

## German banks' foreign direct investment and cross-border services

International economic integration has continued to rise in the past few years. This is true of the real sector and the financial sector alike. German companies responded to the challenges of globalisation at an early stage and became involved in the process through extensive foreign direct investment (FDI) and an intensive exchange of goods with other countries. Influenced by the liberalisation of capital flows in many countries and the creation of a level playing field within the EU, cross-border banking activities have undergone a relatively buoyant expansion within the past 15 years. German banks' credit business with non-residents and FDI both experienced strong growth during that period. The present article studies the determinants of the various forms of German banks' cross-border activities.

### German banks' foreign activities

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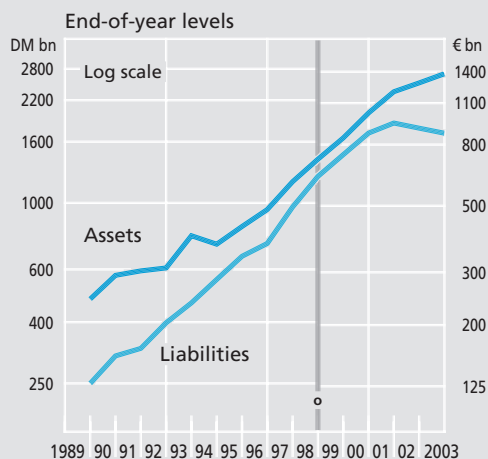
There are many ways in which banks – like other companies – operate globally. One way, if the legal framework is in place, is to render services across borders.<sup>1</sup> Examples include granting credit to foreign customers or offering consultancy services in foreign countries. For another, banks can also strengthen their local presence by establishing foreign affili-

*Globalisation of  
banking sector  
from German  
perspective*

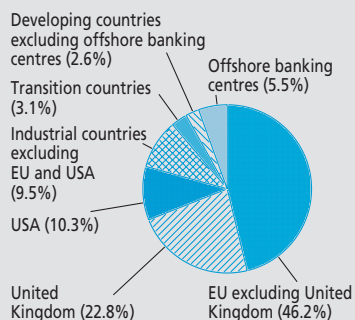
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<sup>1</sup> For the EU see, for instance, European Commission (1997), Credit Institutions and Banking, The Single Market Review, Sub-series II, 3 and General Agreement on Trade in Services (GATS), especially the annex on financial services.

### External assets and liabilities of German credit institutions\*



#### Regional structure<sup>1</sup> of assets at end of 2003



\* Excluding claims on and liabilities to international organisations. — <sup>1</sup> Country classification: Deutsche Bundesbank, Balance of payments by region, Special Statistical Publication 11, Table IV. — o From 1999, figures in euro.

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ates or by acquiring stakes in foreign banks, thereby using FDI to expand their operations abroad.<sup>2</sup>

Financial assets and liabilities

German banks have been vigorously pursuing both methods of making their business activity more international in the past few years. The total cross-border positions of German monetary financial institutions<sup>3</sup> have increased more than sixfold since the end of

1989. At the end of November 2004, German banks' claims on non-residents amounted to more than €1½ trillion and liabilities to non-residents to slightly less than €1 trillion.<sup>4,5</sup> About two-thirds were attributable to intra-EU contracts, and more than one-third of those to the United Kingdom. This is an indicator of the key role played by the City of London. Other industrial countries, taken together, accounted for around one-fifth of German banks' foreign business, half of that being with the United States. German institutions were also extremely active in offshore banking centres. More than 6% of German credit institutions' financial assets and liabilities were related to this group of countries. In November 2004 external assets (liabilities) accounted for 24% (14%) of the balance sheet total. Interbank relations were a key factor. If one includes the claims of foreign branches and subsidiaries on non-residents<sup>6</sup> and consolidates this total by deducting intra-group items, the result is around €2.3 trillion worth of claims on non-residents.<sup>7</sup> This represents the largest sum of foreign claims of any banking system world-wide.<sup>8</sup>

2 For further details see C M Buch and A Lipponer, FDI versus cross-border financial services: The globalisation of German banks, Economic Research Centre of the Deutsche Bundesbank, *Discussion paper, Series 1, No 05/2004*.

3 Excluding the Deutsche Bundesbank.

4 However, this also includes intra-group claims on and liabilities to affiliates and branches located abroad.

5 It is not possible to assign bank debt securities outstanding to domestic and foreign holders from bank balance sheets.

6 The country of domicile of these branches is included in these cases, too.

7 As defined in the consolidated banking statistics of the Bank for International Settlements (BIS). Last revised: September 2004.

8 See Bank for International Settlements (BIS), *Quarterly Report*, December 2004.

*Interest and  
premiums  
received*

Interest and premiums received, as recorded in the balance of payments, can be cited as another indicator of German banks' growing activity in the provision of services across borders.<sup>9</sup> These services are now estimated to be two-and-a-half times greater than at the end of the 1980s; however, in 2001 they were almost three-and-a-half times their 1989 level.<sup>10</sup>

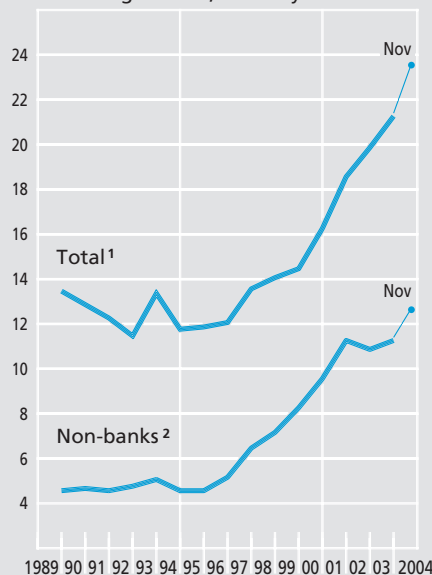
*Foreign direct  
investment*

German banks' FDI stocks likewise showed extremely dynamic growth – particularly towards the end of the 1990s.<sup>11</sup> In the 1989-2002 period (more recent data on FDI stocks are not yet available) they grew by a factor of more than 12. Their growth therefore far out-paced that of total German FDI stocks. At the end of 2002, German banks held more than €100 billion worth of equity capital in foreign branches. Investment in the United States, which in 2002 accounted for around half of German credit institutions' FDI stocks, played a key role in this development. By contrast, only about one-third of investment was in EU partner countries, with one-third of that going to the United Kingdom. The regional breakdown of German banks' FDI is therefore distinctly different from the trend in credit and deposit business, which features a much heavier focus on EU countries.<sup>12</sup> All in all, banks' FDI stocks account for around 15% of all German FDI.

What makes this all the more remarkable is the fact that the aforementioned investment was posted by only around 80 banks. The funds were poured into more than 1,400 affiliates in over 60 countries. Slightly fewer than 30% of these foreign affiliates are – like

### Loans by German banks to non-residents

Percentage shares, end-of-year levels



<sup>1</sup> Percentage shares in total loans. —  
<sup>2</sup> Shares of loans to non-resident non-banks  
in total loans to non-banks.

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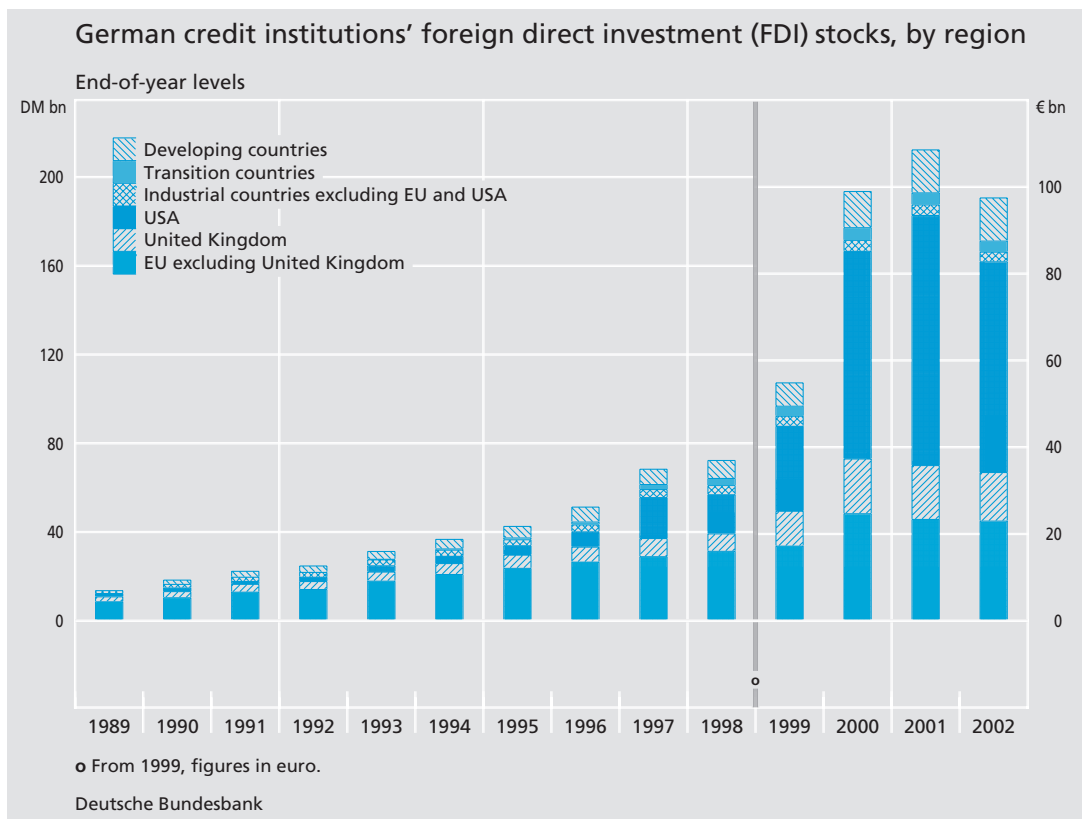
their parent companies – credit institutions. In addition, however, German banks are also heavily involved in investment companies. Additional focal points of German banks' FDI include activities associated with the credit and insurance industries, holding companies, real estate activities and financial leasing institutions. Well over 300 affiliated companies are located in the United States, with around 250 more in the United Kingdom. In terms of the number of affiliates, other popular loca-

<sup>9</sup> For details on the definition of banking services used here see the explanatory notes on page 30.

<sup>10</sup> The interest payments recorded here are influenced not only by the level of credit but also by interest rates and exchange rates.

<sup>11</sup> For a definition of FDI stocks see the explanatory notes on page 30.

<sup>12</sup> One reason is that German banks in individual countries – especially the United Kingdom – have been increasingly establishing legally dependent branches with little endowment capital.



tions include Austria and Luxembourg, followed by France, the Netherlands and Poland. Worldwide, some 160,000 persons are employed by German banks' foreign affiliates and dependent branches. This is only around 3½% of the employees of all German FDI companies abroad. Over 35,000 of these employees work in the United States. Poland is an additional focal point of foreign employment by German banks, alongside Austria and the United Kingdom. More than 20,000 are employed in each of these three countries. This means that nearly two-thirds of staff employed by German banks' foreign branches are working in the four aforementioned countries.

### Determinants of the internationalisation of banking business

FDI in the financial sector has recently attracted increasing interest from academic researchers. As in the case of other enterprises, one question to emerge is why financial sector enterprises engage in FDI. The next question is whether market access is initially obtained by offering services from the home country. Finally, the country-specific influences that determine which markets banks flock to and which markets they tend to avoid are another interesting aspect.

Other key questions address the effects of FDI on the home and host countries. Of particular interest is the influence of FDI on economic growth, competition in the banking industry

*Analysing globalisation in banking sector*

and labour markets. The answers can have far-reaching implications. They may determine, for instance, whether a country actively seeks FDI or tends to shy away from it and how a country can, if desired, "entice" foreign investors.

*Model of a  
multinational  
enterprise*

Studies of the determinants of FDI provide the key to a better understanding of this phenomenon. There is no theoretical model of an "international bank" that is directly applicable to the question of which banks will expand beyond the borders of their own economic territory and, if so, how they will do this. By contrast, there is an extensive body of literature on the theory of the multinational firm.<sup>13</sup> The centrepiece of a model of multinational firms, which is probably also relevant to banks' international activities, is the attempt by an investor to strike a balance between the advantages of being present "on site" and the resultant potential disadvantage of less centralisation, known as the "proximity-concentration trade-off". FDI saves on variable transport costs relative to exports but implies higher overhead costs. This trade-off typically occurs in the case of horizontally integrated multinationals that manufacture the same product in the domestic market and the foreign market, a situation which is likely to apply to a bank. This theory leads to the following thesis: firms invest abroad (instead of exporting) if their local presence leads to higher expected profits than if the product were exported. If earnings remain equal, this means that the lower variable transport costs overcompensate for the additional overhead costs of FDI. In addition, this approach implies that firms with low productivity serve only their domestic market as their ex-

pected profits from exports and FDI are negative. Medium-productivity enterprises export, while only highly productive firms engage in FDI.<sup>14</sup>

With the right reinterpretation, this line of thinking can be applied to the banking sector. Banks do not deal in goods but offer services (such as lending) across borders and, depending on the type of service, either receive or make interest or premium payments. One of the key assumptions in applying the international non-financial enterprise theory to banks is that transport costs can be reinterpreted as information costs. The local presence associated with FDI makes it easier and more cost-effective for banks to obtain information on potential counterparties.

*Applying the  
theory to banks*

By contrast, fixed market entry costs are just as significant for banks as for manufacturing enterprises. Although investment in machinery and equipment is less of a factor, the establishment of a good reputation and of customer networks is somewhat more important for banks than for non-banks.

It is initially unclear to what extent this theoretical model properly reflects reality. In the following, this article will attempt to answer the question with the help of micro data on FDI<sup>15</sup> and the cross-border services of Ger-

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<sup>13</sup> For an overview see, for instance, J R Markusen (2002), *Multinational Firms and the Theory of International Trade*, MIT Press.

<sup>14</sup> E Helpman, M J Melitz and S R Yeaple (2003), *Export versus FDI*, National Bureau of Economic Research, *NBER Working Paper 9439*, Cambridge, MA.

<sup>15</sup> A Lippner (2003), Deutsche Bundesbank's FDI Micro Database, in *Schmollers Jahrbuch – Zeitschrift für Wirtschafts- und Sozialwissenschaften*, 123 (4), Duncker and Humblot, Berlin, pp 593-600.

## German banks' foreign activities: a microeconomic analysis.

This empirical analysis on the basis of individual bank-specific data involved combining information from various sources. The data used span the years from 1997 to 2000. They therefore cover a period in which the globalisation of German banks accelerated strongly.

German banking statistics form the starting point for the analysis. As virtually all domestic banks are represented here, internationally active banks can be distinguished from non-internationally active banks. The analysis used data recorded in the banks' balance sheets and their profit and loss accounts as well as information taken from the direct investment stock statistics on German banks' foreign direct investments and from the balance of payments statistics for the cross-border services which they provided.

Direct investment relationships are understood to mean long-term cross-border investments. Internationally, cross-border corporate participating interests are currently regarded as direct investments if they comprise 10% or more of subscribed capital or voting rights (in accordance with a definition prepared by the OECD and the IMF). In German statistics, certain reporting exemption limits with regard to the amount of a particular transaction and the subsidiary's balance sheet total also apply.

For this study, direct investments are defined as the consolidated sum of the primary and secondary direct investments of German banks in their affiliates' equity capital.<sup>1</sup> Credit capital made available by the banks is therefore not considered to be a direct investment.

<sup>1</sup> See Deutsche Bundesbank, *International capital links*, Special Statistical Publication 10, May 2004, p 73 (available in German only). — <sup>2</sup> Altogether, around 55,000 observations other than zero are revealed (aggregated according to domestic banks and target coun-

tries). Theoretically, 1,976,832 combinations would be produced in the case of four years, 192 countries and 2,574 banks. Owing to data restrictions, only a part of the observations can be used in the regressions, the results of which are shown in the table on page 33. — <sup>3</sup> For

The current profits for the years under review were factored out of the direct investment figures. The retained profits of the previous years are contained in the figures used, however. The data set comprises the direct investments of German banks in 64 countries.

German banks' cross-border services were counted in 185 countries. For this study, the interest paid and received on unsecuritised loans and the commissions paid and received were used. As the data on revenue and expenditure were taken from the balance of payments, the services rendered were valued at market prices. This is a conventional method of establishing the value of market services.<sup>2</sup>

The size of the bank (measured in terms of its balance sheet total), profitability and the degree of international orientation in the loan portfolio ("internationalisation") were analysed as company-specific determinants. Furthermore, account was taken of whether the bank is a commercial bank, a savings bank or a cooperative bank. The country factors comprised indicators of market size (Germany's GDP and bilateral trade with the country in question as a percentage of the host country's GDP) as well as indicators of cultural and geographical distance: physical distance in kilometres and the existence of a common border or language. These factors were supplemented by variables representing economic and political stability as well as state regulation. These include inflation measured by the GDP deflator, Euromoney's comprehensive country risk index, the Heritage Foundation's Index of Economic Freedom, a dummy variable for restrictions on capital movements – particularly with regard to

the unhindered repatriation of invested capital or profits realised (source: IMF) – as well as a variable for EU membership and for offshore banking centres. The strength and transparency of banking supervision were captured by means of two separate indicators.<sup>3</sup>

The econometric estimating equation reads

$$y_{ijt} = \beta_0 + t + \beta_i x_{it} + \beta_j x_{jt} + \varepsilon_{ijt}$$

whereby  $\beta_0$  is a constant,  $t$  fixed time effects,  $x_{it}$  enterprise-specific (bank-specific) explanatory variables,  $x_{jt}$  country-specific factors and  $\varepsilon_{ijt}$  the disturbance term. A Tobit model was chosen as the estimation approach. Thus, the zeros (bank  $i$  has no exposures in country  $j$ ) in the data set can be used as additional information in the regression and, moreover, the marginal effects calculated can be broken down into two components.<sup>4</sup>

1 The marginal effect of a change in the exogenous variables on the probability of obtaining one observation other than zero (“non-censored”) if a positive observation has not (yet) been obtained.

2 The marginal effect on the mean value of the dependent variable in those cases in which observations other than zero (“non-censored”) are available.

A distinction can, therefore, be made between the effect of exogenous variables on (first-time) market entry and a change in the investment activities of investors already active in the country.

further details see C M Buch and A Lipponer, FDI versus cross-border financial services: The globalisation of German banks, *loc cit*, and C M Buch and A Lipponer, Clustering or competition? The foreign investment behaviour of German banks, Economic Research Centre of

$$\begin{aligned} \frac{\partial E[y_{ij} | x_i]}{\partial x_i} &= E[y_{ij} | x_i, y_{ij} > 0] \frac{\partial \Pr[y_{ij} > 0]}{\partial x_i} \\ &+ \Pr[y_{ij} > 0] \frac{\partial E[y_{ij} | x_i, y_{ij} > 0]}{\partial x_i} \end{aligned}$$

On balance, the main difference between the two components is their order of magnitude. Whereas the impact of a 1 percentage point increase in GDP growth on the probability of a bank entering a market is positive but slight, there are greater effects on banks with an established presence in the country. This is consistent with the assumption of relatively high fixed costs, which has to be dealt with in an initial investment decision.

### Regression results

The table on page 33 contains the marginal effects derived from the Tobit regressions for direct investments and German banks’ cross-border services as a function of the explanatory variables. The “ME 1” columns show the marginal effect (1) on the probability of an observation other than zero. “ME 2” columns show the marginal effect (2) on the endogenous variables in the event of “non-censored” observations. The levels of significance of the estimated parameters are indicated in brackets. All of the regressions include not only the explanatory variables shown in the table but also dummy variables for time as well as for savings banks and cooperative banks. The dependent variable as well as the balance sheet total, distance, GDP and risk index were in logarithmic form.

the Deutsche Bundesbank, *Discussion Paper, Series 1, No 06/2004*. —  
4 See J McDonald and R Moffit (1980), The Uses of Tobit Analysis, *Review of Economics and Statistics*, 62, pp 318-321.

man banks. Such firm-level data are especially well-suited to this analysis because the purpose is to test a theory that models microeconomic decisions. The explanatory notes on page 30 provide details on the estimation.

On balance, banks which are larger and more “internationally oriented” generally have a larger volume of FDI and offer a wider range of cross-border services.<sup>16</sup> As suspected, this reveals that the achievement of returns to scale is a key motive driving the international expansion of German banks. Larger target markets (in terms of GDP) and a larger bilateral trade volume between Germany and the target country are likewise beneficial to the activities of German banks in the country in question. Therefore, another driving force in addition to size effects is the provision of trade-related financial services. Moreover, in line with recent theory, more profitable banks are more active internationally. These newer theoretical approaches are moving away from the assumption of homogeneous firms and stress, in particular, the significance of producer heterogeneity – especially regarding size and profitability.

German banks tend to be more active in countries in close geographical proximity with a low country risk and in countries without capital controls. In addition, there is evidence that German banks prefer to invest in countries with strict and transparent prudential supervisory systems. This may be attributable in part to restrictions on cross-border banking services, which can be overcome by establishing branches in the affected financial centres. The reason could also be, however, that Ger-

man institutions are well-equipped to meet the strict requirements imposed by those countries, potentially giving them a comparative advantage over competitors from other countries. In the case of countries with “loose” and intransparent supervisory systems, German banks tend to prefer to offer their services across national borders from Germany instead of establishing branches in those countries.

Above and beyond this special case, however, the general question as to substitutability or complementarity of the banking sector’s cross-border services and FDI presents itself – similar to the substitutability or complementary nature of trade in goods and FDI in the non-financial sector. In fact, just under 60% of all German banks provide services abroad. In the vast majority of these cases, these internationally active banks do not have affiliates in those countries. Only around 3% of German banks (around 80) have engaged in FDI. These figures could be seen as indicating that FDI and cross-border services are substitutes. The different regional structure of FDI and German banks’ claims on and liabilities to non-residents point in the same direction.

However, many of the banks engaging in FDI, ie just under 70, additionally provide cross-border services from their base in Germany. In addition, an econometric analysis based on a two-stage estimation approach shows that services tend to be increasingly offered in those countries in which banks have affiliates and vice versa. This ultimately reveals empiric-

*FDI versus trade  
in services*

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<sup>16</sup> The variables used in the regressions are explained on page 30.



## Regression results

Explanatory variables	FDI		Bank premiums		Interest	
	ME 1	ME 2	ME 1	ME 2	ME 1	ME 2
Internationalisation of the loan portfolio	5.82 e-09 (0.000)***	8.90 e-03 (0.000)***	1.05 e-05 (0.000)***	1.45 e-02 (0.000)***	4.39 e-04 (0.000)***	2.59 e-02 (0.000)***
Balance sheet total	2.51 e-07 (0.000)***	3.84 e-01 (0.000)***	2.54 e-04 (0.000)***	3.48 e-01 (0.000)***	1.09 e-02 (0.000)***	6.39 e-01 (0.000)***
Profitability	3.29 e-08 (0.000)***	5.03 e-02 (0.000)***	3.19 e-05 (0.000)***	4.38 e-02 (0.000)***	8.10 e-04 (0.000)***	4.76 e-02 (0.000)***
Distance	-3.90 e-08 (0.015)**	-5.95 e-02 (0.015)**	-9.92 e-05 (0.000)***	-1.36 e-01 (0.000)***	-2.35 e-03 (0.000)***	-1.38 e-01 (0.000)***
Inflation	-3.55 e-14 (0.758)	-5.42 e-08 (0.758)	4.35 e-13 (0.267)	5.98 e-10 (0.267)	-1.39 e-11 (0.029)**	-8.17 e-10 (0.029)**
GDP	8.99 e-08 (0.000)***	1.37 e-01 (0.000)***	1.06 e-04 (0.000)***	1.46 e-01 (0.000)***	5.02 e-03 (0.000)***	2.95 e-01 (0.000)***
Bilateral trade	1.35 e-08 (0.000)***	2.07 e-02 (0.000)***	2.86 e-06 (0.002)***	3.93 e-03 (0.002)***	2.11 e-04 (0.000)***	1.24 e-02 (0.000)***
Risk	8.92 e-09 (0.000)***	1.36 e-02 (0.000)***	7.16 e-06 (0.000)***	9.84 e-03 (0.000)***	1.67 e-04 (0.000)***	9.83 e-03 (0.000)***
Freedom	1.76 e-08 (0.243)	2.69 e-02 (0.243)	-5.02 e-05 (0.000)***	-6.89 e-02 (0.000)***	-3.03 e-03 (0.000)***	-1.78 e-01 (0.000)***
Supervision (Power)	3.81 e-08 (0.000)***	5.82 e-02 (0.000)***	3.61 e-05 (0.000)***	4.96 e-02 (0.000)***	-4.32 e-04 (0.000)***	-2.54 e-02 (0.000)***
Supervision (Transparency)	6.12 e-08 (0.000)***	9.36 e-02 (0.000)***	-6.45 e-06 (0.348)	-8.86 e-03 (0.348)	-1.20 e-03 (0.000)***	-7.07 e-02 (0.000)***
Capital controls (Dummy)	-1.00 e-06 (0.000)***	-4.72 e-01 (0.000)***	-2.28 e-04 (0.000)***	-2.33 e-01 (0.000)***	-2.08 e-03 (0.000)***	-1.15 e-01 (0.000)***
EU (Dummy)	1.70 e-08 (0.606)	2.47 e-02 (0.606)	8.44 e-05 (0.000)***	1.03 e-01 (0.000)***	1.31 e-03 (0.000)***	7.45 e-02 (0.000)***
Offshore banking centres (Dummy)	2.84 e-07 (0.003)***	2.32 e-01 (0.003)***	7.88 e-05 (0.019)**	9.43 e-02 (0.019)**	-2.74 e-03 (0.000)***	-1.81 e-01 (0.000)***
Constant	-1.03 e-05 (0.000)***	-1.57 e+01 (0.000)***	-9.60 e-03 (0.000)***	-1.32 e+01 (0.000)***	-3.88 e-01 (0.000)***	-2.28 e+01 (0.000)***
Observations	939 510		939 510		939 510	
Uncensored (positive)	1 081		5 858		38 867	
R <sup>2</sup>	0.40		0.31		0.20	

\*, \*\*, \*\*\* significant at the 10%, 5% and 1% levels respectively.

For illustration purposes:  $1.34 \text{ e-}02 \equiv 1.34 \times 10^{-2} \equiv 0.0134$ .

ally a complementary relationship between FDI and cross-border services. FDI and the provision of services from the home country are mutually reinforcing.<sup>17</sup>

Moreover, it would appear to be of interest to find out whether German banks are showing a trend towards agglomeration on foreign markets. Two factors must be considered. On the one hand, other (German) banks' extensive activity at a site will result in more competition and thus tend to lead to a reduced outlook for profitability for market entrants. That might dull the incentive to invest in that market. On the other hand, there could also be potential spill-over effects between established market players and new entrants, which would tend to favour agglomeration. The investor is hoping to find, among other things, a broad labour market with a large, well-educated labour force, as well as a beneficial exchange of experience with other German branches and their local staff. Another factor that plays a major role, especially in the case of banks, is the "demonstration effect": the success of the activities of other market players and their branches in a town or a country will give positive signals that will help potential investors to make their decisions.

An initial estimation approach<sup>18</sup> definitely shows that German banks tend to invest more in places where other institutions have already established a foothold. This outcome is consistent with the observation that German banks' FDI is focused not only on a very few countries but on certain attractive centres within those countries, which may

therefore be regarded as a sign of agglomeration effects.

If the existence of additional country-specific factors is considered, however, the result is different. These factors prove to be important for each bank's specific investment decisions.<sup>19</sup> If this is taken into account in the estimation – by including fixed country effects, for example – the signs of the coefficients change from plus to minus. However, bank-specific explanatory variables are not affected by this change whereas most of the country-specific factors explicitly taken into account in the approach become insignificant. This shows that the activities of German banks in a country tend to have a negative effect on investment activity pursued there by other German banks.

Incidentally, that does not apply to the influence of the activities of German non-banks in those countries. The affiliates of German non-financial corporations, even after the corrections mentioned above, do have a posi-

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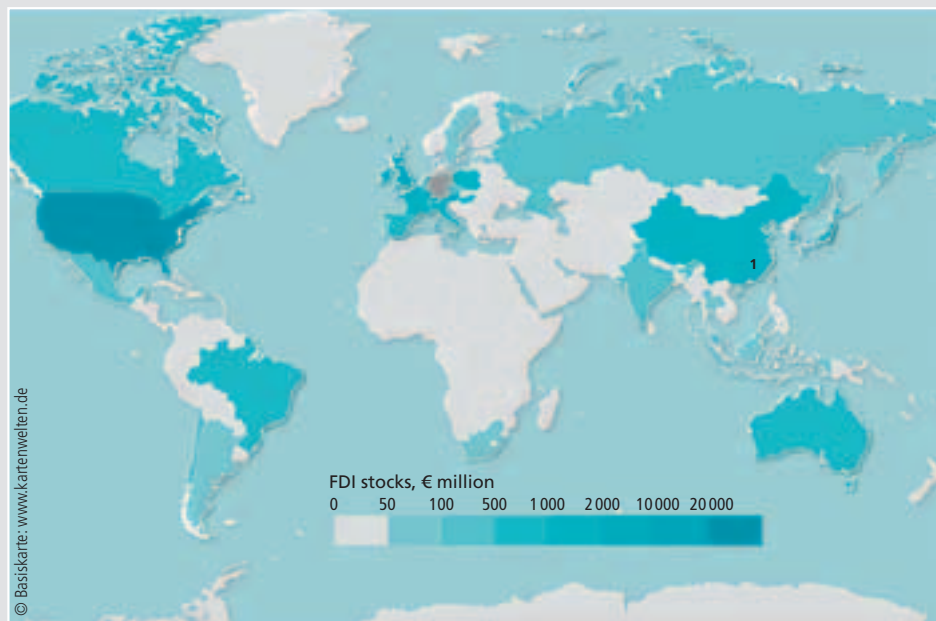
<sup>17</sup> A two-stage estimation approach is used to identify the mutual influence of FDI and the range of services provided. In the second stage, the residual from the first stage was added to the respective other equation as an additional explanatory variable. Because the available data record is short – only four years – it is not possible to determine a direction of causality.

<sup>18</sup> In order to analyse agglomeration and competition effects, the activities of the other (German) banks in a host country are entered into the regressions as an additional variable. The positive influence continues to exist if the activity is broken down into the number of affiliates of German banks in that country and the mean value of their local activities. Upon closer analysis, the number of banks even turns out to be more important than their size.

<sup>19</sup> In such a case, "omitted variables" could be responsible for the positive coefficient. This would mean that banks do not enter a country because many other banks are already there; rather, a large number of other banks are there owing to additional factors not taken into account in the analysis.

### German banks' foreign direct investment (FDI) stocks \*

As at the end of 2002



\* Consolidated sum of primary and secondary FDI in equity capital. — 1 China including Hong Kong.

Deutsche Bundesbank

tive impact on the activities of German banks there. This suggests that banks apparently tend to orient their activity to the affiliates of non-banks and therefore probably to local and home customers, whose FDI activity they have been accompanying. One could sum up very simply by saying that many German banks are active in countries where many other German banks are active, but precisely not for that reason but because these locations are generally attractive to banks. If only other credit institutions' activities were the issue, banks would prefer to go elsewhere. This result therefore tends to favour the dominant position of ("deterrent") competitive effects between the affiliates of German banks; at the same time, a strong positive effect can be observed in financial relations with the foreign affiliates of resident business enterprises.

If banks are divided into two groups by size, it becomes apparent that these effects are particularly driven by the group of large banks. Hence – viewed in isolation – large banks apparently avoid financial centres where other German banks are well-represented. In the case of smaller banks, by contrast, agglomeration effects appear to be relatively more significant. This may be because small banks view the (successful) local activities of large banks as a positive signal when taking their investment decisions, with a view to minimising the cost of obtaining information on the quality of the location. They follow large banks to sites that the large banks deem to be attractive.

Another key question, in addition to the determinants, is centred on the implications

*Implications*

of FDI. FDI can have implications for both the host country and the investor's home country. FDI in the banking sector is likely to take on special importance since the financial sector is credited with being key to the development and stability of an economy and the financial system. Current studies overwhelmingly give a favourable assessment to the consequences for the host country. The entry of foreign banks seems to have a positive impact on the efficiency of the domestic banking system even though the full scope of potential efficiency gains is rarely achieved.<sup>20</sup> There are likewise signs that the entry of foreign banks into a country leads to an improvement in the allocation of capital. Both situations can be associated with a previous lack of sufficient competition. Increased efficiency and an improvement in the use of capital ultimately also have positive impacts on growth in those countries in which foreign banks establish branches.

With their growing foreign activities, German banks have been promoting the increasing integration of international financial markets and thus have been making a decisive contribution to advancing the process of globalising the banking system. Along that vein, lending by German banks to non-residents has grown much more strongly in the past 15 years than lending to residents or German trade in goods. In the same period German banks' FDI has grown twice as fast as total German FDI. When selecting where to invest, German banks have overwhelmingly preferred traditional host countries. Having a physical presence in a host country also plays a key role in the cross-border provision of services. And, not least, it is primarily large and relatively profitable banks that establish major activities abroad.

*Conclusions*

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<sup>20</sup> See, for example, R Vander Venet (2003), *Cross-Border Mergers in European Banking and Bank Efficiency*, in H Herrmann and R Lipsey, *Foreign Direct Investment in the Real and Financial Sector of Industrial Countries*, Springer, Berlin, Heidelberg, New York, pp 295-315.