

The financial services industry has been subject to dramatic changes over the past decades, as a result of advances in information technology, deregulation, and globalization. These changes have reduced margins in traditional banking activities, leading banks to merge with other banks as well as with nonbank financial institutions (both at home and abroad). The forces of consolidation are also having a profound impact on the operation of securities exchanges, as well as the brokerage and asset management industries.

The last few years have witnessed an acceleration of consolidation among financial institutions in the mature markets, as documented in a recent Group of Ten (G-10) report (2001), and a similar trend is gathering momentum in emerging market financial systems. Although the same forces driving consolidation in the mature markets are at work in the emerging markets, the consolidation process in the latter shows some distinguishing features. First, while cross-border mergers and acquisitions are the exception in the mature markets, they account for a large share of the consolidation activity in emerging markets. Second, while consolidation in the mature markets has been a way to eliminate excess capacity more efficiently than bankruptcy or other means of exit, consolidation in emerging markets has been predominantly a way of resolving financial crises. Third, the authorities played a major role in the consolidation process in emerging markets, whereas the role of market forces was more dominant in the mature markets. Indeed, even when consolidation was seen as a desirable outcome, market forces appear to have often failed to deliver the desired outcome. Ownership structures, in particular family ownership, and concerns about job losses remain the main obstacle to a faster, market-driven consolidation process. Market forces are beginning to drive the consolidation process in Latin

American banking systems and, to a lesser extent, in Central Europe. In Asia, there is a relatively clear economic case for consolidation in the Hong Kong SAR and Singapore banking systems, but only limited consolidation has taken place. Some of the countries that suffered financial crises in the late 1990s are involved in a second stage of restructurings where consolidation and financial holding companies play a central role.

The forces of globalization and especially technological innovations are also transforming the securities trading industry. In response to the associated competitive pressures, exchanges in emerging markets are consolidating, liberalizing access, and deregulating brokerage commissions to maintain their competitiveness. However, barriers to entry of foreign brokerages and antiquated trading and governance structures have delayed the adaptation of some securities markets with the ensuing flight of liquidity and trading to offshore markets. In accordance with their strong equity culture, Asian countries are adjusting at a fast pace to global trends in the industry, and several stock and derivatives exchanges in the region have merged and demutualized—or are in the process of doing so. Moreover, in some aspects of e-finance, such as online trading, some Asian countries are actually among the world leaders. The major Latin American stock exchanges have suffered drastic declines in liquidity following the emerging market crises of the late 1990s and the delisting of some of the larger stocks after takeovers by multinationals. It is unclear whether existing initiatives in Latin America—including incipient efforts to consolidate and integrate exchanges—will succeed in restoring activity levels of the mid-1990s. Similarly, the decline in trading volumes in the Central European exchanges has led some analysts to question whether every country should have a stock exchange. The exchanges in most emerging markets are involved

in discussions to form regional and even global exchanges, but merger talks have not yet produced tangible results.

Private pension fund managers have also experienced a substantial degree of consolidation, especially in Latin America. The dynamic behavior of this segment of the industry contrasts sharply with the relative stagnation of the securities markets and poses some important challenges.

The consolidation of financial institutions is driven by attempts to exploit economies of scale and scope, and technological advances such as the Internet are making it easier to reap such economies. Although the empirical evidence on economies of scale and scope is elusive, it appears that with recent technological improvements, relatively small-scale banks in emerging markets are likely to improve their cost and revenue efficiency by consolidating and achieving a larger size and scope of activities. Most banks in emerging markets are following the universal banking paradigm and are increasing the share of revenues obtained through the sale of securities, mutual funds, and insurance products. The Internet is a powerful distribution channel for these products, and most leading banks in emerging markets are rolling out some sort of e-banking offerings. Although penetration rates are relatively lower than in the mature markets, analysts see prospects of steady growth in the area of e-banking.

The increase in concentration derived from the consolidation process has raised concerns about market power in the provision of financial services. However, there is not necessarily a one-to-one relationship between concentration and market power, and some of the forces driving the consolidation process—such as increased foreign bank entry—are also intensifying competition. Some evidence on the evolution of competitive conditions in some of the major emerging markets suggests that, with a few exceptions, the level of consolidation achieved so far does not appear to have reduced the level of competition.

Following this introduction, the next section analyzes the main patterns and causes of finan-

cial consolidation in emerging markets—including banking systems, the securities industry, and private pension funds. The empirical evidence on economics of scale and scope in mature markets is contrasted with that in emerging markets in the second section, with a discussion on the role of the Internet. The third section focuses on the consequences of consolidation on market power and the competitive conditions of the financial services industry. Finally, the trend of consolidation in emerging markets raises a number of policy issues, including the relevance of market discipline and adequate exit policies for institutions in distress, the importance of consolidated supervision and the architecture of supervisory agencies, the systemic risks derived from a more concentrated industry, and the rising importance of consumer protection associated with potential increases in market power and privacy concerns. These policy issues are discussed in the chapter's final section.

Patterns and Causes of Financial Sector Consolidation

The consolidation of financial systems in the major emerging markets is proceeding at a fast pace, as the authorities and market participants see consolidation as key to remaining competitive in a fast-changing and increasingly global financial services industry. Banks are merging with other banks as well as with other securities and insurance firms to exploit economies of scale and scope. Liberalization of commissions and online trading are leading to a shakeout in the brokerage industry, while stock and derivative exchanges merge and engage in cross-border alliances. The development of private pension systems in Latin America and Central Europe has created an incipient industry that is also consolidating at a fast pace.

Banking System Consolidation

The main forces encouraging consolidation in mature market banking systems—namely globalization, advances in information technology, and

deregulation—as well as those discouraging it—lack of information and transparency, different regulatory frameworks, ownership structures, and cultures—are also at work in emerging markets.¹ However, these factors combine in different proportions across countries and form patterns of consolidation that differ somewhat from those in the mature markets.

The most notable difference between the consolidation process in mature versus emerging markets is the overwhelming cross-border nature of mergers and acquisitions (M&As) in the latter.² In particular, as noted in the G-10 (2001) study, cross-border merger activity in continental Europe and also between U.S. and European institutions has been more the exception rather than the rule. In contrast, the staggering increase in foreign ownership of emerging market banks has continued during 2000 and the beginning of 2001, with major advances in Brazil, the Czech Republic, and Mexico. In several Latin American and Central European countries, foreign banks are in the process of integrating previous acquisitions with some of the larger banks bought in the late 1990s. Analysts expect some foreign banks who do not reach market shares above 2–3 percent to exit the market in the near future. Also, the merger of parent banks in the mature markets is spilling over to the local banking environments in both regions, accelerating the consolidation process and contributing to the creation of large dominant institutions. These global mega-mergers have also raised some concerns about the potential implications for the liquidity of international (emerging) bond markets (see Box 5.1).

Another difference is the more important role played by the authorities—and the smaller role played by market forces—in the financial sector consolidation process of emerging markets. In the mature markets, consolidation has been seen

as a way to eliminate excess capacity more efficiently than bankruptcy or other means of exit, as it allows preservation of some of the preexisting franchise value of the merging firms.³ In emerging markets, consolidation has been predominantly a way of resolving problems of financial distress, and the authorities have played a major role in that process. As a result of implicit or explicit deposit guarantees, the banking authorities have usually intervened in troubled institutions and then sold them back to the private sector—as whole institutions or in purchase and assumption transactions. The strengthening of regulatory requirements has also highlighted inefficiencies and generated higher costs for medium- and small-sized banks that are feeling increasing pressures to sell, merge, or exit the market. However, even when consolidation was seen as a desirable outcome—during normal times or as a second stage of the crisis resolution process—market forces appear to have often failed to deliver the desired outcome.

Ownership structures, in particular family ownership, and concerns about job losses remain the main obstacles to a faster, market-driven consolidation process—except for the banking systems in the transition economies.

In most emerging markets, local banks started as family-owned institutions that in many cases became parts of industrial conglomerates. This ownership structure has at times combined with economic and prudential regulations to provide franchise value to institutions that would otherwise be taken over or liquidated. It is generally accepted that family businesses tend to be bigger and last longer in economies with less developed primary and secondary capital markets. Bhattacharya and Ravikumar (2001) show that the size and duration of family-owned firms is positively related to the spread between borrowing and lending rates as well as to the discount

¹See G-10 (2001), Chapter III, for a survey of the main causes of consolidation in industrialized countries.

²Since the extent and consequences of foreign ownership in emerging market banking systems was analyzed extensively in last year's *International Capital Markets Report* (see IMF, 2000, and also Mathieson and Roldós, 2001), only a few additional issues relevant to the consolidation process are dealt with in this year's report.

³See Berger and others (1999).

Box 5.1. Bank Mega-Mergers and Capital Flows to Emerging Markets

The wave of bank mega-mergers in mature economies has raised fears about the potential impact of these mergers on lending volumes and the liquidity of emerging debt markets.¹ The most direct effect may stem from market power: larger banks may seek to reduce lending volumes and increase spreads. Analysts have also noted that smaller issuers may find it more difficult to capture the attention of ever bigger underwriters.² Similarly, some market participants have argued that institutions that used to be focused on and committed to providing liquidity are now part of larger institutions that have broader objectives and may devote less capital to market-making activities. Another natural consequence of consolidation is that the spectrum of views about market developments shrinks, possibly lowering trading volumes. However, neither existing theory nor evidence supports a strong connection between current levels of consolidation and reductions in market liquidity during normal times.³ It may be different in crises times, and the events of the autumn of 1998 suggest that the shrinkage in the amount of capital dedicated to market-making and/or the withdrawal of large institutions from that function may cause major financial disruptions.⁴

The Latin American international bond market has been particularly affected by the merger of some of the region's major underwriters and hence provides a good case study to analyze the impact of increased consolidation in emerging market debt deals. As an illustration of how consolidation affected banks' participation in this market, a simple comparison is carried out in the first table. First, actual market shares in total bond issuance are shown for 1997 and 2001. For example, J.P. Morgan's share in 1997 was 13 percent, followed by Goldman Sachs at 9 percent, and Merrill Lynch at 8 percent. Second, hypothetical market shares were computed by assuming that all mergers carried out between end-

Leading Underwriters in the Latin American International Bond Markets

Bank	Bond Value in Millions of U.S. dollars	Total Market Share	Cumulative Market Share
1997 Actual			
1. J.P. Morgan	7,299	0.13	0.13
2. Goldman Sachs	5,052	0.09	0.22
3. Merrill Lynch	4,764	0.08	0.3
4. Chase	4,592	0.08	0.38
5. Credit Suisse First Boston	3,012	0.05	0.43
6. Salomon Brothers	2,582	0.04	0.48
7. UBS Securities Inc.	2,531	0.04	0.52
8. Deutsche Bank	2,280	0.04	0.56
9. Morgan Stanley	1,929	0.03	0.59
10. Citi	1,786	0.03	0.62
Hypothetical 1997 at 2001 Consolidation			
1. J.P. Morgan	11,891	0.21	0.21
2. Goldman Sachs	5,052	0.09	0.3
3. Merrill Lynch	4,779	0.08	0.38
4. Salomon Smith Barney	4,383	0.08	0.45
5. UBS Warburg	4,222	0.07	0.53
6. Credit Suisse First Boston	3,202	0.06	0.58
7. Deutsche Bank	2,808	0.05	0.63
8. Morgan Stanley	1,929	0.03	0.67
9. ING Barings	1,424	0.02	0.69
10. Fleet Boston	1,093	0.02	0.71
2001 Actual (until May 2001)			
1. J.P. Morgan	2,366	0.14	0.14
2. Goldman Sachs	1,895	0.11	0.26
3. Morgan Stanley	1,613	0.1	0.36
4. Merrill Lynch	1,390	0.08	0.44
5. Bear Stearns	832	0.05	0.49
6. Salomon Smith Barney	826	0.05	0.54
7. Credit Suisse First Boston	730	0.04	0.58
8. ABN-AMRO Bank NV	542	0.03	0.62
9. BNP Paribas	522	0.03	0.65
10. Nomura Securities	429	0.03	0.67

Note: Includes only hard currency bond issuances. "Hypothetical 1997 at 2001" consolidation assumes that all mergers carried out between end-1997 and May 2001 had already taken place by January 1997. Ranking is based on bank participation in any role (bookrunner, lead manager, co-lead manager, co-manager). Data for 1997 are calculated from the disaggregated tables provided by Bondware by adding the volumes of all individual entities belonging to the same group.

Source: Bondware.

1997 and May 2001 had already taken place in 1997 and by simply adding up volumes issued by each merged institution. For example, as a re-

¹See, for instance, IMF (2001).

²See Ward (2000).

³See G-10 (2001), Annex III.3.

⁴See, for instance, IMF (1998).

Box 5.1 (concluded)

sult of the J.P. Morgan/Chase merger, the share of the merged bank would have been 21 percent in 1997. Finally, market shares for the first four months of 2001 were compared to the hypothetical shares of merged institutions in 1997. If bank mergers result in a reduction of lending by the merged institutions, one should observe (other things equal) a drop in the market share of the new bank relative to the sum of the market shares of the pre-merger banks. To some extent, this is visible in the 2001 data: the share of J.P. Morgan/Chase in total loan volumes drops from the (hypothetical) 21 percent in 1997 to 14 percent in 2001, while the share of Salomon Smith Barney/Citigroup falls from 8 percent to 5 percent.

A similar result could be inferred from measures of concentration, which confirm that concentration has not increased as much as the size of the mega-mergers would have suggested. The total market share of the top three underwriters only increased moderately, to 36 percent in 2001, compared to 30 percent in 1997. Note that these market shares are much lower than bank deposit market shares in local bank markets (see Table 5.2). Similarly, another measure of concentration, the Herfindahl-Hirschmann (HH) index for the top ten banks, increases only moderately, from 1,222 in 1997 to 1,319 in 2001, compared to a hypothetical index value of 1,514 for 1997 based on 2001 consolidation.

These results suggest that there has not been a substantial decline in competitive conditions in Latin American bond markets. Some banks that do not have a global presence, but seek to increase their regional strength, are said to be filling the gaps created by the big mergers. Also, fees have not increased noticeably so far, indicating that competition among banks remains strong.⁵ It may be too early, however, to fully assess the ultimate impact of these mergers on lending. Other, more anecdotal evidence indicates that fears about the regional liquidity impact of consolidation may have been excessive,

⁵See Kilby (2000) and Barham (2001).

The Largest Lenders in the Asian Syndicated Loan Market

Bank	Loan Volume in Millions of U.S. dollars	Total Market Share	Cumulative Market Share
2000			
Bank of China	1,908	0.07	0.07
Barclays	1,679	0.06	0.12
HSBC	1,648	0.06	0.18
Mizuho	1,589	0.05	0.23
Citigroup, Inc.	1,142	0.04	0.27
ABN-AMRO Bank NV	1,035	0.04	0.31
Standard Chartered Bank	954	0.03	0.34
BNP Paribas	731	0.02	0.36
Credit Lyonnais	731	0.02	0.39
Sumitomo Mitsui Banking Corp.	685	0.02	0.41
Jan. 1–May 8, 2001			
HSBC	580	0.06	0.06
Mizuho	571	0.06	0.13
Bank of China	527	0.06	0.18
Barclays	525	0.06	0.24
Standard Chartered Bank	520	0.06	0.3
J.P. Morgan	449	0.05	0.35
Bayerische Landesbank Industrial & Commercial Bank of China	340	0.04	0.43
Bank of East Asia	340	0.04	0.47
Commerzbank AG	304	0.03	0.5

Source: Loanware. Includes only hard-currency-denominated loans. Ranking is based on bank participation in any role.

but a study of the impact on liquidity would require a more thorough study of secondary market conditions.

Another example of how bank consolidation may affect capital flows to emerging markets is given by the Asian syndicated loan market (see the second table). As a result of recent bank mergers, the number of active players has been reduced. Of those remaining, many appear reluctant to join deals as second- or third-tier participants.⁶ Indeed, although syndicated lending volumes to Asia were higher in 2000 than in 1999, they declined in the first quarter of 2001. It is difficult to disentangle the effects of consolidation from other factors, however. For exam-

⁶See *IFR* (2001).

ple, some banks have been changing their strategies, focusing on specific industries or other regions. Fears of risks associated with an economic slowdown in the United States seem to have contributed to a cautious attitude toward lending to Asia (see Chapter III). Spreads are relatively low, reducing banks' appetite within a context of a withdrawal from "relationship" lending—an approach that justifies low

spreads on bank loans as part of a bigger, more profitable package of financial services offered to clients.⁷ In all, concentration measures in the second table do not suggest a major change in competitive conditions in the syndicated loans market either.

⁷See *IIR* (2001) and IMF (2001).

of initial public offerings—two factors that are particularly relevant in emerging market banking systems where transparency is low and asymmetric information problems are large.⁴ Also, barriers to entry and regulations such as administered interest rates make profitable banks that would have no economic value in the absence of such regulations, and deficiencies in prudential regulation sometimes tend to perpetuate such inefficiencies.⁵ Moreover, only a few banks are publicly listed in emerging market banking systems, and this makes takeovers—both friendly and hostile—difficult to carry out (see Table 5.1).

Technological change and the wave of mergers and acquisitions has led to a sizable cut of employment in the financial sector worldwide. In several emerging markets, this trend has been reinforced by the need to restructure banking systems affected by crises in the second half of the 1990s, creating difficult trade-offs for the parties involved in the sector. The authorities in some emerging markets have asked acquiring institutions to try to minimize the negative employment implications of their transactions, and in some cases they have reached agreements on a time frame for employment freezes. This may

have hindered market-driven M&As in some cases, but it does not appear to have been a major constraint in countries where a low level of bank penetration ensures rapid credit growth in the near term.

Although the factors driving the consolidation process combine in different proportions for each country, there are some discernible patterns of consolidation across regions. These patterns can be summarized by a number of indicators, some of which are presented in Table 5.2 for a sample of selected emerging markets in 1994 and 2000. The indicators are the number of banks in each country, the share of deposits of the largest banks, and the Herfindahl-Hirschmann (HH) index. The HH index is a standard measure of consolidation in any industry and it is defined as the sum of the squared deposit market shares of all the banks in the market. By construction, the HH index has an upper value of 10,000 in the case of a monopolist firm with a 100 percent share of the market; the index tends to zero in the case of a large number of firms with very small market shares. A market with ten firms with equal shares would have an HH index of 1,000, but an uneven distri-

⁴Yoshitomi and Shirai (2001) note that commercial banks in Indonesia, the Republic of Korea, and Thailand are often owned by family businesses under family-controlled conglomerates. Claessens, Djankov, and Lang (1999) document that smaller, as well as older, corporations in Asia are family-controlled. Family control is generally enhanced through pyramid structures, cross-shareholdings, and deviations from one-share-one-vote rules.

⁵Rajan and Zingales (1998) argue that, in the past, some Asian governments protected commercial banks by setting the maximum rate on deposits; when this policy was no longer feasible under deregulation and intensified competition, then governments protected banks through explicit or implicit guarantees and barriers to entry, increasing the banks' franchise value.

Table 5.1. Bank Stocks in Selected Emerging Markets
(December 2000)

	Market Capitalization		Number of Listed Companies		Total Number of Banks
	In billions of U.S. dollars	Ratio to GDP (%)	Total	Banks	
Asia					
Republic of Korea	171.6	37.5	1,308	23	43
Malaysia	116.9	130.9	795	24	66
Philippines	51.6	68.6	230	9	45
Thailand	29.5	24.2	381	17	34
Latin America					
Argentina	166.1	58.3	127	4	113
Brazil	226.2	38.5	459	13	193
Chile	60.4	86.3	258	7	29
Mexico	125.2	21.8	179	4	23
Central Europe					
Czech Republic	11.0	22.1	131	4	42
Hungary	12.0	24.2	60	1	39
Poland	31.3	19.4	225	10	77
Turkey	69.7	34.4	315	8	79

Sources: Bloomberg Financial Markets L.P.; Fitch IBCA; Standard and Poor's Emerging Markets Database; and national supervisory authorities.

bution of market shares may affect the index substantially.⁶ The regional patterns of consolidation are described in the next subsections.

Asia

The pattern of bank consolidation in the financial centers of Hong Kong SAR and Singapore is markedly different from that of other countries in the region, as banks in the two city-economies came out of the crises relatively unscathed and the authorities are allowing market forces to shape the structure of the industry. The immediate task of crisis resolution in the Republic of Korea and Malaysia led to some degree of consolidation, but the authorities in both countries are pushing a second stage of reforms where consolidation plays a central role.

For a number of years, the Hong Kong SAR and Singapore authorities have openly advocated the need for consolidation of their banking systems, but only limited consolidation has taken place.⁷ They argue that there are a number of reasons why market forces have not delivered a faster consolidation. First, banking sys-

tems in the two financial centers have emerged relatively unscathed from the recent crises, owing partly to their well-developed supervisory and regulatory systems. Second, the banks are relatively well-capitalized and their profitability has improved markedly during the last year. Third, many medium- and small-sized banks are family-owned and this makes takeovers difficult to carry out. Finally, despite their public advocacy of consolidation, the authorities want market forces to operate freely and do not want to force the consolidation process.

Several recent developments, however, are likely to lead to greater consolidation of the Hong Kong SAR and Singapore banking systems. Both economies are encouraging the development of asset management activities as part of their efforts to remain world-class financial centers and the larger banks are likely to be the main beneficiaries of this development. Asset management and distribution of unit trusts/mutual funds is a business with significant economies of scale and the largest banks are viewed as having an edge in these activities. As a

⁶See Cetorelli (1999) for examples of how the HH index varies with different patterns of large and small banks.

⁷Hong Kong SAR and Singapore are not included in Table 5.2 because Fitch IBCA's database does not distinguish between domestic and offshore deposits, making the definition of the domestic deposit market rather difficult.

Table 5.2. Number of Banks and Market Concentration in Selected Emerging Market Banking Systems¹

Country	Number of Banks ² (1994)	1994 Share in Total Deposits (in percent)			Number of Banks ² (2000)	2000 Share in Total Deposits (in percent)		
		Three Largest Banks	Ten Largest Banks	HH Index (1994)		Three Largest Banks	Ten Largest Banks	HH Index (2000)
Asia								
Republic of Korea ³	30	52.8	86.9	1263.6	13	43.5	77.7	899.7
Malaysia	25	44.7	78.3	918.9	10	43.4	82.2	1005.1
Philippines	41	39.0	80.3	819.7	27	39.6	73.3	789.9
Thailand	15	47.5	83.5	1031.7	13	41.7	79.4	854.4
Latin America								
Argentina	206	39.1	73.1	756.9	113	39.8	80.7	865.7
Brazil	245	49.9	78.8	1220.9	193	55.2	85.6	1278.6
Chile	37	39.5	79.1	830.4	29	39.5	82.0	857.9
Mexico	36	48.3	80.8	1005.4	23	56.3	94.5	1360.5
Venezuela	43	43.9	78.6	979.2	42	46.7	75.7	923.1
Central Europe								
Czech Republic	55	72.0	97.0	2101.5	42	69.7	90.3	1757.8
Hungary	40	57.9	84.7	1578.8	39	51.5	80.7	1241.2
Poland	82	52.8	86.9	1263.6	77	43.5	77.7	899.7
Turkey	72	40.7	79.1	957.2	79	35.9	72.0	710.2

Source: IMF staff estimates based on data from Fitch IBCA's BankScope and official data.

¹Analysis is based on data available as of end-2000 for the 30 largest banks in a specific country, including M&As; data on deposits are as of end-1999 or most recent available in Fitch IBCA's BankScope.

²The number of banks is based on official data provided by country authorities, the OECD, or Fitch IBCA. In Asia, the total number of banks in a specific country includes only domestic commercial banks.

³Includes the merger between Kookmin and Housing & Commercial Bank, as well as the merger between Shinhan and Cheju Bank.

result of the Singaporean authorities' decision to allow individuals to invest a portion of their Central Provident Fund (CPF) savings in low-risk mutual funds, the major banks expect strong revenue growth from the distribution of these products.⁸ Similarly, Hong Kong SAR's banks have obtained two-thirds of the Mandatory Provident Fund (MPF) licenses to provide asset management services and the two largest banks have already signed up approximately 60 percent of the registered employees. To achieve some economies of scale, a group of ten small banks have created a consortium to jointly develop an MPF operation. Some analysts see this as a prelude to future mergers.

The deregulation of interest rates and the forthcoming consolidation of the Bank of China Group, the second largest group in Hong Kong SAR, are likely to put further pressure on the smaller Hong Kong SAR banks. The liberaliza-

tion of interest rates on savings deposits, scheduled for June 2001, will raise the costs of a source of funding that has been particularly important for the smaller banks. However, analysts expect that the introduction of explicit deposit insurance some time next year will be of greatest benefit to the smaller banks. The Bank of China Group's plans to consolidate its 11 "sister banks" (four of which are incorporated in Hong Kong SAR and seven in China) and develop its unexploited retail franchise in the SAR are likely to increase the competitive pressures on second-tier banks and stimulate further consolidation.

The Malaysian authorities have been trying to induce the consolidation of the banking system since the early 1990s with limited success. The effects of the financial crisis of 1997–98, however—combined with the potential opening up of the financial services industry in the context of the forthcoming World Trade Organization (WTO)

⁸Analysts also believe that the divestment of nonfinancial assets would lead to the consolidation of the five existing banks into two or three entities (see below).

round of negotiations—have led the authorities to take a more proactive role and speed up the consolidation process. The authorities have argued that, while the economic case for consolidation is clear, market forces alone are unable to bring about a significant degree of consolidation for reasons quite similar to those expressed in Singapore and Hong Kong SAR. To jump-start the consolidation process, the authorities announced in July 1999 that 54 commercial banks, merchant banks, and finance companies would be consolidated into groups associated with six “anchor” banks. Bankers and investors took issue with the original plan and, in October 1999, the banks and finance companies were allowed to decide voluntarily with whom to merge. Ten core groups have emerged and completed—with one exception—the legal aspects of the mergers. The economic logic of the merger program now seems to be widely accepted among participants⁹ and some of them believe that the “shock” derived from the somewhat extreme early plan was useful to kick-start the process. Bank stocks generally fell with most announcements related to the merger program, however.

Two basic structures emerged from the consolidation process, and analysts expect further consolidation into perhaps five entities. The first structure involved a big bank taking over a group of smaller banks, whereas the second structure involved the merger of a group of mid-sized banks to form a large institution. The primary advantage of the first structure was seen as the creation of a larger branch network. The gains derived from the grouping of mid-sized banks are less clear-cut, especially since there is an agreement that no labor retrenchment will take place for a period of 12 months. Some of

the banks are resorting to voluntary separation schemes to shed labor, but this is nevertheless costly and will delay the realization of cost savings. Analysts believe that the size of the five smaller groups is still insufficient to create institutions that are regionally competitive and that further voluntary consolidation is likely. Indeed, Table 5.2 suggests that, despite the large fall in the number of banks, the HH index increased by a small margin, to just above 1,000.

The Korean authorities have also taken an active role in the consolidation process and have recently initiated a second stage of financial restructuring with the enactment of a Financial Holding Company (FHC) Act. The first stage of financial restructuring provided substantial consolidation of the industry, bringing the number of banks to 17 by end-1999, down from 27 before the crisis. This stage was also accompanied by substantial downsizing and employment was reduced by about one-third with a number of branch closures. With the inclusion of the mergers announced so far as a result of the second stage, the HH index would increase by more than 200 points, to 838 (see Table 5.2). The main objectives of the FHC act are to introduce a sort of universal banking and to tackle the problem of overbanking, but the consolidation process is seen as increasingly dominated by employment considerations.

The Korean authorities set up the first FHC, comprising five commercial banks (including the second-largest) and one merchant bank, in April 2001. Analysts saw this FHC as a vehicle for the government to restructure weak banks and many have cited the authorities’ agreement with the labor unions that there would be no major layoffs as the main motivation behind the FHC.¹⁰ The

⁹The objectives of the Malaysian authorities were clarified with the publication in March 2001 of a Financial Sector Master Plan (FSMP). The FSMP charts the future direction of the financial sector for the next ten years and states that the main objective of the first phase is to develop a core set of strong domestic banking institutions, to be followed by a phase that levels the playing field with the incumbent foreign players and a final one that allows further foreign competition (see Bank Negara Malaysia, 2001).

¹⁰Analysts noted that, contrary to some of the post-crisis mergers, the presence of foreign investors with relatively large stakes in some Korean banks prevented the merger of good and bad banks in this second stage of banks restructuring (see Leighton, 2000). Shih (2000) shows that merging two weakened banks or one weak bank with one healthier one could increase the likelihood of failure of the resulting entities.

merger between two large and sound private retail banks (Kookmin Bank and Housing and Commercial Bank) makes more economic sense, but the banks' CEOs have stressed that there will be no need to reduce significantly the number of branches or employment and that there would only be a gradual downsizing as a result of early retirement programs. Indeed, they mentioned that previous mergers in the Republic of Korea have failed because they had tried to cut drastically the organization's branch network and staff without taking into consideration a customer retention program.¹¹ Other private banks are also studying the desirability of creating FHCs.

Latin America

The process of bank consolidation is more advanced in Latin America, as a result of the earlier occurrence of crises and foreign bank entry. Although there was substantial government involvement in bank consolidation in the aftermath of crises, the latter part of the 1990s shows a relatively larger role of market-driven transactions.

The role of the public and private sectors in the consolidation process is best exemplified in the cases of Argentina and Brazil. In both countries, the authorities carried through a process of guided consolidation that has dramatically reduced the number of banks (see Table 5.2). Analysts and bankers praise the approaches followed by both central banks during the 1990s, which separated troubled banks into good and bad banks and sold the former with the aid of subsidized loans. They also recognize that the authorities used moral suasion to persuade acquirers of failed banks to keep as many personnel as possible, but note that this was not a major issue because of the small size of the failed institutions.

But the consolidation process was not driven by just the privatization and restructuring processes: at least 37 M&A transactions involving

private sector financial institutions occurred in Brazil between end-1995 and end-2000.¹² Several of these transactions were driven by the three largest domestic private banks' attempts to remain competitive in the main regions of the country, as well as the perception by many medium and small banks that they would not be able to sustain positive earnings in such a competitive environment, especially in the wake of a few large foreign acquisitions. In Argentina, the five largest private banks have been the major winners of the consolidation process and they have increased their market share by more than 10 percentage points (from 31.8 to 42.3 percent) through a combination of organic growth and acquisitions. However, analysts note that both markets continue to be fairly segmented and that the next stage of consolidation would be driven mostly by market forces that would cull out the smaller, unprofitable banks.¹³ Some analysts think that, in particular in Argentina, the fact that only a few banks are listed on the local stock exchange will hinder a much needed M&A process. Interestingly, some foreign banks with market shares under 2–3 percent are expected to exit the market in the near future.

Chile's banking system has undergone a gradual but steady process of consolidation that has accelerated recently. The merger in Spain of Banco Santander and Banco Central Hispano in 1999 meant that the resulting institution (BSCH) acquired control of the two largest banks in Chile (Santiago and Santander) that jointly had a deposit market share of around 27 percent. This agreement set off an intense congressional debate over the potential damage to Chilean banking competition resulting from the concentration of more than one-fourth of the system loans and assets under a single financial group. The HH index in Table 5.2 does not show an important increase by end-2000 as the two institutions have not technically been merged and continue to operate as individual

¹¹See Wright (2001).

¹²See Abut, Bigio, and Mullen (2000).

¹³See Abut, Bigio, and Mullen (2001).

entities. If their balance sheets were to be combined, however, the HH index would reach around 1,235.¹⁴ The competitive balance of the industry has been enhanced by a more recent merger among two domestic institutions (Banco Edwards and Banco de Chile), to be completed by year-end, that would bring the HH index to around 1,465.

In Mexico, the consolidation process is more advanced, and the three largest banks hold almost 60 percent of total deposits. The HH index increased by 355 points, from 1,005 in 1994 to 1,360 in 2000, the largest increase for all Latin American banking systems covered in Table 5.2.¹⁵ This increased concentration is due mostly to the sale of the second and third largest banks to the two largest Spanish banks, which are currently merging previous acquisitions in the country with the larger banks acquired after 1999. Indeed, BBVA-Bancomer is the result of the consolidation of six banks that were in existence in 1994.¹⁶ The sale of Bancomer to the Spanish group Banco Bilbao Vizcaya Argentaria (BBVA), together with that of Brazil's Banco Real to ABN-Amro, was considered a hallmark of the demise of dominant family ownership in Latin American banking systems.¹⁷ There was also consolidation among the local banks, as exemplified by the strong organic growth and acquisitions of Banorte, which increased its market share from 2.5 percent of total deposits in 1994 to 7.1 percent in 2000. Notably, the sharp fall in employment in the banking sector in Mexico (from 126,852 employees in December 1994 to 90,198 by September 2000—a 29 percent decline) was met with little resistance, in part owing to the protracted nature of the restructuring and consolidation process. The fall in employment is still

less than the decline in lending activities and bankers have announced that more staff cuts will follow. Analysts still see scope for further consolidation, albeit at a smaller scale and concentrated among a few second-tier banks.

Central Europe

The major banking systems in Central Europe were much more concentrated than those of other emerging markets in the early 1990s and the second half of the decade saw a reduction in concentration. Several factors explain this trend of a high level of concentration (when HH indices for the three countries were above the 1,200 level), followed by the evolution toward a less concentrated industry. First, there was the direct legacy from the pre-market-reform era, which led to the creation of large state owned savings banks concentrating a large share of deposits. Second, all three countries pursued liberal entry policies and a large number of new banks entered the markets in the first half of the 1990s. Although entry policies were tightened significantly in the wake of difficulties experienced by some private banks by the mid-1990s (especially in the Czech Republic), several of the new entrants remained and gained market share from the larger, inefficient state-owned banks. Third, the state-owned banks suffered a sharp reduction in market share partly as a result of clean-up operations before their privatization to strategic (and mostly foreign) investors in the second half of the 1990s.¹⁸

A consolidation trend has gradually begun to take hold in the region, from 2000. Although the region is underbanked in terms of banking assets and deposits, analysts estimate that it is overbanked as far as the number of banks is con-

¹⁴See Abut, Bigio, and Mullen (2001).

¹⁵Abut, Bigio, and Siller (2000a) and Abut, Bigio, and Mullen (2001) show somewhat higher figures for the HH indices, a result of a different sample of banks and different accounting conventions, but their results suggest the same qualitative pattern. As was noted in IMF (2000), Fitch IBCA makes an effort to adjust individual bank accounts for differences in reporting and accounting standards, and puts the accounts into a standardized global format.

¹⁶See Naranjo (2000).

¹⁷See Vansetti, Guarco, and Bauer (2000).

¹⁸For example, the share of deposits of Ceska Sporitelna (the Czech savings bank) in total deposits fell from 31 percent in 1994 to 21 percent in 1999.

cerned (see Table 5.2). The consolidation trend will be driven by stronger banks being forced to absorb weaker ones to ensure continued stability, by shareholders that decide to exit the market, and by mergers of the parent companies of a large number of the foreign banks that are established in the region. The year 2000 saw examples of each of these developments. The takeover of Investicni a Postovni Banka (IPB) by Ceskoslovenska Obchodni Banka (CSOB) in the Czech Republic—an example of the first phenomenon¹⁹—has catapulted the former trade bank to the leading position with almost 30 percent of bank deposits. As a result of a major rationalization of its global network, Dutch giant ABN-Amro decided to exit the Hungarian market and sold its retail operation to Kereskedelmi es Hitelbank (K&H), which became the second-largest bank behind the dominant OTP (National Savings and Commercial Bank of Hungary). Finally, the merger between Germany's HypoVereinsbank and Bank Austria, two foreign banks with a large presence in the region, is driving the consolidation of their respective Polish banks subsidiaries.

The banking system in Turkey is highly fragmented, but this is likely to change in the near term as part of the resolution of the current banking crisis. The HH index is the lowest in the sample of countries considered in Table 5.2, and it has fallen since 1994 as a result of both a decline in the position of the four large state owned banks and the rapid increase in the number of medium- and small-sized private banks. The number of private banks increased from 72 in 1995²⁰ to 79 in 1999, and banks expanded their activities under the umbrella of a full deposit guarantee instituted after the 1994 banking crisis. In December 1999, the Saving and Deposit

Insurance Fund (SDIF) took control of five medium-sized banks—following similar actions against two other banks in previous years—that had been experiencing difficulties for some time. In October 2000, the SDIF took control of two other banks, followed by a few others in early 2001. Of the thirteen banks taken over by the SDIF since 1997, four have already been closed and are being absorbed by a first transition bank, four more are expected to be closed and absorbed by a second transition bank, and three more are in the process of being sold. The two transition banks are expected to be sold, put into liquidation, or otherwise resolved by end-2001.

Consolidation of Brokerages and Exchanges

The past decade has seen an enormous transformation in the securities trading industry, driven partly by rapid technological innovation and the globalization of finance. The automation of trading systems, led by the European exchanges and U.S. “electronic communication networks” (or ECNs), combined with the growth of online trading, has led to significant declines in trading costs, massive increases in turnover, internationalization of trading and settlement systems’ operations, and major reform in the structure and governance of securities exchanges. Reductions in trading costs, in turn, reduced the cost of raising equity capital²¹ and shifted issuance and trading activity to lower cost centers.

In response to the forces of globalization and technology, exchanges in emerging markets also are consolidating, liberalizing access, and deregulating brokerage commissions to maintain their competitiveness. However, barriers to entry of foreign brokerages and antiquated trading and

¹⁹A controlling interest in IPB was sold to Nomura Securities in 1998. However, Nomura reportedly regarded its stake in IPB as a portfolio investment and, apart from the sale of IPB's stronger assets, engaged in little restructuring of the bank. As IPB's performance continued to deteriorate, a “quiet” run on its deposits began (its deposits declined by about 50 percent in the first half of 2000) and the Czech National Bank (CNB) was forced to intervene in order to prevent a systemic crisis.

²⁰There were 55 applications (mainly from industrial groups) pending approval by the Treasury at end-1995, but only a few were approved (see Fitch IBCA, 1996).

²¹See Domowitz and Steil (1999).

governance structures have delayed the adaptation of some securities markets—with the ensuing flight of liquidity and trading to offshore markets. In particular, the fact that many exchanges are member-owned has been considered as a factor that tends to obstruct the technological evolution toward electronic trading.²² As with the banking systems, there are some regional patterns of consolidation in the major emerging market stock exchanges and brokerage industries.

Asia

In line with global trends in the industry, the stock and derivatives exchanges of Hong Kong SAR have merged and demutualized, as have the exchanges in Singapore. Other countries in the region are following their lead.²³ In Singapore, the consolidation of the stock and derivatives exchanges has exploited the complementarities of the domestic client base of the former with the more international customer base of the latter. Economies of scale are already being realized through the integration of support functions and human resources. The merged institution was demutualized, a decision seen as critical to the ability to respond to the challenges posed by the rapid transformation of the securities industry. Moreover, shares were offered not only to the exchanges' members, but also to banks and institutional investors that are seen as contributing their expertise to a more flexible organizational structure. In Hong Kong SAR, the exchanges went a step further and also merged with the clearing system. A three-pronged reform program introduced in 1999 led to the establishment of the HKEx in March 2000, a fully electronic, web-friendly trading infrastructure

that will be in place by end-2001, and the tabling of a new law in November 2000. The development strategy of the consolidated exchanges has included alliances with several other exchanges in the region and the introduction of new products. Following the trend, the Philippines Stock Exchange recently announced it would demutualize and seek a listing on its own exchange and the Malaysian authorities have announced plans to do the same in 2002–03. The establishment of a regional exchange is not likely in the near future.

The liberalization of commissions, together with the expansion of banks' activities to retail brokerage and the competition from foreign brokerages and online trading, are leading to a rapid consolidation of the brokerage industry, especially in Asian markets. Singapore liberalized brokerage commissions in October 2000 and analysts expect the number of brokerage firms (currently 27, many of them family-owned and only 10 owned by banks) to fall to single digits. Malaysia has followed a two-stage approach in the liberalization of commissions, to allow the industry to adapt to the changes. The liberalization also aims to reduce transaction costs by reducing additional fees, such as levies paid to the Kuala Lumpur Stock Exchange and the Securities Commission (SC). In Hong Kong SAR, commissions are due to be liberalized in April 2002 and the entry of banks and foreign brokerages to online trading is already exerting pressures on a highly atomistic industry. The Korean brokerage industry had a fixed commission rule of 50 basis points but this implicit arrangement broke down with the advent of online trading and lower commissions are forcing consolidation in this market as well (see Box 5.2).²⁴

²²See Cybo-Ottone, Di Noia, and Murgia (2000).

²³The Singaporean Stock Exchange (SGX) was formed by the merger of the Stock Exchange of Singapore (SES) and the Singapore International Monetary Exchange Limited (SIMEX). In Hong Kong SAR, the Hong Kong Stock Exchange, and the Futures Exchange demutualized and merged with the Hong Kong Securities Clearing Company to form the Hong Kong Exchanges and Clearing Limited (HKEx). In Malaysia, the Kuala Lumpur Stock Exchange (KLSE) acquired the Kuala Lumpur Options and Financial Futures Exchange (KLOFFE), while in the Republic of Korea the government is planning to set up a holding company to integrate the Korea Stock Exchange (KSE) and the Korea Futures Exchange (KOFEX).

²⁴By comparison, up to the second quarter of 2000, fees in Malaysia (and Singapore) were 100 basis points while in Hong Kong SAR they were around 25 basis points. Online trading brought commissions down to as little as 3 basis points in the Republic of Korea.

Box 5.2. On-line Securities Trading in Emerging Markets

The on-line trading of securities has grown dramatically over the last couple of years in both mature and emerging markets. Many analysts see this development as potentially changing the financial services industry in a fundamental way. They claim that there are some clear benefits that come with the growth of on-line trading, such as lower transaction costs, faster execution, and an expanded investor base often encompassing retail investors. However, there have also been concerns about increased volatility and speculation in some markets following the introduction of on-line trading. Moreover, liquidity and market-making, as well as advisory services, may be harmed by increased competition and reduced margins for investment banks and other intermediaries. Although some of the initiatives are coming from the incumbents, there are also new and independent firms entering these markets. This new entry contributes to the increased competitive pressures. This box provides a brief description of the on-line trading in equities, bonds, and other financial instruments.

Equities

On-line brokering has been one of the fastest growing e-finance areas, with the Republic of Korea being the current leader in on-line trading—not only in Asia but possibly worldwide. More generally, much of the on-line trading in emerging markets is concentrated in Asia with the number of Internet brokers in Hong Kong SAR growing from 10 in September 1999 to 60 by end-2000, and with another 200 expected to go on-line in 2001. Singapore is another country where on-line brokerage business is well on its way, with six on-line brokers in 2000.

The share of on-line trading in total volume has also increased sharply, in line with the growth in the number of on-line brokers in these markets. Again, the leader is the Republic of Korea, where around 60 percent of trading value came from on-line trading in 2000, up from 40 percent at end-1999, and 4 percent at end-1998. In other Asian countries, on-line trading as a share of total volume is still modest, at around 6 percent for Singapore, 5 percent for

Taiwan POC, and around 2 percent in Hong Kong SAR. Local authorities and market analysts estimate that around 40 percent of trading in these markets will be done on-line in the next couple of years. A share of 40 percent in these markets would be comparable to the share of trading volume currently done on-line in the United States.

As with other e-finance applications, such as e-banking (see Box 5.4), increased Internet penetration in emerging markets will be a basic factor contributing to the growth potential of on-line trading. Other factors will be the introduction of various wireless protocols that make it possible to make trades using a mobile phone, as well as idiosyncratic factors such as the freeing up of commission rates in Singapore.

There are also factors that have been cited as slowing down on-line trading—and recently falling stock prices and turbulent markets seem to have put a damper on trading volumes. In more difficult market conditions, the investment advice that can be obtained by personal contact with a broker appears to be more valued. Moreover, investors who experienced large losses as a result of leverage and margin calls—and who were among the larger traders—may have left the market permanently.

Furthermore, increased trading volume that follows with on-line trading could potentially increase volatility in the market. On-line trading has also created a new class of traders, the day trader, and in the Republic of Korea, around 40–50 percent of on-line trading is estimated to come from day trading, accounting for 30 percent of total trading volume on the Korean stock exchange.¹ In the United States, some estimates suggest that day trading accounts for around 20 percent of the order flows to stocks listed on the Nasdaq (see Barber and Odean, 2001). Some evidence suggests that on-line

¹In the Republic of Korea, trading is defined as day trading if the same security is bought and sold by the same investor within a day. An estimated 15,000 persons were day trading in the Republic of Korea at the end of 2000.

Box 5.2 (concluded)

traders are more likely to leverage their bets, which could lead to margin calls in a sinking market that could exacerbate a price drop. Barber and Odean (2001) also note that in the United States, faster information flows and feedback made available by the Internet make investors focus on more recent performance of stocks, which may lead to feedback trading, and would also tend to increase volatility in the market. They also claim that these investors often concentrate their portfolio in technology stocks that are hard to value, which again is a potential factor in the buildup of stock market bubbles.

Bonds

The on-line trading of securities is now moving beyond stocks to bonds, loans, trade credit, foreign exchange, derivatives, and other financial contracts. Developments have been most noticeable in the primary and secondary bond markets, while other markets are in many cases still in their start-up phases. For example, while in 1997 there were 11 trading systems worldwide that allowed buyers and sellers of bonds to transact electronically, now there are around 70 such systems in the United States alone and another five in Europe, according to the Bond Market Association (2000).

Primary market dealing of bonds on-line started with a World Bank issue in January 2000. An unusually large share of the issue was taken up by U.S. investors, even at the retail level, suggesting that on-line distribution channels could potentially reach a wider investor base that would not have access to more traditional channels. In the language of some market participants, the Internet contributes to the “democratization” of the primary market. Shortly after the World Bank issue, Argentina reopened a euro issue over the Internet via Morgan Stanley’s ClientLink. The issue was bought mostly by European investors and 40 percent of the orders were received over the web, with a large share of small investors accounting for the strong demand.

The relative value of the Internet for debt exchanges and new issuance is a debated issue.

Some market participants claim that the benefits of the Internet are more tangible when doing debt exchanges rather than plain new issues, as the Internet and associated technologies facilitate the larger amount of data processing involved in the exchanges. However, some smaller and less frequent issuers claim that the Internet facilitates the book-building process and pricing of a new issue.

The Internet is also used for secondary market trading in bonds. The World Bank’s January 2000 bond issue constituted the first case of both primary issuance and secondary trading transacted over the Internet. Some 200 issues have followed the World Bank on-line issue, but few have offered this second leg of trading. Although on-line issuance has led to questions about investment banks’ future in this business, one factor that contributes to the continued importance of investment banks is secondary market trading, where the provision of liquidity is crucial and market-making still needed. In general, secondary market trading has also taken longer to develop, but initiatives like BondsInAsia and Asiabondportal aim to trade both G-3-currency-denominated bonds and local currency bonds.² Some analysts claim that there are already too many on-line bond trading platforms and mergers have already taken place. They also say that the successful plat-

²Platforms for secondary market trading can be divided into multi-dealer sites (that provide buyers with several prices and a narrow product range) and single dealer, multi-product sites. Both platforms have advantages and disadvantages, and analysts predict that they will likely continue to coexist for a while.

BondsInAsia will work on a franchise basis, with multi-dealer hubs in each country serving the local market and trading Asian bonds and bills, starting with Hong Kong SAR dollars, Singapore dollars, and G-3 currencies with an aim to later expand to the Korean won, Thai baht, Taiwanese dollar, Philippine peso, Indonesian rupiah, and Malaysian ringgit markets. Asiabondportal is a one-site, multi-dealer trading platform launched in October 2000. It deals in over 800 Asian dollar bonds, with information on another 500 bonds. Trading volumes are small, however, with only one or two trades per day.

forms will be the ones that update prices quickly, are reliable and secure, and are constantly evolving.

Other Instruments

Foreign exchange trading is also moving on-line. Since foreign exchange is a relatively homogenous product, it may be particularly suited for on-line trading. The independent foreign exchange platform Currenex has been operating since last spring; however, the joint venture platforms Fxall and Atriax, which were planned to be launched in the first quarter of 2001, are not yet in operation. Analysts interpret this as an indication that, although foreign exchange is a homogenous product, the margins for the market-makers are already fairly thin, and moving the trading on-line may put even more competitive pressure on the market, making the incumbents hesitant of making such a move. Other initiatives for trading foreign exchange on-line are Fxmatchbook and CFOweb. CFOweb targets corporate treasurers and offers fixed income, interest rate derivatives, and foreign exchange products in one package. In addition, Merrill Lynch is launching foreign exchange products (spots, forwards, swaps, and—at a later date—plain vanilla options) on the same on-line plat-

form that already trades equity and fixed income instruments.

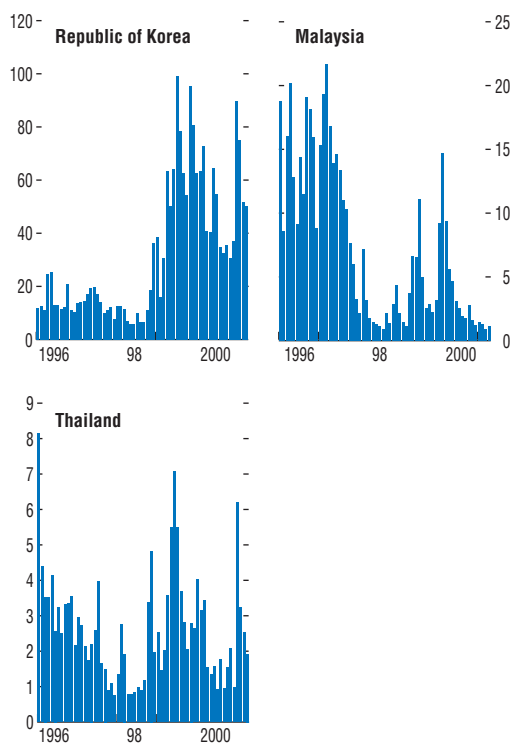
Loan trading and trade financing are also moving on-line. In Singapore and Hong Kong SAR, DebtDomain offers secondary market trading of loans, providing banks' with an opportunity to actively manage their loan portfolios. Currently, only 1–2 percent of outstanding bank loans change hands in Asia (not including Japan) compared to 6–7 percent in the United States. Trade financing in the form of letters of credit are also being handled on-line in Asia, with TradeCard aiming to reduce the amount of paperwork and labor involved in traditional trade finance, as well as the costs to the buyers and sellers of goods. *CFO Asia* (February 2001) claims that the regular bank fee involved in a typical \$50,000 import transaction is between \$1,000 and \$1,500, while the Internet service provided by TradeCard to track and settle domestic and cross-border trade transactions costs \$150. Investing in trade finance debt (a market worth around \$3 trillion) has not been the norm for institutional investors because of the paperwork involved, but LTPtrade is trying to change this by removing the need for investors to do the paperwork and having State Street act as the custodian and counterparty in on-line trades.

The consolidation of the brokerage industry in Malaysia is part of the Securities Commission's Capital Markets Master Plan. Released in February 2001, this plan aims to provide more certainty about the future direction of the authorities' liberalization and consolidation policies. As in the banking sector, the goal is to produce stronger domestic players before the market is fully opened to foreigners. In particular, geographical diversification is important for brokerages, as they are not allowed to open branches and many of them are located in different regions. There are currently more than 60 brokerages and the authorities expect the number to fall to around 15, but they are not forcing the pairing of individual institutions.

The only guideline is that, in order to achieve "universal broker" status, at least four entities have to be merged. The universal broker status would allow for the delivery of integrated financial services, including asset management and corporate finance activities. Banks that already own a brokerage firm are only required to buy one more brokerage. Market participants estimate that niche brokers will disappear as a result of these measures, the decline in trading volumes (see Figure 5.1), and the growth of online trading. Some market participants worry that the "big bang" nature of the consolidation process, with the parallel liberalization of commissions, might lead to a shakeout of the industry. However, Bank Negara Malaysia (BNM)—

Figure 5.1. Monthly Dollar Trading Volume for Selected Asian Countries

(In billions of U.S. dollars)



Source: Standard and Poor's.

Malaysia's central bank—is confident that the regulatory and exit policies for brokerages are clear and well known after the experience of the last crisis.

Latin America

The major Latin American stock exchanges have suffered drastic declines in liquidity after the emerging market crises of the late 1990s and it is unclear whether existing initiatives—including incipient efforts to consolidate and integrate exchanges—will succeed in restoring levels of activity of the mid-1990s. Growth of trading volumes until 1996–97 was driven by substantial privatizations and the increasing participation of foreign investors in local equity markets. However, the increase in depository receipts that trade in the major global exchanges and the delisting of emerging market companies acquired by foreign investors, combined with the decline in the value of emerging market stocks in the aftermath of crises, has reduced trading volumes on local stock exchanges (see Figure 5.2). The authorities and the exchanges are taking measures to face these challenges but some analysts have expressed concerns that the measures may not be enough. Some analysts have even questioned whether every country needs a local stock market (Aggarwal, 2001).

Consolidation in Argentina's brokerage industry has been slow, despite the sharp decline in equity trading volumes in the local equity market (see Figure 5.2). Delistings by foreign companies of their Argentine subsidiaries have cut market capitalization of the Buenos Aires Stock Exchange (BASE) to less than half over the last few years. Trading volumes have also fallen by more than half, causing some analysts to predict the demise of the exchange. Partly to respond to these trends, the BASE bought back 27 seats, but some 223 seats remain and many of the 150 brokerages command less than a 1 percent market share. The Argentine authorities would like to see more consolidation among the institutions in charge of the trading, clearing, settlement, and custody functions, but do not want to interfere in what they perceive to be a problem of the

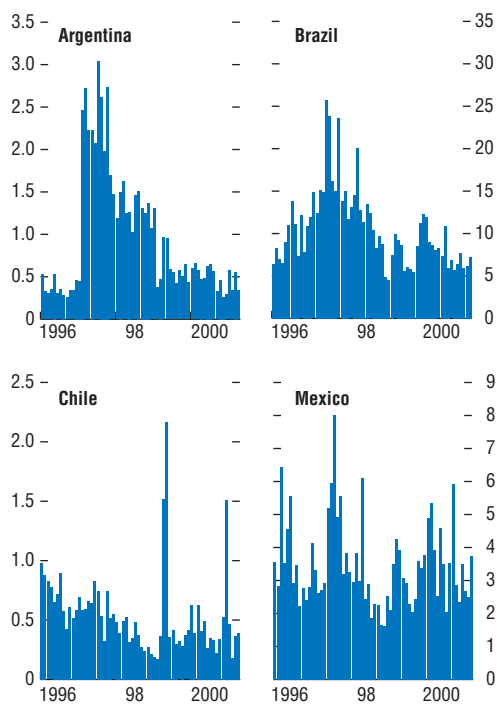
private sector. However, in an attempt to break the forces holding up equity market reform, the authorities and the three institutions involved signed an agreement in March 2000 to redefine the entire market structure.²⁵ The three institutions have just hired an international consulting firm to come up with a diagnosis of the main problems (including governance of the exchange, consolidation and integration of different functions, incentives and disincentives for the listing of stocks, among others) and propose solutions (including alliances with other exchanges in the region and Internet trading).

The BASE's situation contrasts sharply with that of the electronic open market (MAE), an OTC market operated by the largest banks to trade fixed-income securities. As a result of the consolidation of the banking system, the number of agents in the MAE has fallen from 210 in the early 1990s to just 70 currently. The MAE has recently consolidated clearing and settlement functions in Argenclear and has a central depository. This improved infrastructure, combined with a system of 12 market-makers, has provided resilience to the fixed-income securities sector, whose volume of trading is six times that of equities. Moreover, the MAE has exported its software platform to the similar fixed-income electronic exchanges in Brazil and Uruguay (and is in the process of reaching an agreement with Chile). The MAE also has agreements with these countries' depositories and regulators, making regional integration of fixed-income securities more advanced than that of equities.

The Chilean and Mexican stock markets have also lost a fair amount of liquidity and it is unclear whether efforts by the exchanges and the authorities would be enough to bring back the business lost to offshore markets. The Mexican stock exchange (Bolsa de Valores de Mexico—

Figure 5.2. Monthly Dollar Trading Volume for Selected Latin American Countries

(In billions of U.S. dollars)



Source: Standard and Poor's.

²⁵The three institutions are the BASE (which looks after corporate matters such as listing requirements and brokerage licenses), Merval (which regulates and guarantees trading and is responsible for clearing and settlement), and the MAE (the electronic OTC market for fixed-income securities).

BVM) has somewhat recovered the market capitalization and trading volumes prevailing before the recent emerging market crises (see Figure 5.2). Analysts estimate that more than 60 percent of trading is performed offshore, however. The country boasts the largest number of American depository receipt (ADR) listings of any emerging market, and price discovery for some of the major stocks is done on the New York Stock Exchange (NYSE). Share purchases in the local market cannot be leveraged as ADRs can and concentration in a small number of local shares and low volumes make local prices highly volatile. Moreover, market observers estimate that more than half of trading on the Mexican stock exchange is done by foreigners. The exchange authorities have undertaken a series of measures to streamline operations, including the closing of the trading floor and a move to a fully electronic trading system, while brokerages have dropped commissions and lowered minimum investments to attract retail investors. In the session that ended on April 30, 2001, the Mexican Congress approved a financial reform package that attempts to tackle many of the obstacles to the development and deepening of the local securities market.²⁶ Similarly, Chile has also lost a fair amount of trading volume as a result of delistings and ADR listings. The authorities have removed restrictions on capital flows and approved legislation to improve corporate governance and protect the interest of minority shareholders, in part to reverse the decline in activity on the local stock exchange.

Brazil's Bolsa de Valores de São Paulo (Bovespa) has responded swiftly to the challenges of globalization and technological innovation by leading a merger with all the other regional stock exchanges in the country, changing the trading environment for companies with

high standards of corporate governance, and participating actively in regional and global initiatives to integrate with other national exchanges. Beginning in 1996, the São Paulo and Rio de Janeiro exchanges developed electronic trading systems that allow securities from the country's seven regional exchanges to be traded online. However, only a tiny slice of business was left over for the regional exchanges, and last year the São Paulo and Rio de Janeiro exchanges decided to merge with the regional exchanges, concentrating stock trading in São Paulo and bond trading in Rio. In December 2000, the Bovespa launched the Novo Mercado (New Market), changing the eligibility rules to overcome the corporate governance problems that had contributed to liquidity declines. In particular, companies that want to trade on the Novo Mercado can have only voting stock, must float at least 25 percent of their capital, and must offer tag-along rights to shareholders in case their control changes hands. In addition, the exchange joined its regional peers to endorse the concept of a regional stock exchange at the Ibero-American Federation of Stock Exchanges annual meeting in Rio de Janeiro in September 2000.

Finally, the Brazilian and Mexican stock exchanges are participating in negotiations among ten world stock markets to establish a common stock market that would allow 24-hour trading around the world. The project, led by the NYSE and designed to create a Global Equity Market (GEM),²⁷ faces complex regulatory and practical hurdles and is still in a preliminary phase.

Central Europe

Stock exchanges in Central Europe are facing similar problems to those faced by their counterparts in Latin America and are also considering

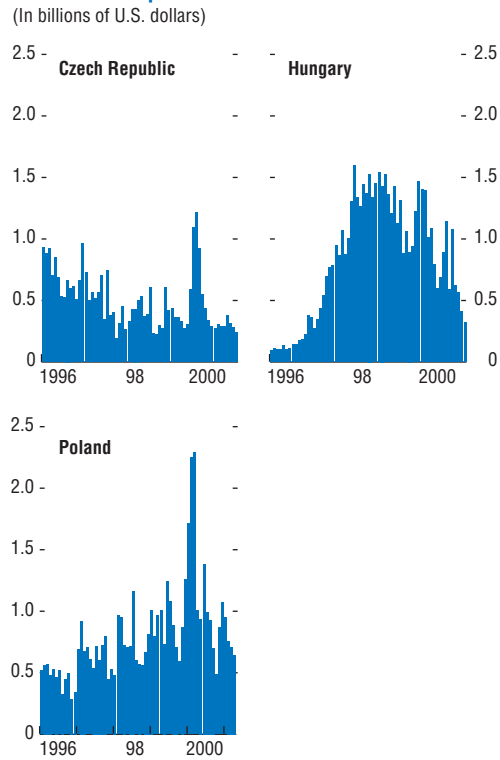
²⁶The modifications to the securities market law include measures aimed at strengthening minority rights, improving corporate governance—including that of the exchange, brokerages, and fund management companies—transparency, and market integrity. As part of the package, the authorities also plan to loosen some of the portfolio restrictions of pension funds—in particular the zero allocation to equities—and to facilitate the issuance of corporate bonds.

²⁷The Global Equity Market would join the NYSE, Euronext (which includes Amsterdam, Brussels, and Paris), the Australian Stock Exchange (ASX), the Hong Kong SAR Exchanges and Clearing, the Bovespa, the Bolsa de Valores de Mexico, the Tokyo Stock Exchange, and the Toronto Stock Exchange.

merging regional operations to enhance competitiveness and survive. Over the last decade, as market reforms progressed and governments shifted business to the private sector, stock markets grew across the region. More recently, however, a dearth of new issues, declining trading volumes (see Figure 5.3), and investor apathy have raised doubts about some of the exchanges' long-term prospects. Despite a large number of initial listings, only half a dozen actively traded stocks remain in most markets and foreign investors interested in regional stocks favor buying them through the more liquid American or global depository receipts listed in London, New York, or Frankfurt. Over the years, the region's exchanges have discussed many plans to merge, form a regional exchange, or coordinate with each other—or even to link up with the major exchanges in London and Frankfurt. However, as in the case of Western Europe and Latin America, merger talks have not yet produced tangible results.

Development of the Prague Stock Exchange (PSE) has been hindered by the lingering effects of the voucher privatization programs of the early 1990s. The exchange has subsequently undergone an extensive consolidation in terms of both the number of members and the number of listed shares. The mass issuance of vouchers in order to achieve a rapid privatization of state enterprises is now regarded by market participants as one of the major policy mistakes in the early transition to a market-based economy. Although this program created over 1,700 new securities, most of these securities rarely traded. Moreover, there was little, if any, disclosure of information about the activities and performance of the new corporations. This limited disclosure—combined with the virtual absence of prudential supervision of the securities markets—facilitated numerous abuses of shareholder interests, effectively undermining investor confidence in the equity markets. In the period since 1998, the national authorities and the PSE have focused on establishing effective prudential supervision of the securities market and improving its transparency and efficiency. A Czech Securities

Figure 5.3. Monthly Dollar Trading Volume for Selected European Countries



Source: Standard and Poor's.

Commission (CSC), created in 1998, began delisting those securities for which there was inadequate disclosure and little or no trading. As a result, the number of members of the PSE has declined from 105 in 1995 to 44, and about 1,500 securities have been delisted. Despite the improvements brought about by these initiatives, market participants argue that there are only seven stocks that have adequate market liquidity. Moreover, the PSE has not yet become a source of new financing for Czech firms.

Listings on the Budapest Stock Exchange (BSE) and the Warsaw Stock Exchange (WSE) have increased substantially since the mid-1990s, but the BSE's liquidity levels have fallen since the 1998 Russian crisis (see Figure 5.3). Some analysts attribute the weaker performance of the BSE to the small size of the companies listed, complex listing requirements, and the government's decision to sell large companies to strategic investors rather than float them on the stock exchange. Others attribute the strength of the WSE, in part, to a well-developed trading system and vigorous demand for stocks from the local pension funds. Reestablished in 1991, the WSE began trading with only one call auction per stock per week.²⁸ The exchange moved to a daily call auction in 1994 and gradually introduced a continuous trading system beginning in 1996. As of early 2001, 45 percent of the stocks listed were traded continuously.

Consolidation of Pension Fund Management Companies

The private pension fund industry has experienced considerable consolidation in Latin America, as a result of the maturation of the industry and economies of scale in the management of assets, accounts, and marketing efforts. Chile has been the pioneer in establishing a privately managed pension fund system, which has experienced various waves of mergers since its

inception in 1981.²⁹ Over the course of the years, however, the number of funds has varied. Starting with 12 funds, of which the largest five controlled 91 percent of assets under management, the number peaked at 22 in 1993. Between 1993 and 1996, there were ten mergers and acquisitions. In 1998, the concentration process accelerated and, by end-2000, there were only eight funds, of which the largest three managed 70 percent of all assets.

To some extent, Argentina and Mexico have followed Chile's lead. The number of pension fund management companies (AFJPs) in Argentina has fallen from 26 at the system's inception in 1994 to 13 currently. Following the merger of the second- and fifth-largest AFJPs, the regulatory authorities decided to impose a maximum limit on market share, at 27.5 percent of assets under management. But some market participants saw no rationale for the specific figure. In Mexico, the number of pension fund management companies (Afores) is currently 13, down from 16 at the system's inception in 1997. Analysts expect further consolidation over the near term, following the experiences of Argentina and Chile. Ever since the system was first put in place, each firm has been subject to a market share limit of 17 percent, to prevent monopolistic practices. Some analysts believe that the market share limit has distorted the market structure, while others claim that the limit has not been really binding. In both Argentina and Mexico, commission levels have been considered high, but industry participants justify them in terms of initial marketing costs and high administrative and insurance costs (in an uncertain environment with a low level of contributors relative to affiliates). Regulators see high profitability as a way of ensuring the stability of the system in its early stages of development.

The concentration of the pension fund industry is higher in Argentina, Chile, and Mexico than in many mature markets. Figure 5.4 com-

²⁸Call auctions concentrate orders for matching at discrete points in time—typically one to three times a day, to mitigate the problems of liquidity that continuous electronic trading systems face in emerging markets. See Steil (2001).

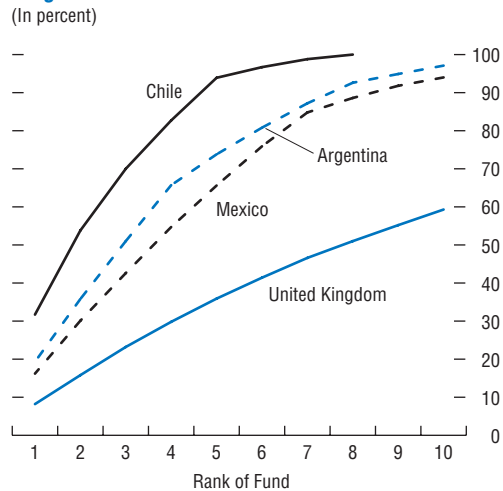
²⁹See Salomon Smith Barney (2000).

compares the cumulative market shares of pension funds in each of these three countries and the United Kingdom.³⁰ The lines for Argentina, Chile, and Mexico lie considerably above the one for the United Kingdom, suggesting a higher concentration level in the Latin American countries. Other mature markets, such as the United States (not shown), have even lower concentration ratios than the U.K. market's ratio. The figure also shows that consolidation is most advanced in Chile and that the figures for Argentina and Mexico are very similar.

A trend toward concentration is also underway in the recently established private pension systems in Central Europe. Since the launch of the private pension pillar in Poland, three of the 21 accredited funds have emerged as the front runners, and now control 67 percent of the industry's assets. Consolidation of funds has just started in Poland, and is expected to accelerate, given that various funds are incurring losses as a result of their small size. In Hungary, the number of funds in the mandatory private pension fund pillar (established in 1998) shrank from 38 to 25, and the number of voluntary private funds (which had been operating since 1994) fell from 270 to 160.³¹ At the end of September 2000, the six biggest mandatory funds concentrated almost 85 percent of the membership and close to 80 percent of fees,³² and the ten largest voluntary funds accounted for more than 50 percent of total assets. Market participants expect the consolidation trend to continue. Concentration ratios are also high for the voluntary funds in the Czech Republic: the share of total assets under management of the three largest funds is 46 percent.³³

In most Asian emerging markets, there are no comparable, mandatory private pension funds. The provident fund systems in many of these countries operate mainly at the national level

Figure 5.4. Cumulative Market Share of the Largest Private Pension Funds



Sources: Salomon Smith Barney (2000); and Srinivas, Whitehouse, and Yermo (2000).

³⁰See Srinivas, Whitehouse, and Yermo (2000) for a similar comparison.

³¹See National Bank of Hungary (2000), Chapter III.

³²See Hungarian Financial Supervisory Authority (2000).

³³See Srinivas, Whitehouse, and Yermo (2000).

under public administration. Hong Kong SAR is the only economy with a mandatory Provident Fund system that relies on decentralized and private management.³⁴ Since the system was only established last year, it is too early to observe any consolidation trends.

Economies of Scale and Scope, and Electronic Banking

The consolidation of financial institutions increases their average size and is likely to allow them to exploit economies of scale and scope. Technological improvements are leading to a larger optimal size (scale) for firms in the industry and, when combined with changes in regulations, to the opportunity to spread fixed costs within a wider range (scope) of products and services. However, almost as often as bankers mention significant scale and scope economies as the rationale for mergers, economists complete empirical studies that fail to provide convincing evidence of these economies. This section reviews the evidence on this issue for mature and emerging markets.

Economies of Scale

Most empirical studies on the existence of scale economies in retail commercial banking find a relatively flat U-shaped average cost curve, with a minimum somewhere around \$10 billion in assets.³⁵ This result is fairly consistent across industrialized countries and it suggests that efficiency gains from the exploitation of scale economies disappear beyond a certain size, as there might be diseconomies of scale above some threshold. Presumably, this is due to the complexity of managing large institutions.

Unfortunately, there are no comprehensive studies on the subject of economies of scale and scope in emerging markets.³⁶ In order to gauge the existence of scale economies in emerging market banking systems, the simplest approach is to compare balance sheet ratios that describe costs for different asset sizes. The results for a sample of countries in the major emerging markets are shown in Table 5.3. The cost-to-income ratio is a rough measure of cost efficiency, since different banks are likely to have different product mixes, but the literature in general bypasses that distinction. Moreover, the minimum size reported above relies mainly on data from the 1980s and the early 1990s, but a more recent study for U.S. banks³⁷ suggests that there are substantial scale economies for bank sizes in the range of \$10 billion to \$25 billion, which is used as another threshold in Table 5.3.

There seems to be some evidence of economies of scale for banks with assets of more than \$1 billion but less than \$10 billion. Banks in that asset range also appear to be the most profitable (see Table 5.3). The cost-to-income ratios for banks in that asset range in Asia and Central Europe decline relative to the same indicators for smaller banks. However, Latin American banks in the range of \$10–25 billion in assets appear to display some degree of economies of scale. Similar indicators for the mature market banks (see G-10, Chapter VI, Table 5.1) suggest that cost-to-income ratios decline for banks with assets in the \$20 billion to \$50 billion range. There could be several reasons why results for emerging markets may be different from those for the mature markets.³⁸ First, it could be that the optimal scale for banks in emerging markets is actually smaller than for the mature markets, owing to less effi-

³⁴See Holzman, Mac Arthur, and Sin (2000).

³⁵There are many surveys on scale and scope economies in banking. See for instance G-10 (2001); Berger, Demsetz, and Strahan (1999); and Santomero and Eckles (2000).

³⁶For a few exceptions, see Berger and Humphrey (2000).

³⁷See Berger and Mester (1997).

³⁸The academic literature shows little or no cost improvements on average, and other aspects of the banking organization—beyond simple cost-to-income ratios—should be included to reach a more definite conclusion. For a survey on these issues see Berger and others (1999) and also Berger (2001).

Table 5.3. Performance Indicators According to Bank Size¹
(Average for 1997–1999)

Total Assets: ³	Cost/Income				Return on Average Equity				Non-Interest Income/Total Income ²			
	Less than \$1 billion	\$1–10 billion	\$10–25 billion	Greater than \$25 billion	Less than \$1 billion	\$1–10 billion	\$10–25 billion	Greater than \$25 billion	Less than \$1 billion	\$1–10 billion	\$10–25 billion	Greater than \$25 billion
Eastern Europe	64.0	52.6	71.4	n.a.	8.5	27.6	0.5	n.a.	36.4	32.8	21.3	n.a.
Czech Republic	62.3	47.6	62.0	n.a.	-1.6	-7.2	-20.1	n.a.	32.1	31.3	36.3	n.a.
Hungary	77.2	69.3	n.a.	n.a.	6.0	13.8	n.a.	n.a.	36.9	34.2	n.a.	n.a.
Poland	57.8	53.5	80.5	n.a.	12.8	24.0	-7.2	n.a.	36.5	35.8	27.6	n.a.
Turkey	57.8	49.2	73.4	n.a.	23.8	43.7	15.7	n.a.	45.7	31.1	9.8	n.a.
Latin America	73.4	82.6	78.2	76.9	5.0	7.6	5.0	13.8	32.5	36.7	37.6	38.2
Argentina	87.1	76.0	70.9	n.a.	-26.4	8.5	5.1	n.a.	33.8	49.7	46.7	n.a.
Brazil	46.7	96.2	90.4	81.1	15.9	2.8	17.7	13.5	28.4	33.0	36.5	40.6
Chile	54.6	62.4	n.a.	n.a.	3.9	12.0	n.a.	n.a.	38.5	31.3	n.a.	n.a.
Mexico	135.8	79.9	81.8	60.2	0.3	11.0	-2.9	14.9	20.5	21.6	24.4	28.4
Venezuela	62.9	62.4	n.a.	n.a.	31.3	38.0	n.a.	n.a.	42.4	44.8	n.a.	n.a.
Asia	45.1	43.5	87.9	74.4	-2.1	-49.4	-63.1	-27.4	37.5	27.0	23.6	30.0
Republic of Korea	n.a.	38.5	136.4	71.5	n.a.	-44.2	-159.8	-21.0	n.a.	30.6	13.1	31.0
Malaysia	35.3	40.6	33.9	n.a.	-1.5	3.1	8.2	n.a.	42.2	33.4	30.9	n.a.
Philippines	65.3	56.8	52.7	n.a.	4.1	11.1	11.2	n.a.	31.6	39.6	37.9	n.a.
Thailand	36.7	52.5	90.6	87.1	-58.7	-154.1	-38.7	-55.9	14.1	11.5	25.6	25.6

Source: IMF staff estimates based on Fitch IBCA's BankScope.

¹The analysis is based on data for the 30 largest banks in most countries; whenever total assets of all 30 banks exceed \$1 billion, additional banks are included to enable calculation of ratios for the lesser category. All calculations are based on data for bank entities prior to most recent mergers because post-merger ratios data were not available from Fitch IBCA.

²Non-interest income/total income is defined as: (total operating income + non-operating income + extraordinary income + exceptional income)/(total operating income + non-operating income + extraordinary income + exceptional income + interest income)

³Some total asset subgroups, especially in the higher range (greater than \$25 billion and \$10–25 billion), contain too few banks, which might create a bias in the estimates. For example, the subgroup of Turkish banks with assets between \$10 billion and \$25 billion contains only two banks.

cient infrastructure (say, in the telecommunications or other support services) or just because of other factors related to the smaller size and purchasing power of these markets. Second, among the largest banks in several of the emerging markets covered in Table 5.3 are some state-owned banks that are generally less efficient than privately run banks.³⁹ Third, with several banks in emerging markets coming out of recent crises, inferences on economies of scale derived from cost-to-income indicators may be particularly distorted when banks are spending large amounts of resources provisioning for bad loans and restructuring their operations. Similarly, many of the leading private banks are the ones doing most of the investing in information technology (IT) to remain competitive. For instance, Abut and others (1999) note that the increased market share of the five largest private banks in Argentina has been

costly from an operating expense standpoint, as it was precisely these banks that accounted for the bulk of the infrastructure investments (in branch and ATM expansion) in the Argentine market over the last couple of years.⁴⁰

Most analysts agree that growth is crucial in mergers. Despite the low banking penetration and promising growth prospects in some emerging market banking systems, it is not completely clear that recent M&As would be able to deliver the promised results. The market responses to some cross-border M&As are analyzed in Box 5.3.

Several factors are behind the difficulties of successful M&As in emerging markets. First, expected growth in revenues has been negatively affected by a domestic and external operating environment associated with low growth and high volatility. Moreover, lending growth usually requires external funding that has been costly to

³⁹Barth, Caprio, and Levine (2000) document the lower performance of state-owned banks.

⁴⁰See Abut, Bigio, and Siller (1999).

Box 5.3. The Market Response to Cross-Border Bank Mergers and Acquisitions

One way of assessing the effects of M&As on bank performance is to examine the markets' reaction to such events. If a merger between banks creates efficiency gains or brings about an increase in market power, there should be a positive reaction in the involved banks' stock prices, as well as in their financial strength ratings, following the merger announcement.¹ In particular, the market value of the newly merged bank should be larger than the premerger sum of the market values of the individual banks.

Empirical studies suggest that the effects of M&As on banks' stock prices depend strongly on the specifics of the deal. Several studies find that the announcement of bank mergers neither creates nor destroys value (see Pilloff and Santomero, 1998, for a survey). Often, positive stock price reactions of the acquired bank are offset by a negative change in the acquirer's stock prices. On the other hand, some studies, such as Becher (2000), found net gains from mergers and acquisitions. Houston, James, and Ryngaert (1999) show that markets react positively to mergers that are expected to reduce costs. Similarly, De Long (2001) finds that mergers focusing on geographic and activity lines (i.e., those with the highest cost savings potential) create value when announced. Examining data from large deals in the European banking industry, Cybo-Ottone and Murgia (2000) find, on average, positive stock price effects on both bidder and target; in particular, markets appear to react favorably to diversification of banks into insurance products.

There is little systematic evidence on the effects of cross-border M&As involving banks in emerging markets, but assessments of such deals

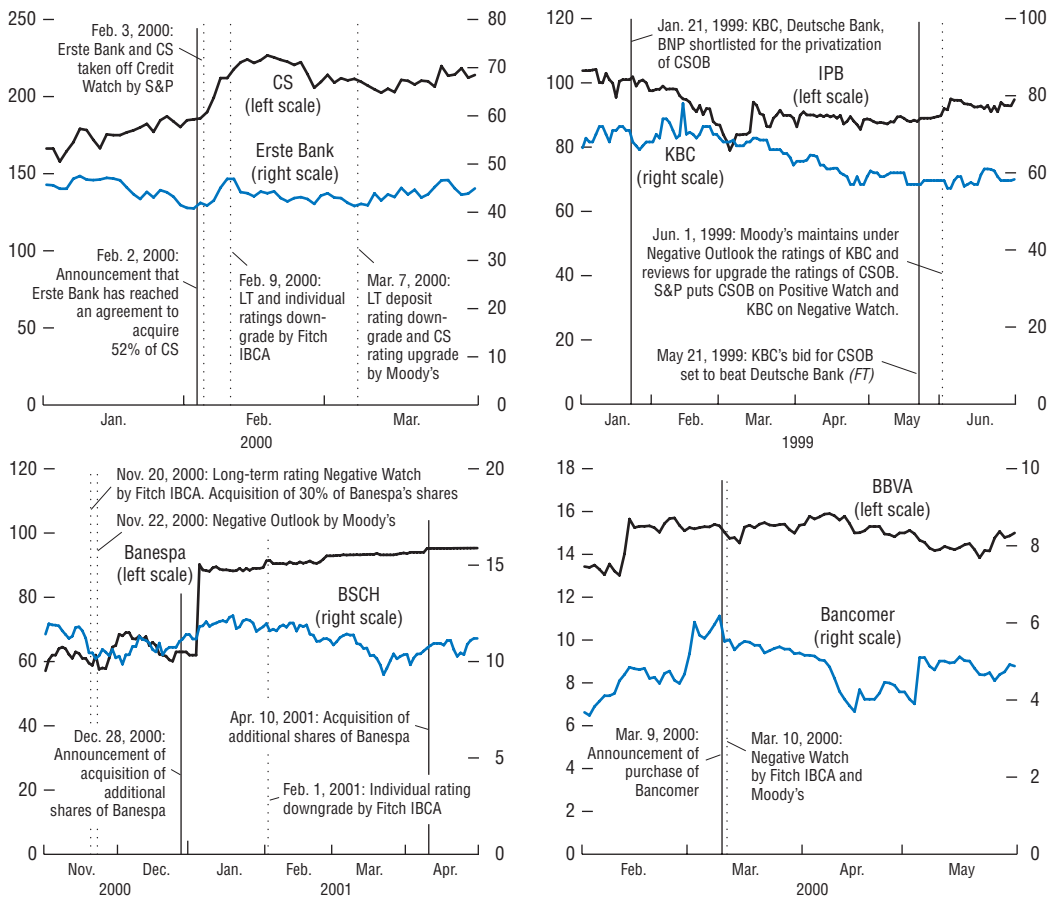
often vary widely. An interesting aspect of these transactions is that emerging markets are characterized by much higher potential earnings growth—owing to both low bank penetration and rapid GDP growth—as well as by higher macroeconomic volatility than mature markets. Moreover, although the acquiring bank usually brings valuable experience into the emerging market, it has often proven difficult to apply this experience in a very different banking environment. More generally, while financial institutions involved in mergers are sometimes seen as benefiting from risk diversification brought about by the larger size of the new institution, engagements in emerging markets are often viewed as risky, with analysts' assessment of the transactions often differing starkly.

A few examples may serve to illustrate these points. When the announcement was made that Austria's Erste Bank der oesterreichischen Sparkassen had reached an agreement to buy a 52 percent stake in Ceska Sporitelna (CS), the main Czech retail bank, in February 2000, the stock market reacted favorably and both Erste's and Sporitelna's share prices rose strongly (see the figure). However, rating agencies were more skeptical. Standard and Poor's and Moody's had already placed Erste Bank's ratings under review in the previous fall, when it became public that Erste Bank was the main contender for CS. While Standard and Poor's removed Erste Bank from the review, Fitch IBCA lowered Erste Bank's long-term and individual ratings on February 9, citing the reason as a worsening of the bank's risk profile as a result of the acquisition. Similarly, Moody's downgraded Erste's long-term deposit rating in March while upgrading Sporitelna's rating.

When the Czech authorities announced that Belgium's KBC was among the four final candidates in the bidding process for the Czech Ceskoslovenska Obchodni Banka (CSOB), both KBC's and CSOB's stock fell slightly. As it became clear in May 1999 that KBC was likely to win the bid, neither stock price moved. The assessment of the impact on KBC by rating agencies diverged: Fitch IBCA and Moody's did not

¹This statement needs to be qualified by the recognition that rating agencies assess banks not only based on the net present value of their profits. Agencies often differentiate between ratings, to reflect the probability that a bank will be able to repay depositors or debtors (where government guarantees may play a role) and to reflect the financial strength of a bank on its own. Fitch refers to the latter type of ratings as the Individual Ratings, while Moody's refers to these ratings as the Bank Financial Strength ratings.

Cross-Border Bank M&As, Stock Prices, and Rating Actions¹



Sources: Bloomberg, Fitch Research, Moody's Research, Standard & Poor's Ratings Direct, *Financial Times*.
¹All stock prices are quoted in local currency.

change their assessments of the bank, while Standard and Poor's put KBC on negative watch, mentioning CSOB's legacy of problem loans. Both Moody's and Standard and Poor's decided to review CSOB's ratings for a possible upgrade, however.

When the Spanish Banco Santander Central Hispano (BSCH) announced the purchase of a 30 percent stake in Brazil's Banespa in November 2000, Fitch IBCA placed Santander's long- and short-term ratings on negative watch, and Santander's stock fell by nearly 7 percent.

The increased proportion of BSCH's total business concentrated in Latin America was seen as risky, and Fitch IBCA later downgraded BSCH's individual rating. Moody's, on the other hand, confirmed BSCH's debt and deposit ratings, arguing that the existing ratings already incorporated the inherent risks associated with BSCH's acquisitive strategy in Latin America. When the acquisition of additional shares of Banespa was announced on December 28, 2000, the stock market reaction for BSCH was positive and Banespa's stock price skyrocketed.

Box 5.3 (concluded)

Rating agencies also reacted mostly negatively when the Spanish Banco Bilbao Vizcaya Argentaria (BBVA) announced the merger of its Mexican subsidiary Grupo BBV-Probursa with Grupo Financiero Bancomer in March 2000. Fitch IBCA and Standard & Poor's placed BBVA on negative watch/alert. On the other hand, Moody's confirmed BBVA's ratings, arguing that the higher geographic, strategic, and business risk for the group of acquiring Bancomer was more than offset by an announced equity capital boost of up to \$3.18 billion (against the \$1.2 billion total acquisition cost). The stock market took a more pessimistic view, and both BBVA's and Bancomer's shares fell; it should be noted, however, that

Bancomer's stock price had risen strongly before the date, probably in anticipation of the announcement (see the figure).

It is hard to draw definite conclusions from these case studies, as they all involve additional specific features that are not discussed here. Nevertheless, the examples highlight the fact that the assessments of risks and opportunities associated with bank acquisitions in emerging markets often differ strongly between management, shareholders, and rating agencies. In addition, the cases broadly confirm the finding from mature markets that the acquired bank is typically seen as benefiting from the merger, while assessments of the impact on the acquirer tend to be more mixed.

obtain under current market conditions (see Chapter III). Second, restructuring costs have generally been higher than originally anticipated. In the case of Hungary, for instance, where bank restructuring and the liberalization of barriers to foreign banks occurred early relative to most other emerging markets, foreign institutions have had to turn poorly run socialist commercial banks into universal banks (offering the full range of products from life insurance to brokerage services). The losses resulting from large investments in improving branch networks, updating IT systems, and provisioning for bad loans, combined with intense competition in a volatile environment, recently led one foreign bank to reconsider its decision to enter the market. Similar factors have caused some foreign banks to leave the Brazilian market after unsuccessful attempts to capture a minimum market share. Third, in some of the Asian crisis countries where bank penetration is already high, branch closures and employment retrenchment in normal M&A transactions has been slowed by the cumulative effects of the massive restructurings needed in the immediate aftermath of the

1997–98 crisis. Although management in merging institutions tends to be confident that cost reductions could be achieved even without layoffs and branch closures—thanks to cost savings in IT investments—some analysts estimate that this goes against existing evidence and may not yield enough savings to render successful mergers.⁴¹

Despite the cross-border nature of the consolidation process in Latin America, most of the efficiency gains are being derived from cost-cutting operations inside the country. The Spanish banks have not yet been able to enjoy the benefits from shared costs across the region, in part reflecting legal and regulatory obstacles to achieving full integration in the region. Nonetheless, they are making substantial progress in rationalizing their operations in individual countries. In Mexico, for instance, the process of integrating the second-largest with the sixth-largest bank—a difficult one, as the systems of the smaller bank are being transferred to the larger one—has encountered almost no unexpected costs, owing to BBVA's cumulative experience from its other mergers with banks in the re-

⁴¹See, for instance, Wright (2001).

gion as well as in Europe.⁴² The bank is expected to complete the merger process by year-end, with a reduction of 10,000 jobs and 700 branches. Bank analysts also note that the largest Brazilian banks have been relatively successful in integrating their recent acquisitions.

Commercial banks enjoy economies of scale mostly as a result of spreading fixed costs and achieving better diversification. While scale-related diversification—that allowed by the possibility of lending to other sectors or regions—clearly reduces average costs (including risk management costs), additional risk-taking may increase costs if banks have to spend more to manage increased risks. In other words, the diversification effect may be dominated by an endogenous risk-taking effect. Indeed, a recent study has shown that incorporating capital structure and risk-taking into models of bank production strongly suggests that economies of scale do exist—but may be obscured by increased risk-taking. A related study shows that large bank holding companies in the United States, while better diversified than small bank holding companies, have historically undertaken riskier activities.⁴³ There is no evidence on this issue from emerging markets, but the trade-off between diversification and risk-taking is one that cannot be ruled out, especially under the current market conditions.

Universal Banking and Economies of Scope

Universal banks are financial institutions that are allowed to offer a wide range of financial products and services to a vast number of customers. They not only take deposits and make loans, but they may also sell and underwrite securities and insurance and may own equity interests in firms, including nonfinancial firms. By contrast, specialized banks are restricted to offer-

ing a narrower range of products and services, with commercial banks prevented from undertaking investment banking activities in certain countries. Until recently, Germany was considered to offer the best example of universal banking, while the United States was regarded as a largely specialized banking system.⁴⁴ Most emerging market banking systems fall in between these two extremes.

The financial models of the major industrialized countries, however, are evolving toward a convergence that, while not absolute, is opening each model to the advantages of the other. The clearest demonstration of this trend is provided by the enactment of the Gramm-Leach-Bliley Act (GLBA) in the United States by end-1999, which repealed the parts of the Banking Act of 1933 (known as the Glass-Steagal Act) that had separated commercial and investment banking activities. In many respects, the barriers between banking and other financial services industries had been eroding for some time, even before the passage of the GLBA.

A recent study⁴⁵ identifies three factors behind the enactment of the GLBA. First, the increasing weight of empirical evidence showed that securities activities of commercial banks bore little responsibility for the banking traumas of the Great Depression.⁴⁶ Second, recent gradual deregulation, which allowed U.S. banks to undertake limited securities and insurance activities, demonstrated that few problems could be attributed to the wider range of permitted activities. And finally, rapid technological change markedly reduced the costs of sharing data across activities and raised the profitability of cross-selling securities and insurance together with traditional banking products. Similarly, bankers in Germany have recognized that some of the large, long-term stakes in industrial groups have not been a good use of bank capital

⁴²See, for instance, Caplen (2000), and Fuentes and Sastre (1999).

⁴³See Demsetz and Strahan (1997).

⁴⁴Benston (1994) and Canals (1997) provide interesting overviews of the institutional and analytical issues related to models of banking in the major mature markets.

⁴⁵See Barth, Brumbaugh, and Wilcox (2000).

⁴⁶See, for instance, Benston (1994), Kroszner and Rajan (1994, 1997).

and are divesting their industrial holdings, aided by the repeal of a capital gains tax.⁴⁷

The drive toward universal banking can be understood by appealing to either demand or supply forces. On the demand side, customers may find complementarities arising from reductions in consumer and search costs. For instance, retail customers may find the convenience of one-stop shopping for their commercial banking and securities brokerage needs; corporate customers may prefer to reveal their private information to a single consolidated entity that meets their commercial and investment banking needs. On the supply side, benefits could derive from synergistic gains and revenue diversification. Synergistic gains could be obtained by spreading fixed costs or by the reusability of information obtained through a banking relationship, which lower the costs of providing ancillary securities and insurance services. Alternatively, integrating imperfectly correlated banking, securities, and insurance activities may reduce the universal bank's risk exposure, thereby allowing the institution to economize on risk management costs.⁴⁸ Indeed, studies show that the integration of financial services activities appears to bring about larger revenue efficiency than cost efficiency gains and that most of the gains appear to be linked to benefits from risk diversification.⁴⁹ The expected effect on risks of combining commercial banking with securities and insurance activities has been studied extensively, mostly by simulations of synthetic portfolios of commercial and investment banks that conclude that risks are more likely to be reduced than increased by permitting banks to engage in additional activities.⁵⁰

The trend toward consolidation of bank with nonbank financial activities is slowly but surely

gaining ground in emerging markets as well. Most emerging markets have followed the universal banking paradigm, and the significant presence of banks in local capital markets is, in part, a direct way of sharing in the growth of these markets.⁵¹ Universal banking firms may be less affected when companies bypass banks and raise funds directly in the capital markets, because the decline in their lending activities may be offset by an increase in their securities activities. Similarly, the direct sale of mutual funds may compensate for the drain of deposits that also characterize the bank disintermediation process. Outside the United States and Japan, banks in the mature markets conduct their insurance activities in subsidiaries, while their securities activities are usually conducted directly in banks.⁵² This organizational pattern is also the most common in the largest emerging markets (see Table 5.4). In a sample of 54 developed and emerging markets surveyed by the Institute of International Bankers in 1998, the majority of countries allowed universal banking—that is, banks were allowed to conduct both banking and securities businesses, including underwriting, dealing, and brokering of all kinds of securities within the same financial institution.⁵³

The largest banks in Latin America are taking advantage of the economies of scope derived from the universal banking paradigm and non-traditional banking activities are growing much faster than lending activities. Analysts estimate that the competitive landscape of the financial industry in Latin America will be more similar to that of Europe than to that of the United States, with one very important difference: many countries in the region have privatized their pension fund systems, creating large opportunities for

⁴⁷Issues related to the mixing of traditional banking with other financial activities (called “broad banking” by Barth, Brumbaugh, and Wilcox, 2000) are dealt with in this section; issues concerning the mixing of banking and commerce are covered in the next section.

⁴⁸See, for instance, Allen and Jagtiani (1999).

⁴⁹See Berger (2001).

⁵⁰However, as noted above, these diversification effects may be dominated by additional risk-taking if, say, the bank engages in additional activities by simultaneously increasing its leverage.

⁵¹A similar phenomenon was seen in Europe; see Canals (1997).

⁵²See Barth, Brumbaugh, and Wilcox (2000), Table 1.

⁵³See Institute of International Bankers (1999).

Table 5.4. Permissible Activities¹ for Banking Organizations in Various Emerging Markets

Country	Securities ²	Insurance ³	Bank Investments in Industrial Firms ⁴	Industrial Firm Investments in Banks
Hong Kong SAR	Permitted, subject to limits based on bank capital	Permitted, subject to limits based on bank capital	Permitted, subject to limits based on bank capital	Permitted, subject to regulatory consent
Republic of Korea	Permitted through affiliates	Permitted through affiliates	Subject to prior approval for investments in excess of 15%	Permitted for up to 100% of the bank's capital, subject to approval
Philippines	Permitted; expanded commercial banks may engage in securities activities directly or through a subsidiary	Insurance agency and brokerage permitted through subsidiaries	Permitted with limitations	Permitted with limitations
Singapore	Banks may hold equity participation in stock-brokering firms with MAS approval	Locally incorporated banks may own insurance companies with MAS approval	Limited in the aggregate to 40% of the bank's capital	Acquisitions of 5% or more require regulatory approval
Argentina	Permitted	Permitted through pension fund affiliates	Limited	Permitted but subject to prior approval
Brazil	Permitted through subsidiaries	Permitted through subsidiaries	Limited to suppliers to the bank	Permitted
Chile	Permitted	Insurance brokerage permitted	Not permitted	Permitted for up to 10% of equity with approval
Mexico	Permitted through affiliates	Permitted through affiliates	Not permitted	Permitted for up to 20% of equity with approval
Venezuela	Permitted; stock exchange activities and mutual funds	Permitted through subsidiaries, subject to controls under the insurance laws	Limited	Acquisitions of more than 10% of a bank's voting stock with approval
Czech Republic	Subject to authorization by the Securities Commission	Insurance brokerage permitted	Controlling interests prohibited. Qualified interests (i.e. 10% to 49%) permitted, but may not exceed (i.e., individually) 15% and, in the aggregate, 60% of bank's capital	Subject to regulatory approval for acquisitions of voting shares equal to or in excess of 10%, 20%, 33%, and 50%
Poland	Permitted; dealing in securities through subsidiaries	Permitted	Permitted up to 25% of the bank's capital	Permitted

Source: Institute of International Bankers (1999).

¹With respect to the activities described, the chart indicates which types of financial activities are permitted. The chart is not intended to summarize the complete range of prudential restrictions that may apply to any such activities.

²Securities activities include underwriting, dealing, and brokering of all kinds of securities and all aspects of the mutual fund business.

³Insurance activities include underwriting and selling insurance as principal and as agent.

⁴Including investments through holding company structures.

the integration of banking, insurance, and asset management.⁵⁴ Banks in many countries are the largest managers and distributors of mutual funds, own the largest pension funds, and are in-

creasingly involved in the sale of insurance products.⁵⁵ The so-called "triangle of finance" is most advanced in Mexico, where banks can own pension funds and insurance companies. Excluding

⁵⁴Some analysts refer to the integration of banking, insurance, and asset management as the "triangle of finance," and estimate that pension funds add a new dimension to the financial systems in the region that creates huge cross-selling opportunities, and leads to further consolidation (see Garcia Cantera and Burbridge, 1998).

⁵⁵While in the United States mutual fund distribution is concentrated in broker-dealers and discount brokers, in Europe funds are sold in bank branches (see G-10, 2001); most emerging markets follow the latter pattern.

Brazil, Mexican financial institutions have the most developed bancassurance operations in the region. In Argentina, banks can only own up to 12 percent of insurance companies, but banks are circumventing the regulation by setting up financial holding companies. In Brazil, the relationship between banking, insurance, and asset management has been in place for many years. However, the lack of a private pension system limits the potential synergies and growth, particularly between insurance and asset management.

In Asia, banks are generally permitted to undertake securities and insurance activities, but bancassurance is just slowly taking hold. Banks in the financial centers of Hong Kong SAR and Singapore are increasingly focusing their growth strategies on fee-income-generating activities, such as asset management, credit cards, and mutual fund distribution, taking advantage of the authorities' moves to develop these activities. In the Republic of Korea, the approval of the FHC Act has opened the field to pure financial holding companies, which are allowed to manage securities, insurance, and other financial companies. Viewed as supportive of the trend toward universal banking, the FHC Act could provide five main advantages to medium and small banks: (i) the ability to cross-sell several financial products; (ii) tax savings by avoiding double taxation; (iii) cost savings through the integration of IT platforms and reductions of overlapping branches and staff; (iv) better capital management; and (v) facilitation of joint ventures with foreign institutions. Since June 2000, banking institutions in Malaysia have been allowed to cross-sell financial products and services of entities within the same group, including those belonging to their subsidiaries, or appoint the subsidiaries as their agents to cross-sell their financial products and services. Together with Singapore, Malaysia has been at the forefront of developing bancassurance products in the re-

gion. By contrast, the Republic of Korea has extended regulations prohibiting noninsurance financial institutions from applying for insurance agent licenses until August 2003. Some analysts attribute the relative variance in development of the bancassurance sector in Asian countries to the relative historical links to the United States versus European nations.⁵⁶

Banks in Central Europe are able to operate as universal banks and are increasingly widening their product offerings. Hungarian banks are just starting to offer pension and insurance products, however, and it will take some time for these products to move from the more affluent market segments to the mass markets.⁵⁷ Similarly, growth in cross-selling to existing customers helped improve noninterest income in 1999 and 2000 for Polish banks, but further expansions are somewhat limited. The revenue contribution from fees and commissions of the Czech banks remains limited, reflecting the relatively underdeveloped nature of cross-selling opportunities, but trading and foreign exchange incomes continue to be a significant source of revenue.

As a result of the increasing shift toward universal banking activities, banks in emerging markets are increasing the share of noninterest income in their revenue mix. The figures in Table 5.3 show that banks in most emerging markets are obtaining a relatively large share of income from noninterest sources. Banks are increasingly charging explicit fees for services that used to be bundled together with deposits or loan products, and receive a growing share of fees from credit card operations, ATM usage, and mutual fund sales, as well as from capital markets and asset management. For the banks in Table 5.3 where a breakdown is available, fees are roughly half of noninterest income, while income from trading is around one-third. A larger share of earnings from fee-based products is likely to provide more stability to banks' revenues.

⁵⁶See, for instance, Wright and Dasgupta (2000). Allen and Gale (2000) also note that the historical development of financial systems has been greatly influenced by financial crises and their resolution.

⁵⁷See Moody's Investors Service (2000).

Banking and Commerce

The same sort of benefits that derive from combining commercial and investment banking activities in a single financial institution—cross-selling and diversification—could apply in cases where banking and commerce are combined. Some analysts believe there are other benefits associated with combining banking and commercial activities in one firm—in particular, the provision of better corporate control and a better ability to extend credit in environments with weak contract enforcement and/or to financially distressed companies. The German “hausbank” system—whereby universal banks have representation and control of companies through the direct ownership of shares and the proxy (indirect) votes delegated to them by the owners—is often mentioned as an example of the benefits of mixing banking and commerce. The Japanese system—whereby a “main bank” has a special responsibility to rescue firms in their keiretsu (industrial grouping) that get into financial trouble—provides another such example. Gorton and Schmid (1996) provide evidence that equity block holdings by German banks led to improved firm performance in the year 1974, but this result is weakened for more recent sample periods as a result of the development of capital markets. Hoshi, Kashyap, and Schaferstein (1990) study a sample of Japanese firms that enter financial distress and find that firms with keiretsu membership are more likely to emerge from financial distress than firms with no formal group or bank relationships.⁵⁸ Finally, Rajan and Zingales (1998) argue that relationship-lending of this type may work better than arm’s length credit relations in less developed economies—where contracts are ineffective and price signals from the market are relatively uninformative.

Although critics of the mixing of banking and commerce refute several of the arguments just discussed, it remains quite difficult to definitively establish the superiority of one bank model over

another. Edwards and Fischer (1994) analyze in detail the widely held view that the German universal banking system has advantages over others, showing that this view is not supported by the evidence from the post-war period. Moreover, the system’s dependence on bank credit can have its drawbacks when the banks themselves fall into distress: Kang and Stulz (2000) show how Japanese firms with large proportions of bank debt invested less than firms with lower proportions of bank debt in the 1990–93 period. Similarly, Rajan and Zingales (1998) note that strong ties with banks meant that Japanese corporates were inclined to ignore signals sent by their poor cash flows and continue to invest rather than cut their losses. Finally, Canals (1997) notes that the crises of Credit Lyonnais and Banesto demonstrate the operational difficulties encountered in efficiently managing universal banks’ corporate holdings.

A strong relationship between banking and commerce has been singled out as an important factor in emerging market financial crises. And this relationship usually works both ways—that is, through reciprocal ownership of banks and corporates that belong to the same business group. One of the best-known cases is the Chilean banking crisis of 1982, where an unrestricted liaison between banks and corporates allowed for unending rollovers of loans, evading regulatory control through the creation of shell companies and other procedures.⁵⁹ More recently, the high level of related party transactions between banks and their affiliates or group associates was mentioned as a key factor leading to the financial crisis that erupted in Thailand in July 1997 and soon became region-wide.⁶⁰ Similarly, although investment limits existed in the Republic of Korea by the time of the 1997 Asian crisis, the close association of the banks with the chaebol (industrial conglomerates), combined with corporate cross-shareholdings, were noted as major determinants of the banking crisis. The Czech

⁵⁸See also Krainer (2000).

⁵⁹See De la Cuadra and Valdés (1992).

⁶⁰See, for instance, Fitch IBCA (1998, 1999).

Republic's experience with voucher privatization schemes provides yet another example of the problems that can arise from combining banking and commerce. Many of the shares handed to the inexperienced population ended up in investment funds that became the dominant industrial equity holders. As most of the funds were run by banks, this created a conflict of interest: banks were the largest holders of both debt and equity in the same enterprises. This meant that it was often more profitable to roll over credits rather than cause a share price collapse by withdrawing finance. Finally, although not the major determinant of the current banking crisis, ownership of the Turkish banks by industrial conglomerates has been cited as one of the major weaknesses in that banking system.⁶¹

The conventional view that mixing banking and commerce is likely to lead to instability and banking crises has been challenged by a recent study.⁶² The authors construct a series of variables on regulatory restrictions, including bank ownership of nonfinancial firms. A regression of a measure of banking crises on that variable—controlling for many other regulatory and banking variables—shows that the likelihood of a banking crisis is greater the tighter the restrictions placed on bank ownership of nonfinancial firms. Although the authors attempt to explain the banking crises from 1980 to 1989 with a regulatory variable that pertains to 1997, it is possible that countries that experienced crises then tightened regulations on banks' powers. However, Barth, Caprio, and Levine make an effort to get around possible reverse causality by backdating the data on regulatory restrictions. They find that in many cases there was no move to greater restrictions on banking powers following crises⁶³ Nevertheless, the authors do not con-

trol for the enforcement of regulations and the study catalogues several countries where the mix of banking and commerce is likely to have been strong and to have had a bearing on crises, as relatively restrictive.⁶⁴

More important, some emerging markets have recognized the problems inherent in mixing banking and commerce and are moving toward a separation of these activities. For example, the Singaporean authorities have asked the country's banks to divest their nonfinancial assets over a three-year period and cross-shareholdings will only be allowed in one direction. (For instance, if a bank takes a stake in an insurance company or brokerage firm, then the insurance company or the brokerage firm will not be allowed to own shares in the bank.)⁶⁵ Moreover, the sharing of directors, managers, or brand names will be prohibited. The authorities are confident that they can trace a particular bank's ownership structure owing to the transparency of ownership relationships in Singapore and the fact that the Monetary Authority of Singapore (MAS) has the authority to approve the banks' boards of directors. Similarly, the Brazilian authorities have asked the major banks to divest their nonfinancial companies. In the case of Bradesco, the largest private bank, this led to the creation of a holding company (Bradespar) with all the major corporate holdings of the bank. In the Republic of Korea, the recently approved FHC Act limits individual ownership of a bank holding company to 4 percent of total equity, to prevent industrial capital from controlling financial capital.

E-Banking

Dramatic advances in the speed and quality of telecommunications, computers, and information

⁶¹See, for instance, Fitch IBCA (2000).

⁶²See Barth, Caprio, and Levine (2000).

⁶³The authors claim that crises did not induce governments to enact more restrictive regulations and point to the cases of Argentina and Chile in support of that conclusion. Indeed, Chile severely restricted bank activities until very recently and both countries considerably strengthened the enforcement of existing rules and regulations.

⁶⁴For instance, Japan, the Republic of Korea, Thailand, Turkey, and Venezuela have an index of three in terms of restrictions of banks owning nonfinancial firms, where four is the maximum restriction in the area.

⁶⁵See Lee (2000).

services have helped lower information and transaction costs and will continue to be a major force in the consolidation of the financial services industry. The Internet, in particular, constitutes an alternative electronic delivery channel that is especially well suited for the provision of standardized or commoditized financial products and services. The Internet allows financial services providers to lower cost, bundle products, and expand the geographical reach of their distribution channels. This will certainly change the underlying business model of banking, leading to the entry of new suppliers, alliances and joint ventures, and greater consolidation. In the short run, however, the business dynamics point toward considerable margin pressures and aggressive investments to capture market share (Garcia Cantera and Burbridge, 2000), which are likely to widen the differences between large and small banks.

There are clear cost advantages to the production and delivery of financial services online, but initial estimates based on operational costs underestimated the impact on firms' total cost. Management consulting firms had estimated that a typical transaction costing around one dollar in a branch would cost one or two cents online.⁶⁶ However, the fixed costs of setting up an online bank operation are much higher than originally expected, not least because of the uncertainties involved in the rapid technological changes and the multiple banking models that could arise from them. Moreover, Internet-only banks soon discovered customer resistance to operating only online, which led the new entrants to add some sort of physical presence—such as branches—to their virtual operations, in order to build up trust and attract and retain new customers. Also, traditional banks that launched their own Internet solutions discovered that customers tend to treat online banking as no more than an additional channel to be used for checking their balances and eventually doing some transactions. In other words, banking customers want to continue to

use branches and ATMs. This behavior simply raises banks' costs and poses a difficult problem of optimal use of the different channels in the distribution network.⁶⁷

The Internet provides banks with much greater opportunities to cross-sell products and services, not only through their business-to-consumer (B2C) relationships with individuals but also in their role as enablers of business-to-business (B2B) transactions. The Internet enables banks to collect and analyze information about their customers in a much more systematic way than previously and to tailor individual products more precisely to the needs and tastes of individual customers. This facilitates the cross-selling of products such as deposits, credit cards, mutual funds, insurance policies, mortgages, and other types of customer loans. The products offered differ across countries as well as between financial institutions. In several countries, B2B applications have advanced more rapidly than B2C applications, which may make the Internet activity less noticeable. Typical B2B applications include cash management, foreign exchange, and treasury products, as well as trade credit. Banks are also forming alliances and joint ventures with commercial companies to pursue B2B e-commerce initiatives. Banks are well positioned to provide the payments gateway to facilitate e-commerce, as they control the payments processing and settlement infrastructure. Until regulators open up the payments settlement function to nonbanks, each and every B2B transaction will have to involve at least one bank at some stage of the transaction. Moreover, this role in the payments system will allow banks to acquire the customer base and supplier chain of their business partners and exploit the resultant cross-selling opportunities.⁶⁸

Despite the cost-effectiveness and convenience of online banking, virtual banks are unlikely to displace traditional banks. There are only a few virtual banks in the mature markets that have

⁶⁶See, for instance, Claessens and others (2000) and Turner (2001).

⁶⁷See Boss, McGranahan, and Mehta (2000).

⁶⁸See Ramos and others (2000).

succeeded in attracting and keeping sufficient customers; stand-alone banks have better chances for success and there are already a few examples of these banks in the emerging markets.⁶⁹ For instance, in Singapore, FinatiQ (the first stand-alone bank in Asia) started out by offering customers time deposits and third-party products (unit trusts/mutual funds and stocks) at wholesale prices, and is becoming a meaningful competitor to traditional banks in these areas.⁷⁰ In the near future, this bank plans to offer basic credit products,⁷¹ as well as third-party insurance products. In April 2001, Dah Sing Financial Holdings (DSFH) launched MEVAS (“more economic value-added services”), which is Hong Kong SAR’s first stand-alone bank.⁷² DSFH has unveiled an aggressive deposit pricing strategy—sometimes paying twice the prevailing market rate—and plans to focus on the young and upper-scale market segment. In Latin America, Patagon.com justified its distinctive pan-regional approach in the quest for scale and critical size, but it has so far provided mostly online brokerage services.⁷³ In 2001, the company has started a turnaround following its merger with Spain’s Open Bank, and it is in the process of applying for banking licenses in Argentina, Brazil, and Mexico.⁷⁴ In the Czech Republic, the only online bank (E-banka) is gradually moving from attracting deposits and investing in government securities to also lending to individuals with loan approvals based on credit scoring models.⁷⁵

Although analysts believe that the true competition for traditional banks will come from brokerages and insurance companies that could start providing savings and payment instruments—as well as from retailers and telecoms and other utilities that could develop “bank in a box”⁷⁶ solutions—e-banking in emerging markets is likely to be dominated by spin-offs of traditional banks.

Most of the large, local banks in emerging markets are rolling out products and services through Internet channels.⁷⁷ Although the process is just in its initial stages and e-banking penetration is still low (see Box 5.4), analysts predict a gradual and steady growth of e-banking in emerging markets. The growth of e-banking is likely to lead to further consolidation, as smaller banks lack the wherewithal to invest in the new technologies or to engage in joint ventures with global banks or Internet/telecoms providers. In making IT investment decisions, banks have to balance two conflicting considerations. On the one hand, technology is constantly changing and expected returns may be undermined by new entrants or even newer technologies. On the other hand, so-called “network effects” may create “first mover” advantages that may encourage market players to quickly adopt the latest technology without awaiting a full evaluation of costs and benefits.⁷⁸ The importance of size for this kind of investment is demonstrated by the leading role that the three large, private Brazilian banks command in the area of

⁶⁹Virtual banks are online banks owned by nonbanks; stand-alone banks are online banks owned by another, traditional (“brick and mortar”) bank. See IMF (2000) for a description of the alternative online banking models.

⁷⁰Although the bank is not allowed to offer its products in most neighboring countries, nothing seems to prevent non-residents from opening an account with an online bank operating from another country.

⁷¹Credit cards, personal loans, and mortgage loans are amenable to “cyberscoring,” a simple statistical method that allows for more or less instantaneous on-line loan approval.

⁷²Online banks in Hong Kong SAR are subject to strict licensing requirements and, in particular, locally incorporated online banks must be established through the conversion of a locally incorporated authorized institution. DSFH took advantage of the license of a previously acquired small bank to convert it into the online venture.

⁷³See Abut, Bigio, and Siller (2000b).

⁷⁴See “La Reconversion de Patagon” (2001).

⁷⁵The bank intends to offer loans to small- and medium-sized firms later this year based on a modified credit scoring model.

⁷⁶“Bank-in-a-box” solutions consist of full service, virtual bank systems sold as unbranded packages to retailers and insurance companies that seek to offer e-banking services (see Boss, McGranahan, and Mehta, 2000).

⁷⁷Large “brick and mortar” banks now generally offer access to account information and transfers of funds and some also provide basic credit products (such as credit cards, mortgages, and car loans) online. These banks also offer their own or third-party brokerage, mutual funds, and insurance products.

⁷⁸See Turner (2001).

Box 5.4. E-Banking in Emerging Markets

The expected fate of e-finance has unfortunately come to be linked with the ups and downs of various “dot.coms” in stock markets around the world. With the e-bubble bursting in stock markets, doubt was also cast on the relevance of e-finance for emerging markets. Although the initial Internet hype was in many cases unrealistic, so is the current pessimism. E-finance certainly seems to be alive and well in both advanced economies and emerging markets. Moreover, several analysts predict steady growth in the provision of e-banking services. This box illustrates how Internet and e-banking developments have gone hand-in-hand in many countries and also discusses factors that are likely to affect penetration of e-banking in emerging markets.

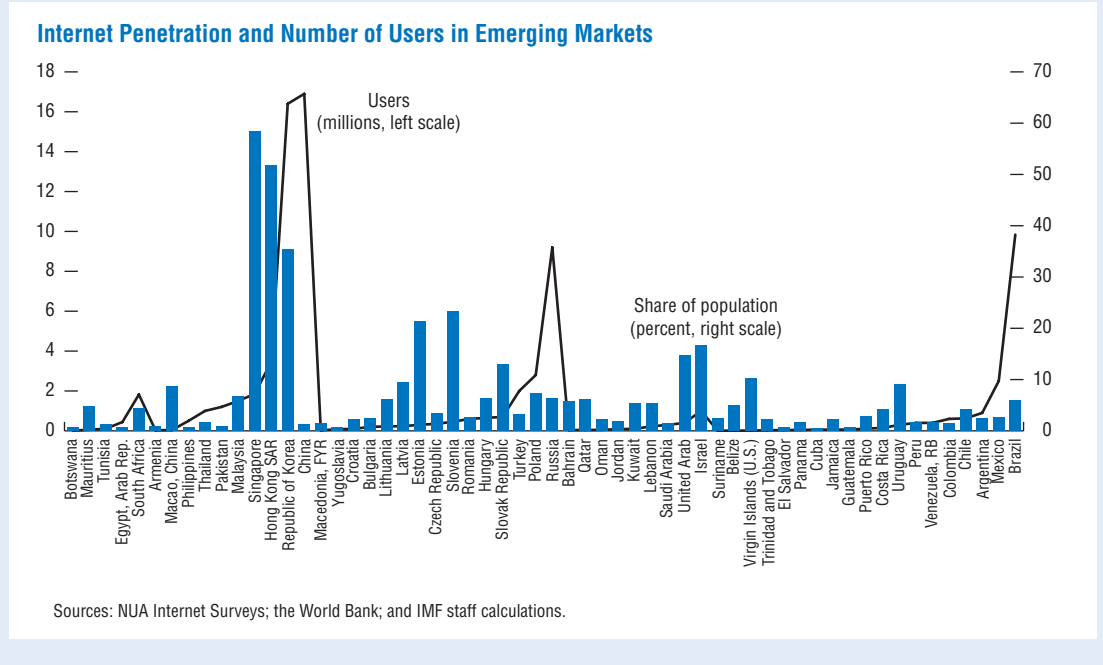
Internet Penetration and On-line Populations Worldwide

Although the Internet, in some respects, may appear to be a mature market phenomenon, it has started to make its way into emerging markets as well. The first two figures display estimates of Internet penetration as a percent of total population (bars) and number of users (lines) in emerging and mature markets. Asia

has become the region leading, not only emerging markets, but also many mature markets, in terms of penetration rates and total on-line population. Emerging Europe contends for the number two spot in terms of Internet penetration rates among emerging markets, with several countries having between 10 percent and 20 percent of the population on-line. Latin America, however, has relatively low penetration rates, with only African penetration rates being lower. Penetration rates also vary a great deal in mature markets, but, overall, mature markets still account for around 80 percent of all Internet users (while accounting for only 15 percent of the world’s population).

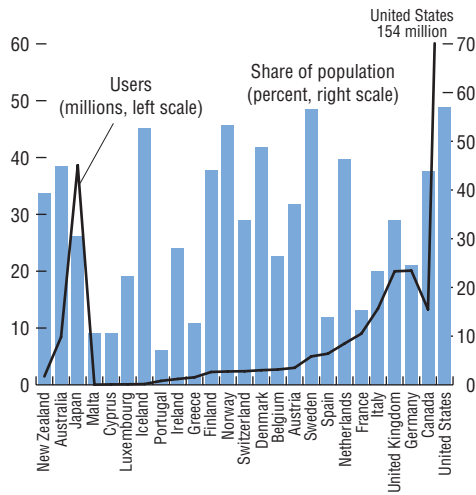
E-bank Penetration

It is reasonable to expect a positive association between Internet penetration rates and e-bank penetration rates. This is confirmed in the third figure, which shows a strong positive correlation between Internet penetration rates and the percent of banks offering on-line banking (the correlation for the 23 countries in the figure is 0.74) and also between both these numbers and the percent of customers actually using e-bank-



Box 5.4 (concluded)

Internet Penetration and Number of Users in Mature Markets

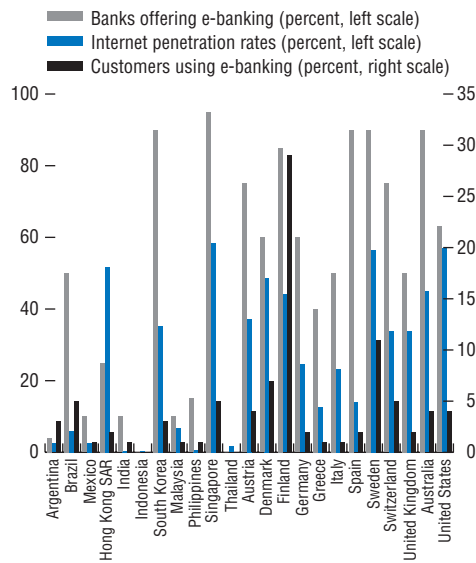


Sources: NUA Internet Surveys; the World Bank; and IMF staff calculations.

ing (the correlations are around 0.45 in both cases). In the emerging markets, the leaders in e-banking are found in Asia, as was the case for Internet penetration, with Singapore showing the largest percentage (5%) of bank customers using the Internet for bank services. Brazil, the Internet leader in Latin America, is not far behind in terms of e-bank penetration. However, the percent of customers that use e-banking is still small relative to both Internet penetration and the percent of banks offering e-banking in both mature and emerging markets.

Internet penetration alone obviously cannot explain the amount of customers that use e-banking at the individual bank level. The success of e-banking at the individual bank level also requires a well designed e-bank strategy that is accompanied by substantial information technology (IT) investments. This is clearly illustrated in the fourth figure, showing large variation in the percent of customers that use e-banking in selected banks within Brazil, Mexico, and Scandinavia. For example, there are Brazilian banks that enjoy penetration rates that are higher or similar to those of Scandinavian banks,

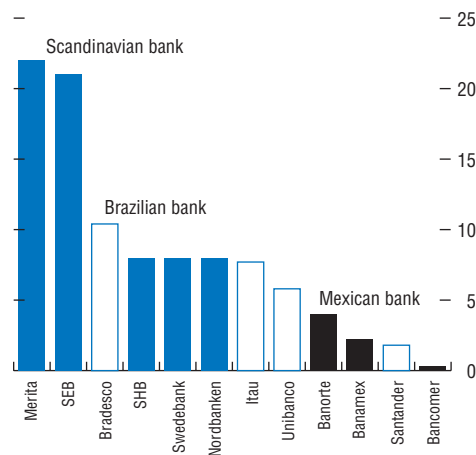
Internet Penetration and E-Banking in Selected Markets



Sources: World Bank; Claessens and others, 2000; NUA Internet Surveys; and IMF staff calculations.

but also some that have lower penetration rates than those of some Mexican banks.

Percent of Customers Using E-Banking in Selected Banks



Sources: Salomon Smith Barney, 2000; and *Financial Times*, 2000.

In terms of transactions, many individuals use e-banking just for balance inquiries and only a few actually do transactions on-line. In Mexico, for example, an overwhelming majority (around 80 percent) of e-banking activities comes from customers making inquiries about their account balances. In Brazil, e-banking accounted for only 1–8 percent of total transactions by end-1999, depending on the type of transaction, with the smaller proportion being for investment in fixed-income securities and the higher for paying bills.¹

There are a number of factors that are viewed as obstacles for the development of e-banking in emerging markets. In many cases, customers express concerns about the security of on-line transactions. Poor infrastructure with slow Internet connections and limited amounts of products offered on-line are other factors. There are also regulatory issues that must be resolved in many cases, and issues of transparency and trust that prevent a more rapid growth of e-banking in emerging markets.

Another set of factors is viewed as potentially contributing to a deeper e-banking penetration, including more competitive pricing and increased convenience in on-line banking. One example of the convenience factor is that access to traditional channels seems to be inversely related to customer demand for Internet services. Analysts have recently used this argument to explain why a survey found that only 6 percent of bank customers in Singapore (where bank branches, ATMs, and cell phones are plentiful) would like to have access to e-banking services,

¹See Central Bank of Brazil (2000).

while around 70 percent of customers in Indonesia (with fewer alternative channels and a larger geographical area to cover) would like to have access to an Internet bank. The importance of the Internet as an alternative banking channel was also demonstrated during a one-week strike among bank employees in Korea's Kookmin Bank, which resulted in around a million on-line transactions. In terms of infrastructure, the lack of fixed lines may be less of an obstacle as alternative ways of connecting to the Internet, such as mobile phones and cable TV, are developed.

E-banking in emerging markets is likely to exhibit steady growth in the near term, owing to the expected growth in Internet penetration, as well as from more aggressive e-banking strategies among the banks. Many individual institutions predict that their on-line customers will double in number over a few years. If the Internet grows at the rate it has grown over the last three years, this would not be unreasonable, especially when taking into account that e-bank penetration is likely to increase over time as it has in mature markets. The e-bank population in the United States, for example, doubled between 1999 and 2001 to 20 million, while the number of Internet users only increased by less than 10 percent over the same time period. In Europe, the number of customers banking on-line grew by almost 69 percent between 1999 and 2000 to around 7 million, while the number of Internet users grew by around 50 percent. If e-banking penetration rates grow at similar rates together with rapid growth in Internet access in emerging markets, this could lead to a significant number of emerging market customers doing their banking on-line in the next few years.

e-banking.⁷⁹ Also, four smaller Hong Kong SAR banks created an online bank consortium (Net Alliance) with an information systems infrastructure company to help defray the costs of the new technologies. Analysts believe, however, that ac-

tual mergers—rather than just consortiums—are what is needed to accelerate the consolidation process in Hong Kong SAR.⁸⁰ Moreover, they also estimate that only a few outsize banks, with a global or pan-regional reach, would be the

⁷⁹See, for instance, Garcia Cantera and Burbridge (2000).

⁸⁰See Ramos, Matanachai, Cheung, and Rogers (2000).

main players in B2B, and that smaller, single-market banks run the risk of marginalization from the corporate banking sector.

Consolidation and Market Power

Consolidation in the banking systems has raised concerns about market power in the provision of financial services. With fewer players in the market, banks may be able to charge prices that exceed marginal costs and extract rents from customers, reduce the volume of lending, and feel less pressure to innovate. In particular, it is sometimes feared that while consolidation may not hurt competition at the national/whole-sale level, it may do so at the local level, the relevant market for many retail services.⁸¹ For example, the presence of only a few banks in some local markets may result in lower deposit rates for customers. A related concern is that lending to small and medium enterprises may be adversely affected.⁸² This may be the case since banks with market power will tend to reduce lending volumes and increase loan interest rates. Larger banks, such as those created by mergers or foreign acquisitions, are often seen as having a relative disadvantage at lending to small companies.⁸³ Since the demand for small business loans is largely confined to the local markets, consolidation may reduce loan volumes, particularly in the small business segment. Consolidation may also affect market power through a very different channel: cross-section consolidation may promote the bundling of products, increasing switching costs for consumers and lowering demand elasticities.⁸⁴

Higher concentration levels need not necessarily translate into less competition, however. The view that high market concentration yields anti-

competitive conduct is widely held and is referred to as the “structure-conduct-performance” paradigm.⁸⁵ In principle, however, there is no one-to-one relationship between market concentration and the degree of competition. For example, in the extreme case of a “contestable” market with no barriers to entry, even in highly concentrated markets, banks would not be able to exploit market power due to the threat of potential competition.⁸⁶ However, as the report by the G-10 (2001) emphasizes, domestic financial markets are unlikely to be easily contestable due to regulatory barriers, economies of scale or scope, and inelastic consumer demand.⁸⁷ Moreover, a small number of monopolistically competitive banks may choose a lower degree of product differentiation, allowing for more competition at the level of each product. Schargrodsky and Sturzenegger (2000) show that this could happen as a result of higher capital adequacy requirements and illustrate it with the experience of Argentina. Similarly, some of the same forces promoting consolidation in emerging markets, such as increased foreign bank entry, are also likely to foster competition. Hence, it is probably necessary to move beyond comparison of concentration (or HH) indices to assess competitive conditions.

In mature markets, higher market concentration appears to have adverse effects on prices. A number of studies have investigated the general relationship between measures of market concentration and the degree of market power. De Bonis and Ferrando (1997) document a positive relationship between concentration and interest rates on loans in Italy. On the other hand, Egli and Rime (2000) report mixed results for Switzerland. For the United States, Simons and Stavins (1998) show that banks pay lower interest rates in markets that are more concentrated and

⁸¹In practice, for some financial products and services, the local market is a city, a metropolitan statistical area, or a county. See Simons and Stavins (1998).

⁸²See Vives (1999) and Belaisch, Kodres, Levy, and Ubide (2001).

⁸³See, for example, Berger and Udell (1998).

⁸⁴See G-10 (2001), Chapter V.

⁸⁵See, for instance, Cetorelli (1999); and Carlton and Perloff (1990).

⁸⁶See Baumol, Panzar, and Willig (1982); and Tirole (1988), p. 309.

⁸⁷See G-10 (2001).

Table 5.5. *H* Statistics for Selected Emerging Market Banking Systems

Country	Argentina	Brazil	Chile	Czech Republic	Hungary	Mexico	Poland	Turkey
<i>H</i> before	.809	.281	.332	.040	.528	.436	-.030	.270
Market structure before	MC	MC	MC	Inconclusive (MC or monopoly)	Inconclusive (MC or perfect competition)	MC	Inconclusive (MC or monopoly)	MC
<i>H</i> after	.969	.291	.363	-.039	.539	.219	-.029	.100
Market structure after	Inconclusive (MC or perfect competition)	MC	MC	Inconclusive (MC or monopoly)	MC	MC	Inconclusive (MC or monopoly)	Inconclusive (MC or monopoly)
Test for change in <i>H</i>	Cannot reject constancy	Cannot reject constancy	Cannot reject constancy	Cannot reject constancy	Cannot reject constancy	Cannot reject decline	Cannot reject constancy	Cannot reject decline
Year of structural break	1997	1997	1997	1998	1997	1998	1998	1998

Source: IMF staff estimates.

Note: *H* statistic is the sum of the elasticities of interest rate revenues. The table reports the results from panel data regressions using yearly data on individual banks for the period 1994–99. Control variables include proxies for size and the banks’ business mix. See Gelos and Roldós (2001). “Test for change in *H*” refers to tests on whether the *H* statistic changed in the period starting with (and including) the year of the structural break, at the 5% confidence level. “MC” (monopolistic competition) indicates that the hypotheses $H > 0$ and $H < 1$ could both not be rejected at the 2.5% confidence level. “Inconclusive” indicates that the results are compatible with various types of market structure.

that mergers tend to reduce deposit interest rates. Prager and Hannan (1998) show that deposit rates offered by participants in large, horizontal U.S. mergers and their local rivals declined by a greater percentage than those in markets not affected by mergers. Using survey data on interest rates charged and paid by banks, Hannan (1991) finds a positive relationship between loan rates and concentration measures and a negative relationship between deposit rates and concentration indices. For the United Kingdom, a recent report suggests the existence of collusive practices among the largest banks: banks make profits well in excess of their cost of capital, prices are poorly related to risk, and customers perceive significant barriers to switching for all their personal banking products.⁸⁸

A general procedure to assess market structure and contestability is to measure how banks’ revenues respond to changes in costs. This procedure relies on the estimation of the response of bank revenues to changes in input prices,

summarized in the so-called *H* statistic, that adds up all input elasticities.⁸⁹ In long-run competitive equilibrium, any increase in input prices should lead to a one-to-one increase in total revenues. This is true since those banks that cannot cover their increase in input prices will be forced to exit the market, and it means that competition is associated with an *H* statistic value of 1. The same argument applies if the bank operates as a monopolist in a perfectly contestable market. By contrast, the *H* statistic will be negative if the bank operates as a monopoly, and lie between zero and one if the market structure is characterized by monopolistic competition (since then the bank faces an inelastic demand). More generally, under some conditions, there is an increasing relationship between the *H* statistic and the degree of competition.⁹⁰

According to this measure, competitive conditions over the 1994–99 period declined in only two of the eight emerging markets examined. Table 5.5 shows the results of estimations of rev-

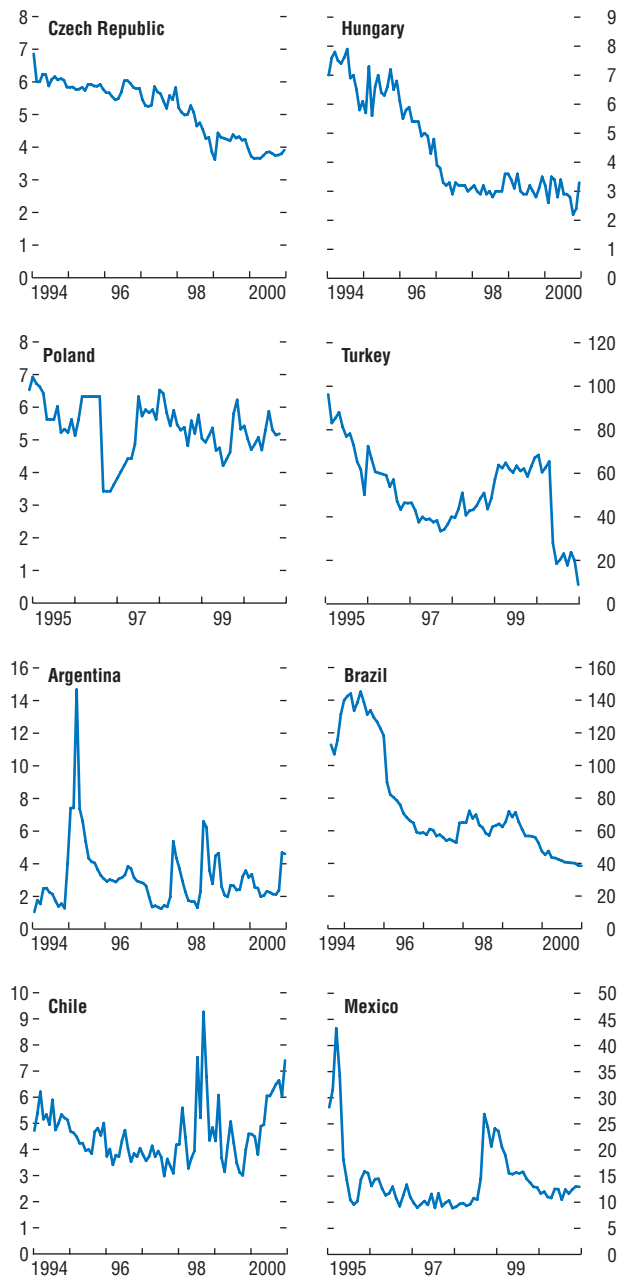
⁸⁸See Cruickshank (2000).

⁸⁹See Panzar and Rosse (1987).

⁹⁰For example, with a constant demand elasticity, there is a clear correspondence between this measure and the markup above marginal cost. Interestingly, for a sample of 15 European countries, Bikker and Groeneveld (2000) find a negative correlation between *H* and concentration measures.

Figure 5.5. Evolution of Nominal Banking Spreads

(In percentage points)



Source: IMF staff estimates based on central bank reports.

enue equations and the derived H statistics based on yearly panel data on individual banks for eight major emerging markets.⁹¹ To ascertain whether there has been a significant change in the competitive environment during the six years studied, the price elasticities (and therefore the H statistic) were allowed to change over two subperiods. Since for most countries it is hard to pinpoint precise “structural breaks,” we use only two split dates: 1997 for countries in which the consolidation process started earlier and 1998 for those in which it took off later. For most countries, the test suggests that the market structure can be characterized by monopolistic competition, a result also observed in many mature markets.⁹² Argentina is the only country in which the null hypothesis of perfect competition could not be rejected for the later years. In four out of eight cases, the results show an increase in the H statistic (suggesting more competition), albeit not statistically significant. By contrast, in the cases of Mexico and Turkey, the estimations show a significant decline in the H statistic, indicating a drop in competitive conditions. While suggestive, these results should be interpreted with caution, given the inherent data and estimation problems.⁹³

The observed pattern in competitive conditions is consistent with the evolution of bank spreads. Although a variety of factors, such as macroeconomic and bank-level cost variables, influence the level of spreads between borrowing and lending rates, spreads are also likely to be affected by market structure.⁹⁴ With more market power, banks will be inclined to lend less at higher rates. Spread levels in most of the eight countries have either remained stable or fallen since 1994–95 (Figure 5.5). Exceptions are Chile, where spreads have increased since 1998; Mexico, where they show higher levels since mid-1998; and Turkey, where spreads have

⁹¹Because of the large effects of the Asian crisis in 1997, no Asian countries were included.

⁹²See De Bandt and Davis (2000).

⁹³For a further discussion of these issues, see Gelos and Roldós (2001).

⁹⁴See Demirgüç-Kunt and Huizinga (1999).

risen since mid-1997 before falling as a result of lower inflation in 2000. Interestingly, the pattern for Mexico and Turkey is consistent with a decline in the *H* statistic observed above. Overall, the charts are in line with the results from Table 5.5.

The evidence regarding the effects of bank consolidation on small business lending is ambiguous. Strahan and Weston (1996) did not find a decline in small business lending following mergers in the United States, and Berger, Demsetz, and Strahan (1998) show that bank acquisitions across U.S. state borders did not result in a reduction of loan volumes to small companies.⁹⁵ Peek and Rosengren (1998) find that while the small business loan portfolio share of the consolidated bank tends to converge toward the premerger portfolio share of the acquirer, small business loans increase in roughly half of the cases after the merger. Similar results are reported by Walraven (1997). Looking at the effects on overall credit availability for small firms, Avery and Samolyk (2000) report that bank consolidation between smaller banks tends to be associated with greater small business credit availability in local banking markets. On the other hand, Keeton (1996) finds partial support for the claim that banks acquired by large or distant organizations reduce lending to local farms and businesses. Focarrelli, Panetta, and Selleo (1999) report that a bank's lending to small firms in Italy typically declined after the bank was acquired by another institution, but the effect could be related to the fact that the acquired banks tended to have weak balance sheets. To date, there is little evidence in this area on emerging markets. In a recent study, Berger, Klapper, and Udell (2001) examine a detailed dataset on Argentine banks, finding evidence that large and foreign-owned institutions extend relatively fewer loans to opaque small firms.

Policy Issues and Systemic Risks

The process of financial sector consolidation in emerging markets raises a number of risks and complex policy issues. Almost invariably, rapid structural changes in finance are likely to lead to increased risks at the level of institutions and markets—including international capital markets. Policies to deal with these risks, as well as with other issues related to the consolidation process, include: exit and other policies designed to enhance the role of market forces in consolidation, antitrust measures and consumer protection, liquidity management, the regulation of pension fund portfolios and performance, regulations related to developments in e-finance, as well as the supervision of financial conglomerates and the architecture of supervision.

Consolidation and Market Discipline

The economic case for financial sector consolidation in many emerging markets remains clear and a case can be made for an enhanced role of market forces in the process of consolidation going forward. Although it is difficult to deduce the optimal number of banks in a particular economy, many emerging markets appear to be overbanked in terms of numbers of institutions, and the forces of globalization and technological innovations suggest that more consolidation is warranted. The experiences of some Latin American economies suggest that, following a process of guided consolidation in the aftermath of crises, increased competitive pressures from foreign entrants are able to deliver a substantial degree of market-driven consolidation.⁹⁶ Nevertheless, some countries in Asia continue to pursue policies that are apparently trying to ensure that a certain number of national institutions emerge as global competitors. The gradual removal of barriers to foreign entry seems ap-

⁹⁵The evidence regarding bank consolidation and bank lending to small enterprises is discussed in more detail in Belaisch and others (2001).

⁹⁶The increased role of market forces can be inferred from the number of M&As in Brazil and Chile, as well as from the takeover defenses built up by the larger domestic banks in Venezuela and Argentina (see Barham, 2000).

appropriate in many cases. Moreover, the establishment of clear exit rules and prompt corrective actions for institutions in distress would also facilitate the consolidation process, while containing the problems associated with institutions that become “too big to fail.” These measures would also be more in line with the enhanced role of market discipline embedded in the new Basel Capital Accord.⁹⁷

The consolidation of bank and nonbank financial activities also seems to be efficient, as long as an enhanced supervisory framework is established. Although the relaxation of most restrictions on banking activities could deliver efficiencies in production and consumption, the existence of a safety net for depository institutions calls for some remaining restrictions in the nature and extent of risk-taking, competition, and permissible activities of such institutions.⁹⁸ The desirability of allowing banks to undertake some nonbank financial activities appears clear, but the advantage of mixing banking and commerce are less clear-cut and may lead to some regulatory dilemmas. For instance, some local institutions in Mexico have argued that strict separations between financial and nonfinancial activities were putting them at a competitive disadvantage relative to the Spanish banks—in particular relative to the ownership of telecoms companies. The regulators have argued that if large ownership stakes in such companies were allowed, it would be difficult to establish “where to draw the line” in relation to what constitute bank-related activities.

Although it is difficult to predict the future structure of the financial services industry, the G-10 (2001) report argues that small, specialized institutions are likely to coexist with large univer-

sal banks. Smaller local institutions specializing in some of the intermediation functions are likely to survive as niche players. Moreover, the new technologies would also allow the supply chain of financial services to be “deconstructed,” with different institutions specializing in certain aspects of the intermediation process.

Market Power and Competition Policies

Traditionally, antitrust considerations have not played the same role in the financial sector as in others. In many advanced economies, including (in the past) the United States, the banking sector has been shielded from similar antitrust scrutiny as applied by regulatory authorities in other markets.⁹⁹ In many cases, a merger between banks only requires approval by the central bank or financial regulator, but not from the antitrust authority. Concerns about financial stability constitute the main reason behind this more lenient attitude toward the financial sector. In the past, more market power was seen as translating into higher franchise value, which, in turn, was regarded as acting as a deterrent for banks to engage in risky practices. More recently, however, the importance of fostering competition in the financial sector has been recognized and antitrust policy instruments are increasingly being applied for bank mergers.¹⁰⁰ Recent country examples, whereby authorities in mature markets have approved bank mergers only under conditions designed to avoid detrimental effects on competition, include Australia, Canada, Italy, and Switzerland.¹⁰¹

Antitrust policy in the financial sector confronts a number of important challenges; in emerging markets, the challenges are even big-

⁹⁷See Basel Committee on Banking Supervision (2001a).

⁹⁸See Mussa (1986).

⁹⁹See Vives (1999).

¹⁰⁰Cruikshank (2000) writes: “Historically, the most likely explanation for this special treatment lay in the existence of an informal contract between successive governments and banks, designed to deliver public confidence in the banking system. In return for cooperating in the delivery of Government objectives, the banking industry escaped the rigours of effective competition. This contract cannot coexist with desirable levels of innovation, competition and efficiency in U.K. banking markets.”

¹⁰¹For a detailed description of regulations and case studies in major mature markets, see G-10 (2001), Chapter V.

ger. If antitrust considerations are to become more prominent in the regulation of financial intermediaries, various issues need to be resolved. First, the geographic extent of the market for a wide variety of products and services has to be appropriately defined, and these definitions are likely to be influenced by the same forces that are driving the consolidation process—namely, technological change and globalization. Second, these same forces are fostering competition and they make it hard to measure barriers to entry. Third, markets for certain banking products exceed national boundaries and this may raise difficult issues of coordination of international antitrust policies. Fourth, differences in regulations mean that different financial products and services are available across countries, making it difficult to determine which ones can be considered sufficiently close substitutes so as to be part of the same market. Finally, regulators face the difficult task of establishing the types of regulations that help promote competition without jeopardizing financial stability.¹⁰² These issues pose difficult challenges for regulators in mature markets and the challenges are likely to be bigger in emerging markets, where antitrust institutions are often less experienced.¹⁰³ Box 5.5 provides some examples of how antitrust policy in banking is handled in selected advanced economies.

Regulators in emerging markets are keen on having larger and stronger financial institutions, especially after crises, and to date have had limited concerns about the potential market power that these entities may build up. Moreover, most countries agree that free entry remains the preferred solution to competitive concerns in local markets, particularly since the relevant market definition for most financial products has become increasingly national, if not global, due to the new delivery technologies. The consolida-

tion process has created situations in some countries where proposed mergers would have created banks with relatively large market shares, however. This has forced the authorities to consider potential market power issues.

Singapore, for instance, does not have a competition policy and is not taking the approach of restricting M&As on competitive grounds. The authorities recognize the possibility of some degree of monopoly power in the deposit market but believe there is sufficient competition and would like to see further consolidation. The Hong Kong Monetary Authority (HKMA) shares that view to some extent, but is concerned that the Code of Banking Practice lacks many of the formal safeguards in place in the United Kingdom and Australia to protect banking customers.¹⁰⁴ The Republic of Korea has a Fair Trade Commission that could eventually deal with such problems, but the authorities see no major concern—even when the merger of Kookmin and Housing and Commercial has left the merged entity with around 45 percent of the retail market.

Issues of concentration and market power have arisen in the recent consolidation of the Mexican and Chilean banking systems. The takeover bids for the second largest Mexican bank raised issues of concentration and market power that, although satisfactorily resolved, continue to worry the authorities. A friendly takeover bid of Bancomer—the nation's second largest bank—by Spain's BBVA was followed by a counteroffer from Banamex—the country's largest bank. The Banamex-Bancomer merger would have created a bank with 40 percent of total deposits and this raised concerns about monopoly power among the regulatory authorities. The latter could not intervene in this second merger as approval from the National Banking and Securities Commission (CNBV) was not re-

¹⁰²See Shull, Bernard, and White (2000).

¹⁰³Rodriguez and Williams (1994) question the adequacy of standard antitrust policies in developing countries. Dutz and Vagliasindi (2000) assess the effectiveness of competition policies in transition economies.

¹⁰⁴The HKMA has recently raised the issue for public discussion, also providing a study comparing international practices to facilitate the discussion (see Yam, 2001).

Box 5.5. Antitrust Policy in Banking in Selected Mature Markets¹

The institutional setup to implement antitrust policy in banking, the processes for approving mergers and acquisitions, as well as the definitions of the relevant markets vary across mature markets. This box briefly sketches some of the main features of antitrust policies in Italy, the Netherlands, Sweden, and the United States.

In the United States, all proposed mergers of insured banks must be approved by a federal banking regulator—namely, either the Office of the Comptroller of the Currency, the Federal Deposit Insurance Corporation, or the U.S. Federal Reserve. The Department of Justice, which has general enforcement authority under federal antitrust laws, reviews proposed mergers and acquisitions approved by the banking regulators.

Antitrust analysis in the United States is largely based on the structure-conduct-performance approach. Horizontal Merger Guidelines published by the Department of Justice foresee an examination of the prevailing Herfindahl-Hirschmann (HH) index and the change brought about by the proposed merger. For most industries, the addition of more than 50 points, resulting in a HH index of 1,000, is taken as an indication that further examination is warranted. For banking, the standards are more lenient, recognizing that local banks are not the only providers of bank services, and an increase in the HH index of over 200, to 1,800 or more, is required to trigger a more serious review. In addition, if the proposed merger would result in a postmerger market share in excess of 35 percent, the Federal Reserve Board is likely to review the transaction further. There are differences in the definition of the relevant market: the Federal Reserve defines product markets as the “cluster” of products and service offered by banks to all customers, whereas the

Department of Justice usually disaggregates the product market into customer classes, such as small businesses. While the guidelines based on the HH index constitute a critical screening device, the Department of Justice and bank regulators also analyze other economic factors when assessing the likely competitive impact of mergers.

In the Netherlands, mergers among financial and nonfinancial firms are prohibited without prior notification to the Competition Authority, the Nederlandse Mededingings Autoriteit (NMA). The NMA then explores the nature of the relevant market, market shares, barriers to entry, and the degree of dependency of external clients or suppliers. Exceptions applying to the financial cases are granted when a merger would prevent bankruptcy of a financial institution, in which case the financial supervisor also becomes involved. In case of divergence, the ultimate decision lies within the Ministry of Economic Affairs.

In Italy, jurisdiction regarding antitrust regulation in the banking sector lies with the Bank of Italy, while other sectors generally fall under the Autorita Granate della Concorrenza e del Mercato. The Bank of Italy usually defines the province as the relevant market for deposits and the region as the market for loans.

In Sweden, the Competitive Authority (Konkurrensverket) must be notified of any merger if it creates an entity with a turnover greater than SKr4 billion and if the acquired firm has a turnover greater than SKr100 million. A merger can be challenged if it results in a dominant market position or further strengthens an existing dominant position. In general, mergers are treated in the same way as those in any other industry.

It should be noted, however, that the European Commission has exclusive responsibility to control mergers whose effects extend beyond individual member countries and affect the European Union. Whether the Commission has jurisdiction over a particular merger is assessed based on the turnover of the companies involved.

¹This summary is largely based on Cyrnak (1998), United States Department of Justice and Federal Trade Commission (1997), United States Department of Justice (1995), G-10 (2001), Chapter V, Annex V, and Woosley, King, and Padhi (2000).

requested by the interested parties. Nevertheless, the CNBV used informal channels to express its concerns about market dominance and consulted with Canadian and other authorities on competition issues in the financial sector. In the event, Bancomer shareholders accepted an improved offer from BBVA, as they saw significant risks that assets sales and/or increased regulation would have lowered the value of the alternative merger. Despite the fact that creation of three large conglomerates ensures a fair degree of competition, the regulatory authorities remain concerned about potential competition issues and the expertise of the antitrust commission to deal with them.

At the end of December 2000, an amendment of the Chilean Banking Law reinforced the role of the Superintendency of Banks and Financial Institutions (SBIF) in M&A transactions. According to the amendment, the previous authorization of the SBIF is required if a “significant market participation” is reached in the cases of: (i) mergers between banks; (ii) acquisition of all or parts of the assets and liabilities of a bank; and (iii) acquisition of control of two or more institutions by the same acquirer (as was the case of BSCH in Banco de Santiago and Banco Santander Chile, and the Luksic group in Banco Edwards and Banco de Chile).¹⁰⁵ In the case of a merger, the new regulation considers two scenarios: (i) when the estimated market share reaches 15–20 percent; and (ii) when more than a 20 percent market share is acquired or controlled. In the first case, the minimum capital adequacy level will be increased from 8 percent to 10 percent.¹⁰⁶ In the second case, the SBIF can approve or deny authorization of the transaction. Approved transactions will be subject to a capital adequacy level of 14 percent, as well as to increased reserve requirements and limits on interbank loans.

Market power could also manifest itself in abuses and unfair business practices arising

from the potential conflicts of interest that could result from the many activities that universal banks perform. Santomero and Ekles (2000) list a number of such practices. First, a broker could provide inappropriate advice when selling products offered by affiliates or the bank itself. Second, an underwriting institution could place investments that are unable to sell in the open market with an affiliate. Third, a bank with private information on the bankruptcy risk of a debtor could encourage the distressed firm to issue other securities to pay off affiliate debt. Finally, a division or line of business could relay private information on the financial situation of a client to another division in an effort to gain a unique price-setting advantage. The authors argue that many of these alleged abuses are the direct outgrowth of the synergies available to universal banks, however, and that it is unclear whether allowing such information sharing is detrimental to the consumer. And, if it was detrimental, the solution for these concerns would be the assurance of full disclosure and sufficient competition from other services providers.

A recent study on the behavior of universal banks in Israel provides interesting insights for emerging markets, as it provides evidence on the implications of combining bank lending and underwriting with fund management—a combination of activities increasingly undertaken by emerging market banks.¹⁰⁷ The study finds that firms whose equity was purchased by an investment fund affiliated with the bank that had been the underwriter of the shares (and that was also a lender to the firm in question) exhibited extremely low stock returns both on the first day of trading and throughout the first year. The authors interpret the results as suggesting that universal banks have higher loyalty to their client firms than to investors in funds. Also, they claim that it is not easy for investors to protect themselves against such behavior by universal banks

¹⁰⁵Control is defined as acquiring more than 66 percent of the shares of each institution.

¹⁰⁶As of end-April 2001, all banks in the system had risk-weighted capital of 10.5 percent or higher.

¹⁰⁷See Ber, Yafeh, and Yosha (2000).

due to lack of transparency and the presence of nonnegligible switching costs.

The authorities in several emerging markets are aware of these issues and are taking measures to prevent these abuses, but enforcement of such measures appears to be quite difficult. For instance, market participants report that, in Brazil, some banks transferred securities from their trading books to mutual funds at inflated prices in the aftermath of the spillover effects of the Asian crisis. The authorities responded to such practices by requiring a strict separation (or “firewalls”) between the activities of the funds and the banks. Similarly, analysts report that a history of trading abuses in Mexico—a result of the lack of enforcement of firewalls between the banks that own the brokerages and the brokerages themselves—has kept retail investors away from the stock market. Independent brokerages that try to avoid these conflicts of interest have grown considerably over the last few years and are capturing a large share of the increasing business generated by the pension funds. In Argentina and Mexico, there is a clear separation between banks and pension funds from an operational point of view: the database containing details of pension fund clients cannot be crossed with that of the bank, although this rule is difficult to enforce.

Concentration and Systemic Risk

The consolidation of banks with other non-bank financial intermediaries has the potential of increasing the stability of the merged institutions, but the success of the universal bank model depends on an adequate control of the

internal contagion risk—the risk that bad outcomes in one line of business or affiliate could cripple the entire entity. As was mentioned above, universal banks enjoy the benefits of increased diversification opportunities but they can also engage in increased risk-taking activities. Moreover, internal contagion is real and the counter argument—diversification—is likely to fail during crisis.¹⁰⁸ Most of the studies that conclude that there are positive diversification results from engaging in securities activities take into account the behavior of securities prices in the mature markets. It is well established that the correlation among securities returns becomes highly positive during crisis periods in emerging markets (see Chapter III), hence mitigating the potential diversification gains. Similarly, firewalls that attempt to prevent the spillovers from other lines of business are also difficult to enforce in emerging markets and the incentives to break down the walls are enhanced in crisis situations.

Moving away from the stability of individual firms, consolidation could also increase firms’ interdependencies through the interbank market by reducing the number of players and counterparties.¹⁰⁹ It also may lead to a significant shift of payment and settlement risks to customer banks and third-party service providers.¹¹⁰ These factors could increase the risk of contagion or spillovers across firms. The G-10 (2001) report shows that, for a sample of 22 large and complex banking organizations (LCBOs) in the United States, an increased consolidation intensity has been associated with increased interdependency through the interbank market.¹¹¹ Figure 5.6 shows similar measures of consolidation intensity and interde-

¹⁰⁸See, for instance, Diebold and Santomero (1999).

¹⁰⁹This may also complicate the implementation of monetary policy and modify the monetary transmission mechanism. However, there is little evidence that consolidation has significantly affected any of the channels through which monetary policy affects the rest of the economy in mature markets (see G-10, 2001, Chapter IV).

¹¹⁰The risks associated with the outsourcing of some of the banks’ functions are also discussed in the section on e-finance. The G-10 report (2001, Chapter VI) discusses in more detail the impact of consolidation on payment and settlement systems. Some of the issues, in particular those associated with cross-border transactions, are also of relevance for emerging markets.

¹¹¹Consolidation intensity is defined as the cumulative growth of the LCBOs’ assets relative to the growth of the assets of the entire banking system; interdependency is defined as the interbank-lending-to-capital ratio for the LCBOs (see G-10, 2001, Chapter IV).

pendencies for a sample of emerging markets. It is difficult to derive strong conclusions from the figure, as the period has been characterized by high volatility, but the figure suggests only a minor increase in interbank interdependencies for a few countries. However, the figure also shows that consolidation is rather recent and one cannot rule out increased interdependencies as consolidation accelerates in the near future. Such interdependencies would result in increased exposure and risks of contagion across institutions, which would have to be addressed by enhanced liquidity management at the institution and market levels.¹¹²

Pension Funds and Local Markets

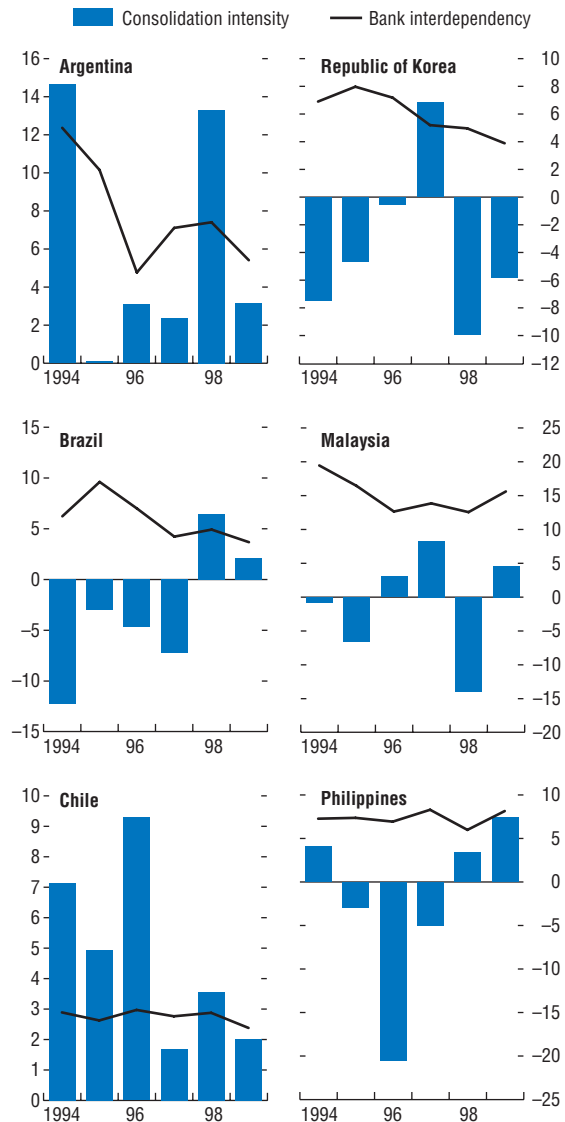
Private pension funds are growing and consolidating at a fast pace in most emerging markets. This rapid growth in funds under management contrasts with the slow growth (and sometimes even shrinkage) of local securities markets and, when combined with restrictions on pension funds' investment policies, could cause significant distortions and concentration of risk exposures. Most countries have adopted tight restrictions on the percentage of a company's capital or outstanding bonds that a pension fund can hold.¹¹³ For example, in Argentina, funds can hold at most only 5 percent of a company's capital and 5 percent of its bonds. When local stock markets are small (as is particularly the case in some Latin American countries), with a limited number of qualifying companies, rapidly growing funds will quickly reach these limits, reducing their possibilities of diversification.¹¹⁴ More

¹¹²On the management of liquidity, see Huang and Johnston (2000).

¹¹³See Yermo (2000).

¹¹⁴For example, in Chile, until 1997, only 30 stocks out of a total of 300 were eligible for pension fund investment. In Argentina, fund managers noted that there were only roughly 14–15 eligible companies listed on the stock market. Walker (1993) finds that smaller Chilean funds' variable income portfolios perform better than those of larger ones, while there is no difference for fixed income. He attributes this to the 7 percent limit of each company's share that funds can hold.

Figure 5.6. Consolidation Intensity¹ and Bank Interdependency² in Selected Emerging Market Banking Systems



Source: IMF staff estimates based on Fitch IBCA's Bankscope.

¹Consolidation intensity is defined as the percentage growth in the assets of the 10 biggest banks (based on total assets) minus the percentage growth in the assets of all banks in a specific country.

²Bank interdependency is defined as the ratio of deposits with other banks to total assets for the 10 biggest banks in a specific country based on most recently available data.

generally, constraints on portfolio diversification result in systematic market risk: higher returns can be achieved only at higher relative risk.¹¹⁵ This is particularly relevant given the strict restrictions on foreign investments prevailing in most countries. Moreover, when pension funds' choices are restricted, their ability to exert corporate control may be limited: companies with a captive group of shareholders may feel less pressure to maximize shareholder value. At the other extreme, in cases where funds are allowed to purchase a substantial fraction of a company's capital, they can acquire control over individual companies that may not be in the interest of affiliates. A similar problem occurs when funds are captive buyers of government securities and cannot diversify away sovereign risk.

Concentration strengthens the funds' ability to influence asset prices. An effect of the large size of funds relative to the markets is that price discovery is impeded: individual funds are often able to move prices. This often also results in liquidity constraints for funds, since they cannot sell assets without putting downward pressure on prices. For example, when the Chilean investment regime was partially liberalized in 1985, pension funds found it difficult to close their fixed-income position and asset allocations changed only slowly in response to the liberalization.¹¹⁶ Similarly, a relaxation of investments abroad contributed to a significant depreciation in the Chilean peso in early 1999. These effects on asset prices are likely to be magnified in a more concentrated industry.¹¹⁷

Minimum performance requirements also distort pension funds' portfolio choices and could have destabilizing influences in a more concentrated industry. Some countries require funds to achieve certain minimum rates of return, often calculated relative to the industry average.¹¹⁸ Relative performance requirements tend to induce funds to move in herds, allocating their assets in a suboptimal manner. A recent study has found that, partly as a result of these performance requirements, the correlation of pension fund returns has been extremely high in Argentina, Chile, and Peru, and pension funds in the last two countries performed worse than the simple IFC index of equity returns.¹¹⁹ Smaller funds, in particular, feel the pressure not to deviate too much from the behavior of their big competitors, and this herding behavior, in turn, could also have destabilizing effects on prices.¹²⁰ To avoid such herding behavior, Hungary adopted wide bands for minimum and maximum returns and Poland allows for a longer period (24 months) over which a fund's return is compared to the benchmark.¹²¹ It has been argued that the concerns about these types of regulations may be exaggerated, however, since they merely strengthen already existing incentives.¹²² The argument is that herding has also been documented for mature markets that lack similar restrictions,¹²³ and that the growing use of index-benchmarking investment strategies by asset managers reinforces the tendency to pursue uniform investment strategies. Finally, minimum absolute performance require-

¹¹⁵See Srinivas, Whitehouse, and Yermo (2000).

¹¹⁶See Srinivas, Whitehouse, and Yermo (2000).

¹¹⁷See Iglesias (1999).

¹¹⁸These countries include Argentina, Chile, Colombia, El Salvador, Hungary, Peru, Poland, and Uruguay. For an overview of regulations in Latin America, see Yermo (2000). For a broader international survey of return guarantees, see Turner and Rajnes (2001).

¹¹⁹See Srinivas, Whitehouse, and Yermo (2000).

¹²⁰Systematic empirical analysis of herding among emerging market pension funds is still scarce. Queisser (1998) compares portfolio weightings across Chilean funds; while the mean portfolio share held in equities is 29.4 percent, the standard deviation is only 1.6 percent. Valdés Prieto and Ramírez (1999) examine the effect of the narrowing of the fluctuation bands around the minimum return in Chile; they find a small but positive effect on the degree of herding.

¹²¹See Pennacchi (2000).

¹²²See Vitas (1998).

¹²³See Lakonishok, Shleifer, and Vishny (1992).

ments,¹²⁴ as adopted by some countries, may force pension funds to invest excessively in very low-risk (and low-return) securities.

Regulatory Issues Related to E-finance

The last couple of years have witnessed enormous swings in sentiment regarding e-finance, but the ongoing revolution in electronic financial services is already transforming the industry, even in emerging markets. This transformation raises a host of complex policy issues. Although the current low penetration has meant that e-finance is not at the top of the policy agenda in many emerging markets, the issues will have to be addressed in the relatively near term.¹²⁵ Although regulators are concerned about the potentially destabilizing impact e-finance can have on the domestic financial system, they also stress the need for the regulatory framework to be flexible and adaptive. Regulators are particularly concerned that regulations should be technology-neutral and should not hinder the adoption of a technology that in the end would be the most efficient.¹²⁶ This trade-off has led regulators in some of the most advanced emerging markets to issue various regulations that try to protect local institutions while also allowing domestic markets to benefit from technological advances.¹²⁷ At the same time, many regulators realize the need to prepare local institutions for changes in their competitive environment, and resources are dedicated to increasing the understanding of e-financing and providing the markets with the necessary infrastructure in terms of

both regulations and technology.¹²⁸ The main risks associated with e-finance can be classified into those that affect individual institutions, those that can have systemic consequences for the local markets, and those that have cross-border implications.

Some of the key risks for institutions involved in various aspects of e-finance are strategic or business risk, operational risk, and legal and regulatory risks. The main problems related to e-finance are due to the competitive pressures to be the first (or at least early) into the market. As the recent boom-bust cycle with the “new economy” sectors has shown, new technologies are associated with high rates of business failure. Indeed, some analysts have argued that the fact that the financial industry has been largely spared the cycle of entrepreneurial creation and destruction is partly thanks to the prudential limits on entry into the banking business. In terms of operational risk, the introduction of complex new technologies is almost always associated with additional—and sometimes unknown—risks. Some have compared these risks with those associated with the introduction of new and innovative financial instruments. Many companies deal with these risks by outsourcing some or all of the areas of the business where they lack the relevant expertise (such as data processing and information systems administration) to third-party services providers. However, dealing with and managing the risks associated with outsourcing also requires specific skills to make outsourcing a less risky proposition than providing the services in house. To reduce the

¹²⁴Countries that offer absolute guarantees include Hungary and Uruguay. Similarly, the non-private, but mandatory, Provident Funds in Malaysia and Singapore provide absolute minimum return guarantees. See also World Bank (2000).

¹²⁵See Claessens and others (2000) and Turner (2001) for surveys of the issues involved.

¹²⁶See, for example, Bailey and Lord (2000).

¹²⁷In Hong Kong SAR, the authorities do not allow virtual banks to operate without a local banking license, and the virtual or stand-alone banks have to show that they strike a balance between building market share and return-on-equity, to prevent aggressive pricing policies in an attempt to reach a critical mass in a short period of time. Moreover, the Malaysian authorities gave local banks an 18-month head start over foreign banks on Internet banking in the local market. Other examples of countries with restrictive regulations in certain areas are Thailand and Brazil, which impose controls on the use of key and encryption technology.

¹²⁸For example, the HKMA was the first to issue virtual bank regulations in Asia (in May 2000). Singapore followed shortly after, in July. Malaysia plans to launch an e-commerce master plan. In Latin America, Brazil, Argentina, and Mexico are among the countries changing regulations and legal infrastructure in response to e-finance considerations.

operational risks, regulators often require several security layers as well as complete back-up systems that are located away from the primary system—something that can be a major cost for smaller financial institutions.¹²⁹ The legal and regulatory risks follow from the fact that regulations are new, vary across jurisdictions, and are subject to revisions as regulators try to keep up with constantly evolving technological developments.

On the users' side, there are several issues of consumer protection that become especially relevant when the Internet is used to conduct financial transactions and gather and process information. The Internet allows companies to gather large databases containing potentially sensitive information about customers' financial transactions and positions. This has led several countries in both mature and emerging markets to introduce legislation aimed at protecting the consumer and preserving confidentiality of personal information collected by companies over the Internet.¹³⁰ There is also the related issue of hackers stealing personal information that is used in a way that is harmful to the individual. There has indeed been a number of such cases, and policymakers are beginning to address the problems.¹³¹ Regulators in some countries are requiring that the board and senior management of financial institutions using the Internet institute security policies that include the use of adequate methods of electronic signatures, encryption systems, certification, firewalls, and the like. With the increased use of the Internet for online stock trading, there is also a concern over attempts to manipulate stock prices over the Internet.¹³²

From a market perspective, systemic risks could arise from the fact that a large share of financial institutions invest in the same or similar technologies, or from more open access to the payments system. The use of common, relatively untested technologies means that if there are problems with the technology, the whole financial system may be affected. There may also be risks to the payments system, as platforms used for the clearing and settlement of transactions become more open to firms and individuals outside the financial system. For instance, inadequate segregation between internal systems for retail and large-value payments may allow a breach of the lighter security net at the retail end (say, the bank's website) to allow entry into a high-value system where damage of systemic consequences could be done.¹³³ Although outsourcing is considered to be an efficient practice, there is a concern that the bank and/or the payments system may be exposed to a firm whose business strategy may enhance the system's risks and may escape the regulator's oversight. In consequence, the regulatory authorities ought to have the right to examine the operations of the relevant services providers. Finally, the Internet is likely to blur the distinctions between different financial intermediaries, increasing the need to be aware of the linkages across banks, securities firms, and insurance companies.

At the cross-border level, the Internet raises issues related to the speed of transfers across borders and the operation of banks beyond their jurisdictions. The former are derived from the fact that funds can be shifted at the click of a button, and this may add an unpredictable degree of

¹²⁹See, for instance, Monetary Authority of Singapore (2000).

¹³⁰In emerging markets, for instance, Hong Kong SAR has issued an Electronic Transactions Ordinance, while similar laws have also been enacted in Mexico and Thailand.

¹³¹China, for instance, has implemented an Internet safety law, which makes computer hacking and spreading of viruses illegal.

¹³²In South Korea, for instance, one investor was charged with manipulating stock prices by placing large orders that were cancelled before they were executed. This was done to make other day traders believe there was a high demand for the stock, which made them push up prices in stocks that the accused investor owned. Other attempts to manipulate stock prices include spreading rumors about companies in Internet chat rooms.

¹³³See Turner (2001).

volatility into global financial markets. These issues should be dealt with by better liquidity management at the level of financial institutions. The latter is related to the fact that a bank that develops an online service will be able to reach (or be reached from) every country with Internet access. This means, for instance, an enhanced ability for the bank to conduct activities with customers over interconnected electronic networks into countries where banks are not adequately supervised. More generally, the traditional home-host understandings about cross-border supervision that were developed for the physical world may not work as well in the virtual world.¹³⁴ In many cases, the regulators have taken the view that it is the target market that determines the relevant legislation. This is the case in, for example, Hong Kong SAR, Singapore, and the United States.¹³⁵

Supervision of Financial Conglomerates

The emergence of financial conglomerates that provide a wide range of services adds at least two new dimensions to the supervision and regulation of such entities: one is the issue of consolidated supervision and the other is the architecture of the institutions in charge of supervision.

Consolidated supervision is critical to assess the solvency of financial conglomerates and many emerging market supervisors are still unable to perform a full consolidation of the balance sheets of the supervised entities. Some of the difficulties involved in consolidated supervision are related to accounting deficiencies and the complexity of some of the new activities undertaken by banks, while others derive from the fact that the solo capital adequacy requirements of each of the banking, securities, and insurance

sectors have different definitions of the elements of capital and different approaches to asset and liability valuations. More important, the structure of financial conglomerates could lead to double or multiple gearing—that is, situations where the same capital is used simultaneously as a buffer against risk in two or more legal entities. Double gearing occurs whenever one entity (say, a bank) holds equity (or another form of regulatory capital, such as subordinated debt) issued by another entity (say, an insurance company), and the issuer is allowed to count the capital in its own balance sheet. Moreover, excessive leverage could result from situations where a parent issues debt and downstreams the proceeds to a dependant in the form of equity. In these situations, the effective leverage of the dependant may be larger than its leverage computed on a solo basis.¹³⁶ This may be especially relevant for large emerging market banks that issue securities in international capital markets and may want to expand their less known securities or insurance sister affiliates. Although many emerging markets have improved their supervisory and regulatory frameworks in issues such as loan classification and provisioning, consolidated supervision is much less advanced. Moreover, the increased size and complexity of some of the new activities undertaken by the banks may require the creation of supervisory teams that monitor the activities of these large, complex banking organizations.¹³⁷

The emergence of financial conglomerates has challenged traditional demarcations between regulatory agencies and has made the business of regulation more complex. In most countries, regulatory architecture is the result of historical decisions—and the response to particular financial failures—and may not correspond to the fast structural changes in the industry. In particular,

¹³⁴See Basel Committee on Banking Supervision (2000).

¹³⁵In other words, if a company outside Hong Kong SAR targets Hong Kong SAR residents, it will be subject to Hong Kong SAR legislation. The issue then becomes how to determine the target market.

¹³⁶Dewatripont and Tirole (1994) and Basel Committee on Banking Supervision (1998) provide examples of double and multiple gearing.

¹³⁷The issue of monitoring the activities of large, complex financial institutions becomes particularly relevant with the increased entry of foreign financial institutions in emerging markets (see IMF, 2000).

the convergence of most emerging markets to a universal banking paradigm may suggest that consolidation of regulatory agencies in charge of banks, securities, and insurance companies would be appropriate to mirror the evolution of the industry.

Although the creation of a single, mega-regulator is becoming increasingly popular among mature and emerging markets, other institutional structures may be equally efficient. The case for a single regulator is based on similar considerations to the ones that drive the financial services industry: to exploit economies of scale and scope, take advantage of scarce supervisory and regulatory expertise, internalize the linkages across different activities, as well as to avoid duplication and regulatory burden, and have better accountability and/or governance. Opponents of the single agency approach note that a large agency may be difficult to manage, too powerful, and prone to extend the safety net to the rest of the financial system. Opponents also argue that, while firms are diversifying into other activities, they continue to have a core business that remains dominant, risks facing banks and insurance companies are very different, and multiple agencies could apply checks and balances and avoid the mistakes of just one overseer.¹³⁸

Some analysts argue that emerging markets can derive useful lessons from the Scandinavian experience with integrated financial supervision, and only a few have so far followed that approach.¹³⁹ These analysts argue that emerging markets share many of the features that have made the Scandinavian experience with integrated financial supervision a successful one: they are relatively small economies that can exploit economies of scale and scope in supervision, they are still building human capital in the area, and they have banks that offer a wide range of financial services—in particular, growing ban-

assurance businesses. However, they also argue that, while the original independence of the regulators from their own central banks in the Scandinavian nations contributed to the creation of single agencies, bank supervision in several emerging markets is still done at the central banks and there are strong reasons for retaining this institutional structure. Moreover, they also note the experience of Finland, where the existence of a compulsory private pension fund sector led to the establishment of two agencies: one for insurance and pension funds and another for banks and securities. Cases of emerging markets that have established a single agency include Hungary, the Republic of Korea, and Singapore (which remains the only country that groups all financial sector supervisors in the central bank).

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¹³⁸The issues of consumer protection and antitrust policies are discussed elsewhere; see Taylor (1995) for a discussion of the so-called “Twin Peaks” approach, which argues that the best institutional arrangement is to have a single regulator covering systemic and prudential issues, with another agency responsible for consumer protection and antitrust issues.

¹³⁹See, for instance, Taylor and Fleming (1999).

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