

# **Euro area balance of payments and international investment position compilation**

## **- *Enhanced compilation method* -**

### **1. Introduction**

Balance of payments (b.o.p.) statistics were originally compiled from reports used for the purpose of foreign exchange controls. When such controls were abolished in the context of market integration and the liberalisation of capital controls, b.o.p. compilers adopted banks' settlement data as a primary data source. This meant that the two entries in the b.o.p. – credits/assets and debits/liabilities – were recorded simultaneously, ensuring that accounts were broadly balanced. However, data reported through financial settlements began to diverge from the underlying transactions as a result of market complexities and further integration. Differences in timing, classification of b.o.p. items and geographical allocation resulted in increased euro area net errors and omissions (n.e.o.).

Recognising this reality, the ESCB designed an enhanced compilation system for the “other sectors” (households and corporations that are not monetary financial institutions (MFIs)) with the primary purpose of diminishing euro area net errors and omissions. This mechanism was launched in 2009, i.e. under the previous balance of payments (b.o.p.) statistical standard – BPM5 (IMF's Balance of Payments Manual – 5th Edition).

The enhanced compilation mechanism was discontinued with the introduction of the most recent methodological standard for b.o.p./international investment position (i.i.p.) statistics – BPM6 (6th Edition) – in October 2014, in order to review the methodology and its applicability to the new data set. Now that this review is complete, its reintroduction is deemed appropriate and desirable from a statistical point of view.

The following sections present the enhanced euro area compilation methodology and its impact on the figures for the euro area.

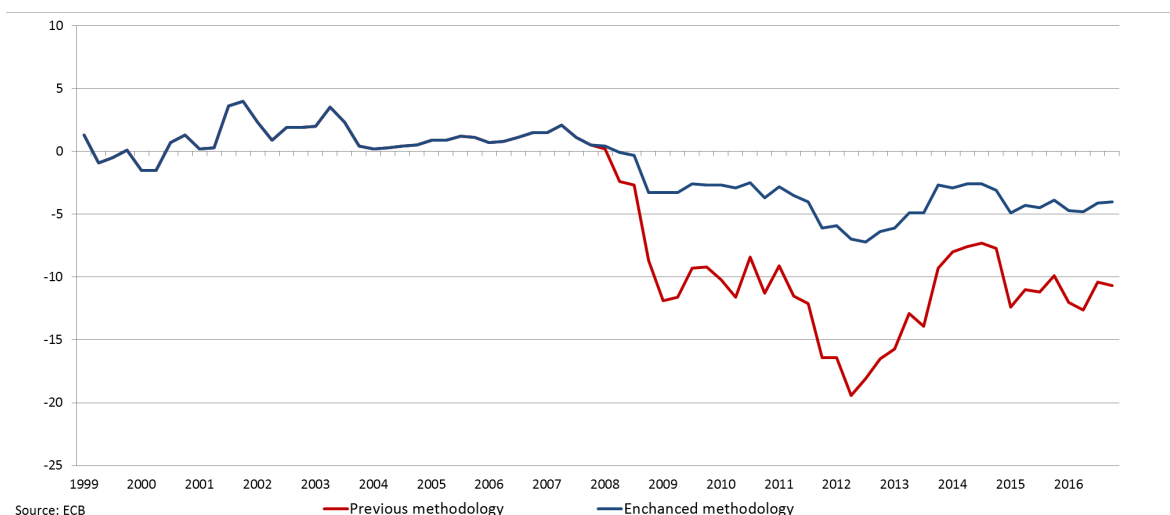
### **2. The enhanced euro area compilation method in detail**

Chart 1 below shows cumulated net errors and omissions. Data before 2008 were estimated by the ECB and were mostly derived from BPM5 aggregates with the necessary and possible corrections to adjust for

methodological differences.<sup>1</sup> As shown in the chart, there is no persistent bias in the euro area net errors and omissions before 2008. Starting in 2008<sup>2</sup>, however, the b.o.p. data develop the negative bias that was present in the BPM5 unadjusted data.

**Chart 1:** Net errors and omissions of the euro area b.o.p.

(cumulated sums; as a percentage of euro area GDP)



More specifically, the rationale for the enhanced compilation rests on three main findings:

- the comparison between the portfolio investment liabilities of each euro area country and assets held by residents in other countries of the world (as extracted from the International Monetary Fund's Coordinated Portfolio Investment Survey (CPIS)), which reveals that the total holdings of euro area equity securities issued in Luxembourg, Ireland and Germany are underestimated;
- asymmetries in the recording of loan transactions between non-banks resident in the euro area, resulting from difficulties in identifying the counterpart country, resulting from limitations in the statistical coverage and the residency classification of special purpose entities;
- locational banking statistics from the Bank for International Settlements, which point to an underestimation of non-banks' deposits held abroad (such deposits are expected to be partly held by euro area households).

Against this background, an enhanced compilation method was designed for these items, preserving, to the extent possible, the properties of the underlying series. This method has four principles:

- i. revisions – more adjustments to time series that are subject to recurrent revisions;
- ii. time series pattern – preserving the pattern of the original series;
- iii. intra-euro area asymmetries – minimising intra-euro area asymmetries in other investment;

<sup>1</sup> The basic principles and methodology used in the estimation process are described in detail in a dedicated explanatory note available in the "Sources and Methods" section of the ECB website [http://www.ecb.europa.eu/stats/balance\\_of\\_payments\\_and\\_external/balance\\_of\\_payments/html/index.en.html](http://www.ecb.europa.eu/stats/balance_of_payments_and_external/balance_of_payments/html/index.en.html).

<sup>2</sup> Data after 2008 are compiled exclusively using BPM6 country data.

- iv. errors and omissions – reducing errors and omissions.

More specifically, the enhanced compilation method is sequential (as described in Table 1): the enhancement is first performed on “investment fund shares”, second on “equity securities”, third on “other investment, loans” and finally on “other investment, currency and deposits”. All items are enhanced as outlined in Table 1. After a specific item is enhanced, n.e.o. are recomputed and used in the enhancement of the subsequent item.

**Table 1:** Overview of the adjusted items

Item	Sectoral/maturity breakdown	Order of enhancement
Portfolio investment/Investment fund shares/Liabilities	Other sectors, Financial corporations other than MFIs	1
Portfolio investment/Equity securities/Liabilities	Other sectors, Non-financial corporations, households and NPISHs, Listed	2
Other investment/Loans/Assets	Other sectors, Financial corporations other than MFIs, Long term	3
Other investment/Currency and deposits/Assets	Other sectors, Financial corporations other than MFIs, Long term	4

The methodology has been applied to the b.o.p. (income and financial transactions) and i.i.p., in the following sequence:

- the four financial transactions described in Table 1 are enhanced;
- end-period positions (i.i.p.) are adjusted to reflect the changes in financial transactions while keeping other flows (revaluations and other changes in volume) unchanged;
- the income account is improved by preserving the relationship (implicit yields) with the adjusted end-period positions;
- in terms of geographical breakdown, adjustments are allocated to offshore financial centres and “other countries” (these are implicitly calculated as the extra-euro area total less all specified extra-euro area geographical breakdowns);
- consistency is also maintained across monthly and quarterly frequencies, as well as between resident and counterpart sectors where applicable.

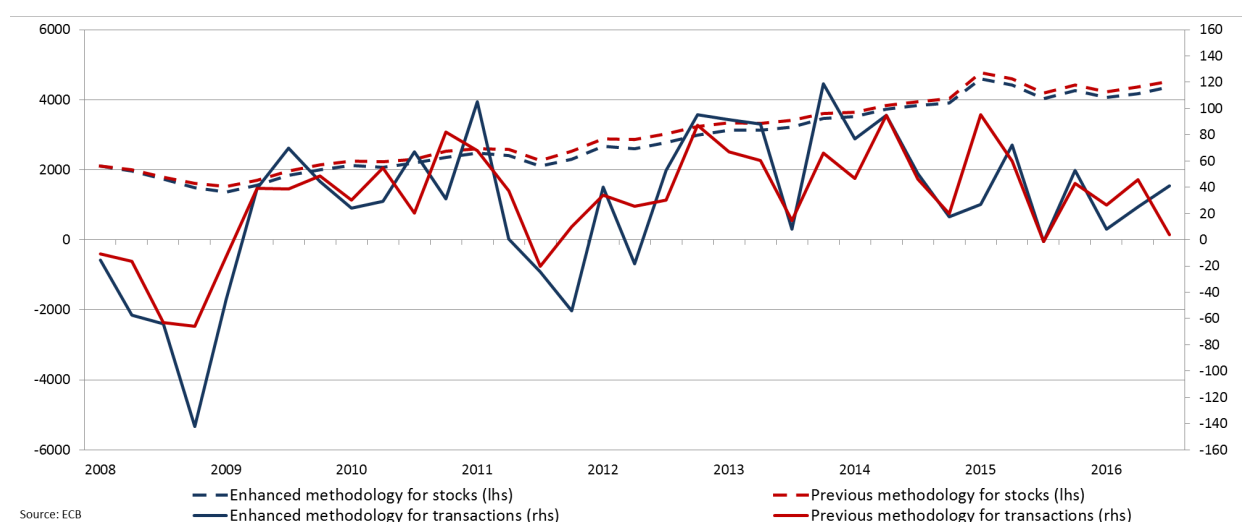
### 3. Results

The enhanced euro area compilation methodology, as described above, reduces net errors and omissions while maintaining the original pattern of the enhanced time series. Its application results in a higher asset position in loans and deposits abroad, and in a lower liability position in equity securities. The new results reduce the euro area errors and omissions for all reference periods from 2004 onwards. For the period from the first quarter of 2004 to the fourth quarter of 2016, the new data resulted in a reduction in the cumulated n.e.o. from 10.7% to 4% of euro area GDP (from €295 billion to €110 billion). The impact on the current account balance through the second-order effect in the income account is not significant.

For the period from the first quarter of 2008 to the fourth quarter of 2016 (BPM6 data), the transactions in portfolio investment equity liabilities (including investment fund shares) decreased by €173 billion, which represents a decrease in outstanding amounts of 4%. In the other investment account, the loan assets of other sectors vis-à-vis non-euro area residents increased by €38 billion (11.9% of the respective i.i.p.), whereas for currency and deposits they increased by €30 billion (4.6% of the underlying position).

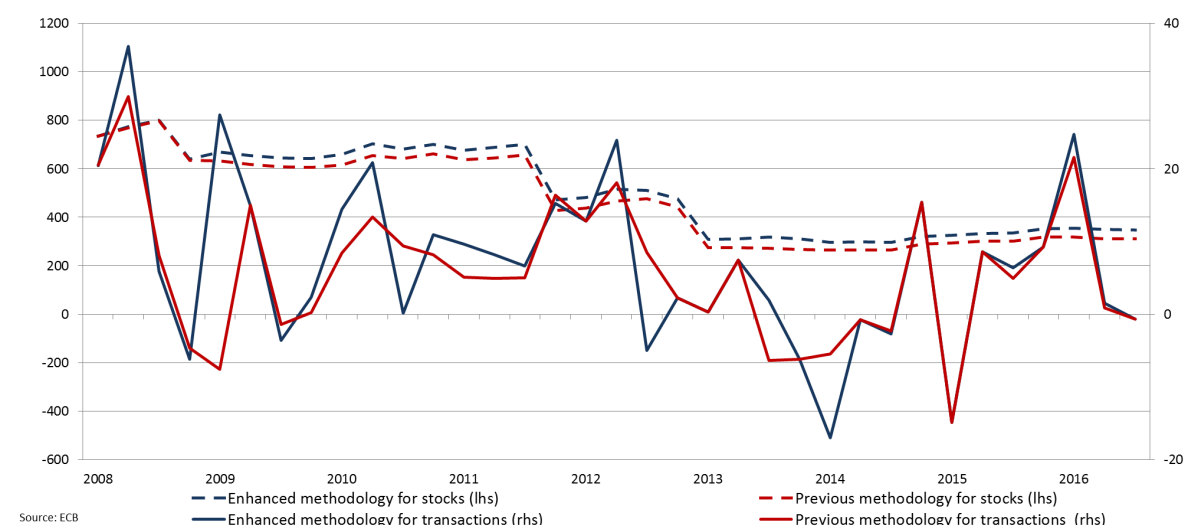
**Chart 2<sup>3</sup>:** Equity securities (including investment fund shares) recorded in portfolio investment liabilities (other sectors)

(EUR billions, outstanding amounts at the end of the period, transactions during the period)

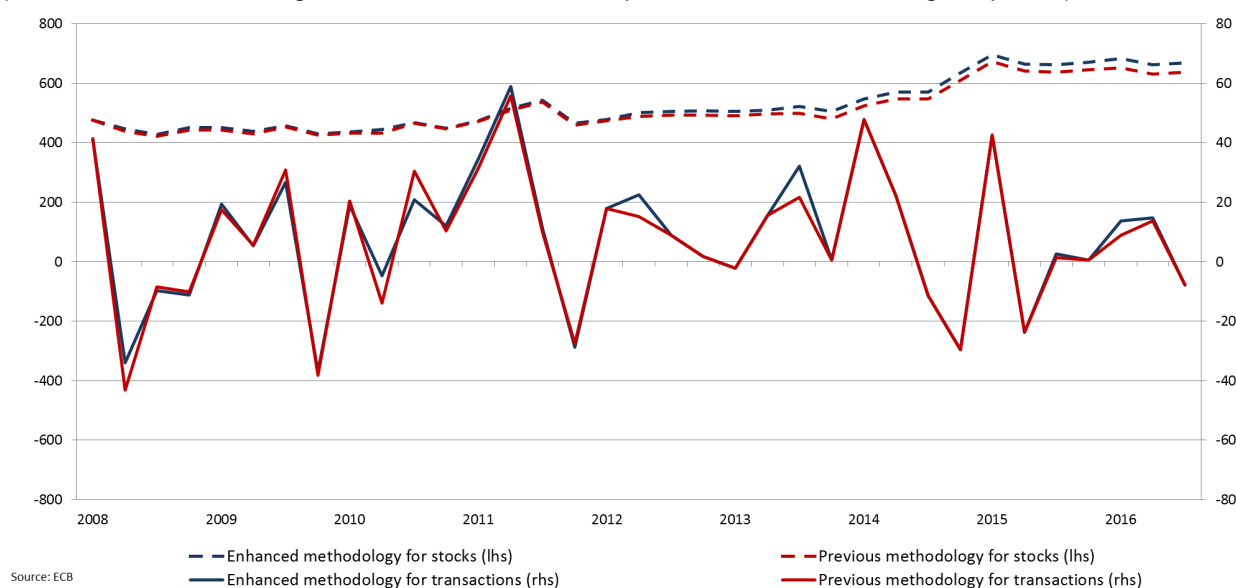


**Chart 3:** Other sectors' loans recorded in other investment

(EUR billions, outstanding amounts at the end of the period, transactions during the period)



<sup>3</sup> Lhs – left hand side of the chart; rhs – right hand side of the chart. This applies to Charts 2,3 and 4.

**Chart 4:** Other sectors' currency and deposits recorded in other investment*(EUR billions, outstanding amounts at the end of the period, transactions during the period)*

As the extra-euro area is adjusted, the more detailed geographical breakdown for both transactions and positions is also recomputed for other investment assets.<sup>4</sup> Only offshore financial centres and the residual “other countries” (calculated implicitly as total extra-euro area except known geographical counterparts) are subject to the enhancement. The shares of these two counterpart areas range between 20% and 25% of the total for currency and deposits, and between 33% and 36% for loans assets (in the period from the first quarter of 2008 to the fourth quarter of 2016), but are assumed to be the cause of most of the discrepancies. The redistribution at this level of geography does not fundamentally change the original series.

Given the change in positions for both portfolio investment liabilities and other investment assets, the income account also needs to be adjusted to account for the decrease in euro area liabilities and the changes in currency and deposits as well as in loan assets. The rates of return are derived by dividing the respective income series for the relevant resident sector by the respective (unadjusted) stocks (i.i.p.). The adjusted income is then computed by multiplying the compiled rate of return by the adjusted position.

<sup>4</sup> A more detailed geographical breakdown for portfolio investment liabilities is not yet available for the euro area.