

■ Financial markets

■ Financial market setting

Stiffer financing terms for southern European borrowers

Growing concerns about economic growth and a renewed flare-up of the euro area's sovereign debt crisis shaped events on the international financial markets from the spring onwards. With regard to Europe, the mood was dominated by concerns about Spain's banking system and its public finances, as well as doubts about implementation of the reform programmes in some euro-area countries. The result was a further worsening in funding terms for banks and governments on the southern European capital markets, whilst a flight to safety drove down bond yields in Germany, the United States and Japan. The equity markets were depressed for a time by the gloomier economic picture, a further percentage rise in non-performing real estate loans on banks' balance sheets in some countries, and credit institutions' increased exposure to sovereign bonds. It was subsequently announced that Spain would be receiving financial support to recapitalise its banking sector and that the Eurosystem might consider taking further non-standard monetary policy measures. These declarations led, in particular, to a recovery in equity prices. On the foreign exchange markets, however, the euro predominantly depreciated.

■ Exchange rates

Euro down against the US dollar

In the first few months of the year, the sovereign debt crisis in the euro area scarcely impacted on the value of the euro. It was only from the spring that the single currency depreciated significantly against other key currencies. The similar way in which the euro has performed against the US dollar, the yen and the pound sterling indicates that exchange rate movements have been driven chiefly by the euro-area debt crisis, with other factors playing a lesser role.

The euro depreciated against the US dollar by around 8% on balance compared to the end of March. For a time, the euro dropped to its lowest level against the dollar since June 2010. Most of the decline occurred in May in the wake of accumulating negative reports from the euro area – Greece's difficulties in forming a government, the election result in France and resulting fears that fiscal consolidation might be watered down, concerns about the stability of the Spanish banking sector, climbing yields on Spanish and Italian government bonds, and unfavourable macroeconomic data in a number of euro-area countries.

In the first half of June, the euro initially made good a small part of its losses. One factor that buoyed the euro was the markets' expectation of a further easing in US monetary policy following weak US payroll data and a decline in consumer prices. Another was the prospective granting of considerable assistance by the European Financial Stability Facility (EFSF) to the Spanish banking sector. The outcome of repeat elections in Greece had a positive impact, too, as it increased the probability, in the eyes of market participants, of Greece remaining within the euro area. The EU summit decisions at the end of June likewise lifted the euro against the dollar, albeit only temporarily. In July, the euro resumed its downward trend. Its exchange rate against the dollar was depressed, first, by uncertainty about the constitutional compatibility of the European Stability Mechanism (ESM) and of the European fiscal compact, as well as by a cut in the euro area's policy interest rate, and, second, by the absence of any indication of a new programme of monetary easing on the part of the US central bank. It is only recently that the euro has recovered slightly against the dollar, following ECB President Mario Draghi's announcement that the ECB would do whatever it takes to preserve the euro. As this report went to press, the euro stood at US\$1.23.



Euro also down against the yen ...

The value of the euro declined even more steeply from the end of March against the yen, which, like the US dollar, arguably benefited from investors' heightened risk aversion and the resulting capital inflows. The yen was additionally supported by unexpectedly strong GDP growth data for the first quarter of 2012, from which the markets inferred that further monetary loosening in Japan was unlikely. The euro temporarily fell to its lowest level against the yen since autumn 2000. At the end of the period under review the euro recovered slightly to ¥97, partly owing to weaker growth in Japan in the second quarter. This was about 11%

down on the euro's comparable level at the end of March.

The euro also recorded losses against the pound sterling in the period under review, although, totalling around 6%, the decline was less marked than against the yen and the US dollar. In this case, too, the euro's depreciation was triggered primarily by the intensifying euro-area sovereign debt crisis. The euro might have lost even more ground against the pound had it not been for market expectations that the Bank of England would expand its asset purchase programme and the publication of data indicating that the UK economy was stalling, which lessened the probability of monetary policy tightening in the near future. Most recently, the euro was trading at £0.78 against the pound.

... and against the pound

The euro has lost about 6% of its external value compared with the end of the first quarter against the currencies of its 20 largest trading partners. Most recently, the single currency was trading 8½% below its level at the launch of monetary union. In real terms, too, ie taking account of the inflation differentials between the euro area and its major trading partners, the effective euro exchange rate declined significantly in the period under review. The price competitiveness of euro-area exporters has improved accordingly. It is now somewhat better than the long-term average.

Drop in effective euro exchange rate

Securities markets and portfolio transactions

The yields of US, German and Japanese ten-year government bonds fell to new lows at mid-year. Demand for liquid and safe debt instruments was pushed up starkly by investors' increased risk perception and the tensions in the euro area, as well as by uncertainty about the prospects for growth in all three of these major economies. In the United States, the latest macroeconomic figures were in part well down on the first quarter. US Treasury yields

International bond markets

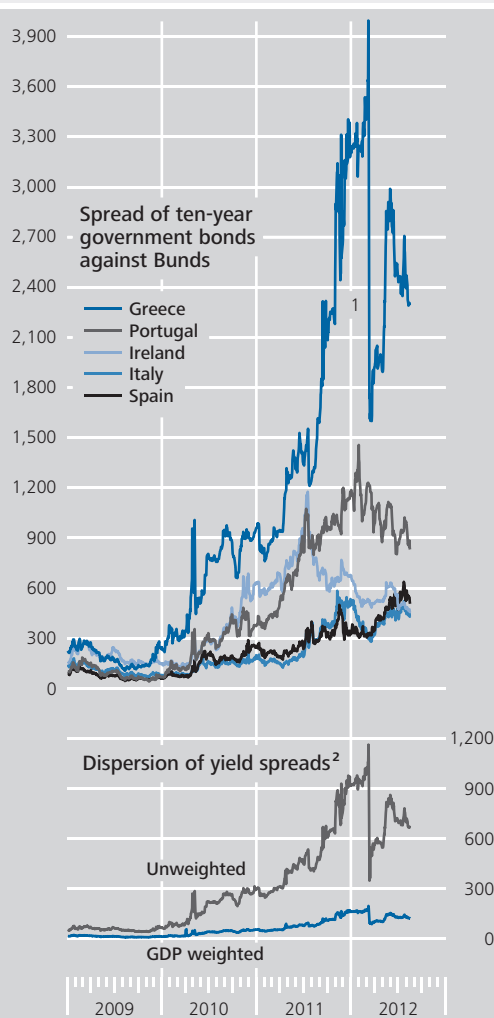
came under additional pressure from heightened expectations of further monetary easing in the second half of the year and political dilatoriness in addressing the drastic fiscal consolidation due to come into effect at the start of next year under current law ("fiscal cliff"). Market expectations for economic growth in Japan were dampened by a weaker net export trend – the result, in particular, of slacker growth in China – and decisions to introduce fiscal consolidation measures in 2013. Growing political and economic uncertainty in the euro area has recently prompted analysts to lower their growth expectations for Germany. On balance, ten-year sovereign bond yields fell vis-à-vis the first quarter of 2012 by ¼ percentage point in Germany, ½ percentage point in the USA and by a marginal amount in Japan; at 1.5%, 1.8% and 0.9% respectively, they are at low levels.

Wider yield spreads in the euro area

Yields on ten-year government bonds within the euro area, by contrast, diverged compared to the first quarter of 2012. Both the (unweighted) interest rate dispersion and the GDP-weighted yield spread of longer-dated government bonds of other euro countries over German Bunds with a comparable maturity were of late well above their five-year average, at 668 and 333 basis points respectively. Doubts about implementation of the reform programmes announced in several countries as well as worries about the Spanish banking system forced up yields in southern member states until the end of May. A brief uplift in confidence in June in connection with the rescue package for the Spanish banking sector was followed in July by a resurgence of fears concerning a possible Greek exit from the euro area and the sustainability of public finances in some member states. Ireland, on the other hand, provides an example of how the capital market rewards determined reform efforts: yields on Irish government bonds have fallen considerably against the highs of last year. Most recently, the yield on long-term Irish bonds was 6.3%, compared with 14.4% in July 2011. At these reduced yields, Ireland was able

Yield spreads in the euro area

Basis points, daily data



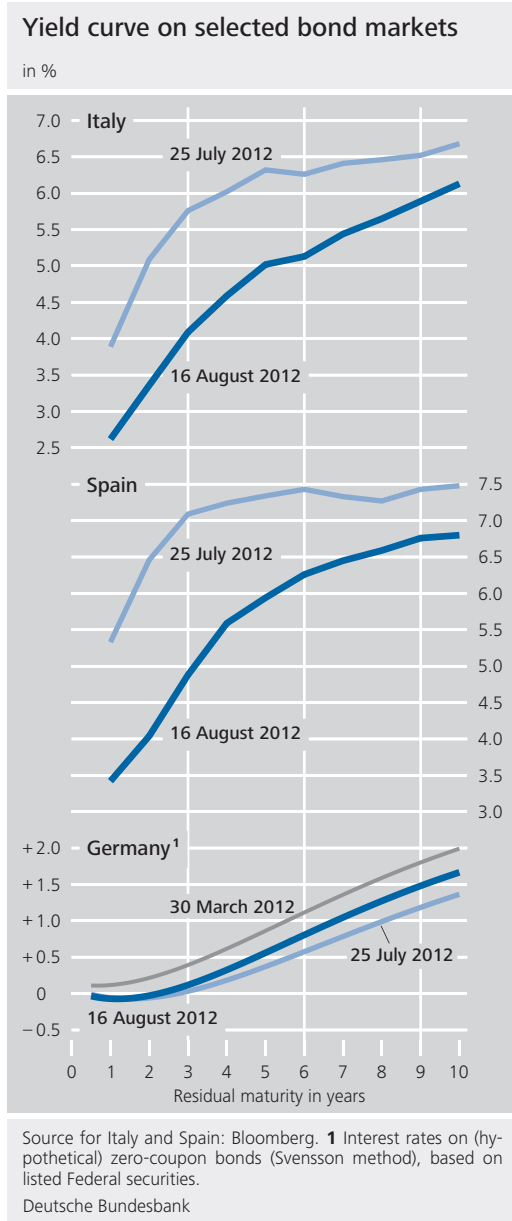
Sources: Thomson Reuters and Bundesbank calculations.
 1 Debt haircut on 9 March 2012. 2 Standard deviation of yield spreads of euro-area government bonds.
 Deutsche Bundesbank

to raise capital on the market for the first time since autumn 2010¹.

Following a speech at the end of July in which ECB President Mario Draghi raised the prospect of further Eurosystem measures to stabilise the financial markets, and his allusion at a press conference on 2 August to a new bond purchase programme focusing on shorter maturities, yields fell significantly in some euro-area peripheral countries. The decline was most pro-

Divergent yield curve movements

¹ Ireland has not issued any ten-year government bonds since January 2010. The residual maturity of the Irish benchmark bond (maturing in October 2020) is thus still over eight years.



nounced in the maturity bucket up to two years, but also left its mark on longer-dated paper. This was mirrored to an extent in an upward shift in the German yield curve over the same period, possibly as a result of a fall-off in safe-haven inflows.

Previously, however, the German yield curve had flattened and shifted downwards. For money market-like one-year maturities, German sovereign debt has consistently offered a negative return since the start of July – of most recently 7 basis points. Long-term yields on German government bonds have dipped even more against the end of the first quarter. In the

period under review Bunds fluctuated within a range of 1% to 1½%, driven principally by the inflows and outflows of investors in search of liquidity and safety. This is reflected, for instance, in the inverse relationship between Bund yields and a liquidity measure – the spread between agency bonds issued by Germany’s KfW banking group, which are equally safe but of varying liquidity, and German Bunds. The fact that German government bonds are in greater demand because they offer a liquid and safe store of value is also demonstrated by the negative correlation between their yields and indicators expressing uncertainty, such as the implied volatility on bond or equity markets derived from option contracts.

Inflation expectations for the European consumer price index, calculated by comparing index-linked and nominal bonds, have risen slightly, with the forward inflation rate from five to ten years moving up 39 basis points to 2.5%. This is attributable to the fact that real yields – now negative over the whole maturity range up to ten years – are dropping more sharply than nominal yields.

Yields on investment-grade European corporate bonds decreased against the end of the first quarter of 2012. Corporate bonds with a residual maturity of seven to ten years and a BBB rating were yielding 4.4% as this report went to print.² The corporate bond spread over German Bunds, whose yields weakened in the period under review, as mentioned above, also narrowed.

Despite reduced yields, capital-raising on the German bond market remained moderate in the second quarter of 2012. The gross issuance volume amounted to €339½ billion, which was below the figure for the previous quarter (€396 billion). After deducting redemptions, which were also down, and taking account of changes

Improved funding terms for firms

Net redemptions on the German bond market

² This is based on yields on corporate bonds included in the different rating grades of the iBoxx bond indices. These indices cover bonds issued by both banks and non-banks.

in issuers' holdings of their own securities, the outstanding volume of German bonds decreased by a net €2 billion. However, foreign borrowers placed debt securities worth €2 billion on the German market. On balance, the volume of bonds circulating in Germany shrank by €½ billion.

Public sector borrowing

The public sector raised €23 billion on the bond market in the second quarter of 2012, compared with €63½ billion in the previous three months. These figures include issues from resolution agencies of German banks – these issues are ascribed to the public sector for statistical purposes. Central government itself issued mainly ten-year Bunds (€14 billion), and to a lesser extent 30-year Bunds (€5 billion). This contrasted with net redemptions of two-year Schätze and five-year Bobls totalling €4 billion and €2½ billion respectively. Overall, the German state governments tapped the capital market for €13 billion in the period under review.

Net redemptions of corporate bonds

Domestic companies still appear to have comparatively little need for capital. They redeemed debt securities for €5½ billion net between April and June. These were solely bonds and notes with maturities of over one year.

Net redemptions by credit institutions

Domestic credit institutions, which continued to receive abundant funds from abroad and recorded rapid deposit growth, likewise further curtailed their capital market debt in Germany in the quarter under review, paying down €20 billion. In particular, they redeemed "other bank bonds", which can be structured flexibly (€15 billion), and public Pfandbriefe (€11½ billion). These redemptions were partly offset by net issuance of mortgage Pfandbriefe and debt securities of specialised credit institutions to the value of €4½ billion and €2½ billion respectively.

Purchase of debt securities

A breakdown of bond purchases clearly reveals the safe-haven motif underlying the financial flows. The largest category of buyers on the domestic bond market in the second quarter of

Corporate bond yields in the euro area*

Weekly averages



Source: Markit. * BBB-rated bonds with a residual maturity of seven to ten years.

Deutsche Bundesbank

Investment activity in the German securities markets

€ billion

Item	2011		2012	
	Q2	Q1	Q1	Q2
Debt securities				
Residents	-29.0	47.3	-18.0	
Credit institutions	-17.5	1.9	-21.6	
of which				
Foreign debt securities	-2.6	-0.2	-14.8	
Deutsche Bundesbank	0.5	0.5	-1.2	
Other sectors	-11.9	44.9	4.8	
of which				
Domestic debt securities	-19.0	7.2	-13.3	
Non-residents	35.0	13.6	17.7	
Shares				
Residents	15.3	7.1	-3.9	
Credit institutions	-0.3	5.5	-11.4	
of which				
Domestic shares	-5.1	10.2	-11.9	
Non-banks	15.5	1.6	7.4	
of which				
Domestic shares	8.2	-0.2	4.2	
Non-residents	14.7	-8.7	9.2	
Mutual fund shares				
Investment in specialised funds	4.2	21.6	15.8	
Investment in funds open to the general public	0.5	-0.5	-0.4	
of which				
Share-based funds	1.4	-0.9	-1.4	

Deutsche Bundesbank



the equity markets. Market players' attention focused in particular on the Spanish banks, which came under pressure from plummeting prices on the Spanish property market and doubts about the sustainability of the country's public finances. The banks' share prices dropped considerably in some instances, partly owing to their increased exposure to sovereign bonds from crisis-hit countries incurred in the wake of the three-year longer-term refinancing operations. This underscores yet again the problematic close interlinkage between credit institutions and governments in the financial and sovereign debt crisis.

In June, however, the equity markets rebounded. This mood swing was driven partly by the expectation that recapitalisation would be provided for distressed Spanish banks. In addition, share prices received a boost from the formation of a government in Greece, hopes of an easing in US monetary policy and the assistance measures from the Eurosystem mooted in July. On balance, European equities, as measured by the Euro Stoxx, were most recently 1½% down on their level at the end of March. Persistent market anxiety showed itself in particular in the price movements of European bank stocks, which have lost about 12% of their value since April.

The fall in share prices went hand in hand with a reduced price-earnings ratio and heightened risk aversion on the part of equity investors. The implied equity risk premium, which can be calculated using a three-stage dividend discount model and analysts' (I/B/E/S) earnings expectations, saw an increase for bank stocks in particular. Accordingly, investors were prepared to hold shares only at reduced prices. To hold bank stocks they required an implied return of 14% in July, compared with 11% for the market as a whole (Euro Stoxx). Back in March, the return required for investing in bank shares and in the market as a whole was 7% and 8% respectively.

Higher risk premiums on equities

2012 were foreign investors, who added German debt instruments totalling €17½ billion to their portfolios. They favoured public sector issuers. Domestic non-banks also purchased debt securities for €5 billion net, though these were exclusively foreign securities. These purchases were accompanied by net sales and redemptions by credit institutions and the Deutsche Bundesbank amounting to €21½ billion and €1 billion respectively, both of which mainly sold off foreign securities.

The gloomier economic outlook and the escalation of the debt crisis in some southern European countries also made themselves felt on

Risk premiums also rose on the US equity market. However, the determinants differed from those in the euro area: earnings expectations 12 months forward for S&P 500 enterprises – unlike for Euro Stoxx firms – have risen since April. In addition, US stocks have held their price level.

*Stock market
funding and
stock purchases*

Issuing activity on the German equity market remained relatively muted in the second quarter of 2012. Domestic companies issued €1½ billion of new shares, split equally between listed and non-listed equities. The volume of foreign shares on the German market concurrently increased by €4 billion. Shares were bought primarily by non-resident investors (€9 billion) – as is usual after key dividend payment dates. Resident non-banks bought equities in the amount of €7½ billion, whereas domestic credit institutions offloaded €11½ billion worth of stocks, after being net buyers in the first quarter.

*Sales and
purchases of
mutual fund
shares*

During the reporting period, domestic collective investment firms recorded net inflows of €15½ billion, as against €21 billion in the previous three months. The inflows were channelled exclusively to specialised funds reserved for institutional investors (€16 billion). In the retail fund market, open-end real estate funds, mixed funds and bond funds attracted new subscriptions to the value of €½ billion each. However, equity funds and mixed securities-based funds redeemed share units (€1½ billion and €½ billion respectively). Mutual funds distributed by foreign companies on the German market also recorded net outflows totalling €3½ billion in the second quarter of 2012. Domestic non-banks were the main buyers, adding €16½ billion worth of mutual fund shares to their portfolios. Their interest was exclusively in German mutual fund shares. By contrast, foreign investors and domestic credit institutions disposed of fund units amounting to €2½ billion and €2 billion net respectively.

Major items of the balance of payments

€ billion

Item	2011	2012	
	Q2	Q1	Q2
I Current account^{1, 2}	+ 25.7	+ 41.1	+ 35.6
Foreign trade ^{1, 3}	+ 38.0	+ 45.4	+ 47.9
Services ¹	– 3.0	– 0.4	– 1.4
Income ¹	+ 0.1	+ 15.7	+ 4.9
Current transfers ¹	– 4.7	– 15.1	– 6.7
II Capital transfers^{1, 4}	– 0.3	+ 0.2	+ 0.4
III Financial account¹ (Net capital exports: –)	– 46.1	– 61.4	– 63.5
1 Direct investment	+ 4.4	– 23.3	– 9.8
German investment abroad	– 0.4	– 27.0	– 12.8
Foreign investment in Germany	+ 4.9	+ 3.7	+ 3.0
2 Portfolio investment	+ 34.1	– 35.4	+ 24.5
German investment abroad	– 15.0	– 39.4	– 0.0
Shares	– 8.9	+ 5.9	– 1.4
Mutual fund shares	– 2.0	– 6.3	+ 3.3
Debt securities	– 4.0	– 38.9	– 1.9
Bonds and notes ⁵	+ 3.7	– 36.4	– 3.6
of which Euro-denominated bonds and notes	+ 6.7	– 38.5	– 4.5
Money market instruments	– 7.7	– 2.6	+ 1.7
Foreign investment in Germany	+ 49.1	+ 4.0	+ 24.6
Shares	+ 13.2	– 8.6	+ 9.3
Mutual fund shares	+ 0.9	– 1.0	– 2.4
Debt securities	+ 35.0	+ 13.6	+ 17.7
Bonds and notes ⁵	+ 32.6	+ 14.1	+ 11.9
of which Public bonds and notes	+ 30.7	+ 29.2	+ 23.1
Money market instruments	+ 2.5	– 0.5	+ 5.8
3 Financial derivatives⁶	– 5.5	– 3.5	– 6.9
4 Other investment⁷	– 78.7	+ 1.8	– 70.5
Monetary financial institutions ⁸	– 52.5	+ 232.9	– 12.7
of which short-term	– 47.6	+ 215.5	– 16.6
Enterprises and households	– 4.3	– 25.2	– 1.0
of which short-term	+ 3.1	– 22.4	– 2.1
General government	– 5.7	– 24.7	– 11.1
of which short-term	– 7.1	– 25.8	– 11.9
Bundesbank	– 16.2	– 181.3	– 45.7
5 Change in reserve assets at transaction values (increase: –)⁹	– 0.4	– 1.0	– 0.8
IV Errors and omissions	+ 20.6	+ 20.1	+ 27.5

1 Balance. **2** Including supplementary trade items. **3** Special trade according to the official foreign trade statistics (source: Federal Statistical Office). **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.

Local bias in German households' equity portfolios

Classical portfolio theory suggests that utility-maximising investors benefit optimally from a broadly diversified portfolio of risky assets. Yet evidence on real-life investment decisions paints a different picture. Recent research indicates not only that investors eschew foreign shares¹ but – in addition to this – tilt their domestic shareholdings towards firms that are located close to their home. This phenomenon of overweighting locally headquartered companies in a domestic equity portfolio has been dubbed “local bias” in the literature and has proved robust across a variety of countries and for both retail and institutional investors.² The significance of an investor's location for his or her investment decisions can be attested for Germany, too.³

The database for the following analysis of German households' investment behaviour in terms of overweighting local equities was taken from the Bundesbank's quarterly Securities deposits statistics. Broken down by customer group, they capture the total securities holdings of all deposit account-keeping banks located in Germany and therefore show which domestic equities are held by German households with a given bank. The study spans the period from December 2005 until December 2009 and covers 1,317 different equities, virtually all listed German enterprises. It makes sense to focus on portfolios held at the savings banks and credit cooperatives because these two categories of domestic banks traditionally have a clear regional customer base. Given this constraint, it may be assumed that the households covered live in the vicinity of their particular bank. For the above period, this narrower dataset still comprises a total of 1,715 banks.

Local bias measure

To differentiate between local and non-local equities from an individual investor's perspective, a suitable distance-based measure needs to be determined. A radius of 100 kilometres around a given investor's location is commonly used in the literature. This radius is also used in our study to ensure that our findings are comparable with other research results. Although this radius is ultimately an arbitrary choice, it turns out that choosing different distances has little impact on the results. The local bias measure is calculated by comparing the fractional market value of an investor's total portfolio of German equities that is invested locally with the fractional market capitalisation of the total domestic market portfolio within the same radius.⁴ This takes due account of the varying degree of agglomeration of listed companies in different German regions. The excess share of local equi-

¹ This familiar phenomenon is known in the literature as home bias.

² The literature on local bias was pioneered by the study by J D Coval and T J Moskowitz (1999), Home Bias at Home: Local Equity Preference in Domestic Portfolios, in *Journal of Finance* 54, pp 2045-2073. The authors' paper shows that US fund managers display a preference for investing in local firms. Evidence of local bias among US households is provided by M S Seasholes and N Zhu (2010), Individual Investors and Local Bias, *Journal of Finance* 65, pp 1987-2010. This phenomenon among households has also been found inter alia in various Scandinavian countries (Finland: M Grinblatt and M Keloharju (2001), How Distance, Language, and Culture Influence Stockholdings and Trades, *Journal of Finance* 56, pp 1053-1073; Sweden: A Bodnaruk (2009), Proximity Always Matters: Evidence from Swedish Data, in *Review of Finance* 13, pp 629-656).

³ For more details, see M Baltzer, O Stolper and A Walter (2011), Home-field advantage or a matter of ambiguity aversion? Local bias among German individual investors, Deutsche Bundesbank Discussion Paper, Series 1, No 23/2011.

⁴ As is customary in the literature, the market value of free-float domestic equities is used as the denominator.

ties in the investor's portfolio compared with the corresponding market fraction measures the local bias. The thus calculated average household equity investment in local companies during the observation period actually came to 20.1%, whereas it should have averaged only 11.8% according to the local fraction of the overall market portfolio. This means that the underlying data reveal a substantial average overweight in local equities of 8.3 percentage points.⁵

This finding might be (partly) explainable by the allocation of company shares to employees as part of their overall remuneration package. Even though this form of employee remuneration still plays a much less prominent role in Germany than it does, say, in the Anglo-Saxon world, German public limited companies also run schemes under which staff can buy shares in their company at a certain discount, usually subject to a lock-up period of several years. Assuming that the employee lives close to the company for which he/she works, these shares would be allocated to the local portion of that employee's portfolio, thereby increasing the local bias in his/her equity portfolio accordingly. However, this possible impact has no bearing on our study since during the lock-up period the employee shares are usually held in an escrow account operated by the company on the employee's behalf.⁶ Accordingly, the Bundesbank's Securities deposits statistics assign the employee shares in question not to households but to the relevant company.

Information asymmetries relating to local equities

Some papers in the local bias literature posit informed (ie rational) investor choice as a possible explanation for the deviation in investment behaviour from classical portfolio

theory, assuming that local investors enjoy a positive information asymmetry in respect of local firms. Return-relevant information asymmetries are thought to be particularly likely in the case of smaller companies that are little known outside their region. That, the argument goes, explains why local investments are overweighted. In the literature, this hypothesis is normally tested empirically by comparing the returns on local equity investments with those of the total portfolio. Seasholes and Zhu (2010) point to a number of possible methodological pitfalls in connection with determining an excess return for local equity investments. One of the authors' key caveats is that the returns on local equity investments should be adjusted using the appropriate benchmark portfolio. When calculating a local excess return, therefore, not only the total market return but also the return of the respective market index solely comprising local equities should be included in the regression as an explanatory variable. Only if a statistically significant coefficient remains after adjustment with these two indices can a return-relevant outperformance by local investments truly be inferred. For the German data, the regressions conducted on quarterly returns, regardless of the respective specification, result in no excess returns that are significantly different from zero for local investments, confirming the findings of Seasholes and Zhu (2010) for US households. If the information and transaction costs incurred are additionally factored in, the portfolio individually composed of local

⁵ By comparison, T M Doskeland and H K Hvide (2011, Do Individual Investors Have Asymmetric Information Based on Work Experience?, in *Journal of Finance* 66, pp 1011-1041) use a comparable measure and find a local bias of 13 percentage points for Norwegian households. Seasholes and Zhu (2010, op cit) have calculated a corresponding figure of 14 percentage points for US retail investors.

⁶ See D Dorn and G Huberman (2005), *Talk and Action: What Investors Say and What They Do*, in *Review of Finance* 9, pp 437-481, here p 469.

companies actually generates a lower overall return than one invested exclusively in the market index.

Non-return-relevant familiarity

An alternative explanation for the local bias phenomenon is that an investor overweight local equities due to his or her preference for the familiar. This is based on the assumption that investors systematically perceive non-local companies as a riskier investment solely for reasons of geographical distance.⁷ Accordingly, an investor's preference for local equities is said to be driven primarily by his/her personal risk perception.⁸ Boyle et al (2012) offer a theoretical concept by including familiarity with certain assets ("ambiguity aversion") as an additional dimension of the portfolio selection process.⁹ The optimal portfolio then consists of a mix of familiar and unfamiliar assets. According to this approach, the portfolio mix responds dynamically to changing correlations between the assets. The underlying intuition is that unfamiliar assets become less beneficial for portfolio diversification in times of higher correlation so that it is no longer worthwhile for an ambiguity-averse investor to continue holding these assets and he/she instead gives a stronger weighting to familiar stocks – an effect the authors dub the "flight to familiarity". In applying this concept empirically to the dataset used here, it is important to make sure that the change in local bias was actually triggered by an active portfolio shift by the investor. A simple analysis of the overall change in local bias over time is insufficient as different price movements of local equities vis-à-vis non-local equities might also be responsible for a change in the local/non-local investment mix. For this reason, the actual portfolio changes are observed by keeping prices constant. A regression including the change in the local equity frac-

tion attributable to active trading as a dependent variable shows the expected positively significant impact of the change in correlation among all shares in the portfolio. An increase in correlation leads to a corresponding rise in the percentage of local equities, and *vice versa*. It remains to be seen whether the portfolio shift really was caused by purchases of local equities (and not sales of non-local shares). For this reason a dummy variable is introduced, which is given the value of 1 if trades in local shares are mostly buy orders. This dummy variable proves to be positive and statistically significant, which indicates that corresponding purchases of local investments take place in times of increased correlation and thus confirms the "flight to familiarity" induced by purchases.

In summary, it can be stated that German households are clearly overinvested in local companies, irrespective of their ownership of employee shares. Further, it can be seen that, on average, they do not possess any return-relevant information advantages that would justify the observed local bias. Rather, investors' non-return-relevant familiarity with local equities seems to be of relevance. This suggests that, besides risk and return considerations, investors' familiarity with the investment in question plays a role in their portfolio selection decisions.

⁷ See W N Goetzman and A Kumar (2008), Equity Portfolio Diversification, in *Review of Finance* 12, pp 433-463.

⁸ See also most recently M Giannetti and L Laeven (2012), Local bias and Stock Market Conditions, CEPR Discussion Paper.

⁹ P Boyle, L Garlappi, R Uppal and T Wang (2012), Keynes Meets Markowitz: The Trade-off Between Familiarity and Diversification, in *Management Science* 58, pp 253-272.

■ Direct investment

*Outflows
in direct
investment*

In contrast to cross-border portfolio investment, in which €24½ billion net flowed into Germany, the direct investment account recorded net capital exports of €10 billion in the second quarter of 2012. However, this was much less than the prior-quarter outflow (€23½ billion).

*German direct
investment
abroad*

The reduced outflows can be attributed mainly to the fact that domestic parent companies provided their foreign affiliates with less capital (€13 billion, after €27 billion in the first quarter). They supplied them with additional funds primarily in the form of equity capital and re-

invested earnings (together totalling €7 billion) as well as direct investment loans (€6 billion). The euro-area countries, particularly Luxembourg (€5 billion) and the Netherlands (€2½ billion), as well as the USA (€3 billion) were the geographical focus of German direct investment abroad in the second quarter.

Foreign proprietors likewise provided their subsidiaries and branches in Germany with additional funds (€3 billion, after €3½ billion between January and March). Intra-group loans played a significant role in this (€5 billion). The principal investors were enterprises from euro-area partner countries.

*Foreign direct
investment in
Germany*