.0	3.1	0.0	3.3	0.0	5.1	-	167.9
Sri Lanka	0.4	2.9	6.2	24.6	0.0	0.7	0.8	24.3
Thailand	1.9	131.5	4.8	91.7	0.6	80.2	30.6	61.0
Turkey	-	-	0.0	16.5	0.0	22.0	-	101.7
Venezuela	1.1	4.1	1.8	7.1	0.0	0.9	2.7	22.8
<i>Total</i>	<i>95.3</i>	<i>1,245.1</i>	<i>7.2</i>	<i>42.9</i>	<i>37.0</i>	<i>792.3</i>	<i>38.8</i>	<i>63.6</i>
Developed Markets								
France	79.0	451.3	15.1	33.9	14.7	615.4	18.6	136.4
Germany	183.8	470.5	29.7	23.0	71.6	952.1	38.9	202.3
Japan	978.7	3,719.9	72.9	79.4	330.0	1,121.4	33.7	30.1
United Kingdom	328.0	1,210.2	70.8	118.2	68.4	928.2	20.9	76.7
United States	2,324.6	5,067.0	55.6	73.1	997.2	3,564.3	42.9	70.3
<i>Total</i>	<i>3,894.1</i>	<i>10,919.0</i>	<i>54.6</i>	<i>68.2</i>	<i>1,481.8</i>	<i>7,181.4</i>	<i>38.1</i>	<i>65.8</i>

Note: End-of-year stock market capitalization figures.

Sources: IFC, *Emerging Stock Markets Factbook*, 1991 and 1996.

The contribution of foreign investors. Foreign investors have made a significant contribution to these improvements. While the data are not fully reliable, table 6.2 shows that

the share of foreign investors in trading volume and market capitalization was very large in most major emerging markets in 1995. Since meaningful foreign involvement in these markets is recent, in many cases starting only in the early 1990s, these data indicate that the increasing foreign activity played an important role in the recent improvement in depth and liquidity in emerging markets. One of the few countries for which time series data on foreign activity are available is Thailand. In 1986, the year preceding the surge in capital inflows, foreign investors accounted for 8 percent of the trading turnover in Thailand. By 1990, they accounted for 15 percent of turnover in the Thai stock market, and after declining during 1991-92, they increased again to 26 percent by 1995 and about 32 percent during the last quarter of 1996.

Table 6.2 Estimates of Foreign Presence in Emerging Stock Markets, 1995

<i>Market</i>	<i>Foreign Share in Total Market Capitalization</i>	<i>Estimate by:</i>	<i>Foreign Share in Trading</i>	<i>Estimate by:</i>
Argentina	35%	National Securities Commission	-	
Brazil	-		35%	Stock Exchange
India	-		25%	Local brokers
Indonesia	-		75%	Local brokers
	29%	Stock Exchange	81%	Stock Exchange
Korea	13%	Securities and Exchange Commission	6%	Securities and Exchange Commission
Malaysia	-		50%	Local brokers
Mexico	25%	Stock Exchange	-	
Pakistan	-		50%	Local brokers
Peru	-		60%	Local brokers
Philippines	38%	Local brokers	50%	Local brokers
Poland	-		25%	Stock Exchange
Thailand	21%	Stock Exchange	26%	Stock Exchange

Notes:

a. Most figures represent rough estimates of foreign participation, since few countries document flows

b. Estimates are sensitive to timeframe and market circumstances, particularly estimates of foreign share in trading

Source: IFC.

Increasing access to foreign markets. Increasing financial integration has also enabled developing country corporations and banks to directly access equity and bond markets in developed countries. Many developing country firms have been able to cross-list in the world's major equity markets through global and American depository receipts (GDRs and ADRs, respectively). The growth in these instruments has been very rapid: at end 1995 there

were some 228 ADRs and GDRs issued by firms from 26 developing countries with an original market value of about US\$ 34 billion. On the debt side, since 1990, both corporations and banks have been able to issue paper in international markets, as well as in the American, Japanese and some European markets. In addition to large sovereign issues, the amount of capital raised by the private sector from developing countries through international issues of debt during 1989-95 amounted to some US\$ _ billion. The number of countries whose issuers were able to access international markets through these instruments also increased.

.....but integration also brings challenges for reforming the markets.....

Increasing competition. However, financial integration has also brought challenges for integrating capital markets. The flip side of direct access by domestic issuers to foreign capital markets is that domestic markets are competing with developed country exchanges for listings and new issues. As noted above, the growth in these alternative means of channeling funds to developing countries has been enormous. By mid-1995, ADRs and GDRs represented 6 percent of the underlying market capitalization of the IFC Emerging Market Investible index at end-1995. And as can be seen from table 6.3, this average 6 percent ratio hides a large variation between countries, with some having surprisingly high ratios. In some of these cases, the success of ADRs and GDRs is explained in part by the weaknesses of developing country capital markets. Foreign investors may prefer to take a position in an emerging market through depository receipts rather than directly if transaction costs and delays in the market in question are high. For example, market participants report that the weaknesses in the clearance, settlement, and depository systems of the Indian stock markets may explain, at least in part, the interest by foreign investors in Indian GDRs. As can be seen from table 6.3, the value of outstanding Indian depository receipts relative to the value of shares that foreign investors can acquire (i.e., the market capitalization of the IFC Investible Index) is among the highest among the 20 countries included in table 6.3. With regard to China, foreign investors report concerns regarding the quality of disclosure and corporate

governance practices of Chinese firms. Since depository receipts need to meet the regulatory standards of developed country markets (which in turn depend to whom and in what market is the security issued), they are preferred by foreign investors. In Argentina, the domestic market is perceived as very illiquid and has also been losing volume to developed country markets. For example, in 1995 the volume traded in New York of ADRs of Yacimientos Petroliferos Fiscales, a recently privatized oil company, was 25 times higher than the volume traded on the Buenos Aires market. In other cases, for instance, Chile and Korea, the domestic market has been more restricted to foreign investors, and the high depository receipts/market capitalization ratio is an indicator of repressed demand for equity by foreigners.

Table 6.3 Issues of ADRs and GDRs, 1989-95 (millions of US\$)

	<i>Total Issues (a) (b)</i>		<i>Corr. Issues/Market Cap (c)</i>	
	<i>Uncorrected</i>	<i>Corrected</i>	<i>wrt General</i>	<i>wrt Investible</i>
Argentina	4204	3898	10.3%	17.7%
Brazil	1286	1281	0.9%	2.0%
Chile	1538	1996	2.7%	17.8%
China	1717	1466	6.0%	77.3%
Colombia	329	277	3.3%	3.4%
Czech Republic	32	32	0.3%	0.7%
Hungary	362	330	41.5%	75.9%
India	3859	2650	2.1%	19.6%
Indonesia	2162	2267	3.4%	11.5%
Korea	3102	3175	1.7%	18.6%
Mexico	10567	6698	7.4%	12.1%
Pakistan	1143	771	8.3%	15.9%
Peru	51	56	0.5%	0.8%
Philippines	1015	1295	2.2%	7.6%
Poland	51	51	1.1%	2.6%
South Africa	477	498	0.3%	0.3%
Sri Lanka	33	20	1.0%	2.6%
Thailand	358	314	0.2%	1.1%
Turkey	540	435	2.1%	3.2%
Venezuela	187	86	2.3%	3.6%
<i>Total</i>	<i>33013</i>	<i>27596</i>	<i>2.3%</i>	<i>6.1%</i>

Notes:

a. Excluding some US\$ 700 million issued by firms from six countries not included in the IFC indices.

b. Corrected for changes in stock prices between date of issue and end-1995 using the IFCG index.

c. Market capitalization as measured by the IFCG and IFCI indices, respectively.

Sources: IFC: Emerging Stock Markets Factbook, 1996. World Bank: Debt Reporting System.

Addressing investor concerns. To compete in an increasingly integrated world, developing countries need to make their markets more attractive to foreign investors. As explained in Box 6.1, investors are concerned about the unreliability of emerging markets in these areas: market infrastructure that results in delays in settlement and failed trades; lack of protection for property rights, including those of minority shareholders; and lack of transparency and fairness of markets because of insufficient disclosure of accurate information that would allow assessing the merits of alternative investments, as well as insider trading and other abusive practices. In addition, despite recent progress, emerging markets remain significantly less liquid than capital markets in industrial countries. In an illiquid market, investors fear they will not be able to liquidate their interests quickly without incurring a substantial loss. The gap between emerging and developed markets, while closing, is still large, and thus still impacts negatively on investor interest.

Box 6.1 Investors' Viewpoint—Risks and Transaction Costs in Emerging Markets

The higher returns that can be earned by capital in developing countries is the fundamental force driving investor interest in these countries. However, the stylized attributes of emerging markets (shallow, illiquid, and opaque markets; high transaction costs; and weak regulatory frameworks) and the underlying developing economy (larger and more frequent macro shocks; new and undercapitalized firms) suggest that risks are also high. Both domestic and foreign investors in developing countries are subject to very large nonmarket risks; i.e., risks not directly related to the underlying investment.

Nonmarket Risks. These nonmarket risks mainly regard the lack of **reliability** in four basic areas.

- Investors require a reliable system to settle transactions either cash or securities, to reduce principal risk and the opportunity cost of a delay.
- Investors demand reliable systems that record ownership, ensure safe custody of securities, and protect property rights. Investors require that securities truly represent a claim on a future income stream, claims that can be enforced, if necessary, by law. Related to this is protection against abuse by management or majority shareholders, which could reduce the value of the investment.
- Investors also want reliable systems that ensure that they pay or receive a fair price for a security, and most importantly, that ensure disclosure of material information to evaluate investment choices.
- Investors desire liquidity to be able to liquidate securities or change the composition of their portfolios without incurring high costs. Liquidity, to a large extent, is an endogenous variable, that is, the result of capital markets having the right attributes to be able to attract large numbers of buyers and sellers. Liquidity needs to be nurtured; it cannot be bought or created by decree.

Settlement and Operational Risks and Costs. Capital market infrastructure in many emerging markets is still in a nascent stage and investors are subject to high settlement risks, both of operational nature and

continue....

counterparty risks. Risks that a party will default on payment or delivery obligations are large, and failed trades or long delays in settlement are widespread. The long delays reduce liquidity and increase market risk. For example, a Templeton fund bought shares in India that subsequently rose by 150 percent. The fund was not able to make good on the potential profit because by the time the original transaction was settled and the fund could sell, the stock price had declined back to its original level. Failed trades expose investors to counterparty risks if the settlement system does not ensure that shares are only delivered versus payment (DVP- i.e., that the final delivery of securities will take place if and only if final payment is made). Most emerging market do not conform to DVP. Failed trades may also have systemic consequences for a securities market, since they may produce a chain reaction of failures. Investors also desire reliability in post-settlement actions. Among the most important is the timely payment of dividends to reduce opportunity costs and market risk, for example of an unfavorable change in the exchange rate.

Legal and Custodial Risks and Costs. A key risk faced by investors in emerging markets is that securities purchases may not be recorded in the legal registry, so investors have no way to prove ownership. If the omission is deliberate, recourse to the courts may be costly and lengthy, with an uncertain outcome if property rights are not well defined. Bias by the judiciary, real or perceived, against foreign interests or the lack of well functioning arbitration and legal systems would further increase uncertainty. These risks are especially prevalent in transition economies where the concept of private property, let alone legal protection for it, is very recent. For example, Dmitry Vasilev, chairman of Russia's Federal Stock Commission, commented in May 1996: "Current legislation does not defend shareholders. Confidence in the stock market has been bruised by secret company meetings at which share registers have been altered and new issues voted on...". Even if securities are registered, it may be only with a lengthy delay, with a loss of dividends and other shareholder rights. Operational risks such as loss of shares or counterfeit securities are another concern. There have been instances of counterfeit securities in India, Indonesia, Malaysia and Turkey. A most recent scandal involved Russia's Minfin bonds. To improve the reliability of post-settlement actions and reduce some of the custodial risks, foreign investors rely heavily on global custodians or their agents in emerging markets.

In addition, investors have concerns with regard to their rights as minority shareholders. In developed markets, decisions that would significantly affect the value of the firm, and practices such as dealings with insiders, need to be submitted to a vote by shareholders. The fear is that such protections in developing country firms may be lacking or not effectively enforced, especially since many such firms are closely held and managed directly by majority shareholders. This concern is shared widely among the investor community.

Information and the Regulatory Framework. Lack of quality information on firms, combined with high asset price volatility, are another prime concern for investors. One reason why the information base is lacking in emerging markets is weaknesses in accounting and auditing systems. Numerous World Bank reviews of accounting systems in developing countries show weaknesses in accounting standards, as well as the lack of sufficient qualified accountants and auditors. More to the point, the regulatory systems in many of these markets are weak in terms of quality, quantity, and frequency of information disclosure. Foreign investors and fund managers feel particularly exposed, believing domestic investors to be better informed. Another concern, which is also related to protection of minority shareholder rights, is insider trading. For example, the International Organization of Securities Commissions (IOSCO - 1992) reports that only 54 percent of their developing country members require reporting of transactions made by insiders in the securities of their company. Even in the more advanced emerging markets such as Thailand, insider trading is perceived to be a problem that is difficult to combat despite strong monitoring and enforcement powers of the Thai Securities Commission.

Sources: Authors' interviews with fund managers and advisors.

Gray (1996).

Mobius (1995).

Seeger (1996).

The Concerns of developing countries. On their part, developing countries also have a number of concerns about growing international integration. Perhaps most important, policymakers in these countries fear that financial integration may increase volatility in their capital markets. As discussed in chapter 1, financial integration makes developing countries more susceptible to external shocks. In addition, foreign investors may add to excess volatility⁴ in asset prices in emerging markets through herding behavior or pure contagion effects. Policymakers are also concerned about the increasing vulnerability to a financial crises as foreign investors become more important in both trading activity and market capitalization. In particular, they fear that foreign investors, because of herding, fads or momentum trading, may increase the likelihood or magnitude of market bubbles, with securities prices rising way above the underlying fundamentals followed by a inevitable market crash.

Developing country policymakers are also concerned about the equity and political implications of increasing foreign ownership of domestic firms. Some officials perceive foreign portfolio investors as fair weather friends, interested in benefiting from large short-term capital gains and dividends but contributing little to the long-run health of domestic firms and the development of the economy, and selling at the first hint of trouble. Perhaps more importantly, there is a perception in many developing countries that foreign and domestic investors and financial firms are not competing on a level playing field. Under these circumstances, foreign investors, because of their wealth, will be able to buy a large share of the equity of domestic firms, to the detriment of long-term national income.

Finally, increasing integration and globalization are raising new issues for capital market regulators in developing countries. For example, integration increases systemic risk, since the failure of a financial intermediary overseas could have an impact on domestic markets. In addition, with globalization, potential gaps in the responsibilities of regulators in different countries may reduce the effectiveness of monitoring and supervision. And two

⁴ That is, as defined in chapter 1, volatility in flows or asset prices not due to changes in fundamentals.

parallel global trends, the development of derivative products and financial conglomerates, are making financial markets even more opaque. The Barings affair is a good example of these new problems: a securities subsidiary of a United Kingdom bank located in Singapore was taking positions in the Nikkei futures index. Who was responsible for monitoring what and where?

Financial Integration and the Policy Agenda

In summary, the new private capital flows represent an important opportunity for developing countries not only to benefit from increased investment, but also to deepen and improve the liquidity of their capital markets. However, this potential will only be realized if developing countries put in place the institutional and policy prerequisites to attract capital inflows, while reducing the risks of potential instability. To this end, developing countries face three main tasks:

- Capital markets must be made more attractive to foreign investors, especially equity markets given the expected composition of capital flows. While investors are attracted by the potential for rapid growth to result in high returns, they are discouraged by operating inefficiencies and lack of reliability of market institutions and infrastructure, and by regulatory frameworks that increase transaction costs and reduce transparency.
- Developing countries need to implement policy reforms and strengthen institutions to reduce the risks of instability. As explained below, improvements that increase the attractiveness of emerging markets for foreign investors also serve to reduce volatility and risks.
- Authorities in developing countries also need to deal with the new regulatory concerns resulting from globalization. These concerns are shared by industrialized countries, and their resolution will be greatly facilitated by international initiatives.

Organization of the chapter. These issues are developed in the remainder of the chapter. Following this introduction, the second section discusses whether financial integration facilitates the role of capital markets in savings mobilization and investment. It also reviews how integration might exacerbate inefficiencies in domestic capital markets as a result of information asymmetries and price volatility. Sections three and four review in some detail the reforms and improvements required for emerging capital markets to operate and develop in an increasingly integrated world, that is, that enhance the attractiveness of domestic capital markets to foreign investors and reduce potential volatility, and address regulatory concerns regarding globalization. The third section will focus on market infrastructure (that is, microstructures, clearance, settlement, and depository systems), and the fifth on the regulatory and legal frameworks. Each of these sections will discuss alternative institutional and policy options in their respective areas, and establish, to the extent possible, best practice, as well as the constraints typically encountered in implementing these reforms. A key question that will arise with regard to the regulatory and legal frameworks is the role of the state to facilitate the transition process in capital market as financial integration deepens. Each of these two sections will also describe the progress of the more dynamic emerging markets in achieving the desired institutional and regulatory attributes. Finally, the last section will be a summary and conclusions.

Capital Markets and Financial Integration

Capital markets in a market economy fulfill three functions:

- First, they serve as a source of long-term capital for financing investment.
- Second, capital markets expand the menu of financial instruments available to domestic savers, allowing diversification and encouraging resource mobilization.
- Finally, capital, in particular, equity, markets continuously monitor the corporate sector, serving both as a signaling device for the allocation of capital and as a means of corporate control, hence promoting managerial and organizational efficiency. However, informational asymmetries, including principal/agent

problems in the area of corporate control,⁵ as well as price volatility, may impede equity markets from correctly fulfilling their monitoring and signaling functions.

The basic questions we will address in this section are whether and how financial integration facilitates the first and third functions and/or exacerbates the risks of volatility and instability. The impact of financial integration on diversification and resource mobilization was discussed in Chapter 2.

Capital Markets as a Source of Investment Finance

Well-functioning capital markets help increase investment by affecting both the supply of and demand for capital in several ways. First, capital markets are a cost-efficient way to attracting savings from a large group of small savers, reducing the cost of capital through economies of scale. Second, stock markets have two risk sharing/diversification properties that allow investors and firms to undertake riskier investments: (i) equity financing reduces the vulnerability of firms to interest rate and demand shocks; and (ii) capital markets also enables investors to reduce risk in their portfolios through diversification, hence promoting the financing of riskier but higher return investments. Finally, capital markets, like banks, perform a term transformation function. Many investments require a long time span to generate returns, while investors generally wish to commit funds for a shorter period. With liquid and active secondary capital markets, both requirements can be met simultaneously,

⁵ The principal/agent problem to which we refer is the result of information asymmetries between management and the shareholders of a corporation. Shareholders, who may not have easy access to all material financial and operational information regarding the firm, are concerned whether managers are operating to maximize shareholder value. However, to acquire such information, shareholders will incur a cost. The higher the cost, the more will potential investors be deterred from buying shares in the firm, leading to a suboptimal level of investment. Institutional factors and regulations will affect the problem; for example, it may not be worthwhile for a small shareholder to incur the search cost since better monitoring will mostly benefit other shareholders. In addition, small shareholders may not be able to effectively organize themselves to contest management. On the other hand, improvements in corporate governance would help shareholders to monitor management. Bloemenstein and Spencer (1993) review this issue in the context of transition economies, where the principal/agent problem is particularly severe.

since investors feel assured that they will have access to their funds quickly and without paying an excessive price.

The Benefits of financial integration. Financial integration enhances this role of capital markets. Most directly, integration increases the supply of investment resources by tapping foreign sources. The increased demand will bid up the price of domestic securities, increasing the price-earnings ratio and reducing the cost of capital. More indirectly, internationally integrated stock markets allow wider risk diversification and thereby facilitate the implementation of higher return but riskier projects.⁶ Finally, as noted above, increased foreign activity increases the depth and liquidity of domestic capital markets, a key ingredient for these markets to perform their term transformation process. The fact that an increasing share of foreign investment is accounted for by institutional investors could magnify the positive impact on liquidity. There is strong empirical evidence from the United States that institutional investors are very active traders.⁷ With improved liquidity in domestic markets, the cost of capital will decline as investors demand a lower yield to reflect their improving ability to sell securities at declining costs. These favorable impacts of financial integration should lead to changes in the behavior of domestic agents. Intuitively, the declining cost of capital and the enhanced risk diversification should induce the corporate sector to issue initial public offerings (IPOs) and additional shares, including in emerging sectors. Infrastructure investment is perhaps a case in point. In addition, as liquidity in domestic capital markets improves, additional domestic investors will be attracted to these markets.

The empirical evidence. The data support the hypothesis that financial integration enhances the role of capital markets as a source of investment finance. Figure 6.1 illustrates how stock market capitalization and turnover in countries that have received the most portfolio equity inflows have increased more than in countries receiving lower levels of flows. The figure correlates, for a group of selected emerging stock markets, aggregate portfolio equity

⁶ Levine and Zervos (1996) make the same point.

⁷ Samuel (1996) summarizes the empirical work in this area.

inflows during their respective inflow episodes (as defined in Chapter 4) to the change during the inflow period in market capitalization and trading value, all as a ratio to GDP. The data also suggest that there has been significant spillovers on domestic activity. This can be seen in table 6.3 by comparing the ratio of trading value to GDP in the year immediately preceding the inflow episode⁸ with the value of trading activity in the last year of the episode, adjusted for the proportion accounted for by foreign investors and normalized by GDP.⁹ Table 6.3 also shows that the number of new listings on the stock exchanges rose during the inflow period in 10 out of the 13 countries compared to the period of equal length immediately preceding the inflow period. Most convincing, figure 6.2 shows that those countries that received the most portfolio equity flows were also those that saw the largest increase in the value of domestic trading as a ratio to GDP during the inflow period.¹⁰

All this increase in activity in emerging markets has real and positive implications for investment and growth prospects in developing countries. First, while conventional wisdom based on developed country data suggests that capital markets are not a large source of investment financing,¹¹ there is increasing evidence that their role is becoming much more important in developing countries. For example, based on data on the 100 largest corporations listed on the stock market in ten developing countries during the 1980s, Singh (1994) finds that these corporations relied strongly on external sources for financing, and in particular on equity markets (41 percent of total financing on average).¹² In addition, there is growing empirical

⁸ Making the conservative assumption that all trading activity in that year was of domestic origin.

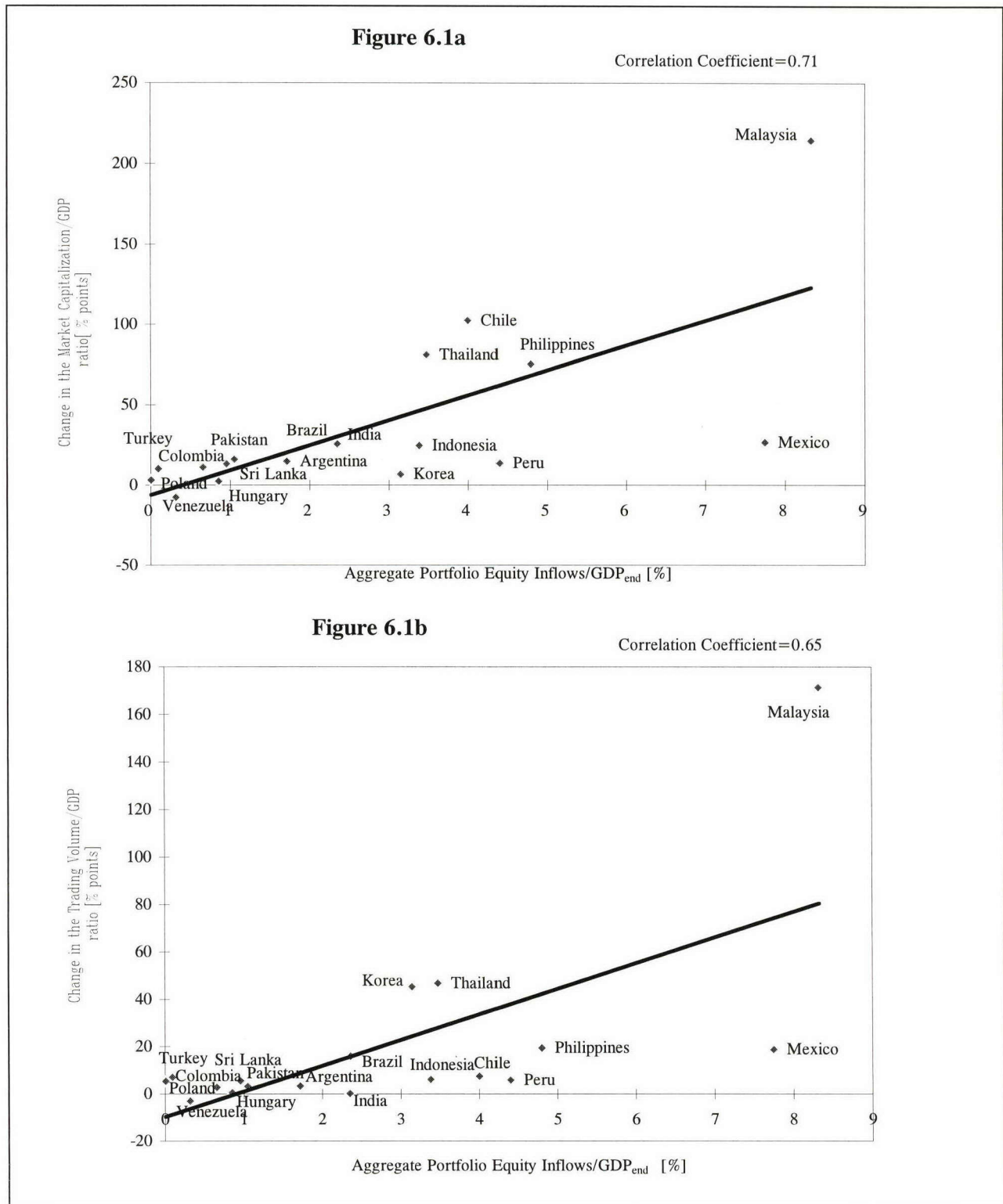
⁹ We assume that the proportion of trading activity accounted for by foreign investors during the last year of the inflow episode was that shown in table 6.2, which actually refers to 1995. It is unclear to what extent and in what direction this assumption distorts the results. However, for countries for which time series data are available, (for example, Thailand), the share of foreign investors in trading was lower in 1994 than in 1995. This suggests that domestic trading was larger than shown in the table.

¹⁰ This simple analysis of the data says little about the direction of causality between portfolio equity flows and increases in domestic activity in the stock markets. Both could be the result of an independent third event, or more likely, both could be endogenous to a simultaneous system, interacting with each other and with third factors, including policy changes.

¹¹ For example, see Mayer (1989).

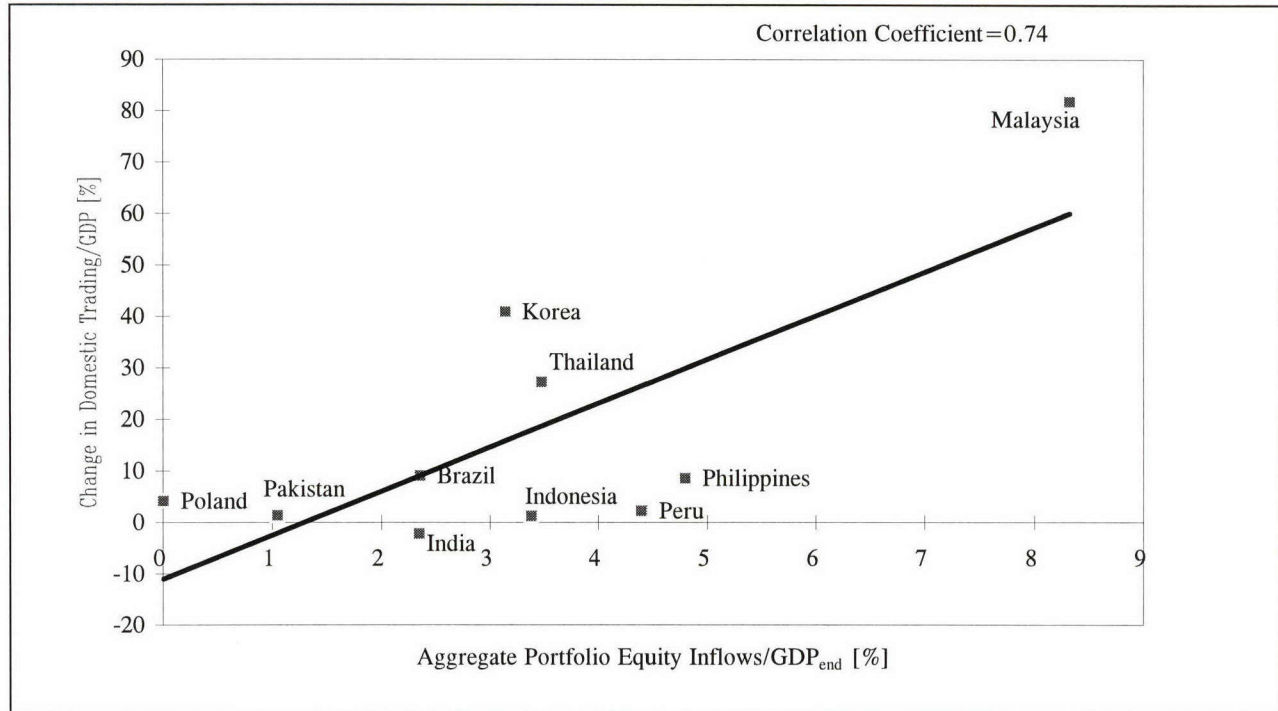
¹² Demirguc-Kunt and Maksimovic (1994) and Glen and Pinto (1994) present additional evidence. Samuel (1995) found that Indian firms use external sources of finance more than their counterparts in developed countries due to higher reliance on debt.

Figure 6.1 Portfolio Equity and Capital Markets Development



Note: Aggregate portfolio equity inflows/GDP_{end} is equal to the sum of portfolio equity inflows during the inflow episode divided by the GDP of the last year of the episode. The market capitalization and trade data refer to the IFC composite general index.

Source: IFC, Emerging Stock Markets Factbook, 1996. World Bank Debt Reporting System.

Figure 6.2 Growth in Domestic Trading in Selected Emerging Equity Markets

Note: Aggregate portfolio equity inflows/GDP_{end} is equal to the sum of portfolio equity inflows during the inflow episode divided by the GDP of the last year of the episode. The trade data refer to the IFC Composite General Index.

Source: IFC, Emerging Stock Markets Factbook, 1996. World Bank Debt Reporting System.

Table 6.3 Change in Domestic Activity in Emerging Equity Markets

	<i>(Domestic Trading Activity)/GDP,^a</i>		<i>New Listings</i>	
	<i>percentage</i>			
	<i>Pre-episode^b</i>	<i>End Episode^c</i>	<i>Pre-episode Phase^d</i>	<i>During Episode</i>
Argentina	0.60	-	-27	1
Brazil	3.74	12.79	70	-48
Chile	2.53	-	-7	74
India	9.33	7.06	-3285	4444
Indonesia	0.53	1.68	33	159
Korea	29.94	70.83	314	30
Malaysia	7.56	89.36	44	240
Mexico	3.34	-	-3	3
Pakistan	0.49	1.78	78	213
Peru	0.31	2.46	117	-76
Philippines	2.31	10.88	-59	48
Poland	0.04	4.13	9	35
Thailand	9.17	36.36	48	264

Notes:

a. Based on shares of value traded accounted for by foreign investors for 1995, as detailed in Table 6.2.

Share estimates are not available for some countries (-).

b. Pre-episode refers to the year preceding the beginning of the inflow episode, as detailed in Chapter 4.

c. End Episode refers to the last year of the episode, as detailed in Chapter 4.

d. Number of newly listed companies during the period of equal length preceding the inflow episode for each country.

Sources: IFC, Emerging Stock Markets Factbook, 1990, 1991, 1996 issues. Staff estimates.

and theoretical support for the idea that development of the stock market has positive implications for economic growth. Most recently, Levine and Zervos (1996) find a strong positive empirical association between stock market development and long-run per capita GDP growth.¹³

Foreign Investment and Corporate Governance

Equity markets increase investment efficiency by serving as a mechanism for corporate control. Basically, shareholders can exercise their rights to change the management of the firm if they perceive that management is not following policies in their best interest. In addition, firms that are under performing will have low share prices relative to their underlying value, and hence are more vulnerable to takeovers.¹⁴ However, the academic literature is divided on how well the market for corporate governance works. For example, shareholders may not be able to monitor management without incurring high costs because of information asymmetries. The incentives for individual (unless they are large) shareholders to incur these monitoring costs may be perverse because of the free rider problem. Institutional problems, such as organizational difficulties involved in small shareholders collectively monitoring the management of a firm, may exacerbate these impediments.

Corporate governance and institutional investors. Another issue widely discussed in the literature is whether the principal agent problem improves or worsens as the proportion of a firm's market capitalization accounted for by institutional investors increases.¹⁵ Some authors believe that institutional investors, with their strong professional background, will be able to monitor corporate performance effectively. On the other hand, the incentives of

¹³ Their findings are based on pooled cross-section (41 countries) time series (1976-93) regressions, controlling for the more traditional macroeconomic and human capital variables that past studies have found to be significant in explaining growth. Atje and Javanovic (1993) reach similar conclusions. Levine and Demirgüç-Kunt (1996) also find a strong positive relationship between stock market liquidity and growth.

¹⁴ There are wide disagreements in the literature regarding the causes and consequences of takeovers. In any case, takeovers are not common in developing countries.

¹⁵ See Samuel (1996).

institutional investors to monitor management behavior may not be strong because of excessive short-term profit maximizing (institutional investors turn over their portfolios quickly) and regulation.¹⁶ The evidence based on US data of the 1980s and early 1990s is that there is no discernible effect of institutional ownership on corporate performance. However, according to Samuel (1996) there is evidence that the monitoring activities of institutional owners may be functioning as a substitute for the disciplinary role traditionally played by the providers of debt financing. Most important, shareholder activism by institutional investors has recently increased sharply, forcing key firms in the United States to improve their structures for corporate governance. Some of these experiences have been pathbreaking, in particular the influence of the California Public Employees Retirement System during the board shakeup at General Motors.

Foreign investment and corporate governance. This discussion is very relevant for emerging markets. It suggests that increasing foreign participation in domestic stock markets in developing countries would have both negative and positive implications for corporate governance. On the negative side, overseas investors, because of lack of familiarity with local conditions, would seem likely to suffer from information asymmetries. In addition, the incentives for foreign, especially institutional, investors to participate actively in corporate governance functions may not be strong. Foreign investors may be more interested in liquidity (if unhappy with performance, they sell) than in control. On the other hand, as discussed in Chapter 1, the nature and objectives of foreign investment change as emerging markets mature. During the period in which foreign investors follow an index-based approach, they take little interest in the underlying companies. But as they become more selective and pick stocks more carefully, foreign investors may take a more active role in corporate governance. In addition, to attract increased foreign funds, and as foreign practices are adopted by domestic shareholders, financial integration may lead domestic companies to improve corporate governance. This demonstration effect may prove to be quite important in the medium-term as suggested by the experience of India's largest development/investment

¹⁶ For example, prudential regulations that limit excessive concentration of the portfolio in an individual firm.

bank described in box 6.2. Investor practice and regulations in both source and destination countries will have a bearing on the role that foreign investors may play in corporate governance. For example, in the US certain institutional investors invest only in firms with independent board members. With regard to developing countries, key emerging market such as Brazil, Indonesia, Mexico, and Thailand impose ceilings on foreign ownership of a firm with regard to both total foreign participation and shares owned by individual investors.

Box 6.2 Corporate Governance in India

Foreign portfolio investment has led to radical changes in corporate governance at the Industrial Credit and Investment Corporation of India (ICICI), India's largest development/investment bank. While foreigner portfolio investors in developing countries are not generally considered demanding, and tend to vote with their feet rather than at the Board, ICICI's experience probably presages the future. Indeed, the changes that are taking place at ICICI parallel those of a growing number of corporates in developed countries.

ICICI's ongoing experiment with corporate governance started with the issue of several GDRs in the early 1990s that led to a change in the ownership structure of the company. Today, ICICI still has over half-million shareholders, but some 34 percent of the shares are now held by foreigners, especially large institutional investors, and 41 percent by large domestic institutions, including the Central Government. Foreign investors were critical of the company's activities in several areas, including sub-standard IPOs, diversion of funds into non-project areas, poor accountability and transparency, preferential allotment of shares to promoters, and more generally, little concern by management for shareholder value. Voicing these concerns at the Board, foreign investors were joined by the large domestic institutional investors in having management accept sea changes in corporate governance. In turn, ICICI has pushed for similar changes in its many client companies. Recognizing their value, the Government has been a passive but favorable spectator to these changes.

Based on the Cadbury Committee's recommendations in the UK, the main reforms implemented at ICICI regard the role and composition of the Board. The reforms have created a more balanced and responsible Board, with greater participation by the independent external directors. They have also increased the independence of the Board by having a distinct Chairman, separate from the Chief Executive Officer. To further increase the sense of responsibility towards shareholders, Directors now have a fiduciary responsibility. Complementing these reforms at the Board, the risk management and internal audit departments have been strengthened and made more independent, and the impact on shareholder value is being used as a key performance indicator for middle management.

Some developing countries are uneasy about the presence of foreign investors in the Boards of their largest firms. But if developing country governments wish to encourage long-term investors with buy and hold strategies, they must be prepared to accept that these investors will demand increased transparency and shareholder control to ensure the value of their investment. Based on the Indian experience, foreign representation on the Board has had significant and positive impact on corporate governance, which may prove to be one of the more important and long-lasting contributions of foreign investment to emerging markets.

Source: K.V. Kamath (1996).

Integration, Capital Market Efficiency, and Volatility

If capital markets, in particular equity markets, are to function as a signaling device for the allocation of capital, information markets need to work efficiently in order for asset prices to reflect all material information. Obvious impediments to efficiency would be lack of information, delays in its dissemination, information asymmetries among market participants, and a weak analytical capacity by market participants. Some authors,¹⁷ however, argue that the potential to make a profit in the stock market on the basis of new information will promote research by market participants. This self-correcting mechanism seems to work best in active and liquid markets, where the potential for profit is higher. Volatility in asset prices is another impediment to efficiency. Market participants may not be able to distinguish whether changes in equity prices are due to noise or to new material information on fundamentals such as dividends or interest rates.¹⁸ Another source of volatility and inefficiency are speculative bubbles, which Stiglitz (1990) defines as asset prices departing from values justified by fundamentals because of expectations of future additional price increases. Volatility and lack of information may feed on each other. Without information, investors are less likely to make bets against the market, which could exacerbate price movements.

Intuitively, financial integration has both positive and negative implications for the price discovery process in domestic capital markets. On the positive side, foreign investment increases depth and liquidity in domestic capital markets, thereby reducing volatility. Shallow markets are more prone to volatility since small trades have a disproportionate effect on prices. Second, increasing foreign participation in domestic capital markets may induce improvements in accounting, information, and reporting systems, as well as increase the analytical sophistication of the domestic securities industry. There is strong anecdotal evidence that this spillover effect of financial integration has been quite important in some

¹⁷ For example, Kyle (1994).

¹⁸ For example, Summers (1986) found evidence of such inefficiencies due to volatility in developed country markets.

developing countries. These two benefits of financial integration should interact and reinforce each other: improved liquidity and profit making opportunities should lead to increased research and better information systems, which in turn would provoke additional investor interest and activity.

Asset price volatility and financial integration. However, other factors suggest that financial integration may lead to an increase in the volatility of domestic asset prices and returns. This is because, with financial openness, domestic capital markets are exposed to new financial sources of external shocks (or these shocks may be transmitted more quickly across borders), in particular, changes in global interest rates, spillover effects from foreign stock markets, and investor herding. As discussed in chapter 2, some of these external shocks, for example changes in global interest rates and certain stock market spillover effects, increase the volatility of asset prices and returns by affecting the fundamentals of an emerging market. But in the other cases, e.g., investor herding and pure contagion effects, these shocks may change investment in a country although the country's fundamentals are unaffected. The latter is many times the result of foreign portfolio investors having little access to information, worsening information asymmetries. Perversely, the improvements in liquidity noted above may make emerging markets more susceptible to external financial shocks since better liquidity reduces transaction costs and facilitates opening and liquidating positions by foreign investors. Given the high share of foreign investors in the major emerging markets, these potential external sources of volatility are important.

Information asymmetries may also increase volatility through interaction effects between domestic and foreign investors. First, a defensive reaction by local investors to changes in the behavior of foreign investors may magnify the impact of foreign stock market spillover effects on the domestic market. Since local investors generally do not know why foreign investors are changing their holdings of domestic securities, they may react to such changes even though the fundamentals of the market in question have not changed. Similarly,

information asymmetries could result in foreign investors magnifying the impact of the behavior of domestic agents.

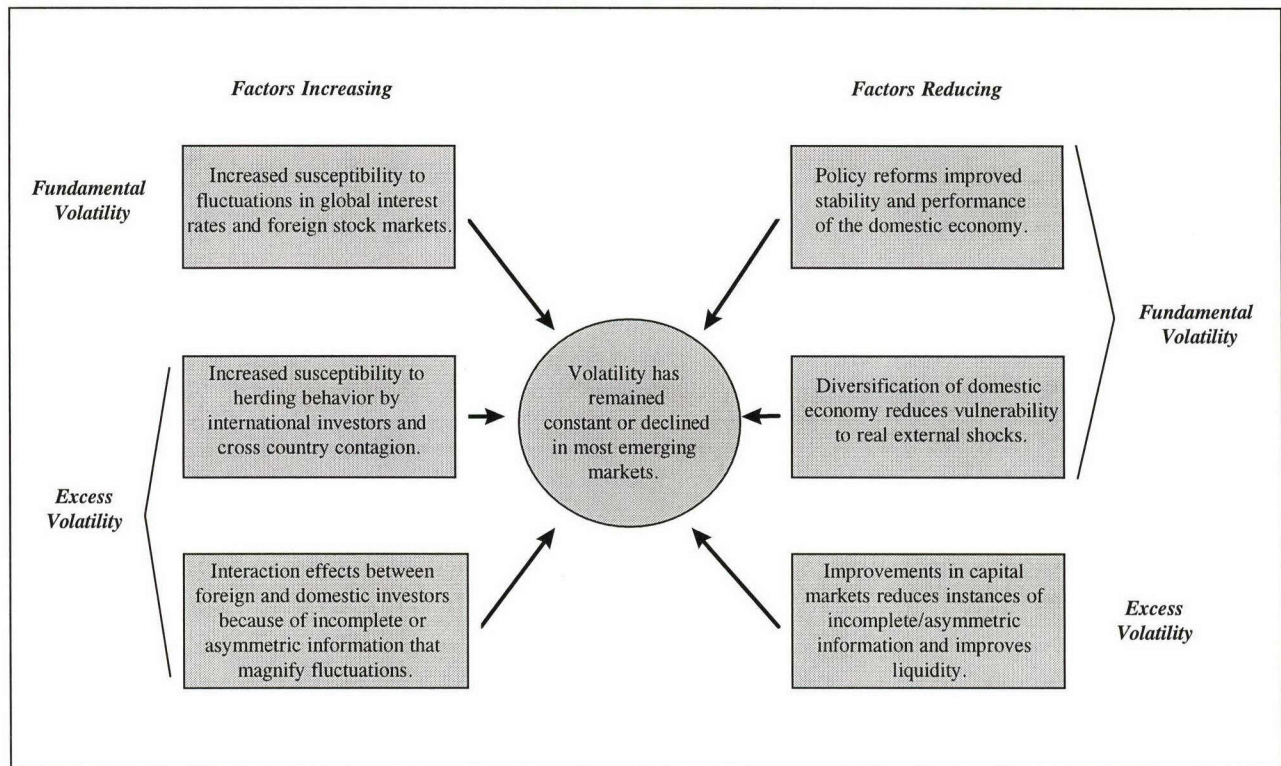
What does the empirical evidence say? Most recent empirical studies have concluded that asset price volatility in emerging markets is generally higher than in developed countries, but that volatility has not increased during the current inflow period.¹⁹ For example, Richards (1996) found no evidence to support the hypothesis that volatility in emerging markets has increased in recent years concurrently with the boom in portfolio inflows. Indeed, his results suggest a decline in absolute volatility. Folkerts-Landau and Ito (1995) also found that absolute volatility of stock market returns has not increased during periods of high and volatile portfolio inflows in Korea, Thailand, and Mexico. Bekaert and Harvey (1995) observe that the volatility of returns remains unchanged or declines in 13 out of their sample of 17 countries after capital market liberalization.

How can these relatively benign empirical results be reconciled with the theoretical prediction that volatility may increase? A possible explanation is as follows. As shown in figure 6.3, volatility may originate from both domestic and international sources, as well as result from changes in country fundamentals or market inefficiencies. Although emerging markets became more susceptible to external financial shocks during the 1990s as they opened their economies, they were also undertaking policy reform programs that improved domestic fundamentals and increased the stability of their economic policies. These economic reform programs also led to the diversification of their economies, reducing vulnerability to traditional external shocks such as changes in terms of trade. In addition, many developing countries during this period also improved their capital markets, reducing excess volatility arising from information asymmetries and other capital market imperfections, including foreign investor herding and pure contagion that as noted above may be caused by incomplete/asymmetric information. All these effects have reduced fundamental volatility from traditional sources,

¹⁹ Levine and Demirjüç-Kunt (1996), which found that external liberalization increased asset price volatility, is an exception.

and may have moderated the impact on volatility of the new sources of external shocks. Indeed, chapter 2 concluded that although there is evidence of herding behavior by foreign investors, it is not robust enough to warrant the commonly held view that foreign investors destabilize emerging markets. With regard to foreign stock market spillover effects not related to fundamentals, chapter 2 also concluded that these contagion effects exist but appear to be relatively short lived. In this regard, the largest corrections in developing country stock markets, for example, Mexico in 1994 and Thailand in 1996, have not resulted from external shocks, but from shifts in the perceptions of domestic and foreign investors regarding domestic fundamentals.

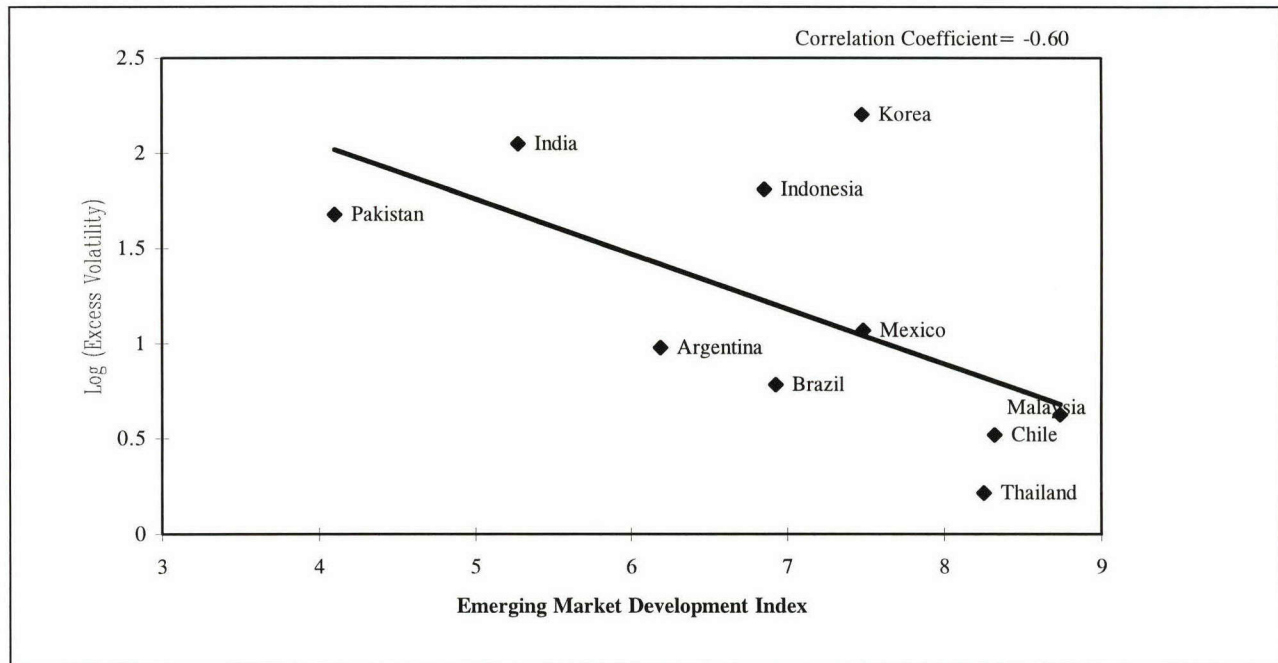
Figure 6.3 Factors Affecting Volatility of Asset Prices in Emerging Markets in the 1990s.



The reduction in volatility resulting from the improvements in capital markets has probably been quite significant. Figure 6.3 relates excess volatility with an index of market development and suggests that market development is strongly associated with lower volatility, although the direction of causation can run both ways. Later below, we will explain in detail

how the index was constructed. For the moment, it suffices to know that the index takes into account the depth and liquidity of a market, the efficiency of its infrastructure and some additional variables that measure by proxy institutional development.

Figure 6.3 Excess Volatility and Market Development



Source: World Bank staff estimates.

Conclusions

Two basic conclusions can be drawn from this section.

- First, liberalizing foreign access to domestic capital markets can bring substantial benefits to developing countries. Liberalization will enable countries to tap into large overseas pools of capital. In addition, foreign portfolio investment increases depth and liquidity. Increasing price-earning ratios and liquidity reduces the cost of capital for domestic firms. Moreover, foreign participation may have important spillover effects on emerging markets through improved accounting and disclosure practices and human capital. To realize these

potential benefits, however, developing countries need to reduce transaction costs and take other measures to increase the attractiveness of their markets.

- Second, asset prices in developing countries are more volatile than in developed markets, and financial integration may potentially increase volatility even further. Volatility and lack of information interact with each other, and together constitute a major impediment to the price discovery process in emerging markets. Information asymmetries will also increase the agency cost for foreign investors. Volatility tends to decline in emerging markets as these markets become less prone to fundamental shocks through improved economic policies and diversification. However, excess volatility resulting from information asymmetries and deficiencies will have to be tackled through reforms and improvements in the attributes of the capital markets themselves.

Improving Market Infrastructure

Market Infrastructure - What is it and why does it matter?

What is market infrastructure? By infrastructure, we refer to the systems and institutions that facilitate the basic functions of capital markets, i.e., the trade and custody of securities. These basic functions can be subdivided into matching buyers and sellers, determining price, the exchange of the security for good funds, the register of the securities to the new owners, and the collection of dividends and other custody functions.²⁰

A good way to understand the main components of market infrastructure is to follow the main steps in a market transaction. A transaction begins with the instructions of a buyer and seller to their respective brokers to buy or sell a security. Then market infrastructure kicks in, when the market microstructures (i.e., the trading system) match buyers to sellers

²⁰ It is not uncommon in the literature to include the legal framework, accounting standards, and rating institutions as part of market infrastructure. The legal system and accounting standards are discussed in this study jointly with the regulatory framework to which they are closely related.

and facilitate the price discovery process. Trade comparison refers to confirming the trade details with the two counterparties before any further processing takes place. The clearance system determines what the counterparties are to deliver and receive at settlement. Then comes settlement, when the transaction is completed and the securities and funds change hands. The depository provides for safekeeping of securities, but more importantly can facilitate the settlement process and other aspects of custody such as reregistration and payment of interest/dividends. Box 6.3 illustrates the main components of market infrastructure using the example of Thailand.

Why does it matter? During the 1990s, the exchanges, governments, and the industry in emerging and developed markets have emphasized the development of capital market infrastructure. The earliest concerns of foreign investors in emerging markets were about market infrastructure. When the infrastructure systems work well, as they usually do in developed markets, the trading flow and custody seem painless. But in many developing countries, inefficient infrastructures were often unable to handle the rapidly expanding volume of cross-border portfolio flows, in particular equity flows. The unreliability of market infrastructure lead to delays and failed settlements, to the loss of principal because shares were not registered to the new foreign owners, and difficulties in collecting dividends. Since these problems were discouraging many investors from their markets, the authorities in developing countries made improving infrastructure one of their top priorities. In developed markets, the importance of these functions became apparent with the settlement problems that arose during the 1987 stock market crash.

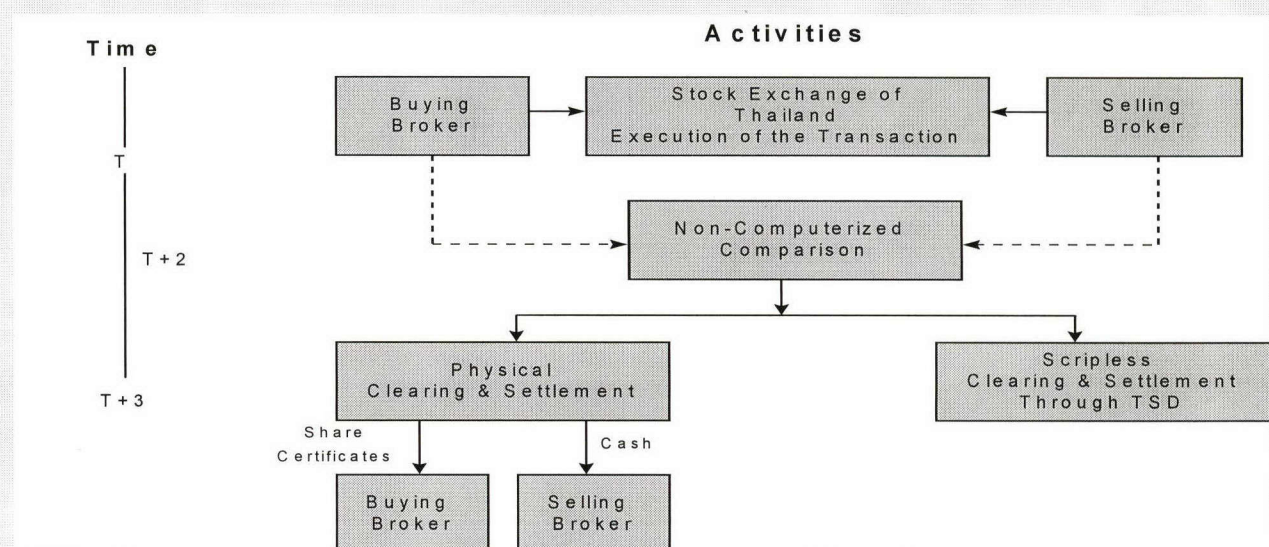
Improving market infrastructure is not only a means to attract potential investors and issuers, but also to reduce systemic risk. The major sources of systemic risk in capital markets are volume and volatility surges, the default of a major market player, and operational breakdowns. Financial intermediaries are often in weak financial conditions in emerging markets, to which integration adds increasing volumes and the potential for increased volatility. A well designed infrastructure will not only reduce the risk of operational

breakdowns, but can also make a significant contribution in reducing the potential systemic impact of the other sources of risk.

Box 6.3 Clearance, Settlement, and Depository Functions in Thailand

Thailand's clearance and settlement system (C&S) is a good example of the basic mechanisms often used to clear and settle transactions in securities markets. Some aspects of Thailand's C&S are quite advanced, but others, in particular in trade matching, need further improvement to match regional and international competitors. The concepts used in this box are explained in detail in the main text.

The C&S of transactions on the Stock Exchange of Thailand (SET) are handled by a subsidiary of SET - the Thailand Securities Depository Co., Ltd (TSD). TSD also functions as the depository for equities listed on SET. The chart describes the main steps in process.



- Trade instructions are received, and executed by the brokers at time T.
- On T+2 days, matching is completed via telephone among market participants.
- C&S takes place on the afternoon of T+3. Although the system is presented as delivery versus payment (DVP), payments are made by check and these take one day for clearing.
- C&S in Thailand is the responsibility of the central depository - TSD. This arrangement simplifies C&S since the estimate of what is owed by each counterparty and the transfer of shares from the seller to the buyer can be done within the same institution.
- With regard to the depository function, since September 1992, the securities market in Thailand is moving towards a dematerialized environment, and stocks are transferred directly between accounts of the members of the depository, instead of physical delivery of share certificates. Investors can also ask for physical delivery of shares if required. In the case of physical settlement, the selling client must deliver the share certificates no later than 1400 on T+3.
- There are no fixed C&S practices for bonds and other securities not traded on the SET.

Source: Citi Bank Country Profiles.
Bank of New York Country Profile.
ISSA (1996).

This section will focus on four aspects of market infrastructure that have been the focus of foreign investor concerns in emerging markets: the trade, comparison, clearance and settlement (C&S), and depository systems. The design of these systems, especially the latter three, is also critical for reducing systemic risk.

International norms. Given increasing cross border flows and the efforts by many developing countries to improve their infrastructures, a central issue during the 1990s was to establish best practice and harmonize systems across countries. The landmark effort in this area was the Group of 30 (G-30) initiative in 1989 that established what was to become best practice in trading and settlement for some 6 years.²¹ Many developing and developed countries, as well as international industry associations such as the International Federation of Stock Exchanges (FIBV in French) and the International Organization of Securities Commissions (IOSCO), adopted the G-30 recommendations.²² In 1995, the International practice in trading and settlement for some 6 years.²³ Many developing and developed countries, as well as international industry associations such as the International Federation of Stock Exchanges (FIBV in French) and the International Organization of Securities Commissions (IOSCO), adopted the G-30 recommendations.²⁴ In 1995, the International Society of Securities Administrators (ISSA) organized a series of workshops to update the G-30 recommendations, taking into account changing technological capabilities and evolving views in the industry.²⁵ Annex 6.1 lists the original recommendations and the suggested ISSA revisions to which we will turn to when best practice is described below.

²¹ See G-30 (1989).

²² For example, see IOSCO (1992).

²³ See G-30 (1989).

²⁴ For example, see IOSCO (1992).

²⁵ See ISSA (1995).

Market Microstructures

Functions and characteristics of trading systems. A good trading system should reduce transaction costs, ease the price discovery process by facilitating the incorporation of information into the price of securities, reduce volatility and increase liquidity. However, there is no best system, but rather each system seems to work best in attaining one or two of these four market attributes, sometimes at the cost of the others.²⁶ Whether a particular trading system should be adopted depends on the circumstances of the market and the objectives that are being sought. Because of this, some equity markets have two or more trading systems, depending on the characteristics of the stock being traded or the investor. Annex 6.2 describes the main typology of trading systems and the basic tradeoffs between them.

The Impact of financial integration. Financial integration does not change these basic tradeoffs and affects the choice of the system only indirectly in four ways. First, the trading system should be able to cope with the surge in activity that accompanies financial integration. Second, foreign investors may add their (powerful) voice to those of domestic market participants who are concerned about transparency of the market, most likely, small investors and the regulatory authorities. This concern for transparency reflects a perception that they are less informed than domestic participants and are more likely to be hurt by abusive practices such as front running and insider trading. And third, foreign investors are also likely to undertake large trades relative to the size of many emerging markets and prefer systems that add most to liquidity and immediacy to be able to conduct transactions rapidly and at a lower cost. Given these two preferences, market authorities face a dilemma since those systems that maximize transparency are not those that most enhance liquidity and immediacy. And fourth, given the premium placed by foreign investors on efficient market infrastructure, market microstructures should facilitate other aspects of market infrastructure, in particular trade comparison and C&S.

²⁶ Glenn (1994) reviews how microstructures influence these market attributes.

Trade Comparison

A comparison system facilitates the comparison of trade details between the counterparties, and if the details do not match, the trade is not allowed to settle. The comparison system, by facilitating C&S, as well as being a prime source of information about market transactions, is a basic building block for a well-functioning capital market.²⁷ The key match criteria are trade date, security traded, face value or number of shares, and price and currency.²⁸ To accelerate the settlement flow, a good matching system should be quick. The G-30 recommendations indicated that trade matches between direct market participants should be accomplished by trade date plus 1 (T+1). ISSA has revised the norm to T+0, that is, on the same day of the trade. However, a good system also needs to be accurate to avoid failed trades at settlement. For some emerging markets, it may be more cost effective to compare trades at T+1 or even later to ensure accuracy. The ratio of compared to unmatched trades and the speed with which unmatched trades are resolved are good indicators of the quality of the matching system.

The other key norms and practices for trade comparison are:

- a centralized system by which the two counterparties submit information on the match criteria to a central party who does a two-sided comparison. The system is usually operated by the exchange or a central clearing agency that integrates matching with the C&S systems, enhancing efficiency through standardization and computerization. Computers are cost efficient for all but the smallest markets, allowing quick and accurate matching of many trades and criteria.

²⁷ There are no significant differences between matching systems for fixed income and equity instruments, except some differences on the match criteria.

²⁸ Others could include counterparty and clearing broker, buy/sell instructions, settlement date, etc.

- locked-in trades (trades compared at execution) are the norm in markets using a computerized system for trade execution. Locked-in trade systems are especially efficient in markets with many retail investors.
- an efficient one-sided system for large (institutional) investors that are not members of the two-side system, that is, members of an exchange or clearing agency. In these cases, the broker or custodian acts as intermediary and requests confirmation of trade details from the investor. However, large investors are increasingly using the central system or a electronic confirmation system. Both ISSA and the G-30 recommend that all indirect market participants should be members of a trade comparison system that achieves positive affirmation of trade details by T+1.

Clearance and Settlement Systems

Desirable characteristics of C&S - the investors' perspective. From the point of view of market participants, these systems should facilitate settlement by:

- reducing counterparty risks²⁹ by ensuring DVP³⁰, preferably with same day funds.³¹ A central depository (see below) linked with a payments systems would facilitate achieving DVP. This link can be achieved if all systems are located within the same institution and transfers are simultaneous, or if the systems are linked. In the latter case, assets would be deposited provisionally in the buyer's account pending receipt of funds through the payments system. ISSA has recently defined more precisely what are the desirable characteristics of a DVP system.³²

²⁹ The risk that a counterparty cannot make good on his promise to deliver money, when due, or deliver the purchased securities.

³⁰ DVP is the most effective yet simple way of reducing counterparty risk, whether involving physical or dematerialized securities, or for transactions that are settled through a central C&S system or directly between buyer and seller.

³¹ Same day funds means that funds are available the same day they are deposited.

³² Stehm (1996) and BIS (1992) discuss these concerns in some detail.

- reducing operational risk/problems (lost transactions, bad record-keeping, computer/power problems) that disrupt the C&S process. The settlement time-frame adopted by a market will affect operational and market risks. Some markets employ an account day cycle by which all trades for a given period are scheduled to settle on a given day. Other markets use rolling settlement, by which trades are scheduled for settlement a certain number of days after execution. Rolling settlement has the advantage of effectively limiting the number of outstanding clearances and reducing the time between trade and settlement dates. In addition, the clearing system should have back-up systems capable of completing the daily processing the next day after a failure, and good data security. Both G-30 and ISSA recommend rolling settlement at T+3.
- minimizing the movement of money and securities, thereby reducing transaction costs. This is usually achieved by instituting netting between market participants for both securities and cash, rather than relying on a trade-for-trade system that independently clears and settles each individual trade. Netting can be daily bilateral or multilateral, or continuous net settlement (CNS) in which open positions at the end of a day are offset against the next day's trade until settlement. A multilateral netting system requires a central C&S entity that acts as a guarantor of all trades, taking on the post-netting counterparty risk. In other words, a member's net obligations to deliver securities or funds are to the central agency and not to the original counterparty. A key point is that these systems require a legal framework that accepts and enforces net obligations transferred to a third party.

There may be a difficult trade-off between reducing transaction costs through netting and counterparty risks. In a trade-for-trade gross settlement system, exposure to each party can be tracked, but the system can be prone to breakdown as volume increases, and cash requirements and cost are large. While the recent development of communication and computer technology has made gross settlement feasible in the more sophisticated markets, netting could bring significant savings for markets with growing or already high volumes, and

with high settlement costs and trade fail rates.³³ According to Stehm (1996), multilateral netting reduces volume and value of settlements by 70 to 98 percent, depending on trading patterns. However, multilateral netting increases uncertainty since the final counterparty is unknown, which has a chilling effect on the market. Even with trade-for-trade settlement, the market may suffer from similar uncertainties if market participants are unable to evaluate each others financial position because of lack of information. A central clearing agency that acts as a guarantor may reduce the uncertainty faced by individual participants but may increase systemic risk.

Desirable characteristics of C&S - the overall market's perspective. From the point of view of the authorities responsible for market development and regulation, and the market as a whole, C&S systems should not only address investor concerns, but also reduce systemic risk.

Risk reduction for a central clearing agency is a key design issue since it concentrates settlement risks, especially if it acts as a guarantor of all transactions. In the latter system, the incentives for market participants to evaluate prudently counterparty risk are weak since the central agency is guaranteeing the transaction. One form of risk reduction is to set stringent standards for membership in the central clearing agency. However, there is a potential tradeoff with achieving economies of scale and with promoting broad participation and competition within the market. In addition, in many emerging markets, given limited information and weak disclosure standards, the clearing agency may only have a limited ability to develop a comprehensive picture of its members. Other forms of risk reduction are net debit caps that limit the net exposure of the clearing agency to each participant and require collateral for some types of exposure. In both cases, for these procedures to be effective in containing risk, the clearing agency must develop a risk control system that marks to market

³³ High trade fail rates are not only the result of inefficiencies in the C&S system, but also, for instance, by undercapitalized or inefficient broker/dealers.

and monitors, in real time, the exposure of its members.³⁴ More importantly, the clearing agency should design its procedures so that participants themselves have more of an incentive to manage and contain the risks they bear. For example, loss sharing rules among participants in the event of a default could be set with a view to increasing the incentives for participants to assess counterparty risk prudently.³⁵ In addition, loss sharing rules should clearly define the potential liabilities of the central agency and participants to reduce uncertainty during periods of market stress. Finally, as a last defense, the central clearing agency should have quick access to sufficient liquidity, and be adequately capitalized.

Reflecting the increasing concern with systemic risk, international norms in this area have been modified since the G-30 issued its recommendations. While the G-30 encouraged the adoption of netting in a high-volume market to enhance market efficiencies and to reduce counterparty risk, ISSA stresses reducing overall settlement risk. ISSA recommends real time gross settlement or a netting system that fully meets the “Lamfalussy Recommendations”³⁶ for multilateral netting systems. In particular, the netting system should be capable of completing daily settlement in the event of the default of the largest single net-debit position. Its procedures should also encourage participants to monitor and contain their own credit exposure.

The Depository

Central depository systems have four main functions. They:

³⁴ Effective risk monitoring would also require the central clearing agency to correctly (re)value the collateral, including the credit standing of the issuer of the collateral, and any legal impediments on it.

³⁵ BIS (1990) and Stehm (1996), for example, suggest allocating losses to the surviving participants pro-rata with their level of activity with the defaulting participant. Since individual participants may have the same problems as the clearing agency in evaluating the financial strength of the counterparty, the proposed measure may reduce market activity.

³⁶ See BIS (1990).

- maintain facilities for the deposit, withdrawal and safekeeping of securities. A registry maintains a record of who owns the shares while the depository maintains records of ownership for market participants. Good coordination between the two is essential, in particular in maintaining records regarding the securities held in the nominee name of the depository.
- facilitate achieving settlement on a DVP basis. The basic function is the delivery or book entry transfer of securities against simultaneous payment between members (in accordance with members instructions or resulting from a netting system), and an institutional delivery system that allows brokers /dealers to deliver securities to indirect market participants.
- simplify post-settlement actions such as registration, payment of interest and dividends and other corporate actions.
- maintain links with depositories in other markets. However, Stehm (1996) reports that these linkages are too complex and costly and have not really developed.

Physical transfer vs. book entry. A key distinguishing characteristic among depository systems is whether settlement involves the physical transfer of securities.³⁷ Book entry refers to the process of settlement without physical movement of securities. It requires that securities be either immobilized or dematerialized, and transfer of property takes place as a book (computer) entry only. Immobilization means that physical certificates/documents are stored and lodged at the depository, which then needs to keep segregated accounts to allocate its members' holdings. Immobilization can result in large savings for the industry as a whole. This is especially true when securities are fungible and the depository can act as a nominee for the beneficial owners. De-materialization, when no physical securities are issued, can reduce costs further by eliminating the costs of custody of physical securities and of maintaining records of ownership on a segregated certificate basis. In both cases, legal constraints and adverse investor reaction can be a barrier. In addition, both immobilization and dematerialization will be difficult to implement if there are large numbers of certificates from many issuers.

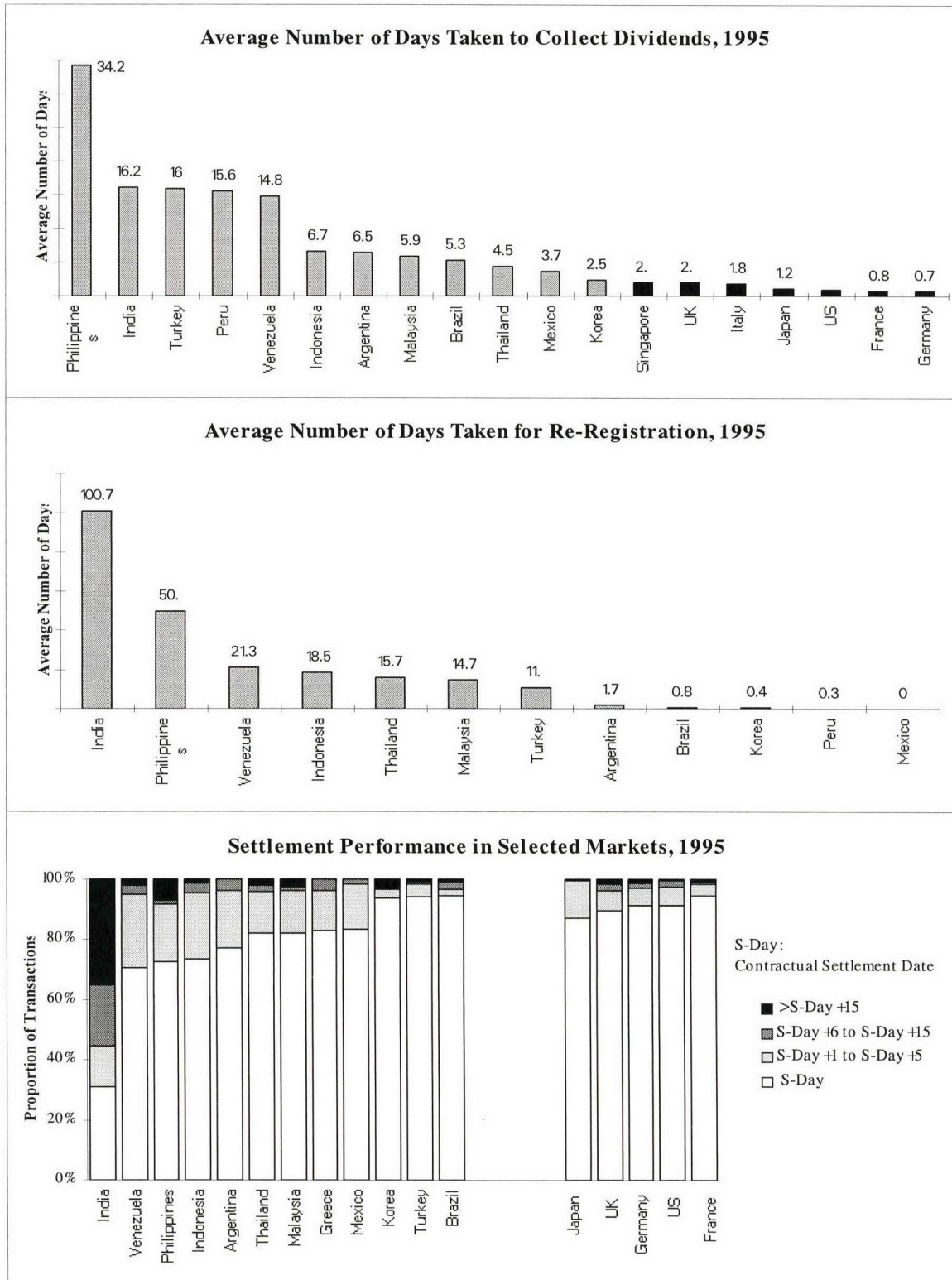
³⁷ Other important differences between systems regard whether there is more than one depository and ownership.

The Experience in Emerging Markets

Summary and conclusions. There are five key conclusions that can be drawn from the experience in emerging markets in the area of market infrastructure. First, market infrastructure in most emerging markets still compares unfavorably with mature markets. Second, however, infrastructure standards in the more dynamic emerging markets in East-Asia and Latin America are approaching international norms and many of these markets meet many if not most of the G30/ISSA standards. Efforts to upgrade infrastructure are ongoing in almost all markets and the situation is rapidly evolving. Third, progress has been weakest in adopting those standards that are designed to reduce counterparty and systemic risk, in particular, achieving DVP. Fourth, many emerging markets, in particular in Asia, have adopted computerized trading systems to enhance market transparency, despite that these are not the best suited to increase liquidity. And fifth, as described in box 6.3, East-Asia has the made the most progress in market infrastructure in recent years, becoming perhaps the region with the best market infrastructure.

The Gap between emerging and mature markets. There is still a gap between emerging and mature markets such as the United States. Figure 6.5 compares for a selected group of developing and industrial countries in 1995 the reliability of settlement and the efficiency in collecting dividends and reregistering securities, two key custody functions. In all three areas, industrial countries are reported to be more efficient -- by a factor of ten to one regarding the average number of days to collect dividends, twenty to one regarding the average number of days to register, and between two to three to one regarding trades that settle with a delay. The range of performance of emerging markets is also wide. For some countries, for example, India, the gap with industrial markets is very striking: for example, the proportion of trades that settle after the contractual settlement date is about 75 percent, compared to 10 percent or less in most industrial country markets. Other markets, such as Korea and Mexico, have a performance close to or even better than industrial markets.

Figure 6.5 Infrastructure Efficiency in Emerging



Note: In most of developed markets re-registration is immediate.

Source: Global Securities Consulting Services Ltd.

Meeting the G-30 recommendations. Emerging markets are meeting many of the G-30 standards as shown in Table 6.5. Developing countries, in particular in Asia as described below, are upgrading their infrastructure very quickly, trying to keep up with rapidly growing trading volumes and meeting international standards, by leapfrogging to state-of-the-art systems. For instance, twelve out of the 16 markets included in the table have a central depository, and the remaining four, India, Indonesia, Pakistan and the Philippines are all scheduled to have one in less than six months. These improvements in market infrastructure are remarkable. Some five years ago, most developing markets would have been just beginning to improve their market infrastructure and central depositories were considered pipe dreams by many market analysts.

Table 6.5 suggests that shortening the settlement cycle through more efficient comparison systems, netting and central depositories, and trying to achieve the G-30 recommended benchmark of T+3, has been the one key focus of all this effort. Many of the countries that do not meet the T+3 objective settle at T+4 (e.g., Indonesia and the Philippines), or T+5 (Malaysia and Sri Lanka). But this emphasis on speed may not be fully justified. Within certain limits, foreign investors do not necessarily demand G-30 speed standards, but rather reliability: they prefer a system that may only be able to settle in five days, but that is a predictable process with no undue backlogs and failed trades. Malaysia, one of the more successful emerging markets, makes this point very well: although only settling at T+5, figure 6.5 suggests that it is has one of the more reliable settlement systems.

One area where least progress has been achieved is in achieving DVP in the settlement process. With central depositories, the delivery side of the equation is working generally well. However, it is on the payment side that the system seems to fail, perhaps because of weaknesses in the domestic banking system and in the payment system.

Table 6.5 Conformance to the Group of 30 Recommendations

	<i>Trade Comparison System (T+1)</i>		<i>Central Depositories</i>	<i>Trade Netting</i>	<i>Delivery vs Payment</i>	<i>Same Day Funds Payment</i>	<i>T+3 Rolling Settlement</i>	<i>Securities Lending</i>
	<i>Direct Participants</i>	<i>Indirect Participants</i>						
Argentina	Yes	No	Yes	No	No	Yes	Yes	Yes
Brazil	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Chile	No	No	Yes	No	Yes	No	Yes	No
China	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
India	Yes	No	No	Yes	No	No	No	No
Indonesia	No	No	No	Yes	Yes	No	No	No
Korea	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Malaysia	No	No	Yes	Yes	No	Yes	No	Yes
Mexico	Yes	No	Yes	Yes*	Yes*	Yes	Yes	No
Pakistan	No	Yes	No	NA	Yes	Yes	No	No
Philippines	No	No	No	No	No	No	No	No
Poland	No	No	Yes	Yes	No	No	Yes	No
Russia	No	No	Yes	No	No	No	No	No
Sri Lanka	Yes	No	Yes	Yes	No	No	No	No
Thailand	Yes	No	Yes	Yes	Yes	No	Yes	No
Turkey	Yes	No	Yes	Yes	Yes	Yes	No	No

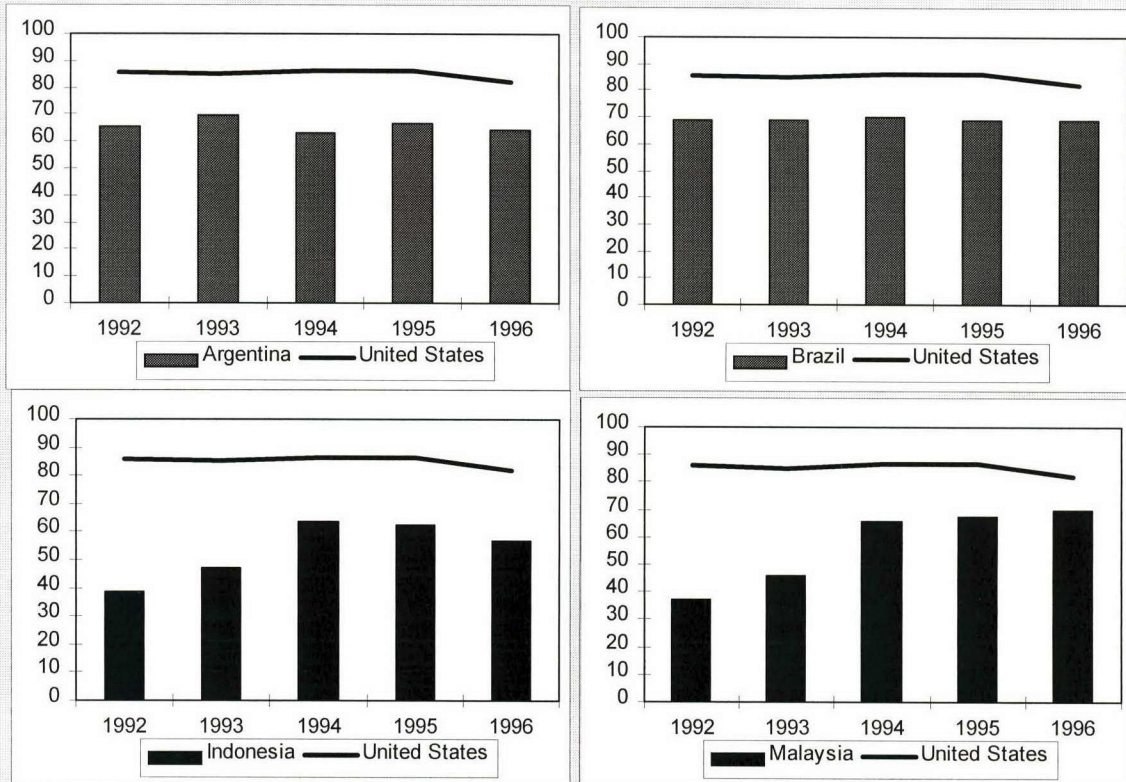
Note: *See box 6.3.

Sources: Bank of New York Country Profiles.

Citibank Country Profiles.

ISSA, 1995.

Emerging markets are computerizing. As described in annex 6.2, many emerging markets have adopted computerized (order driven) systems. Computers can handle large volumes in a cost efficient manner and can trade around the clock, if necessary. They also enhance transparency by generating a detailed audit trail as well as large amounts of information regarding market transactions on a real time basis. However, computerized systems do not handle well large orders in a market with little liquidity. The adoption of computer based systems in many developing countries suggests that this concern is outweighed by the pros, including facilitating other aspects of market infrastructure, including trade comparison and C&S.

Box 6.3 Developing Capital Market Infrastructure in Asia and Latin America**Market Infrastructure in East Asia and Latin America**

Note: The Operational Benchmark plotted above is a score out of a maximum of 100. A higher score indicates higher settlement and post-settlement efficiency and a lower overall operational risk associated with the market. Efficiency is measured taking into account the number and operational costs of failed and delayed transactions, cost of administrative effort, complexity of the market and compliance with the recommendations of the Group of Thirty. The date for 1996 refers to the first quarter.

Source: Global Securities Consulting Service, Ltd.

Asia has made remarkable progress over the last four years in improving capital market infrastructure. For example, as shown above, based on a measure that takes into account both ease and reliability of settlement and post settlement actions, the efficiency of Malaysia's infrastructure has about doubled between 1992 and the first quarter of 1996. Indonesia's performance has been almost as good. India's successful effort to set up from scratch the National Stock Exchange (NSE) in about two years is another good example. The early focus of the NSE was on improving the transparency of trading, developing liquidity, and shortening settlement cycles and risk. To do so, the NSE has instituted a computerized trading system and a clearing corporation, while a central depository is expected to be operational in India by end-1996. The NSE has also introduced a weekly settlement cycle and a large settlement fund, with rolling settlement expected to be launched within weeks.

In contrast to Asia, the figure above suggests that the more advanced capital markets in Latin America started the decade with relatively well functioning infrastructures and have maintained this performance throughout the decade. In some cases, however, for instance Argentina and Chile, the surge in trading volume has been significantly smaller than in East Asia, and market infrastructure has not been under the same stress. As a result, there has been less urgency to upgrade these systems and adopt G-30 benchmarks. Indeed, in the case of Chile, although the C&S system is capable of doing so, netting has not been implemented in order to be able to monitor compliance with capital controls. This does not seem to be the case for Mexico and Brazil where the increase in volumes have been larger.

Lessons Learned and Recommendations

The G-30 recommendations and the revisions suggested by ISSA are a good indication of what constitutes best practice for infrastructure in securities markets, both for stocks and fixed income securities. However, the discussion above also indicates that benchmarks need to be tailored to the needs and possibilities of each individual market. In particular, policymakers and market participants need to carefully consider the tradeoffs that arise from adopting particular institutional arrangements, taking into account local circumstances, for example, in deciding whether to setup a central clearing agency. With this important caveat, the main conclusions on best practice from this section are:

- **Matching:** (a) the matching system should be integrated with the C&S system; and (b) all trades by direct and indirect participants should be matched at most by T+1.
- **Clearance and Settlement:** (a) settlement to be accomplished by a DVP system of good quality, with same day funds; (b) real time gross settlement or a netting system that meets stringent risk control standards, depending on the characteristics of the market; and (c) a rolling settlement system with final settlement occurring by T+3.
- **Depository:** (a) one independent central depository managed for the benefit of the industry, broadly defined;³⁸ (b) independent registry(ies); and (c) immobilization and dematerialization, should be encouraged, and the legal framework revised if necessary.

Mexico is a good example of how countries are adapting these standards to local circumstances. One peculiarity of the Mexican infrastructure is that while securities are settled on a gross basis, the Central Bank (Banco de Mexico) functions as the central clearing agency for the money side of market transactions. Banco de Mexico basically functions as the guarantor of the netting system, although it has recently introduced several measures to reduce systemic risk and change the incentives for market participants. Box 6.5 describes the Mexican experience in more detail.

³⁸ If more than one depository exists, they should be interlinked.

Box 6.5 The Anatomy of Bolsa de Mexico's Clearance, Settlement and Depository System

Mexico has been able to gradually improve its clearance, settlement, and depository systems toward international norms while taking into account local conditions. This process is a good example of how to apply in practice some of the principles of a good infrastructure.

First, Mexico has rationalized and consolidated the institutional structure of the clearance, settlement, and depository systems. One institution, Indeval, is the sole depository for equity, private bonds, commercial paper, and bank acceptances, as well as the clearing house for these instruments. It shares the latter responsibility with the Central Bank (Banco de Mexico) and the Mexican Stock Exchange (Bolsa de Mexico), which are responsible for the money side of transactions. As the sole depository, Indeval has succeeded in minimizing the continual movement of documents, thereby reducing the risk of loss, destruction, or forgery. As the sole clearing house, Indeval processes all transactions, whether executed on Bolsa de Mexico or outside it, and are settled operation by operation. Hence, all settlement operations involving securities are internal to Indeval, which reduces operational risks.

Indeval has also been gradually improving its efficiency as a depository. It was founded in 1978 as a state-owned institution but was privatized in 1987. Today, it is owned by financial institutions, including banks, brokerage firms and insurance companies, on a nonprofit basis. Since 1984, all Mexican securities have to be in registered form: registered securities are transferred by Indeval either by book entry or physical delivery. The transaction is registered in the name of the current stockholder and, if physical delivery is made, the stockholder's name must appear on the stock certificate. Indeval then advises the corporation about the changes to be made in its stockholder's register. The long-term objective of Indeval is to dematerialize all securities. To this end, Indeval is promoting the use of jumbo or global certificates. Indeval also provides extensive post-settlement services for securities owners and custodians, as well as issuers. In an effort to simplify cross-border transactions, a link has been established with Cedel and the International Securities Clearing Corporation in the US, and Indeval is studying options with similar institutions in other countries.

In April 1995, Banco de Mexico implemented structural changes in the Mexican settlement system to reduce settlement risk. The objectives of these changes were to attain a DVP environment and reduce systemic risk by instituting better risk control procedures and by increasing the incentives of market participants to monitor their counterpart exposure. First, Banco de Mexico implemented a new payment system which monitors the capacity of a participant to effect payments, as a function of the cash, collateral, and line of credit at Banco de Mexico. These risk control measures should prevent participants from effecting payments in excess of their credit lines. They are also linked to Indeval's clearing system so that securities will only be credited to a participant if the participant can cover the corresponding payment. Securities will be transferred on a real time basis, while cash will be netted throughout the day. Banco de Mexico will make one net debit or credit to each financial institution's account at the Banco de Mexico at the end of the processing cycle. With regard to the incentives, if a participant's account at Banco de Mexico is overdrawn in excess of its cash and collateral for three business days, Banco de Mexico will debit the accounts of all market members who gave settlement lines to the participant under stress. The debit will be proportional to the settlement lines.

Although effective, Mexico's clearance and settlement system does not fully conform with the G-30 recommendations in two respects. The system does not permit trade comparison for indirect market participants, and securities lending and borrowing is not operational, although it recently received regulatory approval.

Sources: Bank of New York Country Profiles.
Citibank Country Profile.
ISSA (1995).

The G-30/ISSA benchmarks per-se do not say very much on the dynamics of constructing well functioning capital markets. The problem with formulating specific recommendations on how to facilitate this process is that market and country circumstances are also critical for deciding policy and institutional reform priorities. For example, in India the authorities decided the most cost effective manner of improving market infrastructure would be to construct from scratch a modern equities exchange with the expectation that competition would promote improvements in the other exchanges. But this approach may not be advisable in other markets if existing exchanges are able to overcome vested interests and adopt modern systems. Notwithstanding this caveat, based on both country experience and the work undertaken to develop international benchmarks, the following recommendations are possible:

- The G-30/ISSA benchmarks are objectives to be attained over time. While it is possible and in some cases advisable to leapfrog to modern systems, efficiency and reliability rather than speed of settlement should be the primary objective. As noted above, the example of Malaysia shows that investors and issuers will not be discouraged if the market does not fully conform to these benchmarks.
- Reducing systemic risk should be from the start an important objective in the design of market infrastructure. The stylized attributes of emerging markets suggest that they are more prone to systemic problems.³⁹ This suggests early attention on the interface with the banking and payments systems to facilitate attaining DVP. More controversial is that, despite the possible negative consequences for market development, it may be advisable to have very strict membership criteria for exchanges and clearing houses, at least during the transition period until other risk reduction systems are in place. Opening up domestic markets to well capitalized foreign intermediaries may be a way of increasing competition in the market without increasing systemic risk.

³⁹ For example, as noted above, compared to mature markets, intermediaries are more likely to be financially weak and volatility is generally higher, while financial integration may bring large surges in volume. In addition, the systemic consequences of a failure of a intermediary may be larger if the industry is more concentrated in emerging markets as some analysts believe it to be.

- Country experience suggests that setting up a central depository should be encouraged early. While it is possible to have a well functioning C&S system without one, a depository brings large benefits by reducing transaction costs and operational risks and facilitating DVP. That all the countries in table 6.3 have or will have a central depository soon indicates a strong revealed preference for central depositories by the most dynamic emerging markets. However, for the central depository to function cost effectively, there must be sufficient volume. Another essential pre-requisite is the legal basis for nominee ownership.

Country experience, in particular that of Asia, also bring good news to nascent markets. A key lesson that can be drawn from this experience is that, while developing appropriate infrastructure is a key element in preparing capital markets for international integration, rapid progress can be achieved with a sustained and well organized effort.

The Legal and Regulatory Framework

The Regulatory Framework and Financial Integration

Objectives of the regulatory framework. The legal framework or infrastructure serves as the basis on which capital (and other) markets function. Essentially, a legal system should provide for the effective enforcement of private contracts and form the basis for instruments and practices essential to the functioning of modern capital markets.⁴⁰ Building on the legal infrastructure, the role of the regulatory authorities is to make markets fair, efficient, and safe. The presumption is that without regulations, capital markets would not result in a socially efficient outcome because of market imperfections (such as incomplete/asymmetric

⁴⁰ Laws important for the functioning of the financial system include: a company law that adequately promotes corporate governance; banking and commercial laws that give firms a legal basis for practices (such as beneficial ownership, notation, trusts, collateral, etc.) that are central to financial markets; bankruptcy laws that clearly define the rights of different asset owners in a liquidation; and competition laws. An essential component of the legal infrastructure is a set of well-functioning institutions that enforce these laws.

information) or negative externalities (systemic risk). Fair refers to protection of the investor from abuse and fraud and the equal treatment of similar market participants. Efficiency has two aspects. The first, which we have already discussed in detail, regards facilitating an efficient market infrastructure and information systems. The second involves promoting and protecting competition, that is, ensuring that market practices and rules do not impose any unnecessary burden on competition, unless required for the pursuit of the other regulatory goals. Safety means reducing systemic risk.

Best practice. In many emerging securities markets, there is a convergence of regulatory practice towards a model based on public disclosure, and on market and industry self-imposed discipline, along with better internal risk management by financial firms themselves.⁴¹ The model's premises (and the associated key regulations) are as follows.

- First, the goals of the regulator are to ensure that incentives and market structure are consistent with fairness, efficiency, and safety, rather than have the government substitute for the market. Investors, and not the regulator, should judge the merits of alternative investments, and the regulatory framework should ensure that timely and accurate information is available to do so. Hence, the regulatory emphasis on disclosure and eradicating fraud around the world. Insider trading is prohibited for fairness reasons, and also because such practices have the negative externality of discouraging investors and savers from participating in capital markets. Another area where regulatory intervention has been deemed necessary regards investor protection in the case of insolvency of a broker/dealer. Investment firms are often required to segregate investors' assets from their own, and/or to meet capital adequacy standards, the latter in part for systemic risk reasons (see below). The legal system should provide the legal basis for segregating investors' assets.
- Second, the establishment of market rules and regulations, and their enforcement, should be mainly the responsibility of market participants, rather than government. The rationale

⁴¹ Strahota (1996) describes how this model could be applied in emerging markets.

is that participants have a self interest in ensuring that markets are fair and efficient and are better able to judge how best to make them so. In practical terms, this means that self-regulatory organizations (SROs), such as the exchanges, broker/dealer associations and accounting/auditing associations, will bear much of the responsibility for the regulation and surveillance of securities markets and auxiliary supporting services. For the system to work correctly, the official regulator must have sufficient regulatory oversight to assure that the SROs enforce securities regulations as well as their own market conduct rules, and that they act to minimize potential conflicts of interest and restraints on competition.

- Third, systemic risk concerns in capital markets do not justify prudential regulations and monitoring as intense as in the banking sector. As a general rule investment firms are less vulnerable than banks on both the asset side and the liability side to liquidity and solvency crises, and are less prone to contagion.⁴² An exception to this rule regards clearance and settlement arrangements, discussed above. However, with the increasing integration of banks and securities businesses, there is a much stronger rationale for intensifying prudential rules and oversight of the latter.⁴³
- Fourth, financial innovation, in particular the development of a wide variety of derivative products, is leading to some important changes in how to regulate financial firms. Although derivative trading still involves price risk, the speed with which these risks can be transformed and the opaqueness of the transformation process makes it difficult for regulators to assess the degree of exposure of financial firms. The regulatory response to this lack of transparency has been to focus on the capacity of the firm to manage these risks, and to create incentives for financial firms to put in place appropriate risk control procedures. This is a relatively new area of concern in emerging markets, since, except in Brazil and Malaysia, derivative products are not widely used or may actually be

⁴² The assets of an investment firm consist of marketable securities that can be liquidated close to their book value in a crisis, which is not the case for bank assets. Similarly, liabilities of investment firms are less liquid than bank liabilities, especially, deposits, which can be withdrawn quickly. Dale (1996) discusses this rationale for regulation in some detail.

⁴³ There are other methods to address this concern. For example, the approach taken by regulatory authorities in the United States has been to raise funding firewalls between banks and nonbanks to insulate the former from solvency or liquidity problems in the latter. See Dale (1996) for a discussion of the regulatory response to functional integration in the European Union, Japan and the United States.

proscribed. However, as financial integration intensifies, domestic financial firms may trade in these instruments overseas.

Many regulatory agencies in both developed and developing markets are also mandated to promote the development of domestic capital markets. Obviously, the functions and key regulations described above are essential to foster market confidence and growth. In some cases, however, the regulator needs to carefully assess the potential short-term tradeoff between investor protection and safety, and market development or liquidity. More broadly, regulations and their enforcement entail costs, which need to be compared to the benefits that a new regulation may bring. In order to promote market development, regulatory agencies will also perform functions outside their strictly defined regulatory responsibilities. Box 6.6 lists some of the most important development tasks and describes how certain countries have avoided a common regulatory/development tradeoff.

Preparing for financial integration. Financial integration brings increased urgency to the task of constructing and reinforcing the regulatory framework in emerging securities markets. Similarly to market infrastructure, this task is essential to compete in an integrating world and attract foreign investors, and to reduce systemic risk. For example, a key investor concern is the lack of quality information about emerging economies, both macro data on economic prospects and micro data on corporate performance, that reduces investors' capacity to make informed investment choices. Improving information disclosure will not only address investor concerns, but also reduce the susceptibility of the market to volatility resulting from incomplete/asymmetric information.

Moreover, financial integration brings new challenges for the regulatory authorities. First, globalization of financial transactions and intermediaries suggests that regulators need new tools and approaches to monitor effectively overall market risk and the financial soundness of market participants. For instance, domestic financial firms will be exposed to new market and counterparty risks as they increase their international activities, and foreign

Box 6.6 The Regulator and Market Development

Regulatory agencies that foster market development also perform other functions, including: establishing the legal and regulatory prerequisites for domestic institutional investors, encouraging the development of financial institutions and infrastructure (for example, credit rating agencies), and human capital formation. With regard to the latter, well qualified SROs can play a critical role by training, testing and licensing their members, in particular exchanges and broker/dealer organizations. SROs would be effective providers of such training and testing services because of their knowledge of the industry and their self-interest in developing and maintaining the investor public's trust. More specifically for broker/dealers, training in the following areas is particularly important: general knowledge of securities markets and regulations, customers relations (including suitability requirements and sales practices), and back office matters (e.g., management of customer funds, record-keeping, etc.). Good practices build domestic and foreign investor confidence. Investor education is another critical task, in particular so they understand the risks and rewards of investing in securities and how to make informed investment decisions.

One of the most common trade-offs between investor protection and market development regards listing requirements imposed by market regulators to ensure that companies traded on an exchange meet minimum standards. If listing requirements are too stringent, few firms would be able to list and the market would not be liquid. One solution to this dilemma is to segregate the market, allowing firms with a less established track record to list in a special, perhaps over-the-counter, market for less risk-adverse investors. This system has worked well in developed countries, for example NASDAQ in the United States. Emerging markets have also successfully segregated their markets. Korea's stock market, for example, is divided into two trading sections. Newly listed stocks are automatically listed in the second section for at least one year. The Korean stock exchange evaluates the annual reports of all listed companies to determine whether second section firms meet the requirements to be promoted to the first section, as well as whether first section firms moved back into the second. The key requirements for the first section are designed to ensure that the stock is widely held and the company has a demonstrated track record. Korea also has an over-the-counter market with less rigorous listing requirements. Other countries that have similar practices include Poland and Mexico.

intermediaries may become active in domestic markets. Second, developing countries have political economy concerns regarding foreign ownership of domestic firms. Some emerging markets have responded to these concerns through restrictions on foreign investment that seem to have little economic justification.

Given this background, the section will first deal with four main issues: (1) the costs and benefits of direct restrictions on foreign investment in domestic capital markets; (2) the special regulatory issues that arise from the internalization of financial intermediaries and transactions; (3) the most important concerns of foreign investors regarding the regulatory framework; and (4) enforcement and the role of SROs. Finally, it will describe some cross country findings on how emerging markets are dealing with these issues.

Restrictions on Foreign Ownership

Typology and rationale. Restrictions on foreign investment are not uncommon in emerging securities markets. Typically, there is a ceiling on the proportion of a firm's equity that can be owned by a single foreign investor plus an aggregate ceiling on ownership by all foreigners. Ceilings may vary between sectors, generally with lower limits for banks, financial firms, and certain strategic sectors. In some emerging markets, a firm can superimpose even more restrictive limits for its own shares. There may also be differential treatment by type of foreign investor, many times with institutional investors being given preference. Foreign investors may also be subject to special registration requirements, which, depending on their severity and on the efficiency of the process, could restrain foreign investment. Controls or administrative requirements that delay the repatriation of capital gains and dividends would severely, if not totally, curtail participation in the capital markets of the country imposing the control.⁴⁴

Restrictions are generally imposed because of political economy issues revolving around concerns of having domestic firms owned by foreigners, and of the need to ensure a level playing field among investors. Part of the fear is that if foreign investors were not restricted, they would capture the great majority of the increases in capital gains and dividends that rapid growth brings, to the detriment of national income.

Are restrictions justified? The economic justification for restrictions on foreign ownership is weak. If the limits are binding, they curtail foreign portfolio investment, denying the market the additional liquidity, as well as constrain the issuing of IPOs if the firm is not able to mobilize enough local capital to remain within the ceiling. In addition, as noted before, ownership restrictions for foreign investors have negative implications for corporate

⁴⁴ In some cases, for example, Chile, these controls are imposed not to constrain foreign ownership but to influence the amount and composition of capital inflows for macroeconomic management reasons. The pros and cons of such restrictions are discussed in chapter 5.

governance. Confined to being small shareholders, foreign investors are often reluctant to spend resources in monitoring management because of the free rider problem of the benefits accruing to others. Finally, often the restrictions are not effective, with foreigners getting around the limits through nominee ownership, further exacerbating the corporate governance problem. This is widely believed to be the case in both Indonesia and Thailand.

The elimination or softening of these restriction should take the political economy concerns into account to be sustainable from a political economy point of view. Some countries, such as Mexico, have instituted investment trusts consisting of shares without voting rights for foreigners who wish to acquire shares of a firm over and above the ceiling. Thailand is considering a similar system to be implemented in 1996. While this solution allows foreigners to hold more shares, corporate governance remains an issue.

Creating a domestic investor base. The best solution to this problem is to develop a strong domestic institutional investor base. Domestic institutional investors will be able to mobilize significant amount of resources, increase liquidity in domestic capital markets, and serve as a counterweight to foreign investors. In addition, pension and mutual funds have strong benefits for domestic savers. These instruments are managed by professionals and help overcome the information constraints faced by households.

They would also reduce the vulnerability of domestic capital markets in the event of a rapid liquidation of assets by foreign investors. Institutional investors would have deep pockets and would be able and willing to act as an automatic market stabilizer by bottom fishing and value picking when foreign investors are selling as a group. In addition, active domestic institutional investors, by increasing depth and liquidity in domestic markets, would reduce the sensitivity of domestic markets to small trades and lead to a decline in volatility

Developing a domestic institutional base requires reforming and expanding the legal and regulatory framework, in particular in the area of investor protection. Investment fund

regulation addresses prudential rules, custodial arrangements to protect investors if the management company becomes insolvent, to prevent fraud and enhance transparency with regard to a fund's objectives and fees, as well as rules to protect against self dealing. In addition, expanding the domestic institutional investor base, in particular pension funds, would also entail reforms in a variety of policy areas. Box 6.7 describes some recent initiatives in Latin America and Asia to establish institutional investors and the obstacles encountered.

Globalization and the Regulatory Challenges

The new risks. A good way of understanding the effect of growing integration and globalization on the functions of regulation is to analyze how these trends affect the nature and magnitude of the underlying risks, particularly market, counterparty, and systemic risks.

- As domestic financial firms engage in cross-border investments, they may incur new market or price risks from open positions in exchange and interest-rate sensitive foreign assets.
- Domestic residents can be exposed to new counterparty risks with foreign investors and firms if they engage in cross-border transactions. Domestic residents, including the regulators, may find it difficult to develop a comprehensive picture of the foreign counterparty if it engages in multiple cross-border activities around the globe. Note, too, that domestic regulators may also find it increasingly difficult to get a clear picture of a domestic firm as it increases its cross-border activities. Integration would also expose domestic residents to foreign jurisdictional risks not under their control. Globalization may also confuse that allocation of supervisory responsibilities for global firms.

Box 6.7 Promoting Domestic Institutional Investors

There is considerable scope for promoting the growth of securities markets through the development of domestic mutual and pension funds. These funds have become an important form of financial intermediation in the 1980s in industrial countries, but in emerging markets have only reached respectable sizes in Brazil, Chile and Mexico in Latin America, and in Malaysia and Thailand in East Asia. In South Asia, the Unit Trust of India is one of the largest mutual funds in the world in terms of number of investors, but over regulation of asset management has reduced its beneficial impact on Indian capital markets. As is well known, Chile has one of the most developed private pension fund industry among developing countries, managing some 45 percent of GDP in assets.

To be able to develop such funds, there needs first to be the legal basis for practices such as beneficial ownership, novation and trusts that are central to their development. And second, in order to promote confidence in funds, the investor needs to be protected through investment management legislation that is adequately enforced. The legislation should:

- ensure that investors are well informed about the funds' investment objectives and risk profile, and the quality and costs of fund management;
- ensure fair valuation of investors' purchases and redemptions;
- define prudential and fiduciary standards. The extent to which regulation includes detailed investment rules regarding the composition of fund portfolios (types of assets and their shares in the total) varies among countries;
- define, discourage and regulate improper practices such as self-dealing; and
- protect the integrity of the funds assets. These rules generally segregate the funds' assets from those of the management company (to ensure that investors do not suffer in the case of insolvency of the management company) and ensure proper custody arrangements. Management legislation usually also requires independent directors on the board of the fund.

In certain Latin American countries, capital markets have received a huge boost from the reform and privatization of social security. However, the benefits of these reforms and the development of mutual and pension funds has been delayed by problems regarding the structure of the industry as well as excessive regulation. Throughout the region, competing intermediaries such as banks play a dominant role in the mutual fund industry and have not pursued the development of the industry aggressively. In Mexico, banks have reportedly redirected fund investors into deposits. Custodial arrangements also tend to be costly, with only a few institutions, mainly banks, being allowed to act as custodians. But among the most important obstacles to the development of mutual funds are the design and prudential regulation of private pension funds.

These design and prudential rules have created barriers in the provision of financial management services and perverse incentives, and reduced the potential development of equity markets. Typically, pension funds must be new and specially licensed to manage mandated retirement savings (excluding existing intermediaries), and guarantee a certain return. The guaranteed return is defined as a certain percentage of the average return of the pension fund industry. The exclusion of mutual funds has limited their growth and their ability to attain economies of scale. The return guarantee has led pension fund managers to offer virtually identical portfolios, limiting competition, which in turn has led to high up-front commissions. These problems have been compounded by regulatory restrictions limiting equities to 20-30 percent of pension fund portfolios. Remedial action should introduce greater competition and portability of these mandated savings, offering greater freedom to savers to choose among different portfolios of approved products.

Two other trends in private international finance are interacting with globalization. First, as discussed above, financial firms are increasingly becoming financial conglomerates, combining traditional banking with securities operations and other nonbank activities. And second, financial innovation has resulted in a vast array of new derivative instruments and markets. All three together have significantly complicated the task of assessing counterparty risk, undermining the capacity of the market to police itself and of the authorities to regulate. In addition, as cross-border competition among financial firms intensifies, an additional regulatory concern is that differences in national regulations may give rise to competitive advantages among firms.

The regulatory response. These are all relatively new issues, and there is no established best practice to deal with them. Securities regulators all over the world have responded to these new challenges in a variety of ways. First, they have begun to promote uniformity of standards and on information sharing, particularly through bilateral agreements. Recently, there has been progress in promoting uniformity of standards. For instance, banking and securities regulators have collaborated to issue statements on how to evaluate derivative risk exposure and best practice in disclosure of derivative activities.⁴⁵ And as described below, there have agreements regarding the harmonization of accounting standards. On the information side, during the last few years, there has been a sharp increase in the number of bilateral agreements among regulators of both developed and developing countries. There have also been concerted efforts to reduce counterparty and settlement risk through international collaboration. In particular, there have been efforts to harmonize regional payments standards, to set minimum prudential standards for clearing and settlement, and to increase the overlap of hours of operation of different payments systems.

What does seem certain is that the settlement and payments system is one of the most important channels in the securities markets through which systemic risk can be transmitted

⁴⁵ Basle Committee & IOSCO: *Framework for the Supervisory Information About Derivative Activities of Banks and Securities Firms*. May 1995. Basle Committee & IOSCO: *Public Disclosure of the Trading and Derivative Activities of Banks and Securities Firms*. November 1995.

across borders. Governments and markets would do well to concentrate on improving prudential rules and operating procedures of the clearing agency, as discussed above. However, there is still no consensus on the degree to which the central bank and other regulators should be involved in the design and control of the clearing agency. Some regulators hold the view that official involvement should be minimized to reduce moral hazard and increase the incentives for the market to police counterparty risk, while others believe that systemic risks are too large to be left solely to the market.

The Regulatory Framework and Foreign Investors

Three functions of the regulatory framework have been identified as most critical for attracting foreign portfolio investment and reducing the potential costs associated with financial integration: ensuring accurate disclosure of all material information, eradicating insider trading, and improving corporate governance.

Improving disclosure. Among the most critical functions of a regulatory framework is to increase transparency in the market by mandating public disclosure, both at the initial phase, when a firm issues securities to the public, and continuously thereafter. As underlined before, such information is critical for foreign investors, indeed all investors, if decisions are to be more than just uninformed gambles. Hence, investors will shun capital markets with weak disclosure. Inappropriate disclosure also undermines the more macro benefits of capital markets, in particular the efficiency of the market as a signaling device for the allocation of capital.

Over time, three types of disclosure requirements have developed in capital markets:

- First, listing requirements, that is, disclosure mandated in order to list in a securities market or trade publicly. Listing requirements typically include minimum thresholds

regarding the number of shareholders and the value and volume of public shares,⁴⁶ earnings, and balance sheet criteria over a number of years; an assessment of the potential of the firm and industry it belongs to; qualitative criteria regarding corporate governance; and credible documentation proving that it meets the former criteria.⁴⁷ Most markets also have continuing listing or maintenance requirements. In addition, to avoid a regulatory race to the bottom among competing exchanges in a country, there should be a baseline on disclosure imposed by the official regulator for all securities traded publicly on these exchanges or through other means.

- Second, initial offering requirements, that is, disclosure mandated to issue new securities. These include two types of information. First, information that allows investors to evaluate the overall condition of the firm issuing the securities, including risk factors and prior performance. Second, more specific information about the new issue, amount of capital to be raised and its intended purpose, dilution, determination of the offering price, plan of distribution, and underwriters and other market making activity. The information for initial offerings is usually distributed to the public in prospectus form.
- Finally, a general requirement to disclose all material information on a timely basis. Even though issuers may be complying with periodic reporting requirements, they are also obligated to disclose all important (“material”) corporate developments. By material, it is meant that the development may have an effect on the company’s business or the stock price, including mergers and acquisitions, stock dividends, changes in capital, etc. In some cases, the exchange may suspend trading in the security when the event is announced to allow time for dissemination and analysis by the market.

⁴⁶ This is to help ensure that firms listed on the exchange have a corporate structure consistent with public ownership.

⁴⁷ Listing requirements, to the extent that they are not solely informational, seem somewhat contradictory to the basic model premise that investors should be responsible for their investment decisions. They are based on two premises. First, because of lack of experience and financial expertise, investors may not be able to judge the relative merits of alternative investments. Second, the loss of investor confidence in the market in general because of the bad performance of a firm listed on the exchange is a negative externality.

There may also be additional disclosure requirements for companies in special industries, for example, mining, banking and others. Finally, both developed and developing countries make the distinction between public and private offerings, with the latter having less of a disclosure burden. In developed countries, there is also the concept of a “sophisticated” investor, usually high net-worth individuals and institutions who are presumed to be well informed. Disclosure for securities sold to these investors are also less stringent.

Differences among countries in disclosure requirements and their application are not insignificant. They arise because of different legal frameworks and different regulatory approaches, including the assignment of institutional responsibilities both within government and between government and the SROs. In developed markets, while there is widespread agreement on the general categories or criteria that need to be disclosed, the specifics vary, as do the method by which disclosure is made. In some markets, regulators rely on market practice and the general obligation to disclose all material information rather than on specific disclosure requirements. Australia, for example, has in the early 1990s moved sharply in this direction. Other markets, for example, the United States, have more specific requirements. While this distinction is important in theory, in actual practice, what is disclosed may be very similar because of the generalized requirement to report all material events. With regard to how disclosure is made, some developed countries rely more on the disclosure of material events and offering documents rather than on periodic reporting. Again in practice, the differences in what is actually disclosed may not be large. In emerging markets, since market practice may not be very widespread, it seems prudent to be quite specific on disclosure and reporting requirements.

Harmonizing disclosure standards. The international community has been trying to harmonize disclosure requirements to facilitate cross border trade. IOSCO prepared a special report in 1991 on disclosure requirements in developed member countries and differences between them. Its purpose was to help develop a consensus on how to resolve these differences so as to allow the issuance of securities in multiple jurisdictions with a single set of

documentation. IOSCO published in 1992 a survey of disclosure requirements in some 23 emerging markets and Singapore and Taiwan, China. Finally, in 1993 IOSCO prepared guidelines for disclosure in corporate offerings. In 1994, the Council of Securities Regulators of the Americas (COSRA) issued a framework for full and fair disclosure⁴⁸ and stated their intention to implement and maintain a system based on these principles. Both the COSRA framework and the IOSCO guidelines are good frameworks that can be developed by emerging markets, but taking into account local conditions. The caveat is critical. For example, the best means and periodicity of disclosure and the treatment of small companies will depend on country circumstances. In addition, adopting such standards may require significant revisions in the legal framework, since in many countries disclosure requirements are defined in a variety of laws and decrees.

Accounting standards. Disclosure will only be effective if the financial information being provided by the company is based on sound accounting principles and practices that are well understood by investors. In particular, accounting standards are essential for investors to be able to evaluate the financial performance of a company both on an absolute and relative basis. In parallel, auditing standards and practices would also need improvement to ensure reliability of the disclosed information. With the increase in cross border transactions, an additional concern is the comparability of accounting standards across borders.

Major cross country differences in accounting principles are an impediment for cross border issues and for portfolio equity flows to the extent that financial statements are not transparent for international users.⁴⁹ IOSCO and the International Accounting Standards Committee (IASC) are working together to harmonize accounting standards. The approach adopted is to develop a set of international accounting standards towards which national standards could converge. To this end, IASC's work program is to develop a core set of international accounting standards by 1998. By 1995, 15 norms had been developed but there

⁴⁸ Including when, what and how disclosure should be provided and enforced.

⁴⁹ See IASC (1993) for a description of the key differences in accounting standards.

remain 17 to develop. Upon successful completion of the project, IOSCO would recommend to its members to accept these standards in cross-border filings. IASC's challenge is to develop a comprehensive core set of standards that can portray accurately the very different circumstances that firms in different countries deal with, and that measure consistently their performance. Another challenge is to avoid that these international standards are adopted at the cost of excessive discretion compared to national standards.

Private standard setting bodies have played an extremely important role in the more advanced emerging markets in developing sound accounting and auditing principles and practices, and in continuing education for accountants and auditors. IASC's international standards have been used by these organizations in many cases as benchmarks. For example, in Malaysia, the regulation of the accountancy profession is vested in Malaysian Institute of Accountants (MIA). MIA requires all limited companies to comply with local accounting standards in preparation of their financial statements. MIA helps ensure compliance by regular reviews of samples of published financial statements. If the statements fall short of the requirements, the member responsible for preparation or auditing the statements is called to provide an explanation, with follow up appropriate action to be taken. With regard to international standards, MIA reviews on a regular basis the standards issued by IASC to determine their applicability in Malaysia. If the new standard does not conflict with local law or accounting practices, it will be issued under the heading of an International Accounting Standard. The MIA has, to date, adopted twenty-four out of the thirty-one international standards without alteration. With regard to the others, Malaysia has its own alternative requirements which generally conform to international standards.

Insider legislation. Another critical function of the regulatory framework that is necessary to develop confidence among investors is to eradicate insider trading. Insider trading is commonly defined as trading in securities while in possession of material non-public information obtained in breach of fiduciary duty or duty of confidentiality. Insider rules typically define the information subject to insider rules, usually all facts that produces or can

produce an impact on a company's business, and the performance of the stock. They also provide the legal basis for defining who is subject to insider trading rules, the reporting requirements of insiders, and the companies affected by insider legislation. In some developed countries, owners of shares in excess of a certain amount are considered as insiders and are required to file reports with regulators on their trading activities. Insider legislation will also define insiders responsibilities: respecting strict confidentiality and not using the information for the benefit of self or others.

Laws typically prescribe penalties for insider offenses such as loss of profits, warnings; fines; and temporary suspension or cancellation of registration. Some laws also establish civil and/or criminal penalties - monetary as well as jail terms. Based on the United States experience, Strahota (1996) suggests that emerging markets should not try to eliminate insider trading based solely on criminal prosecution. It is more effective to rely on incentives, for example to treble damage provisions, to increase the responsibility of the managers and firms for breaches of insider rules done by their subordinates or employees, to require security houses and relevant market intermediaries to put in place internal control procedures, and to hold both the giver and receiver of information responsible. It is also more effective to have the full range of sanctions (civil, administrative and criminal) since criminal prosecutions require a burden of proof that is not easy to establish in the financial area. In addition, in emerging markets, both the police and court systems may not be experienced in these types of cases.

Minority shareholder rights and corporate governance. In its simplest terms, effective corporate governance is the promotion of shareholder rights and responsibilities, including those of minority shareholders. There are two basic principles for shareholder governance: fair treatment for all shareholders and shareholder approval of key corporate decisions. The latter is more directed at the potential conflicts between management and shareholders, while the former regards more minority shareholder rights. Fair treatment for shareholders implies that voting power at shareholder meetings, dividends, tender or exchange

offers, and redemption should be proportional to the number of shares held, and disclosure announcements should not discriminate between shareholders. Shareholder approval needs to be explained carefully. In order to ensure effective management, most corporate decisions are made by senior management and Board approval may be required for a subset of these, the most significant. Shareholder approval will be in first instance indirect, by the election of independent directors. But in addition, certain outstanding decisions that can have a material effect on the financial value of the corporation or the value of the shares should be approved by the majority of the shareholders.⁵⁰ In addition, it is becoming common practice in industrial countries, especially in the United States and the United Kingdom, that management compensation is determined by a committee of independent Board members and independent directors establish an audit committee. Shareholders in industrial countries are also mandating changes in management compensation (e.g., linking compensation to share price) and other incentives for management to maximize shareholder value.

Countries whose capital market laws and regulations promote these criteria would be significantly more attractive for both foreign and domestic investors. Some emerging markets have begun to mandate by law the appointment of independent directors and other measures to improve corporate governance. For example, Indonesia has recently introduced the requirement that issuers grant preemptive rights to existing shareholders in the case of new equity issues, as is common in Europe and Latin America.⁵¹ In Malaysia, one listing requirement is that there be a Board audit committee comprised of independent directors. The Korean authorities are very much aware of the concerns of foreign institutional investors regarding shareholder rights and are considering ways of promoting corporate governance

⁵⁰ Among the most important decisions are acquisition or transfer of ownership of say 20 percent of the shares of the company, limitation of shareholder rights, sale of corporate assets, or incurring significant new debt liabilities. See Seeger (1996).

⁵¹ Preemptive rights refers to the entitlement of existing shareholders to subscribe to new issues of shares for cash. For issuers, it may raise the cost of capital if the sale is made at a substantial discount to market prices as it usually is to maintain attractiveness during the subscription period. On the other hand, existing shareholders are either able to maintain their ownership interests if they subscribe, or are compensated for the resulting dilution if they are able to sell their subscription rights. The pros and cons of this practice are still being debated.

principles through capital market regulations.⁵² However, it is not clear to what extent should each of these principles be regulated but rather should result from shareholder pressure that leads to changes in corporate practices. The example of ICICI in India discussed above is a good example how market pressures can lead to changes in governance without regulatory changes.

More broadly, corporate governance also refers to shareholders and their representatives at the Board being more independent and active in corporate affairs, monitoring and demanding more transparency from management. Shareholder activism and the emphasis on corporate governance is common across many OECD countries, including Australia, Canada, France, United Kingdom and the United States.⁵³ In the United States, as noted before, certain institutional investors have played a key role. One focus of these efforts has been on strengthening the governance role of the Board of a company, including Board membership criteria, redefining what constitutes outside directors and increasing their role in Board committees. In parallel, directors have begun to put this new status to work through formal evaluations of the Chief Executive Officer, succession planning and, in general, preparing and implementing a Board strategy for the company.

Enforcement - The Role of SROs

While legal statutes and regulations based on international norms and best practice are a pillar of an effective regulatory framework, the other essential component is enforcement. The importance of enforcement can not be stressed sufficiently. Without enforcement, investors, both domestic and foreign, will not have confidence in the market and capital markets will remain undeveloped.

⁵² In-Kie Hong (1996).

⁵³ Some key documents of this trend are the General Motors (1995) and Cadbury (1992) reports. For a comparison of the corporate governance initiatives in the OECD see Millstein and Gregory (1996).

Enforcement requires effective regulators. One aspect of this is clarifying the mandate and powers of the different regulatory institutions. In the capital markets area, the consensus is that one independent institution should be responsible for the oversight of capital markets. The benefits of this regulatory structure are well known and will not be discussed further here. There are some exceptions to this rule, for example, government debt markets are in many countries the responsibility of the Central Bank. In the United States, mainly for historical reasons, regulatory responsibilities for futures markets rests with a specialized institution. Given the SRO model that is being adopted by many developing countries, the other leg of effective enforcement regards defining the functions of SROs and their interrelationships with the official regulator.

Practice in developed markets. The role of self-regulation in securities markets varies across developing and developed markets. In the markets where this concept is most developed, in the United Kingdom and the United States, much of the responsibility for regulating the securities markets lies with SROs, in particular the exchanges, the professional organizations and the clearing and depository organizations. They develop rules for their members, as well as ensure compliance by their members with these rules and the general securities laws. Self-regulatory responsibilities could include the following: regulations of market transactions (including listing requirements, market surveillance, trading regulations, clearing and settlement, and provider of information) which are usually the responsibility of an exchange; regulation of market participants (including licensing of broker/dealers and other professions, capital and probity requirements, and business and ethical codes) typically done by professional organizations; and dispute resolution and enforcement actions, including of insider trading.⁵⁴

This regulatory model, based on disclosure and self regulation, has been the result of a long evolutionary process in developed countries. In the United States, for example, the self regulatory organizations were the only primary regulators until the creation of the Securities

⁵⁴ See International Capital Markets Group (1992) for a good review of self-regulatory activity.

and Exchange Commission after the crash of 1929. The concept of self regulation is based on the premise of long-term self interest of the industry to develop fair and efficient markets to attract capital and investors to the markets. The model presupposes that different segments of the industry will have the incentive to police each other, which together with competition, should lead to the desired results. But given the stylized attributes of capital markets in developing countries, is it possible and desirable for these countries to develop a market based disclosure system for their capital markets?

Applying the SRO model to developing countries. In this regard, the SRO regulatory model will face several problems in emerging markets:

- The structure of securities markets is imperfect due to limited competition, and the resulting performance may not be conducive to fair and efficient markets under self regulation. For example, in Korea, there are fixed commission rates, while in India, exchange and clearance organization membership is restricted.
- The institutional and human capital may be insufficiently developed to ensure that two pillars of the system - self-regulatory and disclosure - result in fair and efficient markets. For example, accounting standards implementation may be deficient, the investor public may be uninformed, and reporting and disclosure practices may be weak or nonexistent. In addition, the accounting SRO's may not have the capacity to perform the oversight function effectively.
- Finally, there may be short-term tensions between the regulatory and market development objectives of the authorities or the SROs. For example, care needs to be taken that new listings are not discouraged by excessive listing requirements, that perhaps should be tightened progressively, or modulated according to the market on which the security will be traded. Or alternatively, listing requirements may be too loose because the exchange may be seeking to increase business to the detriment of the long-term confidence in capital markets.

Despite these problems, the SRO based model still seems the best alternative. The benefits of a self regulatory structure are substantial. As noted above, based on its first hand experience, the industry is generally more able than government to formulate good rules and procedures, and to keep them up-to-date with new technology and industry practices. For the same reasons, the industry will generally also be better able to monitor compliance. In addition, self imposed rules are generally better accepted than rules mandated from the outside. Finally, excessive government oversight or regulation may create different but just as serious governance issues through increased rent seeking behavior. In any case, self interest is central to all regulatory systems, not only to the self regulatory model. Any well designed system has to be based on creating the right incentives for market participants. If the incentives are not right, it is probably just a matter of time before the rules are broken, even with intense and effective monitoring.

An evolving role for SROs in emerging markets. Given the concerns mentioned above, some forethought on the sequencing of responsibilities would, however, be necessary. Three criteria seem important for deciding which and how fast should regulatory functions be transferred to the SRO.

- First, most obviously, the transfer of responsibilities should be modulated according to the institutional capacity of the SRO. For example, in Indonesia, in the absence of a strong professional associations, the official regulator BAPEPAM licenses both legal and accounting professionals that can work in the securities area, in particular regarding registration of securities.
- Second, the governance structure of the SROs should also be considered in allocating regulatory responsibilities. It may be necessary to review governance arrangements in the SRO to minimize potential conflicts of interest. These issues are not unique to developing countries. For example, in both the United Kingdom and the United States there has been increasing concern on the capacity for professional associations to monitor compliance by members with professional and ethical codes of conduct. In addition, governance issues

may change over time, and as markets develop, new conflicts of interest may develop. Box 6.8 describes the reforms implemented in 1996 to reduce these conflicts of interest in both countries while preserving the SRO model.

- Another important factor to take into account is the comparative advantage of the industry relative to the official regulator in performing different regulatory functions. That is, even if the SRO is not fully developed, it still might do a better job in certain areas than the official regulator.

Box 6.8 Applying the Principles of Effective Governance to Self-Regulating Organizations in the United States and the United Kingdom

There was increasing concern about potential conflicts of interest among the functions of two keys SROs, the National Association of Securities Dealers (NASD) in the United States and the Institute of Chartered Accountants (ICA) in the United Kingdom. To resolve these concerns, the structure and governance of both SROs were fundamentally changed in 1996. These reforms illustrate how these conflicts can be resolved while preserving the benefits of a self regulating system that allows applying industry expertise to regulation.

NASD is the only registered securities association in the United States, and every broker dealer conducting a public securities business is required to become a member. Hence, it oversees the activities of over 5,400 securities firms, more than 57,000 member branch offices, and nearly 500,000 professionals. As a SRO, it has certain defined obligations regarding the oversight and discipline of its members. NASD is as well the primary regulator, and owner, of the NASDAQ stock market, and is mandated to adopt rules to promote a fair, efficient and safe market. NASD has therefore three missions. It is first a membership association. It is also entrusted for ensuring responsible professional conduct of broker/dealers. Finally, it is also the overseer of the NASDAQ market. The SEC oversees NASD, and reviews and approves NASD rules and procedures.

This three prong mission leads to innate conflicts, as it requires NASD to mediate divergent interests. For example, NASD was the primary regulator of NASDAQ, in particular, the trading and reporting practices of NASDAQ market makers who also are at the same time members of NASD. Another concern was that NASD, a membership association, was responsible for mediating between the public at large bringing complaints and its members. NASD attempted to meet the needs of differing constituencies by including representation of issuers

and investors in association affairs. However, NASD was characterized in the past by a decentralized administration and heavy reliance on volunteer member leadership. NASD corporate structure added to the confusion by placing direct responsibility for all three missions on one professional staff and one set of committees reporting to the Board. An Independent Select Committee - the Rudman Committee- was asked to assess the corporate governance of NASD in 1995. The Select Committee found that NASD's governance structure was not adequate to fulfill its responsibilities.

In 1996, NASD undertook a fundamental restructuring following the Committee recommendations. NASD was restructured so as to put substantial "daylight" between the membership association, the NASDAQ market, and the broker/dealer regulator, with three separate governing bodies whose compositions are tailored to the particular requirements of their respective missions. Regulation of the broker dealer profession was separated from NASD into NASD-Regulator (NASDR). In turn, NASDAQ was given an independent governing Board.

continue....

The respective professional staff have also been separated. However, all governing Boards and staffs remain associated within a single SRO structure. The restructuring also placed significant emphasis on disciplinary proceedings and internal review. Finally, the reforms also emphasize increased public representation on the NASD's governing bodies (50 percent public members), that not only will provide useful public feedback to NASD, but should also bolster confidence in the NASD's policies.

In the United Kingdom, there was concern whether ICA was mediating adequately the innate tensions arising from acting as the advocate for the interests of members and as a fiduciary of code of conduct. ICA established a Regulation Review Working Party after considering complaints voiced both by members and others about the effectiveness and reliability of the Institute as a regulator. The report of the working party states that it was guided by two objectives: maintenance of public confidence in regulation, and establishment of confidence among members that regulation would be sensible.

The working party proposed the creation of a Public Oversight Board (POB) and the separation of the Office for Professional Standards (OFFS) from the Institute's other functions. The Working Party proposal parallels the NASD initiatives designed to separate functional responsibilities, and introduce transparency into the system via public participation. The POB would consist of a few independent non-accountants, not chosen by the Institute, charged with reviewing the effectiveness of regulation; reviewing public expectations; assessing the extent to which expectations are met; and reporting in public to ensure redress of shortcomings and encourage public confidence. All the Institute functions related to regulation will be grouped within the OFPS, which will be distanced from the Institute's other activities, in particular, its representative function. Interestingly, the disciplinary aspect of members in business and the setting of ethical standards will not be incorporated within the OFPS. These areas would remain the responsibility of committees and tribunals consisting largely of members in business.

Source: NASD (1995).

The Institute of Chartered Accountants, Regulation Review Working Party Final Report (1996).

According to these criteria, functions regarding regulation of market transactions should be transferred first, in particular market surveillance, information providing, and trading regulations to the securities market. Not only does the exchange have a very large comparative advantage over the official regulator, but potential conflicts of interest seem less serious. For example, members of the exchange would have an incentive to ensure compliance with rules regarding the release of price sensitive information, and control and punish manipulative practices, including insider trading. Members of an exchange would also wish to have an efficient trading system. Potential conflicts of interest would seem more intense in licensing members, ensuring compliance with codes of conduct and listing requirements. Many regulators, however, believe that the prosecution of insider trading should be the responsibility of the official regulator. The concern is that SROs may not be willing to prosecute a fellow member, especially if competition in the broker/dealer industry is not strong.

The Regulatory Framework in Emerging Markets

Overview. There are three key findings regarding the state of development of the regulatory framework in emerging markets. First, as already mentioned before, many emerging markets are restricting foreign ownership in their markets. However, the prevailing trend is a gradual softening of these restrictions, even in Asia where they are most prevalent. Second, the regulatory frameworks of the larger emerging markets have improved significantly in recent years, as it seems have accounting standards. However, this is a difficult area to measure progress, since a judgment would need to take into account the completeness and soundness of the legal and regulatory frameworks and effectiveness of enforcement. It is also difficult to generalize across countries with remaining concerns varying very much by region. Third, emerging markets are converging to a disclosure self regulated based regulatory framework. The self regulatory system has been adapted, however, to the particular circumstances of each country. The resulting systems range between those with primary and extensive powers to the official entity, to those with significant reliance on SROs subject to oversight by the official regulator. As described in Box 6.9, generally the influence of the state remains stronger in Asia compared to Latin America.

The Gradual softening of investment restrictions. As shown in table 6.6, emerging equity markets are not fully open, with some countries imposing restrictions on foreign investment and/or the associated foreign exchange movements. These restrictions are much more prevalent in Asia than in other parts of the developing world, in particular Latin America. Except for Malaysia and Pakistan, all other major Asian emerging markets have some form of control. Korea and Taiwan, China, who require registration procedures and impose with very tight foreign investment ceilings, seem the most closed. Notwithstanding the continued existence of controls, as discussed in chapter 2, the prevailing trend is one of gradual opening with the number of countries that can be categorized as fully open increasing sharply since 1991. In Asia, for example, the two most closed markets Taiwan, China and

Korea have relaxed their investment ceilings in 1996 and Korea has announced a program to abolish the ceilings by the year 2000.

Table 6.6 Investment Restrictions in Emerging Equity Markets (at end-1995)

	<i>Restrictions on Foreign Investment</i>		<i>Restrictions on Foreign Exchange Movements ⁽²⁾</i>	
	<i>Freedom of Entry ⁽¹⁾</i>	<i>Investment Ceilings</i>	<i>Repatriation of Income</i>	<i>Repatriation of Principal</i>
Argentina	free	none	free	free
Brazil	free	49% for common stocks, none for preferred stocks	free	free
Chile	some restrictions	none	free	after 1 year
China	only special classes of shares	none for B and H class shares	free	free
India	only authorized (institutional) investors	24% in general	free	free
Indonesia	some restrictions	49% in general	some restrictions	some restrictions
Korea	some restrictions	15% in general	free	free
Mexico	free	none	free	free
Malaysia	free	none	free	free
Pakistan	free	none	free	free
Philippines	only through B shares	40% in general and 30% for banks through B shares.	Free	free
Poland	free	none	free	free
Sri Lanka	some restrictions	49% for banks	some restrictions	some restrictions
Taiwan, China	only authorized investors	15% in general	some restrictions	some restrictions
Thailand	some restrictions	10%-49%	free	free
Venezuela	some restrictions	none	some restrictions	some restrictions

Notes: (1) Some restrictions implies that some registration procedures required to ensure repatriation rights.

(2) Some restrictions implies that registration/authorization of foreign exchange control authorities is required.

Source: IFC: Emerging Stock Markets Factbook, 1996.

Where do developing countries stand? As noted above, emerging markets have made progress in developing their regulatory frameworks. One aspect is that all the major emerging markets have in place the basic building blocks of a such a framework, for instance, they have enacted a securities law (Russia most recently) and established independent securities commissions. The latter is a relatively recent phenomena in many Asian countries where independent commissions replaced the Ministry of Finance and the Central Bank as the primary regulator of securities markets only in the early 1990s. Somewhat surprisingly, the accounting standards of many emerging markets have also strengthened considerably. Industry

Box 6.9 The Role of the State in Capital Markets in Asia and Latin America

There is a growing consensus in developing countries on what should be the role of the state in developing and regulating capital markets. At a general level, one aspect of this consensus is that the state plays a key role in creating an enabling environment for the growth of private sector activity, including in capital markets. A supportive environment includes prudent economic management, and sound and transparent legal and regulatory frameworks that protect property rights and enforce contracts. With regard to capital markets, there is also consensus that the role of the state should change from one of direct intervention in both areas of development and regulation to a more supportive and oversight role. As noted before, the plurality of emerging markets have adopted the disclosure/self regulatory model, and are at various stages in the process of gradually increasing the role of the SROs. There are, however, some important differences between Asia and Latin America.

In Asia, despite the adoption of the self-regulatory model, the role of the state in capital markets seems stronger than in industrial countries. Certain characteristics of Asian and, more generally, developing country capital markets, justify in the minds of the authorities of these markets this stronger role for the state, at least for the moment. The most important are:

- the generally more paternalistic view regarding the role of the state in economic and social development coupled with weak investor education;
- the Asian tradition of closely held family businesses that result in weak disclosure practices and the lack of protection of minority shareholder rights;
- more concentrated and financially weaker capital market intermediaries and less developed human capital among the SROs; and
- “reputational” risk: these markets are all developing and more susceptible that a “problem” in one issuer or intermediary could spill over and affect the reputation of the market more generally.

As a result, Asian SROs are generally less independent than their industrial country counterparts and have less regulatory responsibilities.

In contrast, although their markets share many of the above characteristics with Asia, Latin American securities regulators frequently have weaker powers than is commonly the case in industrial markets in critical areas such as certification of broker/dealers and exchanges and disciplining violators of trading rules. In many countries, exchanges and other SROs predate securities commission by many decades and derive their influence from special, older statutes than those establishing the commissions, and have significant political and financial influence. As a result, non-competitive practices, such as obstacles to wider membership in exchanges, inadequate capital adequacy provisions for broker/dealers, and undesirable trading practices are more common. In addition, vested interests have delayed the adoption of more modern infrastructures.

sources report that financial reporting practices (a key component of disclosure) in not a few emerging markets is based on internationally recognized standards and is as comprehensive as in the United States and the United Kingdom.⁵⁵ Studies conducted for the IASC also show that

⁵⁵ According to the International Financial Reporting Index constructed by the Center for International Analysis and Research, an investment advisor located in the United States, Chile, Malaysia, Mexico, Pakistan and Sri Lanka have reporting standards comparable to those in industrial countries. Argentina, Korea, and Thailand are also ranked relatively highly and only Brazil, India, the Philippines and Turkey show a wide gap with industrial

accounting standards in developing countries have been improving over time and are now on the whole either based or consistent with international standards.⁵⁶ These results are not inconsistent with the more negative World Bank assessments mentioned earlier since the latter refer to actual accounting practices. Accounting practices are more influenced by the lack of a sufficient number of qualified accountants and auditors, a common problem in many emerging markets, than are standards. Finally, most major emerging markets also have regulations defining disclosure standards and listing requirements.

Where the gap between developing countries and their industrial counterparts is still wide regards the more detailed but still critical aspects of a regulatory framework. For instance, although the data are not fully reliable, about one-half of the emerging markets included in table 6.7 have not established the legal and regulatory basis for compensation funds, takeovers and insider trading. Compensation funds protect investors from losses arising from the failure of broker/dealers (not market risks) while takeover rules protect the rights of minority shareholders in a target company for a takeover. More to the point, many emerging markets have not yet instituted the legal and regulatory basis for domestic institutional investors as described above in Box 6.7. In addition to these common sources of fragility, there are other rather general concerns that are shared by the regulatory frameworks of countries within the same region. As can be derived from Box 6.9, in Asian countries the common danger is over-regulation that may stifle market development and repel foreign investors. In Latin America, the danger seems to be under-regulation or lack of effective enforcement. In Eastern Europe and the CIS, the main task is to establish the basic legal and regulatory framework for capital market development.

countries. The index is constructed based on the reporting practices of major domestic corporates with regard to 85 disclosure variables.

⁵⁶ Find reference.

Table 6.7 Legal and Regulatory Initiative in Emerging markets ^{(1) (2)}

	<i>Securities Laws</i>	<i>Establishe d SEC</i>	<i>Disclosure Regulation</i>	<i>Listing Requirements</i>	<i>Insider Trading Regulation</i>	<i>Compensation Fund</i>	<i>Takeover Regulation</i>
Argentina	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Brazil	Yes	Yes	Yes	Yes		Yes	Yes
Chile	Yes	Yes	Yes	Yes	Yes	Yes	Yes
China	Yes	Yes					
India(3)	Yes	Yes	Yes		Yes		Yes
Indonesia	Yes	Yes	Yes	Yes	Yes		
Korea	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Malaysia	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mexico	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pakistan	Yes	Yes		Yes			
Philippines	Yes	Yes	Yes	Yes		Yes	
Poland	Yes	Yes	Yes	Yes	Yes		Yes
Russia	Yes	Yes					
Sri Lanka	Yes	Yes	Yes	Yes	Yes		Yes
Thailand	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Turkey	Yes	Yes	Yes	Yes			

Notes: (1) The table has been constructed from secondary sources which have not been validated by an independent search. In addition, emerging markets are undertaking new initiatives as an ongoing basis.

(2) A blank means either that the country does not have regulation in that area, or that it was not possible to establish from the secondary sources whether a country had such regulation.

(3) In India, there are listing requirements but they are solely informational.

Sources: Latin Finance various issues.
International Bar Association
ISSA.

To end this section on a positive note, it is clear that the regulatory authorities and SROs in many emerging markets are undertaking significant initiatives to be able to fulfill their regulatory responsibilities and improve enforcement. These initiatives are particularly striking in Asia. For instance, the Philippines Stock Exchange has set up new surveillance and audit departments, and, has instituted a new computerized trading system to provide the raw material for surveillance. In Thailand, the Stock Exchange of Thailand has set-up similar departments and instruments for market surveillance. At the same time, with the approval of the Securities and Exchange Act of 1992, the Securities Commission of Thailand was granted wide powers to pursue and prosecute securities offenses. These include the power to subpoena witnesses and documentary evidence, and to inspect premises and records of securities intermediaries, including bank accounts. Since the Commission is not able to prosecute, it has established a special legal unit to work jointly with the police and the courts in prosecuting securities wrongdoings. The Commission is also seeking to increase investor confidence and

reduce systemic risk by instituting capital adequacy rules based on risk factors that take into account the specific types of risks faced by security firms.

Summary and Conclusions

In the new international environment, an increasing proportion of private capital flows will be channeled through capital markets. This represents an important opportunity for developing countries to tap into large overseas pools of capital. To attract this capital, developing countries need to rapidly develop their capital markets. There is a growing consensus on the principles that should guide such reform, and rapidly evolving country experience on which policymakers can draw. Addressing the priority agenda of foreign investors will have large spillover benefits for domestic markets, and will reduce volatility and other market risks—two of the main concerns that developing countries have about increased financial integration.

Foreign investors have already made an important contribution to capital market development in the more rapidly integrating developing countries. From no foreign presence in the mid to late 1980s, the share of foreign investors in trading and market capitalization has risen sharply, and is now quite significant in most major emerging markets. Based on this impetus, developing country capital markets, especially equity markets, have made large strides: average market capitalization of 13 key emerging markets rose from 7 percent of GDP in 1985 to 43 percent in 1994; and trading activity roughly doubled during the same period. Foreign participation may also have important spillover effects on emerging markets through improved accounting and disclosure practices, corporate governance, and human capital.

Despite these benefits, however, developing countries are concerned that increased financial integration may increase volatility and the risk of bubbles. Although it is true that asset prices in emerging markets are more volatile than in developed markets, there is, in fact, little evidence that volatility increases during capital inflow episodes. But we do find evidence of a negative cross-country correlation between excess volatility and the level of market

development. Domestic capital market reforms that reduce information asymmetries and thereby promote liquidity can help reduce excess volatility, vulnerability to reversals, and inefficiencies.

Developing countries show considerable variation in the capital market attributes needed for financial integration. The most aggressive have readily responded to increased interest by the foreign investor community by pursuing rapid and wide-ranging reforms. Others are making needed reforms more slowly, while most are still in a pre-emerging stage. Table 6.8 is an index of the overall level of development of the major emerging equity markets. It is based on the three essential aspects of market development that have been the main focus of investor concerns: market infrastructure, institutional development, and market structure and liquidity. The infrastructure subindex measures the efficiency of the market in settlement and post-settlement actions; the institutional development subindex is based on the quality of financial reporting, the protection of investor rights, and the openness of the market to foreign investment; and the market structure subindex is a weighted average of desirable market characteristics such as depth, lower volatility, and level of activity, relative to an industrial country benchmark. Annex 6.3 describes how the index was constructed in more detail.

The most dynamic emerging markets, where progress has been particularly intense during the last five years, include most of high-growth Asia (Malaysia, Thailand, and Korea, with Indonesia and the Philippines not far behind), and two markets in Latin America (Chile and Mexico, with Brazil also ranking well). The East Asian markets stand out for their depth and liquidity, and because of efforts undertaken in the 1990s their market infrastructures are now equal to those in Latin America. The lagging emerging markets in the sample are in South Asia (India, Pakistan, and Sri Lanka) and China. Generally, these countries need to continue to improve their market infrastructure, as well as their institutional development. But even in the most advanced markets, the outstanding agenda is large. In the infrastructure area, for example, about 20 percent of all securities trades in Malaysia and Thailand do not settle on the contractual settlement date—four times more than in the United States.

Table 6.8 Capital Market Development in Emerging Markets ⁽¹⁾ -1995

<i>Countries</i>	<i>Sub-Index of</i>			<i>Overall Index</i>	<i>Rank</i>
	<i>Market Structure</i> ⁽²⁾	<i>Market Infrastructure</i> ⁽³⁾	<i>Institutional Development</i> ⁽⁴⁾		
Argentina	4.0	8.7	8.2	6.2	10
Brazil	5.6	9.1	7.5	6.9	7
Chile	8.4	10.0	6.6	8.3	2
China	4.1	7.6	3.9	5.0	14
India	6.1	3.8	5.2	5.3	12
Indonesia	5.9	8.1	7.5	6.9	8
Korea	6.7	8.7	7.7	7.5	5
Malaysia	8.7	8.6	9.0	8.7	1
Mexico	6.4	8.4	8.8	7.5	4
Pakistan	4.3	0.0	7.8	4.1	15
Philippine	8.5	6.3	6.2	7.4	6
Poland	4.7	7.5	7.3	6.1	11
Sri Lanka	2.9	7.0	8.2	5.3	13
Thailand	8.6	8.7	7.1	8.3	3
Turkey	4.8	9.3	8.0	6.7	9

Notes: (1) The index ranges from one to ten with higher numbers representing a higher level of market development.

See Annex 6.3

(2) Based on a weighted average of market characteristics including market capitalization, volatility, market concentration, and level of activity, relative to an industrial country benchmark.

(3) Based on measures of efficiency in settlement and post settlement actions.

(4) Based on measures of the quality of financial reporting, protection of investor rights and market openness.

Sources: IFC, *Emerging Market Factbook*, 1996.

Global Securities Consulting Services. World Bank Staff Estimates.

To close the gap, emerging markets should pursue the following policy agenda:

- *Infrastructure:* Emerging markets should implement well-synchronized comparison, clearance and settlement, and central depository systems, with the goal of meeting G30/ISSA guidelines. However, achieving the G-30 recommendation of a T+3 settlement cycle should not be at the expense of reliability. Emerging markets should also pay close attention to reducing systemic risk by developing sound links with the banking and payments systems. In addition, the risk control procedures of a central clearing agency, if such an agency is required, should meet BIS guidelines; and a central depository should be established early in integration process. The immobilization and dematerialization of securities should also be encouraged, but not mandated, since such systems require a lengthy lead time because of investor habits and legal impediments.

- *Property Rights:* The legal and regulatory framework should include two basic principles of shareholder governance: fair treatment for all shareholders, and shareholder approval of key corporate decisions. Some of these principles can be mandated in company bylaws and/or promoted through regulation; and will also spillover to emerging market firms through the increasing presence of foreign investors on their boards of directors. Also, in transition economies, it is essential to establish an independent registry so that records cannot be manipulated by management or shareholders.
- *The Regulatory Framework:* Emerging markets should adapt international best practice on disclosure (including accounting) and self-regulation to local conditions, and improve enforcement of these rules. Government regulatory functions (starting with oversight of trading activities) should be devolved to SROs as quickly as practicable, but taking into account potential conflicts of interest and the SRO's capacity.

Better infrastructure, protection of property rights and a well-conceived and enforced regulatory framework are essential to promote investor interest and liquidity, and reduce systemic risks and volatility. They are the three legs of an efficient and safe capital market, each complementing the beneficial impact of the others. Indeed, progress in only one of these areas would be difficult to achieve. For example, risk reduction measures for central clearing agencies will be effective only if backed up by legal and regulatory practices that allow counterparty risk to be transferred to third parties and the market exposure of broker dealers to be effectively monitored. Similarly, the eradication of insider trading and other illegal trading practices will be greatly facilitated by market microstructures that simplify audit trails.

Finally, emerging markets should also promote the development of domestic institutional investors that, by mobilizing significant resources, can serve as a counterweight to foreign investors and thereby assuage fears of excessive foreign presence. Institutional investors can ensure that a large pool of dedicated money will be available for bottom fishing and value picking, which will reduce the vulnerability of domestic capital markets to a rapid liquidation of assets by foreign investors. In addition, domestic institutional investors will

increase the depth and liquidity of domestic capital markets, which will enable the markets to absorb the benefits that integration can produce.

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