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"MEASURING EURO AREA PORTFOLIO INVESTMENT – STATUS FIVE YEARS AFTER START OF THE ECONOMIC AND MONETARY UNION AND OUTLOOK ON FUTURE DEVELOPMENTS"

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[1]) The views expressed in the paper are those of the author.

Introduction[2]

The financial positions and transactions of Member States of the European Union (EU) saw a significant change with the introduction of the single currency, which had strong repercussions on their statistical reporting, and to some extent also their statistical classification. All statistics compilers in the EU proactively developed common concepts at an early stage, and complemented with agreed practices. (In fact, for Member States, which do not yet participate but may join at a later stage, the time lag between such a policy decision and the actual accession would be much too short to adjust their statistics to the statistical requirements of the ECB.)

In the world of increasingly integrated financial markets cross-border investment activities are more and more in the focus of economic and financial analyses. The respective statistical reference framework is the balance of payments (b.o.p.) and international investment position (i.i.p.) as well as the financial accounts statistics, for which b.o.p./i.i.p. represents the rest-of-the-world sector account.

With respect to the provision of reliable and timely financial euro area statistics the challenge was to build up an equivalent for the euro area as a single economic entity to the national statistics. However, like in other areas the euro area b.o.p./i.i.p. statistics can in several cases not be derived by simple aggregation of the national aggregates but require the provision of specific contributions required to derive the respective euro area aggregates.

Looking back the compilers of the European System of Central Banks (ESCB) and in particular those institutions belonging to the Eurosystem[3] have mastered these challenges. The European central Bank (ECB) is today in the position to regularly publish b.o.p. and i.i.p. figures as well as adjoined financial statistics such as euro area financial accounts or securities issues statistics.

It is the intention of this paper to broadly explain what has been achieved in the years following the formation of the euro area in the field euro area b.o.p./i.i.p. statistics and to present examples of statistics and indicators to support the analysis of international investment flows and positions. It is organised as follows: After a brief description of the stepwise development of the underlying methodology some stylised facts on the euro area b.o.p./i.i.p. are introduced. This sets the stage for a more detailed look on the euro area portfolio and direct investment transactions and positions with a subsequent section of examples for indicators that allow the macro economic comparison of the euro area with other important economies in financial markets. The final section presents an outlook on the pending plans to further refine and enlarge the euro area cross-border statistics.

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[2]) The paper has benefited from valuable comments by Roberto De Santis, Remigio Echeverria, Jean-Marc Israël and Steven Keuning. The author is gratefully acknowledging the assistance of Cornelis Brijde and Bernadette Lauro in preparing the data. All remaining errors are the author's responsibility.

[3]) The ESCB comprises the European central Bank and the National Banks of all 25 Member States of the EU. The term *Eurosystem* is used to designate the ECB and the national Central Banks of the 12 EU Member States forming the euro area.

Methodology adopted

The development of reliable statistics was an integral part of the stepwise introduction of the euro. In fact it is an obvious pre-condition for the functioning of a single currency system that the decision making bodies have access to high quality information on financial and general economic indicators to base the monetary policy upon and monitor the effects of the decision taken.

The approach adopted can at least be split into two phases: During the first the European Monetary Institute (EMI) together with the National Central Banks (NCBs) of all EU Member States prepared a common by defining the statistical requirements that the Eurosystem[4], once in operation, would need to conduct a well justified monetary policy. The basic concept is that the compilation work is carried out, where ever possible, by the NCBs (and in some special cases other national authorities). More precisely NCBs collect data from reporting institutions and other national sources, compile aggregates at the national level and transmit these to the ECB, which compiles the euro area aggregate. The goal to be ready to produce statistics fitting the needs of the single currency area implied a pressure for harmonisation of national statistics so that they add up in a meaningful way. Since then a clear trend towards he development of converging standards in the production of financial statistics in the EU started.

In parallel to the preparatory phase the necessary legal framework for ECB statistics was finalised[5]. The detailed requirements for NCBs to provide the necessary input for the euro area b.o.p./i.i.p are laid down in a Guideline,[6] a special legal instrument issued by the ECB.

In second phase, which started at the time the group of Member States that were finally adopting the Euro as single currency was defined, the actual production of euro area related statistics was launched. In the field of b.o.p./i.i.p. statistics the approach adopted was – where necessary – to refine the euro aggregates in three steps.

- Step 1 was the simple aggregation of national (net) figures to derive the net flow or position for the euro area aggregate. This method allows the calculation of a euro area aggregate without requiring all participating countries to distinguish in their national external statistics between euro area and non-euro area counterparts[7]. While the publication of euro area b.o.p. data was not following this approach, the i.i.p. statistics of the euro area was initially compiled and published on this basis.
- Step 2 figures are derived from the aggregation of national transactions and positions (credits/assets and debits/liabilities reported by Member States) vis-à-vis non-euro area residents, i.e. extra euro area counterparts. The euro area b.o.p. has been produced and published on this basis from the beginning in 1999. Since end-2002 the i.i.p. figures are also compiled and

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[4]) First elaborated by the EMI as the "Implementation Package" in July 1996 and published in an updated version as the "Statistical information collected and compiled by the ESCB" in May 2000.

[5]) EU Council Regulation (EC) 2533/98

[6]) The updated Guideline ECB/2004/15 has been issued in summer 2004.

[7]) The accuracy of this approach is however depending on the overall exactness of the national aggregates. The assumption is that the intra-euro area flows and stocks cancel out when aggregating statistics from all euro area Member States and the ECB. This would require that the participating countries produce asymmetry free b.o.p./i.i.p. data.

published in the same way[8]. As a consequence no national cross-border figures are needed for compiling the euro area external statistics. However, there are three exceptions, namely (i) the liabilities side of portfolio investment stocks and flows, (ii) the debits in the associated investment income account, and (iii) the euro area financial (and non-financial) accounts. Regarding the last one, work is ongoing to ensure a reconciliation between national and euro area rest-of-the-world accounts. Regarding the two first ones, because the residency of the holder of securities issued by euro area residents (and recipients of related income) is usually not known with a sufficient accuracy, the euro area liabilities for portfolio investment (stocks and flows) are obtained by subtracting from the total national liabilities the intra euro area assets. An analogous method is applied for portfolio investment income payable to non-residents.

- Step 3 data will (from early 2005 onwards) show a geographical breakdown among the main extra-euro area counterparts (see last section). Regarding the portfolio investment liabilities, this breakdown will be approximated by the structure of annual positions derived from available mirror.

In meeting the E(S)CB statistical requirements, Member States fulfil various goals:

- Be fully compliant with the international statistical standards, in particular the IMF Balance of Payments Manual (5th edition) and the European System of National and Regional Accounts (ESA95); where relevant, the applied definitions and the level of details go beyond these standards.

- Statistics compilers within the ESCB try to find an optimal balance between the reporting burden on respondents and the quality of the published data. The ECB monitors in particular the consistency of the figures reported by Member States over time and across countries.

- Finally the ESCB in its effort to keep or improve quality also discusses state of the art data collection and compilation techniques.[9] Since the early preparation of the euro area statistics the harmonisation of statistical definitions and data reports has applied to the *output* that statistics compilers within the euro area provide to the ECB, much less to the data collection and processing methods employed in Member States. Meanwhile the discussion on the most cost-effective ways of compiling statistics, both for the reporting agents and for the compilers themselves, reached a state where the ESCB members also start to include harmonisation and co-operation on the *input* side of statistics production. The project of introducing security-by-security technique in the field of portfolio investment statistics and at the same time using a centralised securities database for reference data is a model case for this trend (see last section).

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[8]) For details see ECB Monthly Bulletin, December 2002

[9]) In continuation of the preparatory work initiated by the EMI, the ECB has during the last years organised three ESCB wide Task Forces on portfolio investment issues. Two reports are available on the ECB WebSite.

The euro area b.o.p./i.i p. - results for the first five years

The macroeconomic analysis of cross-border financial transactions and positions of the euro area is embedded in the international standard framework of b.o.p./i.i.p. statistics. With regards to the recording of stocks, the i.i.p. of the euro area represents a balance sheet showing the external financial assets and liabilities of euro area residents at a given moment in time (i.e. end of the year). More precisely it comprises the claims on non-euro area residents, liabilities to non-euro are residents, monetary gold and SDRs.[10] (In terms of the National Accounts statistics the net i.i.p. together with the stock of non-financial assets comprise the net worth of the euro area.).

The connection to the recording of financial flows in the financial account of the euro area b.o.p. is given via the fact that financial transactions are the major factor triggering changes in the i.i.p. positions. Besides the assets and liabilities are also subject to valuation changes and other adjustments. Thus the euro area external statistics on positions and transactions can be linked in an "reconciliation exercise". Contrasting changes in the i.i.p. stocks with the b.o.p. data on flows allows analytical insights and plausibility checks. In theory the following factors can be distinguished:

- Transactions that have taken place during the period;
- Price changes;
- Exchange rate changes and
- Other adjustments (such as write-offs, reclassifications, corrections etc.).

De facto the present data compilation system for the euro area does not allow a separate recording of the latter three effects. Instead only the sum of these factors can be derived as the arithmetic difference of total change in stocks and transaction cumulated over the year.[11] (In the following this component is referred to as "other changes")

The overall results of the reconciliation exercise for the euro area i.i.p. are summarised in Table 1, showing the result the changes in stocks between end-1999 and end-2002 (with the exception of financial derivatives) separately for assets and liabilities The information of particular interest is the relative contribution of transactions to the changes in positions per capture of the i.i.p. or in other words, if there is a plausible explanation for the part of the change in stocks that is not due to financial flows.[12] Even during the three years covered in the table these two factors reveal a high variation. The change in the overall assets and liabilities during 2000 and 2001 was in the end only marginally influenced by (net) valuation changes. Conversely the price and exchange rate effects dominated the development during 2002. The results also confirm the assumption that the portfolio investment category would be the account that is most sensitive for these effects. Interestingly the development in prices and exchange rates had – in net terms – in all three years eroded the euro area assets and liabilities, an effect that during 2002 even over compensated the actual cross-border investment flows.

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[10]) In contrast the *gross external debt position*, which comprises all liabilities other than equity securities and direct investment equity capital

[11]) The more information on the underlying structure of the positions with respect to the type of financial asset or their denomination would be available the more indicators approximating the valuation effects could be employed.

[12]) There are, however, features in the statistics that are not directly transparent, e.g. when stock survey results are not in line with previously recorded flows or ad-hoc re-classifications have been employed.

Table 1 - Factors behind the changes in stocks of te euro area international investment position

EUR billions

	1999	2000				2001				2002			
	end of year stocks	total changes	of which transactions	of which other changes	end of year stocks	total changes	of which transactions	of which other changes	end of year stocks	total changes	of which transactions	of which other changes	end of year stocks
Total													
Net	-318.5	-68.3	-66.1	-2.2	-386.8	197.2	34.2	163.0	-189.6	-100.0	65.8	-165.8	-289.6
Assets	5,796.6	954.6	1,016.6	-62.1	6,751.2	786.0	848.7	-62.7	7,537.2	-259.3	559.8	-819.1	7,277.9
Liabilities	6,115.1	1,022.9	1,093.1	-70.3	7,138.0	588.9	815.4	-226.5	7,726.8	-159.3	504.8	-664.1	7,567.5
Direct investment													
Net	369.6	83.1	13.7	69.4	452.7	43.6	112.4	-68.8	496.4	-71.3	4.7	-76.0	425.1
Assets	1,174.5	270.2	443.1	-34.7	1,626.7	270.2	316.5	-34.7	1,897.0	40.5	151.3	-143.0	1,937.5
Liabilities	804.9	226.6	429.4	24.0	1,174.0	226.6	204.1	24.0	1,400.6	111.9	146.6	-30.1	1,512.5
Portfolio investment													
Net	-892.8	106.4	108.2	-1.8	-786.4	95.1	-67.9	163.0	-691.4	-64.9	-114.6	49.7	-756.3
Assets	2,058.0	293.1	412.1	-119.0	2,351.1	170.3	281.9	-111.6	2,521.3	-250.9	175.8	-426.7	2,270.4
Liabilities	2,950.8	186.7	303.9	-117.2	3,137.5	75.2	349.8	-274.6	3,212.7	-186.0	290.4	-476.4	3,026.7
Financial Derivatives													
Net	16.0	-14.0	10.4	-24.4	2.0	-0.5	0.9	-1.4	1.5	-9.5	10.8	-20.3	-8.1
Other investment													
Net	-193.5	-252.8	-180.9	-71.9	-446.3	57.5	6.6	50.9	-388.8	72.4	162.6	-90.2	-316.4
Assets	2,070.8	205.6	179.0	26.6	2,276.4	341.4	268.2	73.3	2,617.9	-36.6	230.4	-267.0	2,581.3
Liabilities	2,264.3	458.4	359.8	98.6	2,722.7	284.0	261.6	22.4	3,006.7	-109.0	67.8	-176.8	2,897.6
Reserve assets	382.2	9.0	-17.6	26.6	391.2	1.5	-17.8	19.3	392.7	-26.6	2.3	-28.9	366.1

Source: ECB, Monthly Bulletin

A Closer look on portfolio investment

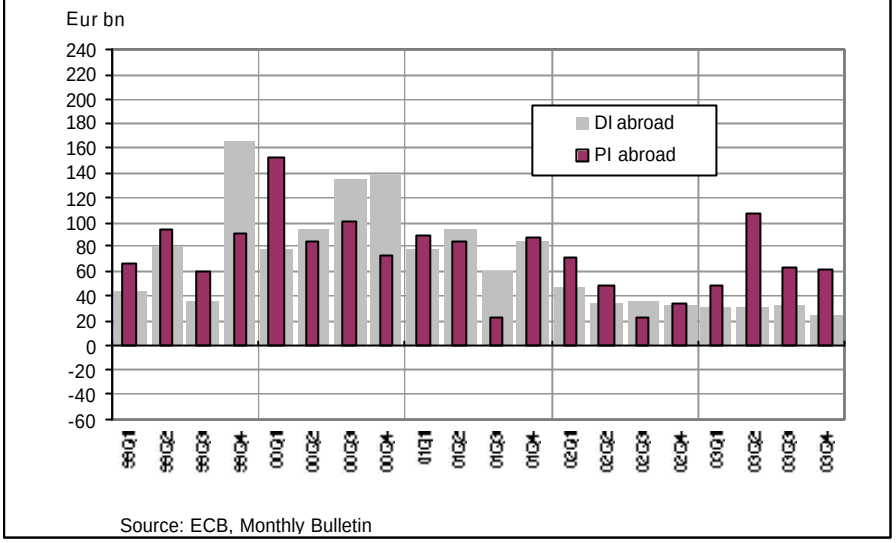
Portfolio investment transactions may be considered the most interesting segment in the cross-border investment flows. Due to the theoretical volatility and discontinuity of global investors' decisions the international acquisitions or sales of shares and fixed-income instruments are an increasingly acknowledged (short term) indicator for the competitiveness and attractiveness of an economy. The fact that the ECB publishes these investment flows on a monthly basis within a 7 weeks deadline allows a timely and continuous monitoring of the pressures the external financing exerts on the euro area economy. The in- and outflows of portfolio investments may be considered as an important indicator or even one main factor influencing the level of exchange rates or pressures for the interest rate levels. Related interpretations highlight the connection of investment flows with general expectations global investors have on the prospects of economies e.g. anticipated growth rates for financing investments or consumption.

In contrast to portfolio investment transactions direct investment decisions are considered to be to a large extent driven by singular circumstances as they comprise acquisitions that are "per definition" representing long-term and thus more stable investment decisions. While covering to the largest extent also securitised assets an investment in/of an affiliated company is supposed to represent a relationship, in which the investor has along lasting interest and the intention of active controlling.[13] In fact the first years of the Economic and Monetary Union were coinciding with a period of outstanding high cross-border merger and acquisition (M&A) activities, which impacted the euro area financial account to a significant extent. In fact some of the most outstanding M&A transactions that were recorded since 1999 were influencing both the portfolio and direct investment account.[14]

[13]) In operational terms a direct investment relationship is defined by a minimum of 10% ownership of the investor.

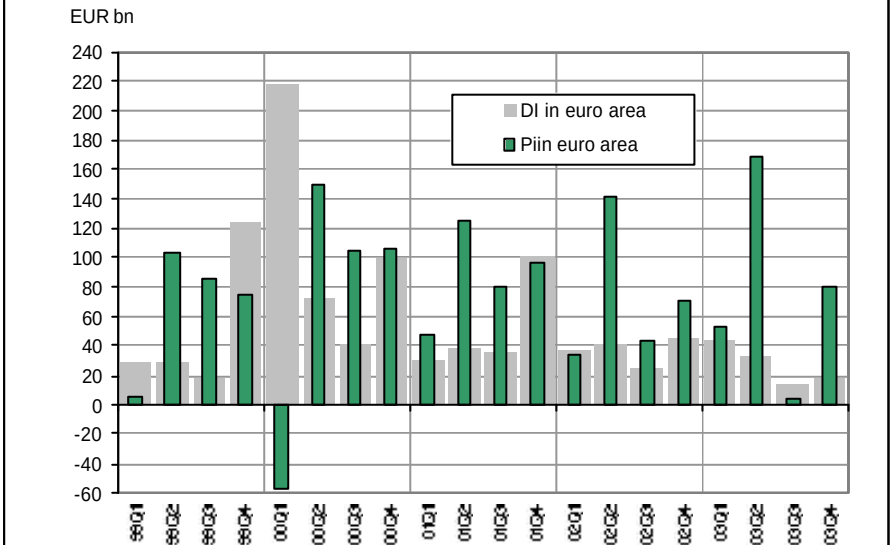
[14]) The most significant case is an outstanding cross-border take-over at the beginning of 2000, representing a direct investment in the euro area. This transaction was (in part) financed by the exchange of shares, which

Figure 1a: Euro area portfolio and direct investment outflows



Source: ECB, Monthly Bulletin

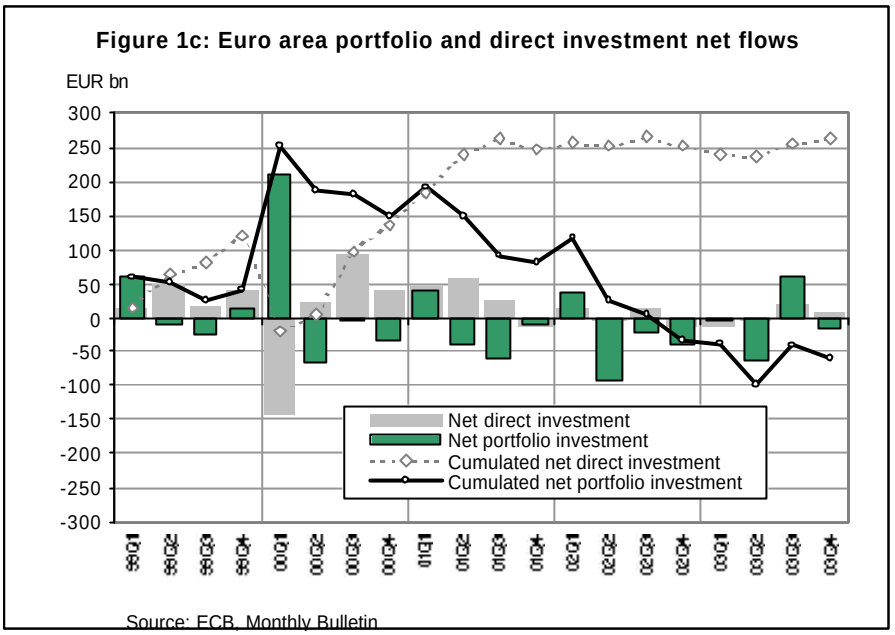
Figure 1b: Euro area portfolio and direct investment inflows



Source: ECB, Monthly Bulletin

were to a large extent recorded in the portfolio investment account as the holders were not holding more than 10% of the equity of the companies that merged.

Figure 1c: Euro area portfolio and direct investment net flows



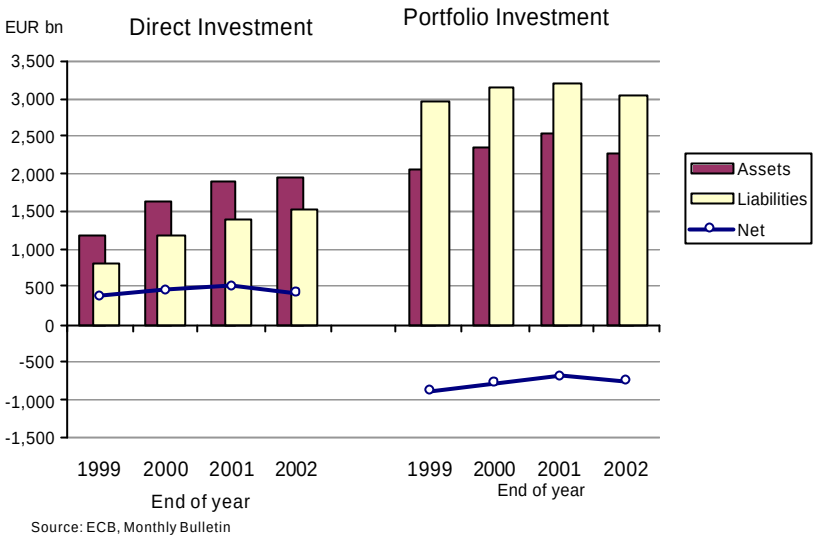
Source: ECB, Monthly Bulletin

As shown for the investment *outflows* (Figure 1a) euro area investors participated strongly in the investment boom at begin of the decade with a more subdue activity level during the last years. In contrast the capital *inflows* (Figure 1b) indicate a higher variance in the behaviour of non-resident investors in the euro area during these 5 years. The structural feature for this period is, however, that the net balance (Figure 1c) of portfolio investment was mostly negative (more quarters with net inflows than net outflows) whereas the direct investment balance was positive (more ouflows that inflows)[15]. The picture is even clearer when considering the cumulated (net) flows, and in particular ignoring the distortion in the first quarter of 2000: Whereas the portfolio investment account recorded a decrease of assets, the direct investment account shows a clear trend of building up positions abroad, at least during the first three years.

The respective direct and portfolio investment positions of euro area i.i.p are given in Figure 2. The characteristic pattern shows – at least since the respective statistical recording for euro area economy has started – a stable positive balance for direct investment. Conversely the net position in portfolio investment is continuously negative. This means that the trends recorded for the capital flows have in fact not changed the underlying structure that balances direct investment assets with portfolio capital liabilities (predominantly in fixed income).

[15]) Note that this presentation does not comply with the usual b.o.p. notation, which presents outward investment as negative figures.

Figure 2: Euro area direct and portfolio investment stocks

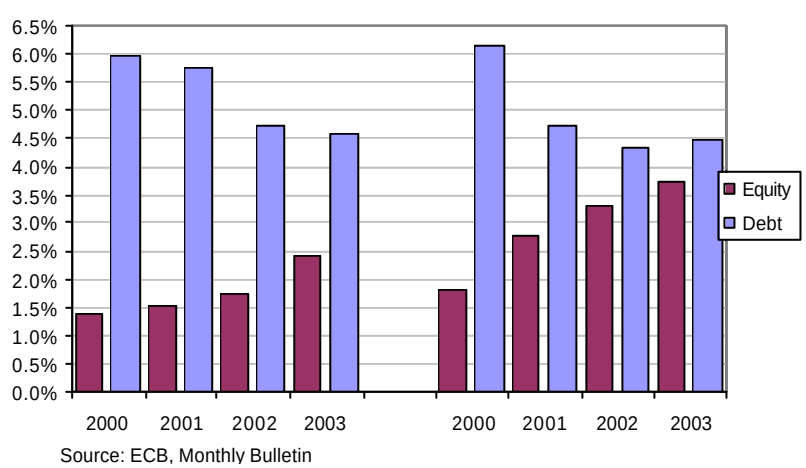


Source: ECB, Monthly Bulletin

Another angle of analysis is given by the combination of the i.i.p. results with the respective recordings on investment income in the current account. Figure 3 is combining the cumulated annual income for equity and debt securities with the respective i.i.p. positions at the end of the previous year, broken down by assets/credits or liabilities/debits.

Figure 3: Euro area implicit portfolio investment yields

(Annual income flow divided by end-year stock of previous year)



Source: ECB, Monthly Bulletin

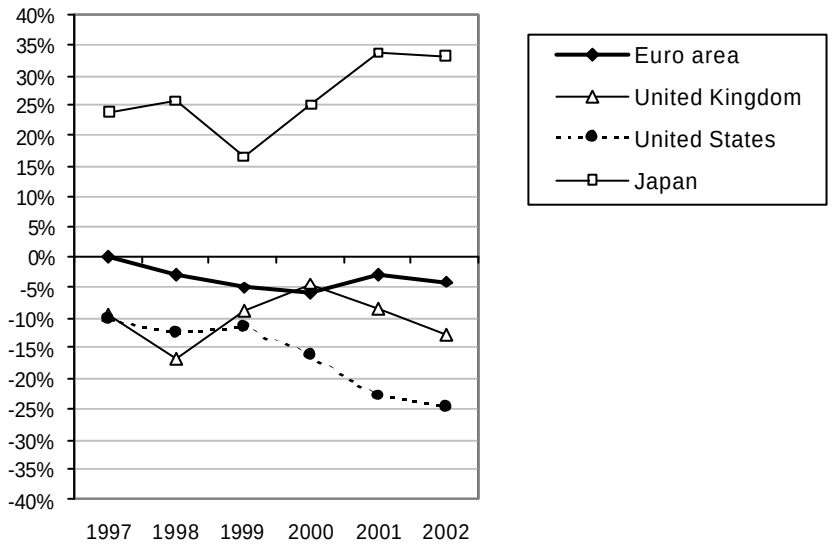
The results indicate a significant difference in this "implicit" yield of the two investment categories. Both on the asset as on the liabilities side the income generated (more precisely paid) by equities is much lower than of fixed income instruments, although the former shows a clear improvement between 2000 and 2003. The relative revenues (accrued) for debt instrument reveals the inverse trend, which is at least in line with gradually falling interest rates in the European and international markets.

International comparisons

Since the formation of the Economic and Monetary Union and the development of adjoined statistics comparisons with other major economies in international investment activities are feasible. A simple but illustrative measure to analyse the developments and trends in the performance of an economy or economic area vis-à-vis the rest of the world is the net i.i.p. (i.e. the net worth of an economy). Figure 4 shows the comparison of the euro area with three major economies over the last years. The picture reconfirms the fact that the euro are i.i.p. is relatively close to balance, a result that is in line with overall tendency of a similarly balanced current account statistics. In contrast, other economies show a much more pronounced net debtor or net creditor position, i.e. a higher difference between the external financial assets and liabilities.

Figure 4: Net International Investment Position

as percentage of GDP



Sources: National sources; ECB, Monthly Bulletin

The concept of an implicit yield of i.i.p. stocks applied for the euro area (see above) can also be used for international comparisons. Table 2 shows the relative earnings for equities and debt securities between 2000 and 2003, thereby revealing clear common trends in the different markets.[16] For equities the asset as well as the liability side show a steady improvement of the yield during the last years in all four economies. Conversely, the results for fix income instruments indicate a decline or at least stagnation, an outcome that would be expected for a period of overall falling interest rates.

Table 2 - Portfolio investment yields, in %
(Annual income flow divided by end-year stock of previous year)

	Assets / credits				Liablities / debits			
	2000	2001	2002	2003	2000	2001	2002	2003
	Equities							
EMU	2.4	2.3	2.6	3.5	1.9	2.2	2.6	3.3
UK	2.4	2.3	2.6	3.5	1.9	2.2	2.6	3.3
US	1.7	1.8	2.3	3.0	1.2	1.3	1.5	1.8
Japan	2.7	2.9	3.6	4.7	0.4	0.5	0.6	1.0
	Debt securities							
EMU	5.9	5.7	4.7	4.6	6.1	4.7	4.3	4.5
UK	5.5	5.2	4.1	4.0	6.5	5.4	4.2	3.7
US	6.8	5.5	4.9	5.3	6.2	5.8	5.0	4.2
Japan	5.9	5.7	4.6	4.8	3.5	2.9	2.4	2.4

Sources: IMF BOP and IFS; US figures for 2003 own estimates

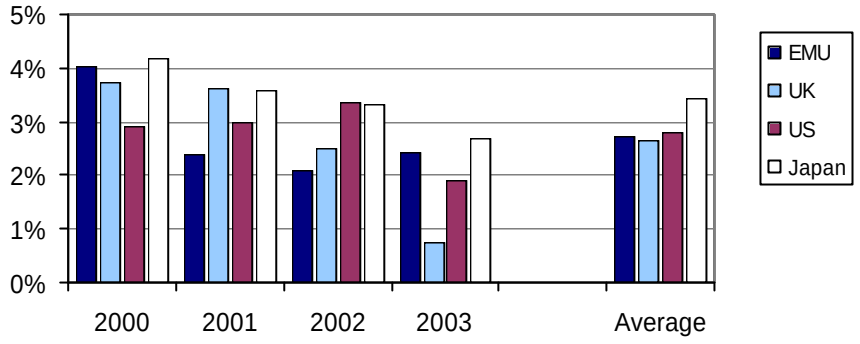
Due to the fact that these results represent (estimates of) *nominal* yields only, they may not be considered the most adequate measure for comparing the revenues generated in different economies. Alternatively, *real* yields for the liability side of the i.i.p.[17] can be generated by subtracting the inflation rate observed in the respective economy. Indeed, as shown for the example of debt securities (Figure 5), the yields achieved by foreign investors reveal (with the exception of UK for 2003) a clear tendency to converge after adjustment by the national consumer price index[18], while the negative trend shown in table 2 is reconfirmed.

[16]) Due to the simplistic methodology by which the figures are derived it may be advisable to focus on trends rather on differences in levels of these indicators.

[17]) Calculating real yields for the asset positions would among other require detailed information on the geographical structure of investments.

[18]) For the euro area the HICP was used.

Figure 5: Portfolio investment liabilities
"real" yields of debt securties
(Annual income flow divided by end-year stock of previous year
minus annual change of Consumer Price Index)



Sources: IMF BOP and IFS; US figures for 2003 own estimates

Looking ahead

The first years of compiling and publishing euro area b.o.p./i.i.p. statistics have characterised by the final implementation of step 2 concepts with a parallel provision of further breakdowns and supplementary statistics.[19]. Back data (at least on best effort basis) were calculated whenever new structures were implemented. The most significant improvements foreseen in the near future will also strongly impact the portfolio investment account.

- The publication of a geographical breakdown of b.o.p./i.i.p. data, i.e. the introduction of step 3 (scheduled for early 2005). Although the asset side of portfolio account is in this context not presenting a special challenge, the NCBs contributing to the euro are aggregate are not requested to provide any building blocks on the geographical breakdown on the liabilities side. Instead the residency of holders of securities issued by euro area residents will be derived from mirror (stock) statistics provided by countries outside the single currency area. More concretely, the annual Co-ordinated Portfolio Investment Survey (CPIS) conducted by the IMF will be the source data for these approximations.
- The extension of the institutional sector classification to the liabilities side of the portfolio investment account (scheduled for 2006). The prerequisite is that from that time on the contributions by NCBs will include on the asset side of the portfolio investment aggregates – for securities issued by euro area residents – the information on the institutional sector of the respective issuers.

[19]) For instance the so called monetary presentation of the b.o.p. figures introduced a new analytical instruments for cross-border investment flows with respect to their impact on monetary aggregates.

- The provision of quarterly i.i.p. will complete the set of cross border financial statistics (scheduled for first half of 2005). Similar to annual i.i.p. data the portfolio investment positions will be purely compiled from stock data

An outstanding challenge in the near future is that the Eurosystem has embarked on the strategy to compile portfolio investment statistics on basis of information on transaction and holdings of individual securities. In fact the recent update of the respective ECB Guideline formulates the goal that from March 2008 on security-by-security (s-b-s) reporting will become the common standard. On the one hand this implies an enormous effort to introduce a s-b-s reporting schema in the different compilation systems operating in the Member States. On the other hand this also requires that the compilers will have access to a consolidated and high quality masterfile on individual securities (shares and fixed income instruments for a start) plus the information on the respective income flows connected to these instruments. To prepare for this the ESCB wide project of a "Centralised Securities Database"(CSDB) has been launched. According to the implementation plan the CSDB, operated by the ECB, will go in production as of begin 2005. During the subsequent year all NCBs of the ESCB (plus some adjoined institutions) will get direct access to the CSDB and take over an active role in the quality management of the reference data provided in the database.

Last but not least a basic and prevailing challenge for the compilation of euro are statistics is the enlargement process of the currency union. The test case was the accession of Greece as of 2001. Theoretically the next years could see other old or new pre-in countries to adopt the single currency. To this end the contributing NCBs as well as the ECB need to prepare the respective back data. Furthermore this also illustrates the need that the methodological standards developed during the last years are applied by all pre-ins and in particular adopted by all new EU member states.