



EUROPEAN CENTRAL BANK



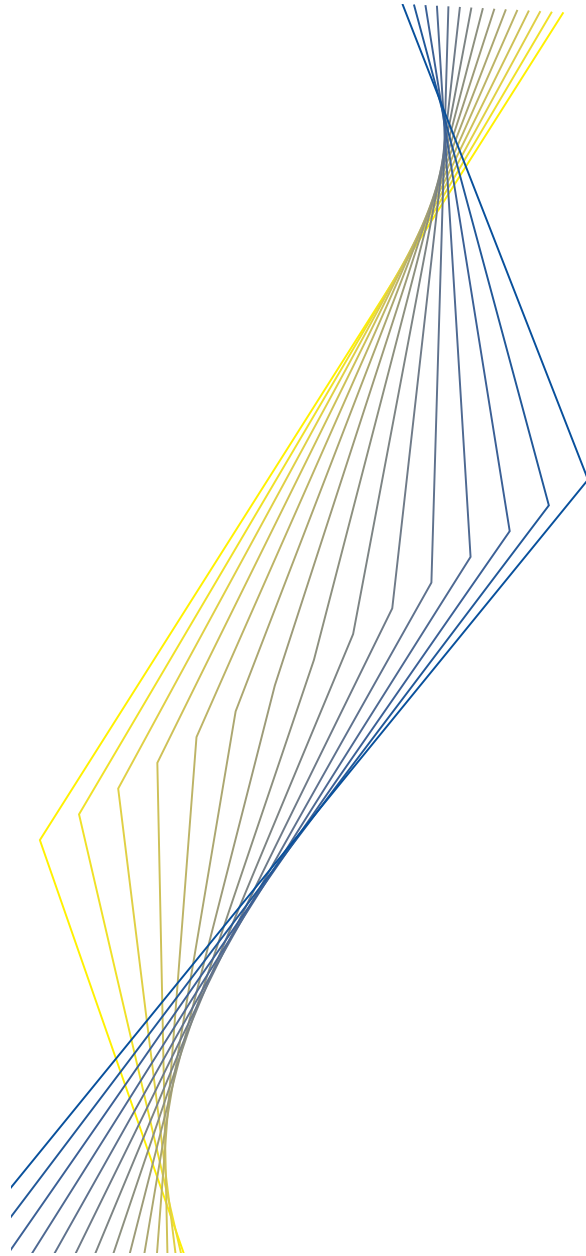
EU BANKING SECTOR STABILITY

November 2003





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ISSN 1725-5546 (print)

ISSN 1725-5554 (online)

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Foreword

The purpose of publishing this report, the second of its kind, is to share the outcome of the most recent assessment of EU banking sector stability, carried out by the Banking Supervision Committee (BSC) of the European System of Central Banks, with a broader audience. The Committee is a forum of co-operation among national central banks and supervisory authorities of the EU and the ECB. The report examines the implications of recent developments in the economy and financial markets on EU banks' performance in 2002 and the first half of 2003. It also assesses the financial soundness and risk-absorbing capability of the EU banking sector.

Periodic banking sector stability analyses at an EU level are becoming increasingly important. As financial integration deepens in the single currency area and in the EU single market, bringing with it more competitive pricing in financial activities, banking sector stability is more and more a European wide concept and not a national concept. Moreover, in view of the challenging operating environment that confronted banks in 2002, after a difficult preceding year, assessing banking sector stability – including the ability of banks to contribute to the efficient allocation of financial resources in the economy – takes on greater relevance. The analysis contained in this report is unique in the European setting. It combines the macro-level perspective of central banks, which have an unrivalled position to monitor

ongoing developments in the financial system, with the equally important micro-level approach of supervisory authorities to form a joint and wide-ranging assessment of the stability of the EU banking sector.

The report reflects the latest ECB macroeconomic analysis. We hold the view that the latest economic data are encouraging and that the economic upturn should broaden and strengthen in the course of 2004 in the euro area. Moreover, we also see the short-term risks to this scenario as being balanced. However, a prudent analysis of banking sector stability entails calling attention to potential, though relatively remote, sources of downside risk to the most probable outcome and evaluating their implications for banks. This is a usual and sound practice for authorities assessing financial stability. In our view, there are clear benefits to be gained from being as transparent as possible in this particular assessment.

Frankfurt am Main, November 2003

A handwritten signature in blue ink, appearing to read 'J. C. Trichet', is written over a horizontal line. The signature is stylized and cursive.

Jean-Claude Trichet

President of the European Central Bank

Executive summary

EU banks were confronted with a challenging operating environment in 2002, largely owing to the global economic slowdown, which also affected the EU, as well as to further downward correction in turbulent global stock markets. Reflecting these unfavourable conditions, loan loss provisions of banks rose and non-interest sources of income were squeezed. However, mostly thanks to robust conditions in residential property markets, income from retail operations remained resilient.

Coming into the first half of 2003, the business conditions facing banks, notably in financial markets, improved. Although the early months of 2003 were marked by geopolitical uncertainties, these receded after mid-March. As a result, risk appetites began to improve. This brought calmer conditions to global stock markets and stock price indices recovered swiftly. In addition, while the pace of growth outside the euro area remained relatively subdued in the first half of 2003, there was growing confidence that it would gain momentum in the second half of the year. This was one factor which prompted a sharp reversal of an earlier downward tendency in long-term bond yields, which left yield curves steeper – traditionally a harbinger of a future pick-up in the pace of economic activity – around the globe. As for the euro area, while the economy was virtually stagnant in the first half of 2003, a moderate pick-up seemed to get underway in the second half of the year, with the stage being set for a gradual broadening and strengthening of the recovery in the course of 2004.

Given the environment in which EU banks operated during 2002 and the first half of 2003 – in particular the extent of the economic slowdown – their loan losses during this period were relatively modest. Loan loss containment seems to have been due, at least partly, to structural improvements that have taken place over recent years in the way that banks manage their credit risks. In addition, the number of arrears and outright loan defaults may have been limited by the benign

influence of very low interest rate levels on the financial condition of borrowers.

Although economic activity remained weak in the first half of 2003, large banks in the EU managed to raise their profitability. They did this primarily by lowering loan loss provisions and by introducing cost-cutting programmes. Looking ahead, while cost-cutting should have contributed to improving efficiency in the banking sector, the durability of profitability improvements should ultimately depend on the ability of banks to raise income in a sustainable manner. A pre-condition for this is that economic growth strengthens in line with current expectations.

By mid-2003, the levels of regulatory solvency ratios of EU banks remained broadly unchanged. While banks had, by late 2003, already endured almost three years of sub-potential economic growth and a succession of adverse shocks in financial markets, the adequate solvency of banks contributed to banking sector stability. However, the ratios of some banks benefited from extraordinary asset sales, which reduced risk-weighted assets, rather than from either new equity issuance or from internal income generation.

Forward-looking market-based indicators, which can shed light on market participants' perceptions concerning the financial health of the banking sector, suggest that after a period of relatively high uncertainty from mid-2002 to the first quarter of 2003, some favourable reassessment took place later on, at least for the sector as whole. This not only reflected the improvement in banks' performances in the first half of 2003 but was also an acknowledgement of the efforts made by banks to ensure their ongoing viability. However, several market indicators continued to suggest that risks to the outlook for banks had not fully receded. Moreover, notwithstanding indications of improving performance on the part of banks in the first half of 2003, close monitoring of performance in the second half of the year will be required before an assessment can be made whether

the challenges that have faced the banking sector have fully subsided.

Looking ahead, short-term risks to the main economic scenario for the euro area and the EU, of a gradual recovery in the pace of economic activity, appear to be balanced. In this environment, a gradual pick-up in banks' income can be expected. This notwithstanding, a prudent evaluation of the stability of the banking sector must also include an assessment of the potential impact of plausible – albeit relatively remote – downside scenarios. If, for instance, the expected gradual recovery were to prove more subdued than anticipated, thereby prolonging the economic slowdown in the EU, this could be expected to impinge on banks' income. Most notably, it could subdue traditional lending business. However, as banks seem to have generally adopted sound lending standards, the likelihood of significant asset quality problems developing in an environment of deteriorating business conditions is not deemed to be high.

Another – potentially related – risk for banks is the possibility that earlier strong real estate price developments in some countries could be unwound. As pressure on other income sources intensified after 2000, EU banks' dependency on income from retail operations, including mortgage-related lending, increased. A sizeable reversal in real estate prices could potentially have a significant impact on banks' mortgage loan demand. However, banks have adopted relatively conservative approaches to mortgage-related lending so that asset quality risks are considered to be low.

To the extent that the recovery of financial markets after mid-March has been predicated upon a gradual improvement in the pace of economic activity, it is likely that it would suffer a setback if growth were to adversely deviate from prevailing expectations. Although it is unlikely that direct impacts on banks would prove to be sizeable, indirect impacts might not be trivial, particularly for those banks that have links to the insurance sector. This is because in some countries the assets of insurance companies tend to be sensitive to equity market swings. Furthermore, some insurance companies are also thought to have acquired significant credit risk exposures from banks through the markets for credit transfer instruments, although quantitative information on this market is sparse.

All in all, despite the deterioration in its profitability performance in 2002, the EU banking sector proved to be resilient. By mid-2003, EU banks were assessed to be in at least adequate financial condition, having buffers comfortable enough to withstand plausible downside scenarios. This partly owes to an early and effective response on the part of EU banks to a challenging environment by cutting costs, reorganising businesses and improving risk management in order to maintain profitability and, thus, adequate solvency. Looking ahead, these are positive signs for the longer-term stability of the EU banking system, although room remains for additional efforts to further improve the efficiency of the system.

Introduction

This report summarises the main findings of the regular annual macro-prudential analysis of EU banking sector stability conducted within the Banking Supervision Committee (BSC) of the European System of Central Banks (ESCB). The BSC consists of representatives of banking supervisory authorities and central banks of EU countries as well as of the ECB.

Based on information available up to October 2003 the report provides a review of the financial condition of EU banks, their resilience and the potential threats to their stability. This is the second publication of this kind following a report released in February 2003.

The analysis is based on indicators drawn from national supervisory data sources and the ECB, as well as on exchanges of information among the member organisations of the BSC. The consolidated banking data collected by the BSC for 2002 represent virtually the entire EU banking industry (see the Annex). It is also the most timely available dataset, allowing for a comprehensive assessment of the financial condition of the EU banking sector and its buffers against unforeseen events. Publicly available data for

large EU banking groups are used to complement this picture for the first half of 2003.

The structure of the report reflects the view that the stability of the banking sector depends on the extent of banks' "external" risks (i.e. risks in banks' operating environment such as business cycle risks) and "internal" risks (such as risks due to banks' strategic choices) and the management of these risks. The resilience of banks to adverse events will depend on their efficiency, profitability and, ultimately, solvency. Against this background, this report first reviews those economic and financial market conditions of relevance for EU banks' operating environment, until October 2003 (Section 1). After that, the impact of these developments on banks' performance – the main income and cost elements and overall profitability and solvency – in 2002 and the first half of 2003 is analysed (Section 2). The next part looks ahead at the potential sources of risk facing banks and it evaluates the resilience of the sector should adverse events materialise (Section 3). The report concludes with an overall assessment of the stability of the EU banking sector (Section 4).

I EU banks' operating environment

I.1 Macroeconomic conditions

After weak economic activity in the first half of 2003, signs of a gradual recovery in the euro area/EU strengthened

As in 2001, EU banks were faced with a challenging operating environment in 2002, which affected both their income and asset quality. The pace of economic activity was slow, with real GDP growth for the year of less than 1%. This was the second successive year of sub-potential growth. A combination of factors contributed to preventing a pick-up in the pace of GDP growth in 2002. In particular, the substantial drop in stock prices in 2002 had yet to work its way through, and uncertainty lingered over the magnitude of the associated adverse wealth effects. The ongoing process of balance sheet repair carried out by firms may have contributed to delaying investment. In addition, financing conditions were affected by the simultaneous plunge in stock prices and the surge in corporate bond spreads.

GDP figures showed virtual stagnation in the first half of 2003 in the euro area, in the wake of the geopolitical uncertainties that had surrounded the Iraq conflict. Once these geopolitical uncertainties faded away, there was a growing confidence that a recovery would get underway in the second half of 2003 and that it would gain momentum in the course of 2004. The short-term risks to the main scenario of a gradual recovery appeared to become balanced by October 2003. The more favourable picture for the economic growth outlook in the euro area was accompanied by a generally more positive outlook at the global level.

Indebtedness continued to rise in the EU

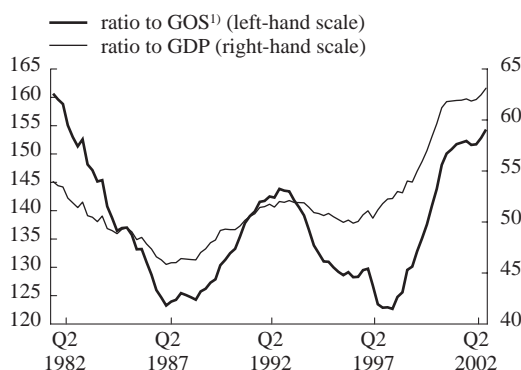
In the course of 2002, concerns about corporate sector imbalances, notably high debt ratios, became apparent in financial markets. Spreads on corporate bonds rose

and there was a preponderance of corporate bond defaults and credit downgrades while equity market volatility also surged. In an environment of weak demand, in which firms had little pricing power, euro area corporations reacted by bringing their costs down, cutting back on investment and by restructuring their businesses. Balance sheet restructuring efforts aiming at improving financial positions were also seen. Most of these adjustments tended to be concentrated among the most highly indebted firms, particularly those in the telecommunications industry, which improved their cash flow by selling assets, cutting labour costs and, in some cases, by renegotiating debt structures. Coming into the first half of 2003, these cost-cutting efforts combined with reduced debt-servicing costs, thanks to lower interest rates across the maturity spectrum, served to underpin a recovery in corporate profits.

Notwithstanding the efforts made by firms to repair balance sheets and an improvement in corporate profits after late 2002, indebtedness ratios remained at relatively high levels. Indeed, while debt ratios had tended to stabilise in 2002, they rose again in early 2003. The low level of debt financing costs and the improvement of economic prospects may have encouraged firms to issue

Chart I
Debt ratios of euro area non-financial corporations

(percentages)



Source: ECB.

1) GOS: Gross operating surplus.

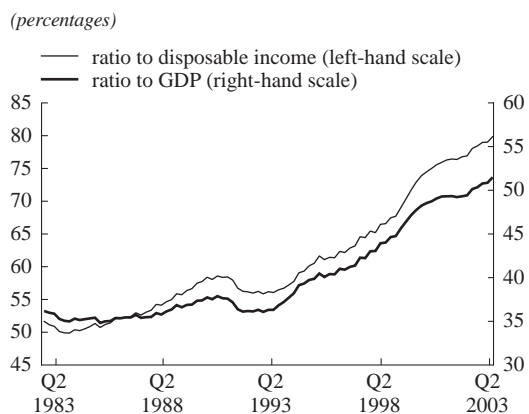
new debt. By the second quarter of 2003, the debt-to-GDP and debt-to-gross operating surplus ratios of euro area non-financial corporations stood close to 65% and 155%, respectively (see Chart 1). There have, however, been differences in the rate of debt accumulation both across sectors and countries. For instance, notable improvements have been seen in the telecommunications sector, a sector that had been an earlier source of concern. In non-euro area EU countries, corporate sector indebtedness tended to increase in the UK, while it declined in Denmark and Sweden.

Efforts made by EU firms to improve their financial conditions apparently began to bear fruit in the first half of 2003. One indication of this is the frequency of defaults on corporate bonds, typically issued by larger firms. In the first half of 2003, a notable decline in bond defaults by European firms was apparent. Moreover, the frequency of rating downgrades of large firms by major rating agencies stabilised, albeit the frequency of upgrades showed little improvement. Together with an easing of pressure from financial markets to make further restructuring efforts, implied by a narrowing of spreads on corporate bonds, the risk of financial distress among large firms seemed to be waning.

Household sector debt ratios in the euro area increased throughout the 1990s, continuing to rise up to 2002 (see Chart 2). This mostly reflected an accumulation of mortgage debt. Households may have had more confidence in their ability to service higher debt levels given the environment prevailing of historically low interest rates, relatively stable conditions in labour markets and rising asset values thanks to buoyant housing market conditions. The same tendencies were seen in non-euro area EU countries.

Household balance sheets in the euro area are probably less sensitive to asset price swings than in the US, and are therefore less vulnerable. For instance, to a large extent euro area households were spared the

Chart 2
Debt ratios of euro area households



Source: ECB.

adverse direct wealth effects of plunging stock prices, in view of the low levels of share ownership. Similarly, more concentrated ownership of housing in some countries implies that the wealth effects of large house price increases have been spread less evenly. Moreover, even for those euro area households that have gained, there has been little housing equity withdrawal from the run-up in house prices, given either limited opportunity or prohibitive transaction costs to refinance mortgages. Although households with newly acquired mortgages could be vulnerable either to adverse wealth effects or labour market conditions, a house price decline in the euro area is unlikely to pose a threat to the banking system as a whole (see also Section 3.3).

The global economic situation has improved recently

After two years of sluggish growth, the recovery underway in the US gathered pace in the second quarter of 2003. Moreover, looking ahead, personal income tax cuts and low interest rates are expected to support continued consumption and, eventually, a recovery in business spending. The economic situation in Japan has also been improving over recent months and for the future, the economy should benefit from the improving global environment.

The economic performance of emerging market economies is also important for EU banks. This is because banks have significant lending activities and extensive presence in these regions through subsidiaries, especially in EU Acceding Countries and in Latin America. The overall outlook for emerging markets improved in the final months of 2002 and the first half of 2003, in part driven by effective economic policies and favourable global liquidity conditions, which reduced financing costs and immediate concerns over debt sustainability.

EU Acceding Countries (as well as Turkey, Russia and Western Balkan countries) continued to enjoy relatively fast output growth in 2002, while performance was more mixed in the Mediterranean region. Moreover, output developments were particularly buoyant in the first half of 2003 in the Baltic States, while some larger economies displayed a more subdued performance.

By contrast to developments in other regions, the recovery in major Latin American countries, which started in the second quarter of 2002, seemed to lose momentum. Nevertheless, efforts towards stabilisation have borne fruit in Brazil and Argentina. In particular, Brazil has succeeded in adopting stability-enhancing macroeconomic and structural policies following the electoral period. By contrast, further progress in the restructuring of Argentina's debt (in agreement with the IMF) and the banking sector is critical for the reactivation of credit supply and economic growth in the country.

In non-Japan Asia, the latest data show that economic performance has remained relatively robust. China remains one of the better performers due to strong fiscal expansion and external demand. But significant risks remain, in particular, in the state-owned corporate and banking sector. Growth in the other Asian emerging economies is expected to pick up in the second half of 2003, partly due to the swift

actions by the governments to bring SARS under control and fiscal and monetary easing.

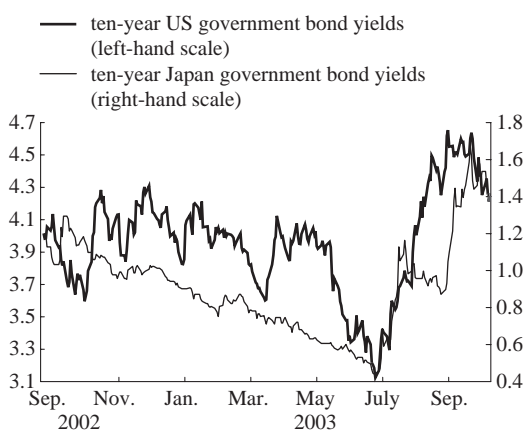
1.2 Financial market developments

Conditions in government bond markets were volatile

Highly volatile conditions in global stock markets and significant downward pressure on stock prices in the second half of 2002 contributed to setting in motion a process of risk reassessment and retrenchment from the riskiest assets, such as stocks, to safe and liquid interest-bearing deposits and government bonds. The rush to safer assets brought bond yields down across the maturity spectrum in major bond markets (see Charts 3 and 4). By mid-June 2003, US bond yields had reached levels not seen since 1958. Given the economic outlook prevailing in June, these levels appeared rather low. After mid-June 2003, there was a notable increase in global bond yields in relatively volatile market conditions, with potential adverse implications for banks and other financial institutions holding fixed income assets. Between the low-point in mid-June 2003 and end-September 2003, long-term

Chart 3
Government bond yields in US and in Japan

(percentage points)



Source: Reuters.

Chart 4

Euro area government bond yield and stock market index

(daily data)



Source: Reuters.

government bond yields in the US rose by 100 basis points. The improved economic outlook, and a waning of deflation concerns, may have set the correction in motion. However, it cannot be excluded that other factors played a role in amplifying the upturn in bond yields and the surge in market volatility. One such factor was the dynamic hedging activities of US Government-sponsored enterprises and other investors in mortgage-backed securities. An additional factor was increasing concern over the widening of the US budget deficit. In the euro area, the rebound in long-term bond yields was somewhat smaller than in the US.

The recent correction in the US government bond market was comparable in magnitude to the substantial bond market correction in 1993-1994, and more pronounced than other episodes in the 1990s, such as the episode that followed the near-collapse of the LTCM hedge fund in 1998. For instance, investors in 7 to 10 year maturity US Treasury securities would have suffered a capital loss of 13% of the face value of their investment in the two-month period ending mid-August 2003; and in the euro area, losses would have amounted to around 7%. However, when looking at the year as a whole, it may be fair to say that bond markets sharply corrected what was an undershooting in May and June.

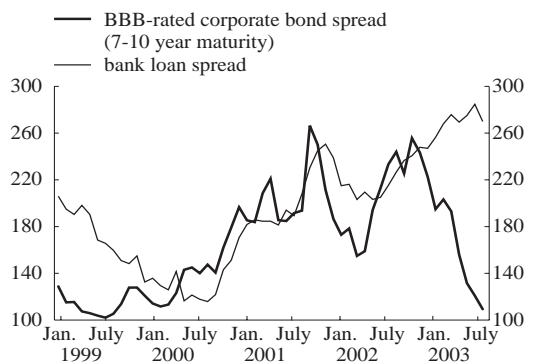
Corporate bond spreads have narrowed substantially

Perhaps, responding to historically low levels of long-term government bond yields in late-2002 and early-2003, some investors moved to the corporate bond markets. As a result corporate bond spreads narrowed significantly (see Chart 5). This may have reflected changing market perceptions of credit risk, reinforcing the underpinnings for a more optimistic outlook for economic developments in the euro area. However, it cannot be excluded that the demand for corporate bonds was a beneficiary of a "hunt for yield" in an environment where competing investment instruments offered relatively low yields. Indeed, corporate bond market trends contrasted with a notable widening of spreads in bank lending markets.

Chart 5

BBB-rated corporate bond spread and bank loan spread¹⁾ in the euro area

(basis points)



Sources: ECB and Merrill Lynch.

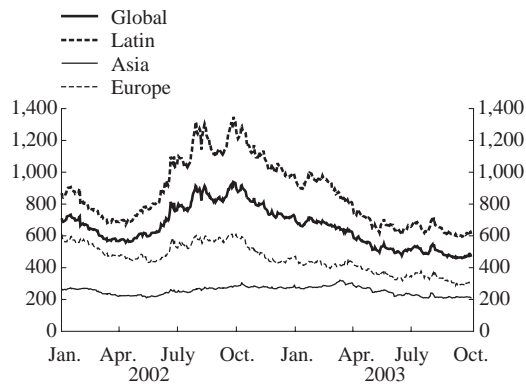
1) Bank loan spread: Interest rate on bank loans to firms with over one-year maturity less the two-year government bond yield.

The low yield environment in mature economies, more generally, may have prompted investors to seek higher returns in other markets, such as the bond markets of emerging market economies where evidence of improving debt sustainability was apparent. For instance, large (non-FDI)¹ capital inflows to emerging market economies were accompanied by a marked reduction in bond yields and compression in credit spreads (see Chart 6).

1 FDI denotes foreign direct investment.

Chart 6
Spreads between emerging market and US government bond yields

(all maturities, basis points)



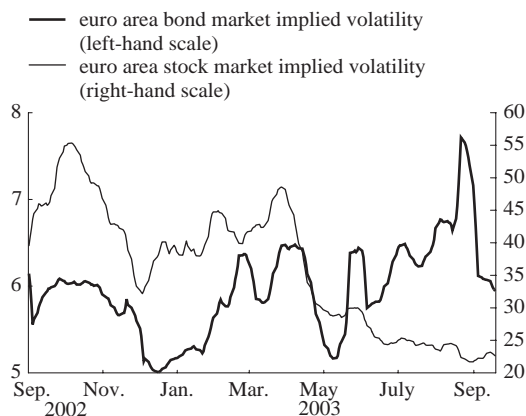
Source: JP Morgan Chase.

Stock price increases underpinned a small rise in IPOs

Uncertainty in global stock markets faded significantly after March 2003, also benefiting European stock markets, as indicated by the fall in implied stock market volatility (see Chart 7). This reduced banks' (limited) equity-related market risks and, more importantly, revived income from asset management, as confidence in stock market investment improved.

Chart 7
Implied volatility in euro area stock and bond markets

(percentages per annum, ten-day moving average)



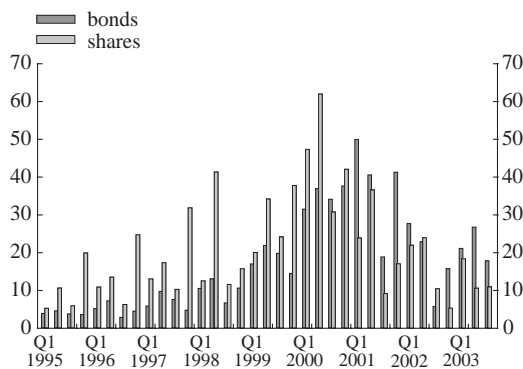
Source: Bloomberg.

Declining equity risk premium, reflecting improving risk appetite, low risk free interest rates and relatively favourable corporate earnings performances in the first half of 2003 all contributed to pushing stock prices upward. By October 2003, the European stock market price-earnings ratio was close to its long-term average.

The rebound in stock prices after mid-March 2003 brought down the cost of issuing equity. However, Initial Public Offerings (IPO) and other issuance of equity remained relatively modest in the first three quarters of 2003 in Europe (see Chart 8). Equity issuance also continued to lag behind bond issuance. The lack of a clear recovery in accessing the equity markets in the first half of 2003 could be one reason lying behind the rigidity of overall corporate sector leverage. It also warrants some caution for banks active in investment banking, as primary market issuance volumes tend to correlate significantly with non-interest income. However, looking ahead, there are some expectations that IPO activity may be revived, perhaps underpinned by the persistence of more orderly conditions in equity markets. A durable improvement in IPO activity would constitute a positive factor for banks that have seen their income from investment banking operations squeezed.

Chart 8
Bond and equity issuance by EU firms

(EUR billions)



Source: Dealogic's Bondware.

2 EU banks' performance

The impact of adverse developments in banks' operating environment depends on banks' business strategies (i.e. diversification of risk exposures) and the status of their risk management. In addition, sufficient profitability is key to building capital buffers which help banks to absorb the realisation of risks in their environment. Banks can implement a number of measures, including cutting their costs and selling assets, to improve efficiency and maintain or even increase solvency levels in the face of adverse external developments. However, these measures should also be assessed against their impact on banks' ability to generate income.

This section begins by assessing the overall profitability of EU banks in 2002 and the first half of 2003. Thereafter it discusses the key factors explaining latest profitability trends,

including developments in banks' income components and asset quality in the face of the changes in the banks' operating environment. This is followed by a review of banks' pricing of credit risk, also commenting on the availability of bank credit. Measures adopted by banks to maintain their profitability in the face of the more difficult environment are discussed thereafter. This section ends with an assessment of the solvency and liquidity position of EU banks.

2.1 Profitability trends

Profitability continued to weaken in 2002 – apparent turnaround in 2003

EU banks' overall profitability deteriorated across the board in 2002 (see Table I).

Table I
EU banks' income, costs and profits

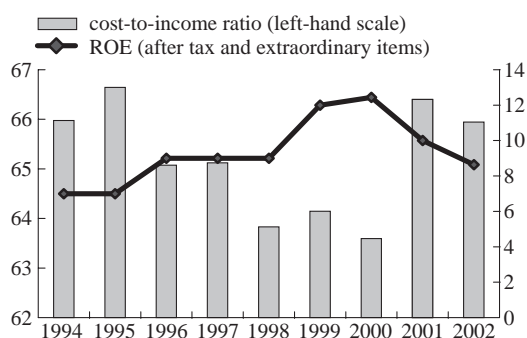
	Change 2001-2002	2002			
		All	All	Large	Medium
		percentage			
Income		points	% of total assets		
Net interest income	0.06	1.57	1.44	1.70	2.41
Dividends	-0.01	0.01	0.01	0.01	0.04
Commissions (net)	-0.03	0.67	0.69	0.62	0.73
Trading and forex results	-0.08	0.13	0.15	0.09	0.05
Other operating income (net)	-0.01	0.17	0.18	0.15	0.25
Total operating income	-0.07	2.55	2.46	2.58	3.49
Expenses					
Staff expenses	0.02	0.90	0.89	0.85	1.37
Other expenses	-0.05	0.78	0.76	0.76	1.14
Total expenses ¹⁾	-0.06	1.68	1.65	1.61	2.51
Profitability					
Profits before provisions	-0.01	0.87	0.81	0.97	0.98
Total provisions	0.11	0.40	0.37	0.44	0.50
Funds for general banking risks (net)	-0.01	0.01	0.00	0.02	0.03
Profits after provisions	-0.11	0.46	0.44	0.51	0.44
Extraordinary items (net)	0.01	0.06	0.04	0.09	0.13
Tax charges	-0.02	0.16	0.15	0.18	0.19
Profits after tax and extraordinary items	-0.08	0.36	0.33	0.42	0.39
Return on equity			% of Tier 1 (net of deductions)		
Profits after tax and extraordinary items	-1.50	8.64	9.29	8.48	5.17
Income structure			% of total operating income		
Net interest income	3.79	61.49	58.43	66.04	69.05
Dividends	-0.32	0.45	0.34	0.48	1.27
Commissions (net)	-0.50	26.30	27.95	24.15	20.87
Trading and forex results	-2.85	5.01	6.08	3.63	1.53
Other operating income (net)	-0.15	6.74	7.20	5.70	7.28
Expenditure structure			% of total expenses		
Staff expenses	2.21	53.83	54.18	52.88	54.51
Other expenses	-2.21	46.17	45.82	47.12	45.49
Cost-to-income ratio			% of total operating income		
	-0.43	65.95	67.00	62.52	72.00

Source: BSC.

1) For 2001, only total expenses are available for all EU countries.

Chart 9 Profitability and cost-to-income ratio of EU banks, all banks

(percentages)



Source: BSC.

Banks' return on equity after tax and extraordinary items (ROE) declined for the second consecutive year, to 8.6%, from 10.1% in 2001. These two years of deterioration from the record high performance in 2000 saw aggregate profitability slip back to levels last seen in 1998 (see Chart 9). While the aim of this report is to describe developments in the EU banking sector as a whole, it is

worth noting that significant country differences continued to prevail in 2002. The aggregated ROE after tax and extraordinary items varied across EU countries' banking systems from around 2% to close to 15% (see Chart 10).

Chart 10 EU banks' ROE (after tax and extraordinary items) in 2002: EU average and maximum and minimum of EU countries

(percentages)

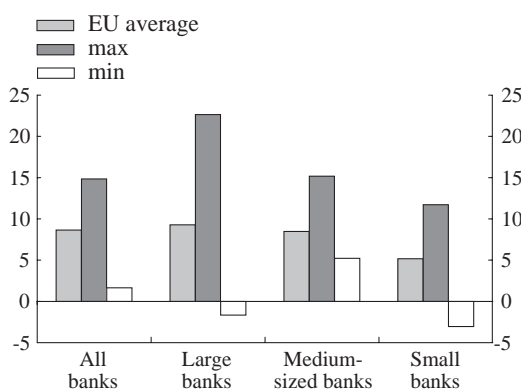


Table 2 Indicators of the 50 major EU banks' asset growth, asset quality, profitability and solvency

(percentages)

	Weighted average [range of variation between highest and lowest 10%]							
	2000	2001	2002	mid-2003				
Annual growth in total assets	30.3 ¹⁾	[4.4,44.4]	10.6	[-0.9,20.8]	-1.6	[-12.2,12.8]	9.2	[-12.2,12.8]
Annual growth in total lending	29.2 ¹⁾	[3.8,72.3]	6.99	[-1.1,16.3]	-0.12	[-9.7,9.5]	2.4	[-9.7,9.5]
Asset quality								
Loan loss provisions/ total operating income	6.13	[1.4,13.9]	8.82	[3.1,19.2]	11.1 (12.0)	[3.3,29.2]	10.3	[4.5,27.6]
Loan loss provisions/total loans	0.36	[0.08,0.72]	0.51	[0.13,0.98]	0.63 (0.67)	[0.12,1.42]	0.57	[0.18,1.15]
Loan loss provisions/total assets	0.18	[0.03,0.41]	0.24	[0.06,0.56]	0.30 (0.31)	[0.05,0.87]	0.26	[0.07,0.48]
Non-performing loans/total loans	2.85	[0.7,7.6]	2.39	[0.5,5.8]	2.71 (n.a.)	[0.4,6.4]	n.a.	n.a.
Profitability								
Net interest income/total assets	1.35	[0.76,2.43]	1.38	[0.71,2.60]	1.42 (1.38)	[0.74,2.71]	1.32	[0.56,2.41]
Net non-interest income/total assets	1.52	[0.50,2.06]	1.36	[0.52,2.04]	1.28 (1.23)	[0.30,1.87]	1.18	[0.23,1.79]
Non-interest income/ total operating income	52.9	[25.6,68.6]	49.6	[24.5,64.9]	47.5 (47.3)	[22.0,64.8]	47.2	[19.6,55.4]
Cost-to-income ratio	65.2	[47.3,78.1]	68.2	[47.2,82.9]	69.2 (64.7)	[48.6,81.5]	61.4	[45.9,71.6]
Return on equity (after tax and extraordinary items)	14.6	[6.60,23.0]	10.6	[3.1,17.7]	8.5 (8.9)	[-1.85,15.1]	11.4	[0.4,19.9]
Return on assets (after tax and extraordinary items)	0.76	[0.32,1.10]	0.50	[0.13,0.93]	0.39 (0.34)	[-0.09,0.89]	0.43	[0.01,0.87]
Solvency²⁾								
Tier 1 ratio	7.7	[6.0,10.4]	7.7	[5.8,10.0]	7.9 (7.4)	[6.1,10.3]	7.7	[6.0,9.4]
Total capital ratio	10.9	[8.7,13.3]	10.9	[9.0,12.5]	11.2 (11.0)	[9.3,13.0]	11.4	[9.6,13.2]

Source: ECB calculations based on Bankscope (May 2003) consolidated data for the 50 largest EU banks for which annual results were available in 2002. For the first half of 2003, data were collected from 46 large EU banks (for comparison, averages for this set of 46 are banks also reported in parentheses for 2002). Total assets at the 50 (46) banks account for nearly 60% of the EU banking sector. Figures for the first half of 2003 are annualised.

1) This growth rate was in part due to mergers and acquisitions.

2) Regulatory solvency ratios are calculated as unweighted averages.

Available data for 50 major EU banks reveal an improvement in profitability in the first half of 2003. On average the ROE increased from 8.9% at the end of 2002 to 11.4% (see Table 2). This was, to a significant extent, associated with a reduction in loan loss provisions and an improvement in cost-to-income ratios. As seasonal or temporary factors might be driving these results, they should be interpreted cautiously. For instance, provision charges typically rise in the second half of a fiscal year as a result of seasonal and accounting effects. In addition, as the third quarter results will be affected by bond market turbulence driving this period, this could raise some doubts about the sustainability of banks' capital market-based income streams. In general, banks' profitability will strongly depend on future economic and financial market developments (see Section 3).

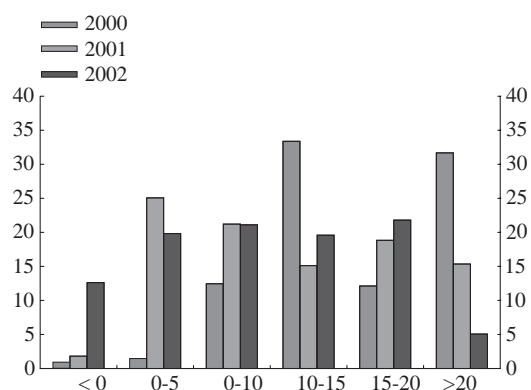
The weakest banks also raised profitability in the first half of 2003

An examination of the distribution of profitability across major institutions and size groups can help in detecting any possible "soft spots". In 2002, a greater share of EU banks showed lower profitability compared to 2001. The share of very profitable banks (ROE over 20%) declined (from 15% to 5% in terms of total assets), while the share of banks making losses increased by 10 percentage points (see Chart 11).

As regards the different size-categories of EU banks,² the ROE was still clearly highest for the largest banks in 2002 (see Table 1), while the variation across EU countries is also greatest in the large bank category (see Chart 10). Large banks also experienced the most significant drop in profitability, while small banks were able to improve their ROE.

The narrower gap between small and large banks is a result of decreasing provisions and improved cost efficiency of small banks, while the longer-term structural differences in performance across size-groups persisted in

Chart 11
EU banks' distribution of ROE
(after tax and extraordinary items)
(percentages)



Source: BSC.

2002. Small banks continued to have lower profitability than medium-sized and large banks (see Chart 10). Small EU banks were still generating more income, mainly net interest income, but they also continued to have higher costs relative to larger banks. The high share of net-interest income for small banks can be explained by the larger share of deposits in their balance sheets, driving down the funding cost, and their focus on traditional retail lending operations, increasing their interest margin. On the cost side, expenses relating to staff as well as retail banking-related IT technologies constitute a larger share for small banks in relative terms.

There are some signs that conditions improved in 2003. Analysis of the variation in the mid-2003 results of the set of 50 major EU banks reveals that the range of institutions with an ROE between 15% and 20% increased significantly, from 5% of the total assets of the banks in the sample in 2002 to 15% in 2003. At the same time, the share of institutions with a negative ROE dropped from 17% to 8%. The improvement was greater for larger financial institutions or banks with a high share of non-interest income. The same shift towards higher profitability in the first half of 2003 can be seen in the figures for the least and most profitable 10% of the banks in the set of 50 major EU

² For a definition of the size groups, see the Annex.

banks (see Table 2). From a banking stability point of view, it is especially important that weaker banks realise a solid improvement in profitability. Thus, the profitability improvements among these banks in the first half of 2003 are an encouraging signal.

2.2 Income and asset quality developments

Banks' profitability is driven by income and cost developments, as well as by provisioning, which reflects changes in asset quality. Whereas income and asset quality developments are strongly correlated with the phase of the economic cycle and other developments in the banks' operating environment, costs are less responsive to economic developments.

This sub-section will discuss the profitability drivers dependent on external developments, i.e. income and asset quality. Cost levels and containment will be discussed in the following sub-section under the measures adopted by banks to improve profitability.

Banking activities exhibited sluggish growth, apart from mortgage lending

The sluggish pace of economic activity, in Europe and elsewhere, resulted in slower growth of banking activity in 2002 compared to the previous year. In particular, aggregate consolidated total assets of EU banks grew by only 1.2% in 2002 (see Table 3) and loans and advances to customers by 2.7%.³ The slow growth of corporate loan portfolios was compensated by relatively strong growth in loans for house purchases. In particular, the continued expansion of mortgage lending supported banks' net interest income generation.

The unconsolidated data on euro area bank lending to the non-bank private sector also show a clear trend of steadily decelerating lending growth, driven by corporate lending. The aggregated growth was 4.5% year-on-year in June 2003 (down from 5.7% at end-2002). There was clear divergence between lending growth to household and corporate

³ For a description of the BSC data coverage, see the Annex.

Table 3

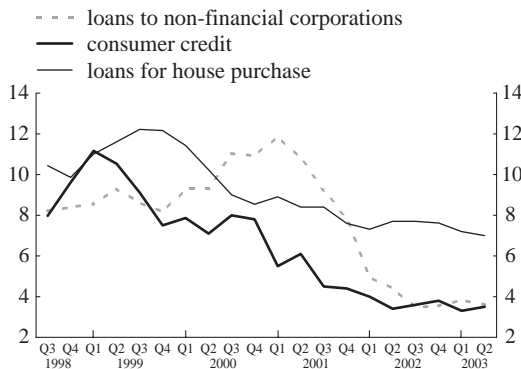
EU banks' assets, liabilities (key items) and risk-adjusted on and off-balance-sheet items

(all banks)

	2002 (EUR millions)	Change 2001-2002 (percentages)
Assets	24,409,351	1.22
Cash and balances with central bank	280,248	-6.47
Treasury bills	339,880	-10.95
Loans to credit institutions	3,750,563	-2.21
Loans and advances to customers	12,173,775	2.71
Debt securities	4,815,179	-0.93
Shares and participating interests	792,891	-10.88
Liabilities	24,409,351	1.22
Liabilities due to credit institutions	5,245,631	-5.83
Deposits	10,031,273	-3.40
Bonds	4,947,750	10.89
Provisions	252,184	-11.22
Funds for general banking risks	35,733	1.53
Subordinated liabilities	448,524	0.83
Own funds	1,118,120	3.93
Risk-adjusted items		
Risk-weighted assets	10,119,449	-3.56
Risk-weighted off-balance-sheet items	1,354,236	-2.39
Trading book own funds requirement	65,478	-3.73

Source: BSC.

Chart 12
Annual growth in lending by euro area credit institutions to the non-financial private sector
(percentages per annum)



Source: ECB.

sectors (see Chart 12). Corporate lending growth slowed down to 3.6% by mid-2003, while housing loans grew at 7.0%, down from 7.6% at end-2002. Consumer credit growth stabilised at a significantly lower level after early-2002.

Income composition shifted more towards net interest income as non-interest income stagnated

Compared with other sources of income, which stagnated in 2002, EU banks' net interest income developed fairly well, thanks to robust activity in mortgage markets. The share of net interest income increased to 61.5% of total operating income in 2002 (see Table 1). Consequently, banks (again) became more dependent on income from traditional lending operations for their overall profitability.

Looking at the breakdown of non-interest income, EU banks' commissions declined in terms of total assets to some extent in 2002 and lost their share in total income, as the inactivity in financial markets depressed banks' fee income. In particular, the fall in security issuance volumes depressed banks' income from investment banking and asset management activities. As regards other non-interest income sources, the most significant

drop was experienced in trading and forex income, even though derivatives businesses helped some banks to reduce income losses from trading activities. Figures for the first half of 2003 did not show a significant change in the income composition as compared with 2002 (see Table 2).

Provisioning charges mainly from the corporate sector

In the downward phase of the economic cycle banks' income usually starts to weaken first. Recognition of a deterioration in asset quality often prompts banks to increase provisioning. Given the deterioration in the environment, EU banks experienced weakening asset quality in both 2001 and 2002. It is noteworthy that the levels of non-performing assets remained relatively low in most EU countries in 2002. Non-performing and doubtful loans increased to an average of 3.1% of total loans and advances in 2002, from 2.9% in 2001 (see Table 4).

Even though the pace of weakening asset quality was slower than in most of the previous slow growth periods, banks' provisioning clearly increased in 2002. The ratio of the flow of provisions banks have to make on their profit and loss account to total loans and advances rose to 0.47% in 2002, from 0.34% in 2001, representing a similar increase in relative terms to that of 2001. The provisioning coverage on the balance sheet (provision stock to non-performing and doubtful loans) remained roughly unchanged from 2001, at approximately 49%. In 2002 EU banks also made relatively significant provisions and write-downs against the depreciation of the value of trading and investment portfolios.

The impact of provisioning on banks' profits was relatively large in 2002. Provisions represented 16% of total operating income in 2002 (11.1% in the previous year). They increased in the fourth quarter of 2002 in particular, reflecting the delayed impact of a weakening phase in the business cycle

Table 4
EU banks' non-performing assets and provisioning¹⁾

	2001	2002
Asset quality (% of loans and advances)		
Total non-performing and doubtful assets	2.90	3.06
Asset quality (% of own funds²⁾)		
Total non-performing and doubtful assets (gross)	38.29	42.44
Total non-performing and doubtful assets (net)	19.73	21.65
Provisioning (flow) (% of loans and advances)		
Total provisions	0.34	0.47
Provisioning (stock) (% of total non-performing and doubtful assets)		
Total provisions	48.47	48.98

Source: BSC.

- 1) Since banks' non-performing and doubtful assets and provisioning figures are not entirely comparable across countries, EU aggregation should be considered with caution. Please note that changes in underlying national data for 2001 resulted in some differences in figures from those published in the previous report (see EU banking sector stability, February 2003).
- 2) Own funds equals the sum of Tier 1 and Tier 2 (all capital deductions have been subtracted from the sum). Net figures reflect non-performing assets after deducting the respective reserves.

and possibly also seasonal and accounting effects (see Table 1).

The bulk of the problem loans and, consequently, provisioning needs came from the corporate sector. According to country reports from national authorities, some major banks suffered large losses from loans to a number of large enterprises. In most cases non-performing and doubtful assets were of domestic origin. However, there were some reports of significant problem loans accumulating outside the home market.

Banks' asset exposure increased in principle on account of the larger share of household sector lending. Retail lending, especially mortgages, accounts for a large part of EU banks' balance sheet exposures.⁴ However, even amid the continued weakness in the economy in 2002 and the first half of 2003, retail payment arrears rose very slowly. Only a few countries reported increased (but still very limited) bad loans from households in 2002.

In the first half of 2003, the set of 50 major EU banks showed decreasing provisions (see Table 2). As a percentage of total loans, loan loss provisions fell from 0.67% to 0.57% on average. This occurred mainly as a result of a reduction in the number of institutions with high provisions. The share of institutions with provisions over 20% of total operating

income fell from 19% to 9% in terms of the total assets of the banks in the sample. The banks with the highest level of provisions also showed a reduction in their provisioning charges (see Table 2). At the same time, the share of institutions with very low provisions (between 0% and 5% of total income) fell from 22% to 13% in terms of total assets. Looking ahead, the reduction in provisioning charges for the full year awaits confirmation, owing to economic uncertainties and the typical increase in charges towards the end of the fiscal year.

2.3 Pricing of credit risk and availability of finance

More risk-based pricing of bank credit ...

Adequate pricing of risks in line with expected losses, including a premium for risk-taking, acts as provisioning against deteriorating asset quality. The data show that banks tightened their credit terms, as banks' lending margins vis-à-vis market interest rates continued to widen from mid-2002 onwards. The average euro area margin on total new lending fell for a brief period between March and April 2003, but it subsequently continued to increase, reaching

⁴ At the beginning of 2003, the share of retail loans to total loan stock varied from 20.9% to 58% in the EU, averaging at around 40%.

2.6 percentage points at the beginning of June 2003. The trend was driven mainly by larger margins on loans to enterprises and was fairly persistent across the euro area. Banks' overall (profit) margin decreased, as deposit rates did not fall as rapidly as market interest rates, and the deposit margin narrowed by more than the lending margin widened. The overall margin reached 3.5% in June 2003 (3.8% at end-2002) for the euro area (see Chart 13).⁵

Survey information can provide further insight into the trends observed in banks' margins. The quarterly euro area Bank Lending Survey (BLS) has shown a tightening tendency in banks' credit terms, in particular in lending to enterprises since its inception in January 2003. However, in the latest survey⁶ undertaken in October 2003, banks reported a continuing decline in the extent to which credit standards applied to enterprises were being tightened, as was already the case in the July survey. Nevertheless, the trend remained towards tightening, with a net percentage of above 20% reporting that credit standards applied to lending to enterprises

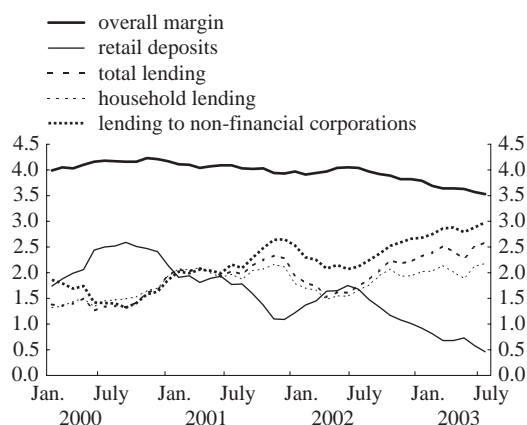
were tightened in October. Moreover, very few banks reported that they were sufficiently confident to ease credit standards.⁷

... but no strong evidence of credit constraints to enterprises

Country reports confirm the findings of the BLS. Clients in those industries that are considered more risky (telecom, media and technology (TMT), airline, and construction) have been most affected by tighter lending terms. Lending to small and medium-sized enterprises (SME) could also be affected by stricter lending terms. According to the BLS and the country reports, risks related to firm-specific and general economic outlooks were the major factors behind the tightening of credit standards. The application of tighter credit terms to, in the main, riskier corporate clients would seem to indicate that banks are adjusting their lending policies to better take account of the risk-return profile of bank financed projects. This may be partly driven by an anticipation of new capital adequacy requirements for banks ("Basel II") and a general improvement in credit risk management, and may explain the relatively low level of EU banks' provisioning needs in the current economic slowdown. This tendency would continue to support a more stable banking system in the medium to long run. By October 2003, there was little evidence of wide-spread credit constraints, despite tightened credit standards.

Chart 13
Euro area banks' margins

(percentage points)



Source: ECB.

Note: See footnote 5 for definitions of the margins.

5 The overall margin is calculated by subtracting average deposit rates from average new lending rates. The deposit margin is the difference between the reference market rate and average deposit rate, while the margin on lending is the difference between the interest rate on new lending and the reference market rate.

6 Available from the ECB web-site at www.ecb.int.

7 In the July survey, 66% of responding banks widened their margins on riskier loans, down from 70% in April 2003. For average loans the percentage fell to 41%.

2.4 Measures to restore profitability

Cost efficiency relatively stable in 2002 but showed strong improvement in 2003

EU banks have actively implemented cost-cutting measures since 2001 in order to improve profitability. Efforts to reduce the number of branches and employees were particularly evident in those banking systems which traditionally have a high density of branches. Many banks reduced capacity significantly in securities-related activities too. In 2002 the improvement in the underlying operating efficiency in general (the aggregate cost-to-income ratio decreased to 66.0% from 66.4% in 2001) was still only slight (see Table 1). The improvement was more pronounced in the countries displaying the lowest level of efficiency.

In the sample of 50 major EU banks, the impact of cost cutting was quite pronounced in the first half of 2003 (see Table 2). The average cost-to-income ratio of these banks fell to 61.4%, from 64.7% at the end of 2002. Underlying this was a notable decrease in the share of institutions within the 70%-80% band (share in total assets falling from 27% to 6%) and a corresponding increase in the 60%-70% band (asset share rising from 24% to 47%).

Asset sales partly compensated for lost income from other sources

According to country reports, asset sales significantly boosted banks' profitability and decreased risk-weighted assets in many countries in 2002, as in 2001. The sales often involved non-core assets, such as shares and other non-interest-bearing securities. Sales of shares in affiliated enterprises were often justified by the need to reform business structures in the changed environment. However, there were cases where assets of core business areas were sold as well, indicating a certain degree of stress. Asset sales were used less in those EU countries where the economic environment and hence

the profitability of banks have developed more favourably.

Extraordinary items, which show in part the impact of asset sales on banks' profitability, represented 13% of profits (after provisions) for EU banks on aggregate in 2002 (see Table 1). The impact on some banks' "bottom line" profitability was quite significant. However, the precise total impact of asset sales is difficult to measure as other income items might be affected.

Extensive sales of profitable assets can come at a longer-term cost. Increased sales of non-core, yet profitable, assets could reduce the "upside potential" for banks to increase their income in a more favourable environment in the future. They could also affect banks' hidden reserves and thus reduce banks' financial buffers for absorbing losses.

2.5 Capital adequacy and liquidity

Capital adequacy has remained stable

EU banks maintained their solvency levels in the face of the risk of sustained weakness in the economy. In 2002, the aggregated regulatory capital ratio remained broadly unchanged at 12.3% (see Table 5), as well as the Tier I ratio (8.3%). These ratios benefited substantially from the decline in banks' risk-weighted on and off-balance-sheet items, rather than from issuance of new equity. Hence, banks adjusted to the more difficult environment largely by reducing their risk-weighted credit exposure, which could represent a positive development for banking stability – to the extent that credit risk is simultaneously reduced.⁸ However, as noted above, sales of profitable assets may have reduced individual banks' ability to withstand further risks without implications for capital.

⁸ Under the present Basel I capital adequacy standards, the relationship between bank's credit risk and its risk-weighted assets is quite loose. The forthcoming reform of the standards (Basel II) aims at tightening this relationship.

Table 5

EU banks' regulatory capital ratios

(percentages)

		2001	2002
All banks	Tier 1 ratio	8.31	8.30
	Total capital ratio	12.18	12.29
Large banks	Tier 1 ratio	7.67	7.52
	Total capital ratio	11.98	11.81
Medium-sized banks	Tier 1 ratio	9.00	8.99
	Total capital ratio	12.28	12.52
Small banks	Tier 1 ratio	12.27	12.57
	Total capital ratio	13.65	15.93

Source: BSC.

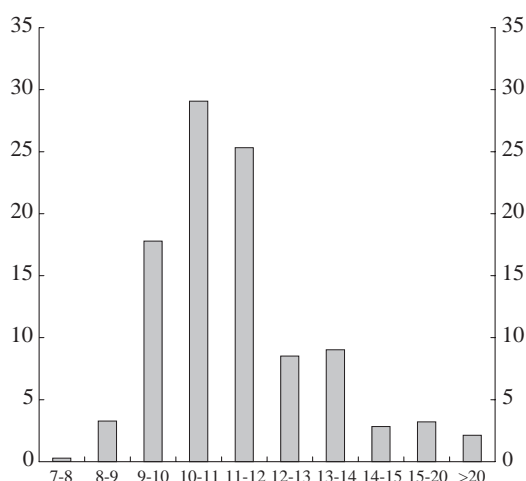
As regards the distribution of capital adequacy in the EU banking sector (see Table 6), the number of banks with a total regulatory capital ratio below 9% increased to 218 in 2002, from 121 in 2001. However, the risk-weighted asset share of these institutions was only 3.5% of all institutions included in the data collection exercise (see Chart 14). Across the EU there was relatively limited variation in the aggregated capital ratio, with capital levels being adequate in all countries (see Chart 15).

The differences in capital ratios of small, large and medium-sized banks increased further in 2002. The total capital ratios of large banks decreased marginally to 11.8% (see Table 5), while in the case of medium-sized banks the ratio increased slightly to 12.5%. By contrast, small banks were able to improve their capital ratios markedly. On average, the ratio increased to 15.9%, from 13.7% in 2001. Small banks tend to have significantly higher capital ratios than large and medium-sized banks (see Chart 15). Their larger pool of own funds and greater share of liquid assets could compensate for less developed risk management systems.

Chart 14

Distribution of regulatory capital ratio across EU banks, 2002

(percentage of risk-weighted assets)



Source: BSC.

Developments in the first half of 2003 among large EU banks show that capital adequacy has been maintained on a continuous basis. In the sample of 50 major banks, the total capital ratio strengthened from end-2002 into the first half of 2003, from 11.0% to 11.4% (see Table 2).

Table 6

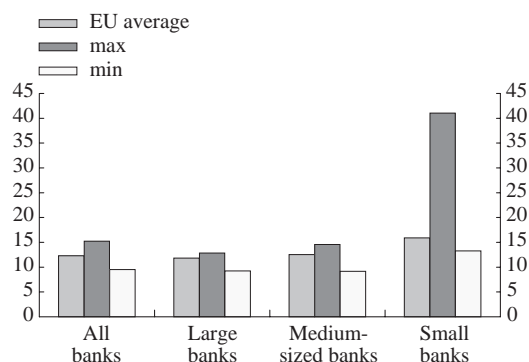
EU banks with regulatory capital ratios below 9%, 2002

	Large	Medium	Small
Number of banks with a regulatory capital ratio below 9%	1	47	170
Asset share (% of total assets) of banks with a regulatory capital ratio below 9%	0.3%	1.6%	0.2%

Source: BSC.

Chart 15**EU banks' total regulatory capital ratio in 2002: EU average and maximum and minimum of EU countries**

(percentages)



Source: BSC.

Access to interbank markets has improved

Even in the absence of reliable turnover data for most market segments, it seems clear that most parts of the euro money market remained highly liquid in 2002.⁹ The liquidity of this market is highly significant for the ongoing liquidity management of EU banks.

The spread between unsecured interbank deposit rates and secured repo rates narrowed in 2003 from the relatively high levels seen in the latter half of 2002 for transactions in euro. This occurred in

particular at longer maturities (see Box 1). These developments reflected a general decline in the perceived credit risks associated with banks and improved access to market liquidity following the turbulent period in the second half of 2002. Hence, in terms of having smooth access to interbank money markets when needed, banks' liquidity risks seem to have reduced.

However, as the end-2002 period showed, at least interbank market access conditions, if not the availability of funds altogether, can change rapidly once market sentiment towards (particular) banks has deteriorated. Moreover, according to market participants, the increased preference for secured transactions has not receded since last year. This finding also reflects a long-term trend, evidenced in the ECB's Money Market Studies, towards secured and short-term transactions, which points to more careful counterparty risk management by banks (see Table 7). While such improvements in banks' risk management are naturally positive, smaller credit lines might limit banks' ability to withstand liquidity shocks by borrowing from the interbank market.

9 One indication of this is a 16% rise in the number of Euribor contracts traded on LIFFE during 2002.

Table 7**Statistics for the euro money market, second quarter of 2002**

(percentages)

Market segment	Change of turnover from 2001 to 2002	Share of average daily turnover of the largest players						Share by average maturity				
		5 largest		10 largest		20 largest		<1m	1m-12m	>1y	<2y	>2y
		lend	borrow	lend	borrow	lend	borrow					
Unsecured cash transactions	-15 (0)	29 (32)	31 (32)	44 (47)	48 (50)	64 (67)	70 (70)	94.1 (93.7)	5.9 (6.2)	0.1 (0.1)		
Secured cash transactions	15 (44)	41 (43)	46 (52)	65 (64)	70 (69)	86 (84)	88 (86)	88.8 (86.8)	11.1 (13.0)	0.0 (0.2)		
OIS transactions ¹⁾	-8 (28)	50 (48)		75 (68)		91 (88)		46.1 (45.6)	51.5 (51.8)	2.4 (2.7)		
Other IRS ²⁾	62 (50)	72 (60)		83 (77)		92 (90)					67.7 (41.1)	32.3 (58.9)

Source: ECB, Money Market Study 2002.

Note: Numbers in brackets indicate figures for the year 2001 study.

1) OIS = overnight interest rate swaps.

2) IRS = interest rate swaps.

Box I

Money market spreads

The spreads between the unsecured deposit rates and either the EONIA swap or secured repo rates are useful indicators of conditions in the interbank money market. These spreads can reflect either (1) the risks attached to the banking sector, (2) the degree of risk aversion prevailing in the market as a whole (resulting from, for instance, a reduced willingness of banks to accept risk), or (3) preferences for holding liquidity (for instance, on account of a perceived risk of payment system failures). An increase in these factors can lead to situations that compromise the stability of the financial system, because of an increased likelihood that those in need of liquidity may not be able to obtain it, or only be able to obtain it at a high cost. This Box attempts to distinguish the different types of risk that are priced into different money market interest rates, in order to better understand how movements in different spreads can be interpreted.

The **repo (repurchase agreement) rate** is the price for borrowing liquidity, i.e. obtaining credit, in exchange for general collateral. The provision of the latter implies that the repo rate contains practically no credit risk premium, because the creditor can always liquidate the collateral in the event that the debtor defaults on paying back his debt. Furthermore, it is in most circumstances reasonable to assume that general collateral and liquidity are substitutes, in the sense that the former can, if need be, be transferred into liquidity, either via the repo market or through the monetary policy operations of the central bank. Under this assumption, the repo rate does not price in any liquidity premium. Therefore, the repo rate can be seen as the risk free interest rate, dependent only on the future policy rates of the central bank and the fluctuation of rates resulting from the design of its operational framework.

By contrast, the **deposit rate** is the price for irrevocably obtaining liquidity over a given period of time, without the provision of any collateral. Hence this rate contains both a credit risk and a liquidity premium and is always above the repo rate. The spread between the deposit rate and the repo rate (the depo-repo spread) widens whenever credit risk aversion, perceived credit risk of banks or the utility attached to liquidity increases.

Finally, the **EONIA swap rate** is the (fixed) rate that banks are willing to pay in exchange for receiving the average EONIA rate as calculated over the maturity of the contract. Therefore the swap rate reflects the same risk premiums that are priced into the expected overnight deposit rates (for which EONIA is a reference rate) and is hence above the risk-free repo rate. Obviously, the average risk of lending via overnight deposits, comprising both a liquidity and credit element, is less than the alternative of lending via long term (fixed) deposits, because the former can, by contrast with the latter, be adapted to new circumstances each day. Largely for this reason, the level of the EONIA swap rate is below the level of the deposit rate.

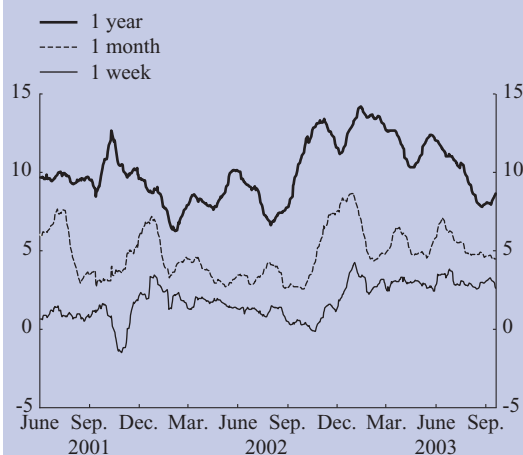
In summary, the **depo-repo spread** can thus be broken down into 1) the swap-repo spread, which expresses the expected overnight risk premiums, and 2) the depo-swap spread, which is the additional premium required for irrevocably committing to the risk over a longer maturity. Since the depo-repo spread summarises the total premium for liquidity and (perceived) credit risk in the interbank money market, it seems most natural, in the context of banking system stability, to first of all monitor this spread. If the liquidity premium is assumed to remain constant, the movements in the depo-repo spread only reflect the credit risk premium.

Spreads with different maturities may also have different interpretations. While a widening of the depo-repo spread at longer maturities, of around one year, implies that it may be difficult for banks to cover their structural, long-term liquidity deficits, a widening of very short maturity spreads, at one-week or one-month maturities, may be indicative of the more urgent risk that banks may be unable to raise the very short-term liquidity they need to carry out their payments.

If a widening of spreads is mainly concentrated around specific calendar days (this would be evident ex-ante from the forward spreads) it may indicate concerns over a specific event. This was seen in the transition to the

Spread between the interbank deposit and repo rates for different maturities

(basis points; values are smoothed using a one-month moving average)



Source: Reuters.

The chart on the left shows the depo-repo spread for one-week, one-month and one-year maturities. A comparison with the market-based indicators of systemic banking stability, introduced in Box 2, confirms that these are, as expected, also reflected in the depo-repo spreads. For instance, the depo-repo spreads increased fairly substantially during the autumn of 2002, after the general decrease in the distance-to-default that was initiated in June 2002 (see Box 2, Chart A). Moreover, by October 2003 the depo-repo spread had declined by around five and three basis points at the one-year and one-month maturities respectively compared to levels prevailing at the start of the year. This indication of more resilience in the money market is in line with the apparent reversal of the spread for EU banks' subordinated debt (see Box 2, Chart B). However, the depo-repo spread at the one-week maturity, standing at about three basis points, remained somewhat elevated. This level, which does not give rise to concerns over banking stability, probably reflects continuously heightened risk awareness.

new millennium in 2000 when the so-called Y2K risks saw the one-week spread surging above one percentage point. In such situations, where the spreads normally widen because of concerns over the availability of aggregate liquidity in the banking system and not because of higher credit risk or risk aversion, the central bank normally possesses a number of tools with which it can reduce the spreads.

The chart on the left shows the depo-repo spread for one-week, one-month and one-year maturities. A comparison with the market-based indicators of systemic banking stability, introduced in Box 2, confirms that these are, as expected, also reflected in the depo-repo spreads. For instance, the depo-repo spreads increased fairly substantially during the autumn of 2002, after the general decrease in the distance-to-default that was initiated in June 2002 (see Box 2, Chart A). Moreover, by October 2003 the

With respect to market concentration, which gives an indication of the market's dependency on individual market participants, the ECB Money Market Study 2002¹⁰ reveals that the concentration in most segments of the euro area money markets, while having declined slightly recently, remains relatively high. Particularly in some OTC markets for money

market derivatives, a failure of one of the major market players might lead to frictions. However, the level of concentration in the euro money market is now significantly smaller than in the markets preceding it, which were segmented by national currencies.

3 EU banks' risk outlook

According to the most recent analysis of the ECB, the latest economic data are consistent with some improvement in economic activity in the second half of 2003 in the euro area. The economic upturn should broaden and strengthen in the course of 2004. Short-term risks to this main scenario are considered to be balanced. Should developments unfold according to this scenario, it would be favourable for the profitability and solvency of EU banks.

The section below begins with a review of forward-looking market-based indicators of EU banks' financial condition and risk with a view to assessing how markets foresee the condition of banks developing in the future. The analysis of market-based indicators falls between a traditional assessment of banks' financial condition on the basis of accounting data and a forward-

¹⁰ Available on the ECB's website at www.ecb.int.

looking assessment of downside risks, because the market indicators reflect not only the markets' assessment of the "economic" capitalisation and leverage of banks, but also their forward-looking earnings prospects. The assessment of the latter is based on the market's perception of the outlook for the banks' operating environment.

Even though the most likely scenario is considered to be one of a gradual economic recovery, it is also necessary in a present analysis of banking stability to identify scenarios which, though relatively remote, could potentially have a negative impact on banks. This is reflected in the discussion in the middle part of this section. In this context, EU banks' sectoral, industry and geographical credit risk exposures are also reviewed. The section ends with a review of their market risks.

3.1 Market indicators of banks' financial condition

Market-based indicators show stabilisation

Market-based indicators of the stability of major EU banks (for which market data are available) generally suggest that the earlier trend of gradually increasing fragility may have come to a halt in the first half of 2003. In particular, banks' share prices tended to outperform the general market in the second quarter of 2003, which points towards market perceptions of an improved outlook. However, the persistence of the improvement in banks' performance is as yet unclear, as is evident from more direct default risk indicators derived from market data (in particular the distance-to-default and subordinated debt spread, which still tend to be relatively depressed) (see Box 2). These indicators reflect the remaining uncertainties surrounding banks' earnings outlook.

By July 2003 the average distance-to-default (DD) for the major EU banks had not improved significantly (see Chart A in Box 2), but the indicator was stabilising. In addition, the degree of variation in this metric across banks, which had heightened around the time of the market turmoil in late 2002, tended to decrease in 2003. From the analysis in Box 2, which proposes ways of assessing system-wide banking stability, it is evident that a tone of caution is warranted, as, for example, the weighted average DD among major EU banks was still quite low in August 2003, indicating that the larger institutions exhibited a greater degree of vulnerability in relative terms. The "threshold" indicators, indicating the share of banking system assets located in weaker banks, also suggest that a large share of the major banks still suffered from a relatively high degree of fragility in August 2003 (see Chart C). On the basis of these indicators, the fragility in the banking sector clearly increased in the latter half of 2002 and in the first quarter of 2003, which was also reflected in money market tensions towards the end of 2002. The increased default risk of certain banks was thus priced into interbank market spreads. While there was no further deterioration, these measures suggest a degree of fragility similar to that observed during the general financial market turmoil following the Russian default in 1998.

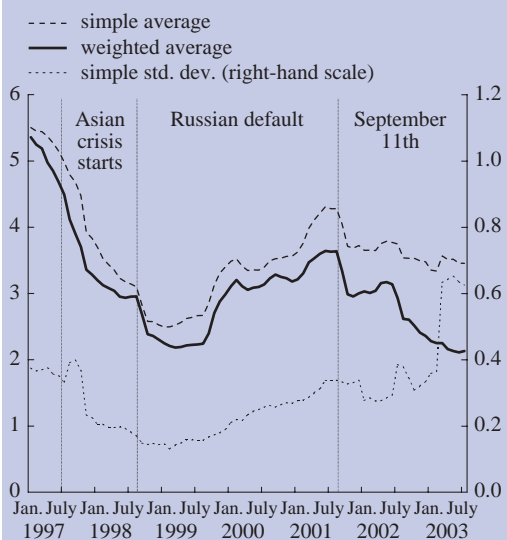
Banks' subordinated debt spreads tended to improve in 2003 as compared with the highest levels reached in 2002 (see Chart B in Box 2), but here again the figures indicate a stabilisation rather than any clear improvement as yet in the financial condition and risk profile of banks. The threshold indicators suggest that the share of "moderately" weakened banks has decreased, while the "more severely" weakened ones still have a relatively large share of the assets of the major banks included in the analysis (see Chart D).

Box 2

Market-based indicators of systemic banking stability

This Box discusses analyses intended to refine the use of market-based indicators for the analysis of systemic bank fragility. As a starting point, Gropp, Vesala and Vulpes (2002)¹ demonstrates that two theoretically preferred and complementary (and increasingly common) market-based indicators – distance-to-default (DD)² and subordinated debt spread – are able to predict individual bank problems in Europe. This means that these

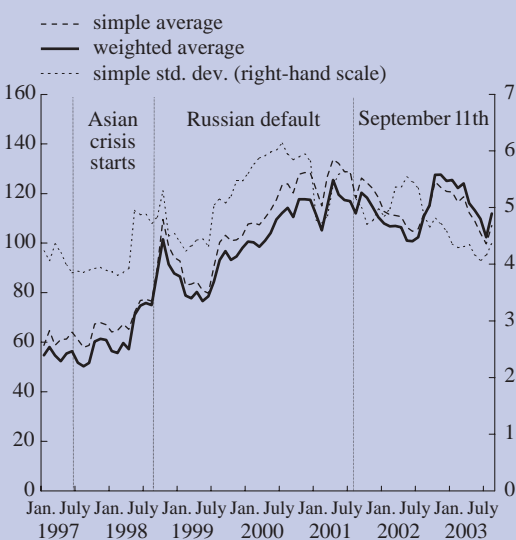
Chart A: Distance-to-default for EU banks



Sources: Datastream, Bankscope and ECB computations.

Chart B: Subordinated debt spreads for EU banks

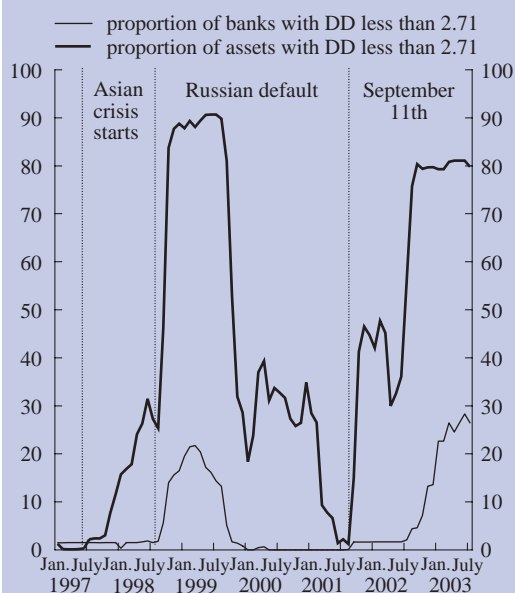
(basis points)



Sources: Datastream, Bloomberg and ECB computations.

Chart C: “Threshold indicators” based on distance-to-default for EU banks

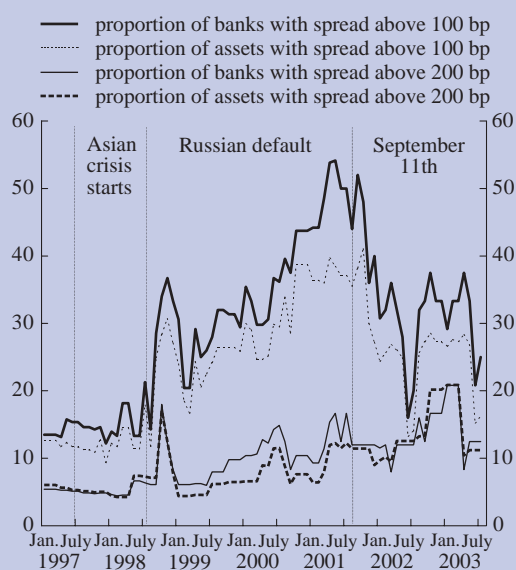
(percentages)



Sources: Datastream, Bankscope and ECB computations.

Chart D: “Threshold indicators” based on subordinated debt spreads for EU banks

(percentages)



Sources: Datastream, Bloomberg, Bankscope and ECB computations.

1 Gropp, R., J. Vesala and G. Vulpes (2002): “Equity Market Signals as Leading Indicators of Bank Fragility”, ECB Working Papers No 150.

2 DD measures the number of asset value standard deviations away from the default point.

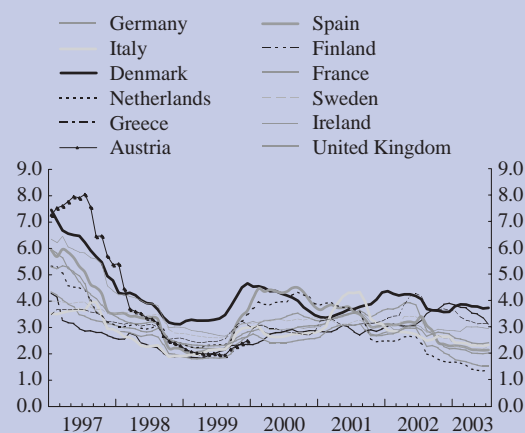
indicators can provide leading information on banking problems, as they reflect banks' perceived default risk (which is a function of their earnings expectations, risk profile and leverage). For this reason, the aggregation of market signals regarding the health of individual banks may yield useful indicators as to the stability of the entire EU banking system. This is particularly so because the set of large banks for which such indicators can be calculated account for a substantial share of the banking assets in most of the EU countries.

First, how could the bank-specific market indicators be aggregated into systemic fragility indicators? Chart B for spreads and, in particular, Chart A for DDs show that an appropriate **weighting scheme** (bank asset size) can refine the picture of the vulnerability of the banking sector as compared with the simple average. In particular, the weighted average DD consistently displays a weaker condition, suggesting that the larger banks are more fragile than the smaller banks in the sample. In terms of spreads, this finding is less pronounced. On the other hand, the weighted standard deviation displays a smoother evolution than the simple deviation, as the latter is driven more by individual (and potentially smaller) banks. Note that a shorter DD and larger spread signal increased fragility.

A complementary way of looking at the systemic banking conditions is to plot the proportion of banks (in terms of number and asset shares of banks in the sample) that are below a certain **threshold**. These measures could be taken as indicating the proportion of large banks at particular risk (depending on the selected threshold). For DDs (see Chart C). The threshold of DD of less than 2.71 corresponds to a probability of default of more than 0.67%.³ The latter is considered as the borderline between the investment grade and speculative credit quality. It seems that most banks can, at times of turbulence, have a DD corresponding to a speculative grade rating. Chart D displays two thresholds for spreads, 100 and 200 basis points (bp). The two thresholds, while ad hoc, can together reveal interesting developments, such as an overall improvement among the majority of banks in terms of the 100 bp threshold, while inertia in the share of banks above 200 bp suggests that some of the most vulnerable banks have remained weak.

Second, the behaviour of the different indicators can be assessed against each other in order to evaluate their **relative performance**. The correlation coefficient between the levels of DDs and spreads over time is significant

Chart E: Individual country weighted average distance-to-default



Sources: Datastream, Bankscope and ECB computations.

Indicators of co-movement of EU banks' distances-to-default

(in terms of DD innovations month-on-month)

	Correlation of country weighted average and the EU average	Ratio of banks' correlations in a country to average EU correlation	Number of banks
Denmark	0.22	1.58	2
Germany	0.77	1.74	6
Greece	0.06	4.86	2
Spain	0.47	1.15	7
France	0.58	2.96	3
Ireland	0.38	3.93	3
Italy	0.53	1.28	16
Netherlands	0.65	2.59	3
Finland	0.12	0.81	2
Sweden	0.36	3.94	2
United Kingdom	0.51	1.85	7

Countries without data or without at least two banks are Luxembourg, Belgium, Austria, and Portugal.

For Charts A-E, at the beginning of the sample there are 67 banks for which DDs are calculated, gradually falling to 53 from January 2003 onwards. There are spreads for 37 banks in January 1997, increasing to 51 in November 1999, falling to 35 in March 2001 and to 25 after that. The spreads over the respective government bond yields are calculated on straight, subordinated fixed rate bonds, which are adequately liquid (majority with a volume above EUR 150 million) to abstract from the liquidity premium.

The second column in the table is calculated as the average country-level correlation in DD innovations/average EU-wide correlation.

Sources: Datastream, Bloomberg, Bankscope and ECB computations.

³ Transformation of DDs to probability of default is here based on the normal distribution and is only for illustrative purposes.

(-0.5), which suggests that the two indicators give a fairly consistent picture on aggregate. Both indicators (as well as the threshold measures) also tend to react in an intuitive way to major adverse shocks in the banks' operating environment (such as the Asian crisis, Russian default and September 11 events (see Charts A-D). However, the DDs appear to be more consistent and powerful indicators of fragility, which is borne out by a simple observation of their reaction to the shock events. This notion is also shown more rigorously at the level of individual banks in Gropp, Vesala and Vulpes (2002). The reason for the inferiority of the spreads is that they can also reflect other factors than default risk, in particular expectations of a public bailout and liquidity differences across banks' subordinated debt instruments. However, the possible measurement biases suggest that monitoring several indicators should lead to a superior assessment over reliance on any single indicator.

Third, the indicators for major banks seem quite strongly to reflect **EU-wide shocks**, which means that it is meaningful to examine the aggregated systemic indicators displayed here at the EU level. Chart E shows that country-specific weighted average DDs move quite closely together. The correlation coefficients of country-specific weighted averages and the EU weighted average are relatively high in terms of the innovations in DDs, showing a fairly significant degree of co-movement, except for Finland and Greece (see Table). The second column in the Table reports the ratio of individual banks' correlation to average EU-wide correlation, which shows the relative influence of country-specific shocks in driving the DDs. For almost all countries, the ratio is higher than one, indicating that banks are more similar within the individual countries than within the EU as a whole, although the ratios do not indicate significant differences (except maybe for Greece, Ireland and Sweden).

3.2 Potential sources of macroeconomic risk

Should economic growth be weaker than expected, risks to banks could rise

Looking ahead, short-term risks to the main economic scenario for the euro area of a gradual recovery appear to be balanced. In this environment, a gradual pick-up in the income of banks and a concomitant improvement in their financial condition can be expected. This notwithstanding, a prudent evaluation of the stability of the banking sector must also include an assessment of the potential impact of plausible – albeit relatively remote – downside scenarios.

As regards the robustness of the banking sector, developments in banks' loan loss provisioning warrant careful examination. The loan loss provisions of EU banks tend to lag behind economic activity, meaning that weaker growth in the past has typically been followed by higher provisioning (see Box 3).

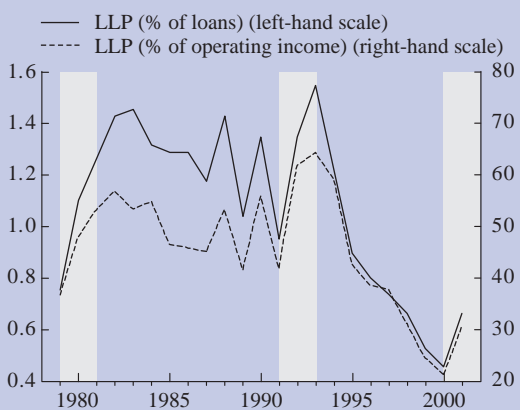
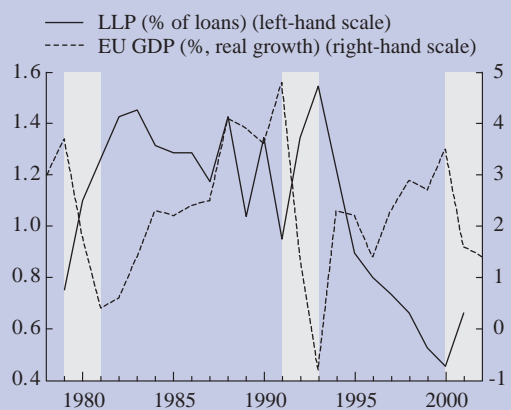
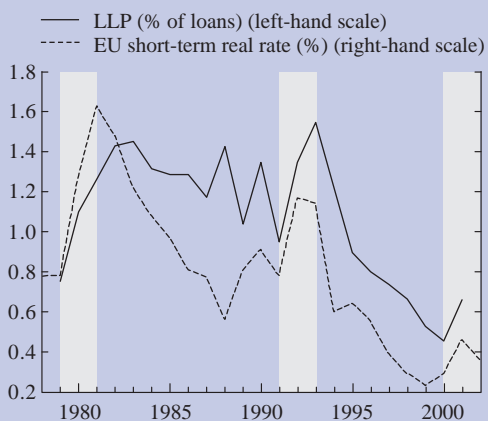
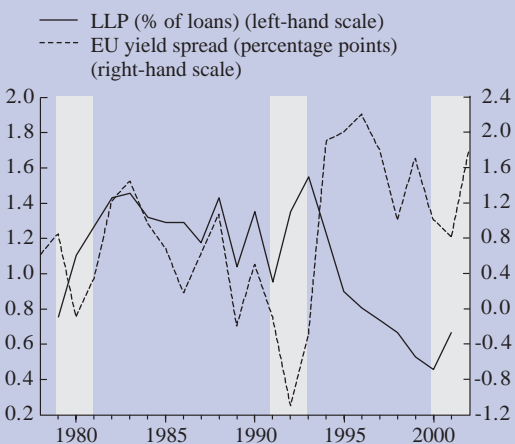
Should a gradual pick-up in the pace of economic activity turn out to be more subdued than expected, EU banks' provisioning needs could increase further, even though a major impact on banks' soundness did not appear likely by October 2003. A rise in long-term interest rates should also not be a major problem for banks, even though it could, for instance, adversely affect the debt servicing capability of banks' clients. Indeed, some empirical evidence suggests that a steeper yield curve is typically associated with lower loan loss provisioning by banks (see Box 3). In addition, banks' income would be boosted, as the profitability of maturity transformation would benefit from a steeper yield curve.

The gravity of these hypothetical scenarios as regards bank stability needs to be assessed against the potential impact on bank solvency. The available profitability and solvency indicators of EU banks suggest that banks should be capable of withstanding adverse developments within reasonable bounds.

Box 3**Loan loss provisioning in the EU over the business cycle**

This Box sets out the historical relationship between banks' loan loss provisioning (LLP) and a number of key macroeconomic variables in the EU on the basis of aggregated data. First of all, EU banks' LLP has shown marked changes over time (as a percentage of loans and income), which suggests strong cyclical variation in provisions (see Chart A). Indeed, EU banks' LLP has tended to increase strongly during recessions and to decrease during expansions. More precisely, a lagged relation between economic slowdown and provisioning needs seems to be implied (see Chart B). This can create procyclicality in banks' earnings, which might also entail the risk of undesirable macroeconomic consequences. LLP has also moved in step with short-term real interest rates, as this determines the burden of debt servicing for banks' clients (see Chart C). Finally, Chart D shows the relationship between LLP and the slope of the yield curve. The apparent negative relationship in the chart also suggests pro-cyclical provisioning, as a high slope (measured by the spread between long and short-term interest rates) can be taken as an indicator of economic growth prospects. The yield curve typically steepens under expectations of higher economic growth.

It should be noted that discretionary management of LLP by banks, for instance through income smoothing or capital management, might also influence the level of provisions. These influences could run counter to the

Chart A: EU banks' LLP**Chart B: EU banks' LLP and real GDP growth****Chart C: EU banks' LLP and EU short-term real interest rate****Chart D: EU banks' LLP and EU yield spread**

Source: ECB computations and OECD Bank Profitability Studies.

effects of the macroeconomic variables. Income smoothing implies a reduction in LLPs when banks' income deteriorates, while capital management allows banks with low levels of capital to increase LLP as a means of increasing their regulatory capital.

3.3 Banks' credit risk exposures

Reduction in overall corporate sector risks not yet confirmed

On average, although efforts have been made to improve the financial position of EU firms, corporate indebtedness ratios have remained relatively high in the EU, and it would seem that room remains for further efforts by firms to repair balance sheets (see Section 1). However, differences do exist across sectors. In this regard, some firms appear to have increased their profitability and reduced their indebtedness to some extent. This is evident from the improvement in a number of forward-looking market-based indicators of large firms' fragility (corporate bond spreads and Moody's KMV Expected Default Frequencies – EDFs¹¹).

Exposures to construction and TMT industries most significant

As regards industry exposures, the largest nominal credit exposure was towards construction and real estate in end-2002. These industries could be vulnerable to cyclical conditions and large real estate price

declines, especially commercial real estate, where prices have started to fall in many countries. The simple average of gross exposures to construction was 36.1% in the EU banking sector,¹² while in the case of real estate it was 36.2% of own funds of the banks in the reporting countries (see Table 8). These exposures are relatively well dispersed, as the share of total assets of the banks with the largest exposures is not very high.

Banks' exposures to the real estate sector occur largely via property companies. As the property companies' business involves investing in property, the same factors that govern companies' earnings also influence the value of the collateral. Thus, a negative development in the property sector can affect banks because the ability of property companies to service their debts deteriorates and because the value of the collateral declines. A large proportion of loans to property companies is secured with real estate. These features leave banks susceptible to commercial real estate price movements.

¹¹ EDFs measure the expected probability of default for the year ahead.

¹² Gross exposures denote exposures before any allowances for risk mitigants, such as guarantees from third parties. Hence, they can overestimate banks' ultimate credit risk exposures.

Table 8

EU banks' industry exposures

	Gross exposures end-2001 (% of own funds)	Gross exposures end-2002 (% of own funds)	Exposure at risk end-2002 = gross exposure times EDF (% of own funds)	The asset share of the three largest banks in terms of exposure (%)
Construction	32.88	36.09	0.55	49.26
Real estate	33.70	36.18	0.12	50.52
TMT	14.68	14.17	0.88	43.14
Tourism	10.37	11.85	0.22	43.94
Energy	9.93	10.20	0.06	45.32
Airline	4.79	4.15	0.05	35.60
Insurance	5.54	6.15	0.04	30.22

Sources: BSC (exposures) and Moody's KMV (EDFs).

Banks in many EU countries increased their exposure to real estate between end-2001 and end-2002. However, the ability of property companies to service their debt has not deteriorated dramatically, as measured by their total income divided by their interest expenses,¹³ or debt-to-equity ratio.

The exposure information can be combined with (EU-wide median) EDFs in particular industries to provide a calculation of banks' "exposures at risk" as a means of ranking the relevance of banks' risk exposures (see Table 8). In terms of this measure, the construction exposure was considerably more significant than the real estate sector exposure, which reflects the more sensitive default risk in the former sector.

The TMT sector remained relatively important, as measured by banks' nominal gross exposures to own funds and, in particular, as measured by exposures at risk. Though the condition of the TMT sector has improved significantly in terms of EDFs, the risk level remained relatively high in 2002. Moreover, a concentration of these exposures could be problematic for certain banks. In the TMT sector, the difficulties continue to stem from slack in consumer spending, very

high debt burdens and the relatively long payback times on investment in new technologies.

At end-2002, EU banks' nominal exposures to the tourism industry increased to 11.9% of own funds, from 10.4% at end-2001, and the exposure at risk was relatively high (see Table 8). Tourism and transport sectors were affected not only by the cyclical deterioration, but also by heightened geopolitical uncertainty. Some forms of tourism were even stalled on account of the war in Iraq, uncertainties over international terrorist activities and the outbreak of SARS in early 2003. However, domestic tourism and intra-European tourism was much less sensitive to these factors. Even though most of these factors had subsided by October 2003, the sector continued to be regarded as relatively risky.

Nominal gross exposures to energy and airline sectors were relatively low at end-2002, as was the exposure at risk (see Table 8). These sectors have attracted attention after the events of 11 September 2001 and collapse of Enron.

¹³ This ratio decreased to 1.73 in 2002, from 2.35 in the EU on average in 1999.

Box 4

Real estate developments

Significant increases in house prices in many EU countries over recent years and the simultaneous strength of loan growth for house purchase have raised some concerns about their sustainability.

Residential properties

House prices rose rapidly in most EU countries in 2002 (see table). The latest available information suggests that in some countries house price inflation even accelerated at the beginning of 2003. The Netherlands was the only country to have experienced a sharp deceleration in house price inflation, from around 20% in 2000 to 2.7% in the second quarter of this year, after experiencing a long period of double digit house price inflation in the 1990s. In Denmark and Portugal house price inflation remained at relatively low levels. In Germany, house prices remained more or less stagnant, as has been the case since the mid-1990s.

Expectations of future income growth and the fall in nominal and real mortgage interest rates are believed to have played the main role in stimulating demand for housing. Given the geographical segmentation of residential property markets, however, much of the house price dynamics are attributable to national or even local factors – particularly those relating to taxes, subsidies and local supply conditions – affecting the effective cost of housing.

The supply of new houses ordinarily takes a long time to react to unexpected changes in the demand for housing. Thus, the short to medium-run market equilibrium may result in house prices fluctuating substantially around the long-term trend, sometimes for relatively long periods of time. It is therefore rather difficult to assess the appropriateness of valuation levels or whether house price inflation in a number of countries will be followed by a “soft landing” or a disorderly downward correction. This distinction is important, as a disorderly movement could have a serious impact on economic growth – via consumption – and on banking stability, whereas an orderly, low level of housing price deflation would improve stability in the long run. Looking ahead, in most euro area countries with high house price inflation, housing prices are expected to decelerate gradually.

Residential property prices

(percentages per annum)

	BE	DE	GR	ES	FR	IE	IT	NL	PT	FI	DK	SE	UK
2002	7.7	-0.1	13.0	16.6	9.3	19.2	9.8	6.2	0.9	7.4	2.7	9.5	21.1
Most recently available data in 2003	7.4	-0.8	n.a.	17.5	10.2	14.2	9.8	2.7	1.7	5.3	2.4	7.6	21.0

Sources: BIS and national sources.

Notes: Most recently available year-on-year growth rate in 2003 refers to the first quarter of 2003 for DE, DK, ES, IE, FI, SE and FR (moving average of 4 quarter growth), to the second quarter of 2003 for NL and PT, and to the first semester of 2003 for BE and IT. Information on AT and LU is not available for the period under consideration.

Commercial properties

Data on commercial properties suggest that the office space markets in Belgium and Greece were the most resilient markets in the EU during the first two quarters of 2003. Office markets in France, the Netherlands and Italy proved to be fairly resilient to the economic slowdown in Europe with little change in capital growth rates in 2003, while Germany, Spain, Ireland, Luxembourg, Finland, Sweden and the United Kingdom all suffered from declining capital values. The decline in performance is due to a number of factors. The first is decreasing

rental income, which has been evident in many European cities. Another related factor behind decreasing capital values is that of weak economic activity. The general economic slowdown in Europe increased vacancy rates, but has in some office markets also increased investors' yield requirement on account of a greater uncertainty in a weakening market.

As noted above, the available data indicate decreasing commercial property prices in most EU countries. Decreasing or negative growth figures on capital values imply that some of the commercial properties that are pledged as collateral have decreased in value. To the extent that property values correlate closely with economic activity, downward pressure on prices are likely to be alleviated as the recovery broadens and strengthens. Notwithstanding recent declines, the financial position of the commercial property sector does not seem to have deteriorated significantly, which is reflected by EDF figures for the real estate corporate sector. The EU median EDF has been stable since November 2002. Moreover, the comparatively low level of debt of property companies argues against potential systemic stability implications.

Insurance sector risks mainly indirect

By mid-2003, some signs of improvement in the overall financial position of both general and life insurance companies in the EU was reflected in their stock market performance, following three years of profit and even capital erosion. After deteriorating significantly in 2002, the stock prices of insurance companies performed slightly better than the market as a whole after January 2003, and particularly after mid-March. Just as insurance companies suffered when equity markets were weak, the rebound in stock markets should have worked in the opposite direction, effectively easing balance sheet strains. The rise in long-term bond yields should also have helped their situation. However, although by October 2003 the financial condition of the insurance industry was not considered to pose a threat to the stability of the EU banking system in general, some important risks remained. In particular, solvency pressures may not have fully eased, especially for companies offering fixed annuities and policies with guaranteed returns – often life insurance companies. Hence, their outlook will be critically dependent on developments in fixed income and stock markets.

Given the present condition of the EU insurance sector, these industry risks might

still be relevant for EU banks. However, this does not come via direct exposures data, which on aggregate are relatively low (6.2% of EU banks' own funds or only 0.04% in terms of exposure at risk, see Table 8), but rather through other links between banks and insurance companies.

One of the links stems from credit risk protection sold to banks by insurance companies. The actual loss left for a bank to carry is known only after the contract has been settled. The possible magnitude of shocks created via these contracts issued by insurance companies is impossible to assess due to a lack of data. However, developments in these markets, particularly in countries where activities in these instruments have started to grow rapidly, deserve careful attention from a banking stability perspective.

Another clear link between banks and insurance companies stems from "bancassurance structures" (see Box 5). The bancassurance corporate scheme may affect banking stability if the insurance arm of the group faces problems due to deteriorating solvency, reduced value of investment assets, write-downs or reputational effects. The capital losses already suffered by banks via their insurance subsidiaries could continue to squeeze them in the future also, should insurance sector problems reoccur.

Box 5

Links between banks and insurance and risks to banking stability

One of the most significant changes in the financial services sector over the past decade has been the appearance and development of many forms of linkage between banks and insurance companies. This Box concentrates on one of the most prominent links, namely bancassurance. Banking institutions and insurance companies have found bancassurance to be an attractive – and often profitable – complement to their existing activities. The successes demonstrated by various bancassurance operations throughout the EU have attracted the attention of both the financial services sector and supervisors.

Interestingly, linkages between bank and insurance sectors have taken very different forms depending on the country concerned, resulting in several combinations: insurance companies wanting to leverage their customer base or distribution network involved in banking activities, or banks creating an insurance arm to reinforce customer relationships or reduce unit costs. The depth of the relationship also varies greatly, going from the creation in full of a financial conglomerate with strong capital links to looser relationships involving only distribution agreements or use of a broker network.

A number of different business models used in the co-operation between banks and insurance companies have been identified: distribution agreements, minority shareholdings, joint ventures, subsidiaries and financial conglomerates. Two main theoretical models can be singled out:

- **the integration/merger model** i.e. a bank or insurance company is integrated into one group. In assessing the nature of capital links, situations in which a holding company controls both a bank and an insurance company (financial conglomerate) warrant special attention.
- **the partnership model**, including co-operation in distribution channels i.e. a strategic partnership in which both partners stay independent, although capital ties often exist. They use each other's distribution channels to sell own products, with significant differences in the various types of distribution co-operation model and in the depth of capital ties.

Irrespective of the business model, the reasons for the establishment of ties have generally been the same. These include revenue diversification, increasing profits by engaging in an additional type of activity if the original market (be it banking or insurance) is seen as too competitive, leveraging distribution networks and responding to customers' demands (such as pension needs or changing savings patterns).

Deregulation and financial innovation have also favoured close links between the two sectors. Several European countries have made considerable regulatory changes in respect of the banking and insurance sectors. Although regulatory changes vary from country to country, there has been a pan-European trend towards a "universal bank", and the limitations of the past no longer exist. Banks are now able to operate across a broader range of activities, including insurance, via legally independent risk carriers. The insurance companies and banks are no longer competing only within the life insurance industry and banking industry but within the wider financial services marketplace.

As regards financial innovation, the development of hybrid financial products, possessing both banking and insurance features, have added versatility to the product mix of those companies and enabled them to reach new potential customers. Risk management has also benefited from new techniques. On the other hand, in a more indirect but nevertheless significant way, credit risk transfer instruments have enabled increased risk transfer between the two sectors.

The intensification of linkages between the two sectors also entails new risks, which have to be taken into account in assessments of the robustness of the EU financial sector and in monitoring banking stability. Indeed,

these new vulnerabilities, spurred by technical innovation and the rapid growth of financial derivatives, may have a strong potential impact on the financial system as a whole. When assessing these risks, conjunctural risks should be differentiated from structural ones.

While enabling revenue diversification, the bancassurance model entails a risk of contagion from one sector to another. This risk has become increasingly evident over the last few years, as yields on fixed income assets continued to drop and falling equity prices eroded unrealised capital gains in life insurance companies' portfolios, sometimes prompting parent institutions to re-capitalise their insurance arms. Indeed, the insurance sector was forced to face both a significant rise in compensation costs as well as unfavourable financial conditions in the past three years, resulting in a tightening of margins and a significant dent in unrealised gains. It is as yet premature to assess how the recent rise in long-term interest rates since June and the equity rally witnessed since March 2003 will affect EU financial institutions. The impact will vary according to the degree of exposure to equity prices fluctuations, the seasonality of the equity portfolio and level of realisation of capital gains, the level of investment in real estate assets and related unrealised capital gains and, finally, the type of accounting and valuation used by individual companies.

Looking ahead, the main conjunctural risk faced by insurance companies is the increasing difficulty of sustaining profitability in an environment of prolonged low interest rates. Indeed, some analysts have used the latest bear market as a stress test, since it is the first time that bancassurance groups have undergone such conditions. In late 2002 and early 2003, large sales of equities by insurance companies on account of regulatory constraints were seen as contributing to the falling equity prices. Instances of concerted selling may have been more frequent in countries where insurance companies had a substantial holding of equities and insurance regulatory regimes apply a forward, rather than backward-looking assessment of solvency.

In addition to conjunctural risks, structural risks have also become prominent, even if direct lending between the two sectors is limited. Chief among these is the redistribution of credit risks from the banking sector to the (re)insurance sector via the use of various credit risk transfer instruments. The current opacity of their use and potentially high concentration of risk have created serious concerns. It remains to be seen whether the transferees are in the best position to monitor the transferred risks. Even though the redistribution effect may be benign, the analysis of banking stability calls for aggregated data on derivatives positions between the two sectors in order to ensure that the current opacity does not threaten long-term confidence in both industries. Several initiatives, led by supervisors and central banks, have been launched to quantify these activities and provide detailed information on both the nature of the counterparts and the instruments used.

Household sector risks may have increased in importance

The key household sector risk stems from lending for house purchase. Around two-thirds of total bank lending to households in the euro area is for this purpose. This represents approximately 35% of total loans to the non-financial private sector. The growth rate of loans for house purchase remained strong in 2002 and 2003, as noted in Section 2.

Direct effects on banks from a downward movement in property prices might arise

through their income and asset exposures. In a hypothetical scenario of increasing long-term interest rates or economic slowdown, households could face problems with servicing their debt, resulting in sales of real estate assets, which would put downward pressure on real estate prices. This pertains, in particular, to the part of the households sector which has the highest level of indebtedness and debt servicing burden.

By October 2003, banks' income risks were assessed to remain more significant than their asset quality risks, as household lending has come to represent an increasing and

important share of banks' overall profitability. Uncertain labour market prospects might continue to dampen households' willingness to make major purchases and induce them to raise their savings ratio, reducing their use of bank financing. In addition, significant falls in house prices could also reduce confidence and lead to lower household lending volumes. However, the probability attached to this scenario seems low for the time being.

In general, EU banks' household sector asset quality could probably only be affected if low economic growth was combined with high (long-term) interest rates for a prolonged period of time. In those countries where residential real estate prices have risen to higher levels, asset quality risks could be more relevant (see Box 4). However, even if real estate prices fell considerably, the default risk might still remain relatively limited, given the fact that collateral typically exceeds the value of loans by a considerable margin and given the historically low default rates on mortgages. There are a number of mitigating factors in the event that a more significant movement takes place. Loan-to-value (LTV) ratios are around 60-80% in the majority of EU countries, and the ratios are typically much lower for older mortgage loan stocks. Banks can also require households to take insurance against problems to service debt as is the case in some EU countries.

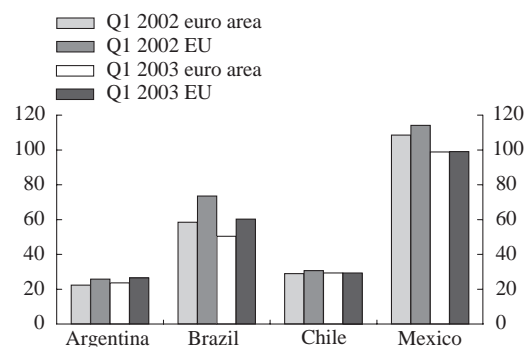
International risks reduced in loans, but potentially increased in bonds

The environment for EU banks' international loan exposures seems to have improved. In the case of the developed countries, credit exposures to the United States are naturally subject to the general macroeconomic uncertainties witnessed in that country, while the exposure to Japan has declined to a relatively low level for EU banks.

Looking at the credit exposures of EU banks in emerging markets, lending to these markets has continued to increase and EU

Chart 16
Claims of EU and euro area banks on Latin American countries

(USD billions)



Source: BIS.

banks have increased their share according to the BIS consolidated banking data for 2003. Looking ahead, if the world economy and world financial markets begin or continue their recovery towards end-2003, EU banks' international lending exposures might pick up further.

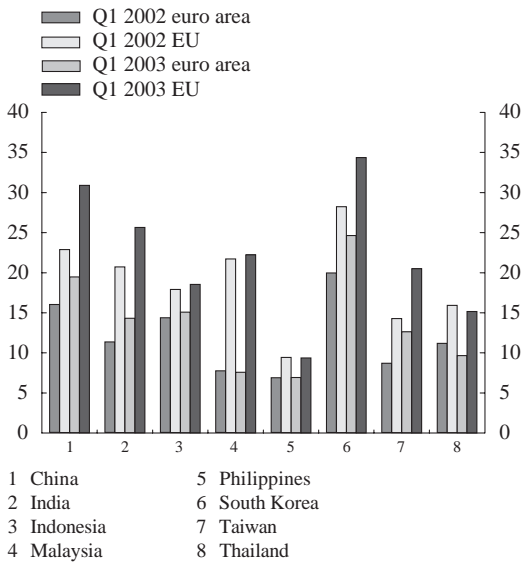
EU banks remain relatively heavily exposed to Latin America and, in particular, Mexico, which accounts for 10% of all exposures (see Chart 16).¹⁴ However, the Mexican economic and financial outlook does not give cause for concern beyond sluggish growth performance. In general, Brazil might still be the most sensitive country at risk, although EU banking sector exposures are on average not particularly significant.

In spite of substantial increases in claims on certain Asian emerging markets, EU banks' claims on countries in this region remain low as compared with other emerging markets (see Chart 17). By contrast, lending to central and eastern European countries is of considerable significance for EU banks and occurs mainly via local subsidiaries (see Chart 18). EU banks have expanded strongly in the countries of this region in the run-up to their accession to the EU, in the expectation of relatively high growth rates and stability, and as a means of diversifying

¹⁴ The exposures include banks' cross-border claims and claims held locally (via local subsidiaries) in local currencies.

Chart 17
Claims of EU and euro area banks on Asian countries

(USD billions)



Source: BIS.

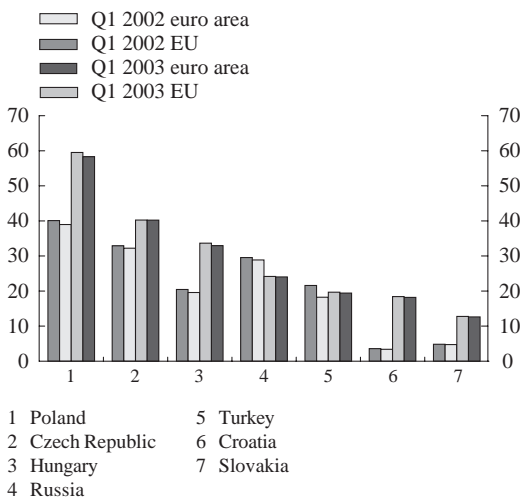
income and increasing profits. The very high lending growth rates in this region might warrant concern from a banking stability perspective, as dramatic growth in loans (to a large extent supplied by EU banks) could entail increased credit risk. Indeed, financial

systems in EU acceding countries have become increasingly linked with the financial system of the EU, in particular through the substantial level of ownership on the part of EU banking groups in acceding countries' banking sectors.

Section I suggested that emerging bond markets may have been subject to global investors looking for higher yields; together with improved credit quality, this may have depressed yield spreads in these markets. Chart 19 shows that the international holdings of emerging market securities by developed country banks has increased sharply since 1999, reaching USD 168 billion in the first quarter of 2003, which is 22% of the size of their overall international credit exposure. The EU banks' share of all international positions in securities has tended to decline after 1999, indicating that other banks increased their exposure; nevertheless, the EU banks' share is still large, at close to 65% (see Chart 20). While the extent of hedging of this exposure is generally unknown, it could be vulnerable to major changes in sentiment towards emerging markets and possible shocks in interest and exchange rates.

Chart 18
Claims of EU and euro area banks on central and eastern European countries

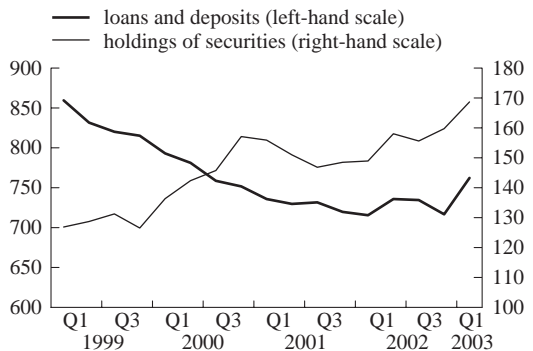
(USD billions)



Source: BIS.

Chart 19
International positions of BIS reporting (developed countries) banks vis-à-vis emerging markets

(USD billions)

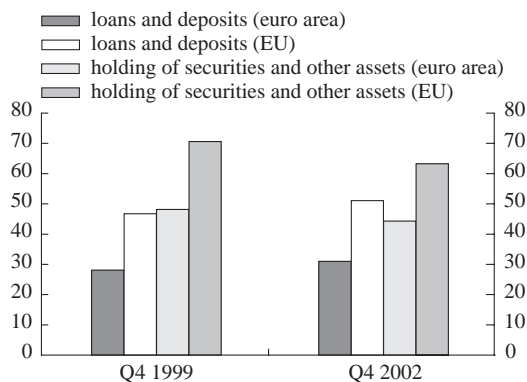


Source: BIS.

Chart 20

Share of EU and euro area banks in total international positions of BIS reporting banks

(percentages)



Source: BIS.

3.4. Banks' market risk exposures

Market risks may have increased in 2003

According to annual figures available on regulatory own funds requirement on trading book activities, subdued equity and bond market activity, combined with heightened volatility, did not seem to increase EU banks' exposure to market risk in 2002 as compared with 2001. This regulatory requirement decreased by 3.7% on aggregate in 2002 (see Table 3). However, the situation may have changed to some extent in 2003. Information on value-at-risk measures (which measure banks' trading books' sensitivity to changes in interest rates and stock prices – i.e. their market risks) of a number of major EU banks indicated an increase in the first half of 2003.

4 Overall assessment

EU banks were confronted with a challenging operating environment in 2002, largely owing to the global economic slowdown, which also affected the EU, as well as to further downward correction in turbulent global stock markets. While profitability performances did deteriorate in 2002, the banking sector proved to be resilient. Moreover, an early and effective response

by EU banks to their business environment – which saw cost-cutting, businesses reorganisation and improved risk management – contributed to improving profits in the first half of 2003.

It is difficult to assess what aggregate impact further falls in long-term bond prices would have on banks. Even though a steepening of the yield curve would increase the profitability of banks' maturity transformation business, the falling asset values and rising hedging costs would have an adverse impact on banks. A further rise in yields would necessitate new hedging, since the market movement would alter existing duration gaps. However, hedging costs would also be likely to increase if the rise in bond yields were accompanied by higher market volatility. The loss of asset value suffered by banks from falling bond prices would depend on whether banks realise losses via trading or marking their portfolios to market.

If realised, these losses would hit profits through asset write-downs or trading losses. Though market risk does not seem to be a major concern from a systemic point of view, these activities require careful monitoring. This is particularly the case if income remains weak over the near term, potentially inducing banks to improve profits via increased risk-taking.

As regards EU banks' exposure to mortgage refinancing risk¹⁶, if market rates were to continue to rise, this should not be a major issue. While comprehensive data on EU banks' mortgage refinancing practices are not available, anecdotal evidence suggests that in the few countries where mortgage backed securities (MBS) are in active use, risks are contained either by unattractive penalties for loan prepayment or by specific regulations.

by EU banks to their business environment – which saw cost-cutting, businesses reorganisation and improved risk management – contributed to improving profits in the first half of 2003.

¹⁶ When interest rates decrease households may want to refinance their mortgages to benefit from a lower rate. Refinancing of a loan would increase the interest rate risk of the financial institution holding the loan by changing the duration gap between its assets and liabilities.

Reflecting perceptions in markets that corrective action measures would likely prove supportive in ensuring ongoing viability, forward-looking market-based indicators of the financial health of the banking sector began to stabilise, even improve, from the second quarter of 2003 onwards, perhaps aided by improving stock market conditions. The favourable reappraisal of banking sector conditions continued despite the emergence of turbulent conditions in global bond markets in the summer months as bond yields, which had been falling, swiftly changed direction. As the trading book exposures of banks to bonds is typically small, the impact on bank profits was perceived to be small and bank stock prices continued to rise.

However, several market indicators did continue to suggest that risks to the outlook for banks had not fully receded. Hence, notwithstanding indications of improving performances in the first half of 2003, close monitoring of bank performances in the second half of the year will be required before an assessment can be made that the challenges that have confronted the EU banking sector have fully subsided. In particular, even though there were improvements in asset quality and the efficiency of the poorest-performing banks and although capital levels were considered to be sufficient, a relatively large number of EU banks still had weak profitability in the first half of 2003.

Looking ahead, the key to future banking sector performance will be the speed of the economic recovery. By October 2003, short-term risks to the main economic scenario for

the euro area and the EU of a gradual recovery in the pace of economic activity appeared to be balanced. In this environment, a gradual pick-up in the income of banks can also be expected, thus allowing them to further solidify their financial condition. If continued, cost containment should support banking sector stability in the medium- to long run. However, adverse deviations from the most likely scenario, if they were to materialise, could intensify some of the risks facing EU banks. In particular, slower than expected growth could impinge on the interest income of banks, given relatively high indebtedness in the private sectors of the economy. Although the emergence of significant, broad-based, asset quality problems is not expected some risks for banks do remain, relating to specific industries and households. The former includes the insurance sector, the condition of which seems dependent on the outlook for conditions in financial markets, which could represent an indirect risk for banks. For households, real estate price developments could prove to be an important factor in the period ahead.

All in all, by October 2003, EU banks were assessed to be in at least adequate financial condition. Moreover, their stability was not assessed to be endangered by any plausible, albeit relatively remote, downside risk scenario. EU banks have responded early and effectively to a challenging environment. This will contribute to the longer-term stability of the system, although room remains for additional improvements to further enhance the efficiency of EU banks.

Annex

Banking data description

The macro-prudential analysis conducted by the BSC is based on the pooling of relevant aggregated information. The data consist of quantitative and qualitative information provided by member organisations of the BSC, harmonised ECB statistics and publicly available data. An important set of information for analysis is the consolidated bank profitability, solvency and balance sheet data provided by national supervisory authorities and central banks. These data are specifically collected for the macro-prudential analysis. They contain information on the three size groups of EU banks, covering almost 100% of the EU credit institution sector in terms of total assets in 2002 (see Table).

In the data, banks are divided into three size categories on the basis of consolidated assets. The threshold differentiating medium-sized banks from large banks is set at 0.5% of total consolidated assets of the European banking sector, corresponding to approximately EUR 122 billion in total assets. The threshold between small and medium-sized banks is set at 0.005% of total consolidated assets, which corresponds to total assets of EUR 1.2 billion. Large banks represent 65% of EU banks' total assets and are particularly important from a systemic stability perspective.

For the purposes of this report, mid-2003 data on 46 major EU credit institutions were also collected. These data cover nearly 60% of the EU banking sector. The sample of large institutions for 2002 is somewhat larger than the sample for mid-2003, as mid-year results were available only for a limited number of banks. Comparisons between the data for 2002 and mid-2003 are based on this smaller sample of large banks.

Data for the fiscal year 2002: coverage

	EU
Number of credit institutions	
Stand-alone credit institutions	4,609
Banking groups	474
Total number of credit institutions	5,083
of which:	
large	51
medium	933
small	4,099
Total assets of EU credit institutions (EUR millions)	24,526,304
Assets of the credit institutions in the sample	24,409,351
large	15,753,752
medium	7,459,721
small	1,195,878
% of total assets of all EU credit institutions	99.52
% of total assets of the credit institutions in the sample	
large	64.54
medium	30.56
small	4.90

Source: BSC.