ANNEX I

ONGOING WEAKNESSES IN JAPAN'S CORPORATE AND FINANCIAL SECTORS

This annex provides an update on progress in restructuring and revitalizing Japan's financial and corporate sectors and related policy initiatives. The framework for addressing the banking system's sizable bad loans and the corporate sector's excess capital has been strengthened, but incentives for banks and corporations to employ the framework remain weak. Accordingly, not much measurable progress has recently been made in resolving these problems so far.

Japan's Financial Sector: Limited Progress in Addressing Structural Weaknesses

After a period of relative calm following the last round of public capital injections in 1999, a deteriorating macroeconomic environment has again exposed underlying structural problems in Japan's banking sector. Notwithstanding some progress in restructuring banking operations and raising profitability, including in the context of large mergers, reported bad loans have been broadly unchanged and concerns about asset quality remain. In early 2001, a sharp drop in the stock market reinforced concerns over bank capitalization, prompting the government to announce an emergency package aimed at disposing of major banks' bad loans and reducing their exposure to equity market risk. The package received a lukewarm reception from many market analysts, however, because important policy details were still being worked out and because it was not seen as representing a major shift in the authorities' approach to restoring the banks to health. Looking ahead, the introduction of mark-to-market accounting in FY2001 and the shift from blanket to partial deposit insurance in April 2002 could present formidable challenges for weaker banks, including some regional institutions and credit cooperatives.[1]

The life insurance sector has also been adversely affected by the economic slowdown, which brought deteriorating revenues, asset quality, and yield spreads during the past year. The major insurance companies have held up reasonably well so far, but a string of failures among mid-sized insurance companies highlighted the increasing vulnerability of the sector. Entry by banks and the opening of some parts of the industry to cross-sectoral competition—concluding the Big Bang reforms—will raise competitive pressures over time and has already led to greater cooperation through mergers and alliances. Going forward, further consolidation is likely to occur.

Bank Vulnerabilities: Bad Loans, Weak Capital, and High Market Risk

Three years after Japan's banking crisis, initial hopes that bank restructuring supported by public capital injections would restore banks to financial health have given way to disappointment. Major banks, regional banks, and credit cooperatives continue to be burdened by sizable problem loans. In the view of the Financial Services Agency (FSA), Japan's financial supervisory agency, banks have adequately provisioned against nonperforming loans (NPLs), but private analysts estimate that banks' uncovered loan-loss exposure remains excessively large—equivalent in the aggregate to half of Tier 1 capital for major banks and more than 100 percent of Tier 1 capital for regional banks. The quality of regulatory capital remains weak and bank profitability remains low. Banks also remain highly exposed

[1]The fiscal year begins April 1.

to market volatility owing to their large equity and government bond holdings, and market fluctuations will directly affect bank capital with the introduction of mark-to-market accounting.

The Bad Loan Problem

Despite banks' continued efforts to write off NPLs in FY2000, outstanding bad loans declined only slightly as new NPLs emerged faster than expected. Banks recognized an estimated ¥5–6 trillion in fresh bad loans amid high-profile corporate failures and a sharp increase in bankruptcies among smaller companies. Banks also participated in several large-scale debt forgiveness packages and had to cover falling collateral values as land prices continued to decline. Moreover, as the authorities have noted, progress in the implementation of loan classification standards has also contributed to the need for additional provisioning. As a result of these factors, loan-loss charges for major banks are now estimated at about ¥4.3 trillion for the past fiscal year—2.6 times the initial estimates and comparable to costs in the previous year.

As of September 2000, gross nonperforming loans for major and regional banks according to the Financial Reconstruction Law (FRL) standard amounted to ¥32 trillion, compared to ¥11–12 trillion in general and specific reserves and an undisclosed amount of collateral (Table A1.1).[2] Preliminary results for the full fiscal year suggest that these numbers have remained roughly unchanged through March 2001. A large amount of currently performing loans, which were lent to borrowers classified as needing attention, may be at risk of becoming nonperforming, however. Recently released data—based on banks' self-assessments of asset quality—show that the total face value of loans by major and regional banks to borrowers whose financial condition requires attention or who are either bankrupt or close to bankruptcy amounts to ¥111 trillion, of which ¥48 trillion is covered by "superior" collateral (Table A1.2). The remaining ¥63 trillion is either covered by "ordinary" collateral or is unsecured.[3] Once credit cooperatives are included (using data as of March 2000), the total value of all deposit-taking institutions' loans to classified borrowers rises to ¥151 trillion (30 percent of GDP), of which ¥70 trillion is covered by superior collateral.[4]

Notwithstanding concerns that have been raised over the large amount of potential problem loans, the FSA takes the view that currently performing loans to borrowers requiring attention pose manageable risks. The FSA has advised banks to adjust lending policies and conditions according to the credit risk of the borrower, and they see banks as having made progress in this area. In addition, the FSA has expressed confidence that banks are well advanced in strengthening loan classification and provisioning practices to internationally comparable levels, citing endorsements by external auditing firms that regard banks' accounting practices as adequate. Following intensive on-site examinations for all major and regional banks, the FSA has reported increasing compliance with its 1999 bank inspection manual, which closely mirrors supervisory practices in other major industrial countries. Moreover, the FSA enforces stringent provisioning requirements for nonperforming loans. Accordingly, the latest data show that more than half of the value of major banks' loans to "special attention" borrowers is covered by collateral, loan guarantees, or loan-loss provisions. More than 80 percent of the value of loans to borrowers in danger of bankruptcy is covered by collateral, guarantees, or provisions, and loans to bankrupt borrowers are fully covered.

The FSA does not see a need for a further tightening of classification or provisioning stan-

[2]The FRL definition of NPLs includes claims on borrowers in or near bankruptcy and claims on borrowers requiring special attention (mainly those with restructured loans and loans past due by more than three months).

[3]Superior collateral includes deposits and other financial instruments (such as government bonds) of high credit quality that are easily disposable. Ordinary collateral includes other types of disposable collateral (such as real estate).

[4]Loans to classified borrowers included ¥48 trillion in NPLs as of September 2000 (see Table A1.2).

Table A1.1. Japan: Problem Loans

	March 1999	March 2000	September 2000	March 1999	March 2000	September 2000
	(In trillions of yen)			*(In percent of total loans)*		
Banks' self-assessment of asset quality[1]						
Deposit-taking institutions	80.6	81.7	. . .	11.6	12.1	. . .
Banks	64.3	63.3	63.9	11.7	11.8	12.0
Major banks	41.6	40.9	40.9	11.6	11.7	11.8
Regional banks	22.7	22.5	23.1	11.7	12.1	12.5
Cooperative-type financial institutions	16.3	18.4	. . .	11.4	13.4	. . .
Nonperforming loans: FRL standard[2]						
Deposit-taking institutions	. . .	42.2	. . .	. . .	6.6	. . .
Banks	33.9	31.8	32.1	6.2	5.9	6.2
Major banks	21.9	20.4	19.1	6.1	5.8	5.7
Regional banks	12.0	11.4	13.0	6.2	6.2	7.1
Cooperative-type financial institutions	. . .	10.4	. . .	. . .	9.9	. . .
Nonperforming loans: FBA standard[3]						
Deposit-taking institutions	38.7	41.4	. . .	6.0	6.6	. . .
Banks	29.6	30.4	31.1	5.8	6.1	6.4
Major banks	20.3	19.8	18.5	6.3	6.2	6.2
Regional banks	9.4	10.6	12.5	5.0	5.9	5.9
Cooperative-type financial institutions	9.0	11.0	. . .	5.7	8.3	. . .
	(In trillions of yen)			*(In percent of NPLs)*[4]		
Memorandum items:						
Specific reserves						
Deposit-taking institutions	14.8	11.5	. . .	. . .	27.8	. . .
Banks	11.2	8.4	7.7	37.8	27.7	24.8
Major banks	6.8	5.0	4.4	33.6	25.3	23.8
Regional banks	4.4	3.4	3.3	46.9	32.1	26.3
Cooperative-type financial institutions	3.6	3.1	. . .	. . .	28.2	. . .
General reserves (major banks)	2.3	2.3	2.4	11.4	11.6	13.0

Sources: Financial Services Agency; and IMF staff calculations.

[1]Under the self-assessment standard, banks report all loans to category II–IV borrowers—that is, borrowers in or near bankruptcy or in need of attention, with the exception of class 1 loans (which are covered by superior collateral).

[2]The Financial Reconstruction Law (FRL) standard requires banks to report all loans to category III and IV borrowers (bankrupt or nearly bankrupt borrowers), as well as loans to borrowers requiring special attention, notwithstanding the quality of collateral.

[3]The standard used by the Federation of Bankers' Associations (FBA), which has been longest in use, is somewhat narrower than the FRL standard. It does not include guarantees, foreign currency assets, and other claims.

[4]Relative to nonperforming loans according to the FBA standard.

dards. In particular, it believes that forward-looking provisioning—beyond the level consistent with historical loss rates—would be inconsistent with international accounting standards and practices, and could exacerbate the already procyclical tendency of bank lending activities. It also argues that provisioning should adhere to the Commercial Law and generally accepted accounting practices. Nevertheless, the FSA plans to continue efforts to ensure strict enforcement of existing standards and the strengthening of banks' risk management capabilities in the context of future examinations.

By contrast, market analysts consider that the banking system is substantially underprovisioned against potential loan losses. Using various methods, different analysts estimate that major and regional banks need to provide for an additional ¥20–30 trillion (5–6 percent of GDP) in additional loan-loss charges to reach adequate provisioning levels (Box A1.1). These charges compare to total Tier 1 capital of ¥33 trillion. The basis for this assessment is their view that (1) the average loan-loss rate on existing NPLs may prove to be higher than the present rate of provisioning, and (2) a substantial amount of so-called "gray zone" loans—loans to borrowers requiring attention that have not yet been classified as NPLs—may become nonperforming and incur losses.

Table A1.2. Japan: Classification of Bank Loans
(In trillions of yen)

Classification of Borrower	Loan Class[1] 1	2	3	4	Total
Deposit-Taking Financial Institutions (March 2000)					
1. Normal borrowers	513.6	n.a.	n.a.	n.a.	513.6
2. Borrowers needing attention	53.0	63.9	n.a.	n.a.	116.9
of which: Borrowers requiring special attention	. . .	. . .	n.a.	n.a.	14.0
3. Borrowers in danger of bankruptcy	9.4	7.6	3.5	n.a.	20.5
4. Bankrupt or technically bankrupt borrowers	7.2	6.3	0.0	0.0	13.5
Total loans	583.2	77.8	3.5	0.0	664.5
of which: Nonperforming loans[2]	. . .	. . .	3.5	0.0	48.0
Major and Regional Banks (September 2000)					
1. Normal borrowers	410.1	n.a.	n.a.	n.a.	410.1
2. Borrowers needing attention	36.7	50.5	n.a.	n.a.	87.2
of which: Borrowers requiring special attention	. . .	. . .	n.a.	n.a.	11.6
3. Borrowers in danger of bankruptcy	7.0	5.6	2.7	n.a.	15.3
4. Bankrupt or technically bankrupt borrowers	3.7	4.9	0.0	0.0	8.6
Total loans	457.5	61.0	2.7	0.0	521.2
of which: Nonperforming loans[2]	. . .	. . .	2.7	0.0	35.5

Source: Financial Services Agency, April 2001.
[1]Class 1 loans include all loans to normal borrowers, as well as other loans that are covered by superior collateral or guarantees. Class 2 loans include all remaining loans to borrowers requiring attention, as well as loans to borrowers in or in danger of bankruptcy that are covered by ordinary collateral. Class 3 loans include all remaining loans to borrowers in danger of bankruptcy, as well as remaining loans to bankrupt borrowers with doubtful recovery value. Class 4 loans are regarded as unrecoverable.
[2]Loans to borrowers requiring special attention, in danger of bankruptcy, or bankrupt or technically bankrupt. Nonperforming loans shown here are slightly larger than those reported in Table A1.1, owing to differences in coverage and loan reclassification between publication dates.

- *Loss rate on reported NPLs.* On the basis of the loss rate on loans that have already been fully removed from banks' balance sheets, analysts expect loss rates for existing NPLs to exceed provisioning requirements on the non-collateralized part of NPLs, which are between 15 and 70 percent depending on the classification of the borrower.[5] Moreover, notwithstanding a 30 percent haircut on collateral values imposed by the FSA, analysts consider that the value of collateral on bank balance sheets is often overstated. Write-downs of land values have not kept up with the decline in land prices, and sales typically occur at depressed prices, owing to the absence of a liquid real estate market. Analysts estimate that these factors could give rise to further losses of ¥10–20 trillion on existing NPLs.
- *Losses on "gray zone" loans.* In addition to reported NPLs, analysts expect substantial losses from gray zone loans. These loans are typically owed by severely indebted companies concentrated in some of the weakest sectors of the economy (real estate, construction, retail, and financial and other services). Many of these companies would not be able to survive if interest rates rose significantly from their present low levels. Loans to such companies account for more than half of all major bank loans and 85 percent of all NPLs.[6]

[5]Loans that are fully provisioned up to the value of collateral and guarantees can be carried on the balance sheet with zero value ("partial write-off"). The loans remain on the books until all claims relating to the loan have been resolved ("final disposal"), which can take years unless the loan is sold or forgiven.
[6]Loans to just three sectors (real estate, construction, and retail) account for about one-quarter of all loans and almost half of bad loans.

Box A1.1. Japan: Methods to Estimate Future Bank Loan Losses

In view of banks' past loss experience, market analysts generally consider that current provisioning levels are inadequate to cover losses that might arise both from reported nonperforming loans (NPLs) and from loans to troubled borrowers that might become nonperforming in the near future. Analysts base their estimates of how much more provisioning will be needed on different methods, partly depending on the quality of loan data at their disposal:

- One approach is to compare the ratio of bank loans to GDP at the height of the bubble to its long-term average, which gives a rough measure for the amount of excess loans that needs to be written off. Uncovered loan losses can be calculated by subtracting the cumulative amount of loan losses that has already been recognized.
- Some analysts have applied assumed loss rates to the amount of outstanding nonperforming and "gray zone" loans. These rates are assumed to increase sharply from historical levels (which can be calculated from banks' loan books), owing to a weakening economy, a concentration of loans in weak sectors, less room for evergreening, and a tougher approach by bank regulators. Analysts generally refer to the experience with nationalized banks where inspectors discovered a much larger amount of NPLs than had been classified as such by the banks.
- Another approach, which takes account of the fact that banks continue to experience losses on collateral as long as a loan has not been fully removed from the balance sheet (which may take several years), applies a common loss rate to all loans that have been reported as nonperforming since the end of the bubble. Estimates for the loss rate can be based on the relatively few loans that have been resolved by loan disposal agencies (such as the Cooperative Credit Purchasing Company (CCPC), an institution that resolves credit cooperative loans), or on prices for bad loans on the secondary market.
- Finally, one approach is to modify loss rates according to the year in which bank loans have been taken out. This also takes account of the fact that losses relate to the decline of collateral values over the lifetime of the loan.

Details regarding the calculations are often proprietary, which makes it difficult to evaluate individual assumptions and estimates on their merits. However, the estimates broadly converge to the conclusion that major and regional banks may hold some ¥20–30 trillion in unrecognized loan losses.

Analysts question whether these loans are adequately classified and provisioned against, particularly as loan officers still appear reluctant to downgrade borrowers—either because of long-established relationships or because of the implications for provisioning and new lending. Moreover, favorable loan classifications sometimes depend on guarantees by affiliates of parent companies, which could themselves become impaired. Analysts expect that a further slowdown in the economy could transform many gray zone loans into NPLs, necessitating ¥10–15 trillion in additional loan-loss charges.

Differences in view between the FSA and market analysts largely reflect different assumptions about future loss rates, which in turn depend strongly on the future course of the economy.[7] Table A1.3 shows the amount of uncovered losses for major and regional banks under various scenarios. The table loosely corresponds to a simulation by a major credit rating agency,

[7]They may also reflect some features of the Japanese financial system, such as the limited information that banks demand of borrowers and the heavy reliance on collateral. Because of these features, loans that are assessed as "good" based on the limited available information about the borrower and the use of collateral may be subpar on a cash flow basis.

Table A1.3. Japan: Sensitivity Analysis for Uncovered Loan Losses of Major and Regional Banks
(Based on banks' self-assessment as of September 2000; in trillions of yen)

	Loan Amount	Scenario I		Scenario II		Scenario III		Scenario IV	
		Loss Ratio[1]	Loss	Loss Ratio[1]	Loss	Loss Ratio[1]	Loss	Loss Ratio[1]	Loss
Normal loans	410.1	0.5	2.1	1.0	4.1	1.5	6.2	2.0	8.2
Loans to at-risk borrowers secured by superior collateral[2]	47.4	1.0	0.5	2.0	0.9	3.0	1.4	4.0	1.9
Loans secured by ordinary collateral									
Borrowers requiring attention	50.5	10.0	5.1	17.5	8.8	25.0	12.6	35.0	17.7
Bankrupt borrowers[2]	10.5	20.0	2.1	30.0	3.2	45.0	4.7	60.0	6.3
Loans to bankrupt borrowers with doubtful recovery value[2]	2.7	80.0	2.2	85.0	2.3	90.0	2.4	100.0	2.7
Unrecoverable loans to bankrupt borrowers[2]	0.01	100.0	0.01	100.0	0.01	100.0	0.01	100.0	0.01
Total	521.2	n.a.	11.7	n.a.	19.4	n.a.	27.4	n.a.	36.8
Uncovered loan losses[3]	n.a.	n.a.	0.0	n.a.	7.7	n.a.	15.7	n.a.	25.1

Sources: Financial Services Agency; and IMF staff calculations.
[1]In percent. Mechanical loss assumptions are used for the purpose of calculation.
[2]Collateral refers to both loan collateral and loan guarantees. Bankrupt borrowers include *de facto* bankrupt borrowers and borrowers in danger of bankruptcy.
[3]Banks are assumed to hold a combined ¥11.7 trillion in general and specific provisions.

which has analyzed possible losses across different loan categories under varying macroeconomic conditions.[8] Going beyond the estimation problem, however, there are concerns that adherence to internationally accepted inspection practices may not be sufficient in Japan's deflationary environment to reflect the full scale of the bad loan problem. There is likely a need for a more forward-looking approach than is typically required by such practices, in view of the erosion of collateral values and the sharp increase in the real debt burden that are unique in recent economic history. Since Japanese banks may not yet have the credit management systems in place to deal with these unusual circumstances, their assessments of the true quality of their loan portfolios are still at risk of being too optimistic.

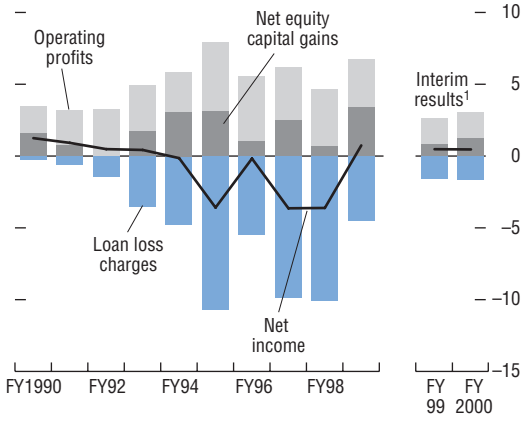
Weak Capital and Low Profitability

Market analysts consider that, if bad loans were provisioned in accordance with their estimates, a number of weaker banks could become technically insolvent and many others would probably fall below minimum capital requirements. Major banks have achieved the most progress in provisioning for or writing off bad loans, accounting for an estimated 75 percent of around ¥70 trillion in cumulative credit costs for all banks since the end of the bubble.

Nevertheless, market analysts estimate that major banks' aggregate future loan-loss exposure equals about half of their Tier 1 capital.[9] Because regional banks remain relatively less well capitalized (notwithstanding some success in raising additional capital in FY2000), analysts estimate that their combined loan-loss exposure exceeds their Tier 1 capital. The same conclusion has been reached for credit cooperatives and some of the other small financial institutions, which generally have the lowest capital ratios and are particularly exposed to the small- and medium-sized enterprises that are experiencing widespread bankruptcies.

[8]See Fitch (2001). The macroeconomic outturn underlying the worst-case scenario in Table A1.3 corresponds to a sharp recession, followed by meaningful structural change and a gradual economic recovery.
[9]Based on preliminary data, reported capital adequacy levels of major banks have declined by three-quarters of a percentage point since September 2000, although on average they remain high at around 11 percent.

Figure A1.1. Japan: Major Banks' Profits, FY 1990–2000
(In trillions of yen)



Source: Fitch.
[1]Interim results refer to the first six months of the fiscal year.

Table A1.4. Japan: Major Banks' Regulatory Capital[1]
(As of September 2000)

	Trillions of Yen	Percent of Risk-Weighted Assets
Total regulatory capital	41.3	11.6
Tier 1 capital	22.8	6.4
Deferred taxes	5.5	1.5
Public capital (preferred stock)	6.2	1.7
Other preferred stock	0.9	0.3
Other	10.2	2.9
Tier 2 capital	18.8	5.3
Public capital (subordinated debt)	2.5	0.7
Memorandum items:		
Top tier regional banks	12.1	10.3
Second tier regional banks	3.0	8.2
Shinkin banks (credit unions)	5.8	9.8
Credit cooperatives	1.0	7.6

Source: Financial Services Agency.
[1]Major 16 banks, consolidated basis.

Banks' shareholder equity remains relatively small, particularly in contrast to their large exposure to market risk from their equity and JGB portfolios (see below). Following a decade of low profitability and two rounds of public capital injections, more than half of the banks' Tier 1 capital consists of deferred tax assets, public capital, and preferred equity instruments (Table A1.4). Moreover, deferred tax assets will expire unless they are claimed against profits over the next five years; banks will eventually want to repay injections of public capital; and preferred instruments will need to be rolled over in the course of the next two years.

Banks therefore will need to substantially raise profitability over the medium term to deal with the bad loan problem and strengthen their capital bases. However, there are as yet few signs that profits will increase substantially in the near future. Major banks' operating profits in FY2000 were essentially unchanged compared to the year before, as sluggish credit demand continued to erode the average gross lending margin (Figure A1.1). Some banks have recently begun to shift toward fee-based activities such as domestic syndicated lending and investment banking. These operations are still small, however, and therefore are unlikely to generate substantial

revenues in the near term, especially in the face of strong competition from established market participants.[10] Banks have also returned to the international loan market in search of higher margins, but this expansion comes at a time when other banks are tightening exposure in anticipation of rising credit risk. Finally, implementation of merger plans is proceeding slowly. Significant synergy gains have yet to be realized, and cost-cutting efforts have so far had only a small impact on operating profits. Partly reflecting market pessimism about bank restructuring, major bank share prices have declined by about 30–40 percent since merger plans were announced in August 1999 (Figure A1.2).

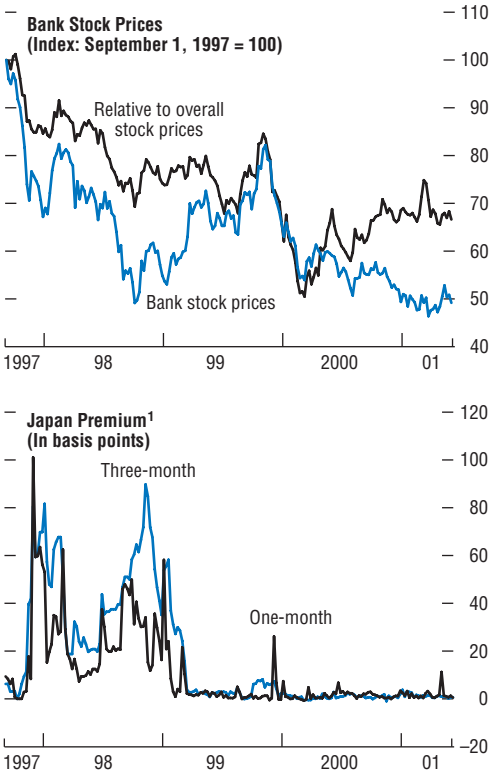
High Exposure to Equity and JGB Markets

Bank exposure to market risk remains large, and falling stock prices eroded banks' hidden capital gains in 2000. The book value of shares and government bonds held by banks amounts to some ¥38 trillion and ¥44 trillion, respectively, for the major banks and ¥8 trillion and ¥20 trillion, respectively, for the regional banks. In March 2000, with the Topix at 1,650, major banks reported hidden reserves worth ¥8.1 trillion. These gains—which had been used in the past to finance bad loan write-offs—evaporated during the year, however, as the Topix slid below 1,300. Private sector analysts estimate that hidden reserves disappeared as the Topix crossed 1,350, and that every 100 point change in the Topix translates into a capital gain or loss of about ¥2.5 trillion. On this basis, major banks on aggregate are thought to have experienced some hidden losses at the end of FY2000. The drop in stock prices was short of what would have caused systemic problems, although concerns arose about the degree of losses at some individual banks at around the time that the equity market reached its trough.

Banks are also increasingly exposed to a sharp rise in JGB yields. In the absence of attractive

[10]Moreover, fees on syndicated lending usually depend upon the size of the loan, so that profitable syndicated lending might require banks to expand their balance sheets.

Figure A1.2. Japan: Banking Indicators



Sources: WEFA; and Bloomberg Financial Markets L.P.
[1]Average U.S. dollar LIBOR of Fuji Bank, Bank of Tokyo, and Norinchukin Bank minus the LIBOR fix.

lending opportunities, banks have continued to invest surplus funds in JGBs. By mid-2000, the share of government securities in bank assets increased to a record 8 percent, compared to around 3 percent at end-1998. During the year, bond holdings gained in value as 10-year JGB yields fell to low levels, but by the same token, JGB holdings became both less profitable and more risky. A 100-basis-point rise in JGB yields is estimated to reduce major banks' capital by around ¥1 trillion, or 5 percent of Tier 1 capital (consistent with an assumed average maturity of bank JGB holdings of around two years). The FSA views this exposure as manageable, however, and does not consider banks' interest-rate exposure to be the source of significant risk.

Policies to Strengthen the Banking System

The Government's Emergency Package

In April 2001, faced with deteriorating confidence in the economy and the financial system, the government announced a package of measures to deal with the related problems of bad loans and the corporate debt overhang and to reduce banks' substantial exposure to equity market risk. Further details of the package emerged in the context of the Council on Economic and Fiscal Policy's blueprint for economic reform, which was released in June 2001. The package contains two major initiatives:

- The plan calls for the major banks to eliminate two categories of NPLs—loans to bankrupt and nearly bankrupt companies, but not loans to borrowers requiring special attention—from their balance sheets over a two-year period.[11] While banks can sell NPLs in their entirety or resolve bad loans through the courts, the package emphasizes the principle of fostering corporate reorganization through informal debt workouts along the lines of the London Approach, implying the use of debt forgiveness and debt-equity swaps.[12] To this end, a private sector committee recently issued draft guidelines on voluntary debt workouts, which require a restructured company to return to profitability within three years and to clarify the responsibility of both shareholders and company management. Any loans that remain on banks' balance sheets after the specified period would be sold to the Resolution and Collection Corporation (RCC), which is to play a more active role in bad loan disposal, including through stepped-up securitization and active participation in debt workouts.
- In addition, bank equity holdings are to be limited to 100 percent of capital (defined as either shareholder equity or Tier 1 capital) from 2004 onwards. A Bank Shareholding Acquisition Corporation (BASAC) is to be established to facilitate scaling down cross-shareholdings.[13] The BASAC would purchase stocks over a period of five years, with the aim of unwinding its holdings through sales to the public (e.g., in the form of exchange-traded mutual funds) or repurchases by the issuing companies over the following five-year period. The government will initially guarantee up to ¥2 trillion of funds for share purchases. Any loss of the BASAC at its dissolution would be covered in the first instance by the contributions of its member banks, which will consist of an aggregate ¥10 billion in initial contributions, plus subordinated contributions equiva-

[11]New NPLs would have to be written off within three years from the date they are classified as nonperforming. The FSA has stated that the plan focuses on the major banks because they see regional banks facing very different situations in their regional markets. It also argues that efforts by major banks to remove bad loans from their balance sheets will inevitably require regional banks to do the same.

[12]The London Approach brings major creditors and other parties together on an informal basis to reach a collective decision on the feasibility of a corporate debt workout and on how to share the related losses. The authorities would mainly play the role of resolving coordination problems.

[13]Banks hold shares worth an estimated 130–150 percent of bank capital. A target exposure of 100 percent of capital implies that banks would have to sell ¥10–15 trillion in shares.

lent to 8 percent of their sales to the BASAC (effectively a haircut that would be returned if the BASAC returned sufficient profits). The government would cover the remaining loss. Share sales by banks to the BASAC will be voluntary and are to take place at market prices. Relevant legislation is likely to be introduced during the extraordinary Diet session in the autumn of 2001, and the corporation would take up operations early in 2002.

Although markets generally welcomed the authorities' willingness to focus on the corporate debt-bad loan nexus, the package was seen by market analysts as only partially addressing the underlying problems and as reflecting the authorities' reluctance to recognize the size of the bad-loan problem. First, the package only focuses on the major banks, which account for less than half of the banking system's total assets and problem loans and have stronger asset quality and capitalization than the regional banks. Second, the plan does not address the need for more forward-looking provisioning practices, or call for more aggressive treatment of the large stock of gray zone loans whose repayment prospects are also very uncertain. Third, it will be important that corporate restructuring plans submitted in exchange for tax-subsidized debt forgiveness are realistic and provide a sufficient basis for a sustained turnaround in corporate profits.

Market participants were also critical of the equity purchase scheme. The scheme has the potential to weaken much-needed market discipline on both banks and corporations, particularly if it comes to be seen as effectively putting a floor under stock prices. At the same time, the scheme allows banks to maintain an equity exposure equivalent to perhaps as much as 100 percent of capital—leaving open the possibility that another scheme may be needed in the future. There are also concerns that, by setting a precedent, the plan could lead to other asset-purchasing schemes (for example, to reduce banks' JGB exposures). Finally, the plan potentially gives banks too much discretion in choosing the stocks they sell to the scheme, raising the risk that banks could unload the stocks of fundamentally unsound companies on the BASAC—stocks that could be highly illiquid and that the BASAC might find impossible to resell later.

Progress in Strengthening the Supervisory and Regulatory Framework

Following the first round of on-site inspections of major and regional banks during 1998–99, which focused primarily on asset quality, a second inspection round currently underway concentrates on banks' risk management systems. It examines the valuation and soundness of financial assets, exposure limits to various types of market risk, and internal monitoring and controls (including in preparation for the introduction of the revised Basel capital adequacy standards). The FSA has released a revised inspection manual for banks, focusing on improved audit functions and including changes made necessary by the transition to mark-to-market accounting. Meanwhile, the first round of inspections of nearly 300 credit cooperatives that began in April 2000 after supervisory authority was transferred from regional governments to the FSA will have been completed by mid-2001. The FSA's longer-term supervisory priorities include decreasing the time between bank inspections from two or three years to one year, and pushing for quarterly instead of semiannual disclosure of banks' investment results, with the aim to eventually compile quarterly earnings results.

The authorities have reaffirmed their commitment to reintroduce partial deposit insurance in April 2002, although liquid deposits—mainly current deposits—will be fully covered until April 2003.[14] Under the new deposit insurance law, which initially was to come into force in FY2001 but had been delayed by concerns over the health of the credit cooperative sector, the scope of institutions and types of deposits covered will be widened to include certain bank

[14]The new deposit insurance framework would cover ¥10 million per depositor plus interest.

Table A1.5. Japan: Bank Support Framework

Account	Purpose	Proposed Limits in Trillions of Yen FY99	FY00	FY01	FY02	Used by March 2001[1]
General Account	Depositor protection (partly premium-funded)	2	4	6	6	
Special Account[2]	Depositor protection	17	23	23	n.a.	12.5
	Public loans	10	10	10	n.a.	
	Grants	7	13	13	n.a.	
Financial Revitalization Account[2]	Lending to nationalized and bridge banks	18	18	10	n.a.	5
Financial Functioning Early Strengthening Account[2]	Capital injections	25	25	16	n.a.	8
Crisis Management Account	Emergency measures for major and regional banks	n.a.	n.a.	15	15	n.a.
Total		62	70	70	21	25.5

Sources: Deposit Insurance Corporation; and IMF staff estimates.
[1]IMF staff estimate. Most of the funds are expected to be recovered, except for ¥8.5 trillion in government grants to cover depositor losses.
[2]Established under the Financial Functioning Early Strengthening Law in 1998.

debentures, interest on deposits, and deposits of public entities. At the same time, to minimize the cost of future bank failures, the new legislation provides for stronger instruments to close troubled institutions and sell the viable parts to an assuming bank. For example, measures have been taken to facilitate the swift transfer of business (ideally over the course of a weekend), including the requirement to maintain adequate information on depositors and loan transactions. In addition, the scope of financial assistance to be provided to the assuming institution has been enlarged, providing (among other things) for the Deposit Insurance Corporation to share losses that are incurred from loans transferred from a failed institution.

Changes in the Public Support Framework

Public funds have been used in a number of costly bank failures in recent years (Table A1.5). Costs of covering the failure of several financial institutions in the late 1990s amounted to some ¥8.4 trillion (1.65 percent of GDP). The disposal of a large number of failed shinkin banks (credit unions) and credit cooperatives conducted in FY2000 cost the government about ¥800 billion. Another ¥17 trillion, which has mainly been used for capital injections and loans to nationalized banks, is expected eventually to be repaid. Taken together, the public funds used to address the banking crisis up to this point amount to some 5 percent of GDP, toward the upper end of the range for other industrial countries that have experienced banking crises.[15]

In view of the extension of blanket deposit insurance by one more year, cutbacks in the public support framework for the banking sector have also been pushed back until April 2002. Changes in the composition of the framework have raised questions about the government's ability to facilitate future bank restructuring with public capital. During FY2001, funding for the government's safety net is to remain unchanged at ¥70 trillion, but the accounts for capital injections and bridge bank financing will be considerably reduced and can only be used to address problems in the credit-cooperative sector before they are phased out in 2002. Under the revised deposit insurance law, a new emergency account provides ¥15 trillion to ensure the stability of the financial system in case of a systemic threat (including on a regional level). These funds are available for capi-

[15]By comparison, the public costs of the U.S. savings and loan crisis amounted to 2.5 percent of GDP (see Lindgren, Garcia, and Saal, 1996).

tal injections, full coverage of deposits, and temporary nationalization in the event of financial instability, although the circumstances under which they could be used have been left vague. The systemic clause, which only the prime minister can invoke, appears more restrictive than the Early Strengthening Law that expired in March 2001. (The latter law allowed the use of public funds to prevent a credit crunch and promote write-offs of problem loans.) This may have weakened an important tool for the government to enable banks to address their bad loan problems more aggressively. Moreover, the projected decline in available public funds after FY2002 raises more general concerns about the adequacy of public support for bank restructuring in the absence of a systemic crisis.

Restructuring in the Banking and Insurance Sector

Failures, Mergers, and Strategic Alliances

Most of the banks that failed and were nationalized since 1998 have been reprivatized. In March 2000, the Long-Term Credit Bank (LTCB) was sold to a private consortium led by foreign investors, and in September 2000, ownership of Nippon Credit Bank (NCB) was transferred to a domestic consortium. Both banks were cleared of most of their bad assets, received public capital injections, and submitted ambitious restructuring plans to the government, including commitments to maintain strong capital adequacy ratios. In August 2000, the first of five regional banks that failed in 1999 was transferred to a new owner. Purchasing agreements have been completed for the remaining four, including with two foreign investors, and the process of reprivatizing them is expected to be essentially complete by mid-FY2001.

The reorganization of Japan's banking system advanced in April 2001, when the remaining three of the four major banking conglomerates took up combined operations. Following the example of Mizuho—a bank holding company that united three of the largest banks under one roof in October 2000—two organizations (United Financial of Japan and Mitsubishi Tokyo) have also opted for a holding structure, while Sumitomo and Sakura Bank underwent a full-scale merger.[16] Restructuring plans for the new institutions have generally been strengthened, including through the announcements of further personnel cuts over the medium term. The full integration of computer systems is not expected to be achieved before 2003 in most cases, however. The completion of the Big Bang reforms prompted greater cooperation between banks and trust banks, some of which have joined one of the major alliances, and between banks and insurance companies (see below). The lack of a strong retail network has also led major banks to cooperate more closely with regional banks. In addition, some banks have begun to work with the postal savings system to improve access to banking services through ATMs in post offices and other venues.

Restructuring among regional banks also picked up during FY2000, mainly in the context of a number of mergers and cooperation agreements, and core profitability has been boosted by expenditure reductions and an improvement in the net interest spread. Moreover, banks have generally managed to strengthen their customer bases. Many banks replenished capital, decreasing the number of banks with capital adequacy ratios below 8 percent from 31 to 25 in the six months to September 2000.[17] Six more banks applied for public capital injections before the deadline expired at the end of FY2000. In the five years ending March 2000, the number of credit cooperatives declined from 373 to 291 as 53 institutions failed, one was liquidated, and 28 were absorbed by mergers. With the first round of FSA inspections in FY2000, this process picked

[16]Sanwa Bank and Tokai Bank are slated to merge in early 2002. Mizuho plans to reorganize its operations into two subsidiaries, dealing separately with corporate and retail customers.

[17]Banks that are not internationally active face a 4 percent minimum capital requirement.

up steam. The government closed a total of 12 institutions during the fiscal year and more failures are widely expected.

New Entrants to the Banking Sector

Competition in the banking system is intensifying as domestic nonfinancial competitors make inroads, armed with new business models such as banking through retail outlets or Internet banking. The demand for such services has required changes to the regulatory framework, particularly in view of concerns that the new banks might be excessively vulnerable if their parent companies experience financial difficulties. To address these concerns, in March 2001 the FSA submitted legislation that would require FSA approval for nonbanks to hold more than a 5 percent stake in a bank. Shareholders with a stake exceeding 20 percent, or otherwise having strong influence on the bank, could be subject to financial inspections if questions regarding the sound management of the bank emerged. A majority shareholder could be asked to shoulder the losses of its banking subsidiary if the subsidiary experienced financial difficulties. Moreover, regulations will be in place to ensure the operational independence of banks from major stakeholders, to subject the sharing of customer information between banks and parent companies to operational safeguards, and to prohibit banks from bailing out parent firms and other affiliates.

The new legislation is to replace existing FSA guidelines by the end of FY2001 at the latest. The opening of the sector to new entrants paved the way for the reprivatized NCB to start business (one principal shareholder is a nonfinancial company) and has led to applications for several new banking licenses, most of which have been granted. By mid-2001, there are likely to be four new banks that use the Internet as a main channel for the delivery of financial services or use convenience-store ATMs to deliver services to customers. So far, two Internet banks and one convenience-store bank have been licensed and have begun to do business.

The Life Insurance Sector

Policy cancellations and sluggish sales at life insurance companies continued to depress premium income during FY2000, magnifying the long-standing problem of negative yield spreads.[18] Insurers were also affected by declining stock prices, which reduced latent profits on their sizable equity holdings, and by deteriorating loan quality. As a result, the average solvency margin ratio among the seven largest life insurers, while still about triple the mandated 200 percent minimum, declined by about 180 percentage points during FY2000.[19]

Combined with an adverse economic environment, these difficulties contributed to several failures among mid-size life insurers over the past year, bringing to seven the number of institutions that have failed since 1997. Three companies filed for bankruptcy under the modified Law on Special Reorganization Procedures for Financial Institutions passed in mid-2000 that provides for quick restructuring under court protection, including through a possible cut in guaranteed yields. All of the failed companies have in the meantime concluded purchasing agreements with sponsoring institutions and have resumed operations under their new parents. The resolution of some cases required assistance from the Life Insurance Policyholders Protection Corporation, whose initial ¥960 billion in funds have now declined to ¥420 billion—an amount approximately equivalent to previous government injections.

The government has taken a number of measures to improve supervision of life insurers. Life insurers have undergone one round of FSA inspections, focusing partly on loan quality, and an inspection manual for the insurance sector was finalized in the summer of 2000. From April

[18]The yield spread is the gap between guaranteed rates of return on policies and returns on assets.

[19]The solvency margin measures an insurance company's ability to maintain payments to policyholders against exposure to different categories of risk.

2001, the formula to calculate the solvency margin has been changed to include the risks from investment in unlisted shares, domestic bonds, and foreign securities, evaluated at market prices. Although the change is expected to lower margins by about 50–200 percentage points, the remaining insurers would still have solvency margins that are well above the 200 percent mark that would trigger FSA intervention. The FSA has also required insurance companies to publish more financial information, including core profits from insurance business, twice a year (disclosure of interim results is currently voluntary). Moreover, in a recently released interim report, the Financial System Council (FSC) suggested steps to make it easier for companies to build capital, including through a revision of the requirement to pay out at least 80 percent of annual profits as dividends to policyholders. In addition, the FSC proposed to allow insurance companies to reduce guaranteed returns on insurance policies outside a formal restructuring process (a right that was suspended in 1996), provided that policyholders are granted the right to participate in the decision-making process.

Foreign insurers have used recent failures of life insurance companies as an opportunity to gain a stronger foothold in the Japanese market. Five of the seven companies that failed have been taken over by major foreign companies, and three smaller insurance companies have also come under foreign control. Domestic insurance companies have responded to increased competition by forging a web of alliances and mergers in an attempt to solidify their financial bases before a wider opening of the insurance market to banks and foreign companies occurs.[20] Domestic companies will also have an opportunity to branch into "third sector" products that include relatively new products such as medical care and cancer insurance and that so far have been largely reserved to foreign competitors. Mergers have mostly been concentrated in nonlife insurance (which will be particularly affected by the opening of the third sector), but life insurers have also begun to build alliances with nonlife companies. The benefits of cross-sectoral cooperation are mutual, combining the stronger financial positions of nonlife companies with broader sales networks of life insurers.

Remaining Challenges

Looking ahead, a key challenge for the authorities is to restore the financial health of the banking system, in particular through a speedy resolution of the bad loan problem. An important challenge will be the continued strengthening of loan classification and provisioning practices, which could result in the downgrading of gray zone loans. Moreover, the new initiative to accelerate bad loan disposal should be pursued rigorously, with efforts to include regional banks and credit cooperatives in the process. In view of the possibly sizable losses that could result from higher write-offs, further targeted public capital injections may be needed to recapitalize banks with viable business franchises to prevent a credit crunch and maintain confidence in the financial system. To limit moral hazard, such injections would need to carry appropriate conditionality, including performance criteria that ensure banks' active participation in debt workout agreements, and a credible threat to convert preferred into ordinary shares in case of noncompliance.[21]

Now that a legal and institutional framework for corporate debt restructuring is largely in place, the authorities need to provide incentives that force both creditors and borrowers to use the tools that have been provided. While regula-

[20]The consolidation of insurance companies has so far occurred largely along the lines of the four major banking groups, likely heralding a shift toward greater integration of banking and insurance services following the completion of the Big Bang reforms.

[21]The FSA has emphasized its view that, in order to limit moral hazard, decisions to inject public funds should be based on true need and limited to systemically important cases.

tory pressure and performance targets for recapitalized banks could provide a push for debt workouts from the lending side, substantive deregulation of the weaker sectors of the economy would expose bank borrowers to stronger market forces and bolster incentives for workouts from the borrowing side. Once implemented, recent proposals by the Council on Economic and Fiscal Policy and in the draft guidelines for debt workouts could add further support to a market-driven resolution of the bad loan problem—for example, by requiring that independent experts assess whether informal workout arrangements are adequate to restore financial viability. In addition, planned measures to liquefy the secondary market for bad loans, including by liberalizing the real estate market and providing for a more active role of the RCC, could be crucial in helping banks to dispose of bad assets (for example, through securitization).

Finally, the opening of the financial sector to new entrants—both in the banking and insurance industries—should lead to greater competition and a general improvement in the provision of financial services. The government would have two crucial roles to play. First, financial intermediation would benefit from a gradual reduction in the role of government financial institutions, including the postal savings system. Second, the government would need to have a strategy in place that would ensure the timely exit of unviable institutions from the market.

Corporate Restructuring: Big Problems, Little Progress

Revitalizing the corporate sector will be key to Japan's medium-term economic recovery, but it remains a major challenge. Japanese corporations are burdened with high leverage and considerable excess capacity accumulated during the bubble era. In 1999 and 2000, significant enhancements to the legal and regulatory framework for corporate restructuring gave rise to optimism that restructuring would accelerate. These hopes were not fulfilled, as bank relationship lending, regulation of politically connected sectors, and the low interest rate environment contributed to further delays. Against this background, this section reviews the framework for corporate restructuring, assesses the magnitude of the problem, describes the major impediments to addressing it, and discusses future prospects.

The Framework for Corporate Restructuring: Strengths and Weaknesses

Official Initiatives

Japanese officials increasingly recognize that microeconomic reforms, not macroeconomic stimulus, are needed to jump-start growth in Japan. During the last two years, the government has introduced major changes in taxation, the Commercial Code, and other elements of the legal framework designed to facilitate the restructuring process (Table A1.6). These changes included (1) a number of measures under the Industrial Restructuring Law (IRL) aimed at reducing leverage and excess capacity by facilitating debt-equity swaps, corporate spin-offs, and the sale of assets; (2) a new bankruptcy law, the Civil Rehabilitation Law (CRL), that includes some features of U.S. bankruptcy legislation (Chapter 11); and (3) measures intended to improve accountability and corporate governance. The proposals were passed by the Diet (parliament) in 1999 and most of them became effective during fiscal year 1999 and 2000.[22]

In FY2001, a number of measures will take effect and other measures are under consideration. Mark-to-market accounting for investment securities (including cross-shareholdings) and tax measures including incentives for corporate spin-offs and mergers have become effective. In addition, a law allowing pension plans along the lines of U.S. 401k savings plans is under discussion. The government is also considering complementary initiatives such as the deferment of

[22]These proposals are discussed in further detail in IMF (2000a).

Table A1.6. Japan: Official Initiatives Targeted to Corporate Restructuring

Proposal	Legislative and Tax Changes	Expected Timing
Facilitate debt-equity swaps	a) Raise the ceiling on size of preferred stock issuance from one-third to one-half of outstanding shares	Passed August 1999
	b) Tax-deductibility of debt write-off by banks	Uncertain
Civil Rehabilitation Law	Introduction of provisions similar to those of Chapter 11 in the United States	Effective April 1, 2000
Tax incentives to reduce excess capacity	Extend tax loss carry-forward from five years to seven years	Passed August 1999
Share swap scheme	Introduction of exceptions to provisions in the commercial code to permit share exchanges	Passed August 1999; effective October 1, 1999
Stock transfer scheme	Introduction of exceptions to provisions in the commercial code to permit establishment of a holding company in between shareholders and operating firms	Passed August 1999; effective October 1, 1999
Ease restrictions on asset sales	If acquired company's net assets are less than 5 percent of the acquirer's net assets, the latter is not required to obtain special shareholder approval	Passed August 1999
Reduction of registration taxes	Registration taxes lowered to 0.35 percent from 0.7 percent	Passed August 1999
Expand application of stock option schemes to subsidiaries	Introduction of exceptions to provisions in the commercial code to permit extension of stock options to employees of subsidiary firms	Passed August 1999
Mark-to-market accounting	Increase transparency of financial accounts	
	a) Mark-to-market accounting for tradable securities	Effective March 2001
	b) Mark-to-market accounting for real estate assets for sale	Effective March 2001
	c) Mark-to-market accounting for cross-shareholdings	Effective March 2002
	d) Mark-to-market accounting for fixed assets (proposed)	Uncertain
Pension fund accounting	Improved transparency of corporate pension funds by introducing new evaluation standards based on discounted-present-value techniques, and the strict separation of pension fund assets and general corporate assets	Effective April 2000
Corporate Spin-off Law (kaisha bunkatsu ho)	Introduction of exceptions to provisions in the commercial code to shorten process	Effective April 2000
Pension Reform Law	Introduce portable pension schemes along the lines of U.S. 401(k) plans	Under discussion, possible implementation during 2001
Commercial Code amendments	Update standards of corporate governance: introduce provisions to reduce the minimum number of shareholders needed to hold a general shareholders meeting; introduce provisions for consolidated accounting methodologies for all companies meeting certain capital and other requirements	To be submitted to the Diet in Fall 2001
Consolidated taxation	Offset losses in one holding company against profits in another	Possible implementation FY 2002–2003

Sources: Goldman Sachs (1999, 2001b); Oxford Analytica (various issues); and World Securities Law Report (2001).

capital gains taxes on asset transfers and the introduction of consolidated taxation in FY2002–03.[23] The Justice Ministry plans to amend the Commercial Code to update Japanese standards of corporate governance. These amendments would liberalize provisions surrounding shareholder meetings and improve disclosure. The Ministry plans to submit the amendments to the Diet in the winter of 2002.[24]

Corporate Governance

The 2000 *International Capital Markets* report described a number of changes in business practices intended to promote corporate governance

[23]See Oxford Analytica (2000).
[24]See *World Securities Law Report* (2001).

Table A1.7. Corporate Governance Score Card

Indicator	Japan	United Kingdom	United States	France	Germany
Best Practice Codes	2	7	9	8	5
Nonexecutive Directors	2	6	8	9	5
Board Independence	0	4	7	3	3
Split Chairman/CEO	10	9	2	2	10
Board Committees	3	10	10	8	4
Voting Rights	10	10	9	6	9
Voting Issues	4	7	3	8	7
Accounting Standards	0	9	10	4	7
Executive Pay	1	10	10	2	1
Takeover Barriers	1	10	7	4	3
Overall Score	**3.3**	**8.2**	**7.5**	**5.4**	**5.4**

Source: Davis Global Advisors, as cited in Goldman Sachs (2001a).
Note: 0 = lowest, 10 = highest.

based on market discipline rather than relationship lending, thereby bolstering incentives to cut excess capacity and boost profitability. These changes included shrinking corporate boards, appointing external directors, and introducing incentive-based compensation structures. Nevertheless, a review of the experience during the past year suggests that Japanese corporate governance has not improved substantially, in part because these changes have been weakly implemented. For example, although there are fewer directors on corporate boards, directors are still former executives of the companies themselves, and are therefore seen as favoring management rather than shareholder interests. Likewise, external directors are viewed as ineffective in providing independent oversight of management.[25]

As a consequence of such problems, corporate governance in Japan remains weak. An independent consulting firm recently examined corporate governance in five major developed countries using a number of indicators (Table A1.7). Japan's overall score declined in 2000 as it continued to lag other countries. The study attributes the poor relative performance of corporate governance in Japan to factors such as inadequate accounting standards, barriers to takeovers including insufficient transparency, lack of independent boards of directors, and executive compensation schemes that bear no relationship to firm performance.

Merger and acquisition (M&A) activities, which play a vital role in strengthening corporate governance by fostering the creation of an external market for corporate control, gained significant momentum in 1999 as the keiretsu system weakened and cross-shareholdings were unwound. Market analysts were confident that the momentum would continue in 2000, as a number of official initiatives that encouraged equity sales by banks and corporations (such as mark-to-market accounting) became effective during the year. The results in 2000 were disappointing, however. Public capital injections into the banking system, low interest rates, and some signs that the economy might recover reduced pressure on corporations to restructure and divest assets.

In this environment, the total value of M&A activities involving Japanese targets declined from $197.3 billion to $99.89 billion during 2000. A significant part of the M&A activity that did occur took place in banking and telecommunications—which accounted for 34 percent and 14 percent of the total value of deals, respectively—rather than in the most troubled sectors. In addition, the share of Japanese target transactions in the global value of M&A shrank from 6 percent to 3 percent. Foreign purchases of Japanese companies, which may have considerable potential to establish a strong market for corporate control, declined from $25.82 billion to $13.57 billion.[26] There was just one successful hostile foreign bid, that of Boehringer Ingelheim for a stake in SSP Co. Ltd.[27]

Despite the dismal results in 2000, market analysts are hopeful that a number of factors may revive M&A in the period ahead. One factor is the continuing consolidation in the banking system, which may promote unwinding of cross-

[25]See Moody's Investors Service (2000c).
[26]See Ibison (2001).
[27]There were also a number of hostile Japanese takeover bids—although none were successful.

shareholdings. In 2000, the share of equity holdings of stakeholders such as banks, corporations, and insurance companies on the corporate sector declined from 38 percent to 35 percent. Another relevant factor is the forthcoming implementation of the corporate spin-off law (kaisha bunkatsu ho) and related tax incentives.

Contrary to expectations, the numerous official measures embodied in the IRL, the CRL, and changes to the Commercial Code have not significantly accelerated corporate restructuring. For example, the IRL provides tax incentives to reduce excess capacity by extending the tax loss carry-forward from five years to seven years. As of February 2001, more than two years after the law was implemented, fewer than 60 firms had applied for the tax incentives.[28] The number of restructuring announcements picked up slightly after the April 2001 introduction of the CRL but, according to experienced private sector observers, most announced plans are insufficient to raise medium-term profitability. They consider the plans as focused mainly on short-term cost-cutting rather than on addressing excess capacity.

The market has also greeted restructuring announcements with skepticism (see Box A1.2). Firms made over 1,000 restructuring announcements between July 1999 and December 2000, the period surrounding the introduction of the CRL. On average, they had a negligible impact on the stock price of the corporation making the announcement. Announcements made after the CRL was introduced were no more credible to the markets than those made earlier. The type of plan announced also made little difference for its reception by the market.

One encouraging sign of restructuring amid these disappointments has been the mounting pace of bankruptcies, including among large firms—which had been extremely rare in past years. In 2000, bankruptcy liabilities rose from ¥13.5 trillion to ¥24 trillion, and the number of bankruptcies increased from around 15,300 to around 19,000. The sharp increase in bankruptcy liabilities owed mainly to the failure of large corporations such as Sogo and Seiyo, which had liabilities of ¥1.9 trillion and ¥0.5 trillion, respectively. These failures indicate that banks may be increasingly reluctant to bail out insolvent corporations.

The Sogo bankruptcy illustrates both the progress in dealing with insolvent corporations and some of the remaining impediments. Sogo, founded in 1830, was one of the oldest and largest department store groups in Japan and had strong political connections. Early in 2000, Sogo became unable to repay debts amounting to close to ¥2 trillion, and a consortium of 71 banks led by Industrial Bank of Japan (IBJ) proposed a ¥632 billion debt-forgiveness package. The package failed when one of the leading banks, Shinsei Bank, refused to go forward with the solution.[29] Shinsei demanded that the government assume responsibility for the ¥200 billion in Sogo loans received when it purchased the failed Long-Term Credit Bank from the government, as stated in the terms of the purchase.

As Shinsei Bank pulled out of the rescue, the government took a more active stance through the Deposit Insurance Corporation (DIC).[30] Under the government's scheme, the DIC would have taken over Shinsei Bank's Sogo loans and written off half of them, which would have allowed Sogo to remain in business. A public outcry followed the announcement of the plan's details and serious concerns were raised that other troubled but politically well-connected corporations might be given public bailouts. Sogo subsequently withdrew its request for debt forgiveness and applied for bankruptcy under the CRL; the

[28]METI figures, as reported in Goldman Sachs (2001b).

[29]Shinsei Bank is the former Long-Term Credit Bank of Japan (LTCB), recently purchased by a consortium of foreign investors led by Ripplewood Holdings. Shinsei Bank also played an important role in forcing the bankruptcy of Life Co. and Dai-Ichi Hotel Ltd.

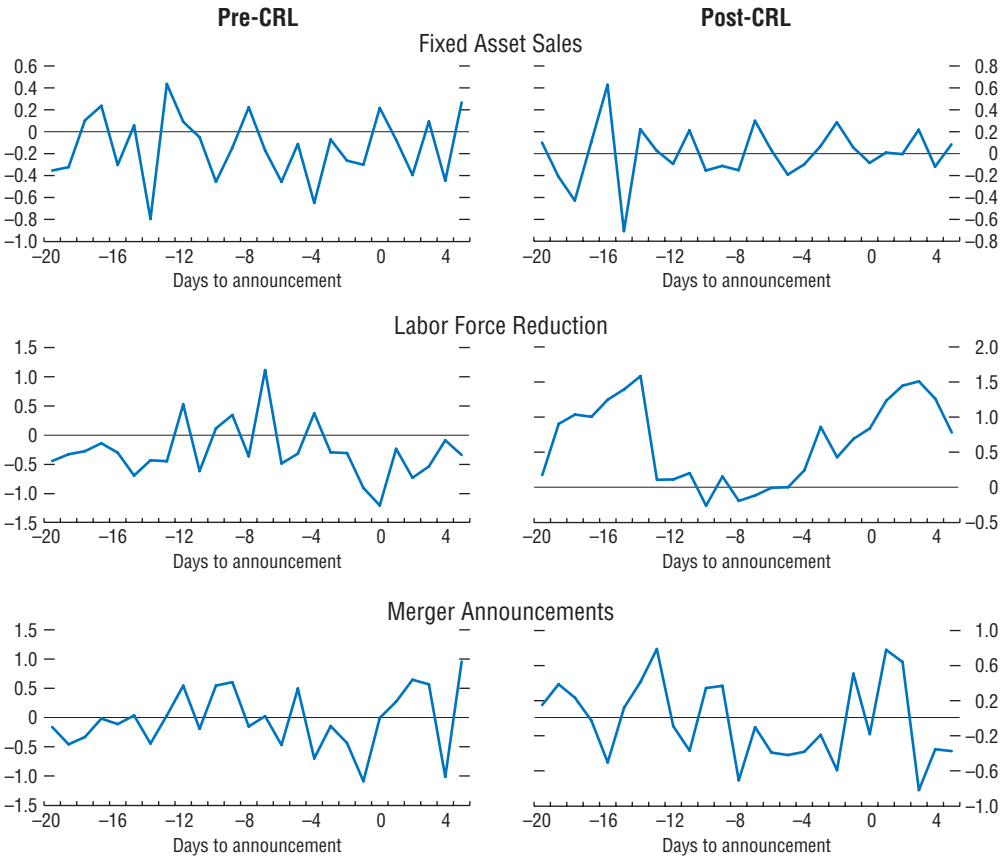
[30]The involvement of the DIC led some to suggest that Sogo's political connections may have played an important role in the rescue. Nagasakiya, another department store with twice the sales of Sogo and one-third more staff, had been allowed to go bankrupt earlier in 2000.

Box A1.2. Stock Market Reaction to Restructuring Announcements Before and After the Implementation of the Civil Rehabilitation Law

In 1999, before much of the current framework for corporate restructuring was put in place, restructuring announcements were received skeptically by the market. Market participants expressed concerns that many of the plans were based solely on cost-cutting measures, which they deemed insufficient to boost profitability. They were nonetheless confident that real corporate restructuring would begin once key elements of the legislative and regulatory framework for restructuring were implemented, notably the Civil Rehabilitation Law (implemented on April 1, 2000).

This box presents the results of an event study analysis of 1,016 restructuring announcements during the period July 1999–December 2000 to empirically assess whether recent changes in the legislative and regulatory framework have been viewed by the market as encouraging real restructuring. Event study analysis (see Campbell

Price Impact of Restructuring Plan Announcements Before and After the Implementation of the Civil Rehabilitation Law (CRL)
(Cumulative abnormal returns, in percent)



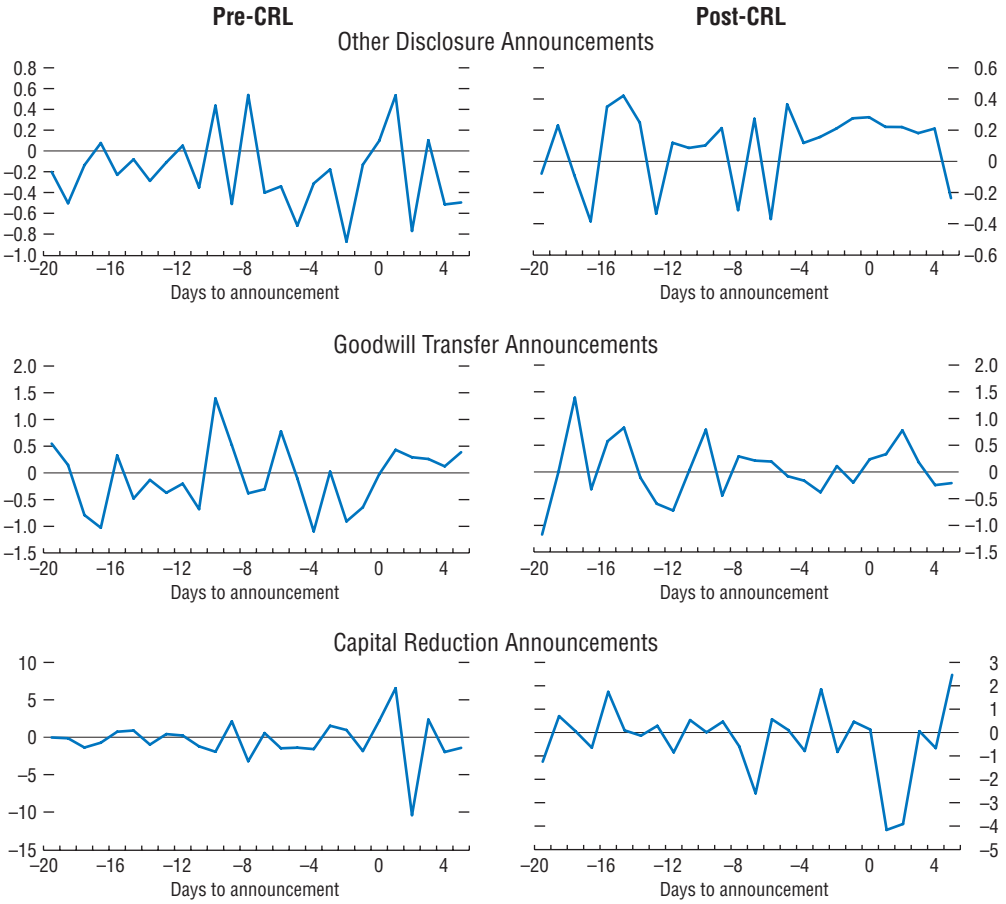
Sources: Goldman Sachs; Primark Datastream; and IMF staff calculations.

and others, 1997) is employed to assess the impact of restructuring announcements on the stock return of the announcing company. Event study analysis has been widely used in finance, including to study the impact of restructuring announcements by Japanese corporations on their stock returns.[1]

[1]See IMF (1999).

To assess the impact of the CRL on the credibility of restructuring announcements, announcements were classified according to whether the firm announced the sale of fixed assets, a reduction of the labor force, a merger, goodwill transfers, capital reductions, or improvements in disclosure. Announcements were also classified by whether they were made before or after the April 1, 2000 introduction

Price Impact of Restructuring Plan Announcements Before and After the Implementation of the Civil Rehabilitation Law (CRL)
(Cumulative abnormal returns, in percent)



Sources: Goldman Sachs; Primark Datastream; and IMF staff calculations.

Box A1.2 *(concluded)*

Number of Restructuring Announcements by Type and Date

Restructuring Announcement	Pre-CRL July 1999–March 2000	Post-CRL April 2000–December 2000	Full Sample July 1999–December 2000
Sale of fixed assets	198	147	345
Reduction of labor force	57	40	97
Mergers	81	129	210
Goodwill transfers	31	49	80
Capital reductions	5	13	18
Improvements in disclosure	100	166	266
Total number of restructuring announcements	**472**	**544**	**1,016**

Source: Goldman Sachs.

of the CRL (see the table). Cumulative abnormal returns, defined as the excess return over the historical average one year prior to the announcement, were computed 20 days prior to and 5 days after an announcement, in order to assess the announcement's price impact. The results were averaged across types of announcements. The results, summarized in the figures, indicate that on average, restructuring announcements have not had a positive price impact—either before or after the introduction of the CRL—and support the hypothesis that the CRL has not had a major influence on restructuring. The only exceptions are announcements of labor-force reductions, which had a positive impact after the CRL was introduced. These announcements may be seen as addressing one of the key structural impediments to restructuring—labor market rigidities.

firm was later taken over by Seibu Department Stores and IBJ.

Extensive Restructuring Is Still Needed

Confronting excess capital and the debt overhang will be key to sustainably revitalizing Japan's corporate sector. Unproductive fixed assets continue to depress corporate returns on assets (ROA) and returns on equity (ROE) in Japan. In 2000, ROA rose from 0.5 percent to 1.25 percent but remained well below both its pre-bubble average of 4 percent and the U.S. historical average of 5.5 percent. ROE in Japan was 4.7 percent, compared with 22.7 percent in the United States and 16.3 percent in Germany.

Three methods are widely used to estimate excess capital in Japan. They are based on the adjustment in the capital stock required to (1) raise ROA to historical levels, (2) raise utilization rates from their present low levels, and (3) return the capital/output ratio to the trend established in the 1970s and 1980s. Each method implies a large overhang of excess capital:

- Market analysts estimate that even if profits rose substantially, fixed assets would still need to be reduced by about ¥100–120 trillion to raise ROA to historical levels.[31]
- Fixed assets would need to be reduced by ¥53 trillion to raise the utilization rate from its 2000 level of 73.5 percent to 80 percent, or by ¥120 trillion to raise it to 90 percent.[32]

[31]See Morgan Stanley Dean Witter (2001).

[32]80 percent corresponds to the average utilization rate over 1985–90. The estimates of excess assets, based on manufacturing data, are conservative. Restoring the fixed asset/sales ratio in nonmanufacturing to its pre-bubble level would require a reduction of fixed assets by 30 percent.

- Estimates of excess capital based on the capital/output ratio amount to 8 percent of GDP, or ¥41 trillion.[33]

The necessary reduction in fixed assets would affect many companies and workers. According to market analysts, restructuring or liquidation of more than one-and-a-half million companies would be required to relieve the excess asset overhang.[34] These companies are concentrated in five industrial sectors: construction, wholesale and retail, financial, real estate, and services. They account for close to 85 percent of nonperforming loans and almost 60 percent of the labor force. Tokyo's top private sector analysts gauge that there was little progress in addressing the problems in these industries during the last year. Moreover, bank lending to these troubled sectors increased by 1 percent. Bank lending and public works contributed to the expansion of the construction sector, despite the fact that the sector is affected by high debt burdens, weak profitability, and asset quality problems. In 2000, the number of construction companies rose by 5 percent to a record 600,980.

Japanese corporations remain excessively leveraged. In 2000, the average debt/equity ratio of nonfinancial companies listed on the first section of the Tokyo Stock Exchange was unchanged at 350 percent, compared with 400 percent at the peak of the bubble period in 1989. Figures for the entire corporate sector are more encouraging, indicating that in 2000, financial leverage declined from 320 percent to 300 percent. Although this is the same leverage as in Germany, it is above the U.S. level (200 percent). Leverage is particularly high among firms with less than ¥1 billion in assets, which have an average debt/equity ratio of 425 percent.

Among the indirect costs of the debt overhang, reduced investment expenditure has made Japan's capital stock increasingly obsolete. In 2000, the capital stock vintage increased from 9 years to 10 years, well above the 1980s average of 8 years. In contrast, during the last two years the capital stock vintage in the United States decreased from 11 years to 8½ years, reflecting increased investment in information technology. The debt overhang problem therefore may be reducing Japanese productivity and potential growth.

Remaining Impediments to Corporate Restructuring

The current conjuncture in Japan includes a number of disincentives to corporate restructuring. Chief among these is access to inexpensive bank credit. Corporate analysts and major credit rating agencies believe that corporate credit quality is mainly determined by the support of the banking sector, which in turn benefits from systemic support by the government.[35] They view corporate default risk—even among speculative-grade companies—as stable and as a minor concern despite very weak financial ratios and a subpar macroeconomic environment.

In addition, banks have lacked the incentives and resources to force resolution of problem borrowers. According to market analysts and credit rating agencies, the current level of loan-loss reserves indicates weak incentives for banks to pressure troubled borrowers to restructure. In October 2000, the ratio of loan-loss reserves to nonperforming loans was about 40–50 percent, which some market observers considered low and as a signal that banks may be willing to continue to lend to some troubled borrowers.[36] Moreover, the main bank system may lack the capital and profits they would need to rescue or write off loans to distressed corporations without government support.[37]

[33]See IMF (2000c).
[34]See Goldman Sachs (2001c).
[35]See Moody's Investors Service (2000a), Standard & Poor's (2000), and Goldman Sachs (2000).
[36]See Moody's Investors Service (2000c).
[37]As noted above, market participants and the authorities hold significantly different views about such questions.

Low interest rates have further undermined incentives for corporations to restructure. Despite poor underlying profitability, low-rated companies have been able to cover interest payments. They have been able to achieve most of the targets proposed in their restructuring plans, particularly as the targets were mainly associated with cost-cutting measures such as consolidating the number of suppliers in order to reduce administrative costs. By the same token, these firms will be vulnerable if interest rates rise. For example, among B-rated firms, the ratio of funds from operations to total debt is less than 4 percent compared with 9 percent for similarly rated U.S. corporations.[38] The real test of restructuring plans will therefore come when interest rates rise. If growth remains sluggish, however, the low interest rate environment is likely to persist.

A fourth factor is the regulation of key sectors of the economy. In the construction sector, for example, access to building materials and supply routes is protected.[39] The construction sector also includes many companies that rely heavily on public works for profitability—in 2000, profit margins on public works were as high as 17 percent.[40] Private analysts consider that many such companies are probably unviable on a strictly commercial basis. The emergency package mentioned the need to promote consolidation in the construction sector but emphasized mergers and tie-ups, which raises the risk that excess capacity may remain in the sector even if the package were fully implemented.

Steps to Overcome the Impediments

It is generally agreed that a workable framework for restructuring, in terms of tax reforms and legislative and regulatory measures, is already partly in place. There are also some incentives in place, including in the tax code, for firms to employ the restructuring framework. On balance, however, incentives to use the framework are lacking in the present environment. Extended support from the bank system to ailing corporations, as reflected by the increase in bank loans to companies in the most troubled sectors of the Japanese economy during 2000, has weakened corporate governance and undermined the effectiveness of government initiatives to encourage restructuring. Official measures to raise the pressure on corporations to restructure and on banks to resolve bankrupt and troubled clients are needed to move restructuring forward.

Deregulation would intensify competition and increase pressure to either restructure or shut down inefficient companies. It would particularly help to weed out companies in the construction, wholesale and retail, real estate, financial, and services sector that are a major source of both the corporate debt overhang and corporate inefficiencies. Faced with stronger competition and narrowing profit margins, many of these companies would have trouble servicing their debts and would need to turn to their main banks for debt restructuring. Some would probably prove unviable without continued support from the banking system and would have to be liquidated. Because these sectors employ a large share of the labor force, deregulation would usefully be complemented by measures to facilitate labor shedding and bolster the social safety net.[41]

Stronger, market-oriented corporate governance is also badly needed. Steps to incorporate governance guidelines as part of listing requirements and require institutional investors to exercise their voting rights along the lines of the U.S. Employee Retirement Income Security Act (ERISA) would improve governance by investors. Corporate governance could also benefit from official initiatives aimed at accelerating the unwinding of cross-shareholdings. This could be achieved by eliminating capital gains taxes on

[38]See Standard & Poor's (2000).
[39]See Goldman Sachs (2001e).
[40]See Goldman Sachs (2001d).
[41]See IMF (2000b).

cross-held shares, and by strengthening the power of external auditors and outside directors on corporate boards.[42] Unfortunately, as noted in the discussion of the banking system, the government's scheme to buy bank cross-shareholdings may weaken, not strengthen, corporate governance.

References

Campbell, John Y., Andrew W. Lo, and A. Craig MacKinlay, 1997, *The Econometrics of Financial Markets* (Princeton, New Jersey: Princeton University Press).

Fitch, 2001, *Japanese Banks: Loan Loss Simulation for Japanese Banks Based on New Disclosed Problem Loan Data* (May).

Goldman Sachs, 1999, "Millenium Metamorphosis: From Old to New Japan," *Portfolio Strategy* (Tokyo, December 17).

Goldman Sachs, 2000, "Japan: Credit Spreads Likely to Matter Increasingly," *Global Economic Weekly* (New York, November 15).

_____, 2001a, "Additional Steps: Corporate Governance, Industrial/Financial Restructuring," *Japan Strategy Flash* (Tokyo, February 13).

_____, 2001b, "Showa Depression Deja-Vu?" *Portfolio Strategy* (Tokyo, March 2).

_____, 2001c, "The Great Heisei Loan Work-Out, Part II," *Banks: City Banks* (Tokyo, February 27).

_____, 2001d, "The Great Heisei Loan Work-Out, Part III," *Banks: City Banks* (Tokyo, February 27).

_____, 2001e, "The Great, Great Heisei Loan Work-Out," *Banks: City Banks* (Tokyo, April 20).

Ibison, David, 2001, "Japan M&A Levels Off," *Financial Times* (London), January 24.

International Monetary Fund, 1999, *International Capital Markets: Developments, Prospects, and Key Policy Issues*, World Economic and Financial Surveys (Washington).

_____, 2000a, *International Capital Markets: Developments, Prospects, and Key Policy Issues*, World Economic and Financial Surveys (Washington).

_____, 2000b, *Japan: Selected Issues*, IMF Staff Country Report No. 00/144 (Washington).

_____, 2000c, *Japan: Staff Report for the 2000 Article IV Consultation*, IMF Country Report No. 00/98 (Washington).

Levy, Joaquim, 1999, "Financial Reorganization and Corporate Restructuring in Japan," Chapter 8 in *Post-Bubble Blues: How Japan Responded to Asset Price Collapse*, ed. by Tamim Bayoumi and Charles Collyns (Washington: International Monetary Fund).

Lindgren, Carl-Johan, Gillian Garcia, and Matthew I. Saal, 1996, *Bank Soundness and Macroeconomic Policy* (Washington: International Monetary Fund).

Moody's Investors Service, 2000a, *How Will We Know When the Japanese Banking Problem Is Over?* (New York, May).

_____, 2000b, *Japan: Banking System Outlook* (New York, October).

_____, 2000c, *Ratings on Rebound as Japan's Corporations Restructure* (Tokyo, November).

_____, 2001, *Japanese Banks in Another Crisis . . .: What Has Changed? What Will Change? What Would Be Difficult to Change? Time to Revisit Management Improvement Plan?* (Tokyo and New York, February).

Morgan Stanley Dean Witter, 2001, *Japan Economics: In the Crisis Quadrant* (Tokyo, April).

Oxford Analytica, 2000, "Japan: Tax Options," September 22.

Rafferty, Kevin, 2000, "Voters Sink Sogo's Lifeboat," *Euromoney* (September), pp. 50–54.

Standard & Poor's, 2000, *Japan CreditStats: Clear Divergence in Japanese Corporate Credit Quality Emerges* (Tokyo, November 15).

World Securities Law Report, 2001 (January), pp. 18–19.

[42]The authorities plan to address these issues in future revisions of the commercial code.

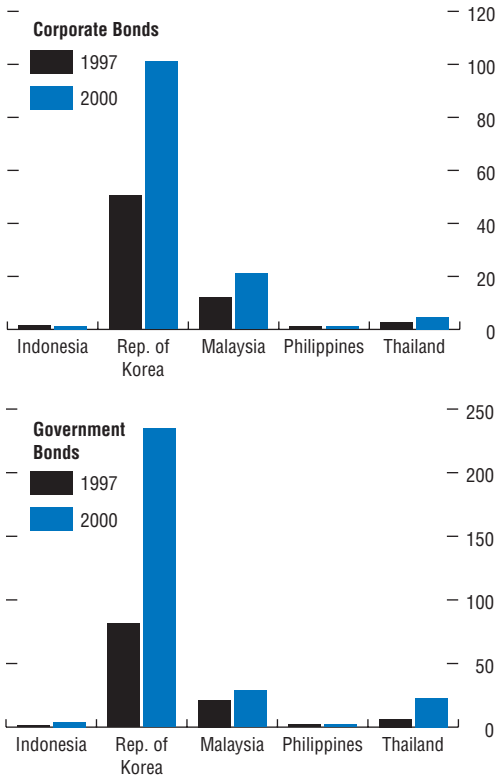
ANNEX II DEVELOPMENT OF LOCAL BOND MARKETS IN ASIA AND LATIN AMERICA

In the aftermath of the Asian crisis, many emerging market policymakers have argued that the existence of well-functioning domestic bond markets would have helped mitigate the impact of shocks on their financial markets both by providing an alternative source of funding to bank lending and by exposing investors rather than taxpayers to negative shocks. Thus, in the context of capital market reform, Asian and Latin American emerging economies are seeking to develop their domestic bond markets in order to reduce currency and maturity mismatches, alleviate the dominance of bank lending, and mobilize domestic savings to provide domestic issuers with alternative and sometimes cheaper sources of long-term funding.

Between 1997 and 2000, for instance, the outstanding amounts of local currency-denominated long-term bonds in Asian "crisis countries" more than doubled from a total of $181 billion at end-1997 to $422 billion at end-2000 (see Figure A2.1). This growth was partly due to the surge in government paper issues in the aftermath of the Asian crisis, as governments in this region issued substantial quantities of bonds in domestic capital markets to fund the purchase of nonperforming loans and to recapitalize local banks. As banks scaled back their lending in the context of the post-crisis environment, the corporate sector turned to the bond market for funding. Corporate bond issues grew from $68 billion in 1997 to $130 billion in 2000, with the increases significant in the Republic of Korea (in particular), Malaysia, and Thailand.

Despite increased government and corporate bond issues, market participants offered two conflicting views on the medium-term viability of these markets as a source of corporate funding. Some have argued that these markets will continue to expand because the corporate sector wants to reduce its dependency on bank financing, and there is a set of institutional investors

Figure A2.1. Size of Local Currency Bond Markets for Selected Asian Countries[1]
(In billions of U.S. dollars)



Source: International Finance Corporation.
[1]Outstanding nominal value of long-term local currency bonds.

(e.g., pension funds and insurance companies) that have a demand for "duration" assets to match the long-term nature of their liabilities. In contrast, other market participants argue that much of the recent surge in bond market activities reflects an "interest rate story." In particular, the current configuration of interest rates is such that the bank lending rate exceeds the bond rate for highly rated corporates, which, in turn, exceeds bank deposit rates. As a result, highly rated borrowers have an incentive to issue bonds rather than borrow from banks. Institutional investors (and banks) have an incentive to buy these bonds rather than place funds in bank deposits (or in the case of banks, in the interbank loan market). A change in this interest rate configuration (e.g., a rise in the bond interest rate above the bank lending rate) was seen as leading to a rapid slowdown of bond issuance.

The robust growth in the corporate bond market also masks a number of obstacles to the development of Asian bond markets. For instance, the surge in corporate bonds issued in the wake of the crisis in the Republic of Korea can be attributed largely to the substantial issuance of three-year and shorter maturity bonds absorbed mainly by domestic investment trust companies. The record redemptions and losses in the investment trust industry following the collapse of Daewoo, combined with the maturing of half of the existing stock of corporate bonds this year, have raised serious challenges to the further sustained growth of the corporate bond market in Korea. The authorities have responded to the situation by reforming and supporting the investment trust industry and by issuing a set of measures to support the corporate bond market,[1] such as the establishment of bond funds and asset securitization.

Unlike the Republic of Korea, other Asian "crisis countries" have had to build their local bond markets from a much lower base. In spite of some success in countries such as Malaysia and Thailand, the development of deep bond markets still has some way to go. The issuer base remains mainly the domain of governments and a handful of corporates, reflecting a flight to quality in the aftermath of the Asian crisis, exacerbated by banks' compliance with the Basel capital adequacy requirements and a greater recognition of credit risk. From the supply side, corporate issues have been hindered by time-consuming and cumbersome authorization and registration procedures. Perhaps more importantly, institutional constraints have traditionally encouraged corporates to rely on bank financing. The limited development of distribution channels to retail investors and concerns about corporate governance issues—combined with the propensity of retail investors to seek higher returns in the stock markets—explain corporates' small participation in local bond markets.

From the demand side, financial institutions dominate the investor base, in part because of their need to hold bonds to meet reserve and liquidity requirements, leaving little room for retail investors. The buy-and-hold nature of these institutional investors has resulted in an illiquid secondary market. The lack of a diversified investor base and the predominance of inactive investors make Asian bond markets more of an investment market than a trading market, resulting in pricing inefficiencies.

The efficiency of the local bond markets has also been limited by the predominance of short maturity instruments and illiquid secondary markets. Market participants typically rely on a combination of local credit ratings and relative valuation to negotiate the price of corporate bonds, resulting in pricing anomalies that cannot be arbitraged because of lack of liquidity. Among the obstacles to pricing efficiency, the absence of a reliable and liquid benchmark is the one that is most frequently mentioned. In addition, foreign exchange and capital account restrictions can lead to a sharp drop in swap trading, thus preventing market participants from using the swap rate as a benchmark. In this context, the poor ratings of domestic banks limit swap operations to the foreign interbank market.

[1]See IMF, *Republic of Korea—Selected Issues* (2001).

Policymakers have been cognizant of the limitations in the local bond markets and have attempted to improve the financial and legal infrastructure of the domestic bond markets. A major initiative—although with varying success rates in Asian emerging markets—has been to lengthen the benchmark yield curve, publish advance schedules for auctions, and step up the frequency and size of issues. Moreover, the creation of a quasi-government yield curve, the improvement of existing market making systems, and the development of the swap market should provide supplementary benchmark yields to facilitate the pricing of private debt securities. Bond futures contracts and repo operations are also being gradually developed to help investors hedge against interest rate risk. Investments have also been made in technology for clearing and settlement systems, such as the introduction of real time electronic payment systems for minimizing settlement risk in securities transactions.

Finally, attempts have been made to increase the liquidity of the secondary markets by diversifying the issuer base and increasing distribution channels to reach retail investors, as well as a wider use of guarantors and credit rating services. The regulatory and supervisory framework is also being improved, with more attention paid to educating as well as protecting investors, increasing market transparency, and enhancing corporate governance and market integrity. In this regard, investments in human resources and information technology will be key to further developing Asian bond markets.

A number of market participants and some authorities have argued that a further widening of the retail investor base for Asian bonds could be achieved by developing the asset management industry. Indeed, in both Hong Kong SAR and Singapore, the authorities have initiated programs designed to place a portion of assets of the mandatory provident funds in the hands of private fund managers.

In Hong Kong SAR, pension product providers have started signing up employers that have been contributing since December 2000 to a new, defined contribution pension scheme. The Mandatory Provident Fund is projected to provide first-year contributions—calculated on the basis of 10 percent of employees' income with both employers and employees contributing 5 percent each—of $1.3 billion and to accumulate assets totaling $130 billion by 2030. Although the payback period is estimated by interested fund managers to be about 9 to 10 years, some foreign institutions have entered the market for these assets in spite of projected stiff competition from banks and insurance companies.

In Singapore, the government is attempting to attract more fund managers by offering tax breaks, deregulating its centrally run mandatory pension scheme—the Central Provident Fund—and by farming out part of its assets to private asset managers. The recent changes in the rules governing the scheme have freed up an estimated $21 billion in new assets for investment in approved retirement-related financial instruments—including unit trusts. Furthermore, the Government of Singapore and other government-linked entities are gradually placing S$35 billion of investment mandates with qualifying private sector fund managers.

In Latin America, the most important development in local capital markets has been the growth of private pension funds. Because of their large and growing size, the funds are becoming the dominant players in various segments of domestic capital markets. Excluding Brazil (which does not have a privatized system), Latin America's private pension funds are currently estimated to have $95 billion under management and monthly contributions of $700 million.[2] Including Brazilian corporate pension funds, assets under management reach about $175 billion or about 18 percent of GDP and are expected to grow to about $887 billion by 2015. In Mexico, funds in the private pension system introduced in 1997 already manage around $28 billion or 5.1 percent of GDP (including assets at state house financing agency Infonavit, which

[2]See *IFR Latin America* (2001) and Salomon Smith Barney (2000).

are eventually expected to be managed by pension funds). In Argentina, funds currently manage approximately $21 billion (7.4 percent of GDP), up from $8 billion in 1997.

Regulations have so far restricted the activity of funds, however, making them captive buyers of government bonds. Investments in the equity and corporate bond markets are restricted by regulations: in Mexico, pension funds are not permitted to invest in stocks, while the limit is 35 percent in the Argentine case. In Argentina, however, regulations regarding the credit ratings of eligible companies, together with the small and shrinking size of the local stock market, have limited equity investments of pension funds to around 14 large listings. Furthermore, high real interest rates on government bonds in both countries have kept the appetite for investments in corporate securities in check. Funds tend to buy mainly longer-term government securities, with the intention to hold them to maturity.

Market participants see a growing tension between the need to export capital in order to reap the benefits of international diversification, on the one hand, and the development of local bond markets, on the other. So far, Latin American policymakers have differed in their choices, which range from prohibiting foreign investments (such as in Mexico), to allowing allocations to foreign markets up to 16 percent (such as in Chile) and 17 percent (in Argentina). Another source of tension is whether to allow pension funds to invest in bonds issued by small- and medium-sized corporations but at the cost of lowering their portfolios' credit quality. Asset securitization with the use of credit enhancement is being considered as one way to alleviate concerns about deteriorating credit quality.

Another interesting trend is the use of local private pension funds as an investor base for both local and foreign currency denominated sovereign debt. For instance, in 2000, the Argentine authorities had planned to fulfill about $13.7 billion of their financing program (78 percent of a $17.5 billion program) by tapping local investors. Of that amount, $4.3 billion was expected to come from private pension funds, $6 billion from banks, and $3 billion from insurance companies and other investors. Market participants have often given the example of Argentine banks and pension funds as "partners" rather than lenders during crises. It has been estimated that Argentine residents—mostly banks—held $12.2 billion of Bontes at end-2000, while pension funds held around $11 billion of public sector debt at end-March 2001. A large proportion of the $3.9 billion of Letes outstanding is thought to be held by banks, with $8 billion of promissory notes and other bonds and structures held by locals (banks, pension funds, and corporates). In respect of Argentina's U.S. dollar-denominated debt, it has been estimated that nearly 20 percent is held by residents, mostly pension funds.[3]

[3]See Merrill Lynch (2001).

References

Hardwood, Alison, ed., 2000, *Building Local Bond Markets: An Asian Perspective* (Washington: World Bank).

Hong Kong Monetary Authority, 2001, *HKMA Quarterly Bulletin* (February).

J.P. Morgan, 2000, "Guide to Asian Local Markets," October.

Kilby, Paul, 2001, "Pension Funds Search for Paper," *IFR Latin America* (April 16), pp. 11–13.

Krishnan, Sharma, 2000, "The Underlying Constraints on Corporate Bond Market Development in Southeast Asia," Department of Economic and Social Affairs Discussion Paper No. 14 (New York: United Nations).

Merrill Lynch, 2001, "Size and Structure of the World Bond Market 2001," April.

Organization for Economic Cooperation and Development, 2000, "Round Table on Capital Market Reforms in Asia: Summary of Proceedings," October.

"Review of the Year 2000," 2001, *EuroWeek* (London, January).

Salomon Smith Barney, 2000, "Private Pension Funds in Latin America," December.

ANNEX III

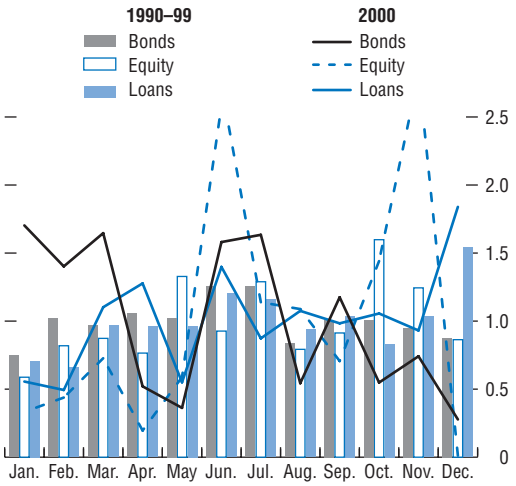
ISSUANCE AND CLOSURES IN EMERGING MARKET BONDS, EQUITIES, AND LOANS

Emerging market access to the international capital markets tends to be characterized by an "on-off" cycle. Therefore, the factors that influence the amount of new financing that is made available and its phasing over time present key issues in international finance. These issues include whether there is a seasonal pattern to borrowing activity and the mature and emerging market developments that are the key determinants of overall flows and phasing.

To examine possible seasonal patterns, Figure A3.1 shows emerging market issuance of bonds, equities, and syndicated loans throughout the 1990s and 2000, normalized so that average monthly issuance equals one. The bars represent the average monthly issuance for the 1990s, while the lines represent issuance in 2000. Over the 1990s, there were low issuance levels during traditional holiday months such as January and December, leading to a hump shaped pattern over the year, with another holiday month, August, creating a break in the hump shape.[1] Although the markets seem to share a common seasonal pattern for much of the year, the loan market has been most active in December when bond and equity issuance is usually below the yearly average. In part, this reflects the fact that loans typically settle at a longer interval after the announcement date than do bonds and equity. This pattern was also evident in 2000.

Figure A3.1 also suggests that equity issuance is different in many respects to bond and loan issuance. In particular, primary equity issuance is more volatile than bond and syndicated loan issuance (in the sense that it has a larger coefficient of variation) and equity issuance is also

Figure A3.1. New Millennium, New Seasonality?
(Relative issuance in different months: 1990–99 vs. 2000)



Sources: Bondware; and IMF staff calculations.

[1]Estimating a seasonal pattern in a regression including yearly dummies produces a very similar picture, indicating that this pattern is not driven by events in one specific year.

Table A3.1. Issuance Volume Regressions for Bonds, Equity, and Loans
(Sample January 1991 to April 2001, weekly data)

Dependent Variable (Millions of U.S. dollars)	Bonds		Equity		Loans	
	Coefficient	*t*-statistics	Coefficient	*t*-statistics	Coefficient	*t*-statistics
Lagged dependent variable	0.146	3.45	–0.105	–2.36	–0.101	–3.72
EM bond issuance			0.047	2.11	0.003	0.14
EM equity issuance	0.110	1.32			0.045	0.96
EM loan issuance	–0.024	–0.50	0.032	1.34		
Same mature market issuance	0.053	5.35	–0.027	–0.85	0.727	29.01
U.S. investment-grade issuance	–0.001	–0.04	0.037	2.17	–0.007	–0.41
U.S. high-yield issuance	–0.103	–0.27	0.075	0.36	–0.004	–0.02
EM amortization lag	0.083	0.66	–0.095	–1.47	–0.164	–2.34
EM amortization lead	0.336	2.75	–0.061	–0.95	0.055	0.80
EMBI spread	–0.947	–2.38	–0.194	–1.72	–0.348	–1.57
EM equity return	4,139	2.03	–598	–1.29	–3,407	–3.00
Nasdaq return	3,519	2.48	1,731	2.18	–388	–2.74
S&P 100 volatility	–43	–2.73	–14	–2.31	–2.6	–0.30
Oil	–43	–1.93	8.3	1.20	47	3.72
U.S. high-yield spread	69	0.67	–50	–1.48	146	2.53
U.S. swap spread	–9.9	–1.41	8.6	3.61	–5.0	–1.26
Adjusted *R*-square	41%		11%		74%	
Number of observations	537		538		537	

Note: In addition to the variables shown in the table, the regressions include a constant as well as dummies for months and years.

lumpier. This relationship is particularly evident in the 2000 numbers, when equity issuance in June and October are "off the chart." In June 2000, equity issuance was driven by China Unicom's initial public offering (IPO) of over $5 billion, while October saw issues by China Mobile (over $3 billion) and China Petroleum (over $6 billion). These three dates alone account for almost half (46 percent) of all equity issuance in 2000 (see Box 3.6). Therefore, the nature of seasonality and market closures is less useful for equities than for bonds and loans.

Perhaps the most significant seasonal change in 2000, which also continued in 2001, was the large amount of bond issuance early in the year. This shift in bond market seasonality has been labeled "pre-financing," indicating that on the demand side of funds, issuers have tried to fulfill their financing needs early in the year and keep a stock of reserves so as to avoid having to go to the market when conditions are unfavorable. On the supply side of funds, the relatively large amount of funds flowing back to investors in terms of interest payments and amortization is an important factor: data from Bondware indicate that amortizations in December 1999 and February 2001 were in excess of $6 billion in each month, compared to a monthly average of around $3.4 billion from 1999 onward.[2]

To identify the factors that have affected issuance, emerging market issuance of international bonds, equities, and syndicated loans were regressed on a number of "explanatory" variables (see Table A3.1): volume of issuance in related markets (issuance of emerging market international bonds, equities, and syndicated loans; the corresponding mature market issuance; and U.S. investment-grade and high-yield issuance), and returns or interest rate spreads on the related assets (EMBI spread, emerging market equity returns, Nasdaq returns, U.S. high-yield spreads, and U.S. swap spreads).[3] The price of oil is included to capture potential

[2]The amortization data are based on maturities at issuance, and will not correspond to actual amortizations if there are, for example, buybacks, swaps that change the maturity, or defaults.

[3]The return or spread associated with the dependent variable is lagged one week; others are included both contemporaneously and with four lags. The table reports only selected coefficients of interest.

effects on financing needs, as is the amount of emerging market bond amortization (one week lead and lag). The implied volatility on the S&P 100 is included as a measure of risk perception in financial markets.[4]

The loan and bond regressions perform reasonably well, with adjusted *R*-squares of 74 percent and 41 percent, respectively, but the equity regression explains only 11 percent of the variation. Although not shown in Table A3.1, the regressions also indicate that when all the other control variables are included, the monthly dummies are not statistically significant in any of the equations. This could reflect either the absence of seasonality or the presence of other variables in the regression that have the same seasonal pattern as the issuance that is explained.

For emerging market bond issuance, one highly significant variable is the overall level of issuance in mature bond markets, while issuance in the U.S. investment-grade and high-yield markets is not significant. In the analysis below, however, there is evidence of Granger causality from closures in the U.S. investment-grade market. Amortization coming due (with a one-week lead) is also significant, which is consistent with the hypothesis that some bond issues are just far enough in advance to allow investors to receive the amortization payment in time for the settlement date for the new issuance. For the price variables, the significant ones have the signs we would expect if the market is driven primarily by factors that cause shifts in the supply of funds, so that high returns, low spreads and volatility, and high issuance volumes all coincide.

There is also some indication that oil prices reduce bond issuance, which would be consistent with oil-producing issuers being the main issuers of bonds and having less need for external financing when oil prices increase. At the same time, high oil prices are associated with more loans, which would be consistent with the recycling of oil funds in the loan market, with non-oil producing countries seeking funding in the syndicated loans market.

Table A3.2. Closures Based on 539 Weekly Observations from 1990–April 19, 2001

	One-week Definition	Frequency	Two-week Definition	Frequency
	Total number of weeks closed and frequency			
Bonds	42	7.8%	16	3.0%
Equity	233	43.2%	145	26.9%
Loans	42	7.8%	8	1.5%
	Contingent on bond market closed			
Equity	29	69.0%*	11	68.8%*
Loans	7	16.7%	0	0.0%*
	Contingent on equity market closed			
Bonds	29	12.4%	11	7.6%
Loans	30	12.9%*	4	2.8%
	Contingent on loan market closed			
Bonds	7	16.7%	0	0.0%*
Equity	30	71.4%*	4	50.0%

*Indicates statistically significant change from unconditional probability at 5% level.

In the equity equation, issuance of emerging market bonds as well as U.S. investment-grade bonds are associated with larger amounts of equity issues. High returns on the Nasdaq and low volatility in the U.S. equity market are also associated with more equity issues, while issuance volume in mature equity markets is not statistically significant.

Emerging market loan issuance is strongly related to issuance in the mature loan market. Loan issuance is also negatively related to both emerging and mature equity returns, and positively related to high-yield spreads. In general, the variables that are statistically significant in the loan regression either are not significant in the other equations or have the opposite sign. This may indicate that the loan market acts as a substitute to the bond and equity markets, despite the fact that the direct effect as measured by the amount issued in the other markets does not show up strongly in any equation.

Substitutability between markets is potentially of even greater importance in times of market

[4]This variable is discussed in more detail in Box 3.3.

Table A3.3. Granger Causality: Bond, Equity, and Loan Markets
(Four Lags in Regression)

	Bonds	Equity	Loans
Bonds		++	—
Equity	+		+
Loans	—	—	
U.S. high-grade	+++	0	0
U.S. high-yield	0	+	0

Table A3.4. Granger Causality Different Issuers of Emerging Market Bonds
(Four Lags in Regression)

	Private	Public	Sovereign
Private		+++	0
Public	+++		+++
Sovereign	0	0	
U.S. high-grade	+++	+	+
U.S. high-yield	0	++	+

closure. In order to analyze this issue, we use two alternative definitions of market closure. The first is the definition used in IMF (2001), where a closure in the bond market is defined as a single week when issuance is less than 20 percent of a 52-week moving average. According to the second definition, this condition has to be fulfilled in two consecutive weeks to constitute a closure.

Table A3.2 shows the number of closures since 1990 according to these definitions in the first three rows, with bonds and loans having relatively few closures.[5] The next rows in the table describe the number of closures and frequencies contingent on one of the other markets being closed. In general, closure in one market increases the probability of closures in the other markets. With the two-week definition, however, the bond and loan markets were never closed at the same time.

A final analysis of the relationship between closures in various markets is to see if closures in one market predate closures in the other markets.[6] This is done by estimating tobit models of the closure dummies for the bond, equity, and syndicated loans markets, where we use the same explanatory variables as in the issuance equations above, but add closures in the other markets lagged one through four periods.

Tables A3.3 and A3.4 indicate the effect of the lagged row variable on the closure probability of the column variable. One positive (negative) sign indicates that at least one of the row variable's lags has a significant coefficient at the 10 percent level and that it increases (decreases) the probability of a closure in the column variable. Two or three signs indicate significance at the 5 percent and 1 percent levels. The tables show, for example, that a closure in the U.S. investment-grade bond market is likely to precede a closure in emerging market bonds, while it has no significant relationship to closures in the emerging equity and loan markets. For the emerging market variables, a closure in the bond market increases the probability of a closure in the equity market, while it reduces the probability of a loan market closure.

Reference

International Monetary Fund, 2001, *Emerging Market Financing: Quarterly Report on Developments and Prospects*, Second Quarter 2001 (Washington).

[5]Given the large number of weeks with no equity issuance, any definition that relies on issuance in a week being over a certain percent of a positive mean to avoid being defined as a closure would lead to frequent closures in the equity market.

[6]When looking at the timing of different closures, it should be mentioned that the loan dates used are the signing dates. The signing date can be several weeks after the mandate has been awarded, so in that sense some caution may be needed when looking at the timing of events. Four lags of the closure dummies are included in the regression, however, which allow for some issuance lags in all of the markets considered.

ANNEX IV THE MAJOR FIXED-INCOME SECURITIES MARKETS

Overview of the Major Debt Securities Markets

Government debt is an important part of the outstanding supply of private and public debt securities. Total debt securities issued by the advanced economies presently stands at about $36 trillion (Table A4.1). A little more than half of this total represents public sector debt—including debt issued by state and local governments and government-sponsored enterprises—about 30 percent is debt issued by financial institutions, and the remaining 15–20 percent is debt issued by nonfinancial corporations. Two points are noteworthy regarding corporate sector debt: only about 15 percent of all debt issued in national markets is for financing nonfinancial firms, and the United States has more corporate debt outstanding than all other countries combined.

Another way to break down outstanding debt securities is to differentiate between those issued in national and international (mainly London) markets. Less than one-quarter ($6.3 trillion) of all outstanding debt securities are issued in the "international debt markets" rather than in national financial systems. The main reason for this is that, as noted above, public debt securities account for more than half of all debt securities in tandem with the fact that the vast majority of public debt is issued in national markets. With this in mind, it is noteworthy that a comparison

Table A4.1. Global Bond Markets, December 2000
(In billions of U.S. dollars)

	Gross Issuers	Debt Securities[1]		International Debt Securities			Domestic Debt Securities		
		International	Domestic	Public Sector	Financial Institutions	Corporate Issuers	Public Sector	Financial Institutions	Corporate Issuers
All countries	35,736.2	6,003.2	29,733.0	1,262.8	3,133.9	1,606.5	17,957.9	7,764.4	4,010.7
North America	17,103.7	1,972.5	15,131.2	593.8	816.4	562.3	8,448.5	4,210.4	2,472.3
Canada	794.4	209.0	585.4	121.6	37.2	50.2	414.2	100.3	70.9
United States	16,309.3	1,763.5	14,545.8	472.2	779.2	512.1	8,034.3	4,110.1	2,401.4
Japan	6,359.9	287.6	6,072.3	20.2	142.2	125.2	4,543.3	773.2	755.8
EU-15	9,628.4	2,936.3	6,692.1	363.6	1,899.4	673.3	3,902.3	2,288.3	501.5
Austria	246.7	93.8	152.9	34.7	54.1	5.0	91.0	58.6	3.3
Belgium	406.6	83.3	323.3	22.9	56.9	3.5	229.3	74.3	19.7
Denmark	277.9	30.8	247.1	16.5	9.4	4.9	78.0	154.6	14.5
Finland	109.5	41.3	68.2	28.9	8.1	4.3	42.8	18.3	7.1
France	1,426.1	358.1	1,068.0	27.8	193.8	136.5	635.7	309.4	122.9
Germany	2,604.8	893.2	1,711.6	21.6	746.9	124.7	736.5	950.0	25.1
Greece	114.5	27.5	87.0	22.9	2.5	2.1	86.8	0.2	0.0
Ireland	66.5	35.5	31.0	4.9	26.4	4.2	21.6	0.0	9.4
Italy	1,484.6	212.4	1,272.2	68.5	94.9	49.0	976.1	273.4	22.7
Luxembourg	20.4	20.4	n.a.	0.1	18.1	2.2	n.a.	n.a.	n.a.
Netherlands	536.3	291.0	245.3	0.7	221.0	69.3	162.4	44.8	38.1
Portugal	96.2	33.8	62.4	14.6	16.6	2.6	35.8	16.2	10.4
Spain	483.6	152.5	331.1	34.7	83.1	34.7	274.4	29.9	26.8
Sweden	292.8	96.7	196.1	52.2	24.6	19.9	105.4	73.2	17.5
United Kingdom	1,461.9	566.0	895.9	12.6	343.0	210.4	426.5	285.4	184.0
Other countries	2,644.2	806.8	1,837.4	285.2	275.9	245.7	1,063.8	492.5	281.1

Source: BIS.
[1]International and domestic debt securities shown by nationality of the issuer.

Table A4.2. Selected Countries: Key Features of Government Bond Markets

	Canada	Italy	Japan	United Kingdom	United States	Belgium	France	Germany	Netherlands	Sweden
Turnover ratio[1]	22	8	7	7	22	4	34	n.a.	3	33
Bid-ask spreads[2]	5	6	7	4	3	5	10	4	n.a.	15
Reopening used	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bonds strippable	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No
Withholding tax[3]	No	Yes	Yes	No	No	Yes	Yes	Yes	n.a.	Yes
Number of primary dealers	11	16	n.a.[4]	17	27	16	19	46[5]	13	8
Settlement date[6]	T+2M, T+3M	T+3M+1C	T+3M	T+1M	T+1M	T+3M	T+3M	T+3M[7]	T+3M	T+3M

Sources: Inoue (1999); Fabozzi (1998); European Union; and national sources.
[1]Annual trading volume/outstanding amount.
[2]Ten-year, on-the-run issues.
[3]In Italy, Belgium, France, and Sweden, the tax is levied only on personal investors. In Japan, designated financial institutions are exempt from the tax (and certain transactions by nonresidents are exempt from the tax).
[4]A syndicate comprising banks, life insurance companies, and securities firms underwrites about 40 percent of each 10-year issue. The remaining 10-year securities are issued via a competitive auction.
[5]Number of members of the Bund Issues Auction Group at end-2000.
[6]Settlement for domestic transactions. T, M, and C indicate trade date, market days, and calendar days, respectively.
[7]Settlement could be up to T+5.

of the three major advanced-economy regions—North America, Japan, and the European Union—reveals that European countries rely more heavily on the international markets for issuing debt securities than do Japan, Canada, or the United States. As discussed below, the reason

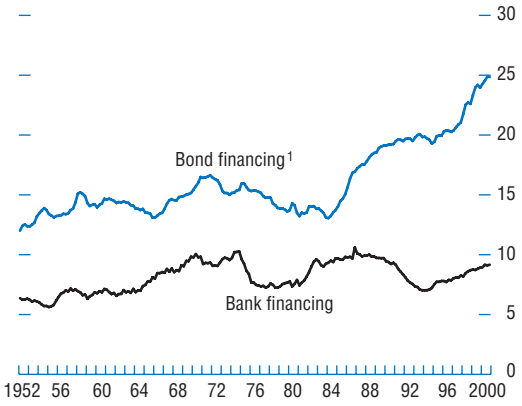
Table A4.3. Selected Major Economies: Private Debt Securities Issues

(In billions of U.S. dollars)

	Financial Institutions							Corporate Issuers						
	International[1]				Domestic[2]			International[1]				Domestic[2]		
	1997	1998	1999	2000	1998	1999	2000	1997	1998	1999	2000	1998	1999	2000
All countries	353.6	370.7	656.7	670.7	609.9	521.3	343.9	120.4	132.3	353.7	299.6	401.7	349.4	365.3
North America	101.6	144.6	186.6	181.5	478.6	419.7	365.6	66.6	71.9	158.6	99.2	202.8	166.5	174.2
Canada	4.5	5.5	9.9	–1.8	20.2	21.1	10.1	3.9	10.6	6.4	3.4	6.7	9.9	8.9
United States	97.1	139.1	176.7	183.3	458.4	398.6	355.5	62.7	61.3	152.2	95.8	196.1	156.6	165.3
Japan	25.2	13.7	12.2	0.9	–68.1	–27.6	–34.7	–28.5	–31.6	–8.5	–28.4	103.5	50.2	30.2
EU-15	178.3	187.2	431.6	441.8	118.2	121.3	–2.4	29.1	64.4	185.0	208.6	62.5	111.5	124.6
Austria	5.1	2.9	8.7	16.3	–0.8	2.3	4.0	–0.4	–0.4	–0.4	–0.6	0.4	0.0	–0.2
Belgium	4.9	1.4	15.9	16.4	–1.0	–2.0	0.2	0.0	0.7	0.5	–0.3	–1.0	4.7	2.2
Denmark	1.5	1.1	2.3	1.0	11.5	6.0	12.3	–0.7	0.4	0.2	0.8	1.2	–0.3	–0.3
Finland	–1.0	–0.5	2.3	0.9	3.9	–0.4	–4.0	1.4	–0.2	0.2	0.9	0.6	1.7	0.4
France	14.0	13.7	32.4	26.9	–33.9	14.2	–18.3	4.2	12.0	35.9	38.6	8.4	31.9	28.0
Germany	74.8	85.4	197.8	171.1	103.3	48.8	14.0	6.4	6.1	32.3	61.0	0.9	7.1	11.5
Greece	0.2	0.0	1.1	1.1	0.2	–0.5	–0.2	–0.4	0.0	0.0	0.3	0.0	0.0	0.0
Ireland	1.8	3.2	5.5	7.3	0.0	0.0	0.0	0.4	1.2	0.7	0.6	1.3	2.0	3.2
Italy	4.4	5.4	23.2	37.1	–8.2	–13.3	3.8	1.0	4.1	28.6	14.2	0.6	5.7	12.1
Luxembourg	3.0	2.7	1.3	3.3	n.a.	n.a.	n.a.	0.1	0.3	0.3	–0.2	n.a.	n.a.	n.a.
Netherlands	30.1	34.1	48.3	40.6	2.6	8.5	0.4	0.6	6.2	7.1	40.1	2.7	9.8	15.1
Portugal	0.5	0.8	5.7	8.7	2.9	2.9	2.5	0.0	0.0	2.5	0.1	1.5	1.3	0.3
Spain	5.1	15.2	22.8	24.9	1.3	9.0	0.0	1.1	2.0	16.6	10.3	3.7	8.3	3.7
Sweden	2.3	0.3	3.3	3.8	–0.2	–2.1	–13.0	0.1	2.1	6.0	5.0	3.8	2.7	1.7
United Kingdom	31.6	21.5	61.0	82.4	36.6	47.9	–4.1	15.3	29.9	54.5	37.8	38.4	36.6	46.9
Other countries	48.5	25.2	26.3	46.5	81.2	7.9	15.4	53.2	27.6	18.6	20.2	32.9	21.2	36.3

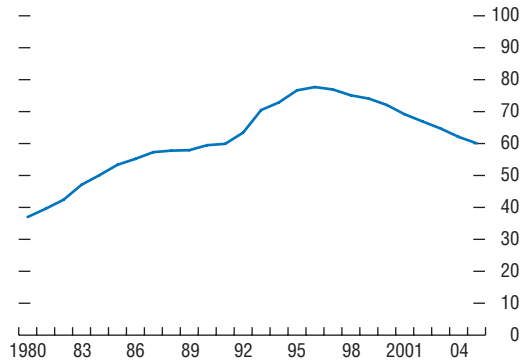
Source: BIS, *International Banking and Financial Market Developments* (various issues).
[1]Net issues.
[2]Changes in stocks. The changes in stocks exclude exchange rate valuation effects.

Figure A4.1. United States: Corporate Sector Financing
(As a percentage of GDP)



Source: Flow of Funds, Board of Governors of the U.S. Federal Reserve.
[1]Bond financing includes commercial paper.

Figure A4.2. Euro-Area Government Debt Outstanding
(As a percentage of GDP)



Source: IMF. *World Economic Outlook* database.

for this is simply that private sector issuers in Europe, and especially European financial institutions, are utilizing the infrastructure in London for issuing and trading "international" debt securities as well as exploiting the broad investor base built around this market.

Overview of the Major Government Securities Markets

Previous IMF reports have examined the evolution of the sizes and structures of the major government securities markets.[1] The main thrust of this analysis is that growing volumes of government bonds over the past two to three decades spurred the development of infrastructure for issuing and trading government debt securities in the major countries. As a result, in the 1990s the major economies had more or less converged in their thinking about "best practices" for designing government securities markets. Accordingly, the major government securities markets presently have a number of key characteristics in common, and these characteristics have underpinned the various roles that government securities and government securities markets have come to play in modern finance. These key characteristics and roles are discussed in Chapter IV.

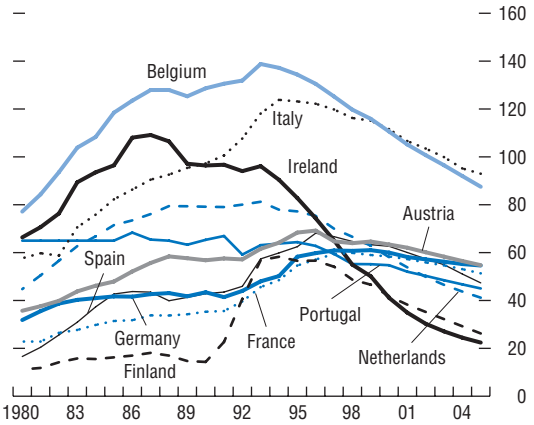
As a result of this development of government securities markets in advanced economies over the past 20–30 years, several of the major advanced economies have deep, liquid, and sophisticated government debt securities markets. Most of these markets are large compared to their economies, other domestic stock and bond markets, and international markets for debt securities denominated in their respective currencies. Secondary-market turnover of government securities also generally far surpasses turnover in

[1]The size, structure, and functions of government securities markets in the major advanced countries are covered in detail in IMF (1994) and in Schinasi and Smith (1998). The evolution and development of the U.S. treasury securities market and its role in national and international finance is the focus of Schinasi, Kramer, and Smith (2001).

other securities markets (Table A4.2). For example, in the U.S. treasury market, daily turnover currently averages about $200 billion, a magnitude that is about two-thirds *global* turnover in spot currency transactions involving the dollar, and five times greater than daily turnover on the New York Stock Exchange. Many other major economies have high turnover ratios and liquid government securities markets, although the U.S. treasury market appears to be the most liquid.

Government securities markets also tend to be the most internationalized markets. At one end of the spectrum, U.S. treasury securities are held by most central banks and are widely used by private investors in the United States and in other countries as investments and to support other financial activities. As a result, non-U.S.-based investors own about $1.2 trillion in U.S. treasury debt, which is roughly one-third of the "publicly held" debt. (The publicly held debt is roughly equal to total federal debt less non-marketable series issued directly to and held by various U.S. government accounts.) Foreign involvement in euro-area government securities markets and in Australia and Canada is also high in comparison to other securities markets in these countries, but generally less than is the case for the U.S. treasury market. Toward the other end of the spectrum is the Japanese government bond (JGB) market, where foreign investors represent only about 6 percent of the market.

Figure A4.3. Government Debt Outstanding in Selected Euro-Area Countries
(Gross debt, as a percentage of GDP)



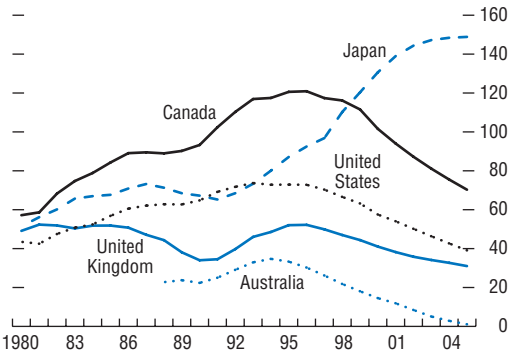
Source: IMF, *World Economic Outlook* database.

Recent Issuance Trends in Fixed-Income Markets

Rapid Growth of Private Securities Markets

It is well known that private fixed-income securities markets have a longer history and are most developed in the United States compared to other major countries. Private debt securities markets have in fact been the most important form of corporate finance for U.S. firms in recent years, presently accounting for an outstanding volume of finance equivalent to 25 percent of GDP—almost three times the magnitude of

Figure A4.4. Government Debt Outstanding in Selected Countries
(Gross debt, as a percentage of GDP)



Source: IMF, *World Economic Outlook* database.

Table A4.4. Selected Major Economies: Public Sector Debt Outstanding

(In percent of GDP)

	Gross Debt[1]							
	Average 1995–98	1999	2000	2001	2002	2003	2004	2005
Australia	27.89	18.06	14.53	11.89	8.43	5.09	2.86	1.09
Canada	118.76	111.55	101.57	94.02	87.22	81.11	75.51	70.28
France	57.73	58.96	58.39	57.85	55.90	54.68	52.90	50.94
Germany	59.93	61.03	60.11	58.60	57.70	56.89	55.91	55.31
Italy	120.50	114.45	110.25	105.28	102.29	98.97	94.87	92.74
Japan	96.66	120.35	130.65	138.99	144.36	147.22	148.40	148.85
United States	70.66	63.20	57.51	54.05	50.17	46.35	42.67	39.10
United Kingdom	50.29	44.38	41.03	38.21	35.80	34.14	32.68	31.01
	Net Debt[2]							
	Average 1995–98	1999	2000	2001	2002	2003	2004	2005
Australia	27.41	17.61	14.11	11.49	8.06	4.74	2.53	0.77
Canada	85.38	75.26	66.86	60.84	55.53	50.82	46.57	42.63
France	48.48	49.23	48.68	48.47	47.45	45.77	43.43	40.71
Germany	51.19	52.33	51.41	49.90	49.00	48.19	47.21	46.61
Italy	114.10	108.38	104.39	99.69	96.86	93.72	89.84	87.81
Japan	18.91	35.99	43.55	49.49	53.91	57.00	58.70	59.28
United States	57.34	48.77	44.04	41.09	37.89	34.72	31.65	28.67
United Kingdom	42.70	39.49	36.25	33.66	31.48	30.03	28.78	27.31

Source: IMF, *World Economic Outlook* database.
[1]Gross central government debt as a percent of GDP.
[2]Net central government debt as a percent of GDP.

bank financing (Table A4.3 and Figure A4.1). Private debt securities markets have become increasingly important as a source of financing for firms located in Europe, although these markets are still considerably less important for corporate finance than is presently the case in the United States (see Table A4.3). Private debt securities markets also are presently a significant arena for raising funds by Japanese financial and nonfinancial firms. As is the case for European firms, however, this is several orders of magnitude less significant than for U.S. firms.

Reduced Issuance of Public Debt Securities in Most Major Economies

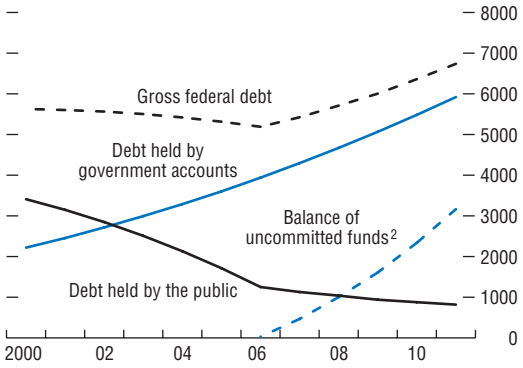
The recent rapid growth of private debt securities in the international markets and in many national markets stands in sharp contrast to recent developments in public debt issuance in a variety of countries (Table A4.4 and Figures A4.2–A4.4). With the notable exception of Japan, beginning in the mid-1990s, advanced economy governments have improved their fiscal accounts markedly and, as a result, government debt markets have by and large changed course in most advanced countries. This is particularly apparent when debt levels are measured as a percentage of GDP (see Figures A4.2–A4.4). But even in terms of the nominal fiscal balance, Australia, Canada, New Zealand, the United States, and more than half the EU–15 countries reported fiscal surpluses in 2000 (according to the *World Economic Outlook*'s definition of central government balance). As a result, governments in these countries have dramatically reduced new issues of debt securities and some have even initiated programs to repurchase some of their outstanding debt. In Australia, Sweden, and the United States, improvements in fiscal balances have been so large in nominal terms that it is possible, if not likely, that publicly held federal debt could disappear in the next 5–10 years in each of these countries.

The buying back of government debt has attracted the most attention for the United States

because of the international role of the U.S. dollar as well as U.S. treasury securities. In early 2000, the U.S. Treasury began buying back longer-term issues in secondary markets—the first buyback in 70 years. During 2000, the Treasury bought back $30 billion (par value) in publicly held debt and the Treasury has announced plans to buy back another $18 billion in debt during the first half of 2001. The combination of debt repurchases and reduced issuance is rapidly shrinking the stock of U.S. treasury securities (Figure A4.5). During the first three years of successive budget surpluses in the United States, 1998–2000, the publicly held treasury debt fell by $363 billion. Although U.S. federal government debt is presently about $5.6 trillion, almost half this amount is held in U.S. federal, state, and local government accounts (Figure A4.6), and another 21 percent is owned by the U.S. Federal Reserve Board and foreign official institutions. In other words, the "free float" of treasury securities is less than $2 trillion. Various official and private projections suggest that the free float of U.S. treasury securities could disappear within about five years.

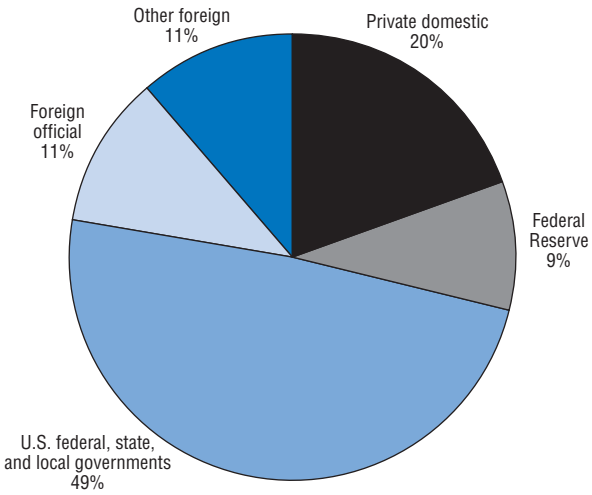
The situation in Japan is very different. Lingering weakness in the real economy and serious ongoing strains in the financial sector have helped cause the government debt (in net and gross terms) to rise rapidly in recent years. This trend is expected to deteriorate considerably before it improves (see Table A4.4). At end-2000, the volume of central government *net* debt in Japan stood at ¥223.1 trillion, or about 43.5 percent of GDP. With the fiscal balance expected to remain in deficit in the range of 5–10 percent of GDP over at least the next five years, and maybe much longer, the stock of Japanese government net debt is projected to rise by half in nominal terms and by about 16 percentage points as a share of GDP (to about 60 percent by 2006, according to the IMF's *World Economic Outlook* projections). More striking, of course, are the projections for gross government debt: the *gross* debt stood at 130 percent of GDP in 2000 and it is expected to reach 150 percent of GDP by 2005.

Figure A4.5. Projected U.S. Treasury Debt[1]
(By fiscal year, in billions of U.S. dollars)



Source: U.S. Congressional Budget Office.
[1]Debt projections assume that discretionary spending grows at the rate of inflation (the "baseline projection" of the Congressional Budget Office).
[2]The CBO's term for the surpluses remaining in each year after paying down publicly held debt available for redemption. Uncommitted funds accumulate from one year to the next.

Figure A4.6. Ownership of U.S. Treasury Securities
(As a percentage of total as of end-September 2000)



Source: United States, Department of the Treasury (2001).

Outlook for Major Government Bond Supplies

Despite recent sharp improvement in fiscal balances in most advanced economies other than Japan, there are, however, at least two main reasons why this trend could reverse course—that is, the shrinking new issuance of publicly held debt securities in various advanced economies may be just a temporary phenomenon. The first reason is that tax revenues may fall if global economic growth stalls for a protracted period. This risk is reinforced by tax reductions in several countries, including the United States, Canada, and some European countries. Nevertheless, the shrinking supply of government securities in many countries (e.g., Australia, Canada, United States, and various euro-area countries) is widely expected to continue despite reductions in taxes.

The second reason is that longer-term budget projections suggest that central government fiscal balances are likely in many countries eventually to reverse course and thus so would the path of publicly held central government debt. The reason for this is that, as the baby-boom generation moves into retirement, the cost to central governments of health and retirement benefits may outstrip growth in tax revenue.

References

Bank for International Settlements, 2001, *Quarterly Review: International Banking and Financial Market Developments* (Basel, June).

Fabozzi, Frank J., ed., 1998, *Perspectives on International Fixed Income Investing* (Frank J. Fabozzi Associates, July).

Inoue, Hirotaka, 1999, "The Structure of Government Securities Markets in G-10 Countries: Summary of Questionnaire Results," in *Market Liquidity: Research Findings and Selected Policy Implications* (Basel: Bank for International Settlements).

Schinasi, Garry J., Charles F. Kramer, and R. Todd Smith, 2001, "Financial Implications of the Shrinking Supply of U.S. Treasury Securities," IMF Working Paper 01/61 (Washington: International Monetary Fund).

Schinasi, Garry J., and R. Todd Smith, 1998, "Fixed-Income Markets in the United States, Europe, and Japan: Some Lessons for Emerging Markets," IMF Working Paper 98/173 (Washington: International Monetary Fund).

United States, Department of the Treasury, 2001, *Treasury Bulletin* (Washington, March).

ANNEX V CONCLUDING REMARKS BY THE CHAIRMAN

At the conclusion of the Executive Board's discussion of the International Capital Markets *report (Executive Board Meeting 01/95; June 29, 2001), the Chairman made the following concluding remarks.*

Executive Directors held an extensive discussion of developments in the mature and emerging international capital markets. During the discussion Directors raised a number of issues, including important policy issues, on which we will need to reflect, including on how to organize the Fund's future work on international capital markets through the new department. Directors will have further opportunities in the coming months to come back to these issues. In this summary, I will focus on Directors' comments on international capital markets that flowed from the analysis in the staff papers before us.

Directors observed that the events of the past year have been dominated by periods of increased asset price volatility, slowing growth in the global economy, and crises in key emerging markets. Adjustments in capital markets have been most clearly visible in a repricing of risks in a wide range of equity and high-yield bond markets. Directors viewed the high correlation of asset price movements across countries as reflecting the globalization of finance and the increasing tendency of global investors to invest on the basis of industrial sectors or credit ratings, rather than geographic location.

Developments and Risks

Directors noted that slowing global economic growth had been both anticipated by, and reflected in, a sharp fall in global equity markets—particularly in technology stocks—and a dramatic rise in high-yield credit spreads, although financial markets had later recovered significantly following monetary policy easing in the major countries. They observed the remarkable degree of co-movement in asset prices among the major advanced countries, particularly between European and U.S. stock markets. The key exception was Japan, which seemed somewhat de-linked from global markets, reflecting the more important role of domestic than foreign investors and the remaining weakness in the corporate and financial sectors.

Directors discussed the risks facing international financial markets in the period ahead. They considered that, although significant declines in equity markets had already taken place, thus correcting a portion of the imbalances of recent years, a key risk is that market sentiment may still remain vulnerable to U.S. economic developments, and to concerns about the ability of monetary policy to offset economic weakness and about the sustainability of high productivity growth. In addition, if the sustainability of the current high U.S. household, corporate, and external imbalances were called into question, a significant and potentially disorderly rebalancing of domestic and international portfolios might occur, with possibly significant effects on key exchange rate relationships. Directors took note of the considerable uncertainty that prevails at the present juncture, and of the fact that an assessment of risks is complicated by recent structural developments, including the increasing concentration in the major financial systems, the growing reliance on over-the-counter (OTC) derivatives, and structural changes in the major government securities markets. They observed that structural changes appear to have reduced transparency about the distribution of financial risks in the international financial system, and that greater disclosure could help to enhance market discipline and official oversight. Directors noted, nonetheless, that U.S. banks appear to be more robust than in previous down-

turns and sufficiently well capitalized to weather a possible credit deterioration.

Directors also reviewed risks in Europe and Japan. For Europe, while banks remain strong, they cautioned that capital markets might be more vulnerable to spillovers and contagion from volatility in U.S. capital markets as well as to common shocks that appeared to affect these large economies simultaneously. Directors also expressed concern that loan provisioning in the Japanese banking sector may be inadequate and that it also has significant exposures to bond and equity prices in the Japanese market. At the same time, the Japanese banking sector seems vulnerable to continued poor domestic macroeconomic performance, large unanticipated external economic and financial shocks, and volatility in Japanese financial markets. In this context, Directors welcomed recent steps by the Japanese authorities to strengthen the framework for resolving the corporate debt overhang and persisting financial sector fragilities.

While noting that developments in national economies remain the key drivers of capital flows to emerging markets, Directors considered that in the past year emerging markets' access to international capital markets has been strongly affected both by events in the mature markets and by crises in emerging markets. As a result, many emerging markets have found it difficult to maintain continuous market access. While in earlier periods, the emergence of exchange rate and banking crises in emerging markets and the ensuing contagion has led to an abrupt loss of markets access, the past year saw periods when many emerging markets lost market access mainly because of developments in mature markets, such as the collapse of equity prices on the Nasdaq.

Directors agreed that a shift in the investor base for emerging market instruments has increased the vulnerability of capital-importing emerging market countries to shifts in investor sentiment or investment strategies. They noted that because holdings of emerging markets assets by "dedicated" investors remain limited, "crossover" investors—who can place a small fraction of their assets in emerging market instruments, with large effects on these markets—have come to dominate the current investor base. Directors emphasized that these investors are likely to reduce or eliminate their holdings of emerging market assets if the outlook for emerging markets deteriorates, if more attractive investment opportunities in mature markets arise, or if managers become more risk averse. The result can be an abrupt loss of market access for emerging market borrowers that is not necessarily related to changes in the fundamentals of emerging markets themselves. Although Directors noted that emerging market borrowers have shown welcome adaptability—particularly through syndicated loans, prefunding of obligations, and the use of alternate currencies—to the "on-off" nature of market access, such adaptations can sharply increase the cost of accessing international financial markets. Directors acknowledged that it is difficult to assess whether this shift will be long lasting. In any event, they stressed that emerging market economies should not be deterred from pursuing fundamentally sound and transparent policies. Indeed, this could be helpful, over time, in restoring the role of dedicated investors in providing financing for emerging markets and hence reducing volatility.

Against the background of recent data pointing to a further weakening of global economic prospects, Directors reviewed the outlook for capital flows to emerging markets. They acknowledged that, while these flows are influenced by developments in mature markets and prospects for the global economy, the domestic policy environment in capital-importing countries can also be an important factor in the distribution of capital flows. Directors expected that the U.S. economy would avoid a sharp recession and likely show strengthening of growth later this year. They considered that, with lower interest rates and a relatively soft landing, this year could see increased gross issuance of international bonds, equities, and syndicated loans, and a recovery of net flows to emerging markets—particularly non-oil exporting emerging markets—in line with the global economic re-

covery. Nevertheless, Directors also recognized that if the global slowdown in economic growth were sharper than expected, a marked slowdown in capital flows to emerging markets, including in foreign direct investment (FDI), could be the consequence. Given that FDI flows remain the single largest source of capital in all regions, the staff should monitor them closely and assess the conditions and policies that would foster greater stability in these flows over time.

Directors agreed that developments in Argentina and Turkey are being closely watched by the markets and could have an important effect on market access for many emerging markets. They noted that external debt swaps can play an important role in smoothing out external financing, as evidenced by Argentina's recent debt exchange. Directors argued that successful implementation of the adjustment programs for both countries could improve the terms and conditions of market access, not only for Argentina and Turkey but also for other emerging markets as well. At the same time, it was recognized that failure to implement these programs could result in a sustained loss of market access for these countries. The staff will continue to analyze further the potential for adverse spillover effects to other countries in the region and to emerging markets in general, and the channels through which these spillovers might occur.

Financial Market Implications of the Changing Structure of Major Government Securities Markets

Directors agreed that the significant structural changes under way in the major government securities markets carry implications for financial markets and should be kept under review. They noted that the shrinking supply of U.S. treasury securities has already resulted in significant changes in U.S. and international financial markets, as market participants have increasingly relied on other instruments, including swaps, in some roles. However, Directors noted that private financial instruments may not easily, or fully, substitute for treasury securities as domestic and international safe havens. It remains to be seen whether, over time, the shrinking supply of the traditional international safe haven assets will affect the ability of markets to adjust to economic and financial shocks.

Directors observed that some harmonization of regulation and convergence of issuance and trading practices had already occurred in the euro-area government securities markets. Over time, greater convergence and integration can be expected, which will likely promote the emergence of a uniform euro-area benchmark yield curve and an increase in euro-area market liquidity, even if some segmentation remains. At the same time, Directors noted that there has been significant integration and rapid growth of the region's corporate bond market.

Directors generally expressed concern about the situation in Japan, where lingering economic uncertainty and financial imbalances have impaired corporate financial activity and fuelled rising government debt supply. The combination of a low interest-rate environment and technically driven changes in Japanese government bond (JGB) supply and demand, along with shortcomings in the market infrastructure that have adversely affected market liquidity, have resulted in JGB market volatility while spreads in the corporate bond market have been significantly compressed. This situation presents important risk management challenges for financial institutions, and also highlights the challenges to the Japanese authorities of managing the costs and risks of a large and growing supply of government debt. Directors noted recent steps to improve the JGB market infrastructure in order to enhance the efficiency and attractiveness of the JGB market to domestic and international investors, and urged further efforts along these lines.

Financial Sector Consolidation in Emerging Markets

Directors noted that financial sector consolidation, which has been evident in mature mar-

kets, is now under way in many emerging markets, although there have been important regional differences in the extent and pace of the consolidation. They saw this process of consolidation as one facet of the continuing globalization of international financial activities, and akin to a "quiet" opening of capital accounts. Directors noted that, while migration of financial activities to low-cost financial centers is profoundly altering the financial systems of many emerging markets, it also links them to international financial markets.

Directors pointed out that there are a number of aspects of the consolidation process that differ from the experience of mature markets, including the role of cross-border mergers and acquisitions, which have been rare in mature markets. Furthermore, consolidation in emerging markets has frequently been a vehicle for restructuring the financial system following major financial crises, whereas, in mature markets, consolidation has more often been designed to reduce excess capacity. It was also noted that the authorities have played a major role in fostering the consolidation process in emerging markets, whereas market forces have been the predominant force for consolidation in mature markets.

Directors observed that the process of financial sector consolidation in emerging markets raises a number of complex policy issues, including how to create sufficient market discipline and official supervision for institutions that are "too big to fail." They emphasized that the experience for mature markets indicated that dealing with these problems will involve strengthening supervisory capacity to monitor the activities of large complex financial institutions, and establishing clear entry and exit rules and prompt corrective action for distressed institutions.

Directors noted that the emergence of financial conglomerates that provide a wide range of products and services complicates prudential supervision and regulation. The presence of financial conglomerates was seen as raising the issue of how the regulatory agencies overseeing banks, securities, and insurance companies should be structured. Directors considered that this would depend on the specific circumstances of each country or region. A few Directors felt that the transparency of highly leveraged institutions should be improved.

While e-finance is still at an early stage of development in most emerging markets, it is witnessing steady growth in the application of the Internet to the production and delivery of financial services, underscoring the need for improved liquidity management at the level of financial institutions, and better supervision.

World Economic and Financial Surveys

This series (ISSN 0258-7440) contains biannual, annual, and periodic studies covering monetary and financial issues of importance to the global economy. The core elements of the series are the *World Economic Outlook* report, usually published in May and October, and the annual report on *International Capital Markets*. Other studies assess international trade policy, private market and official financing for developing countries, exchange and payments systems, export credit policies, and issues discussed in the *World Economic Outlook*. Please consult the IMF *Publications Catalog* for a complete listing of currently available World Economic and Financial Surveys.

World Economic Outlook: A Survey by the Staff of the International Monetary Fund

The *World Economic Outlook,* published twice a year in English, French, Spanish, and Arabic, presents IMF staff economists' analyses of global economic developments during the near and medium term. Chapters give an overview of the world economy; consider issues affecting industrial countries, developing countries, and economies in transition to the market; and address topics of pressing current interest.

ISSN 0256-6877.
$42.00 (academic rate: $35.00); paper.
2001. (May). ISBN 1-58906-032-6. **Stock #WEO EA 0012001.**
2000. (Oct.). ISBN 1-55775-975-8. **Stock #WEO EA 0022000.**
2000. (May). ISBN 1-55775-936-7. **Stock #WEO EA 012000.**
1999. (Oct.). ISBN 1-55775-839-5. **Stock #WEO EA 299.**
1999. (May). ISBN 1-55775-809-3. **Stock #WEO-199.**

Official Financing for Developing Countries

by a staff team in the IMF's Policy Development and Review Department led by Anthony R. Boote and Doris C. Ross

This study provides information on official financing for developing countries, with the focus on low-income countries. It updates the 1995 edition and reviews developments in direct financing by official and multilateral sources.

$25.00 (academic rate: $20.00); paper.
2001. ISBN 1-58906-038-5. **Stock #WEO EA 0132001.**
1998. ISBN 1-55775-702-X. **Stock #WEO-1397.**
1995. ISBN 1-55775-527-2. **Stock #WEO-1395.**

Exchange Rate Arrangements and Currency Convertibility: Developments and Issues

by a staff team led by R. Barry Johnston

A principle force driving the growth in international trade and investment has been the liberalization of financial transactions, including the liberalization of trade and exchange controls. This study reviews the developments and issues in the exchange arrangements and currency convertibility of IMF members.

$20.00 (academic rate: $12.00); paper.
1999. ISBN 1-55775-795-X. **Stock #WEO EA 0191999.**

World Economic Outlook Supporting Studies

by the IMF's Research Department

These studies, supporting analyses and scenarios of the *World Economic Outlook*, provide a detailed examination of theory and evidence on major issues currently affecting the global economy.

$25.00 (academic rate: $20.00); paper.
2000. ISBN 1-55775-893-X. **Stock #WEO EA 0032000.**

International Capital Markets: Developments, Prospects, and Key Policy Issues

by a staff team led by Donald J. Mathieson and Garry J. Schinasi

This year's *International Capital Markets* report assesses recent developments in mature and emerging financial markets and analyzes key systemic issues affecting global financial markets. The report discusses the main risks in the period ahead; identifies sources of, and possible measures to avoid, instability in OTC derivatives markets; reviews initiatives to "involve"the private sector in preventing and resolving crises, and discusses the role of foreign-owned banks in emerging markets.

$42.00 (academic rate: $35.00); paper
2001. ISBN 1-58906-056-3. **Stock #WEO EA 0062001.**
2000. (Sep.). ISBN 1-55775-949-9. **Stock #WEO EA 0062000**
1999. (Sep.). ISBN 1-55775-852-2. **Stock #WEO EA 699.**
1998. (Sep.). ISBN 1-55775-770-4. **Stock #WEO-698**

Toward a Framework for Financial Stability

by a staff team led by David Folkerts-Landau and Carl-Johan Lindgren

This study outlines the broad principles and characteristics of stable and sound financial systems, to facilitate IMF surveillance over banking sector issues of macroeconomic significance and to contribute to the general international effort to reduce the likelihood and diminish the intensity of future financial sector crises.

$25.00 (academic rate: $20.00); paper.
1998. ISBN 1-55775-706-2. **Stock #WEO-016.**

Trade Liberalization in IMF-Supported Programs

by a staff team led by Robert Sharer

This study assesses trade liberalization in programs supported by the IMF by reviewing multiyear arrangements in the 1990s and six detailed case studies. It also discusses the main economic factors affecting trade policy targets.

$25.00 (academic rate: $20.00); paper.
1998. ISBN 1-55775-707-0. **Stock #WEO-1897.**

Private Market Financing for Developing Countries

by a staff team from the IMF's Policy Development and Review Department led by Steven Dunaway

This study surveys recent trends in flows to developing countries through banking and securities markets. It also analyzes the institutional and regulatory framework for developing country finance; institutional investor behavior and pricing of developing country stocks; and progress in commercial bank debt restructuring in low-income countries.

$20.00 (academic rate: $12.00); paper.
1995. ISBN 1-55775-526-4. **Stock #WEO-1595.**

Available by series subscription or single title (including back issues); academic rate available only to full-time university faculty and students. For earlier editions please inquire about prices.

The IMF *Catalog of Publications* is available on-line at the Internet address listed below.

Please send orders and inquiries to:
International Monetary Fund, Publication Services, 700 19th Street, N.W.
Washington, D.C. 20431, U.S.A.
Tel.: (202) 623-7430 Telefax: (202) 623-7201
E-mail: publications@imf.org
Internet: http://www.imf.org