# Financial markets

## Financial market setting

*Financial markets gripped by economic uncertainty in emerging market economies*

In the third quarter of 2015, the international financial markets were influenced, above all, by the slowdown in growth in some large emerging market economies. Monetary policy decisions by central banks and changing expectations with regard to future monetary policy in the industrial countries also played a key role. Since the end of June, the trend in long-term government bond yields in the major currency areas has – despite fluctuations – been negative overall, albeit to varying degrees. Declining long-term inflation expectations derived from implied forward inflation rates contributed to the lower nominal yields. On the international equity markets, the effects of the more moderate global economic outlook, on the one hand, and the price-boosting expectations of continued accommodative monetary policy in many countries, on the other, ultimately balanced each other out for the most part. In this context, the falling returns had a stabilising effect on share prices, as a lower discount rate increases the present value of future corporate earnings. However, the more subdued global growth expectations also imply reduced future corporate earnings. Moreover, the gloomier business prospects affected financing conditions for enterprises on the capital market. Although these remain favourable, yields on corporate bonds have not declined to the same extent as government bond yields, as risk premiums for enterprises have risen. On the foreign exchange markets, concerns about the economic outlook of some emerging market economies initially led to an increased demand for euro. Subsequently, market participants' expectations regarding a possible further divergence in the monetary policy stance on either side of the Atlantic weighed on the single currency. Overall, the euro has depreciated slightly in effective terms since mid-year.

## Exchange rates

*Euro falls on balance against the US dollar, …*

The euro made relatively strong initial gains against the US dollar in the second half of August, peaking at around US$1.15, which was its highest point since January 2015. This was largely attributable to heightened uncertainty among market participants with regard to developments in the global economy, which was further intensified by the more flexible exchange rate regime for the renminbi and falling share prices. According to market participants, this uncertainty propped up the euro as a result of the unwinding of carry trades funded in euro, as a low-interest-rate currency, while also raising doubts in market circles about an early interest rate rise in the United States.

In the ensuing period, the euro fluctuated between a rate of around US$1.11 and US$1.15. The reasons for this were market participants' changing expectations with regard to an early interest rate reversal in the United States and the Federal Reserve's decision to leave policy rates unchanged for the time being as well as speculation about an expansion of the bond purchase programme in the euro area. This sideways movement was interrupted in mid-October when voices within the ECB's Governing Council repeatedly buoyed market participants' expectations of a further easing of monetary policy and the Federal Reserve sent out clear signals of a December interest rate rise. As a result, the euro depreciated against the US dollar. It was most recently trading at approximately US$1.07, which is around 4.1% lower than at the end of the second quarter.

*… against the yen …*

The euro began the first half of August with gains against the yen, too. Despite fears among market participants that uncertainty surrounding the economic outlook in China could have a negative impact on Japan, the euro subsequently depreciated against the yen. Disappointing economic data from Japan only lifted

**Exchange rate of the euro**

Daily data; log scale


Source: ECB. **1** Exchange rate at the start of monetary union on 4 January 1999. **2** As calculated by the ECB against the currencies of 19 countries.
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the euro temporarily, particularly as their impact was softened by optimistic reports from the Japanese central bank. It was not until the second half of October, amid mounting speculation of a further easing of monetary policy in the euro area, that the euro lost value again. It fell 3.7% against the yen compared with the end of June, standing most recently at about 132 yen.

*… and against the pound sterling*

The single currency started out with slight gains against the pound sterling. According to market participants, the initial strength of the euro was the result of the unwinding of carry trades and the expectation of an interest rate reversal in the United Kingdom being pushed back ever further into the future. During this appreciation phase, surprisingly positive economic data from the United Kingdom weighed on the euro at times, but was not enough to break the trend. It was only recently that the euro fell again against the pound. At the time this report went to press, it stood at approximately 0.71 pound sterling and was thus trading 0.7% below its level at the end of June 2015.

*Renminbi down against the euro and the US dollar*

The renminbi, which attracted much attention when the People's Bank of China made changes to the fixing methodology for its reference rate in mid-August, initially lost 3.2% against the US dollar before recovering slightly. Overall, the renminbi has depreciated 2.5% against the US dollar and 0.4% against the euro since the mechanism was changed.

*Effective exchange rate of the euro weaker*

Measured against the currencies of 19 major trading partners, the euro sustained a loss in value of 1.1% compared with the end of June. The single currency was thus latterly trading 11.7% below its level at the launch of monetary union. In real terms – ie taking account of the inflation differentials between the euro area and its major trading partners – the effective euro exchange rate fell by about 2% in the period under review.

## Securities markets and portfolio transactions

*Yields in international bond markets down*

Given the uncertainty surrounding the economic situation in major emerging market economies, long-term yields in the global bond markets have fallen. The question of when the US Federal Reserve is going to raise its official interest rate also continues to affect developments on the US bond market. At the start of August, the majority of market participants had still been expecting the first rate rise to occur in September. However, on account of risks to the US economy arising from the economic situation in the emerging market economies, the US central bank decided to keep interest rates on hold. Following the most recent US Federal Open Market Committee (FOMC) meeting, the bulk of the market is now anticipating a change in interest rates in December 2015. On balance, yields on ten-year US government bonds – despite the recent increase – have declined by 5 basis points to 2.3% since the end of June. In the context of weaker than expected economic data, there was speculation among market participants in Japan about further monetary policy measures by the Bank of Japan. Accordingly, yields on ten-year Japanese government bonds were down significantly, most recently standing at 0.3%.

*Decline in Federal bond yields*

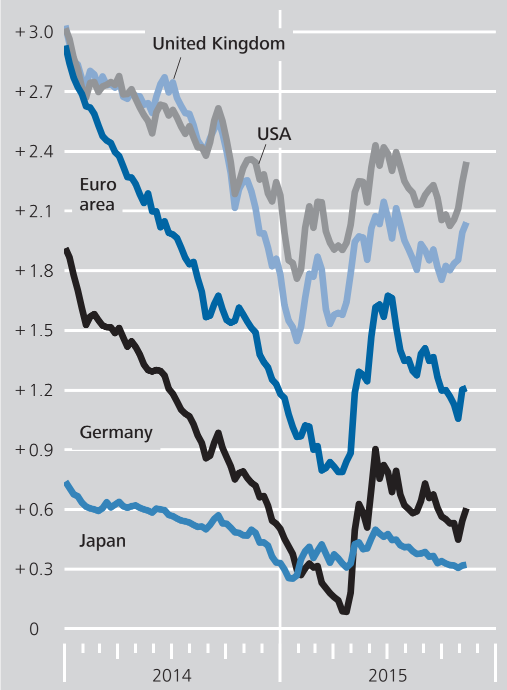
Bond yields in Germany and in the rest of the euro area have also dropped since mid-year. In July, negotiations over a third support package for Greece had an impact on the yield curve of Federal bonds (Bunds) in particular, as investors temporarily increased their demand for these Federal securities, which are deemed to be particularly secure. The heightened uncertainty surrounding the economic outlook in the emerging market economies, and the drop in share prices associated with this, also led market participants to seek out secure investments in the form of Bunds. In addition, the Eurosystem has been acquiring a sizeable volume of German debt securities – Bunds, above all – as part of the expanded asset purchase programme (PSPP cumulative total as at end-October: €92.3 billion). As a result, yields on ten-year Bunds have thus fallen since the end of June by 19 basis points; at the time of going to press, they stood at 0.57%. Overall, uncertainty with regard to developments in yields – measured using the implied volatility of options on Bund futures – also decreased, recently once again dropping below the five-year average.

*Yield curve for Bunds flatter*

The German yield curve derived from yields on Federal securities has become flatter since the end of June. This resulted, in particular, from lower yields in the medium and long-term maturity segments. With figures as low as -0.36%, short-term yields remained squarely in negative territory and also below the deposit facility rate. Once again, negative yields could temporarily be observed for bonds with maturities of up to six years. Market participants thus appear to be expecting low interest rates to persist over the longer term.

**Yields* in euro area and selected countries**

% pa, weekly averages




Source: Thomson Reuters. * Government bonds with a residual maturity of ten years.
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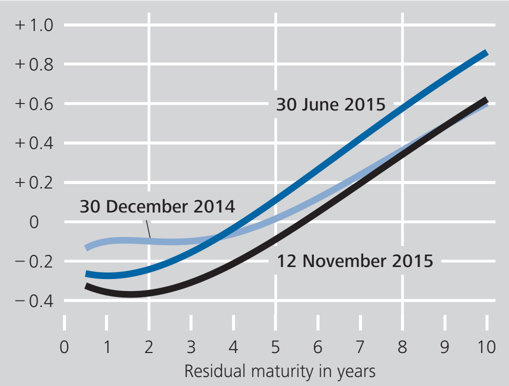
*Narrower yield spreads in the euro area*

Yields on bonds issued by other euro-area countries have followed a similar path to that of Bunds. For example, at 1.4%, the yield on GDP-weighted ten-year euro-area government bonds was significantly below the value observed at the end of June. Furthermore, the spread between these yields and those of German Bunds has narrowed by 43 basis points to 84 basis points since the end of the second quarter. A considerable part of this contraction occurred back in mid-July as a result of the fall in Greek yields in the wake of the agreement on a third support package for Greece. Unlike in the past, however, the debate surrounding this support package only had a marginal impact on the yields on bonds issued by other periphery countries. Spanish yields were also

**Yield curve on the German bond market***

%




* Interest rates for (hypothetical) zero-coupon bonds (Svensson method), based on listed Federal securities.
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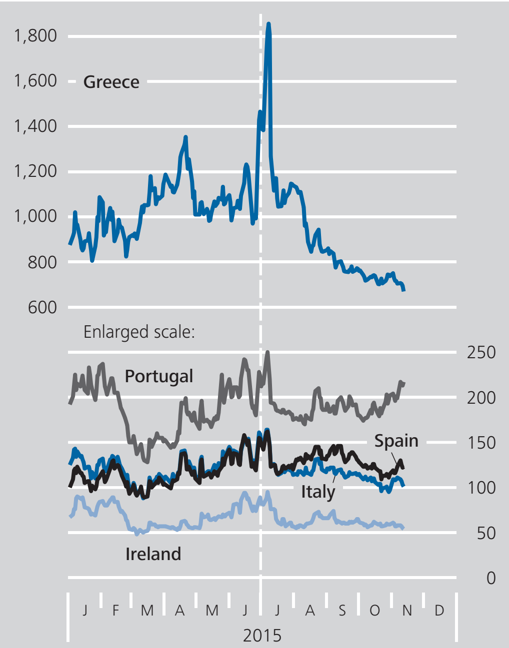
**Yield spreads between euro-area government bonds with ten-year residual maturities and comparable German Bunds**

Basis points, daily data




Sources: Thomson Reuters and Bundesbank calculations.
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affected by country-specific developments. Since the return of political uncertainty in connection with the early parliamentary elections held in Catalonia and the nationwide parliamentary elections planned for December, the yields on Spanish bonds have been higher than those of their Italian counterparts.

*Financing conditions for enterprises remain favourable*

Most recently, yields on European corporate bonds have hovered at approximately the same level as at the end of June. BBB-rated bonds with a residual maturity of seven to ten years, for example, yielded 2.5%. Their yield spread over Bunds thus expanded by 15 basis points, with the gap widening somewhat more for non-financial corporations than for financial corporations. The higher risk premiums also reflect the fact that the uncertainty surrounding the economic outlook in major emerging market economies also has an impact on European enterprises. The financing conditions for these enterprises, however, remained significantly more favourable than the five-year average.

*Declining forward inflation rates in major currency areas*

In the euro area, the five-year forward inflation rate in five years derived from inflation swaps has fallen to 1.8% (-6 basis points) since the end of June. This market-based indicator of inflation expectations has also declined in other major currency areas. The forward inflation rate was down 23 basis points to 2.2% in the United States and fell by 52 basis points to 0.8% in Japan. This would suggest that global rather than country-specific factors are the main drivers behind the sinking market-based inflation measures. The inflation risk premiums derived from market data have dropped further since June and have in some cases – depending on the model specifications – been in negative territory for some time now.

*Net issuance in the bond market*

Gross issuance in the German bond market stood at €358½ billion in the third quarter of 2015 and was therefore up on its previous-quarter level (€307½ billion). After deducting redemptions and taking account of changes in issuers' holdings of their own bonds, net issuance amounted to €32½ billion. In addition, foreign borrowers placed debt securities worth €21½ billion in the German market. Thus, funds totalling €54 billion net were raised in the German bond market in the reporting period.

German enterprises took advantage of the favourable financing conditions and issued debt

*Issuance of corporate bonds mainly in the longer-term maturity segment*

securities to the value of €23 billion in net terms in the third quarter. On balance, the vast majority of these were bonds with maturities of more than one year. The remarkably high issue volume was primarily attributable to a larger securitisation transaction booked in the corporate sector in September.

*Rise in credit institutions' capital market debt*

Domestic credit institutions increased their capital market debt in the quarter under review by €5½ billion, compared with net redemptions amounting to €18 billion in the second quarter. They mainly issued mortgage Pfandbriefe (€5 billion) and debt securities of specialised credit institutions (€4½ billion). This contrasted with net redemptions of public Pfandbriefe (€2½ billion) and other bank debt securities that can be structured flexibly (€1 billion).

*Public sector borrowing moderate*

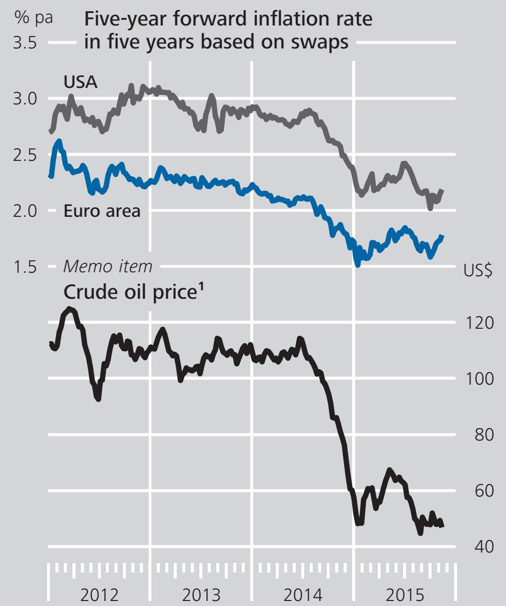
Between July and September, the public sector raised €3½ billion on the bond market, compared with net redemptions of €4½ billion in the previous three-month period. These figures include issues by resolution agencies set up for German banks, which are ascribed to the public sector for statistical purposes. Central government itself issued five-year Federal notes (Bobls) for the most part (€13½ billion), and to a lesser extent 30-year Bunds (€2½ billion). At the same time, it made net redemptions of ten-year Bunds (€10½ billion) and also redeemed two-year Federal Treasury notes (Schätze) and Treasury discount paper (Bubills) for €3 billion net in each case. In the quarter under review, state governments issued their own bonds to the value of €8 billion in net terms.

*Bundesbank and domestic non-banks main buyers of debt securities*

In the third quarter, German investor groups were the sole buyers on the domestic bond market, adding paper worth €72½ billion to their portfolios. The Bundesbank acquired German bonds to the value of €36½ billion net, primarily under the asset purchase programmes. Domestic non-banks expanded their bond portfolios by €24½ billion, concentrating mainly on foreign instruments. German credit institutions likewise invested in interest-bearing paper, making purchases worth €12½ billion.

## Forward inflation rates* in the euro area and the USA

Weekly averages




Sources: Bloomberg, Thomson Reuters and Bundesbank calculations. * Derived from the fixed cash flow arising from inflation swaps which is swapped for the actual annual inflation rates (HICP excluding tobacco for the euro area and CPI Urban Consumers for the USA) realised over the next five or ten years. **1** Barrel of Brent Blend (for delivery in one month).

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## Investment activity in the German securities markets

€ billion

| Item | 2014 Q3 | 2015 Q2 | 2015 Q3 |
|---|---|---|---|
| **Debt securities** | | | |
| Residents | 19.8 | 16.7 | 72.5 |
| Credit institutions | 4.9 | − 39.4 | 12.4 |
| *of which* | | | |
| Foreign debt securities | 3.4 | − 5.5 | 3.8 |
| Deutsche Bundesbank | − 3.7 | 36.2 | 35.8 |
| Other sectors | 18.7 | 19.9 | 24.3 |
| *of which* | | | |
| Domestic debt securities | 1.9 | 5.0 | 5.7 |
| Non-residents | 1.5 | − 30.4 | − 18.4 |
| **Shares** | | | |
| Residents | 0.2 | 10.2 | 7.0 |
| Credit institutions | 2.3 | − 2.8 | − 14.5 |
| *of which* | | | |
| Domestic shares | 0.7 | − 6.8 | − 7.0 |
| Non-banks | − 2.0 | 13.1 | 21.4 |
| *of which* | | | |
| Domestic shares | − 0.3 | 1.2 | 13.7 |
| Non-residents | 5.9 | 8.8 | − 5.1 |
| **Mutual fund shares** | | | |
| Investment in specialised funds | 20.7 | 24.6 | 14.7 |
| Investment in retail funds | 0.4 | 2.6 | 7.3 |
| *of which* | | | |
| Equity funds | − 3.2 | − 2.6 | 2.9 |

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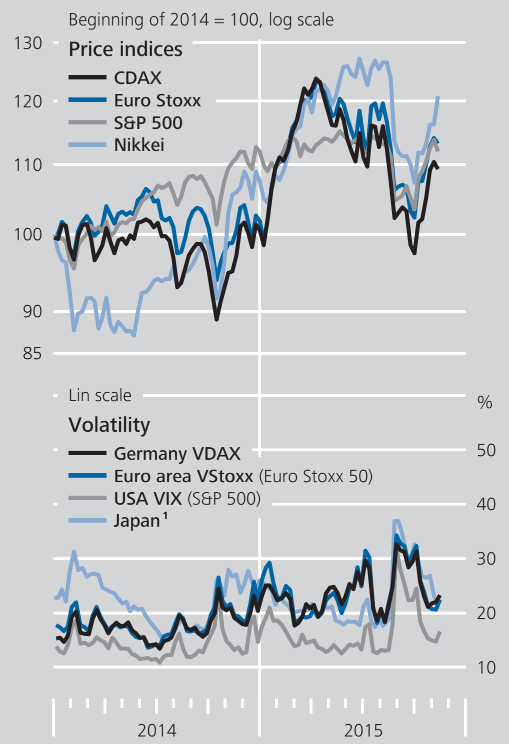
**Equity market**

Weekly averages




**1** Implied volatility of options on the Nikkei index.
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Their focus was on instruments issued by domestic enterprises. By contrast, non-resident investors parted with German debt securities to the tune of €18½ billion. On balance, these were exclusively bonds issued by the public sector. Ultimately, it appears that foreign holders, above all, are disposing of Bunds, and these are then primarily being bought by the Bundesbank.

*Global equity markets fall initially, before rising again*

In the second half of the year to date, equity markets across the globe initially drifted sideways before an adjustment phase set in following the moderation of Chinese economic growth and the perceptible depreciation of the renminbi resulting from the introduction of a more flexible exchange rate regime. Considerable losses on all major equity markets were connected with concerns about lower growth rates in key emerging market economies. Furthermore, the effects of a potential interest rate hike in the United States also weighed on the price expectations for equities until mid-September. At the same time, the option-implied volatilities of share price indices rose almost as high as the levels seen in the crisis year of 2011. Negotiations with Greece placed a strain on equity prices in the euro area until an agreement on a third support package was reached on 12 July. However, following the Federal Reserve's decision at its September meeting not to go ahead with an anticipated hike in official interest rates, which had already been largely priced in by market participants, and in light of speculation about further monetary policy loosening in the euro area and Japan fuelled by the moderate inflation rates in both currency areas, share prices around the world rebounded. These price rises were partly caused by falling government bond yields, which, as a result of a lower discount rate, boosted the present value of future corporate earnings and made equity investment more attractive.

*Initial losses on equity markets in the euro area attributable to lower future dividends and increased uncertainty*

Overall, European and US shares were, at the time of going to press, close to their levels at the end of June, as measured by the broad Euro Stoxx and S&P 500 indices. Japanese equities (Nikkei) fell by 2.7% in the same period, in part owing to recent subdued economic data. In the euro area, price falls were observed above all in Greece and Spain. The closure of the Athens stock exchange for the whole of July and the election defeat of Spain's ruling party at a regional election in Catalonia are likely to have contributed to this. Bank shares, particularly in Greece, Portugal and Spain, recorded greater losses than the market as a whole. In Germany, the price losses precipitated by the Volkswagen emissions scandal had only limited effects on the overall index.

Dividend futures, which can be used to measure the present value of future dividends, show that the downward movements seen for a time on European equity markets are consistent with expectations of diminishing future dividends and increased stock price uncertainty. The slide in prices was therefore probably not a specific exaggeration on the part of market participants. Rather, the weakening growth rates of the major emerging market economies caused increased uncertainty about future profits and thus also about enterprises' dividends.

*Equity risk premium down slightly*

The price-earnings ratio, based on 12-month earnings expectations, was latterly at roughly the same level as the end of June, at 14.0 for the Euro Stoxx and 16.7 for the S&P 500. It therefore lay significantly above the respective five-year averages on both sides of the Atlantic, which, when looked at in isolation, indicates relatively high valuations on the equity markets. However, any assessment of the valuation level must also take into account changes in medium-term dividend expectations and in the risk-free interest rate as a discount rate or as a return on an alternative investment. In the third quarter, analysts slightly lowered their dividend expectations for the Euro Stoxx over the next few years, and the risk-free interest rate used as the discount rate fell. A dividend discount model that takes these variables into account reveals that the equity risk premium for the Euro Stoxx latterly stood at 8.6%, which is above its level at the end of June. Compared with the five-year average (8.7%), this does not indicate an excessively low risk aversion on the part of equity market participants.

*Equity issuance and acquisition*

Domestic enterprises issued €1½ billion worth of new shares in the third quarter of 2015, the majority of which were unlisted equities. The volume of foreign equities outstanding in the German market edged up only slightly, on balance. Equities were, on balance, acquired solely by domestic non-banks (€21½ billion), including investment companies, while domestic credit institutions and foreign investors reduced their share portfolios by €14½ billion and €5 billion respectively.

*Sales and purchases of mutual fund shares*

During the quarter under review, domestic investment companies recorded inflows of €22 billion, after raising funds totalling €27 billion in the previous three-month period. The new inflows mainly benefited specialised funds re-

## Major items of the balance of payments

€ billion

| Item | 2014r Q3 | 2015r Q2 | 2015r Q3p |
|---|---|---|---|
| I Current account | + 53.8 | + 56.9 | + 63.2 |
| 1 Goods[1] | + 59.9 | + 69.1 | + 67.5 |
| 2 Services[2] | − 17.1 | − 8.5 | − 16.2 |
| 3 Primary income | + 18.7 | + 3.6 | + 18.6 |
| 4 Secondary income | − 7.8 | − 7.3 | − 6.8 |
| II Capital account | + 0.8 | + 1.1 | + 0.7 |
| III Financial account (increase: +) | + 68.2 | + 76.3 | + 58.8 |
| 1 Direct investment | + 22.5 | + 3.9 | + 6.2 |
| Domestic investment abroad | + 19.9 | + 22.8 | + 17.1 |
| Foreign investment in the reporting country | − 2.6 | + 18.9 | + 10.8 |
| 2 Portfolio investment | + 28.1 | + 52.7 | + 47.6 |
| Domestic investment in foreign securities | + 29.4 | + 27.3 | + 27.7 |
| Shares[3] | − 0.6 | + 10.7 | + 1.4 |
| Investment fund shares[4] | + 12.9 | + 8.1 | + 4.7 |
| *of which* Money market fund shares | + 2.5 | − 1.3 | + 0.4 |
| Long-term debt securities[5] | + 19.5 | + 11.1 | + 28.5 |
| *of which* Denominated in euro[6] | + 14.9 | + 2.0 | + 22.6 |
| Short-term debt securities[7] | − 2.4 | − 2.7 | − 6.8 |
| Foreign investment in domestic securities | + 1.3 | − 25.4 | − 19.9 |
| Shares[3] | + 2.7 | + 8.7 | − 5.1 |
| Investment fund shares | − 3.0 | − 3.8 | + 3.7 |
| Long-term debt securities[5] | − 5.6 | − 28.5 | − 23.3 |
| *of which* Issued by the public sector[8] | − 6.5 | − 18.3 | − 23.0 |
| Short-term debt securities[7] | + 7.1 | − 1.9 | + 4.9 |
| 3 Financial derivatives[9] | + 9.5 | + 5.9 | + 2.6 |
| 4 Other investment[10] | + 7.7 | + 14.3 | + 3.8 |
| Monetary financial institutions[11] | − 28.1 | + 9.7 | + 18.1 |
| Enterprises and households[12] | − 5.8 | + 6.4 | − 14.5 |
| General government | + 8.5 | + 4.8 | + 3.4 |
| Bundesbank | + 33.0 | − 6.6 | − 3.2 |
| 5 Reserve assets[13] | + 0.3 | − 0.5 | − 1.5 |
| IV Errors and omissions[14] | + 13.6 | + 18.2 | − 5.0 |

**1** Excluding freight and insurance costs of foreign trade. **2** Including freight and insurance costs of foreign trade. **3** Including participation certificates. **4** Including reinvested earnings. **5** Long-term: original maturity of more than one year or unlimited. **6** Including outstanding foreign D-Mark bonds. **7** Short-term: original maturity up to one year. **8** Including bonds issued by the former Federal Railways, the former Federal Post Office and the former Treuhand agency. **9** Balance of transactions arising from options and financial futures contracts as well as employee stock options. **10** Includes in particular financial and trade credits as well as currency and deposits. **11** Excluding the Bundesbank. **12** Includes the following sectors: financial corporations (excluding monetary financial institutions) as well as non-financial corporations, households and non-profit institutions serving households. **13** Excluding allocation of special drawing rights and excluding changes due to value adjustments. **14** Statistical errors and omissions, resulting from the difference between the balance on the financial account and the balances on the current account and the capital account.

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served for institutional investors (€14½ billion). Among the asset classes, it was mainly mixed securities funds (€8½ billion) and equity funds (€5½ billion) that placed new shares on the market. Foreign funds distributed in the German market attracted new inflows totalling €4½ billion net in the third quarter of 2015. Domestic non-banks were the main buyers, adding mutual fund shares worth €24 billion to their portfolios. These were units of domestic funds for the most part. Foreign investors purchased mutual fund shares for €3½ billion, while domestic credit institutions sold fund units worth €1 billion.

## Direct investment

*Capital exports in direct investment*

As with cross-border portfolio transactions, which recorded a net outflow of funds totalling €47½ billion, direct investment also saw net capital exports amounting to €6 billion in the form of direct investment in the third quarter of 2015.

*German direct investment abroad*

The largest contributing factor was funding provided by German enterprises to their subsidiaries abroad, which amounted to €17 billion in the third quarter. German enterprises increased, above all, their equity capital (€12½ billion). Furthermore, over the same period, intra-group lending rose by €4½ billion, which was virtually entirely attributable to an expansion in financial credits. Overall, nearly one-third of direct investment originating from Germany was made in the Netherlands (€5½ billion). Other important destinations were the United States (€4 billion), Luxembourg (€3 billion) and Austria (€2 billion).

*Foreign direct investment in Germany*

Foreign investors upped their direct investment in Germany in the third quarter of 2015 (€11 billion). Intra-group loans, which were primarily issued in the form of financial credits, played an important role in this regard (€8 billion). In addition, foreign investors increased their equity interests in German subsidiaries by €3 billion. The inflows of funds from Sweden were particularly large (€6 billion), with the bulk of these in the third quarter of 2015 being attributable to domestic parent companies receiving direct investment loans from their Swedish branches. A countervailing trend was seen in transactions with the Netherlands, as domestic direct investors paid back large volumes of direct investment loans from abroad (€5½ billion).