VII. The financial sector

Highlights

Over the period under review, financial systems in most industrialised countries came under additional pressure; expectations of an early economic recovery proved premature and equity prices fell further. However, financial institutions generally appeared to be weathering the economic downturn successfully, and financial sector pressures did not impede the supply of credit in most countries. Admittedly, the Japanese financial system continued to face serious difficulties. In addition, the profitability of financial institutions in Germany came under increased pressure, owing to chronic structural weaknesses as well as cyclical influences. Elsewhere, bank profitability typically held up better, reflecting in part the benefits of banks' earlier efforts to restructure their cost bases. In comparison to the previous cyclical slowdown, losses due to credit deterioration had only a limited effect on profitability and capital positions remained healthy. Insurance companies generally fared less well, owing to substantial losses on equity and bond holdings.

The noteworthy resilience of the banking sector, which contrasted favourably with the substantial deterioration in the non-financial sector, reflected both cyclical and structural factors. Atypical aspects of the economic slowdown, including a very accommodative stance of monetary policy, continued growth in household expenditure and the absence of a property price bust, contained the rise in loan losses relative to past cycles and boosted income from lending to households. Chief among the structural developments that cushioned the effects of the downturn was the increased use of traditional tradable debt instruments and loan syndications to improve the dispersion of credit risk throughout the financial system. Moreover, the development of new credit risk transfer mechanisms has enhanced institutions' ability to manage risk exposures. In addition, banking sector capital bases were stronger at the outset of the current slowdown than in the past, as a result of the long duration of the preceding expansion and tighter regulatory standards.

Looking ahead, the very reasons for the resilience so far point to the key sources of potential vulnerability. A prolonged period of economic weakness, although unlikely, would further test the loss absorption capacity of financial institutions and markets were it to materialise. Further falls in equity prices could undermine the solvency of insurance companies and pension funds, while a decline in property prices would hurt both the household and commercial real estate sectors, putting further stress on lenders.

The recent resilience can be viewed as an indication that financial systems with established alternative channels of funding, through both market-traded

instruments and balance sheet intermediation, may offer a more flexible response to adverse economic developments. Multichannel systems, however, pose new challenges for prudential supervisors in the form of greater complexity of individual institutions and intensified interrelationships between institutions and markets.

The economy and the performance of financial institutions

The weak economy put pressure on non-financial businesses ...

The sharp slowdown and hesitant pace of recovery in global economic activity put substantial pressure on the balance sheets of non-financial businesses (see also Chapters II and VI). Defaults on corporate bonds, as well as losses given default, surged in recent years, with defaults reaching or surpassing their peaks in the early 1990s (Graph VII.1). Looking forward, market-based measures of non-financial sector risk in several countries, which rose steeply over the past few years, remain elevated, suggesting that market participants expect a continuation of the poor credit environment in the near future (Graph VII.2).

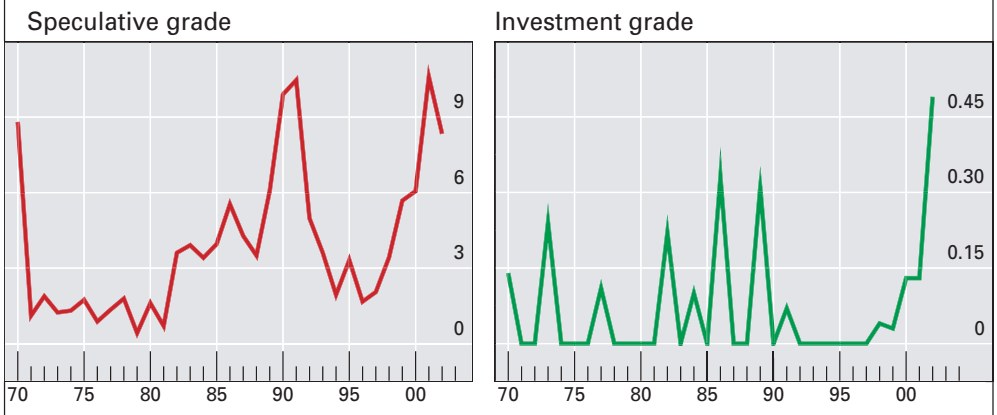
... but financial institutions fared better ...

In contrast to the substantial difficulties faced by non-financial firms, in most countries the financial sector remained relatively healthy. Bank profitability declined somewhat, but generally remained adequate given the poor economic backdrop. By contrast, insurance companies showed more signs of stress, with portfolio losses imposing severe strains in some cases. Nonetheless, market-based measures of risk for both banks and insurance companies remained at low levels relative to those for non-financial firms, although default risk in the insurance sector rose last year. The low level of the measures for Japanese financial institutions may reflect expectations of government action, given the well known difficulties facing these institutions.

... also relative to past cycles

The recent resilience of banks contrasts favourably with their performance in past downturns, during which deteriorating asset quality had

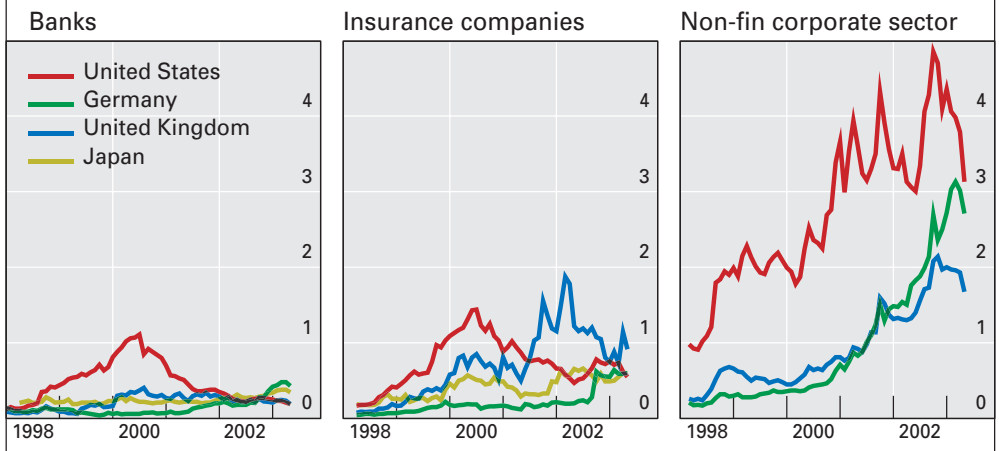
Global one-year default rates[1]



[1] Number of bond issuers that defaulted as a percentage of the number of issuers that could have defaulted in one year.

Source: Moody's Investors Service. Graph VII.1

Market-based measures of default risk[1]



[1] Expected probability, in percentages, that a company will default within one year; median for companies in each sector/country.

Source: KMV. Graph VII.2

sometimes caused widespread difficulties. In some cases, prominent financial institutions had failed; and, even when there had been no significant bank failures, the resulting adjustments to lending and investment behaviour had at times weighed on the economic outlook. For example, financial sector headwinds had dampened economic activity in the United States, the United Kingdom and Australia in the early 1990s.

Commercial banks

Bank performance varied ...

While banks held up well overall during the period under review, there were significant differences in performance across countries and lines of business (Table VII.1). The serious difficulties at Japanese banks continued, despite

Profitability of major banks[1]

As a percentage of total average assets

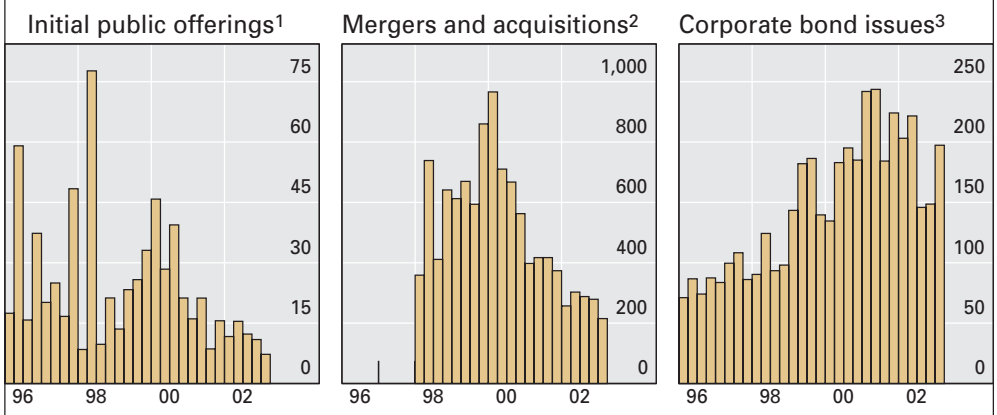
	Pre-tax profits			Provisioning expenses			Net interest margin			Operating costs		
	2000	2001	2002	2000	2001	2002	2000	2001	2002	2000	2001	2002
United States (10)	1.86	1.49	1.66	0.56	0.71	0.72	3.07	3.10	3.11	4.45	4.06	3.46
Japan[2] (12)	0.13	–0.93	0.04	0.81	1.36	0.28	1.08	1.14	0.81	1.14	1.20	0.82
Germany (4)	0.53	0.14	0.05	0.17	0.24	0.39	0.83	0.90	0.80	1.62	1.62	1.50
United Kingdom (4)	1.65	1.27	1.11	0.29	0.31	0.36	2.36	2.07	2.02	2.68	2.48	2.40
France (4)	0.85	0.74	0.58	0.17	0.22	0.20	0.93	0.94	1.03	1.94	1.87	1.81
Italy (6)	1.15	0.81	0.48	0.44	0.55	0.67	2.06	2.04	2.16	2.37	2.39	2.61
Canada (6)	1.26	0.92	0.61	0.29	0.41	0.59	1.89	1.95	2.06	2.76	2.84	2.76
Spain (4)	1.33	1.20	0.93	0.35	0.44	0.49	2.65	2.86	2.66	2.63	2.60	2.37
Australia (4)	1.85	1.47	1.49	0.20	0.27	0.26	2.42	2.22	2.16	2.39	2.15	2.29
Switzerland (2)	0.96	0.42	0.08	0.04	0.14	0.21	0.73	0.68	0.84	2.87	2.91	2.47
Sweden (4)	1.16	0.82	0.70	0.06	0.10	0.09	1.60	1.49	1.48	1.72	1.51	1.44

[1] The figures in parentheses indicate the number of banks included. For Japan, the number changed from 13 in 2002 after a merger. [2] Fiscal years; for 2002, September interim data.

Source: Fitch Ratings. Table VII.1

Indicators of investment banking activity

In billions of US dollars



[1] Germany, Japan, the United Kingdom and the United States. [2] Global value, announced excluding terminated transactions. [3] Global value, announced or completed international issues of bonds and euronotes.

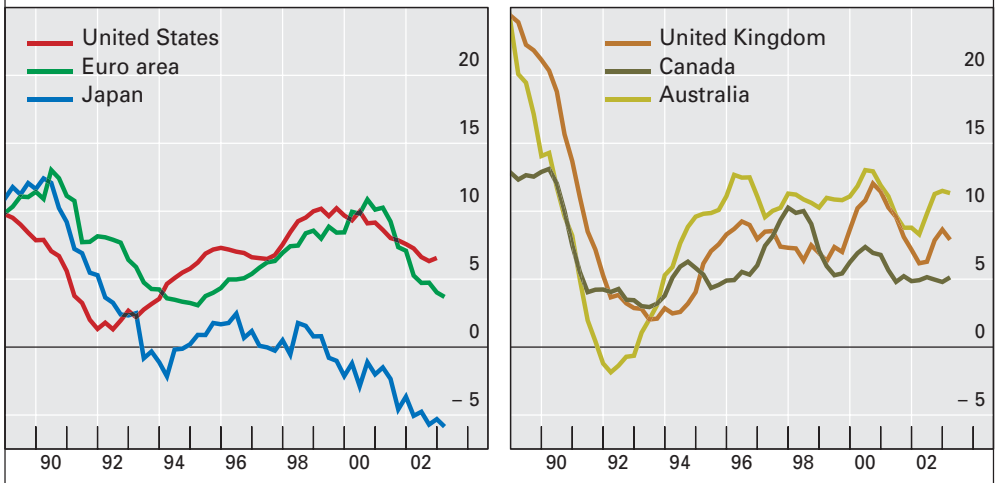
Sources: Bloomberg; BIS. Graph VII.3

considerable efforts to write off bad loans and issue new capital. In Germany, a relatively weak economy put greater pressure on commercial banks. Moreover, structural pressures on the profitability of retail banking meant that such operations did not provide an offset as was the case in some other countries. Larger wholesale institutions everywhere faced reduced income from capital market activity. Low stock prices, weak investment spending and efforts by some non-financial firms to strengthen their balance sheets slowed the pace of mergers, acquisitions and initial public offerings (Graph VII.3). On the upside, household borrowing remained relatively strong in many countries, bolstering overall growth in credit and the profits of household lenders (Graph VII.4). In addition, ongoing efforts by banks to increase efficiency and reduce costs helped to support income.

... across countries ...

... and across lines of business

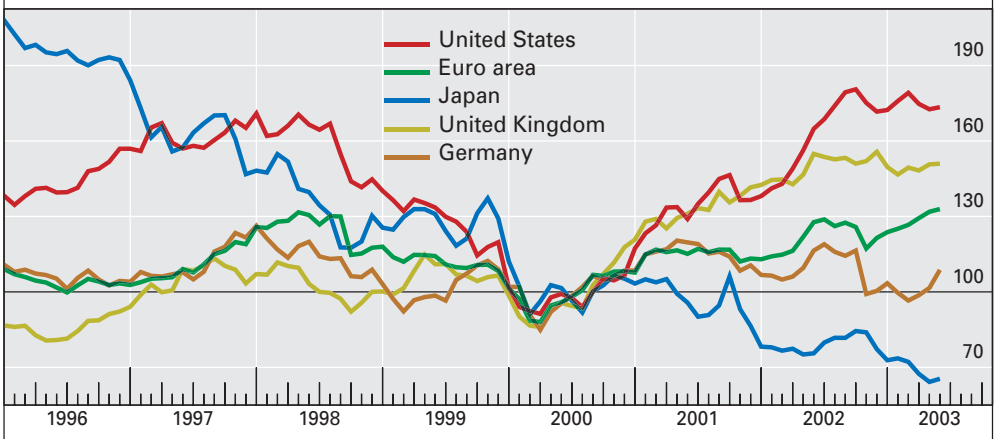
Credit growth[1]



[1] Annual percentage change in private domestic credit.

Sources: IMF; national data. Graph VII.4

Relative bank equity prices[1]



[1] Ratio to broad equity index; 2000 = 100.

Sources: Datastream; national data. Graph VII.5

US banks performed well ...

In the United States, commercial banks posted very strong results despite the difficult environment, boosting their stock prices relative to the broader market (Graph VII.5). With the US economy expanding at a somewhat faster pace than those of Europe or Japan, loan losses changed little from 2001, and broad measures of loan quality actually improved slightly (Graph VII.6). Robust household spending on consumer goods, notably automobiles, sustained consumer lending, and the continued strength in residential housing supported mortgage growth. The profitability of mortgage lending was also strengthened by fee income from a boom in mortgage refinancing activity. A low-yield environment combined with heightened concerns about risk reinforced bank deposit inflows, keeping funding costs low and supporting net interest margins. Finally, non-interest expenses as a share of assets fell substantially last year. This probably reflected efforts to trim costs, although the reduction was also due in part to a change in the accounting for goodwill.

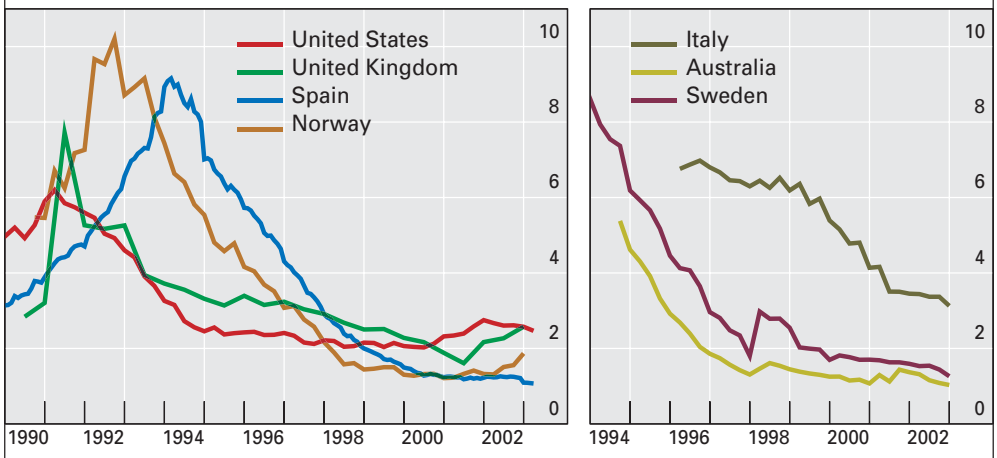
... as did banks in much of Europe

European banks generally performed less well than their US counterparts, but interest and non-interest income remained fairly strong and provisions for loan losses increased only modestly. Well established domestic retail and corporate clienteles provided low-cost funding and supported banks' non-interest fee income. Bank profits were boosted in some cases by progress made in reducing costs through investments in technology, restructuring and rationalisation of operations in the wake of consolidation during the latter part of the 1990s. Repricing and restructuring of product portfolios allowed many banks to sustain growth in revenues relative to costs, an effort aided by the revenue gains from offering a range of new products to households.

German banks faced larger challenges

The main exception to this picture was the German banking sector, where a confluence of cyclical and institutional factors brought to the fore long identified structural problems. German banks were hit by cyclical factors because of the greater severity of the slowdown in their home market. In addition, chronically low margins, a result of a fragmented banking system and heavy competition from a number of state-sponsored regional institutions, provided an insufficient offset to loan losses, putting at risk the capital

Non-performing loan ratios[1]



[1] As a percentage of total loans; definitions and coverage differ across countries.

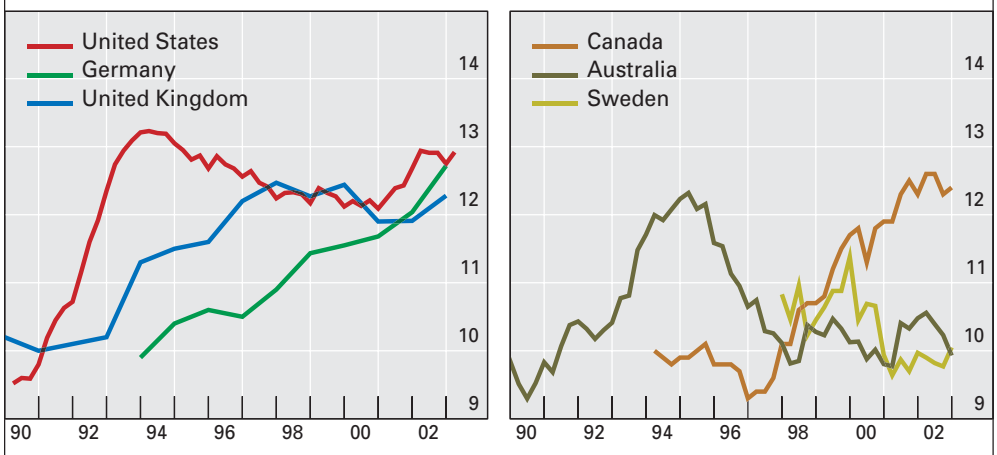
Source: National data. Graph VII.6

cushions accumulated in the 1990s. In the current environment some banks may find it difficult to generate the revenues that would be needed to cope with a significant further decline in asset quality. However, the German banking sector generally remains adequately capitalised (Graph VII.7). Owing in part to pressures on bank profits and also to efforts to price such loans appropriately for risk, German banks have reportedly increased margins on loans to small and medium-sized businesses – with potentially adverse effects on such firms. Looking forward, the expected ending of explicit government guarantees to regional and savings banks in 2005 should help ease the pressures on German banks' margins over the longer term.

Japanese banks continued to struggle

Banking conditions in Japan remained difficult, as weak economic activity and further declines in prices put additional strains on banks. Pressured by new regulatory rules on the valuation of loans to troubled firms, Japanese banks moved to deal more aggressively with their serious non-performing loan problems. In fiscal 2002 the largest Japanese banks suffered over ¥3 trillion

Bank capital ratios[1]



[1] Total capital as a percentage of risk-weighted assets.

Source: National data. Graph VII.7

of losses in their equity portfolios and made more than ¥5 trillion of provisions for loan losses. As a result, reported losses for the year exceeded ¥4 trillion. To bolster their capital ratios, these banks issued about ¥2 trillion of capital instruments, including common, preferred and mandatory convertible preferred stock (see Chapter VI). In some cases, however, these instruments were sold to related parties or to the issuing bank's customers, and so it cannot be concluded that the new capital clearly reflected confidence on the part of outside investors. Despite these new issues, capital ratios for a number of the largest Japanese banks fell considerably, ending the fiscal year well below 10% in some cases despite earlier injections of public funds. Moreover, their actual capital positions may be significantly weaker than they appear, as a sizeable fraction of capital reflects deferred tax assets that can only be realised if banks generate substantial earnings in the near future. Indeed, in response to auditors' doubts about estimates of future earnings, one large bank reduced the reported value of its deferred tax assets enough to trigger official intervention.

Insurance companies

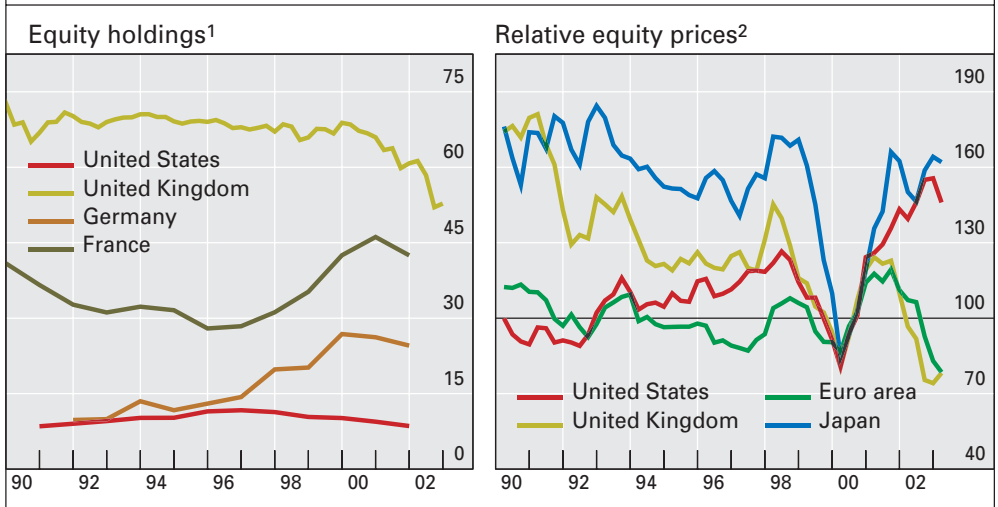
Insurance results were weaker than those of banks ...

Results in the insurance sector were substantially weaker than those for banks last year. The weakness was due in large part to poor returns on investment portfolios in 2002, which reduced profits or even led to losses. In the life insurance sector, profits were further squeezed by high guaranteed returns on insurance contracts. In the non-life sector, including reinsurance, low investment returns were partly offset by gains in operating income. Premium income strengthened, and claims, which had surged in 2001 as a result of the terrorist attacks in the United States and a number of natural disasters, returned to more normal levels.

... due to investment losses

The low returns on insurance companies' investments reflected two factors. First, yields on new fixed income instruments fell considerably, owing

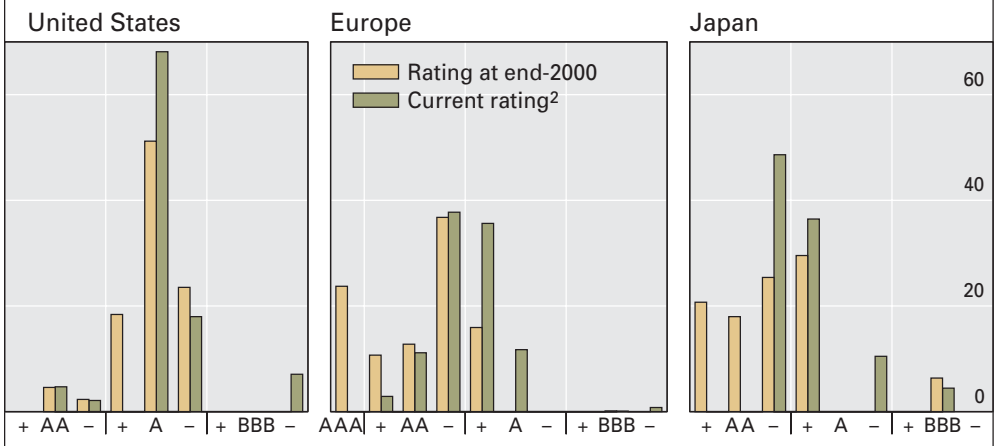
Insurance companies: equity holdings and performance



[1] As a percentage of total financial assets. [2] Ratio to broad equity index; 2000 = 100.

Sources: Datastream; National Association of Insurance Commissioners; national data. Graph VII.8

Insurance companies' ratings[1]



[1] Each bar represents the assets of insurance companies with the corresponding rating as a percentage of the total assets of the selected companies from each region. Companies as included in industry groups of the S&P 500, Dow Jones STOXX 600 and TOPIX indices. [2] As of April 2003.

Source: Bloomberg. Graph VII.9

to the sharp easing of monetary policy. But, more importantly, the slide in corporate stock and bond prices reduced the value of insurance company holdings. Moreover, under existing insurance accounting rules in many countries, all of these losses may not yet have been reflected in company accounts. Looking across regions, higher equity market exposures appear to be related to the underperformance of insurance sector stock prices (Graph VII.8). The relative performance of the insurance sector in the United Kingdom and the United States is a case in point. UK insurance companies have traditionally held large equity portfolios and have suffered the most from current market conditions, while most of their US counterparts have been constrained by regulation in their exposure to the equity market.

Insurance ratings suffered

Losses on investments, as well as weak operating income, put pressure on the credit standing of a number of insurance firms in 2002. In some cases the firms responded by cutting dividends or issuing new capital to strengthen their balance sheets. In other cases companies were downgraded (Graph VII.9), and a few smaller ones failed. Downgrades were more common in Europe and Japan than in the United States. Despite the changes, however, the average credit rating of insurance firms in Europe remained higher than in the United States.

Sources of resilience

Financial sector resilience reflects both cyclical and structural factors

Both cyclical and structural factors contributed to the recent resilience of banks in most industrialised economies. On the cyclical side, the latest slowdown has been atypical in ways that limited increases in loan losses by past standards, despite the considerable problems facing many non-financial companies. On the structural side, banks' risk management has no doubt improved substantially in recent years, and financial market developments have facilitated the dispersion of credit risk across the financial sector.

Cyclical factors

The recent cycle has been atypical

Two atypical features of the recent slowdown in economic activity helped to attenuate its effects on intermediaries, and especially on banks. First, as discussed in Chapter II, the slowdown was due primarily to a spontaneous unwinding of an investment-driven boom that had been accompanied by excessive equity valuations, rather than to the effects of monetary policy tightening in response to increased inflation pressures. As a result, monetary policy was eased significantly as the economy slowed. Lower interest rates contributed to a second atypical feature of the slowdown: the relative strength of property prices. House prices continued to rise, and even surged in some countries (see Chapter VI). While commercial property prices softened, they generally did not decline to the extent seen in many previous slowdowns.

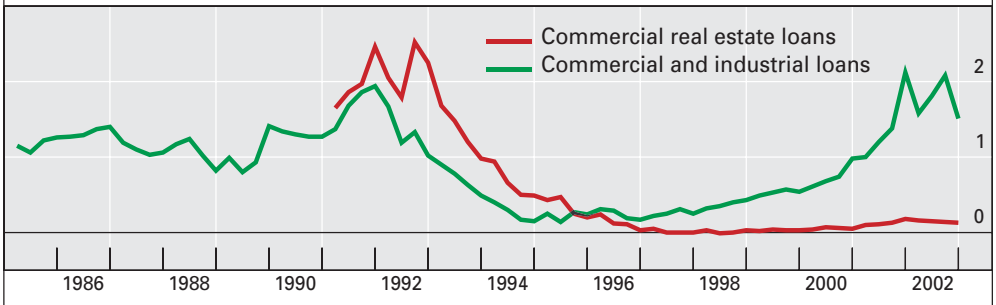
Loan quality deteriorated less than in past cycles ...

With lower interest rates trimming debt service burdens, and high property prices supporting balance sheets, loan quality deteriorated considerably less than in past slowdowns. Admittedly, the weak economy and unwinding of excesses in a number of sectors, including telecommunications and information technology, did cause a substantial rise in losses on commercial and industrial loans (Graph VII.10). However, losses on real estate related lending, especially commercial mortgages, remained low. By contrast, those investors, notably insurance companies, with greater exposure to equities and inflexible liability costs faced more substantial losses in the recent cycle, reflecting the outsized fall in equity prices and the sharp decline in long-term interest rates.

... especially for real estate related credits

The relatively mild deterioration in the commercial real estate sector in many countries reflected in large part the absence of a boom in the sector during the previous expansion. In contrast to residential real estate prices, those for commercial properties stayed well below their previous peaks (Table VII.2). Moreover, construction activity in most countries remained modest. As a result, as the economy softened, increases in vacancy rates and declines in rents and prices were generally muted, putting less pressure on borrowers. True, reported increases in vacancy rates may understate underused capacity to the extent that current lessees may be seeking to sublet space they no longer need. In such cases, however, owners continue to receive rent income, allowing them to service their debts.

US commercial bank charge-off rates[1]



[1] Annualised, as a percentage of average loans.

Source: National data.

Graph VII.10

Commercial real estate performance depended on demand

With overbuilding less prevalent than in the past, the performance of commercial real estate assets depended on the strength of demand for space. Continued growth in consumer spending in many countries buoyed demand for retail space. By contrast, office or industrial properties were particularly hard hit in markets where the economy was soft, either because of weak overall performance, as in Germany, or because of sector-specific problems, as in Silicon Valley in the United States. Commercial real estate in some financial centres was adversely affected by declines in investment banking activity. Properties located in cities with more diverse business mixes reportedly performed better.

Lack of overshooting reflects past losses ...

The relative lack of overshooting in the commercial real estate market in the latest cycle reflected a number of factors. Memories of losses suffered in the commercial real estate collapse of the early 1990s presumably inspired investor and lender caution and greater scrutiny of projects. Moreover, the gradual absorption of overcapacity created by that earlier construction wave is likely to have dampened further investment. The increased role of market sources of finance, including real estate investment trusts, listed property companies and commercial mortgage-backed securities, may also have contributed to the relative stability of the sector (Graph VII.11). The development of these public funding sources arguably increased market transparency and discipline. It also allowed for a wider dispersion of risks,

... and closer market suveillance

Property prices

	Commercial property[1]			Residential property			*Memo: Household debt*[2]	
	1995–2002	2002	2002	1995–2002	2002	2002	*1995–2002*	*2002*
	Nominal change[3]		Level[4]	Nominal change[3]		Level[4]	*Nominal change*[3]	
United States	3.2	–5.6	37	5.8	6.9	100	*8.1*	*8.9*
Japan[5]	–8.7	–10.0	38	–3.0	–4.6	69	*0.3*	*–2.4*
Germany	4.1	–14.2	63	0.0	1.0	84	*4.4*	*2.5*
United Kingdom	2.8	–3.7	35	11.8	23.9	100	*8.6*	*13.0*
France	5.9	–4.3	64	4.8	6.7	100	*6.2*	*6.2*
Italy	11.6	5.5	84	3.7	10.0	94	*8.1*	*6.3*
Canada	4.6	–0.5	52	3.6	10.3	94	*6.0*	*7.8*
Spain	12.5	–20.5	49	9.8	17.4	100	*13.2*	*6.2*
Netherlands	7.5	–11.8	86	11.2	4.5	99	*12.7*	*7.0*
Australia	2.5	–7.8	44	9.0	18.5	100	*11.9*	*12.4*
Switzerland	0.2	–1.6	61	0.1	4.9	66	*3.3*	*3.3*
Belgium	4.0	0.4	78	5.2	6.5	100	*5.1*	*1.5*
Sweden	4.9	–7.4	52	8.0	9.2	100	*7.1*	*8.2*
Norway	5.6	–2.9	43	8.9	5.6	97	*7.6*	*6.1*
Denmark	7.2	8.0	85	7.0	3.4	100	*7.9*	*5.9*
Finland	3.3	–2.3	59	8.2	8.7	79	*4.3*	*4.7*
Ireland	14.3	–3.0	91	14.5	14.2	100	...	...

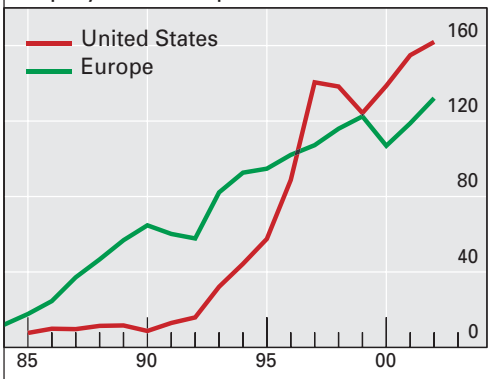
[1] For Australia, Belgium, Italy and Spain, prime property in major cities. [2] Broad financial accounts concept where available, otherwise credit from banks; partly estimated. [3] Annual percentage changes. [4] Relative to the peak period of real commercial/residential property prices. [5] Land prices.

Sources: Catella Property Consultants; Frank Russell Canada Ltd; Investment Property Databank Ltd; Jones Lang LaSalle; National Council of Real Estate Investment Fiduciaries; Nomisma; Office of Federal Housing Enterprise Oversight; Sadolin & Albæk; Wüest & Partner; national data; BIS estimates. Table VII.2

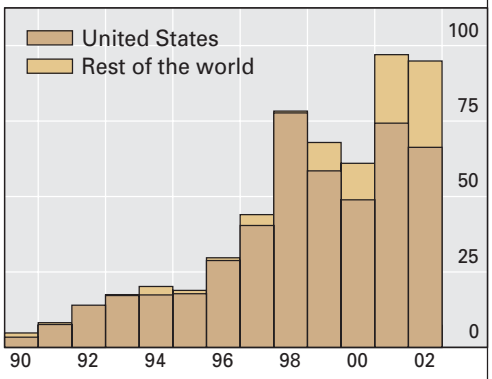
Public commercial real estate markets

In billions of US dollars

Equity market capitalisation[1]



CMBS[2] issuance



[1] Refers to real estate investment trusts in the United States and listed property companies in Europe. [2] Commercial mortgage-backed securities.

Sources: Commercial Mortgage Alert; Global Property Research; National Association of Real Estate Investment Trusts; national data. Graph VII.11

reducing lenders' exposures to individual projects. Finally, these instruments eased the access of new investors to the commercial real estate market, potentially augmenting the flow of funds to projects in the event of difficulties at traditional funding sources.

Structural factors

Improved dispersion of credit risk underpinned by ...

Although the characteristics of the latest cycle helped limit the resulting fallout for financial institutions, especially banks, two other developments also contributed to this outcome. First, there has been a general shift of business credit from bank loans to capital market financing in many economies in recent years (Graph VII.12). As a result, losses that might have been absorbed by banks in earlier downturns were shared with portfolio investors. Second, risks were better dispersed within the banking sector, with risk concentrations generally better contained than in the past.

... better credit risk management ...

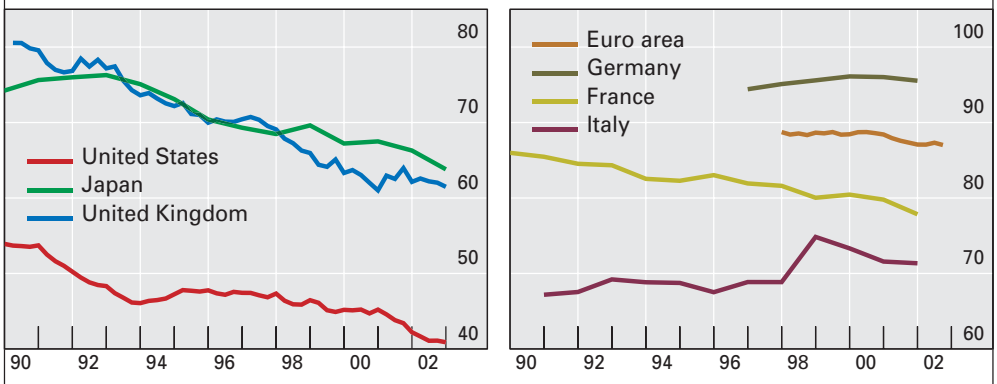
Improved measurement and management of credit risk on the part of banks supported these developments. Banks benefited in particular from the use of improved information technology, which facilitates the assessment and pricing of borrower risk and aids in the monitoring of potential concentrations of risk. Banks' heightened attention to risk was also a response to pressures from both the financial markets and supervisors to improve the pricing of risk, boost the level of capital and enhance the efficiency with which it is deployed.

... and deeper markets for risk transfer instruments:

The improved dispersion of risk was also facilitated by the development of existing and emergence of new financial markets, including the corporate bond market, the syndicated loan market, markets for asset-backed securities and markets for credit derivatives.

The shift of funding from banks to the bond market in recent years reflected both supply and demand factors. The cost and availability of bond finance was eased by the expansion of the market for high-yield securities,

Bank loan versus capital market financing[1]



[1] Bank loans to the corporate sector as a percentage of the sum of such loans and short- and long-term securities issued by corporates. For the United States, excluding mortgage credit.

Source: National data. Graph VII.12

especially in the United States, and also by the development of the European bond market following the introduction of the euro in 1999. In addition, with bond yields near historical lows, many firms reportedly chose to lock in low funding costs and avoid rollover risk by substituting bonds for short-term credit, including bank loans (see Chapter VI). This shift to longer-term finance was also encouraged by a reduced willingness of banks to provide backup lines of credit for commercial paper issues – a development linked to improved assessments of the risks posed by such lines.

syndicated loans ...

In the market for syndicated business loans, banks shifted a substantial amount of credit risk to non-bank investors – including insurance companies, mutual funds, pension funds, hedge funds and securitisation vehicles. In recent years such investors accounted for about a tenth of the volume of US syndicated credits, and the credits they accepted were significantly riskier than those held by banks (Table VII.3). The much weaker performance of these credits presumably reflected the greater risk appetite of non-bank investors, as well as sales of distressed loans by banks wanting to limit the deterioration in their own loan portfolios. Indeed, the fraction of secondary market activity in the syndicated loan market accounted for by transactions in distressed loans increased considerably in the last few years.

US syndicated credits[1]

	Share of total credits (in %)[2]			*Memo:*	Percentage classified[3]			
	US banks	Foreign banking organisations	Non-banks	*Total credits ($ bn)*	US banks	Foreign banking organisations	Non-banks	Total credits
2000	48	45	7	*1,951*	2.8	2.6	10.2	3.2
2001	46	46	8	*2,050*	5.2	4.7	14.5	5.7
2002	45	45	10	*1,871*	6.5	7.3	22.6	8.4

[1] Includes both outstanding loans and undrawn commitments. [2] Dollar volume of credits held by each group of institutions as a percentage of the total dollar volume of credits. [3] Dollar volume of credits classified "substandard", "doubtful" or "loss" by examiners as a percentage of the total dollar volume of credits.

Source: Board of Governors of the Federal Reserve System. Table VII.3

Intermediaries also increasingly used the market for asset-backed securities to trim their exposures to a wide variety of credits. The volume of asset-backed securities outstanding rose sharply in recent years in the United States and especially in Europe, where it grew by over 50% a year (Graph VII.13). In the United States, where the market is largest, the assets most commonly used to back issues are residential mortgages. Consumer loans, business loans and trade receivables are also used to back significant volumes of asset-backed paper. The pattern in Europe is broadly similar.

... asset-backed securities ...

The market for credit derivatives – including credit default swaps, credit-linked notes, total return swaps and other similar derivative instruments – expanded extremely rapidly in recent years. The notional principal value of such contracts has jumped by roughly a factor of 10 since the late 1990s to about $2 trillion last year. In part, however, this large value reflects trading and market-making rather than net positions used to hedge or take on credit exposures. For example, US banks' purchases of protection in the credit derivatives market have broadly paralleled their sales of credit protection since 1997, with both rising from negligible levels at that time to about $300–350 billion by the end of 2002. Over time, the net position of US banks has fluctuated widely relative to their gross positions, with banks occasionally being net sellers of protection. Even so, at the end of last year US banks were net buyers of credit protection to the tune of $60 billion, roughly equivalent to 8% of their commercial and industrial loans.

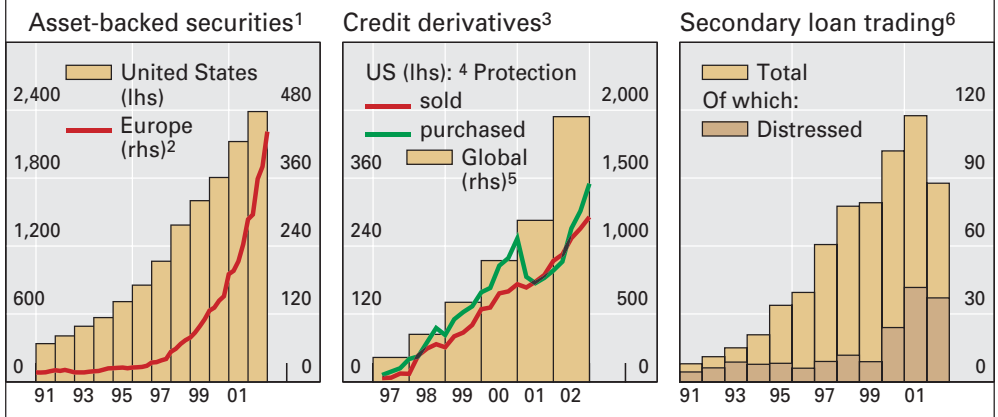
... and credit derivatives

A survey of many major financial institutions in the United States and Europe conducted by Fitch Ratings provides further information on the size and structure of the credit derivatives market in the autumn of 2002 (Table VII.4). Gross positions taken on in the credit derivatives market by the surveyed firms totalled $1.2 trillion of notional principal value, with collateralised debt obligations amounting to another $117 billion. Banks accounted for the largest

Banks are net purchasers of credit protection ...

Credit risk transfer markets

In billions of US dollars



[1] Amounts outstanding. [2] International bonds. [3] Notional principal values. [4] All banks. [5] Market participants' estimates (BBA surveys). [6] Global; turnover data.

Sources: Board of Governors of the Federal Reserve System; British Bankers' Association (BBA); Dealogic; ISMA; Loan Pricing Corporation; Thomson Financial Securities; BIS. Graph VII.13

share of these gross positions, but insurance companies and credit guarantors also had substantial exposures. Net positions were considerably smaller than gross positions for all the institutions surveyed. At the time of the survey, both US and European banks were net purchasers of credit protection, while insurance companies and, as one might expect, financial guaranty insurers were important net sellers. Within Europe, larger banks had purchased protection from second-tier regional banks seeking to obtain more attractive yields and to diversify their credit risk.

... while insurance companies are net sellers

Financial institutions used these markets to varying degrees to transfer risk across borders as well as between sectors. Cross-border risk transfer appeared to be the greatest for syndicated loans and corporate bonds. In the syndicated loan market, European and Japanese banking organisations accounted for about 30% of the syndicated credits arranged for US borrowers in recent years (Table VII.5). Conversely, US and Japanese banks provided about 20% of the syndicated credits to firms in Europe. While similar data for the asset-backed securities market are not available, foreign

These markets also allow the transfer of risk across borders

Credit derivatives positions[1]

At end-September 2002, in billions of US dollars

	Credit default swaps	Portfolio products	Credit-linked notes	Total return swaps	Other	Total[2]	*Memo: CDOs*[3]
	Gross positions[4]						
Total	614.0	390.6	17.4	48.6	113.7	1,184.4	*117.4*
United States	259.4	327.6	8.3	23.0	110.1	728.5	*85.5*
Banks	246.7	40.2	7.5	22.2	110.1	426.7	*10.2*
Insurance companies	4.9	103.1	0.8	0.9	0	109.7	*18.9*
Financial guarantors	7.8	184.3	0	0	0	192.1	*56.4*
Europe	354.7	62.9	9.1	25.6	3.6	455.9	*31.9*
Banks	351.3	54.0	9.0	25.6	3.6	443.4	*31.5*
Insurance companies	3.4	8.9	0.1	0	0	12.5	*0.4*
	Net positions[4]						
Total	–25.3	206.5	–27.7	2.3	31.6	187.4	...
United States	–6.9	215.3	–1.0	1.9	30.7	240.1	...
Banks	–18.3	–42.9	–1.8	1.0	30.7	–31.2	...
Insurance companies	4.2	99.2	0.8	0.9	0	105.0	...
Financial guarantors	7.2	159.1	0	0	0	166.3	...
Europe	–18.5	–8.8	–26.7	0.4	0.9	–52.7	...
Banks	–21.7	–17.7	–26.9	0.4	0.9	–65.0	...
Insurance companies	3.2	8.9	0.1	0	0	12.3	...

[1] These data summarise survey responses from about 150 participants in the credit derivatives markets, with an emphasis on those selling credit protection. [2] The values for other regions are $13.9 billion (gross) and $8.7 billion (net). [3] Collateralised debt obligations; the total for other regions is $0.6 billion. [4] Gross positions are intended to capture aggregate gross sales of credit protection to counterparties. They provide a measure of the maximum loss in the event of the failure of all of the reference entities on such contracts. By contrast, net positions reflect aggregate net sales of credit protection, taking account of any offsetting positions on the same reference entity. The specific definitions of gross and net exposures differ across respondents depending in part on their internal reporting systems.

Source: Fitch Ratings. Table VII.4

Global syndicated loans of non-financial borrowers

In percentages

Borrowers' nationality[1]	Fund providers' nationality					*Memo: Ratio to bank loans*[3]
	United States	Euro area	United Kingdom	Japan	Other[2]	
United States						
1993–95	49.4	17.2	3.7	12.6	17.2	*33.2*
1996–99	51.0	17.6	2.5	7.5	21.4	*52.0*
2000–02	56.4	20.6	4.5	5.6	13.4	*48.0*
Euro area						
1993–95	8.2	61.1	5.6	14.5	10.6	…
1996–99	8.5	68.5	5.6	4.0	13.4	*5.0*[4]
2000–02	13.7	63.6	10.2	4.6	7.9	*7.0*
United Kingdom						
1993–95	11.6	27.2	29.2	13.9	18.2	*13.7*
1996–99	11.7	35.2	22.4	9.9	20.8	*23.4*
2000–02	15.0	35.2	32.0	7.2	10.7	*28.6*
Japan						
1997–99	4.9	17.4	4.0	63.2	10.6	*0.5*
2000–02	4.1	8.0	1.7	84.4	1.8	*2.8*

[1] Residence of borrower. [2] Includes loans of unallocated origin. [3] Average new syndicated loan agreements during the period, including drawn and undrawn portions, as a percentage of average total outstanding bank loans to non-financial corporations. [4] 1997–99.

Sources: Dealogic Loanware; national data; BIS calculations. Table VII.5

holdings of US corporate bonds have increased substantially in recent years reaching some $1.3 trillion at the end of 2002, more than 20% of the total outstanding.

By contrast, the limited data available do not suggest that the use of credit derivatives has resulted in large net cross-border transfers of credit risk. At an aggregate level, the survey noted earlier does not show net sales of protection in some regions and net purchases in others. At the institutional level, a recent survey of large US banks indicated that a large majority of the respondents' credit default swaps – the most common form of credit derivative – were undertaken with US counterparties.

Vulnerabilities

While financial institutions generally have weathered the recent cycle relatively well, there remain risks to their continued financial strength. The most important risks reflect the uncertainty surrounding the macroeconomic outlook. Clearly, unexpected weakness in the economy going forward could trim asset values further and put additional pressure on balance sheets. In addition to these cyclical risks, some institutions also face legal and reputational risks related to their actions in the boom period of the late 1990s, and the possible fragility of new markets for credit risk transfer may pose risks to participants.

Cyclical risks

Prolonged economic weakness is the primary risk

The fundamental factor underlying a number of potential risks to financial firms is the performance of the global economy. The consensus view of a gradual recovery towards potential would, over time, be expected to lead to improvements in the asset quality and, thus, in the earnings of financial firms. However, a more prolonged period of economic weakness, or even a renewed downturn, could put institutions under strain by eroding further the cushions that have so far underpinned their resilience.

Key role of asset prices

Asset price weakness would be likely to play a key role in any such scenario. At the time of writing, and despite their protracted slide, equity market valuations remain relatively rich, dependent on expectations for a strong earnings rebound in the near term (see Chapter VI). Moreover, historical experience indicates that equity prices tend to overshoot at the tail end of large corrections. Hence equity prices could decline further if economic recovery were delayed enough. Similarly, property prices showed signs of softening in recent months (see Chapter VI). Continuing economic weakness could well lead to marked declines, at least in those markets where growth was strongest in recent years. In addition, the commercial real estate sector's increased reliance on market finance could prove a double-edged sword. Investor demands for safety and liquidity could well intensify if financial market conditions were to deteriorate, depressing prices of commercial mortgage-backed securities, as happened in the autumn of 1998.

Insurance companies are most exposed

Given the structure of their portfolio holdings, insurance companies are most directly exposed to a further substantial decline in these asset prices, especially in a low interest rate environment. Severely weakened capital positions leave only limited room for manoeuvre, and a deterioration in market conditions could complicate additional efforts to raise new equity. Moreover, further distress sales of equities by insurers would reinforce the drop in stock prices.

In recent years, the value of occupational pension funds' asset portfolios fell sharply in the face of lower equity prices, corporate defaults and widening credit spreads. Pension funds were also hurt by low interest rates that increased the actuarial value of their liabilities. Faced with declining coverage of these liabilities, many employers, typically large industrial companies with mature labour forces, had to increase contributions to their plans at a time of already falling profits. Furthermore, given current accounting practices in many countries, higher pension costs are likely to continue weighing on the reported earnings of corporations with large defined benefit plans, delaying the impact of an economic recovery on their stock market valuations. In a number of cases, concerns about the impact of underfunded pension liabilities on companies' capital structures triggered ratings downgrades and led to increases in funding costs (see Chapter VI).

Pension plans could also come under pressure

A further reduction in asset prices would put additional pressure on the financial condition of defined benefit pension plans and their sponsoring companies. With market participants more aware of the possible effects of post-employment liabilities on corporate balance sheets, the sensitivity of

equity and bond prices to pension funding status might increase further. In addition, in many jurisdictions changes were recently put in place, or are likely to be introduced, in the rules and practices that govern the accounting treatment of such balance sheet items and their relationship to recorded company income. These changes will arguably complicate the management of declines in asset values because they typically restrict companies' current flexibility in amortising over a longer period the earnings impact of pension funding shortfalls.

Adverse effects on banks could take longer to emerge

A protracted period of economic weakness accompanied by lower asset prices would also put pressure on the financial condition of banks, although such effects might take longer to emerge. Despite some moves to restructure balance sheets of late, business debt burdens remain high in many countries, and continued sub-par growth could, by trimming firms' revenues and profits, push up banks' losses on business loans. In particular, banks continue to have substantial exposures to firms in weak sectors, including information technology, media, telecommunications and travel services. Lower property prices could also be damaging for banks because the share of their loans backed by property is very high in many countries and recently rose further in some cases (Graph VII.14). If income and employment growth remain weak, and softer home prices limit the flexibility afforded by home equity extraction, household loan quality could well deteriorate beyond the sub-prime sector, which has already showed considerable stress. Further economic weakness and property price declines would also put pressure on commercial real estate credits, undermining a source of strength for both banks and insurance companies in the recent downturn.

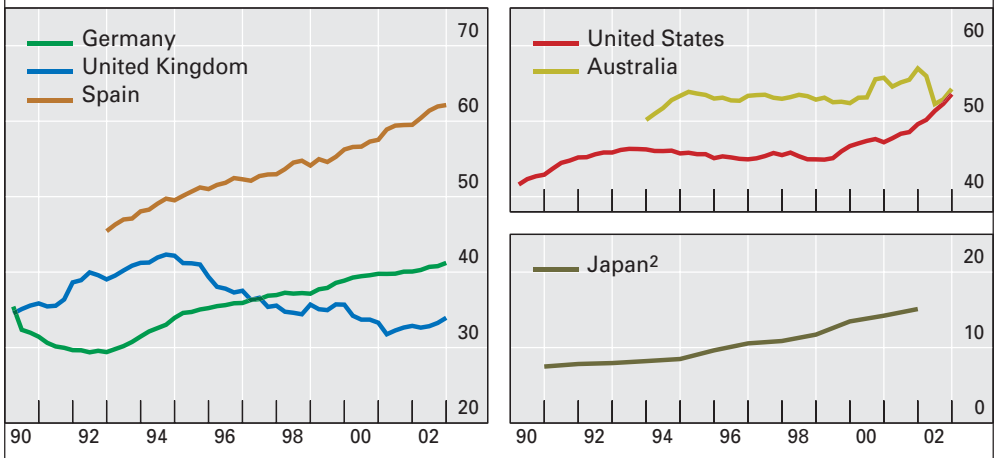
Some institutions may be exposed to an increase in interest rates

A sustained period of economic weakness could result in higher long-term interest rates, either by undermining government finances or by triggering a flight to liquidity in response to heightened uncertainty. Such a development would pose risks to financial institutions with substantial exposures to interest rate changes. While some market participants might seek such exposures in expectation of stable or declining rates, for others they might reflect the lack of attractive alternatives, as is the case for Japanese banks. Furthermore, some institutions might have difficulty hedging their complex interest rate positions, as could be the case for the mortgage-related government-sponsored enterprises in the United States, which face uncertain mortgage prepayment risks. Moreover, once a rise began, it could be amplified by reductions in market liquidity if the increase led some market participants to pull back from trading and market-making, as happened when rates rose in early 1994. Of course, a faster than expected economic recovery would also boost interest rates. In that case, however, higher incomes and asset prices would clearly help mitigate the risks to financial institutions.

Other risks

Even if asset values firm as the global economy continues its gradual recovery, some financial institutions could face other difficulties, reflecting, in part, a legacy of the late 1990s financial market boom. Two such sources of vulnerability are legal and reputational risks, stemming from institutions'

Banks' real estate exposure[1]



[1] Ratio of banks' real estate related lending to total lending. Definitions vary across countries. [2] Fiscal years; excluding real estate loans to corporates.

Source: National data. Graph VII.14

actions during that period, and potential problems in the operation of the new markets for credit risk transfer. These risks are more difficult to assess and are arguably less widespread than those related to economic weakness and lower asset prices. Nevertheless, they could cause problems for large financial institutions and, depending on the circumstances, the ultimate effects could be broader.

Legal and reputational risks to the largest institutions

The scale of the legal and reputational risks that leading investment banks could face as a result of business practices engaged in during the late 1990s is hard to assess at this juncture. A number of large financial firms operating in the United States recently reached a settlement with federal and state authorities of issues related to investment research and the management of initial public offerings. This agreement imposed substantial but manageable costs on the industry. However, the settlement did not limit subsequent action by the authorities with respect to questionable interactions with Enron or other troubled firms, nor did it limit any litigation by private investors.

At the end of 2002, two large US banks set aside reserves to cover anticipated costs associated with any such investigations and litigation. Given the inherent uncertainty in such legal matters, the large number of possible participants in the legal actions, and the potential magnitude of the damages sought, it is not easy to evaluate the appropriate level of such reserves. Thus, the ultimate costs incurred could conceivably exceed the reserves that have been accumulated to date. As a result, in an extreme scenario, individual institutions may face credit rating downgrades and heightened liquidity pressures.

New markets for credit risk transfer raise concerns about opacity ...

The dependence of some financial firms on markets for credit risk transfer in the management of their credit risk raises a number of possible concerns. First, while these markets successfully handled several major corporate failures, future difficulties cannot be ruled out given that the markets are relatively new and have not been tested in times of significant stress. A particular issue is that the markets lack transparency about the

ultimate distribution of credit risks, so that some market participants may take on more risk than other participants or the financial authorities are aware of. Moreover, the central role of a handful of large financial institutions, and the resulting links among them, means that problems could spread across firms despite efforts by market participants to limit their exposures. Should such spillovers impair the liquidity and capacity of the market, other market participants might find it difficult to manage their credit risk. A possible result would be a reduction in the availability and an increase in the cost of credit.

... concentration risk ...

A second risk to these markets reflects a more fundamental structural issue. Many of the financial institutions using credit derivatives to manage their credit exposures have lending or underwriting relationships with the firms whose risk they are trading. As a result, such institutions may at times have access to non-public information that could give them an unfair advantage over uninformed market participants. Trading on such inside information may violate the law and could discourage potential counterparties. Financial institutions have internal mechanisms to ensure in principle that traders do not have access to non-public information or that they cannot trade on the basis of it. These mechanisms, however, may limit, perhaps significantly, institutions' ability to use credit derivatives to manage their credit risk.

... and conflicts of interest

Multiple financing channels and financial sector resilience

The current cycle represents a departure from typical past experience both in terms of the causes of the slowdown and of the performance of the financial sector. It also raises issues related to the complementary roles of balance sheet and market-based intermediation in dealing with financial strains. Thus, the recent experience suggests the importance of understanding the strengths and weaknesses of these two intermediation channels.

Balance sheet and market-based finance have complementary roles

The economic value of the financial system is measured by its success in channelling resources from savers to productive users and in allocating risk to those that are more willing and able to bear it. In this respect, a better system is one that performs these functions efficiently and is less susceptible to disruptions and bottlenecks.

The main benefit of on-balance sheet intermediation is that it is better suited to overcome informational and incentive obstacles through the use of monitoring and multifaceted, longer-horizon relationships. However, because intermediaries typically assume the resulting credit risk on their books, the scope for diversification is constrained by balance sheet size and by the fixed costs of engaging in information-intensive relationships.

Balance sheet finance can help solve information and incentive problems ...

Market-based intermediation, by contrast, allows for better dispersion of risks across the system so long as the ultimate investors maintain well diversified portfolios. Such diversified investment is founded on the availability of public information, so that all investors can evaluate the risks and returns of various investments, and on low transactions costs, which allow portfolios to be easily adjusted in the light of new information about firms. As a result,

... but market-based finance can improve diversification

tradable securities and rules about the disclosure and handling of information are the key building blocks for an effective market-based system.

Useful redundancy in times of stress

The ability to switch smoothly between balance sheet and market-based channels of intermediation is a desirable characteristic of a financial system. Systems that offer such flexibility are likely to be more robust than those dependent on only one type of intermediation. In other words, the two channels can provide a form of diversification for the system as a whole because disruptions in one channel can be mitigated by increased reliance on the other. In addition, to the extent that financial conglomerates are engaged both in direct provision of credit and in underwriting and market-making, they may have a more resilient revenue stream than would more specialised firms.

Consolidation may reduce this redundancy ...

At the same time, the apparent economic benefits provided by having alternative channels of finance may be eroded by consolidation among large financial firms. From the perspective of an individual firm, access to a broader range of functions and products should provide opportunities for cross-marketing and diversification that could boost profitability and reduce risk. However, from the perspective of systemic stability, larger conglomerates may raise new risks. Since the same institutions are increasingly engaged in both types of financial activity, a common capital base underpins on-balance sheet intermediation, investment banking services and market-making functions (Table VII.6). As a result, losses in one activity could put pressure on the entire firm, affecting its activities in other areas.

... as the same capital base may be backing both channels ...

... and firms may come to have similar risk profiles

Such outcomes raise the possibility that a large enough shock could, through its effects on one or more large, complex financial institutions, disrupt the functioning of both channels of intermediation. The risk of spillovers may have increased because consolidation has been accompanied by a substantial concentration of transactions among the largest institutions. A related risk is that, as individual financial conglomerates become more diversified across business lines, the financial sector as a whole becomes less diversified since the largest institutions become more similar in their risk exposures. On one hand, the greater diversification of institutions may increase the resilience of the financial system in the face of small or medium-sized shocks. On the other hand, the lack of systemic diversity means that a single large shock could adversely affect all of the major financial firms in an economy simultaneously, potentially leading to macroeconomic problems. Arguably, globalisation may mitigate this risk to the extent that foreign institutions are able to substitute for troubled domestic ones.

Conflicts of interest ...

Another economic cost associated with large conglomerate institutions whose activities straddle the two channels of intermediation is the potential for the creation of conflicts of interest. The exploitation of synergies in the joint production of financial services can give rise to situations where the institution's actions could benefit some customers, or the institution itself, at the expense of others. Two examples of such conflicting incentives for conglomerate institutions are the underwriting and placement of securities for companies with which the commercial banking arm of the financial institution has ongoing credit relationships, and the provision of research on securities underwritten by the same institution. Recent experience confirms that in such

... may impair financial efficiency

Concentration measures across financial product lines

In percentages

Top five institutions in:	Institutions' share in: [1]			
	International bond underwriting	International equity underwriting	Arrangements of syndicated loan facilities	Total derivatives
Bond underwriting				
1991–93	36.5	42.2	7.4[2]	…
1994–96	36.1	43.1	25.1	14.9
1997–99	40.9	43.7	23.6	19.2
2000–02	42.5	38.9	19.8	24.2
Equity underwriting				
1991–93	29.8	60.4	7.7[2]	…
1994–96	33.0	54.2	6.5	8.8
1997–99	38.5	53.0	7.1	12.7
2000–02	38.3	56.2	12.7	13.5
Syndicated loan lead arrangement				
1993	20.3	20.5	50.0	…
1994–96	17.1	17.3	54.4	20.7
1997–99	13.9	8.6	49.9	26.6
2000–02	26.6	14.7	41.9	38.7
Derivatives dealing				
1994–96	11.8	8.3	40.0	33.0
1997–99	20.4	14.3	35.5	38.7
2000–01	23.8	16.5	39.0	49.7

[1] Percentage share of the total volume of activity in a given category (columns) accounted for by the top five institutions in a given activity (rows). For example, in 1991–93, the top five bond underwriters accounted for 36.5% of the total volume of international bonds underwritten. The same institutions accounted for 42.2% of the total volume of international equities underwritten over the same period. [2] 1993 only.

Sources: Dealogic; Dealogic Loanware; Swaps Monitor; BIS calculations. Table VII.6

circumstances financial institutions may act in ways that reduce the capacity of the system to process and analyse information. The result may have been distortions in the pricing mechanism that compromised the efficiency of the allocational role of the financial system.

Complex institutions pose challenges to prudential authorities

Complex financial institutions that combine on-balance sheet intermediation with services facilitating market-based intermediation present a number of challenges to financial prudential authorities. First, from a microprudential perspective, their activities challenge the traditional risk management framework – and by extension also regulatory rules – structured around the notion of firms with specialised activities. A broader mix of activities in the same institution necessitates the adoption of a more flexible and more general risk management framework that takes a holistic view of the firm. The involvement of the insurance sector in the provision of credit risk protection through credit derivatives is a case in point. These instruments straddle the investment and underwriting activities of the firms, which are conventionally managed separately.

Second, from a macroprudential perspective, large and complex institutions exacerbate the risk that excessive concentration might pose to overall financial stability. As mentioned earlier, strains in one firm can more easily spread to its counterparties, and such institutions might well be exposed to similar risks, increasing the likelihood that a number of firms could face difficulties simultaneously. For this reason, supervisory and regulatory regimes need to be tailored to the specific nature of the risks faced by these large, complex institutions and to the potential macroeconomic costs that strains at such firms might imply.

Finally, the fact that large shocks might be more likely to have adverse effects on many institutions at the same time has implications for how policymakers respond to such shocks. If stresses are concentrated on a small group of market players, then narrowly tailored policy interventions focused on this group can be effective. However, if stresses are widespread, such an approach might not be feasible. Thus, policymakers may have to respond with more general and necessarily blunter tools, such as lower interest rates.