## Technical Documentation

# Microdatabase: External Position Reports of German Banks 

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# External Position Reports of German Banks A Description of the Microdatabase 

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## 1 Introduction

This description of the External Position Report refers to a comprehensive dataset filed by the Deutsche Bundesbank. The External Position Report collects mandatory reports on external positions submitted to the Deutsche Bundesbank by banks located in Germany as well as by their foreign affiliates. A broad definition of "external positions" captures assets and liabilities vis-à-vis foreign entities as well as domestically held assets and liabilities denominated in foreign currency. It hence reflects the internationalization of various banking services either by way of cross-border transactions or by way of commercial presence abroad. Our aim is to provide a detailed description of the database and thus establish its potential for academic research. The document contains some technical information, statistics on the data and some caveats to raise researchers' awareness of the data's real coverage.

## Motivation and Recipients of the Data

The main purpose of collecting the data is to accommodate the need for information of three distinct groups inside the Deutsche Bundesbank: first, banking supervisors who evaluate the overall credit risk of financial institutions; second, the balance of payments analysis division, which examines the impact of credit operations on the balance of payments statistics and, third, the monetary analysis division, which is interested in the development of short-term assets and liabilities in order to obtain information on monetary aggregates.

It is not only the Deutsche Bundesbank but also other parties beyond Germany's borders which are interested in banks' external positions. The European Central Bank ( $E C B$ ) requires this information for two reasons. First, for monetary policy decisions, since banks' short-term positions are an ingredient of the broad money aggregate. Second, to secure financial stability, an aim for which information on international capital linkages among EMU member countries is important. The Bank for International Settlements (BIS) receives aggregate data for the purpose of international banking supervision. Drawing on this data, the BIS issues two sets of statistics: the quarterly territorial statistics on international assets and liabilities based on the location of the reporting institution (BIS, 2006b), and the quarterly statistics on banks' worldwide consolidated international assets (BIS, 2006a). ${ }^{1}$

## Availability, Confidentiality and Research Interests

The External Position Report goes back to 2003 and comprises all German banks, their subsidiaries and branches abroad, and in addition to that, the subsidiaries of foreign banks operating in Germany. ${ }^{2}$ For research purposes, it is possible to exploit the benefits from micro-level data once a proposal has been accepted. As the database contains confidential information on individual German banks, its use is restricted to the Bundesbank's premises in Frankfurt. The External Position Report is currently accessible by means of a specific software which supports queries along the four dimensions explained in detail in Section 2.

[^1]
## Structure of the Report

This description is structured as follows: Section 2 provides a detailed view of the database's structure, its coverage, potential blank spots and some other databases to which the External Position Report might be matched; Section 3 makes use of the data itself and presents some stylized facts about German banks' international businesses as reported in June 2007; Section 4 summarizes and provides an outlook on current research projects drawing on data from the External Positions Report. The appendix provides some definitions of presented technical terms, legal definitions and the official forms that banks have to submit.

## 2 Structural Setup

## Coverage

The dataset has comprised German banks' external positions on a monthly basis since January 2003. Until then, reports had been compulsory only for institutions which had held external positions above $€ 10$ million. In 2002, the Deutsche Bundesbank decided to broaden the statistics' scope by requiring reports from all banks operating in Germany. ${ }^{3}$ Comparing the setup of reporting requirements before January 2003 with the status quo, more than 90 percent in terms of volume had already been captured. However, the number of reporting banks has increased remarkably to almost 2,000 banks, the entire German banking population. ${ }^{4}$

### 2.1 Multidimensional Panel Structure

### 2.1.1 Reporting Banks

Currently, all banks subject to reporting requirements provide information about their external positions on a monthly basis and categorize it by destination country. The same rules apply to all banks without a distinction between banking groups such as commercial, savings and cooperative banks. Reporting institutions are domestic (here, synonymous with German) banks, their foreign affiliates subclassified into branches and subsidiaries (provided they hold a banking licence issued by their host country), and subsidiaries of foreign banks operating in Germany. In addition, all banks give information about positions vis-à-vis domestic residents which are denominated in foreign currency. Hence, in a departure from traditional banking statistics, which merely rely on the cross-border business of banks residing in Germany, the External Position Report adds data submitted by subsidiaries and branches located abroad as well as currency holdings. ${ }^{5}$ These features clearly support a more comprehensive assessment of German banks' total exposure, the business models and structures of German banks, the country spread of German banking businesses and the network relationships between domestic and foreign institutions.

### 2.1.2 Multidimensional Queries

The database is structured along four dimensions: (a) the month of reference, (b) the foreign country of destination, ${ }^{6}$ (c) the position's original currency denomination, (d) the sub-differentiation of assets or liabilities.

[^2]
## Dimension (a) - Month of Reference

Banks have to submit data on their external positions each month. The structural setup of the database allows the researcher to query each particular month or several consecutive months.

## Dimension (b) - Foreign Country of Destination

To identify the destination country, a 2-letter country code (ISO 3166) provided by the International Organization for Standardization is used. ${ }^{7}$ Besides all sovereign countries, several offshore destinations have to be indicated explicitly. Further, queries can handle sets of countries, for instance industrialized versus developing countries, regions and continents, or member countries of currency and trade unions.

## Dimension (c) - Currency Denomination

Positions vis-à-vis foreigners are actually converted into euro at a particular reference rate prescribed by the Deutsche Bundesbank at the time of submission. Data are hence recorded in thousands of euro despite the fact that they are in reality denominated in foreign currency. The information about the original currency denomination, however, remains available. For convenience, the euro is hereinafter designated as the "domestic" currency, whereas all other currencies are deemed to be foreign. Particular queries about positions vis-à-vis foreigners, which are originally denominated in either US dollars, Japanese yen, Swiss francs, pound sterling, Swedish kronor or Danish kroner, are supported by the implemented software. Indeed, banks provide information on their domestic positions denominated in foreign currency in a supplementary form. ${ }^{8}$ Data on these domestic positions can also be queried. In general, positions are expressed in 1,000 units of the domestic currency, the euro.

## Dimension (d) - Reported Subcategories of Assets and Liabilities

The External Position Report differentiates between various types of assets and liabilities, with the degree of sophistication varying between parent banks and their foreign affiliates. The highest degree of sub-differentiation applies to cross-border holdings of the parent bank. A three-digit numerical code indexes single position or summarizes a combination of particular positions which might be held by the bank or its affiliates. At this point the distinction along dimension (d) comes into play to identify various types of positions.

Table 1 broadly sketches the database of the External Position Report. ${ }^{9}$ As to crossborder positions, banks domiciled in Germany have to submit data on their assets and liabilities vis-à-vis different foreign sectors: ${ }^{10}$ banks, enterprises (subdivided into insurance corporations, other financial intermediaries and non-financial corporations), general government (distinguishing between central government and other general government), households and non-profit institutions. Positions vis-àvis foreign monetary authorities and central banks can be identified separately. With

[^3]regard to assets, the External Position Report differentiates between non-tradeable (loans, advances and irrevocable credit commitments) and tradeable securities (e.g. shares, money market papers or funds, other debt securities). The term negotiable (non-negotiable) is used interchangeably with tradeable (non-tradeable) hereinafter in this paper and in the forms of the External Position Report. For some positions, a rather sophisticated classification by original maturity is required: for instance, interbank loans are separated into "repayable on demand", "fixed-term of one year or less", "more than one but not more than two years" and "more than two years". Only with regard to assets do supplementary data on the residual maturity have to be provided, thus necessitating the indication of positions with a residual maturity of "one year or less". This additional identification of residual maturity and a more sophisticated distinction of security type, however, are omitted for liabilities. Apart from that, savings deposits of foreigners and amounts owed to foreign central banks or monetary authorities are also reported. In the case of commercial presence abroad by means of foreign branches and subsidiaries, reporting standards trace the patterns presented above. More subtle sub-differentiations, however, are not required by the Deutsche Bundesbank.

| External Asset | External Liabilities |
| :--- | :--- |
| Loans and Advances to Banks | Liabilities vis-à-vis Banks |
| Loans and Advances to Enterprises | Liabilities vis-à-vis Enterprises |
| Loans and Advances to Government | Liabilities vis-à-vis Government |
| Bonds and Notes | Other External Liabilities |
| Foreign Shares and Other Equity |  |
| Participation Abroad |  |

Table 1: External Positions of German Banks Within the Balance Sheet Framework

## Identification and Cross-Sectional Units

Following a decision on the four dimensions of a query, a list of all reporting banks is created. In econometric terms, all cross-sectional units are listed and identifiable using a five-digit numerical code which allows us to distinguish banks located in Germany from their foreign subsidiaries and foreign branches. It is quite noteworthy that foreign subsidiaries and branches are not attributed to their domestic headquarters. Instead, they feature as separate cross-sectional units. It is also worth mentioning that, within this structural setup, foreign branches and subsidiaries are listed if they report positions vis-à-vis the country which has been defined in the four-dimensional query. Put differently, branches and subsidiaries are listed according to the destination countries of their positions and distinctly not by their host country, i.e. the country in which they are located. We will revisit potential problems ensuing from this issue in Section 2.2. Besides, each individual subsidiary files its own report, whereas several branches of one particular bank located in the same country submit a joint report on their external positions. It is also worth mentioning that subsidiaries feature as distinct entities and obtain their own identification only if the German bank holding company owns more than 50 percent of the share. In this case, affiliated banks are listed in the External Position Report as proper cross-sectional units. Otherwise, banks (enterprises) in which the reporting bank owns less than 50 percent become rather anonymous, as smaller shares in foreign
banks (enterprises) are captured only by the special position "claims vis-à-vis foreign banks" ("Participating interests and shares in affiliated enterprises abroad").

### 2.2 Illustration and Caveats

## Consolidation and Double Counting

Inferences have to be drawn with caution when it comes to the disentanglement of assets and liabilities among affiliated banks. Depending on the specification of the data query, the researcher may run the risk of double counting. Domestic banks submit reports which provide information about their total assets and liabilities vis-à-vis host countries. As the data query refers to the entire set of reporting banks, a domestic bank as well as its branches and subsidiaries are listed as separate entities. However, the indicated positions per bank ignore the possibility that, for instance, a reported position might occur twice: on the German parent bank's balance sheet as well as on its affiliate's report. In the case of assets, it is possible to avoid this trap and obtain data which account for intra-bank holdings. Unfortunately, no such option exists for the liability side. The following example illustrates this problem.

We sketch international financial linkages of German banks and the positions indicated in the External Position Report with the aid of Figure 2.2 and Table 2. Consider any hypothetical parent bank which operates a single foreign subsidiary in country C and several foreign branches in country B. Recall that each individual subsidiaries submits its own report, whereas several branches of one particular bank located in the same country submit a joint report.

The domestic bank issues 40 loans to country A, 75 to country B and 55 to country C. We assume that some of these loans are issued to affiliated banks. In our case, 25 go to the branches in country B and 16 to the single subsidiary in country C. Similar considerations apply to branches in country B and the single subsidiary in country C. Branches hosted in country B issue a total of five loans to country A and 30 to country B. The single subsidiary issues 35 loans, which, in turn, are separable into 20 loans granted to residents of country C, five to affiliated branches in country $B$ and ten to residents of country B. It is worth emphasizing that, from the point of view of the branches, country A and B are assumed to be foreign, despite the fact that these branches are located in those countries. In fact, all countries except Germany are deemed foreign, with the terminology applying to parent banks as well as their affiliates abroad.

As mentioned, the parent bank domiciled in Germany submits the stock of assets and liabilities vis-à-vis counterparts located in foreign countries. However, the parent bank does not have to disclose the counterparties' identity, even if an affiliated bank is concerned. Hence, these intra-bank positions mingle with other cross-border positions. Exact identification is impossible. Branches and subsidiaries have to report positions vis-à-vis affiliated banks, be it the German parent bank or any other foreign affiliated bank. Only the working capital which the German parent bank makes available to its foreign branches is shown separately and can thus be explicitly identified.

Based on this rationale, Table 2 shows the make-up of the external positions reported by banks to the Deutsche Bundesbank. The domestic parent bank reports


Figure 1: External Positions of a Bank and its Foreign Affiliates. Authors' illustration.

40 loans issued to destination country A, 75 loans issued to destination country B and 55 issued to destination country C. However, its branches in country B report five loans to destination country A and 30 loans to country B (which features as destination and host country simultaneously). Additionally, these branches report 30 liabilities vis-à-vis affiliated banks (without specifying the destination country and exact recipient). The single subsidiary in country C reports 15 loans issued to destination country B, 20 issued to country C (which also functions as host and destination country simultaneously) and 16 liabilities vis-à-vis affiliated banks (without specifying destination country and exact recipient).

|  | Assets |  | Liabilities <br> - Intrabank - |  |
| :--- | :---: | :---: | :---: | :---: |
| Country A | Country B | Country C |  |  |
| Parent Bank | 40 | 75 | 55 |  |
| Branch in Country B | 5 | 30 |  | 30 |
| Subsidiary in Country C |  | 15 | 20 | 16 |
| Total | 45 | 120 | 75 |  |
| Adjustment |  | -30 | -16 |  |
|  |  |  |  |  |
| Total Consolidated | 45 | 90 | 59 |  |

Table 2: External Positions of a Bank Holding Company
In sum, it is impossible to exactly disentangle intra-bank positions since the ultimate recipient of a loan cannot be identified. Therefore, caution has to be exercised while computing a bank's net exposure to a specific foreign country. The German parent bank submits data with respect to each destination country, but its report does not allow us to trace back intra-bank positions in detail. Correspondingly, foreign branches and subsidiaries report claims per destination country, which may, in part,
restate positions which actually should be attributed to their parent bank.
If we look at a breakdown by country, gross external assets of the parent bank amount to 45 loans issued to destination country A (of which 40 stem from the domestic bank and five from the branches in country B), 120 loans issued to destination country B (of which 75 originate from the domestic parent bank itself, 30 from the branches in country B and 15 from the subsidiary in country C) and 75 loans issued to destination country C (of which 55 are attributable to the domestic parent bank and 20 to the subsidiary in country C).

In order to avoid double counting, cross-border liabilities vis-à-vis affiliated banks reported by their respective branches and subsidiaries should be subtracted. This means, in the case of country B, 30 loans (of which 25 are issued vis-à-vis the domestic parent bank and five vis-à-vis the subsidiary in country C) and, in the case of country C, 16 loans (vis-à-vis the domestic bank). Therefore, from the point of view of the domestic parent bank, the net consolidated outcome is 45 loans to destination country A, 90 to destination country B and 59 to destination country C.

To recall, owing to the design of the External Position Report, information on the precise location and the number of branches belonging to one specific institution within the same foreign host country does not exist. By contrast, subsidiaries provide individual reports, which means that information on the number of subsidiaries per German bank and their exact location in the destination country is registered by the Deutsche Bundesbank. However, it must be noted that, if subsidiaries run subbranches, the individual information on these sub-entities is also lost.

## Backflows to Germany

Up to this point, we have adopted the parent bank's perspective and computed its net positions vis-à-vis foreign destination countries. As illustrated in Figure 2.2, we can imagine two cases in which further transactions are not captured by the database. First, if the subsidiary in country C issues loans to Germany, i.e. to domestic clients, the External Position Report does not record this claim. It exclusively covers positions vis-à-vis clients residing out of Germany. Second, we have implicitly assumed that the foreign country corresponds to the final destination of a capital flow. Beyond the scope of the External Position Report and, so far, beyond our perspective, lies the true ultimate recipient of the loan. If the domestic bank issues loans to a foreign, non-affiliated bank in country A and this foreign bank in turn uses the money to grant loans to any client located in Germany, the database does not record this transaction, either. In short, any backflows of capital to Germany lie beyond the scope of the External Position Report.

From a macroeconomic point of view, these shortcomings can be substantial, since the External Position Report does not draw a complete picture of international financial linkages. It is partly possible to fix the problem of backflows with the help of the balance sheet statistic. Here, positions of affiliates vis-à-vis Germany are captured, which means that merging the two datasets might at least tackle the problem of backflows via affiliated banks.

## Value Adjustments and Off-Balance Sheet Activities

German banks report changes in their external positions every month. The dataset
is therefore available on a monthly basis, though researchers should be aware that this does not hold true for the value adjustment of securities. In fact, the majority of banks review their valuations once a year and only a small minority of institutions adjust it once a month. Furthermore, it is important to note that the External Position Report does not register securitized liabilities and other off-balance sheet activities. ${ }^{11}$ For instance, the international activities of German banks on derivative markets lie beyond the scope of this dataset. Many activities of a bank's asset management or investment bank division are not captured. These concerns primarily apply to large bank holding companies since small savings banks or cooperative banks do not conduct these kinds of banking business. For this reason, the exposure of large commercial banks to foreign markets might be understated.

### 2.3 Matching with Other Data

The External Position Report does not provide further details on the exact counterparts of assets and liabilities. For instance, in the case of conventional loans, it is impossible to identify the specific industrial sectors. Information on particular firms, their size etc. is missing. Other positions are even less precisely defined and do not allow any sectoral attribution at all. However, it is possible to match these data with data from other banking statistics. ${ }^{12}$

Evidence on the external business of German banks with a slightly different focus can be drawn from the Large Credit Database (Schmieder, 2006). Such a merger would shed light on bilateral lender/borrower pairs. Another fruitful source for economic research is the micro database on German enterprises' foreign direct investment (MiDi) since it also captures financial institutions (Lipponer, 2003). This set of statistics includes more information on the individual bank. However, both sets of statistics, in isolation, are at a clear disadvantage compared with the External Position Report. The first dataset gives only information on a consolidated basis, while the second does not give a complete survey. Indeed, the micro-level database on foreign direct investment only features direct investment enterprises whose balance sheet total exceeds the $€ 3$ million reporting threshold. Moreover, neither database allows a breakdown by currency denomination. Nevertheless, a comparison between the international activities of German banks and firms can be drawn by adding information on the foreign direct investment of German companies. Furthermore, the External Position Report can be matched in the future with the Report of Condition and Income Statements collected on German subsidiaries operating in foreign countries, such as the United States.

## 3 A Snapshot of German Banks' External Positions

In this section we draw a stylized picture of the External Position Report and shed light on the heterogeneity of banks across positions. The data are broken down by asset type, maturity, sector and currency. Domestic banks report supplementary

[^4]information on their foreign currency held domestically. In our description we abstract from foreign currency positions. The results presented here rely on mandatory reports submitted in June 2007.

### 3.1 Number of German Banks Involved in Foreign Banking Services



Figure 2: Number of Banks and International Activities. Authors' illustration.

German banks are sorted into three categories according to the size of their total domestic assets as provided in the June 2007 edition of the monthly balance sheet statistics. Figure 2 shows that 1509 banks report total domestic assets of less than $€ 1$ billion (small-sized banks), 456 banks report total domestic assets between $€ 1$ and $€ 10$ billion (medium-sized banks) and 64 banks report total domestic assets in excess of $€ 10$ billion (large banks). Drawing on this categorization, Figure 2 reveals that almost all small-sized banks - 1,473 out of 1,509 - hold cross-border assets. Yet, only few small-sized banks are physically present abroad: 11 banks maintain foreign branches and only 2 maintain foreign subsidiaries. ${ }^{13}$ This impression of considerable cross-border activity yet minimal commercial presence is confirmed by mediumsized banks. Out of 456 banks, 454 hold cross-border assets, but only 11 (9) operate branches (subsidiaries). The most prominent commercial presence abroad is held, of course, by large banks. All 64 large banks hold cross-border assets and 29 (27)

[^5]of them operate foreign branches (subsidiaries). In general, German banks clearly prefer serving foreign markets via branches rather than subsidiaries. ${ }^{14}$


Figure 3: Affiliates. Authors' illustration.

Figure 3 gives support to this hypothesis by revealing a slight increase in the number of foreign market presences via branches from 2002 to 2008 and a decline in the number of foreign market presences via subsidiaries. Figure 3 confirms that not only the number of foreign market presences but also the number of German banks maintaining foreign branches has grown, whereas the number of banks maintaining subsidiaries has declined since 2003. To sum up, almost each German bank holds cross-border assets, but only very few, predominantly large banks, venture abroad, preferring to serve foreign markets via branches rather than subsidiaries.

### 3.2 Volume of External Activities

## Heterogeneity Due to Domestic Asset Size

On average, about 40 percent of German banks' total assets are held abroad. ${ }^{15}$ These figures are obtained by using consolidated data, that is, once intrabank positions of

[^6]

Figure 4: Aggregated Foreign Assets. Authors' illustration.
large bank holding companies have been taken into account. In Figure 4, we maintain the categorization introduced earlier and aggregate across all banks populating the respective category. For small-sized banks, domestic assets dominate even if we take the sum across all modes of foreign market activity, that is, adding cross-border, branches' and subsidiaries' assets. Looking at external assets, however, we find that cross-border assets dominate relative to the foreign affiliates' aggregated assets of these banks. The same pattern applies to medium-sized banks. By contrast, for large banks, external assets outperform domestic assets (about $€ 3,300$ billion). Within the aggregate of external assets, cross-border assets (about $€ 2,000$ billion) still stand out. The aggregate of branches' assets (about $€ 1,600$ billion), however, lies considerably above the aggregate of foreign subsidiaries' assets (about $€ 300$ billion). These findings suggest that the international banking services provided through commercial market presence are highly concentrated within the group of large banks. More pointedly, the ten largest German banks account for about two-thirds of overall external assets (not shown here).

Figure 5 depicts the evolution of all banks' external assets over time irrespective of their size. It shows that the increase in total external assets (sum across all modes) is driven mainly by an increase in cross-border assets and partly by changes in branches' assets, whereas the amount held by foreign subsidiaries is almost constant. To sum up, in terms of volume, especially small- and medium-sized banks count on cross-border assets, whereas large banks also hold considerable amounts via their foreign affiliates in general and their foreign branches in particular.


Figure 5: Aggregate Foreign Assets Over Time. Authors' illustration.

## Heterogeneity Due to Banking Groups

Apart from the heterogeneity which derives from size, substantial differences in German banks' international activities exist also between banking groups. In Germany there exist three banking groups: commercial banks, savings banks with their head institutions (Landesbanken), and cooperatives with their head institutions. By and large, large commercial banks and head institutions belong to the group of large banks, whereas savings banks and cooperatives are counted among the small and medium-sized banks. As to their international activities, large commercial banks dominate the picture, especially with their foreign branches and subsidiaries. Their consolidated external assets make up 70 percent of their total assets (not shown here). This illustrates that international capital ties are of particular importance for the most prominent banking group in terms of size and that these banks are not shielded from the developments on international financial markets. Other important players on the international stage are Landesbanken and head institutions of credit cooperatives (each with external assets accounting for around 45 percent of total assets), mortgage banks and branches of foreign-owned banks located in Germany.

### 3.3 Geographical Concentration

Figure 6 maintains the categorization by size of banks' domestic assets and displays the geographical spread of aggregates. It distinguishes three regions: the euro area


Figure 6: Geography of Bank Assets. Authors' illustration.
(emu), the UK ${ }^{16}$ and the US. In addition, we distinguish between three modes of foreign banking services: cross-border, via foreign branches and subsidiaries. It is worth mentioning in the context of foreign branches and subsidiaries that we deliberately ignore their host country, that is, the country in which they are located. Instead, we look at destination countries or regions against which a foreign affiliate located anywhere might have a claim. Of course, aggregates reported by large banks always exceed aggregate positions of small- and medium-sized banks, abstracting from the respective mode of supply.

As for cross-border positions, the geographical pattern is virtually replicated across size categories. The euro area attracts the most assets: in each size category the share amounts to approximately 60 percent. The UK attracts about 30 percent and the remainder (around 10 percent) accrues to the US.

The picture changes remarkably when we turn to foreign affiliates. With respect to branches of large banks, they hold most of their assets in the US (38 percent), closely followed by the UK ( 37 percent), with the euro area's share amounting to only 25 percent. With respect to the subsidiaries of large-sized banks, the euro area takes the lead: almost 60 percent accrue to the neighboring euro-area countries, whereas the UK attains a share of 19 percent and is overtaken by the US with about 22 percent. Admittedly, this description might misleadingly diminish the role of the UK and the US in German banks' portfolios given our focus on the euro area as a whole. With regard to individual member countries of the euro area, the crucial role

[^7]of US and the UK is unquestionably more pronounced.
The presence of branches and subsidiaries is particularly relevant in Luxembourg and some (British) overseas territories, serving as offshore destinations for German banks. With regard to the strategic focus, differences exist among affiliates domiciled abroad: branches in New York or the Cayman Islands are primarily specialized in business with US enterprises; institutions in Luxembourg maintain extensive relationships with German residents (both financial and non-financial); the United Kingdom, being the largest international banking center, serves as a focal point for lending and deposit business in foreign currencies.

### 3.4 Sectoral Distribution



Figure 7: Assets and Liabilities by Sector. Authors' illustration.

## Heterogeneity Across Domestic Asset Size and Mode of Supply

The breakdown of external positions into assets and liabilities vis-à-vis foreign banks, the private sector (enterprises and households) and general government is exhibited in Figure 7. Besides banks headquartered abroad, the term "foreign banks" also captures foreign monetary authorities and central banks as well as the $E C B$. Foreign enterprises, from a domestic point of view, also include foreign affiliates of German multinational companies, that is, their foreign direct investment projects. Foreign general government stands for foreign central state and local government as well as foreign social security funds and diplomatic or consular missions in Germany. Again,
we contrast cross-border positions with foreign affiliates (branches and subsidiaries) and maintain the categorization by domestic asset size of the German bank holding company. Aggregates reported by large-sized banks dominate in absolute value across modes of supply.

As to cross-border positions, external assets exceed external liabilities irrespective of the size of banks. Positions vis-à-vis banks are considerably higher than positions vis-à-vis the non-financial private sector and certainly vis-à-vis general government. This derives from the fact that German parent banks provide liquidity to their foreign affiliates. Furthermore, covered bonds issued by foreign banks play an important role in German banks' foreign assets. In the case of large banks, assets vis-à-vis banks account for 61 percent of all assets. Turning to medium-sized banks, this figure increases slightly ( 64 percent), and turning to small-sized banks 78 percent of their asset portfolio consists of claims on banks, mostly securities. The government sector never exceeds 10 percent and turns out to be negligible. As for foreign branches, and with a particular focus on large-sized banks, external interbank liabilities ( $€ 633$ billion) exceed assets ( $€ 567$ billion). After assets have been decomposed, the private sector ( 65 percent) dominates the interbank market ( 34 percent). After the same has been done for liabilities, the private sector accounts for 43 percent, the interbank market 54 percent. As for foreign subsidiaries of large-sized banks, absolute amounts are by far lower than those of foreign branches. Here, assets exceed liabilities and claims vis-à-vis banks ( 42 percent) and the private sector (44 percent) are of nearly equal importance.

In general, Figure 7 confirms the idea that assets and liabilities vis-à-vis banks are most important and therefore deserve special attention. In the next section, we will dedicate more attention to interbank positions and therefore differentiate between banking groups again.

Unfortunately, the database does not provide further details to identify specific industrial sectors. Nevertheless, information on destination countries, the maturity of the claims and the profile of the domestic bank can provide more insights about very specific business models. For example, real estate loans to foreign, non-financial institutions figure as external assets of mortgage banks. To cite a second example of very specific business models which enter into the external position report, longterm loans issued to enterprises in flag states (e.g. Malta, Bahamas, Liberia, etc.) are used to finance the shipbuilding industry.

## Interbank Claims: Domestic Versus Foreign

Table 3 compares the interbank business of banks located in Germany vis-à-vis other domestic and foreign banks. Foreign interbank activities exceed domestic interbank business in the aggregate. A closer look at various banking groups, however, reveals some contrasting patterns. It abstracts from the mode of foreign market supply by aggregating cross-border and foreign affiliates' positions. In June 2007 German banks reported interbank claims against foreign banks of about $€ 1,703$ billion, whereas claims on domestic banks merely amount to $€ 1,236$ billion. On the liability side, the difference between liabilities vis-à-vis domestic banks ( $€ 1,496$ billion) and foreign banks ( $€ 1,530$ billion) is less pronounced. The foreign interbank business is considerably more concentrated in large banks, encompassing commercial banks and head institutions. Large banks hold about 85 percent ( $€ 842$ billion out of $€ 992$
billion) of their claims vis-à-vis foreign banks. It is worth mentioning that these figures include claims and liabilities of foreign affiliates. In the case of regional banks, the share of interbank claims against foreigners still amounts to almost 70 percent. This pattern, however, is the opposite on the liability side: regional banks have more liabilities vis-à-vis domestic banks than foreign banks. Landesbanken hold about 55 percent of their interbank claims vis-à-vis foreigners. Their liability side is slightly more tilted towards the domestic market. In sharp contrast to these figures stand smaller-sized banks, who make up a significant share of the German bank population: savings banks and credit cooperatives hold only about 6.4 percent and 4 percent, respectively, of their interbank claims against foreigners. To conclude, the foreign interbank market plays a central role for larger, mainly multinational banks, whereas small-sized entities rely more heavily on the domestic interbank market.

|  | Interbank Claims |  | Interbank Liabilities |  |
| :--- | ---: | ---: | ---: | ---: |
| Banking Group | Domestic | Abroad | Domestic | Abroad |
|  |  |  |  |  |
| All Groups of Banks | 1,236 | 1,703 | 1,496 | 1,530 |
| Large Banks | 150 | 842 | 234 | 888 |
| Regional Banks | 64 | 148 | 125 | 67 |
| Branches of Foreign Banks | 14 | 66 | 25 | 81 |
| Landesbanken | 336 | 416 | 388 | 355 |
| Savings Banks | 102 | 7 | 202 | 5 |
| Regional Credit Cooperatives | 78 | 53 | 115 | 66 |
| Credit Cooperatives | 71 | 3 | 75 | 4 |
| Mortgage Banks | 97 | 64 | 152 | 38 |
| Special Purpose Banks | 287 | 100 | 154 | 26 |
| Building and Loan Associations | 39 | 4 | 26 | 1 |

Notes: Data are expressed in billions of euro.
Table 3: Foreign and Domestic Interbank Claims and Liabilities. Authors' illustration.

### 3.5 Asset Classes

We decompose German banks' assets into tradeable and non-tradeable assets and distinguish between different maturities. Tradeable assets are assumed to be liquid and include foreign treasury bills, treasury discount paper, money market paper, bonds and notes as well as shares and other kinds of equity. Non-tradeable assets represent the traditional banking business such as loans and advances to foreign banks, enterprises, households and the general government. More specifically, shortterm non-tradeable assets encompass fixed-term assets with a maturity of up to and including one year. Long-term non-tradeable assets refer to fixed-term assets of more than one year.

Again, Figure 8 maintains the previous categorization by banks' domestic asset size and differentiates between cross-border positions and positions reported by foreign affiliates. It turns out that non-tradeable assets significantly exceed tradeable assets in banks' cross-border portfolios. This finding is robust across size categories and means that the traditional banking business of providing loans dominates within their cross-border activities. Specifically, 84 percent of cross-border loans issued by small-sized banks have a short-term maturity. In the case of medium-sized banks
this figure drops to 72 percent and for large banks to 60 percent. Turning to branches of large-sized banks, non-tradeable assets again exceed tradeable assets. About 79 percent of branches' non-tradeable assets are short-term. The picture reverses when we turn to subsidiaries. Here, tradeable and non-tradeable assets are of almost equal size. This appears to indicate that foreign subsidiaries at some locations are primarily involved in the management of tradeable assets. However, the share of short-term non-tradeable assets drops to an average of 55 percent.

To conclude, international exposures of banks predominantly exhibit a short-term character. One possible explanation of this finding lies in the minor importance of the maturity transformation function at the international level relative to the domestic level. However, traditional bank assets such as loans still prevail over tradeable asset holdings, in particular with regard to cross-border positions and branches.


Figure 8: Asset Classes and Maturity. Authors' illustration.

## Foreign Versus Domestic Securities

Table 4 draws a comparison between foreign and domestic holdings of securities. It further differentiates between different types of securities held by distinct banking groups. In total, foreign holdings of securities ( $€ 1,303$ billion) exceed domestic holdings ( $€ 938$ billion); this also applies to each individual banking group. Across banking groups, bonds exceed shares, irrespective of whether holdings are foreign (bonds account for 82 percent of all securities) or domestic (bonds account for 78 percent of securities). As for other types of securities, foreign non-bond securities are
of minor importance; however, as regards domestic holdings of securities, holdings of investment trust certificates dominate shares, a peculiarity of the German market. A clear difference between domestic and foreign holdings is revealed by looking at the decomposition of bonds: on the foreign market, corporate bonds take the lead (41 percent of foreign bond holdings), almost matched by bank bonds (39 percent), whereas government bonds rank far behind the other types ( 20 percent). This result is mainly driven by large banks; the decomposition across banking groups reveals considerable heterogeneity. On the domestic bond market, bonds issued by other banks attain a share of 73 percent in the portfolio, followed by government bonds (24 percent), with only 3 percent accruing to corporate bonds. This finding, however is quite robust across banking groups in that bonds issued by banks always dominate. In sum, bonds play the most important role in German banks' domestic as well as foreign securities portfolios, with corporate bonds taking center stage on the foreign bond market and bank bonds taking center stage on the domestic bond market.

| Securities | Total <br> Banking <br> System | Large <br> Commercial <br> Banks | Landes- <br> banken | Head Instit. <br> of Credit <br> Cooperatives | Mortgage <br> Banks |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |
| Foreign Securities | 1,303 | 457 | 328 | 83 | 194 |
| Bonds | 1,071 | 283 | 302 | 82 | 193 |
| Bank Bonds | 414 | 66 | 148 | 35 | 57 |
| Corporate Bonds | 445 | 172 | 120 | 41 | 45 |
| Government Bonds | 212 | 44 | 34 | 5 | 91 |
| Money Market Paper | 58 | 34 | 15 | 1 | 0 |
| Investment Trust Cert. | 41 | 21 | 6 | 0 | 1 |
| Shares | 133 | 120 | 4 | 0 | 0 |
|  |  |  |  |  |  |
| Domestic Securities | 938 | 121 | 177 | 43 | 113 |
| Bonds | 727 | 81 | 153 | 40 | 110 |
| Bank Bonds | 530 | 45 | 120 | 34 | 57 |
| Corporate Bonds | 21 | 7 | 4 | 1 | 0 |
| Government Bonds | 175 | 29 | 29 | 6 | 52 |
| Money Market Paper | 20 | 7 | 6 | 1 | 0 |
| Investment Trust Cert. | 153 | 21 | 15 | 1 | 2 |
| Shares | 93 | 12 | 3 | 1 | 0 |

Notes: Data are expressed in €bn.
The four selected banking groups on the right-hand side do not comprise all German banks. Therefore they do not sum up to the total banking system as shown in the first column.

Table 4: Foreign Securities

## 4 Summary and Outlook

This paper introduces the structural setup of the External Position Report and provided some figures on the international financial linkages of German banks and their foreign affiliates. Previous analyses of the German banking system have primarily been restricted to domestic activities, thereby neglecting a significant percentage of German banks' overall exposure. Almost 40 percent of banks' total assets are held abroad. Moreover, the complexity and scope of international banking business have implications for financial stability at both the domestic and the international level. Therefore, our aim has been to provide a detailed background and shed some light on the potential usefulness of this dataset for further economic research. Our description is based on data of June 2007.

As highlighted in the previous section, the External Position Report filed by the Deutsche Bundesbank can serve as a database for a multitude of economic research purposes at microeconomic and macroeconomic level alike. More comprehensive research projects might aim to combine the External Position Report with other data filed by the Deutsche Bundesbank. One example might be evidence on the domestic activities of German banks as recorded in the banking statistics (Memmel and Stein, 2008). Future research based on data after 2007 might further investigate whether and to what extent the global financial crisis has changed the external positions of banks. By analogy, McGuire and von Peter (2008) and Naohiko et al. (2008) use the BIS international banking statistics based on aggregates to describe international banking activities during the recent turmoil.

So far, few research projects have made use of the External Position Report; Buch et al. (2009) is a notable exception. The database's structure is quite complex and reporting requirements create a lot of complications or even roadblocks to thorough economic analysis. We have only worked with the data for some time and are still discovering new and challenging peculiarities. For this reason, we invite readers and potentially interested researchers to share their knowledge with us and other people working with the data from a scientific point of view.

## A Definitions

The following definitions originate from several special statistical publications issued by the Deutsche Bundesbank. ${ }^{17}$

## Domestic Banks (MFIs)

Domestic banks are enterprises whose registered office is located in the Federal Republic of Germany, which conduct banking business as defined in Section 1 (1) of the Banking Act and which come under the definition of "monetary financial institutions" (MFIs). MFIs denote all institutions which receive deposits and/or close substitutes for deposits (for example, by issuing securities) from the public and, for their own account, grant credit and/or invest in securities. They also include legally independent and dependent building and loan associations, KfW (Germany's development bank), money market funds and the domestic branches of foreign banks, as well as (unless listed separately) the Deutsche Bundesbank. A list of MFIs is available from the European Central Bank (ECB) at www.ecb.int.

## Non-Resident/Foreign/Abroad

Non-residents are natural or legal persons whose normal domicile, head office or registered office is located abroad. The other euro-area member states are therefore also classified as foreign/abroad.

## Foreign Banks

Foreign banks are institutions whose registered office or seat of management is located abroad and which are regarded as banks in the country concerned. These also include branches of domestic banks located abroad (including foreign branches of the reporting bank). The following entities are also classified as foreign banks: foreign monetary authorities/central banks including euro-area central banks and the ECB as well as supranational banks such as the Bank for International Settlements (BIS). Throughout the European Union, only MFIs are to be classified as "banks".

## Countries

The classification by country also includes euro-area member states. International organizations or central banks are to be treated like countries.

## Currencies

The domestic currency is the euro. All other currencies are deemed to be foreign currency.

[^8]
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Monthly external position report for
External assets, sheet 1

Monthly external position report for
Supplement to the main form External assets, sheet 1 Name


Monthly external position report for

Monthly external position report for
Supplement to the
Supplement to the main form External assets, sheet 2
Change in assets owing to valuation adjustments in the reporting month
Place

Form R1200B
Monthly external position report for
External liabilities, sheet 1
Name $\quad$ Banking group $\longrightarrow$ Place


Monthly external position report for
External liabilities, sheet 1
Name $\quad$ Banking group $\longrightarrow$ Place


Monthly external position report for
Foreign currency position, sheet $\mathbf{1}^{1}$
Supplement FW

| Hem |  | All foreigncurrencies | of which |  |  |  |  |  |
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|  |  |  | US dollar | Japanese yen | Swiss franc | Pound sterling | Sweilish krona | Danish krone |
|  |  | 01 | 02 | 03 | 04 | 05 | 06 | 07 |
| Foreign currency assets vis-à-vis residents |  |  |  |  |  |  |  |  |
| Loans and avvances to domestic insurance corporations | $\begin{aligned} & \hline 502 \\ & 503 \\ & 504 \\ & 504 \\ & 505 \\ & 506 \\ & 507 \\ & 507 \end{aligned}$ |  |  |  |  |  |  |  |
| Loans and a avancesestos odomesticici nourance coic copororions |  |  |  |  |  |  |  |  |
| Loans and a avances to domestic non-financial copporations |  |  |  |  |  |  |  |  |
| Loans and advances to resident households |  |  |  |  |  |  |  |  |
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|  |  |  |  |  |  |  |  |  |
| Loans and advances to domesicic non-banks (502 to 507) | 508 |  |  |  |  |  |  |  |
| Money market paper and fixed-interest securities of domestic banks (MFIs) with a maturit <br> of one year or less <br> of more than one but not more than two years <br> of more than two years <br> Money market paper and fixed-interest securities of domestic enterprises <br> Treasury bills and fixed-interest securities of domestic general government <br> Shares in domestic money market funds <br> Other foreign currency assets vis-à-vis residents | $\begin{aligned} & \text { 509 } \\ & 50 \\ & 511 \\ & 511 \\ & 512 \\ & 513 \\ & 514 \\ & 515 \\ & \hline \end{aligned}$ |  |  |  |  |  |  |  |
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|  | 500 |  |  |  |  |  |  |  |
|  | 601 |  |  |  |  |  |  |  |
| Liabilities vis-à-vis domestic insurance corporations <br> amounts owed and repayable on demand <br> fixed-term liabilities or with a period of notice of one year or less <br> fixed-term liabilities or with a period of notice of more than one year but not more than two years fixed term liabilities or with a period of notice of more than two years | $\begin{aligned} & \text { 602 } \\ & 603 \\ & 603 \\ & 604 \\ & 60 \end{aligned}$ |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
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|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| Liabilities vis-à-vis domestic other financial intermediaries <br> amounts owed and repayable on demand <br> fixed-term liabilities or with a period of notice of one year or less <br> fixed-term liabilities or with a period of notice of more than one year but not more than two years <br> fixed term liabilities or with a period of notice of more than two years | $\begin{array}{\|l\|l} \hline 606 \\ 607 \\ 608 \\ 608 \\ 609 \end{array}$ |  |  |  |  |  |  |  |
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|  |  |  |  |  |  |  |  |  |
| Liabilities vis-à-vis domestic non-financial corporations amounts owed and repayable on demand <br> fixed-term liabilities or with a period of notice of one year or less fixed-term liabilities or with a period of notice of more than one year but not more than two years fixed term liabilities or with a period of notice of more than two years | $\begin{aligned} & 610 \\ & 619 \\ & 612 \\ & 612 \\ & 613 \end{aligned}$ |  |  |  |  |  |  |  |
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Monthly external position report for

Form fw2
Monthly external position report for
External assets of foreign branches
Name
Country of domicile of the toreign branch
covered by the report


Monthly external position report for
External liabilities of foreign branches

Authentication of the external position report for foreign branches
Place and date

| Bank code |  | Check digit |
| :--- | :--- | :--- | :--- |
| $\perp ـ$ | $\ldots$ |  |

Monthly external position report for
External assets of foreign subsidiaries


[^9]Monthly external position report for
External liabilities of foreign subsidiaries


[^10]Authentication of the external position report of foreign subsidiaries
Form R2100T


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[^1]:    ${ }^{1}$ McGuire and Tarashev (2008) and McGuire and Tarashev (2008) illustrate various applications of the BIS international banking statistics.
    ${ }^{2}$ Publications in English and German are available in print and on the Bundesbank's website: www.bundesbank.de/statistik/statistik_veroeffentlichungen_sonderveroeffentlichungen.en.php

[^2]:    ${ }^{3}$ The initiative, however, originated with the $E C B$.
    ${ }^{4}$ Mirco-level data prior to 2002 are not available for research.
    ${ }^{5}$ As a matter of fact, foreign branches and subsidiaries do also submit a trimmed version of monthly balance-sheet statistics. These data exist in addition to the External Position Report. The pattern of report requirements follows that of the External Position Report by subsuming all branches at the country level, whereas for subsidiaries balance-sheet statistics are mandatory with respect to each individual subsidiary.
    ${ }^{6}$ Changes in the country codes are permanently updated, the case of Serbia and Montenegro in 2006 being just one example.

[^3]:    ${ }^{7}$ The list is available on the website: www.iso.org/iso/country_codes.htm.
    ${ }^{8}$ The reporting forms on foreign currency held domestically, supplement FW, are included in the Appendix.
    ${ }^{9}$ Reporting forms which contain any further details and the codes of positions are included in the Appendix to this text.
    ${ }^{10}$ See the Appendix for exact definitions.

[^4]:    ${ }^{11}$ Credit commitments are the sole exception.
    ${ }^{12}$ For detailed information on micro-level data collected by the Deutsche Bundesbank see: www.bundesbank.de/vfz/vfz_forschungsdaten_einzeldaten.en.php

[^5]:    ${ }^{13}$ Of course, a bank may operate branches and subsidiaries simultaneously, even in the same host country.

[^6]:    ${ }^{14}$ For the sake of comparability, we have applied reporting rules for branches to the reports submitted by subsidiaries. That is, we have subsumed various reports of foreign subsidiaries by the same bank in the same country as one report.
    ${ }^{15}$ Total assets of German banks amounted to roughly $€ 8,600$ billion in June 2007, of which around $€ 3,600$ billion were external assets.

[^7]:    ${ }^{16}$ Islands such as Guernsey, Jersey and the Isle of Man are attributed to the UK.

[^8]:    ${ }^{17}$ Special statistical publications are available online at www.bundesbank.de/statistik/statistik_veroeffentlichungen_sonderveroeffentlichungen.en.php

[^9]:    Form R1100T

[^10]:    1 German parent company and its foreign branches as well as other foreign group-affliated banks.

