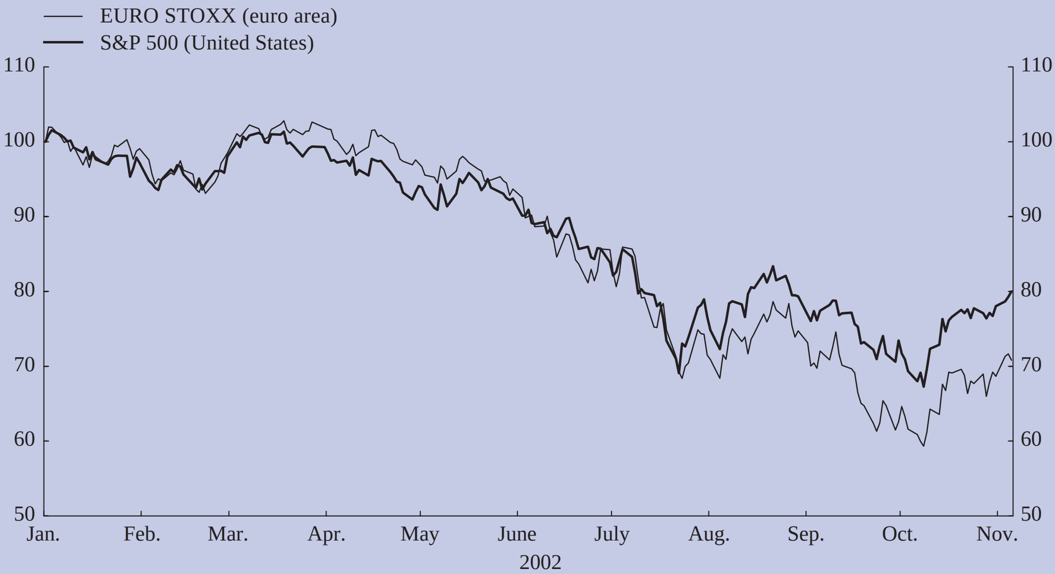
Box 3

Recent stock market developments in the euro area

Between the end of December 2001 and 6 November 2002 broad stock price indices for the euro area and the United States dropped by around 30% and 20% respectively (see Chart A). These sharp declines, which came after a two-year period in which stock prices had been falling more or less continuously, brought price-earnings ratios – the ratio between stock prices and corporate earnings for the previous 12 months – much lower in both markets (see Chart B). Of course, these ratios should be interpreted with a high degree of caution since (as explained in a box on page 19 of the May 2002 issue of the ECB's Monthly Bulletin) they are influenced by developments in past profits and related to the business cycle. Nevertheless, price/earnings

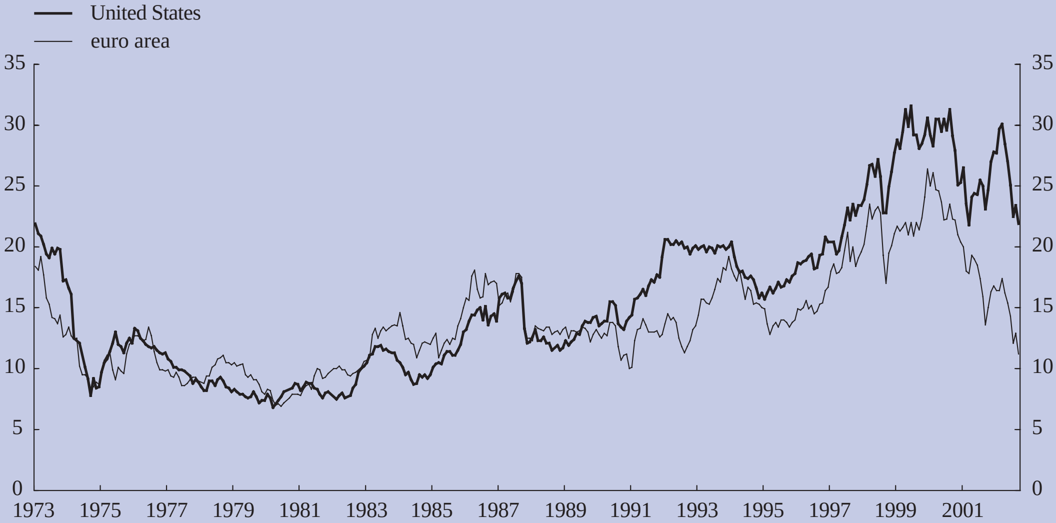
Chart A: Stock market developments during 2002

(Rebased 1 January 2002 = 100)



Source: Bloomberg.

Chart B: Price/earnings ratios for the euro area and the United States



Source: Price/earnings ratio based on Thomson Financial Datastreams broad base stock market indices and earnings per share.

ratios, based on 12 months of past earnings, which are above historical averages, typically reflect market expectations that corporate profit growth will be stronger in the future compared with the recent past. In this respect, it was notable that by October 2002 these ratios in the euro area stood at around the average level seen over the past 30 years, while they were somewhat higher than the 30-year average in the United States.

The main factor triggering the turbulence in euro area equity markets in 2002 appears to have been the discovery of a series of accounting irregularities at large US corporations. Concerns about accounting irregularities began to surface in December 2001 with the collapse of Enron, an energy corporation, which came at a time when US profits were already under significant pressure. This dampened investor confidence in the information content of profit statements and optimism for a quick rebound in profits faltered. Later on, as more scandals were revealed, market uncertainty increased further and then surged after the unearthing of the largest accounting fraud in US corporate history at WorldCom, a telecommunications company, in June 2002. Following this series of accounting scandals, the Securities and Exchange Commission (SEC) ordered the chief executive officers (CEOs) and chief financial officers (CFOs) of almost 1,000 US companies to testify to the accurateness and completeness of their financial statements. Although this order had not resulted in any fresh revelations by 14 August 2002, when the vast majority of CEOs and CFOs were due to testify, US stock markets continued to decline until early October as uncertainties remained as to whether corporate earnings would recover quickly.

The accounting scandals gave rise to considerable uncertainty about underlying profit performances, not only in the United States. As a result, the premium demanded by investors to hold stocks also increased in the euro area. In particular, there was a surge in implied stock market volatility in the euro area after the WorldCom scandal in late June 2002 because this had raised general uncertainties about the true profit picture of corporations, particularly in the technology, media and telecommunications (TMT) sectors. In the latter half of the 1990s there had been exuberance among investors worldwide with regard to TMT stocks, which brought price/earnings ratios in these sectors to particularly high levels. However, once investors became uncertain about the ability of corporations in this sector to deliver the high levels of implied profits, stock prices in these sectors came under particularly severe pressure on a global scale.

More generally, there has been an increasing tendency for stock prices in the euro area and the United States to move closer together over recent years. One reason for this is that economic, particularly corporate, links have become tighter between the two economies as a result of a substantial surge in global merger and acquisition (M&A) activity in the late 1990s. A sectoral breakdown of these M&A activities between euro area and US corporations shows that this surge occurred, to a large extent, in the technology and telecommunications sectors in the late 1990s.[1] As a result, unfavourable news affecting the US profit outlook, particularly in these two sectors, tended to spill over to the euro area, as market participants expected a concomitant deterioration in the euro area profit outlook.

Notwithstanding the discovery of accounting irregularities in the United States and spillover effects, the stock market correction in the euro area during 2002 can also be traced to factors specific to the euro area technology and telecommunications sectors as well as the insurance and bank sectors. These four sectors together accounted for around half of the total stock market decline between end-December 2001 and 6 November (see the table below). The decline in technology stock prices seems to partly reflect a correction from the high levels seen in the late 1990s and further downward revisions of investors' earnings expectations in 2002. Declines in the telecommunications sector occurred for similar reasons, while market participants also became concerned about the relatively high level of indebtedness in this sector.

The insurance and banking sectors also experienced severe declines in stock prices during 2002. A large proportion of euro area insurance corporations' assets consists of shares, making insurers particularly vulnerable to stock market declines. In addition, recent losses from natural catastrophes have also been high in this sector. The stock market correction also had an adverse influence on the banking sector, particularly during the summer. Notably, banks with relatively low profitability and banks with insurance company subsidiaries were adversely influenced by plunging stock prices.

In addition to these sectors, stock prices in the health, media and consumer non-cyclical sectors declined by more than the overall EURO STOXX index. However the weights of these sectors in the total index are rather limited, and the overall decline in stock prices in these sectors only contributed 15% to the total stock price decline between end-2001 and 6 November 2002.

Apart from these sector-specific considerations, different trends in long-term government bond yields might also partly explain why the drops in euro area stock prices since the end of 2001 have been larger than in the United States. In this respect, government bond yields, by setting a level for long-term interest rates, play a crucial role in determining the discount factor for stocks. All other things being equal, when these yields decline, stock prices typically rise. This favourable discount effect was much larger for stock prices in the United States. Between end-2001 and 6 November 2002, US government bond yields fell by around 90 basis points while euro area government bond yields fell by just 30 basis points. This could therefore partly explain why stock prices in the euro area dropped by more than those in the United States.

Table: Development in EURO STOXX sector indices

(31 December 2001 to 6 November 2002)

	Price changes (in percentages)	**Contribution to the total market change** (in percentages)
Technology	-43.6	14.7
Banks	-23.5	13.8
Insurance	-45.3	12.2
Telecommunications	-33.0	9.4
Energy	-17.8	8.0
Utilities	-26.0	5.8
Health	-34.1	5.7
Media	-49.7	5.4
Cyclical Goods	-28.8	3.8
Non-Cyclical Goods	-31.0	3.7
Financial Services	-28.9	3.0
Auto	-20.1	2.9
Chemical	-22.4	2.7
Industry Goods	-26.4	2.6
Construction	-26.4	2.2
Retail	-22.0	1.9
Basic Resources	-22.0	1.2
Food/Beverage	-7.6	1.1
Total Index	-29.2	

Source: Bloomberg and ECB calculations.

1 *See the box entitled "Mergers and acquisition activity and the composition of the financial account of the euro area balance of payment" on p. 36 of the August 2002 issue of the ECB's Monthly Bulletin.*