

Recent developments and risks in the euro area banking sector

This article provides an overview of euro area banks' exposure to risk and examines the effects of the cyclical downturn in 2001. It describes the extent to which euro area banks' risk profile has changed as a result of recent structural developments, such as an increase in investment banking, mergers, securitisation and more sophisticated risk management techniques. The article stresses that the environment in which banks operated in 2001 was fairly complex due to the relatively weak economic performance of all major economies as well as the events of 11 September in the United States. It evaluates the effects of these adverse circumstances on banks' stability and overall performance. The article provides bank balance sheet information as well as financial market prices, arguing that the latter may be useful when assessing the soundness of the banking sector in a forward-looking manner. It concludes with a review of the overall stability of euro area banks, pointing to robustness in the face of the adverse developments in 2001 and the somewhat improved forward-looking indicators of banks' financial strength in early 2002.

I Introduction

Banks play a central role in the financial system by channelling funds from savers to investors. An efficient allocation of capital is a pre-condition for economic growth over the medium term. In addition to its important role in terms of growth, the banking system is at the nucleus of the payment system and performs an important function in transmitting monetary policy. Banking system stability is, therefore, of vital interest to the Eurosystem. Single market legislation, which liberalised the cross-border provision of financial services in the European Union, has in recent years led to a more integrated and competitive banking system. This process has been further enhanced by the introduction of the single currency and euro area-wide large value payment systems. Together with other factors, such as globalisation and technological progress, it has resulted in an accelerated pace of consolidation in the euro area banking sector. In this environment, assessing the soundness of the banking sector from a euro area-wide perspective has become increasingly important.

In performing important economic functions, banks by necessity take on risks. First, they are exposed to the risk of a loan customer defaulting on the repayment obligation. This is referred to as credit risk. Second, banks may take on substantial interest rate risk, namely when they transform short-term deposits into long-term loans (or fixed-rate long-term securities). If short-term interest

rates rise, banks' financing costs increase, while their interest revenues remain unchanged, at least if they lend at fixed rates. Third, changes in financial market prices may create adverse revaluation effects on banks' tradable asset portfolios or introduce volatility in the income stream from non-proprietary asset management services – this is referred to as market risk. Furthermore, banks may be subject to liquidity risk, which arises from the short-term nature of customer and interbank deposit funding. If, for some reason, a great proportion of depositors want to withdraw their funds simultaneously, or if the bank is unable to roll over its short-term borrowing in the interbank market, banks face liquidity strains. Finally, banks are exposed to various types of operational risk. Operational risks include unpredictable events (natural disasters, computer failures, etc.) which jeopardise the business continuation of the bank, as well as failures in internal control mechanisms and fraud.

The objective of this article is to examine the relevance of the different risks faced by euro area banks in light of the recent developments in the economic and financial market environment. The focus is on developments in 2001 and on the current outlook as at June 2002. The article is organised as follows: Section 2 examines major shifts in euro area banks' business activities in order to highlight changes in their risk exposures; Section 3

reviews bank performance in 2001 and its main determinants; finally, Section 4 presents

an outlook on banking sector stability in the euro area.

2 Changes in banks' risk profile

Euro area banks' exposure to risk has been changing considerably. This is because of the expansion of banks into securities-related activities and insurance, increased use of securitisation and other complex risk transfer instruments, and cross-border expansion and consolidation into ever larger and complex financial groups. These developments have improved the diversification of banks' risks, but may also have generated new exposures. In general, the changes in risks underline the importance of banks using advanced risk management systems.

2.1 Credit risks

The relatively high levels of lending growth by euro area banks to non-bank private sectors, which reached 10.0% and 9.6% in 1999 and 2000 respectively (ECB Money and Banking Statistics), caused some concern about the accumulation of credit risk, as the growth resulted in increased levels of corporate and household sector indebtedness. In 2001, lending growth moderated to 6.1%. However, banks' credit risk management has become significantly more sophisticated, which has at least raised banks' awareness of the risks typically accumulated in a period of high lending growth. In this area, banks increasingly rely on complex credit risk transfer instruments, such as securitisation and derivatives.

The packaging of bank loans into securities marketable to investors is referred to as securitisation. There are two main forms of securitisation. The first involves the issuance of securities by the bank itself, which still holds the loans and the associated credit risk on its balance sheet. The second is conducted through the sale of the assets to separate entities called special purpose vehicles (SPV), hence involving a transfer of the credit risks

away from the bank's balance sheet. Based on data from the European Securitisation Forum, this type of activity soared in 2001 to €154 billion, up from €78 billion a year earlier. In contrast, the former declined by 2% to €210 billion. For comparison purposes, new bank lending in the euro area declined to €366 billion in 2001 and the amount outstanding rose to €7,366 billion. While, at present, securitisation still has a relatively small share in the overall activity of banks, it is growing much faster than overall lending.

Credit derivatives are another important category of instruments for transferring credit risk. They are now the fastest growing segment of the over-the-counter (OTC) derivatives market. A recent survey by the Bank for International Settlements (BIS) of foreign exchange and derivatives markets indicates a seven-fold increase in global notional OTC credit derivatives since 1998, up to USD 694 billion in June 2001, of which euro area banks accounted for 32%. A recent survey by the International Swaps and Derivatives Association (ISDA) highlights the rapid growth in this activity, which amounted to an additional 45% in the second half of 2001.

Finally, credit risk transfer has been facilitated by the increasing marketability of loans, first and foremost via increasing syndicated lending by banks. Data from Capital Data Loanware suggest that syndicated loans to euro area counterparts grew at an annual rate of over 70% in 1999 and 2000, reaching approximately €800 billion a year. This growth was driven by the need to finance consolidation and investment for future growth in the telecommunications and technology sectors. In 2001, the growth rate slowed down significantly, in line with the increasing difficulties facing these industries.

It may be premature to arrive at firm conclusions about the implications of these innovations for banks' exposure to credit risks. In principle, credit risk transfer instruments represent a positive development, since they permit a re-allocation of risks to those market participants best able to bear them. Nevertheless, they also allow financial institutions to take on new risks, as these instruments may also be used to build up large unhedged and leveraged positions.

In addition, the typical concentration of global OTC derivative activity in a few major intermediaries may lead to significant risk concentrations and vulnerability to counterparty credit risks (as well as to market and liquidity risks stemming from these credit risk transfer instruments). The credit derivative market is also very concentrated: according to a February 2002 survey in Risk Magazine two firms share more than a third of the total global business. In part, the concentration is a result of the recent wave of bank consolidation. It is leading to the establishment of ever larger and more complex financial institutions with sizeable market positions in several wholesale financial markets as well as in client financial services. In Europe, the introduction of the euro has triggered a particularly significant movement towards consolidation, as the segmentation of markets according to the different currencies has made it impossible to fully exploit the economies of scale. 70% of the mergers and acquisitions of euro area financial institutions over the past ten years have occurred in the last three years (in terms of the value of the transactions).¹

Banks have also increased their cross-border credit exposures. Growth rates in cross-border lending have recently exceeded domestic rates by far, especially in terms of lending within the euro area. The level of cross-border lending is still relatively small (around 11% of total lending of the euro area banks to non-bank clients). However, banking groups have also accumulated credit exposures via cross-border entry. Branches established by foreign banks now account for

5% of the total banking assets in the euro area on average, although in a few individual countries (especially Portugal and Ireland) the market share of foreign bank branches is significantly higher, exceeding 10% of the domestic market. Traditionally, cross-border mergers have been quite rare, but their share has been increasing over time and, in 1999-2001, accounted for around 25% of all deals involving banks in the euro area. Banks have also tended to develop cross-border alliances, including exchanges of minority interests, in addition to outright mergers and acquisitions. As a result of the acquisition of majority and minority stakes, the share of owners outside the domestic banking system has risen above 20% on average in the euro area.²

Credit exposures of euro area banks have also increased in countries outside the euro area, mainly via the establishment or acquisition of subsidiaries in the local markets. The largest transactions involving financial institutions outside the euro area have been related to acquisitions in the United States. For some major euro area banks, income from US operations can now reach 10%-20% of total consolidated income. Similarly, there has been expansion into emerging and developing economies. Banks from countries that are geographically close to central and eastern Europe, such as Austria, Germany and Italy, have in particular continued to expand in this region. Latin America, and notably Brazil and Argentina, were attractive in terms of expansion to the major Spanish banks in particular until the crisis in Argentina. Overall, euro area banks' emerging country credit exposures to central and eastern Europe and Latin America have increased over the past two years, while they have declined slightly in the Asia Pacific region (see Chart 1). The total of such exposures reached €780 billion in December 2001.

It is difficult to determine the effect of diversification into foreign markets on the

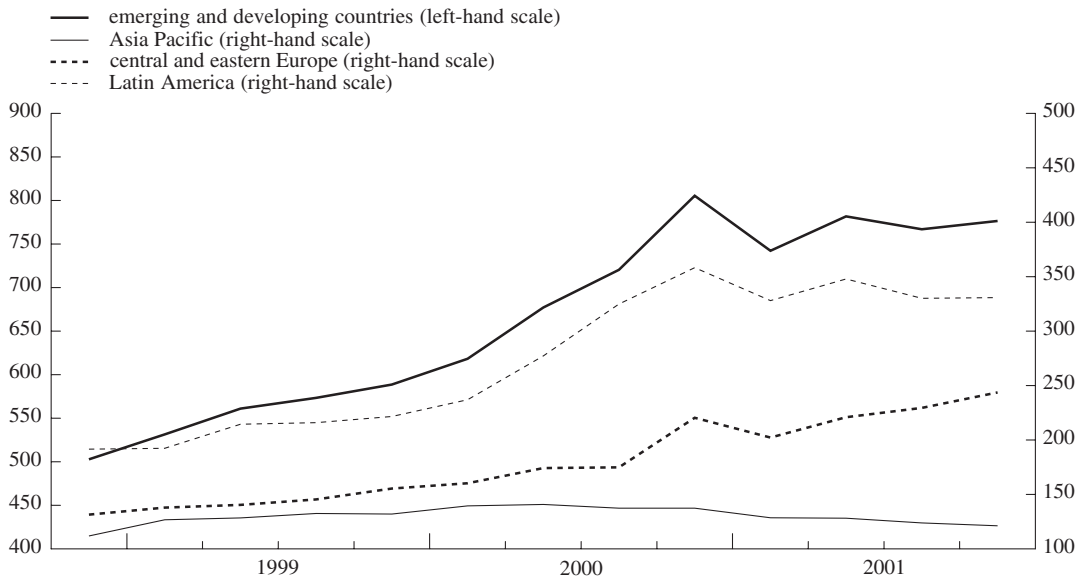
¹ Source (for all data referring to bank mergers and acquisitions): Thomson Financial Securities Services.

² Estimated on the basis of the Fitch Bankscope data for 570 euro area banks for which data are available.

Chart 1

Total gross exposures of euro area banks to emerging markets (including local claims in local currencies)

(EUR billions; quarterly data)



Source: Bank for International Settlements.

total credit risk exposure of banks. While risk diversification may have enhanced bank stability, the greater exposure to more volatile economic conditions and to markets in which banks may initially have less expertise than on their home turf could potentially lead to adverse outcomes. Argentina's debt default may be taken as one example of these potentially higher risk exposures (see Section 3.1).

2.2 Risks stemming from securities markets

The increased participation of banks in securities market activities has led to a greater prominence of several risks related to these activities. This refers not only to market risks, but also to greater income volatility and credit risks, to the extent that the creditworthiness of banks' clients investing in securities markets may decline when securities prices fall.

The increasing importance of securities markets for banks follows on from the

growing popularity of securities investments, especially via mutual funds and insurance-related products. Investment in equities and mutual fund shares by euro area households and non-financial companies increased steadily until mid-2000 (see Table 1). As a consequence, the share of bank deposits in households' financial assets declined to around 29% at end-1999, and to 10% in the case of non-financial firms. Euro area banks were able to exploit this increased demand for asset management services via their extensive retail distribution networks, gaining a dominant position in overall asset management (for example, holding over 80% of the total collective investment business in many countries).

There was rapid growth in equity and bond issuance by the European corporate sector until early 2001, matching the rising demand for securities (see Chart 2). This substantially increased the market for investment banking services, where some major euro area banks now act as global investment banks. US investment banks have made successful inroads into the European market: they were

Table I**Financial assets of euro area non-financial sectors (households and firms)***(percentage of total, end-year data)*

	Non-financial corporations					Households				
	Currency and deposits	Debt securities and loans	Equity holdings and mutual funds	Insurance	Other	Currency and deposits	Debt securities and loans	Equity holdings and mutual funds	Insurance	Other
1995	15	14	40	2	30	39	15	24	21	2
1996	15	14	43	1	27	37	14	25	21	2
1997	13	13	46	1	26	35	12	29	22	2
1998	12	12	50	1	24	32	11	33	22	2
1999	10	13	54	1	21	29	9	38	22	2
2000	10	14	55	1	20	29	10	37	23	1
2001 ¹⁾	10	15	54	1	20	29	10	37	23	1

Sources: ECB (annual Monetary Union Financial Accounts), national accounts.

1) Estimated using flows data.

able to increase their market share from 8% in 1995 to the current approximately 40% in the lead management of bond issues by euro area companies (source: Capital Data Bondware). At the same time, the market share of euro area banks decreased from roughly 70% to 35% (with mainly UK, Japanese and Swiss banks holding the remaining 25%). However, the overall strong growth in issuance and the involvement of several intermediaries in single issues supported increasing income for euro area banks until mid-2001. This occurred irrespective of the fact that their market share also slightly declined in the co-lead management of the bond issues by euro area firms. Intermediation of equity issues shows a similar picture, with high rates of growth. However, euro area banks have maintained a larger share of the market at over 40%.

The expansion into securities activities has in part taken place via “organic” growth. Mergers and acquisitions have been increasingly used to take advantage of the developing securities markets and to cross-sell different products through wide branch networks. New types of conglomerate structures have also emerged, such as the combination of banking activities and pension fund management, as well as bank-insurance groups. In the euro area, mergers and acquisitions across sectors have

accounted for roughly 32% of all financial industry deals in terms of value over the past three years.

The growth in investment banking and asset management activities boosted euro area banks’ non-interest income from fees and commissions and profits, as the market conditions were very favourable until mid-2000. In 2000, consolidated non-interest income already accounted for 57% of the 50 largest euro area banks’ total net income, whereas the share was below 30% in 1995. For the largest banks active in the securities field, this shift went much further: the share of non-interest income amounted to 70% of total consolidated income; investment banking alone accounts for over 50% of total consolidated profits in some cases.

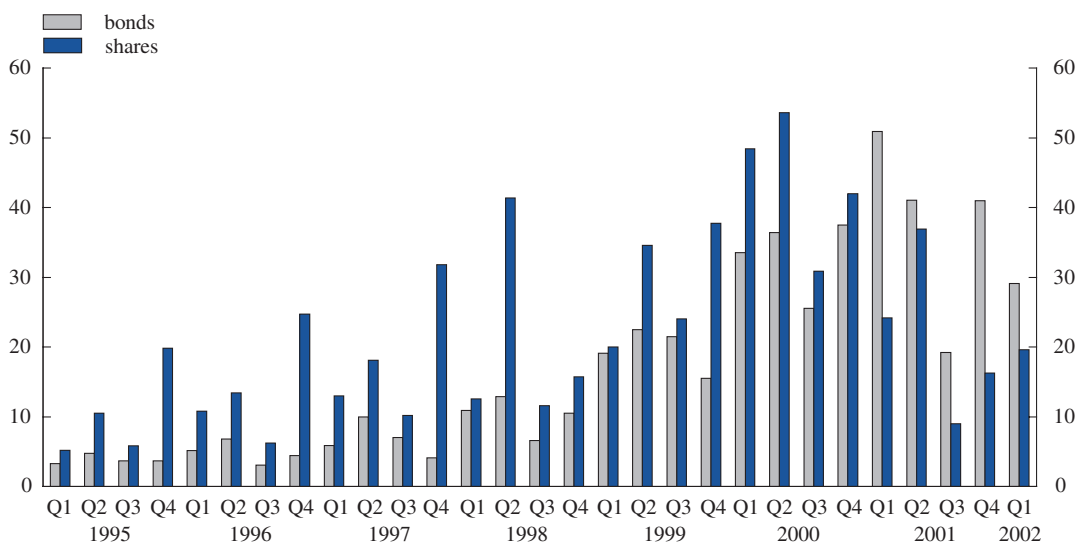
These changes in banks’ business profiles have reduced the importance of traditional credit and interest rate risks in relation to risks arising from securities underwriting and asset management. Overall, this development may have resulted in income diversification gains. However, while there is improved diversification of income sources, non-interest income from securities operations may be at least as cyclically sensitive as interest income.³ Banks’ exposure to market

3 See the ECB publication: “EU Banks’ Income Structure”, April 2000.

Chart 2

Bond and equity issuance activity in the European Union ¹⁾

(EUR billions)



Source: Capital Data Bondware.

1) The figures include issues in all currencies by non-financial firms resident in the European Union.

risk may also have increased through their own securities portfolios associated with the supply of asset management and investment banking services (such as underwriting), or through the performance guarantees offered to investors. Again, the overall effect on risks is difficult to ascertain and can be fairly bank-specific.

2.3 Liquidity risks

Disintermediation and the use of complex instruments also affect the way banks manage their liquidity risks. There are indications that euro area banks' exposure to liquidity risk has diminished. First, the share of deposits in euro area banks' funding has continuously declined to currently stand at around 35% of total liabilities. In addition, tradable liquid securities have a higher share in banks' assets, even though the picture can vary a great deal between individual banks. As noted above, the increasing depth and liquidity of securities markets since the introduction of the euro has also made securitisation more attractive in the case of traditionally non-marketable

assets, such as loans to small and medium-size enterprises. One consequence of securitisation is a decreasing share of illiquid assets in banks' balance sheets.

Furthermore, the integration, deepening and better liquidity of the money markets since the introduction of the euro, new payment technologies and financial innovations have improved banks' ability to manage liquidity risks.⁴ Euro area banks have already exploited the improved possibilities by increasing their access to cross-border interbank sources of liquidity. However, the increased reliance on wholesale market funding and complex instruments, whose contingent liquidity effects are difficult to assess, may have increased the danger of large swings in banks' liquidity conditions in market stress situations.

⁴ See the ECB publication: "Developments in banks' liquidity profile and management", May 2002.

3 Banks' performance and its determinants in 2001

The performance of the banking sector depends on the degree of risk in the environment in which banks operate, banks' exposure to risks, their ability to manage these risks and their resilience to adverse outcomes. In 2001, the environment for banks was quite unfavourable, at least in terms of credit, income volatility and market risks.

3.1 Quality of credit exposures

2001 was characterised by widespread economic weakness in both industrialised and developing economies, which resulted in lower corporate sector profits and an increase in bankruptcies (including some major companies), thus leading to a higher realisation of credit risk than in previous years. The economic woes were exacerbated by the events of 11 September in the United States, which affected specific industries, such as airlines and insurance companies, particularly severely. The events occurred when, for the first time in many years, all three major economic areas (the United

States, Japan and the euro area) were faced with a downturn in economic activity. Real GDP growth in 2001 was significantly below potential in the euro area and the United States and, even worse, Japan showed negative growth. Against the background of falling inflationary pressure, short-term interest rates declined markedly in the euro area and the United States, and remained extremely low in Japan.

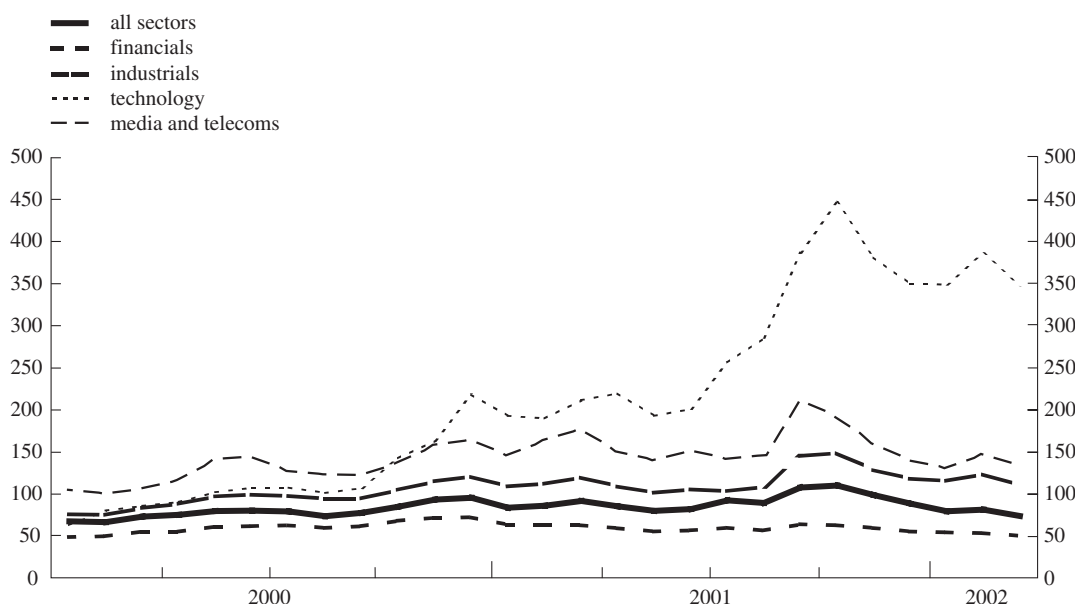
Corporate bond spreads widened on a global basis until the third quarter of 2001, displaying expectations of weakened asset quality and higher default risk (see Chart 3). In the first half of 2002, there was an improvement in most sectors following indications of a turnaround in economic conditions. Nevertheless, the bond spreads remained at elevated levels for higher-risk speculative grade borrowers and for companies from the technology and telecommunications industries.

Argentina encountered serious economic difficulties in 2001, eventually defaulting on its external debt. The reasons for the crisis

Chart 3

Global average corporate bond spreads over government bond yields

(basis points; monthly data)



Source: JP Morgan.

were a combination of the peg to the appreciating US dollar, the rapid depreciation of the Brazilian real and falling commodity prices. The crisis resulted in serious problems in Argentina's banking system, in which foreign banks play a major role. Unlike previous crises in the emerging markets of Asia or Russia, there was little contagion to other emerging markets.

These developments are reflected in measures of asset quality of euro area banks. Table 2 shows that provisioning increased by 50% in terms of total income from 2000 to 2001. In response to the crisis in Argentina, Spanish banks, for instance, have virtually written off their entire exposure to the country. However, balance sheet figures suggest that Spanish banks, as well as banks in the euro area in general, while experiencing a substantial reduction in profits, were able to weather the crisis and the weak economic environment quite well and continue to enjoy levels of capital well in excess of the minimum regulatory requirements.

The overall picture of already significant accounting for credit losses is supported by the fact that the level of the non-performing assets of the major euro area banks was, at end-2001, lower than the previous year, despite the worsening of asset quality throughout 2001. Moreover, it appears that banks may have become more conservative in their provisioning policy, as the overall "coverage ratio" of the stock of provisions to total non-performing assets has increased on average. However, it typically takes time before an asset quality weakening is reflected in banks' books. Therefore, it is uncertain to what extent banks would be forced to increase provisioning in response to the deterioration in their environment.

3.2 Market-related risks and income

The economic downturn was reflected in the poor performance of stock markets everywhere throughout 2001 on a global basis, reversing part of the stock market increases of 1999/2000. Setbacks were most pronounced in

Table 2
Indicators of the 50 largest euro area banks' liquidity, asset quality, profitability and solvency
(percentage)

	1997	1998	1999	2000	2001
Growth in total assets	10.9	10.6	22.7	14.3	7.0
Liquidity					
Liquid assets/customer deposits and short-term liabilities	29.0	28.5	27.6	27.4	27.2
Tradable securities/total loans	10.6	13.4	15.6	15.9	14.7
Asset quality ¹⁾					
Loan loss provisions (income statement)/total operating income ²⁾	13.2	11.7	9.1	7.6	11.5
Loan loss reserves/non-performing loans ("coverage ratio")	74.3	65.9	66.3	70.9	75.7
Non-performing loans/total loans	5.0	6.1	5.6	5.0	4.6
Profitability					
Non-interest income/total operating income	41.9	46.2	49.8	57.0	53.3
Total operating cost/total operating income	64.6	62.4	62.7	64.3	65.0
Return on equity (after tax)	7.6	9.8	12.5	15.8	12.2
Return on assets (after tax)	0.3	0.4	0.5	0.7	0.5
Solvency					
Total risk-weighted capital ratio	10.7	10.6	10.5	10.4	10.4
Tier 1 risk-weighted ratio	7.2	7.0	7.2	7.2	7.1

Source: Fitch Bankscope. Consolidated data.

1) Data availability may restrict coverage to less than 50 banks for specific indicators.

2) Includes the write-off of goodwill in foreign subsidiaries by banks with exposure to Argentina.

sectors in which stock prices had experienced particularly large increases, such as technology and telecommunications. Concerns about the pace of the recovery of corporate earnings and about the reliability and accuracy of accounting rules following a number of bankruptcies have had an adverse impact on stock prices in 2002. Stock prices in the banking sector have also been significantly affected. This illustrates the development of banks' performance in line with the macroeconomic conditions, but has also demonstrated the significant credit exposure of banks to the industries hit especially hard by the terrorist attacks last September, such as aviation and tourism.

A similar picture emerges when one considers implied volatilities of equity prices. Volatility doubled in the third quarter of 2001 and remained at a relatively high level throughout most of the fourth quarter, both in the United States and in the euro area, but declined temporarily in early 2002, reflecting the improved economic outlook. The summer months have again witnessed increased stock market uncertainty.

The bearish stock market conditions also significantly reduced primary market issuance activity towards end-2001 and into 2002, especially on the equity side (see Chart 2). The boom in the collective investment and other asset management activity also suffered, as well as the insurance business (in particular unit-linked insurance), as customers showed more appetite for less risky products such as money market funds, bond funds and saving deposits, rather than managed securities funds. As a result, banks' non-interest income from securities market-related activities decreased substantially following the decline in their investment banking and asset management operations (see Table 2). Banks specialising in the equity business were particularly affected. In 2001, the income diversification gains from securities-related activities may have been small, as the increase in credit risk coincided with income losses (and sometimes also materialisation of market risk) from securities-related activities.

Still growing lending volumes and developments in the maturity structure of lending resulted in an increase in net interest income for euro area banks in 2001. This indicated increasing gains from maturity transformation and lower interest rate risks, which typically occur in an environment of reduced short-term interest rates and steeper yield curves. Interest income tends to rise when short-term interest rates fall, provided that banks disproportionately fund themselves in the short term and lend in the long term at fixed rates. The robust developments in net interest income acted as a counterweight to the reduced non-interest income.

3.3 Banks' overall financial condition

The profitability of major euro area banks declined significantly in 2001, mainly because of the increased provisioning and reduced non-interest income, while costs remained rather flat (see Table 2). From 2000 to 2001, the average return on equity after tax among the 50 largest banks fell from around 16% to 12%. However, this should be viewed against the notably high profits in the two previous years.

In spite of the increase in credit risk and reductions in income, solvency ratios of major euro area banks have been, on average, quite stable. The average total ratios have remained significantly above the regulatory minimum, i.e. 8%. Also the core capital ratios (Tier 1) have remained at sound levels. Euro area banks appear to have been sufficiently capitalised to absorb losses. The fact that capital ratios have been stable, irrespective of the rather large swings in banks' asset growth rates and profits, is quite striking. Banks may have actively managed their capital in order to maintain a constant buffer above the regulatory requirements, regardless of the changes in business conditions. However, it is also possible that the lags with which defaults affect banks' balance sheets distort the picture and the 2002 data will be more informative in this respect.

Chart 4

Median distance to default of the 50 largest euro area banks¹⁾

(monthly data)



Sources: Datastream and Fitch Bankscope.

1) Distance to default is defined as the number of standard deviations away from the default point, at which assets equal liabilities.

Recent research has suggested that the market prices of securities issued by banks may be useful in the monitoring of banks' and the banking sector's stability. In particular, it appears that the distance to default is a useful summary indicator of banks' soundness. For more details on the calculation of the distance to default and its benefits, see the box below. Chart 4 presents the median distance to default for the 50 largest euro area banks. After the impact of the 1997/1998 emerging market crises, there was a continuous upward trend in distances to default until mid-2001, suggesting an improvement in systemic

banking sector stability. The benign view changed in the latter half of 2001 in response to the adverse developments in the banks' environment, and the distances to default of the major euro area banks started to decline. This provided a clear indication of increased risk in the banking sector. The terrorist attacks on 11 September resulted in a decrease in the distance to default by around 20% month-on-month and a subsequent further decline of 20% cumulatively in the winter of 2001/2002, with a subsequent recovery of an approximately equal magnitude.

Box

Using market information to monitor banks

Financial market information is interesting from the perspective of monitoring banking sector stability for three reasons. First, market prices may discipline banks and limit their risk-taking, as banks have to pay higher financing costs to compensate market participants for higher risk. Second, market indicators provide observers with a measure of financial stability, which may have a number of convenient properties. In contrast to balance sheet information, which is generally available on a quarterly basis to supervisors and often only on an annual basis to the public, market prices are available at a high frequency, permitting a continuous monitoring of banks. Market prices also provide a convenient way of summarising information. Balance sheet information may give a differentiated and complex picture of financial stability; however, overall conclusions may be elusive and require judgements on the part of the observer as to which variables are of particular importance.

Hence, markets may usefully complement such judgements by central banks or bank supervisors by providing their own judgements. Third, market prices are inherently forward-looking, as they are a function of the expectations of market participants, in contrast to balance sheet information, which tends to be only a reflection of past performance.

Referring to recent ECB research findings for European banks, two market-based measures in particular may be of use in monitoring financial stability: subordinated debenture spreads of banks over government bonds and the distance to default. Both indicators represent explicit indicators of bank default risk. The distance to default represents the number of asset value standard deviations away from the default point. It is calculated from the bank's market value of assets and the volatility of that value and from the bank's liability figures. Options pricing theory is used to derive the first two components from the bank's equity market data. The default point is defined as the point at which the value of the bank's assets is precisely equal to the value of its liabilities (i.e. equity is zero). This article focuses on the distance to default as the relevant measure for two reasons. First, consistent stock price data are available for the 50 largest banks in the euro area. Second, research has suggested that the two indicators have a different nature: the distance to default is more forward-looking, while the spread mainly reacts to major financial problems and is more correlated with the (backward-looking) balance sheet variables. Moreover, research has shown that the signal given by the subordinated debt spread is sometimes muted by the expectation of public assistance should the bank encounter difficulties.

To illustrate the usefulness of the distance-to-default indicator, Chart 4 examines the behaviour of this indicator over time in response to specific shocks in financial markets. Concurrent with all major recent economic events causing financial market turbulence and economic uncertainty, such as the Asian crisis, Russia's debt default and the terrorist attacks on 11 September, there was a noticeable decrease in the median distance to default of the major euro area banks. For example, Russia's default in October 1998 resulted in a reduction of the distance to default by about 30%, i.e. an increase in the market's perception of risk in euro area banks of 30%. Similarly, the Asian crisis in 1997 and the terrorist attacks on 11 September resulted in a major decrease in the distance to default. Interestingly, the indicator exhibited some leading properties as regards the Asian crisis and Russia's debt default, while this is not the case with respect to the totally unexpected events of 11 September.

4 Banks' risk outlook

Forward-looking assessments of the risk profile of the banking sector are notoriously difficult and subject to great uncertainty. Hence, this section focuses on market expectations of banks' risks, as reflected in a number of indicators.

As discussed in the box above, one of the main advantages of the distances to default is that they are forward-looking assessments of risk. Hence, we can reconsider Chart 4 in this light. In all cases, the market appears to have revised its views upwards in early 2002, i.e. it has a more favourable assessment of banking sector stability in the euro area. The median distance to default increased markedly in the first months of 2002.

Despite this improved longer-term outlook in market-based measures of banking stability, bank balance sheet measures may continue to deteriorate during 2002. This is a reflection of the backward-looking nature of balance sheets and of the fact that typical measures of asset quality, such as loan loss provisions and problem loans, are reflected in the balance sheet of banks with a lag. Specific forward-looking measures regarding the quality of banks' portfolios include expected default frequencies (the probability that a firm defaults on its debt within a one-year horizon) in the corporate sector, which are given in Chart 5. The figures show that expected default frequencies are still high, especially in the technology and telecommunications

sectors. This is consistent with the still elevated bond spreads in these industries. Even considering the overall market, default risk is still significantly higher than just a few years ago, although it was declining in the first half of 2002 and was below the threshold default risk for speculative grade issuers in the bond market (horizontal line indicated in Chart 5). Hence, the corporate sector appears to continue to be vulnerable, with the potential for further adverse effects on banks. In particular, the technology and telecommunications sectors may remain fragile. As noted, bank lending to these sectors has been significant, even though it has tended to be moderate of late.

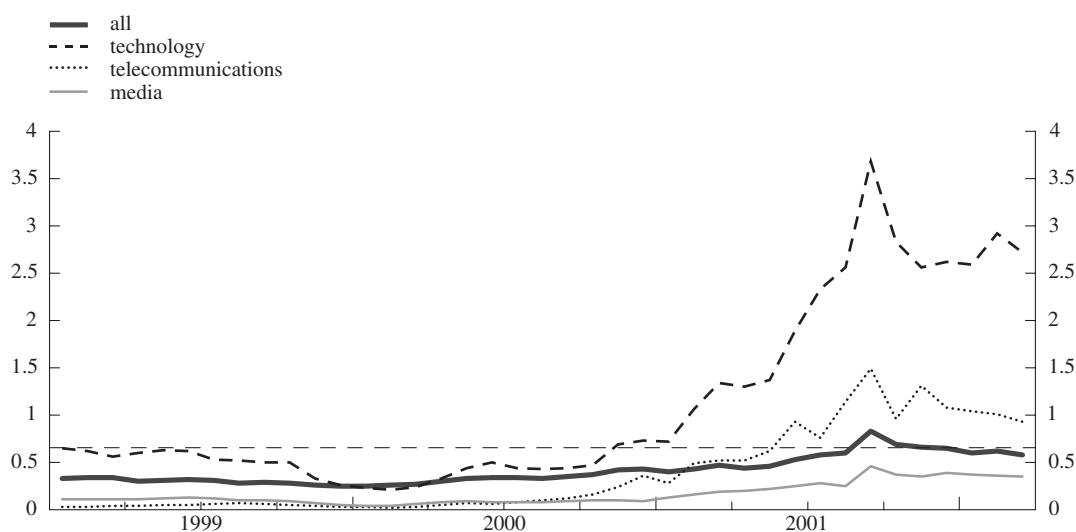
Over the medium to long-term, it is generally accepted that most episodes of banking instability are preceded by substantial increases in lending to the private sector, resulting in excessive levels of indebtedness of the household and corporate sectors. The level of indebtedness, as measured as a percentage of GDP, of both households and non-financial corporations has indeed been increasing over the last few years in the euro

area. Households' level of debt exceeded 50% of GDP in 2001 (1995: 42%), whereas the level of debt in non-financial corporations increased from 61% to 78% from 1995 to 2001. The higher debt levels were associated with significant increases in interest payments. In the case of households, interest payments as a percentage of GDP increased from 3.2% to 3.3% from 1999 to 2001, while for non-financial enterprises the increase was from 3.5% to 4% during the same period. While the increases in debt levels have recently levelled off in the case of both households and non-financial corporations, growth rates in indebtedness for the latter remained high in 2001.

Hence, developments clearly warrant continuous close monitoring as the figures could suggest a further increase in corporate defaults and further increases in credit risk in the coming years. However, this article has also shown that the increasing sophistication of banks with regard to their risk management, the availability of new avenues of hedging against credit risk and market risk, better diversification, as well as the adequate

Chart 5
Expected default frequencies for EU corporations¹⁾

(one year default rates, in percentages; monthly data)



Source: KMV Corporation.

1) The expected default rate in the year following a given date.

The horizontal line indicates the expected default threshold for speculative grade issuers.

level of capital observed in the euro area may put banks in a relatively favourable position to absorb these risks.

In conclusion, the euro area banking sector has remained robust despite a number of adverse developments in 2001. Banks' solvency ratios have remained by and large unaffected or even improved, and banks have

already significantly provisioned against the risks that materialised in 2001. In early 2002, market indicators painted an improved picture of banks' risks, but important elements of concern remain, especially in the credit risk area, as the outlook for specific industries and countries continues to be uncertain, as reflected in recent stock market developments.