Analysing worldwide asymmetries in cross-border investments: the euro area in perspective

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Introduction

The cross-border financial investments of a country can be measured using different sources. First, national statistics capture each country's international investment position. In addition, the mirror investments from/to that country are recorded in the international investment positions of counterpart countries.

This paper contains an analysis of mirror data on direct investment and portfolio investment, and presents possible explanations for different results. Those differences may arise, among other things, from the coverage of surveys, the definition of the resident population and the methods of valuation. The results of the analysis help us to assess the overall coherence of worldwide statistics and point to gaps or misallocations in particular areas. A special focus is given in this paper to results for the euro area.

The data to be contrasted were taken from national international investment position statistics and statistics published by the International Monetary Fund (IMF), namely the results of the Coordinated Direct Investment Survey (CDIS) and the Coordinated Portfolio Investment Survey (CPIS). These surveys focus on cross-border positions at the end of the year. The IMF has carried out substantial work to align the corresponding methodologies used in these surveys,[2] particularly as regards the definition of residency and the methods of valuation.

While the CPIS was launched in 1997 and has produced regular yearly results from 2001 to 2009, the results of the first CDIS relate only to 2009. As with the CPIS, the IMF plans to conduct the CDIS on an annual basis.

This paper is organised as follows: Section 1 focuses on analysing asymmetries in direct investment, Section 2 focuses on analysing asymmetries in portfolio investment, and Section 3 contains some conclusions.

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[2] See on the IMF's website the CDIS Compilation Guide (http://www.imf.org/external/np/sta/cdis/pdf/2009/120109.pdf) and the CPIS Guide (http://www.imf.org/external/pubs/ft/cpis/2002/pdf/cpis_index.pdf).

1. Direct investment

Direct investment consists of financial assets or liabilities in companies that are related through a direct investment relationship. Such a relationship is created when the equity participation of a company in the other is sufficiently large as to affect the other company's subsequent decisions. In general, to be considered a direct investment relationship, such participations need to be equal to or higher than 10% of the shares.

The IMF's Coordinated Direct Investment Survey (CDIS), carried out for the first time in 2010, focuses on the direct investment position at year-end. A total of 72 countries contributed to the CDIS. The preliminary results were released in December 2010 and contained data for the end of 2009 on inward investment from all 72 countries and on outward investment from 52 of the 72 countries.[3] Taking into account only the 52 countries[4], both as reporters and as counterparts, the outward investment each of them reported vis-à-vis the other 51 countries can be compared with the addition of the inward investment reported by the other 51 countries reported vis-à-vis itself. For example, France's reported outward investment vis-à-vis the group of 52 countries can be compared with the addition of the investment from France reported by the 51 countries. We label the investment by France as "reported" and the addition of the investments in the 51 countries "derived". The inverse calculations can be done for France's inward investment.

The results of these comparisons can be displayed in scatter plots in which each point refers to a country. The value in the x-axis refers to the "reported" data and the value in the y-axis refers to the "derived" data. If there are no asymmetries, the points in the charts appear on the line dividing the quadrant in two. On the other hand, points in the upper side of the quadrant mean that the "derived" data (i.e. data whose sources are the remaining countries) are higher than the "reported" data (i.e. data whose source is the country at stake).

The results for the 12 countries with higher positions are displayed in Chart 1 (outward investment) and Chart 2 (inward investment). In four countries (i.e. Netherlands, Luxembourg, Switzerland and the United Kingdom), the derived data vis-à-vis the other 51 countries lead to higher results than the reported data. The explanation for this could be twofold.

First, three of those countries host financial intermediaries that channel intra-group investments. These financial intermediaries, also known as "special purpose entities", are typically set up to optimise the tax situation of the group to which they belong. With a very low number of staff, some special purpose entities[5] have enormous balance sheets, with the overwhelming assets and liabilities vis-à-vis non-

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[3] See CDIS results at http://cdis.imf.org

[4] Luxembourg, Austria, United Kingdom, Malaysia, France, Italy, Mexico, Belgium, Netherlands, Thailand, South Africa, Turkey, Hungary, Poland, Portugal, Latvia, Armenia, Kyrgyz Republic, Pakistan, Spain, Greece, Kazakhstan, Australia, Bangladesh, Belarus, Botswana, Canada, Hong Kong, Macao, Costa Rica, Croatia, Cyprus, Czech Republic, Denmark, El Salvador, Estonia, Finland, Germany, Iceland, Ireland, Japan, Republic of Korea, Lithuania, Malta, Mozambique, New Zealand, Peru, Philippines, Slovak Republic, Slovenia, Switzerland and the United States.

[5] For a detailed description of special purpose entities, see *OECD Benchmark on Foreign Direct Investment (4th edition)*.

resident companies belonging to the same group. Special purpose entities often have simplified administrative reporting requirements and have little incentive to invest in sophisticated accounting systems. Those systems would allow a valuation of their investments according to the statistical standards (namely "own funds at book value"[6]) and provide a detailed statistical reporting by counterpart country.

Chart 1: Results of comparison of mirror data for outward FDI positions at end-2009
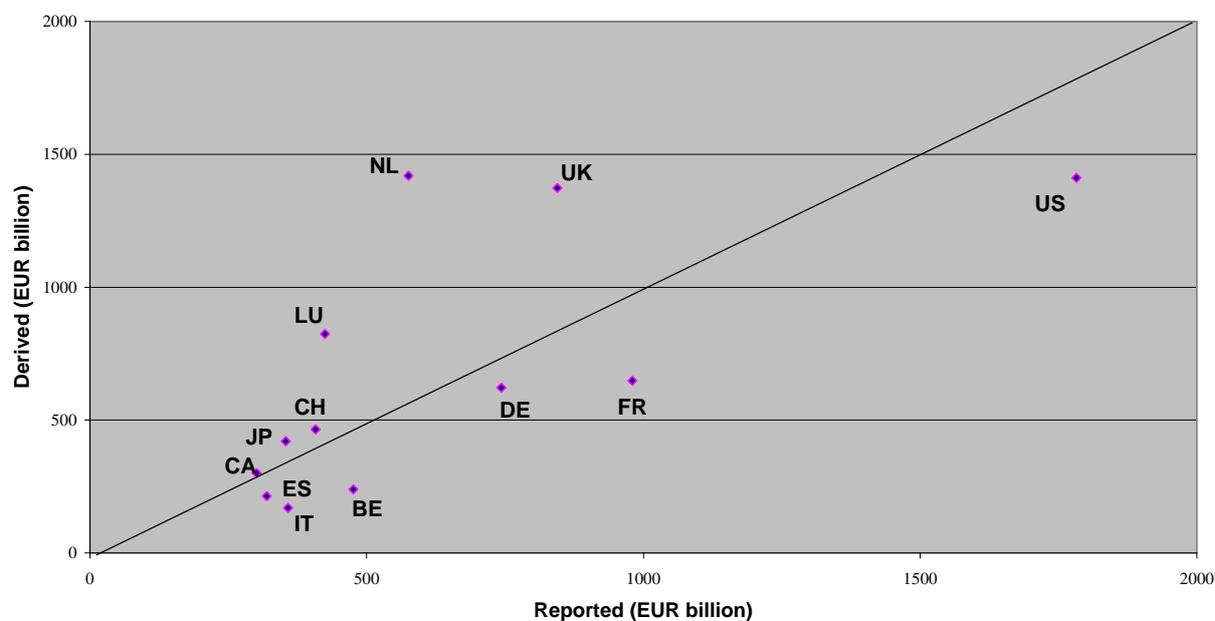
Second, statistical standards allow for data to be based on local enterprise units or local enterprise groups. A local enterprise group comprises all enterprise units in a country that are controlled by one of them. Direct investment statistics are compiled in the United Kingdom based on local enterprise groups. While, in the majority of cases, the methodologies lead to similar results, the methodology based on local enterprise groups may result, in certain cases, in the consolidation of positions by enterprise units, which reduces the total positions of the group as a whole.

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[6]The valuation recorded in the balance sheet of the direct investor (i.e. the acquisition/historical price) hardly reflects the evolution of the price of the company through time. Own funds at book value are calculated based on liabilities of the invested company, and include: i) paid-up capital (net of own shares); ii) all types of reserves (including shares, premium accounts and investment grants); and iii) the net value of non-distributed profits and losses (including results for the current year).

Chart 2: Results of comparison of mirror data for inward FDI positions at end-2009
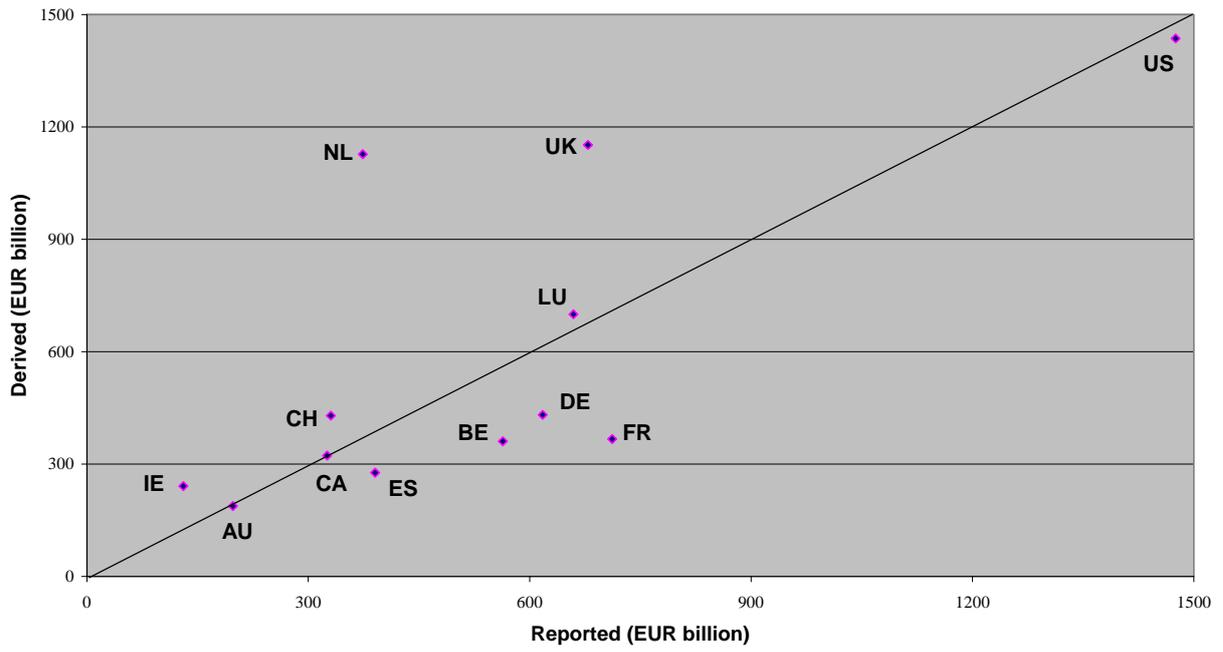
2. Portfolio investment

Portfolio investment relates to cross-border holdings of tradable financial instruments, except those included in direct investment or reserve assets. In contrast with direct investment, those tradable financial instruments considered as reserve assets of a country are classified as portfolio investment liabilities by the country of the issuer.

The IMF has conducted the Coordinated Portfolio Investment Survey (CPIS) on an annual basis since 2001.[7] 75 countries currently participate in the survey, and the latest results were released in November 2010. The CPIS provides year-end holdings of portfolio investment securities (i.e. equity securities and debt securities) valued at market prices, cross-classified by the country of the issuer of the securities. The coverage of the CPIS is augmented with information from two other surveys, namely Securities Held as Foreign Exchange Reserves and Securities Held by International Organizations (these datasets are disclosed at an aggregate level, as the data are reported on a confidential basis). Together, the CPIS provides country data on the cross-border holdings of equity and debt securities, broken down by the country of the issuer of the securities.

The CPIS focuses on securities holdings (i.e. the assets side). Through the data from countries participating in the CPIS on the holdings securities issued in a specific country, one gets a picture of the geographical distribution of its liabilities. In principle, the addition for all countries should result in the same figure as reported on the liabilities side of each country's international investment position.

**Chart 3: Positions in portfolio investment equity at end-2009**

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[7] See CPIS results at http://www.imf.org/external/np/sta/pi/datarsl.htm
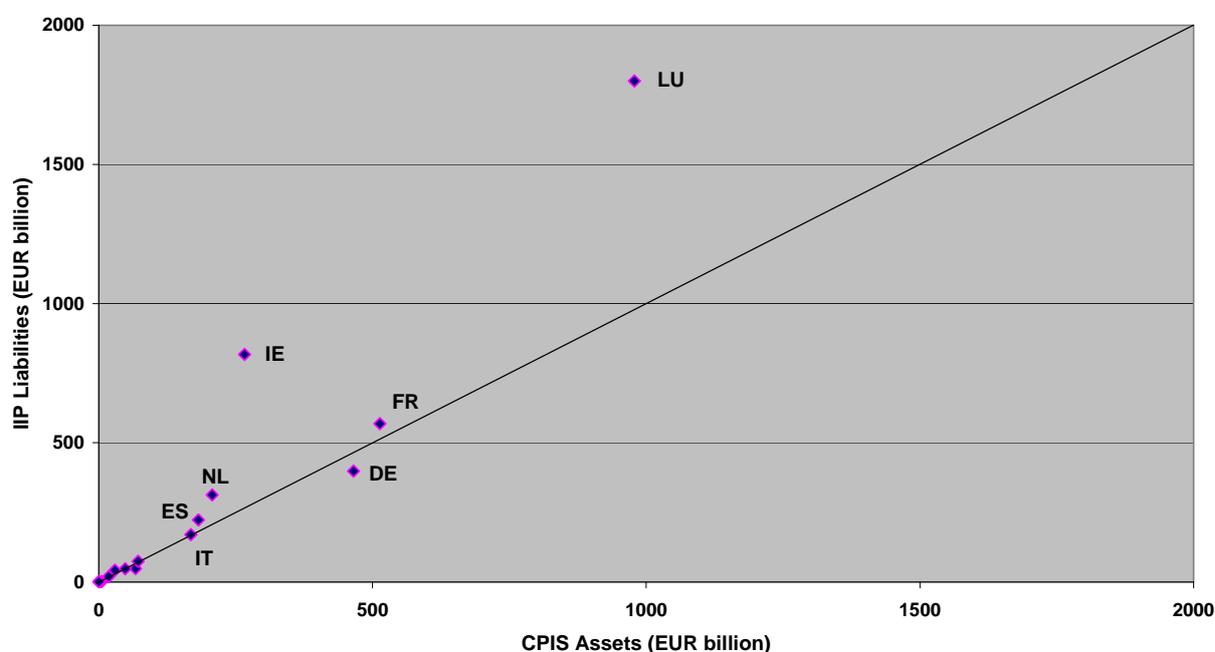
The comparison in this case focuses on results from different sources, namely the addition of CPIS assets and the total cross-border liabilities in the national international investment position collected by the European Central Bank from euro area countries (see Charts 3 and 4).

As regards equity, the data from the CPIS are in general comparable, except for Luxembourg and Ireland, who exhibit much higher cross-border liabilities in equity than other countries of their size owing to a large investment fund industry in both countries. Because of this, the asymmetry between the CPIS assets and their national international investment position liabilities probably relate to a low coverage of household assets in the CPIS survey.[8]

In the CPIS survey, the foreign assets of households are usually covered through domestic custodians. This is because the statistical agencies are often only allowed to address surveys to residents in their countries. If households deposit their assets in foreign custodians, those are not captured in the CPIS results.

Chart 4: Positions in portfolio investment debt at end-2009
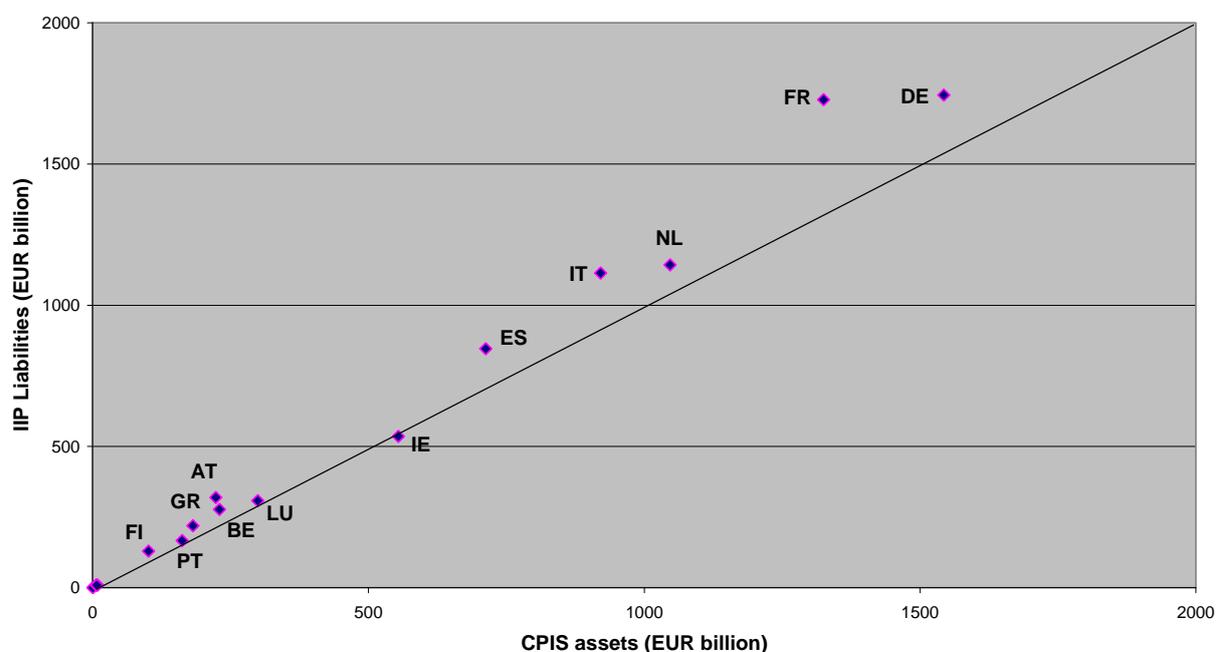
On the other hand, the data for debt securities show a consistent pattern for euro area countries. In general, the CPIS assets are lower than the corresponding data from the national international investment position. The explanation for this systematic difference may be of a different nature. In particular, several countries whose official sector has recently accumulated foreign assets may not be contributing to the CPIS. In those countries, the central bank and government agencies, such as sovereign wealth funds, have substantially increased their holdings, but the composition of their portfolios has been kept secret. As the euro is one of the currencies used worldwide for reserve purposes, it is plausible that the difference

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[8] Further evidence on this was obtained from a study carried out by the European System of Central Banks in 2008 on enhancing the internal consistency of the euro area balance of payments.

between the CPIS assets and the international investment position liabilities for euro area countries is related to data not reported to the CPIS.

An estimate of the holdings of countries not participating in the CPIS can be obtained by calculating the difference between the national international investment position liabilities and the corresponding CPIS assets. When that estimate is calculated for euro area securities (i.e. 16 countries), the result shows an increase in the corresponding stock from €304 billion at the end of 2002 to €1,227 billion at the end of 2009 (see Chart 5).

The IMF does not provide information about the countries that have contributed to the part of the CPIS focusing on reserve assets (i.e. the SEFER - Survey of Geographical Distribution of Securities Held as Foreign Exchange Reserves). Therefore, the difference between the results cannot be attributed directly to any specific country. Nonetheless, it may provide a reasonable estimate for the group of countries that are not disclosing information on the composition of reserves. That group may change from time to time, for example if a country decides to start contributing to the survey. This may cause a one-off increase in the CPIS assets, which would be reflected as a one-off decrease in the result of the calculation for the group of countries not disclosing information to the CPIS. To overcome this, in the future, the IMF may consider publishing separately the change of the stock related to the SEFER and SSIO (Survey of Geographical Distribution of Securities Held by International Organizations) that is owing to changes of the reporting population.

Chart 5: Portfolio investment - Debt liabilities of euro area countries not recorded in the CPIS as assets
Positions as at year end
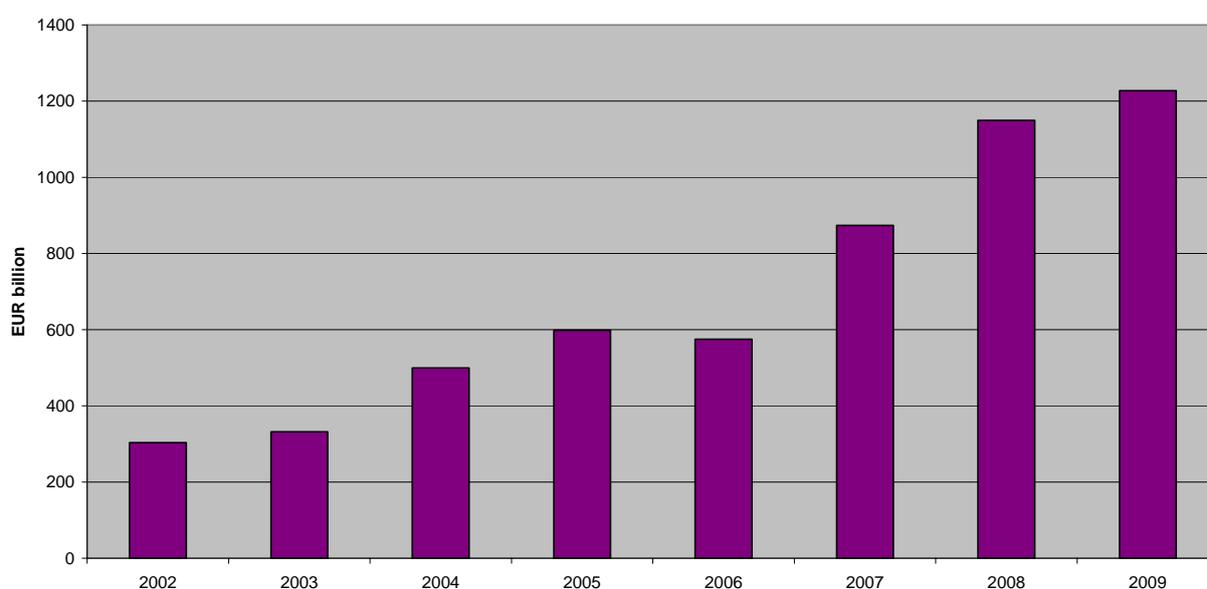
3. Conclusion

The analysis of mirror data from different sources provides additional insights into the methodologies used in their compilation. Asymmetries can be visualised in scatter plots in which the x-value refers to one of the sources and the y-value to the other.

Starting from the results of the IMF's worldwide surveys, namely the CDIS and the CIPS, this note analysed data on end-year positions for direct investment and portfolio investment. Methodological aspects and issues related to coverage may explain asymmetries in mirror data. Finally, asymmetries for positions in debt securities are linked to countries not reporting to the CPIS the holdings by their official sectors. According to own calculations, those holdings rose from €304 billion at the end of 2002 to €1,227 billion at the end of 2009.

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