The German CDIS Data—

Explaining Compilation Particularities and Bilateral Asymmetries

The German CDIS Data – Compilation particularities and bilateral asymmetries

The Bundesbank very much welcomes the IMF´s initiative to dedicate a special focus on bilateral data and the persistent discrepancies revealed by comparison studies of mirror-statistics. With the resource-intensive BPM6 implementation well on its way, some capacities will become available that can be dedicated to foster bilateral consistency of German FDI data. Thus, renewed effort should be put on analysing asymmetries, e.g. pinpointing the most relevant ones, identifying their causes and taking steps to reduce them. The IMFs annual Coordinated Direct Investment Survey (CDIS) data provides a pivotal starting point for a compiler's work in this field.

The Deutsche Bundesbank has been participating in the CDIS initiative since it started in 2009. The initial survey results were submitted to the IMF in 2010 for position data as of the end of 2009. Internal FDI data discrepancies between different German statistics, albeit most of them are temporary in nature, have been an issue continuously challenging the German FDI compiler. Even though some progress has been made to bring down discrepancies, e.g. ensuring the same methodological footing for the valuation of equity, some problems remain to be solved. Promising work to settle them is under way.

Much more challenging are the persistent bilateral asymmetries. Of course, some improvement may be derived from the fewer internal discrepancies. Nevertheless, methodological issues remain that pose great challenges to national compilers and international agencies. Due to the complexity and singularity of direct investments – as compared to bulk businesses like portfolio investments – the reduction of bilateral asymmetries will require cumbersome ongoing efforts on a case-by-case basis. Besides bilateral comparisons more knowledge and guidance concerning practical compilation issues will be needed to improve FDI/CDIS data. This can be concluded from our experiences as participant of the European FDI Network, which provides the technical infrastructure and resources to facilitate the secured exchange of microdata on specific FDI positions (and transactions) between national compilers of the European Union.

I. Compilation particularities

To fulfil its CDIS reporting requirements the Bundesbank relies on three different primary statistics. This is necessary as the most obvious data source, the annual FDI stock statistics, is not available in time, but is produced with a time lag of T+16 months. Thus, taking the most recently available annual FDI-data as a starting point, the Bundesbank has to estimate preliminary FDI stock data with the help of two supplementary data sources, namely the monthly balance of payments statistics and the monthly external position of non-banks.

Three different sources for German CDIS Data

Annual survey on FDI stocks

Since 1976 the Bundesbank has been conducting annual inward and outward FDI stock surveys on behalf of the Federal Ministry for Economic Affairs and Energy. The survey is compulsory for all resident economic agents, i.e. banks, enterprises, individuals and public authorities with FDI relations to foreign enterprises (including branches and permanent establishments) or participating interests of foreign direct investors. The compilation of FDI stock statistics is thus based on a census. Reporting agents have the obligation to report core balance sheet items of the direct investment enterprises on a yearly basis.[1]

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[1] In case the balance sheet total exceeds 3 m € (or its equivalent)

The above mentioned time lag of T+16 months for the annual survey data results from the half-year reporting lag granted to the respondents, and the subsequent compilation process, for which the plausibility of the statistical balance sheets of more than 35 000 German FDI companies abroad and almost 16 000 FDI companies in Germany have to be ascertained.

For more timely data requirements, e.g. T+3 or T+9 months, preliminary FDI data have to be estimated. To estimate FDI-equity, the Bundesbank uses the latest annual stock figures and extrapolates these by using FDI-transactions from the balance of payments. To estimate FDI-debt a different approach has been chosen: The Bundesbank uses the monthly external position of non-banks data as a proxy for the annual balance sheet results (please refer to the illustration below for clarification).

The Bundesbank derives CDIS Data from three sources

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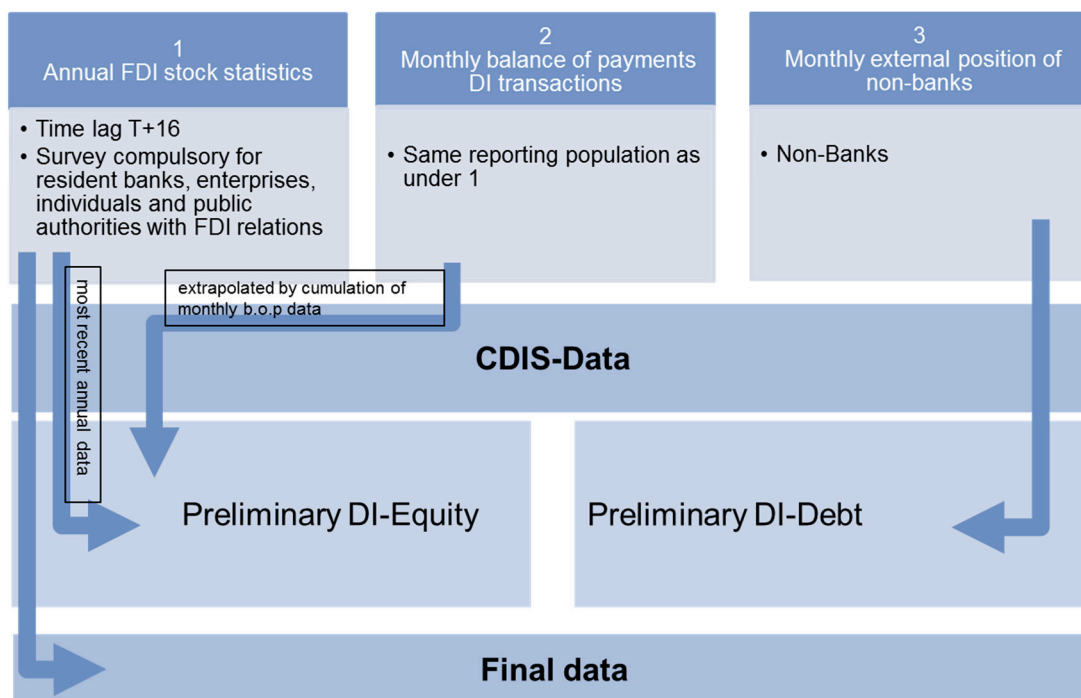
[2] In case the value of the transaction exceeds 12,500 € (or its equivalent)
[3] In case the value of claims and liabilities towards a counterparty exceeds 5 m € (or its equivalent)

I.1. Compilation particularities - problems identified, tackled … and solved

It is inherent that these compilation particularities, namely the use of different data sources for the calculation of preliminary and final FDI stock data, lead to discrepancies. However, most of those that are only of a technical nature have already been successfully tackled in the recent past.

One issue that has been solved regards the different valuation methods for equity investments. Previously, the final annual stock data statistics valued equity investments of listed enterprises using the Own Funds at Book Value (OFBV) method, whereas the other statistics used market values as recommended by the BPM6 manual. This has been changed: From reference year 2014 onwards, preliminary and final data value listed enterprises at market value on the basis of stock market prices.

Another settled discrepancy was caused by the fact that final annual FDI data did not include real estate estimates. This has been changed as well: From reference year 2014 onwards, final FDI stock data include the real estate estimates compiled and published in the international investment position statistics.

I.2. Compilation particularities – problems identified … and work in progress

In spite of the progress made, some issues still have to be cleared, most of which have to do with the different collection methodologies of the different statistics involved.

Debt between financial intermediaries – what is included, what is not

The different statistics still follow different methodologies for debt instruments: The final annual FDI stock data exclude only debt between financial intermediaries. On the contrary, the preliminary data already exclude all debt relationships where one party only is a bank from FDI debt and record it as other investment. Therefore, preliminary data is likely to underestimate the actual amount of FDI debt.

Gross data vs consolidated data reporting

In addition, final and preliminary stock data may differ in absolute value even for a single entity because the gross figures of the monthly reports deviate from the annual survey data if the resident direct investor has only consolidated balance sheet information available. Though reporting agents are requested to submit gross data extracted from the individual financial statements of the direct investment enterprises, consolidated information is accepted when – due to local accounting standards – gross data is not legally required.

Different geographical breakdowns for fellow debt

Another issue concerns the geographical details of fellow debt, i.e., credit relationships between direct investment enterprises resident in Germany and associated enterprises abroad. Resident enterprises' debt liabilities vis-à-vis foreign shareholders as well as directly and indirectly affiliated entities are reported as one position of the balance sheet in the annual survey without further breakdowns. The residencies of the non-resident creditors are thus unknown.

So far, in the final FDI stock data, these liabilities are proportionally assigned to the residency of the foreign enterprise(s) holding a participating interest in the reporting domestic entity (implicitly assuming that direct investors and fellows have the same residency). On the other hand, in the preliminary FDI stock data the monthly report of corporate external liabilities differentiates between liabilities (a) vis-á-vis enterprises holding a participating interest in the reporting entity (parent company), (b) vis-á-vis enterprises in which the reporting entity holds a participating interest (subsidiary or affiliate), and (c) vis-á-vis enterprises with which the reporting entity is affiliated by way of a common

investor (fellow).

Until now, however, the monthly fellow debt information cannot be incorporated into the final FDI stock data as its total does not match the reported annual balance sheet values. We intend to fix this shortfall by a current project that assesses the possibility of using the information on the geographical allocation of the monthly reports and to assign these proportionally to the annual balance sheet totals.

To account for the close connection between the aforementioned statistics, the Bundesbank decided to allocate the annual FDI statistics section to the Balance of Payments Statistics and International Investment Position division as of September 2016. In addition, the ongoing overhaul of the unit's IT-system, along with a re-organization of the data production process, is expected to further improve the consistency and comparability of the FDI data sub-systems.

II. Bilateral asymmetries

The above mentioned discrepancies between different national FDI statistics clearly contribute to the observable asymmetries with other countries, especially when the collection and compilation methods of the counterpart country deviates strongly from the German FDI stock statistics. Nevertheless, there is a wide range of other problems creating bilateral asymmetries in FDI stock data. When scrutinizing the CDIS data much insight can be gained from taking a closer look at the results from the FDI Network

II.1. Bilateral asymmetries – lessons learned from the European FDI Network

In general, foreign direct investment is one of the components, which contribute to high errors and omissions of the EMU/EU balance of payments and in which intra-EMU/EU asymmetries are typically large. Therefore, the FDI Network was jointly established in 2009 by the ECB and Eurostat to address the problems of asymmetries in FDI. From the very beginning the Bundesbank has been actively participating.

The FDI Network is a platform aimed at facilitating the secured exchange of data on specific FDI transactions and positions (microdata) between national compilers of the Member States involved, thus making it – theoretically – possible to match very granular data from different countries. Overall, the FDI Network has proven very useful. Nevertheless, some hurdles remain, so that data for individual cases could not be successfully reconciled between Germany and its counterparties in the FDI Network, and existing asymmetries could not be reduced. It can be assumed that these causes are also largely responsible for the bilateral discrepancies observed for the CDIS data.

Different accounting standards and consolidation levels

It is fairly self-evident that different valuation methods lead to asymmetries in FDI stock data between countries as there is e.g. a large difference between the valuation according to local GAAP and IFRS. Nevertheless, the current manuals do allow for different accounting standards: According to the BPM6, equity in unlisted direct investment enterprises can be valued according to alternative valuation methods deviating from OFBV. The report can also be drawn up on the basis of individual accounts in accordance with international accounting standards, provided that these standards are permissible in the country in which the investment enterprise is domiciled.

Furthermore, in some countries reporting agents submit consolidated data whereas for the same case unconsolidated – or partly consolidated, like sometimes in Germany – data are submitted in the counterpart country.

Different reporting populations

Different reporting populations are another problem that is difficult to solve since most of the differences are due to specific country characteristics.

Multinational Enterprises (MNE) are organized in complex ownership chains. It therefore becomes very difficult to identify the direct ownership relationships, and as a result compilers of FDI stock data may receive inconsistent data on the residency of the various companies of a MNE.

In addition, due to the use of different statistical unit concepts by compilers like legal unit, institutional unit or enterprise group, the survey population for the compilation of FDI stock data is not the same in different countries. However, with the progress of the European Statistical Business Register for multinational enterprise groups, the EuroGroups Register (EGR), these problems may become less severe in the future. The EGR maintains reference data for all relevant multinational enterprise groups acting in Europe. The Bundesbank strives for an active role in enhancing the quality of the EGR, in close cooperation with the Federal Statistical Office (FSO). Thanks to changed legislation, both institutions will be able to exchange FDI entity micro data from their respective databases from next year onward.

II.2. Bilateral asymmetries – different methodological guidelines for FDI by investment funds in European BoP/IIP

In order to assure a consistent recording across European countries, FDI by investment funds is treated differently by the ESCB than recommended in the global manuals. Due to the different legal set-up of investment funds, the collection of FDI information is complex and prone to error. In addition, the phenomenon is considered to be of minor importance. In Europe, hence, FDI related capital flows have to be recorded as either portfolio or other investment in the BOP/IIP, depending on the fund-type or the underlying debt instrument. The preliminary data therefore underestimate the actual FDI stocks, which may provide a further explanation for the bilateral asymmetries in the German CDIS data.

II.3. Bilateral asymmetries – the way forward for reducing CDIS asymmetries

Bilateral comparisons are an effective exercise to share best practices among countries by means of real-life examples. But the expectations that asymmetries vanish in the course of these exercises on their own account are deceptive as data collection and compilation often vary between countries for good reasons. Intensive work is needed to turn the thus gained theoretical knowledge into practical use. Therefore, results of these exercises can provide useful input for the future research agenda on FDI both for methodological and for practical compilation issues.