

Financial markets

Financial market trends

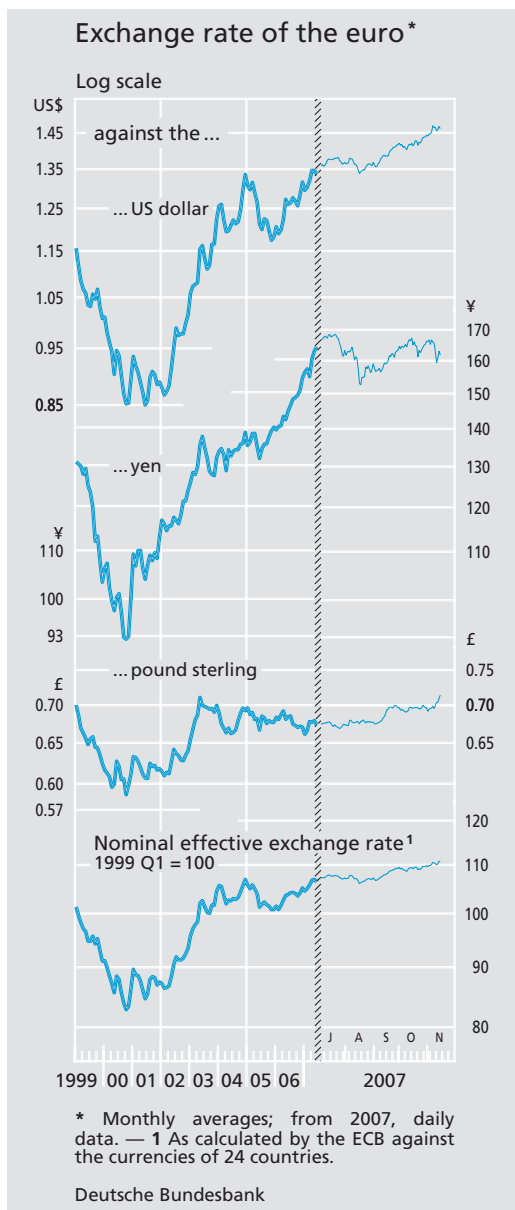
Especially at the beginning of the third quarter, events in the international financial markets were shaped by the impact of the crisis in the US mortgage market. In the course of a reassessment of credit risks, there was initially a marked increase in the market players' aversion to risk, which led to a considerable impairment of the trade in complex credit products, such as structured securitisations. At the same time, corporate bond spreads widened markedly, and share prices, which had hitherto been reaching multi-year peaks, came under heavy pressure accompanied by declining yields on government bonds. Given an easing of the Federal Reserve's monetary policy and the overall robust state of the world economy, the stock markets were able to make up some of the losses again as the reporting period progressed, however. The turbulence in the money and capital markets also affected the forex markets. There was a sharp increase in exchange rate uncertainty for a time and the exchange rate relationships among the major currencies have shown a marked shift.

*Financial
market setting*

Exchange rates

The US dollar, in particular, was under considerable pressure in the summer and autumn months. By contrast, the euro was tending to appreciate – above all, against the dollar. After reaching an interim peak of just over US\$1.38 at the end of July, the euro depreciated somewhat temporarily against a backdrop of profit-taking, a surprisingly high rate

*Euro exchange
rate against
the US dollar, ...*



of growth in US GDP for the second quarter and an increased demand for dollar liquidity. Thereafter, however, sentiment reversed again in favour of the euro. The crisis in the mortgage market as well as weak data from the real estate and labour markets in the United States strengthened the expectation of a re-orientation in US monetary policy. In actual fact, at its meeting on 18 September 2007, the US Federal Open Market Committee de-

ecided to cut the target for the federal funds rate by 50 basis points to 4.75%. As the Governing Council of the ECB had left key rates unchanged at its meeting before, the result was a narrowing of the interest rate spread over the euro, which subsequently rose above the US\$1.40 mark for the first time.

In October, unfavourable US economic data and, in some cases, weak quarterly results of US banks led to the euro continuing to firm up against the dollar. Surprisingly large net capital exports in US portfolio investment in August may also have played a part in these exchange rate gains. Added to this was a second interest rate cut by the Fed, even though this had largely been expected by the markets. The upshot of this was that, in early November, the euro reached a new all-time peak of more than US\$1.47.¹ Most recently, the euro was only slightly below this at US\$1.46, which was roughly 11% up on its level at the beginning of the year.

According to market reports, investors' heightened risk-aversion in the wake of the financial market turbulence resulted in a large-scale unwinding of carry trade positions in the first half of August. As a consequence, there was a broad rise in the Japanese yen, which is frequently involved in such transactions on the financing side – a movement which the euro, too, was unable to evade. The euro-yen exchange rate showed a marked fall to roughly ¥153, compared with

... against the yen ...

¹ From a German perspective, this means the US dollar was at its all-time lowest level. The US dollar's previous low against the Deutschemark of DEM1.3620/US\$1 – applying a conversion rate of DEM1.95583/€1 – corresponds to a euro-US dollar exchange rate of US\$1.4360/€1.

as much as just under ¥169 in mid-July. The slight calming in the financial markets beginning in the second half of August, which was also reflected in a decline in the implied euro-yen volatility, soon reversed the trend in favour of the euro again, however. Given, too, the Bank of Japan's decision to leave the target rate on hold in August and September, the euro had appreciated to more than ¥167 by mid-October. As this report went to press, the euro was somewhat lower again at ¥162, which was just over 3% up on the beginning of the year.

... and against
the pound
sterling

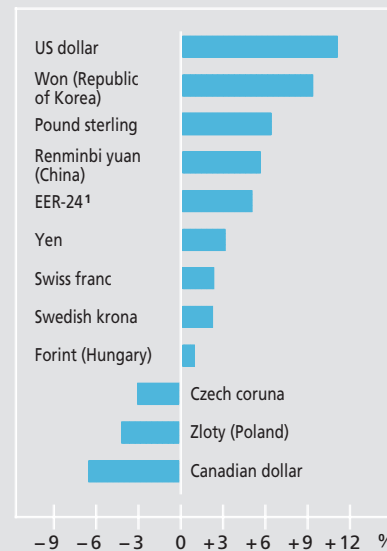
Against the pound sterling, the euro initially stayed within a narrow range around £0.68 up to early September. Following news of the difficulties of the Northern Rock mortgage bank, which the Bank of England had to support with an emergency loan, the euro appreciated to £0.70, however. Furthermore, the cooling of the UK property market appears to have tempered the Bank of England's inflation concerns somewhat, with the market players in the United Kingdom therefore expecting a trend decline in central bank rates. These expectations were confirmed at the end of the reporting period with the publication of the Bank of England's *Inflation Report*. This led to the euro's exchange rate against the pound sterling going up to just over £0.71, which was 6½% up on the start of the year.

Effective euro
exchange rate

The euro depreciated against a number of other currencies, such as the Canadian dollar, the Polish zloty and the Czech coruna, however. On a weighted average, the euro's exchange rate was therefore more than 5% up

Appreciation / depreciation of the euro against selected currencies

29 December 2006 to 15 November 2007



¹ Nominal effective euro exchange rate against the currencies of 24 major trading partners.

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on its level at the beginning of 2007 and over 7½% up on its level at the launch of monetary union. In real terms, ie taking account of the simultaneous inflation differentials between the euro area and the major trading partners, the effective exchange rate of the euro was well above its longer-term average.² Overall, the euro's appreciation dampened the strong inflation impulses acting on the domestic European economy in recent months

² Real exchange rates are an important measure of an economy's price competitiveness. From Germany's point of view, the recent appreciation of the euro has been tending to lead to a deterioration in price competitiveness. Nevertheless, at more than 3%, its price competitiveness is to be rated as more favourable at present than on a long-term average, which, for the sake of simplicity, may be interpreted as a "neutral" level of competitiveness. In this context, German enterprises – especially with regard to competitors from other euro-area countries – are benefiting from the comparatively moderate developments in prices and costs over the past few years.

which stemmed from the international commodity and agricultural markets.

Securities markets and portfolio transactions

Falling capital market rates in the euro area ...

In the bond market, European government bond yields have been fluctuating and have fallen by just under ½ percentage point since early July to 4¼% in the wake of the US mortgage crisis. Following a pronounced decline up to mid-September, which was also driven by the flight to safe assets, the Fed's interest rate cut of 50 basis points and the decision by the Governing Council of the ECB to put euro-area key interest rates on hold for the time being marked the start of a brief countermovement. Along with the marked revisions of US growth expectations and gloomier sentiment indicators on both sides of the Atlantic, yields went down again in mid-October, however.³ In line with the subdued economic outlook, the decline in interest rates in the euro area was accompanied by a low real interest rate level, while long-term inflation expectations – derived from the spread between nominal and real interest rates – showed hardly any increase despite record oil price levels.⁴

... and in the dollar area

The decline in yields in the dollar area was even more marked than in the European bond market. With a US interest rate level of less than 4¼% at the end of the period under review, the yields of US Treasuries were lower than those of comparable European bonds. In particular, the fear that the crisis in the subprime market could affect the econ-

omy as a whole led in the United States to a downward revision of long-term growth expectations as well, whereas the outlook in Europe deteriorated less strongly.⁵ Added to this were interest rate cuts by the Fed and further expectations of lower interest rates, which impacted on the yield level at the long end.

Uncertainty about the future performance of the bond market, measured by the implied volatility of options on the Bund future, developed as a mirror image of interest rates. Following a marked rise up to the middle of September, there was a briefly calmer period up to mid-October and then an acceleration again. At present, the implied volatility for a constant three-month horizon is moving at a level that is above the average of the past five years. The market players are therefore still unsettled.

This uncertainty has had a particularly marked effect on the financing conditions for enterprises in the bond market. Despite the decline in government bond yields, financing conditions have deteriorated in the past few months as a result of reassessed credit risks. In the wake of rating downgrades, the diffi-

Continued nervousness in the bond market

Premiums on corporate bonds reflect course of subprime crisis

³ In line with the interest rate policy decisions of the Governing Council of the ECB and less favourable sentiment and expectation indicators, the entire yield curve for listed Federal securities showed a downward shift in the reporting period. The expectations of higher interest rates, which had still been prevalent in the market at the beginning of the third quarter, have now subsided in the short to medium-term maturity segment. At the same time, the yield spread between ten and two-year bonds, ie the slope of the yield curve, has increased again compared with the end of the first half of the year.

⁴ Real interest rates calculated from Consensus Economics surveys and yields of inflation-linked government bonds.

⁵ Source: Consensus Economics.

culties of some hedge funds and the liquidity problems not only of US mortgage financiers but also of some German and British banks, the spread of long-term BBB-rated corporate bonds over government bonds soared by more than half to values of 165 basis points at the end of July. The Fed's distinct rate cut in September then marked the beginning of a period of stabilisation and the bond spreads declined somewhat for a time. In November, they then went up once more and, at the end of the period under review, were again at 165 basis points. On balance, however the yields on seven to ten-year BBB-rated bonds in mid-November were no more 25 basis points up on their level at the start of the third quarter, however. Nevertheless, in some cases, the financing conditions for non-investment-grade enterprises were considerably less favourable; in summer, the spreads had grown very sharply and were still at a higher level at the end of the period under review.

*Net repurchase
of German debt
securities ...*

With gross sales of domestic debt securities amounting to €313½ billion in the third quarter, issuance activity in the German bond market was stronger than in the preceding quarter. However, after deducting markedly higher redemptions and changes in issuers' holdings of their own bonds, German issuers repurchased debt securities worth around €38 billion net. Domestic debt securities worth as much as €45 billion had been sold in the preceding quarter. In the reporting period, foreign bonds and money market instruments were likewise sold on a much smaller scale in the German market (€2 billion) than in summer (€42½ billion). Overall, only foreign, non-



euro-denominated debt securities were sold in the German market (€12½ billion). By contrast, euro-denominated debt securities from euro-area partner countries, which had been in demand from domestic investors in the preceding months owing to the fact that they carry a slightly higher rate of interest than the benchmark Bund, were sold for €10½ billion net. This means that, between July and September, the outstanding amount of domestic and foreign debt securities in the German market fell by €36 billion, compared with net sales of €88 billion in the period from April to June.

The domestic public sector, in particular, reduced its bonded debt in the third quarter – by just under €31 billion – whereas it had issued debt securities for €25 billion in the

*... due mainly
to marked
reduction
in public
sector debt
instruments*

Investment activity in the German securities markets

€ billion

| Item | 2006 | | 2007 | |
|--|-------|--------|------|--------|
| | Q3 | Q2 | Q2 | Q3 |
| Debt securities | | | | |
| Residents | 4.2 | 22.9 | | - 86.8 |
| Credit institutions | - 0.8 | 25.3 | | - 0.2 |
| of which | | | | |
| Foreign debt securities | 10.0 | 32.4 | | 13.8 |
| Non-banks | 5.1 | - 2.4 | | - 86.6 |
| of which | | | | |
| Domestic debt securities | - 1.7 | - 12.7 | | - 74.7 |
| Non-residents | 18.5 | 65.1 | | 50.9 |
| Shares | | | | |
| Residents | 16.9 | - 2.0 | | - 9.8 |
| Credit institutions | 3.7 | - 13.0 | | - 4.0 |
| of which | | | | |
| Domestic shares | - 2.5 | - 18.5 | | - 2.8 |
| Non-banks | 13.2 | 10.9 | | - 5.8 |
| of which | | | | |
| Domestic shares | 4.8 | 8.7 | | 2.3 |
| Non-residents | 1.8 | 12.3 | | 1.6 |
| Mutual fund shares | | | | |
| Investment in specialised funds | 5.7 | 1.0 | | - 1.2 |
| Investment in funds open to the general public | - 3.9 | - 0.7 | | - 6.9 |
| of which: Share-based funds | - 1.1 | - 2.8 | | - 2.5 |

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preceding three-month period. On balance, it was only state government that tapped the capital market (€2½ billion). Given buoyant tax revenues, the Federal government reduced its market debt by the record figure of €33 billion. On balance, it redeemed five-year Federal notes (Bobls) for €17½ billion, ten-year Bunds for €11 billion, and two-year Federal Treasury notes (Schätze) for €5½ billion. Additionally, it reduced the outstanding amount of Treasury discount paper (Bubills) by €½ billion. It was only in the very long-term segment that Federal government expanded its market debt somewhat (€2 billion) with the issuance of 30-year bonds.

The credit institutions, too, reduced their capital market debt in the period from July to September (by €8½ billion). This was likewise

Credit institutions' market debt also fallen

due to a high level of redemption and repurchasing. In the preceding quarter, the credit institutions had issued their own bonds for €15½ billion net. They reduced their public Pfandbrief debt by €14 billion and their mortgage Pfandbrief debt by €3½ billion. A positive amount was raised, however, from the issuance of debt securities by specialised credit institutions and from the category of "other bank debt securities", which can be structured flexibly; in the third quarter, the figures for these reached €5 billion and €4 billion respectively.

In the reporting period, non-financial corporations, unlike other issuers, increased the net circulation of their own bonds and money market instruments by €1½ billion, issuing short-term and longer-term instruments in roughly equal amounts. Net redemptions of money market instruments in August and September are masked in the quarterly figures, however. Tensions in the European money market occurred at this time, which made new issues of short-dated bonds considerably more difficult.

As in the second quarter, German debt securities were purchased mainly by foreign investors in the third quarter, too. They acquired private sector debt instruments for €47 billion and public sector debt instruments for €4 billion. Credit institutions swapped domestic debt securities for foreign debt securities; on balance, there was no change in their overall bond holdings. Domestic non-banks, on the other hand, sold debt securities amounting to €86½ billion. In terms of domestic instruments, they sold mainly bank bonds and cor-

Net issuance of corporate bonds

Purchases of debt securities

porate bonds (€46½ billion) but also public sector instruments (€28½ billion). Domestic non-banks redeemed foreign bonds for €12 billion.

Stock markets under pressure ...

In the third quarter, the international stock markets felt the impact of the turbulence in the credit markets. When the crisis in the US mortgage market became distinctly more acute in July and August and many credit risks were being reassessed, investors – given a greater aversion to risk – undertook considerable shifts in their portfolios away from stocks into secure government bonds. Crucial factors in this are likely to have been concerns about the adverse implications of the financial market turbulence for the profitability of the financial institutions, for business with mergers and acquisitions, which had hitherto been driving stock prices, as well as for economic activity as a whole. This “flight to security” led initially to sharp price falls in the third quarter, especially of equities from the financial sector. At the same time, there was a marked increase in uncertainty about future stock market prices, reaching figures that were above the long-term average.⁶

... but relatively robust overall

In mid-September, the distortions in the credit markets took a backseat somewhat when the Fed cut its target for the federal funds rate by 50 basis points. Following this, the market players’ uncertainty and risk aversion receded again somewhat. In a setting of generally robust global economic activity, stock prices made good some of their earlier losses despite somewhat gloomier sentiment indicators in the euro area and increasing concerns about the economy in the United States. One



contributory factor in this was that the markets had anticipated the further interest rate cut made by the Fed at the end of October. Another, major supporting factor on both sides of the Atlantic was the expected year-on-year growth in corporate profits – which, despite the financial market turbulence, actually showed an increase in the third quarter.

⁶ Measured by indices of implied volatility (VDAX, VIX).

Portfolio shifts as a measure of general risk perception in the financial markets

In the wake of the recent turbulence in the financial markets, investors have evidently carried out portfolio shifts from stocks into secure government bonds. The analysis of such portfolio shifts allows inferences to be drawn concerning the general risk propensity of the market players. In this context, the correlation between returns from stocks and long-term government bonds is a suitable measure of risk aversion, since changes in risk propensity have a stronger impact on the stock markets than on the markets for government bonds. In times of heightened risk aversion, it is therefore often possible to observe that investors demand higher equity risk premiums or undertake shifts from stocks into secure government bonds (safe haven flows). The resulting contrasting price developments of stocks and government securities are accompanied by a negative correlation. By contrast, in calm periods, the prices of both should develop in parallel, since lower interest rates increase the present value of future gains and thus lead to higher stock prices.

The easiest way of calculating the correlation between stocks and government bonds is by means of a moving window. In this approach, sudden changes of the correlation are captured as a smoothed development. This means that some extreme correlation values influence the measured correlation, depending on the scope of the window, for an extended time. One problem of this approach is that all the data within the window are weighted equally and data outside of the window are not considered at all. Another problem is that the scope of the window has to be chosen at random. In order to avoid these problems, a GARCH(1,1) model is estimated below, which can be used to capture the correlation between both time series as it varies over time. A version of the BEKK model,¹ which is often used in practice, is chosen as the specification of the GARCH(1,1) model.

The estimate is made on the basis of the returns (measured as the daily logarithmic price differential) of the total return indices of CDAX and the Merrill Lynch Index for European government bonds in the observation period

¹ The name "BEKK model" has its origins in a paper by Baba, Engle, Kraft and Kroner (1989), an earlier version of R Engle and K Kroner (1995), Multivariate Simultaneous Generalized ARCH, *Econometric Theory*, 11, pp 122-150. In this model, the correlation is calculated from



from the beginning of 1999 to 12 November 2007. With regard to the recent turbulence in the credit markets, it can be seen that the correlation has declined since mid-June and, since July, has moved clearly below the mean value determined in the observation period (see chart above, straight line). In mid-June, rating agency Moody's announced that it would downgrade many securities collateralised by mortgages from the subprime segment. This was followed by a general reassessment of the credit risks. When the Federal Reserve cut its key funds rate by 50 basis points on 18 September 2007 and stock prices subsequently went up significantly, the downward trend reversed and the correlation increased again somewhat owing to an evidently lower aversion to risk. At the end of the period under review, it was at a level similar to that following the temporary stock price losses in March of this year, although it remained negative, as almost throughout 2007.

In order to estimate the current state of risk propensity as accurately as possible, it appears logical to make an

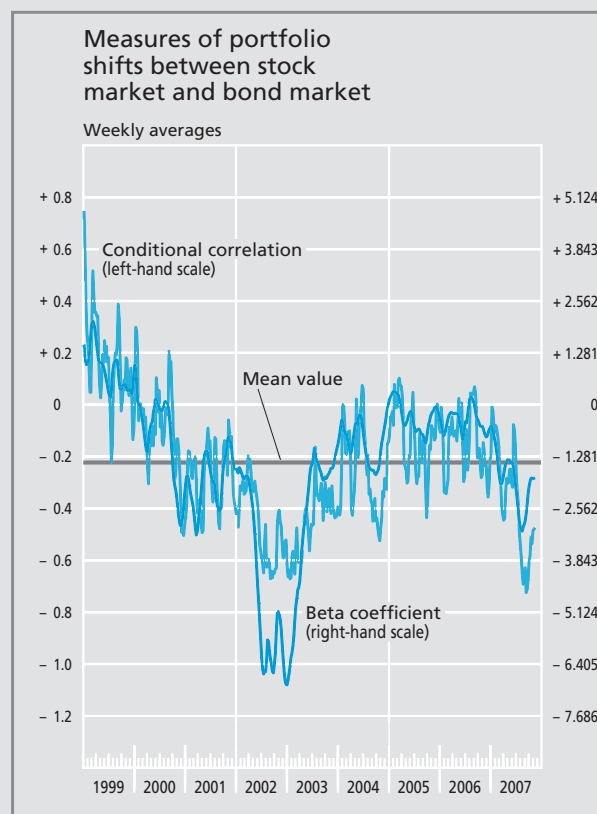
the conditional variance-covariance matrix H_t , which is specified as $H_t = C + A[\varepsilon_{t-1}, \varepsilon_{t-1}']A' + BH_{t-1}B'$, with A , B and C as 2×2 matrixes, A and B are assumed to be diagonal, and the 2×1 vector ε_t corresponds to the errors from a regression of the stock and bond returns on their mean values.

assessment against the background of its past long-term development, too. To avoid isolated extreme values of the correlation giving a distorted picture of risk propensity, the analysis of a smoothed development is an obvious option. The cited problems in calculating the correlation with the aid of a moving window are overcome by means of a regression of the equity returns on a constant (α) and the bond returns with a time-variable beta parameter. The relationship between the daily CDAX returns and the returns of the Merrill Lynch Index for government bonds are therefore analysed below in a time-variable context. For this purpose, the regression equation is transformed to a state-space form, estimated time-variably using the Kalman filter and then smoothed by means of the smoothing equation using all the available data.² This estimation procedure avoids the problems of an identical weighting of all the data within the window and of an arbitrarily chosen window scope, which are associated with a moving window regression.

In most cases, the smoothed beta coefficient and the conditional correlation show the same trend in the observed period. Sudden, merely temporary changes of the correlation between the equity market and the bond market were reflected in the conditional correlation only as "outliers", without changing its longer-term trend. The heavy stock price losses following accounting scandals in the USA and in the run-up to the conflict in Iraq between mid-2002 and the second quarter of 2003 are reflected more clearly by the beta coefficient. In this period, the conditional correlation also dropped to similarly low values as seen recently during the turbulence in the credit markets. However, the long duration of this stock-market slump, along with simultaneously increasing bond prices is expressed more clearly in the smoothed values of the beta coefficient. The very low values of the beta coefficient signal – among other things – the evidently persistent period of portfolio shifts from stocks into secure government securities at that time against the backdrop of an exceptionally high aversion to risk on the part of the market participants.

See also European Central Bank, Box 2, Monthly Bulletin, December 2004, pp 18–19. — 2 In this case, it is assumed that the beta coefficient follows a random walk and thus may vary substantially. State-space

Compared with this period, the current development of the beta coefficient shows a less tense picture of the situation in the financial markets. Following the decline in July, the coefficient rose again especially in September and October, with the result that the last value is only marginally below the longer-term average for the observation period and thus points at present to a rather moderate risk aversion. When interpreting this result, however, it must be taken into account that the analysis presented here focuses solely on the relationships between the returns on government bonds and stocks. Hence, it mainly models the general risk perception of the market. Of course, it cannot capture investors' caution concerning individual product categories – as, for example, in the case of structured securitisations.



models and the Kalman filter are described in detail, for example, in K Cuthbertson, SG Hall and MP Taylor (1992), Applied econometric techniques, New York.

Major items of the balance of payments

€ billion

| Item | 2006 | | 2007 | |
|--|--------|--------|--------|----|
| | Q3 | Q2 | Q3 | Q2 |
| I Current account 1,2 | + 21.7 | + 35.6 | + 37.7 | |
| Foreign trade 1,3 | + 38.7 | + 48.8 | + 50.1 | |
| Services 1 | - 11.2 | - 3.3 | - 10.2 | |
| Income 1 | + 6.9 | - 2.1 | + 9.1 | |
| Current transfers 1 | - 8.1 | - 4.8 | - 8.6 | |
| II Capital transfers 1,4 | - 0.3 | + 0.8 | + 0.4 | |
| III Financial account 1 (Net capital exports: -) | - 12.8 | - 89.0 | - 20.4 | |
| 1 Direct investment | - 14.6 | - 22.3 | - 19.4 | |
| German investment abroad | - 19.7 | - 24.1 | - 34.1 | |
| Foreign investment in Germany | + 5.0 | + 1.8 | + 14.7 | |
| 2 Portfolio investment | + 5.8 | + 12.9 | + 49.7 | |
| German investment abroad | - 20.2 | - 62.5 | + 1.4 | |
| Shares | - 2.8 | - 2.8 | + 5.3 | |
| Mutual fund shares | - 0.6 | - 16.9 | - 2.1 | |
| Debt securities | - 16.8 | - 42.7 | - 1.9 | |
| Bonds and notes 5 | - 15.1 | - 39.6 | + 3.6 | |
| of which Euro-denominated bonds and notes | - 13.1 | - 33.4 | + 10.6 | |
| Money market instruments | - 1.6 | - 3.1 | - 5.5 | |
| Foreign investment in Germany | + 26.0 | + 75.3 | + 48.3 | |
| Shares | + 6.3 | + 8.6 | - 3.5 | |
| Mutual fund shares | + 1.2 | + 1.6 | + 0.8 | |
| Debt securities | + 18.5 | + 65.1 | + 50.9 | |
| Bonds and notes 5 | + 22.3 | + 60.6 | + 31.8 | |
| of which Public bonds and notes | + 9.1 | + 27.1 | + 3.6 | |
| Money market instruments | - 3.8 | + 4.5 | + 19.1 | |
| 3 Financial derivatives 6 | - 1.1 | - 12.0 | - 32.2 | |
| 4 Other investment 7 | - 3.7 | - 66.2 | - 18.1 | |
| Monetary financial institutions 8 | + 13.0 | - 60.8 | - 24.7 | |
| of which: short-term | + 28.3 | - 40.4 | + 10.3 | |
| Enterprises and households | + 5.2 | + 13.7 | + 5.9 | |
| of which: short-term | + 8.7 | + 23.3 | + 10.0 | |
| General government | + 6.1 | - 23.4 | + 28.6 | |
| of which: short-term | - 1.0 | - 23.1 | + 29.1 | |
| Bundesbank | - 28.0 | + 4.3 | - 27.9 | |
| 5 Change in reserve assets at transaction values (increase: -) 9 | + 0.8 | - 1.4 | - 0.3 | |
| IV Errors and omissions | - 8.6 | + 52.5 | - 17.7 | |

1 Balance. — 2 Including supplementary trade items. — 3 Special trade according to the official foreign trade statistics (source: Federal Statistical Office). From January 2007, excluding supplies of goods for/after repair/maintenance, which, up to December 2006, were deducted via the supplementary foreign trade items. — 4 Including the acquisition/disposal of non-produced non-financial assets. — 5 Original maturity of more than one year. — 6 Securitised and non-securitised options as well as financial futures contracts. — 7 Includes financial and trade credits, bank deposits and other assets. — 8 Excluding the Bundesbank. — 9 Excluding allocation of SDRs and excluding changes due to value adjustments.

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Overall, as measured on the broad CDAX share price index, German equities showed losses of 5% since the end of June, while the European Dow Jones EuroStoxx and the US S&P 500 lost 6% and 3% respectively. At the end of the period under review, all the cited indices were still up on their end-2006 level, however.

Against the backdrop of the financial market turbulence, issuance activity in the domestic stock market weakened again in the third quarter. German enterprises issued only €1 billion worth of new shares, compared with €2½ billion in the second quarter. These were mostly listed equities. Moreover, residents sold foreign shares for €9½ billion net.

Decline in stock market borrowing

In the German stock market, domestic non-banks were the largest group of buyers of German equities in the third quarter, at €2½ billion. At the same time, they sold foreign shares amounting to €8 billion. Foreign investors increased their investment in the German equity market by €1½ billion. They reduced their holdings in the form of portfolio investments by €3½ billion, but stepped up their direct investment (see also page 45). German credit institutions took domestic and foreign equity out of their portfolios (€3 billion and €1 billion respectively).

Share purchases

Domestic investment companies recorded outflows of funds amounting to €8 billion in the third quarter after raising funds of €½ billion in the preceding three months. At €7 billion, the outflows were predominantly to the detriment of mutual funds open to the general public, while the specialised funds re-

Sales of mutual fund shares

served for institutional investors were less severely affected (€1 billion). In the case of the mutual funds open to the general public, the outflows – against the backdrop of the tensions in the European and US financial markets – affected mainly money market funds (€5 billion), although bond-based funds (€3 billion) and equity-based funds (€2½ billion) were affected, too. By contrast, open-end real estate funds and mixed security-based funds sold shares for €2 billion and €1½ billion, respectively. Foreign mutual funds recorded inflows of funds of €2 billion.

*Purchases of
mutual fund
shares*

Mutual fund shares were purchased solely by foreign investors in the third quarter (€1 billion). By contrast, both domestic non-banks and domestic credit institutions reduced their investment in mutual fund shares on balance by €4 billion and €2½ billion respectively.

Direct investment

*Net capital
exports in direct
investment*

Net capital imports of €49½ billion in portfolio investment – not least owing to the increasing risk aversion of internationally oper-

ating investors – contrasted with net outflows of funds of €19½ billion in direct investment in the third quarter; net capital exports had been at €22½ billion in the second quarter.

The key factor, as in the preceding quarter, was investment by German proprietors, which provided their foreign branches with capital amounting to a total of €34 billion, a large part of which was in the form of intra-group financial credits (€21½ billion). Among the preferred locations for investment were the countries of the European Union, including – apart from some large international restructuring measures within affiliated enterprises – Italy (€8½ billion) and the Netherlands (€5 billion).

Foreign firms likewise strengthened their investment in Germany, investing €14½ billion net in the reporting period. In the preceding quarter, foreign investment in Germany had been considerably more subdued at €2 billion. The vast majority of the inflowing funds came from European countries, principally the Netherlands and France.