Financial markets

Financial market setting

Financial markets expecting quantitative easing by Eurosystem

Developments on the international financial markets in the fourth quarter of 2014 were increasingly marked by the expectation of large-scale asset purchases by the Eurosystem. This expectation was predicated on easing medium and longer-term inflation expectations in the wake of tumbling oil prices. The mere prospect of an expanded asset purchase programme, as decided upon by the ECB Governing Council by majority vote on 22 January 2015, pushed down bond yields throughout the euro area apart from in Greece, with new lows being recorded in several countries. Bond yields outside the euro area likewise eased amid the abundant liquidity supply and falling oil prices. The equity markets were upbeat for the most part, with European stock exchanges, in particular, seeing strong demand for shares. The Eurosystem's asset purchase programme evidently exceeded the expectations of some market participants in terms of both volume and breadth, causing an intensified search for alternative investment opportunities after its announcement. Furthermore, the euro's depreciation is likely to have boosted exporters' earnings expectations. Measured by its weighted average against the currencies of 19 major trading partners, the euro lost approximately 5% of its value on balance compared with the end of September 2014. The higher implied stock market volatility and lower consensus amongst analysts, however, are indicative of elevated stock price uncertainty.

Exchange rates

Depreciation of euro against US dollar ...

Much of the euro's depreciation in nominal effective terms can be attributed to the trajectory of the bilateral exchange rate against the US dollar, which was itself particularly influenced by a growing disparity between the monetary policy strategies being pursued on either side of the Atlantic. Announcements by the Governing Council of the ECB to the effect that the prospect of subdued price developments might necessitate further monetary policy easing served to weaken the euro. ECB president Mario Draghi noted in mid-November that expansionary monetary policy measures can also include government bond purchases. Reports in early December of unexpectedly favourable developments in the US labour market only added to the euro's woes.

That being said, the euro's loss in value against the US dollar remained comparatively moderate up to mid-December 2014 as several business indicators for the euro area published in the autumn certainly provided a positive surprise. Moreover, some forex market participants seemed disappointed after the ECB Governing Council's meeting in early December that a bond purchase programme had not already been decided at that particular session. The chief impression, however, is that their uncertainty over the future path of US interest rates was undiminished.

> ... but picked up pace in the ensuing period

For the euro's loss in value began to gain traction in mid-December last year when the Federal Open Market Committee statement no longer referred to a "considerable time" passing before an interest rate hike, which market players evidently interpreted as signalling that policy rates would be lifted sooner. The exchange rate movement was compounded by the surprisingly sharp upward revision of US GDP. On this side of the Atlantic, the euro was additionally burdened by the decline in the euro-area consumer price index brought about by contracting energy prices as well as by the uncertainty surrounding the need for new parliamentary elections in Greece. Following the ECB Governing Council's decision in favour of a bond purchase programme in January 2015, the value of the euro fell to US\$1.12, its lowest level since September 2003. While it subse-

... still moderate up to mid-. December 2014, ...

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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quently stabilised, the euro latterly stood at US\$1.13, putting it 10% below its level at the end of September 2014.

In November, the euro strengthened markedly against the yen following the Japanese central bank's decision at the end of October to expand its programme of quantitative easing. In the course of the same month, the yen was further weakened first by the uncertainty arising from rumours, later confirmed, that prime minister Shinzo Abe intended to call new elections and to postpone the planned VAT increase, and second by the unexpected renewed decline in Japanese GDP. Spurred by these factors, the euro climbed to its highest level since October 2008, standing at ¥149 at the beginning of December. However, when it subsequently became increasingly evident that the ECB Governing Council was likewise going to green-light an extensive bond purchase programme, the euro quickly relinquished its gains, primarily in the new year. At the end of the reporting period the euro stood at ¥136, meaning that the single currency had depreciated against the yen by 2% in net terms during this time.

Euro also down against the yen ...

Shifts in the value of the euro against the pound sterling remained comparatively moderate in the final quarter of 2014. Up to the end of November, the euro recorded slight gains after the Bank of England had signalled to the market that it would probably further delay the expected policy rate increase. In the ensuing period, the prospect of further substantial monetary policy easing in the euro area caused the euro to shed value against the pound sterling, too. As this report went to press, it was trading at 0.74 pound sterling, 5% below its level at the end of September 2014.

... and against the pound sterling

With effect from 15 January 2015, the Swiss National Bank discontinued the minimum exchange rate of CHF1.20 per euro that it had introduced in September 2011. At the same time, it lowered the rate applying to credit balances held in current accounts above a given

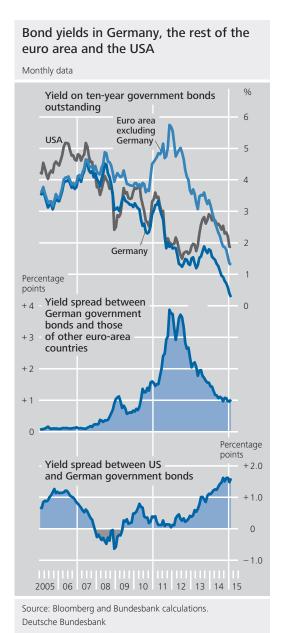
Minimum euro exchange rate for Swiss franc abandoned

exemption threshold to -0.75% in order to ensure this abandonment of the currency ceiling would "not lead to an inappropriate tightening of monetary conditions". The central bank justified this move by pointing to the fact that the euro and therefore the Swiss franc had seen a marked depreciation against the US dollar and that the franc was no longer guite so overvalued. Until the reference rate could be set, the day on which the cap on the franc was abandoned saw the euro depreciating against the Swiss currency by 141/2%, while the latter appreciated against the euro by 17% in net terms. Since then, the exchange rate for the two currencies has stabilised. Most recently, the euro stood at CHF1.06, making it 121/2% weaker than at the beginning of the final quarter of 2014.

Improvement in euro-area price competitiveness and introduction of euro in Lithuania Since the beginning of this year, the effective euro rate is no longer calculated against the currencies of 20 trading partners but those of 19 partner countries instead. This is due to the fact that Lithuania gave up its previous currency, the litas, replacing it with the euro at the beginning of the year, the irrevocable litas to euro exchange rate being 3.4528. As a result, all three Baltic countries now use the euro as their legal tender. In the wake of the above developments, the effective euro rate, as now calculated against the currencies of 19 trading partners, is down by 5% compared with the beginning of the final quarter of 2014. This was accompanied by an improvement in the price competitiveness of euro-area exporters.

Dramatic slide in value of rouble

During the period under review, the euro continued to gain appreciably against the rouble, which is excluded from the calculation of the effective euro rate for this group of countries. After the rouble was allowed to trade freely in November 2014, pre-existing and ongoing adverse factors such as the drop in oil prices, the Ukraine conflict and the economic sanctions imposed on Russia were compounded by a major rating agency's decision to downgrade the credit rating of Russian government bonds to below investment grade status. The euro has



now gained 51½% against the rouble since the end of September 2014.

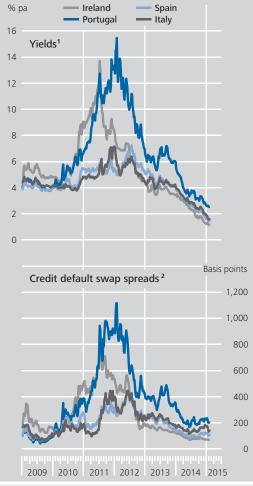
Securities markets and portfolio transactions

Following activation of the asset-backed securities and covered bonds purchase programme announced by the Eurosystem in September 2014, and with inflation expectations on the decline, there was a growing expectation among market participants during the period under review that wide-scale purchases of government bonds would be introduced as an

European bond market influenced by monetary policy

Financing conditions for selected euro-area countries

Weekly averages



1 Government bonds with a residual maturity of ten years. Source: Thomson Reuters. 2 Spreads on ten-year credit default swap (CDS) contracts on the basis of government bonds with matching maturities. Source: Markit.

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additional monetary policy measure. Given these market influences, yields on government bonds issued in the euro area narrowed for the most part throughout the period under review. At its meeting on 22 January 2015, the Governing Council of the ECB announced that it would be expanding its existing asset purchase programme to include bonds specified in greater detail and issued by euro-area central governments, agencies and European institutions. It is envisaged that public and private sector securities totalling €60 billion in value are to be bought each month on the secondary market, at least until September 2016.¹ In this market environment, the GDP-weighted yield on ten-

year bonds issued by euro-area countries (excluding Germany) has contracted by 52 basis points since the end of September, falling to a historically low level of just over 1.3% at last count. Investors' continued high demand for German Federal bonds (Bunds) sent yields on ten-year paper to fresh lows. Yields on ten-year Bunds eased by 55 basis points, latterly dipping to a level of 0.33%.

The expectation of new monetary policy measures also affected bond yields in other euroarea countries, with the exception of Greece. In the countries particularly affected by the sovereign debt crisis, yields on ten-year government bonds declined by more than 40 basis points, resulting in new temporary lows for most of these countries, too. Yield spreads over Bunds with matching maturities mostly narrowed slightly on balance, while risk premiums measured on the basis of CDS spreads remained virtually unchanged. In Greece, uncertainty over the need for new parliamentary elections and the new government's economic policy stance helped to drive risk premiums higher. Ten-year Greek sovereign bonds yielded more than 10% in January 2015 for the first time since late summer 2013, representing a jump in yield of 339 basis points since the end of September 2014.2

Yield spreads over German Bunds broadly narrower

On bond markets outside the euro area, geopolitical tensions played something of a lesser role in the fourth quarter, with the focus primarily being on the cyclical trajectory of the global economy, the lower inflation rates caused by falling oil prices and the expectation of non-standard monetary policy measures in the euro area. In this context, international linkages between interest rates came back to the fore as of November 2014. US government

Yields down on international bond markets

¹ For more detailed information, see pages 23 to 36.

² There has been a pronounced fall in the market volume of Greek bonds as a result of the assistance measures taken by the international community. The liquidity of these bonds is likely to be fairly low. Moreover, market yields do not reflect the Greek state's interest burden, which essentially depends on the considerably more favourable conditions of the assistance programme.

securities, too, saw a decline in yields. Only the better-than-expected economic data for the United States in October 2014 and at the start of February 2015 sparked a brief countermovement. On balance, yields on ten-year US Treasuries shed 51 basis points from the end of September to stand at 2.0%. The yield spread over Bunds with matching maturities expanded by 4 basis points. The Japanese bond market was once again influenced by the further monetary accommodation by the Bank of Japan and fresh economic stimulus, leading to a yield on ten-year Japanese government bonds of 0.4% on balance, which is 13 basis points down on the end of September 2014.

Yield curve for Federal securities Since the end of September 2014, the slope of the German yield curve derived from the yields on Federal securities became flatter still, slipping by 54 basis points to 55 basis points as measured by the yield differential between tenyear and two-year bonds (see chart top right). The narrowing interest rate spread reflects the market expectation that short-term interest rates will remain persistently low. The debate over the current low inflation rates and over the declining inflation expectations were also contributory factors. In addition, there was a downward shift in the yield curve, meaning that yields in the maturity category of up to six years are now negative.

Further fall in inflation expectations

Market-based longer-term inflation expectations in the euro area continued to fall in the period under review. The five-year forward inflation rate in five years based on French and German bonds dropped to 1.6% from 1.9% at the end of September 2014. A similar tendency can be seen in inflation expectations calculated on the basis of inflation swaps. International factors, such as the steep fall in the price of oil, appear to have contributed substantially to this development. Indeed, the five-year forward inflation rates in five years in the euro area and in the USA have diminished more or less in parallel since mid-2014 (see bottom chart on

Yield curve on the German bond market*



* Interest rates for (hypothetical) zero-coupon bonds (Svensson method), based on listed Federal securities. 1 Day before the ECB Governing Council meeting.

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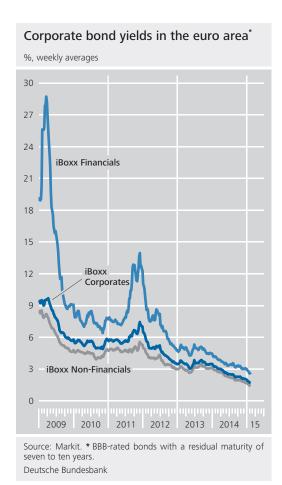
Forward inflation rates* in the euro area and the USA

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 across the next five or ten years. 1 Brent blend (for one-month forward delivery).

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page 41).³ The start of this intensified downward trend lags slightly behind the onset of the steeper decline in oil prices. A comparison between inflation expectations derived from the swap markets and those based on surveys would additionally suggest that an increasingly negative inflation risk premium is likely to have contributed to the fall in market-based indicators.

Favourable financing conditions for enterprises

On the European corporate bond market the financing conditions for enterprises on the capital market, which were already favourable by historical standards, improved even further in the period under review. This was especially true for financial corporations. The yields on their bonds with a residual maturity of seven to ten years and a BBB rating shed 93 basis points since the end of September 2014 to reach 2.5% when this report went to press – that is more than 2 percentage points down on the level immediately before the outbreak of the financial crisis. Equivalent bonds for the non-

financial sector currently yield 1.5%, compared with just over 2% at the end of the previous quarter.⁴ Yields for financial sector bonds declined so strongly that the yield spread over Bunds with the same maturity narrowed by 47 basis points, while the equivalent yield spread for non-financial corporations remained broadly unchanged. It appears that in their search for yield, investors are increasingly looking to corporate bonds, which is pushing up their prices.

Gross issuance on the German bond market in the fourth quarter of 2014 was slightly down on the previous quarter. Overall, German borrowers issued paper worth €330½ billion, compared with €331½ billion in the previous three months. Net of redemptions and changes in issuers' own holdings, domestic issuers reduced their capital market borrowing by €24 billion. The fourth quarter saw foreign debt instruments totalling €26½ billion being sold on the German bond market. On balance, the total outstanding volume of bonds in Germany thus climbed by €2 billion in the quarter under review.

Net redemptions of domestic debt securities

Domestic credit institutions, which have abundant liquidity, trimmed their capital market borrowing by €18 billion from October to December 2014. "Other bank debt securities", which can be structured flexibly, as well as debt securities issued by specialised credit institutions, were the main focus of redemptions (€6½ billion in each case). The volume of public Pfandbriefe also continued to drift downwards (€5½ billion). By contrast, mortgage Pfandbriefe worth €½ billion were issued net.

The public sector, where demand for borrowing is also low, redeemed debt instruments

totalling €4 billion net in the quarter under

Credit institutions' capital market debt on the decline

Net public sector redemptions

³ The days before and after the decision of the ECB Governing Council on an expanded asset purchase programme (EAPP) saw increased fluctuation, with no clear trend, in the five-year forward inflation rates in five years in the euro area.

⁴ These calculations are based on the corporate bond yields included in the various iBoxx bond indices for different rating grades.

review. This is, on balance, solely attributable to the state governments, which took bonds worth €6½ billion net out of the market. For its part, the Federal government, and the resolution agency classified as part of central government, mainly issued ten-year and 30-year bonds (for €10 billion and €2 billion respectively). This contrasted with net redemptions of five-year Federal notes totalling €6½ billion and Federal Treasury discount paper worth €5½ billion

Net redemption of corporate bonds

The final quarter of 2014 saw domestic enterprises tapering their capital market debt in Germany by €1½ billion. These redemptions were, on balance, solely attributable to other financial intermediaries without a banking licence (€5½ billion), while non-financial corporations issued debt instruments to the net value of €4 billion.

Debt securities bought solely by German non-banks In the fourth quarter of 2014, debt securities were bought exclusively by German non-banks, which added €26½ billion worth of bonds to their portfolios in net terms. In contrast, fixed-income securities were divested above all by domestic credit institutions (€13 billion), but also by foreign investors (€10 billion). "Window dressing" at the end of the financial year may well have played a role in this context.

Equity markets largely upbeat

Against the backdrop of accommodative monetary policy in the key currency areas and falling oil prices, international stock markets have proven to be largely buoyant in the latter part of 2014 and in early 2015. What is more, unlike in the euro area, the growth outlook for the United States and Japan did not need to be revised downwards in response to the Consensus forecast in the fourth quarter of 2014. This catalyst caused both the US and Japanese stock markets to initially distinctly outperform the Euro Stoxx. However, European equity markets soared in January 2015 on the back of the ECB Governing Council's decision on the QE programme. When this report went to press, the US and Japanese stock markets, as measured by the S&P 500 and the Nikkei, were 5.9% and

Investment activity in the German securities markets

€ billion

	2013	2014	
Item	Q4	Q3	Q4
Debt securities Residents	0.1	17 1	12.1
Credit institutions of which	8.1 - 0.6	4.9	12.1 - 12.8
Foreign debt securities	2.3	3.4	7.4
Deutsche Bundesbank Other sectors of which	- 2.1 10.8	- 3.7 15.9	- 1.6 26.5
Domestic debt securities	- 8.0	1.8	7.1
Non-residents	- 19.9	1.7	- 9.9
Shares			
Residents Credit institutions	- 7.0 - 2.2	0.7 2.3	6.3 4.4
of which	- 2.2	2.3	4.4
Domestic shares	- 1.9	0.7	4.5
Non-banks of which	- 4.8	- 1.6	1.9
Domestic shares	- 1.7	-0.3	- 6.7
Non-residents	4.9	5.9	3.8
Mutual fund shares ¹			
Investment in specialised funds	29.1	20.7	31.3
Investment in retail funds of which	- 0.5	0.4	- 1.5
Equity funds	1.2	- 3.2	- 4.4

1 Figures for the fourth quarter of 2014 are provisional. Deutsche Bundesbank

11.2% up respectively on their levels at the end of September 2014, compared with a figure of 8.8% for the Euro Stoxx.

European stock markets have put in a very mixed performance since the end of September 2014. Prices rose especially strongly in the core euro-area countries, while stock markets in some periphery countries took a hefty tumble. For example, Germany's broad CDAX ratcheted up gains of 15.9%, whereas Greek and Portuguese equities shed 20.3% and 9.6% respectively of their value. The losses suffered by the Spanish stock market were less severe.

These developments were driven by more than just the divergent economic outlooks for the individual countries; market participants also took a nuanced view of banks' current and future prospects. Bank equities suffered disproportionately heavy losses, particularly in the periphery countries. On balance, European bank equities are 8.5% down on their value at

Mixed performance by European equities



the end of September (see above chart), probably because of market participants' doubts about banks' business models in the light of the slump in profits from investment banking and the prospect of lending margins drying up in the medium term as a result of interest rates reaching new lows. Analysts' short-term outlook, however, does not appear to be quite as downbeat, raising their earnings forecasts for the banking sector for the next 12 months by 1.8% on this side of the Atlantic and by 3.3% on the other side of the pond.

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The price rises mentioned earlier have driven the price-earnings ratio of European and US

equities based on earnings forecasts to 14.8 and 16.4 respectively, sending the figure for Euro Stoxx to its highest level since 2004. By means of a dividend discount model it is possible to quantify the implied cost of equity which reflects the stock price as well as medium-term earnings growth and the dividend level. For European enterprises, the real cost of equity is now more than one percentage point down on its relatively high level in September 2014. Entrenched expectations of quantitative easing measures by the Eurosystem are likely to have been a contributory factor. Meanwhile, the real cost of equity has remained unchanged for US enterprises. Taking into account the roughly 60 basis-point drop in long-term US and German real interest rates, as indicated by Consensus inflation expectations, the implied equity premium is up 48 basis points for US enterprises and down 53 basis points for their European counterparts. At the same time, expected implied stock market volatility, which is derived from stock options, increased on both sides of the Atlantic on balance. Together with the increased dispersion of analysts' forecasts, this indicates heightened levels of uncertainty on stock markets. The increased equity premium in the United States also suggests a slightly increased risk perception among investors there.

On balance, funding raised on the German stock market totalled €1½ billion in the reporting quarter. The volume of foreign shares on the German market rose by €8½ billion in the same period. In net terms, equities were purchased by German credit institutions (€4½ billion) and foreign investors (€4 billion), as well as in smaller volumes by domestic non-banks

(€2 billion).

The changeover in reporting standards as of December 2014 means that final figures for the sales and purchases of investment fund shares in the fourth quarter of 2014 are not yet available. Preliminary data suggest that domestic investment companies recorded inflows of €30 billion in the final quarter of 2014, com-

Increased stock market uncertainty

Almost no funds raised on equity market

Sales and purchases of investment fund shares

pared with €21 billion in the previous quarter. On balance, the inflows were channelled exclusively to specialised funds reserved for institutional investors (€31½ billion). Of the various asset classes, it was above all mixed securitybased funds (€9½ billion), bond funds (€7 billion) and open-end real estate funds (€1½ billion) which attracted inflows of funds, some in significant amounts. By contrast, equity funds redeemed their own shares to the tune of €7½ billion net. The outstanding volume of foreign mutual fund shares in Germany rose by €6½ billion in the period under review. Investment fund shares were bought on balance exclusively by domestic non-banks, which added paper worth €40 billion to their portfolios. The vast majority of this paper was issued by domestic mutual funds. By contrast, non-resident investors and domestic credit institutions offloaded investment fund shares worth €3½ billion and €½ billion respectively.

Direct investment

Capital exports in direct investment

As with cross-border portfolio investment, which saw net outflows amounting to €45 billion in the fourth quarter of 2014, there were also net capital exports in the direct investment account, albeit in the much smaller amount of €28 billion. Alongside investments by German enterprises abroad, the outflows of funds also reflect a reduction in intra-group liabilities to foreign countries.

German direct investment abroad

Domestic owners provided their foreign branches with funding totalling €18 billion from October to December 2014. They chiefly topped up their equity capital (by a total of €19 billion), reinvesting profits of €2½ billion in affiliated enterprises abroad. In terms of intragroup funding, the issuance and repayment of cross-border loans practically balanced each other out (-€½ billion). German corporate investment abroad is essentially broadly diversified in regional terms. In the fourth quarter, direct investments were up slightly in the Neth-

Major items of the balance of payments

€ billion

	2013	2014	
Item	Q4	Q3	Q4p
I Current account 1 Goods ¹ 2 Services ² 3 Primary income 4 Secondary income	+ 59.4 + 51.3 - 7.2 + 26.4 - 11.2	+ 53.8 + 61.6 - 18.2 + 18.3 - 8.0	+ 66.6 + 60.4 - 7.6 + 25.2 - 11.4
II Capital account	0.0	+ 0.8	- 0.7
III Financial account (increase: +) 1 Direct investment Domestic investment abroad Foreign investment in the	+ 74.9 - 10.0 + 1.1	+ 79.5 + 25.7 + 19.3	+ 71.7 + 27.9 + 18.2
reporting country 2 Portfolio investment	+ 11.1 + 34.0	- 6.3 + 23.2	- 9.8 + 45.0
Domestic investment in foreign securities Shares ³ Investment fund shares ⁴ of which	+ 23.7 - 2.9 + 8.3	+ 27.2 - 0.1 + 12.8	+ 35.8 + 3.3 + 6.3
Money market fund shares Long-term debt	- 0.4	+ 2.5	+ 1.6
securities ⁵ of which	+ 17.7	+ 16.2	+ 29.0
Denominated in euro ⁶ Short-term debt	+ 12.0	+ 11.9	+ 20.3
securities ⁷ Foreign investment in domestic debt securities Shares ³ Investment fund shares Long-term debt	+ 0.5 - 10.3 + 4.2 + 5.4	- 1.7 + 4.0 + 5.5 - 3.2	- 2.7 - 9.2 + 4.1 - 3.4
securities ⁵ of which Public bonds and	+ 10.9	- 7.0	+ 6.7
notes ⁸ Short-term debt	+ 16.4	- 6.4	+ 7.7
securities ⁷ 3 Financial derivatives ⁹ 4 Other investment ¹⁰ Monetary financial	- 30.8 + 6.0 + 43.4	+ 8.6 + 6.8 + 23.6	- 16.6 + 6.7 - 6.3
institutions ¹¹ Enterprises and	+ 63.8	- 27.4	+ 31.2
households12 General government Bundesbank 5 Reserve assets13	+ 21.9 + 9.1 - 51.4 + 1.5	- 0.7 + 8.2 + 43.4 + 0.3	- 24.9 + 8.7 - 21.3 - 1.7
IV Errors and omissions ¹⁴	+ 15.5	+ 24.9	+ 5.7

1 Excluding freight and insurance costs of foreign trade. 2 Including freight and insurance costs of foreign trade. 3 Including participation certificates. 4 Including reinvestment of earnings. 5 Up to and including 2012, without accrued interest. Longterm: 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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Deutsche Bundesbank Monthly Report February 2015 46

erlands, Luxembourg, the United States and China.

Foreign direct investment in Germany Foreign direct investment in Germany was almost €10 billion down in the final quarter of 2014. Non-resident enterprises lifted their

equity capital in Germany by nearly €5 billion but simultaneously scaled back the funding provided as direct investment loans by €14½ billion. Intra-group credit transactions chiefly saw the repayment of previously issued loans.