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**Research Report**

## The monetary presentation of the euro area balance of payments

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EUROPEAN CENTRAL BANK

EUROSYSTEM

**OCCASIONAL PAPER SERIES**

**NO 96 / SEPTEMBER 2008**

**THE MONETARY  
PRESENTATION OF THE  
EURO AREA BALANCE  
OF PAYMENTS**

by Louis Bê Duc, Frank Mayerlen  
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# THE MONETARY PRESENTATION OF THE EURO AREA BALANCE OF PAYMENTS<sup>1</sup>

by Louis Bê Duc<sup>2</sup>, Frank Mayerlen<sup>3</sup>  
and Pierre Sola<sup>4</sup>



In 2008 all ECB publications feature a motif taken from the €10 banknote.

This paper can be downloaded without charge from <http://www.ecb.europa.eu> or from the Social Science Research Network electronic library at [http://ssrn.com/abstract\\_id=1144467](http://ssrn.com/abstract_id=1144467).

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## ABSTRACT

This occasional paper describes the monetary presentation of the euro area balance of payments and its use. The monetary presentation is a tool for assessing the impact of balance of payments transactions involving non-bank residents on monetary developments. The paper explains in detail the principle underlying this approach, i.e. the link between the external counterpart of money, as reflected in the balance sheet of the banking sector, and the balance of payments. From a statistical perspective, it is shown that the monetary presentation of the balance of payments, which is based on international statistical standards, may be applied in any country or currency union.

With regard to euro area statistics, the paper elaborates on the practical implementation of the monetary presentation, while also describing a few approximations and remaining statistical challenges. Finally, the paper assesses how the monetary presentation of the balance of payments has been used for analysing monetary developments in the euro area, and highlights the significant impact of balance of payments transactions on monetary dynamics in certain periods.

Key words: monetary analysis, capital flows, balance of payments

JEL: E51, F40

**NON-TECHNICAL SUMMARY**

The Eurosystem's primary objective is to ensure that price stability in the euro area is maintained over the medium term. To achieve this objective, the European Central Bank (ECB) uses complementary economic and monetary analyses to monitor risks to price stability. Its monetary analysis embodies an assessment of developments in the M3 monetary aggregate, its components, and the so-called counterparts to money, all of which are captured in the consolidated balance sheet of the money issuing sector. One of these counterparts consists of the "net external assets of banks", which is the sum of bank claims minus liabilities vis-à-vis non-euro area residents. An increase in the net position of banks vis-à-vis non-residents often corresponds to an increase in the money stock. For instance, when a euro area exporter receives payment for an export invoice, to be credited to its own account at a euro area bank, this will induce an increase in both the net external assets of banks and the money stock, via the deposit held by the exporter vis-à-vis the domestic bank. Conversely, if a euro area household or a firm acquires financial assets from a non-resident and pays for them via its bank account in the euro area, this will lead, all other things being equal, to a reduction in both money and the net external asset position of banks. In recent years in particular, external financial transactions have had an important impact on monetary dynamics in the euro area.

To monitor the relationship between domestic monetary developments and external transactions, it is necessary to identify those external transactions which influence banks' net external assets and hence may influence the level of money holdings in the euro area. Therefore, the monetary presentation makes a distinction, within the balance of payments statistics, between the external transactions of the money-holding sectors and those of the money-issuing sector. Following international statistical standards, it is possible to establish an explicit statistical link between the external transactions of the money-holding sector and

developments in monetary aggregates. This framework was implemented in 2003 and has been published for the monthly euro area balance of payments statistics since then. It has involved a few statistical approximations whose impact on data quality has been marginal, except in one area – foreign holdings of securities issued by residents – for which more detailed data will become available soon.

The monetary analysis conducted in the euro area since 1999 has shown that external transactions by the money-holding sector, in particular with regard to portfolio and direct investment, have significantly influenced monetary developments over certain periods, in particular from 1999 to 2003. The external counterpart of M3 exhibited an exceptional decline from 1999 to 2001, reflecting large purchases of foreign equity by euro area residents. This was followed by an exceptional increase in the net external assets of banks from 2001 to 2003 in line with a sizeable repatriation of funds by euro area residents when the bursting of the internet bubble and rising geopolitical uncertainty caused a flight towards less volatile assets. Such a reversal of external capital flows was (to a large extent) behind the so-called "portfolio shift" into money which drove monetary dynamics during this period.

## I INTRODUCTION

The Eurosystem's primary objective is to ensure that price stability in the euro area is maintained over the medium term. To achieve this objective, the European Central Bank (ECB) uses thorough economic and monetary analyses to monitor risks to price stability.<sup>1</sup> Its monetary analysis essentially entails assessing developments in the M3 monetary aggregate and its components, and studying its counterparts in the consolidated balance sheet of the banking sector.<sup>2</sup> Analyses of the counterparts to M3 provide insight into monetary developments, in particular in situations where money demand strongly deviates from its equilibrium value as determined by fundamental variables, such as real income and prices.

The net external assets of banks, i.e. bank claims minus liabilities vis-à-vis non-residents, represent one of the counterparts of M3. An increase in the net position of banks vis-à-vis the rest of the world often corresponds to an increase in the money stock. For instance, when a domestic, i.e. euro area, exporter exchanges a receipt from an export against a transfer to its own account at a euro area bank, this will increase both the net external assets of banks and the money stock, via the deposit held by the domestic exporter vis-à-vis the domestic bank. Conversely, if a household or a firm uses its euro area bank account to acquire goods or assets from non-residents, this will lead, all other things being equal, to a reduction both in money and in the net external asset position of banks. In recent years in particular, external transactions have had an important impact on monetary dynamics in the euro area.

To monitor the relationship between domestic monetary developments and external transactions, it is necessary to identify the external transactions that may influence the level of money holdings in the euro area. The “monetary presentation of the balance of payments” is the appropriate framework for this analysis because it distinguishes external transactions of the money-holding sector from

those of money-issuing (and “money neutral”) sectors.

The remainder of the paper is structured as follows. Section 2 clarifies the general concepts underlying this tool and shows how it fits into the current international statistical standards. Section 3 is devoted to the practical compilation of data in the specific context of euro area statistics, explaining in particular how the table on the monetary presentation of the b.o.p. shown in the ECB Monthly Bulletin (Table 7.4 of the Statistical Part) is created. Section 4 illustrates practical uses of the monetary presentation of the b.o.p. for analysing external transactions and their monetary implications in recent years in the euro area.

1 See ECB (1999a, 2000, 2003c and 2004).

2 In the euro area statistics the banking sector is defined as the “Monetary Financial Institutions (MFI)” sector and corresponds to the money-issuing sector (except for certain government deposits): for more details, see Sub-section 3.1.



## 2 GENERAL CONCEPTS OF THE MONETARY PRESENTATION OF THE BALANCE OF PAYMENTS

### 2.1 ECONOMIC BACKGROUND: REASONS FOR A MONETARY PRESENTATION OF THE BALANCE OF PAYMENTS

The interrelationship between external transactions and domestic monetary developments has long been at the core of monetary analysis, among both theoreticians and central bank practitioners. This may be traced back at least to Jean Bodin.<sup>3</sup> In “Response to the Paradoxes of Malestroit” (1568), Bodin argued that the universal rise in prices in Europe was due mainly to the increase in the supply of gold and silver imported from America, and not only, as Malestroit had stated, to debasement practices. The mercantilist literature of the 17th and 18th centuries, as theorised by authors like R. Cantillon or D. Hume, paid close attention to the mutual relationship between the stock of money, domestic prices and external balances. This interrelationship was formalised by the “classical economists” (e.g. Ricardo and Mill) in the 19th century in the context of the gold standard, which ensured, at least in principle, an automatic correction of external imbalances through outflows/inflows of metal and associated changes in domestic prices.<sup>4</sup>

The disappearance of the gold standard in 1914, in spite of various attempts to reform it in the inter-war period, increased the autonomy of monetary policy from the external balance. Hence, the focus shifted to the role of money and credit developments in external imbalances. In particular, in the 1950s and 1960s the monetary approach to b.o.p. developed by the International Monetary Fund (IMF) and the University of Chicago gave a prominent role to money and credit developments when analysing external transactions and related balances, an aspect which the early Keynesian economists had hitherto neglected on empirical rather than theoretical grounds. Such a monetary approach to the b.o.p. focused on the important interrelation between fluctuations in the external

trade balance, and domestic real and monetary growth and price dynamics.<sup>5</sup>

In the 1970s, the adoption of floating exchange rates in several countries further lessened the external constraint on domestic monetary policy and contributed, together with the gradual liberalisation of capital flows, to an important development in international financial transactions in the 1980s and 1990s. In this new regime, the economic analysis of the b.o.p. has evolved from focusing primarily on the current account to analysing the overall potential spillover effects of external flows on monetary variables and asset prices across countries.

In this context, the need emerged to reconcile monetary statistics and b.o.p. statistics as closely as possible by identifying and analysing the money-holding sectors’ external transactions. Accordingly, several central bank analyses have since examined this aspect. For instance, an article published by the Bank of England (1978) entitled “External and Foreign Currency Flows and the Money Supply” described in detail the statistical links between the b.o.p. and the money supply, while acknowledging that “in practice, an exact reconciliation between the two sets of figures as published is not possible, mainly because many of the items in the b.o.p. do not differentiate between domestic sectors”. De Nederlandsche Bank (1991) described how national b.o.p. data could be reconciled with the transactions derived from the monetary statistics by using a monetary presentation of the b.o.p. labelled “Balance of the Non-monetary Sectors”. Other studies include the Deutsche Bundesbank (1993) analysis of external transactions’ impact on bank liquidity, the money stock and bank lending, and the Banque de France (1999) study

<sup>3</sup> See Bodin (1568).

<sup>4</sup> See Gibson (1996).

<sup>5</sup> See Polak (2001) and Frenkel and Johnson (1976). It should be noted that the “monetary presentation of the balance of payments” described in this occasional paper is in itself a statistical framework which is logically independent from a specific economic theory, such as the “monetary approach to the balance of payments”. However, such a statistical framework appears appropriate to approaches focusing on the interrelation between external transactions and domestic monetary and financial developments.

on money creation/destruction in the euro area resulting from transactions with non-euro area residents.

## 2.2 STATISTICAL FRAMEWORK: LINKING TRANSACTIONS IN THE BANKING STATISTICS WITH THE BALANCE OF PAYMENTS

The key principles underlying the monetary presentation of the b.o.p. may be summarised as follows: (1) external transactions of the banking sector are part of both the b.o.p and the banking statistics<sup>6</sup>; and (2) external transactions of the banking sector mirror the transactions of the non-banks in the b.o.p. (for a definition of “external transactions”, see Box 1). These two statements establish a link between the external transactions of the non-banks, as included in the

b.o.p., and the balance sheet of the banking sector, including money.

Chart 1 below illustrates how external transactions in the banking statistics correspond to the b.o.p. Column 1 reflects transactions of the resident banking sector, consisting of the banking sector’s domestic (row “a”) and external (rows “b” and “c”) transactions. Rows (b) and (c) reflect the transactions theoretically covered by the b.o.p., consisting of banking sector external transactions (with either residents or non-residents) and non-banking sector external transactions.

6 The “banking statistics” referred to here are the balance sheet of the banking sector and the transactions derived from this balance sheet. See ECB (2002).

Chart 1 Statistical coverage of the b.o.p. and banking statistics<sup>1)</sup>

	Banking sector transactions (1)	Non-banking sector transactions (2)
Transactions between residents involving domestic assets (a)	■	
Transactions between residents involving foreign assets (b)	■	■
Transactions between residents and non-residents (c)	■	■

1) For definitions, see Box 1.

### Box 1

#### TERMINOLOGY: EXTERNAL ASSETS, EXTERNAL TRANSACTIONS, B.O.P TRANSACTIONS

The following definitions apply in this Occasional Paper.

According to the System of National Accounts 1993 (SNA93), an *economic flow* reflects the creation, transformation, exchange, transfer or extinction of economic value. Among flows, a *transaction* is an economic flow between institutional units by mutual agreement.

*Financial transactions* reflect the net acquisition of financial assets and the net incurrence of liabilities for each type of financial asset category.

*External assets* are financial assets issued by non-residents and held by residents. *External liabilities* are liabilities issued by residents and held by non-residents.

*External transactions or b.o.p. transactions* comprise (i) transactions between residents and non-residents, as well as (ii) transactions between residents involving external assets and liabilities.

*External transactions* are reported in the *balance of payments statistics* (“b.o.p.”). The banking sector’s external transactions, i.e. those leading to an increase/decrease in external assets or external liabilities of the banking sector<sup>1</sup>, are also reported in the *banking statistics*. These banking statistics report both *positions* (i.e. the balance sheet of the banking sector) and *transactions* that contribute (on top of valuation effects and further changes in volume) to the changes in positions. Part of the liabilities in the banking balance sheet constitute the monetary aggregates. In this banking balance sheet, the balance of external assets and external liabilities is called *net external assets of the banking sector*.

Furthermore, the banking balance sheet may be split between (i) the monetary aggregate (broad money) and (ii) its *counterparts*, i.e. all other items in this balance sheet, broken down into domestic credit (i.e. loans to and holdings by banks of securities issued by resident non-banks), net external assets and other items.

<sup>1</sup> The external transactions of the banking sector, as defined in this paper, include not only financial, but also non-financial transactions. In practice, non-financial transactions are usually not separately identified in the banking statistics, which are based on the reporting of positions.

### 2.2.1 IDENTIFYING BANKS’ EXTERNAL TRANSACTIONS IN THE BANKING STATISTICS AND IN THE BALANCE OF PAYMENTS

International statistical standards regarding banking statistics are provided in the IMF’s Monetary and Financial Statistics Manual (MFSM). This manual recommends the recording of *positions and transactions of banks* as a tool for monetary policy formulation and monitoring.<sup>7</sup> Transactions are compiled within a double-entry accounting framework, which means that each transaction has one or more counterpart transactions.

The IMF Balance of Payments Manual (5th edition, 1993, henceforth “BPM5” in this paper) sets out the international standards regarding the *b.o.p.*, which provides a statistical presentation of cross-border *transactions* between residents of an economic territory and residents of the rest of the world, as well as transactions between resident sectors in foreign assets or liabilities held by non-residents.<sup>8</sup>

Corresponding *positions*, the so-called international investment position (i.i.p.), are described in the same manual. The BPM5 requires the identification of four resident sectors within the b.o.p., namely monetary authorities, general government, banks and other resident sectors (including in particular other financial institutions, non-financial corporations and households).

Following the definitions in Box 1, the external transactions in the banking statistics should be the b.o.p. transactions of the banking sector; both the banking statistics and the b.o.p. statistics are in principle consistent with the general

<sup>7</sup> While the Balance of Payments Manual refers to “banks”, corresponding entities are called “other depository corporations” in the MFSM.

<sup>8</sup> The forthcoming 6th edition of the IMF Balance of Payments Manual (BPM6) is expected to exclude the exchange of external assets between residents (and that of external liabilities between non-residents) from the balance of payments statistics, though acknowledging the usefulness of considering this type of transactions for specific purposes, e.g. the monetary presentation.

framework of the financial accounts, described in the System of National Accounts (SNA93). In particular, most recording principles are identical, e.g. the valuation principle (broadly speaking, transactions are recorded at their transaction value, and positions at market price), the time of recording (the so-called accrual principle, corresponding in general to the date of change in ownership), the residency criterion (based on the centre of economic interest concept), and the sector delineation (the “banking sector” is defined in the b.o.p. statistics in the same way as in the SNA93 and the MFSM).<sup>9</sup>

### 2.2.2 DERIVING THE LINK BETWEEN THE BALANCE OF PAYMENTS TRANSACTIONS OF THE NON-BANKING SECTORS AND MONEY

B.o.p. transactions may be split into: (i) external transactions by the resident non-banking sectors, and (ii) external transactions by the resident banking sector. In addition, since the b.o.p. is also based on the double-entry principle, the sum of transactions reported in the b.o.p. is equal to zero.<sup>10</sup> Therefore, the transactions in net external assets of the resident non-banking sector are equal, with opposite sign, to the transactions in net external assets of the banking sector in the b.o.p. In turn, the banking sector’s external transactions as reported in the b.o.p. should be equal to banks’ external transactions as derived from their balance sheet. These two relations may be formalised by the following equations:

First, the accounting identity between the transactions of the banking sector can be expressed as follows<sup>11</sup>:

$$ETB + \Delta DC - \Delta M + OTR = 0$$

where ETB = Net external transactions of banks; M = broad money (liabilities); DC = domestic credit; OTR = other (net) transactions vis-à-vis residents; and  $\Delta$  = the transactions. A positive sign means an increase (and a higher increase or a lower decrease in assets than in liabilities, in the case of net items like ETB). Rearranging leads to:

$$ETB = \Delta M - \Delta DC - OTR \quad (1)$$

Second, we can express an equation reflecting the accounting identity in b.o.p. Given that the sum of b.o.p. transactions is by definition equal to zero, one may write:

$$ETB + ETN = 0$$

where ETB = (financial + non-financial) external transactions of the banking sector recorded in the b.o.p. and ETN = (financial + non-financial) external transactions of the non-banking sector recorded in the b.o.p. Rearranging leads to:

$$ETB = - ETN \quad (2)$$

As pointed out in the previous section, the left-hand sides of equations (1) and (2) are conceptually identical, both reflecting the external transactions of the banking sector as derived from either the banking sector balance sheet (equation 1) or the b.o.p. statistics (equation 2). By combining (1) and (2), we obtain:

$$\Delta M = - ETN + \Delta DC + OTR \quad (3)$$

The latter identity expresses the (accounting) relationship between the external transactions of resident non-banks and the transactions in money ( $\Delta M$ ) held by resident non-banks.

### 2.3 INTERPRETING THE LINK BETWEEN EXTERNAL TRANSACTIONS OF THE NON-BANKING SECTORS AND MONEY

The above equation (3) establishes an accounting relation between the external transactions of non-banks and money. However, this does not imply that all external transactions of non-banks will impact money. Apart from certain measurement issues (see Section 3), external transactions may have no impact on broad money in the following cases:

9 Cf. paragraph 516 of the BPM5, and paragraph 92 of the MFSM.

10 Those transactions settled via foreign banks or other means give rise to two opposite transactions of the non-banking sector. For detailed examples, see Annexes 2 and 3.

11 Equation derived from paragraphs 373 and 374 of the MFSM.

- First, external transactions of non-banks may affect the banking statistics without affecting money.
- Second, external transactions of non-banks may have no impact on the banking statistics.

#### EXTERNAL TRANSACTIONS OF NON-BANKS MAY AFFECT THE BANKING STATISTICS WITHOUT ULTIMATELY AFFECTING MONEY

The macroeconomic identity reported in equation (3) does not imply a systematic functional relation between non-banks' external transactions and money. For instance, residents may sell foreign bonds to banks in exchange for cash and invest the proceeds in longer-term securities issued by domestic banks. In that case, the rise in the external assets of MFIs is balanced by a rise in the longer-term financial liabilities of banks, not in money. This indeterminacy is not specific to the external counterpart of money, but a general feature of the analysis of counterparts to money: each counterpart of money, for instance, domestic loans or credit to government, is linked to money and other counterparts through an accounting identity. However, there is no one-to-one functional relation between two components in the banking statistics.

#### EXTERNAL TRANSACTIONS MAY HAVE NO IMPACT ON THE BANKING STATISTICS

While most counterpart transactions of external transactions of the domestic non-bank sector impact domestic bank liabilities, because the former typically use their account with a domestic bank to settle the external transaction<sup>12</sup>, this is not always the case. In fact, a number of b.o.p. transactions are settled without any impact on domestic bank accounts. As an example, mergers and acquisitions (M&As) may be financed by an exchange of shares, which do not directly affect bank deposits and, hence, monetary aggregates.

More generally, cases in which external transactions by non-banks do not give rise to counterpart payments through bank accounts held with domestic banks may be summarised as follows:

- 1) Transactions not involving any payment, such as:
  - M&As settled in shares;
  - transactions settled via intra-group claims and debts, which may be netted out without a cash payment (recorded under “direct investment – other capital – non-bank sectors”);
  - reinvested earnings, i.e. profits (or losses) of affiliates abroad, as well as those of resident affiliates of non-resident companies.
- 2) Payments via accounts abroad: mainly bank accounts abroad held by non-banks, recorded under “other investment – currency and deposits – assets – non-banking sectors”.

Two of these items can usually be easily identified, i.e. M&As settled in shares and reinvested earnings, which are often compiled separately for the b.o.p. reporting. The other two, i.e. payments via accounts abroad or intra-group accounts, are usually only of analytical significance if they show large *net* transactions over the period under study. Otherwise, they often reflect transactions which would have given rise to offsetting payments without affecting banks' net external assets and monetary aggregates (see Annexes 1 and 2 for further details).

<sup>12</sup> This impact may not be immediate, as the settlement may not be simultaneous with the transaction: for instance, a number of exports and imports give rise to trade credits. The latter are explicitly identified in the b.o.p., so that analysts can take them into account. For most other items in the b.o.p., timing differences are rather short, and do not significantly distort the data analysis.

### 3 IMPLEMENTING THE MONETARY PRESENTATION OF THE B.O.P. FOR THE EURO AREA

The specific statistical framework implemented in the euro area to analyse the net external assets of the banking sector follows the principles described in Section 2 of this paper. However, it includes some adaptations, in particular to bring the statistical framework fully into line with the definition of broad money applied in the euro area, and consequently with the counterparts to broad money.<sup>13</sup> This section clarifies the specific terminology and statistical concepts applied, and provides a detailed explanation of how the table on the monetary presentation of the b.o.p. published in the ECB Monthly Bulletin is compiled. It also elaborates on the limitations currently faced in terms of fully implementing this conceptual framework and the challenges that the regular compilation of such data creates.

#### 3.1 CURRENT STATISTICAL FRAMEWORK

The euro area monetary statistics and b.o.p. are in line with the international statistical standards described in Section 2. Some definitions are more precise than the ones fixed by these standards, which has led in various cases to the use of a slightly different terminology. In particular, the main broad monetary aggregate in the euro area is M3 (see detailed description in ECB, 1999a), and the money-issuing sector (“banks”) refers to the “Monetary Financial Institutions (MFIs)” sector. MFIs include the Eurosystem, resident credit institutions (as defined in Community law) and all other resident financial institutions whose business is to receive deposits and/or close substitutes for

deposits from entities other than MFIs, and to grant credit and/or invest in securities for their own account (at least in economic terms). The latter group consists predominantly of money market funds (see ECB, 1999b).

#### 3.1.1 EXTERNAL ASSETS AND LIABILITIES OF THE MFI SECTOR

In principle, the common methodological framework of the b.o.p. and the balance sheet of the MFI sector permits the identification of the external asset and liability categories in both sets of statistics. MFIs’ net external assets include the following components as defined in the MFI balance sheet:

**Table 1 Components of the euro area MFIs’ external assets and external liabilities<sup>1)</sup>**

External assets	External liabilities
Shares and other equity	Money market fund shares/units
Securities other than shares	Debt securities up to two years
Loans	Deposits
Gold and gold receivables	
Receivables from the IMF	

1) External assets and liabilities do not have the same coverage in terms of instruments, in particular as MFIs usually have no (or limited) information on the holders of the securities they issue. This implies that external liabilities do not include shares and other equity or securities other than shares, except debt securities up to two years. Instead it is assumed, by convention, in the MFI balance sheet, that these instruments are held by the domestic sectors.

Given the differences in terminology and classifications used for MFI balance sheet statistics as compared with the b.o.p., a set of correspondences has to be established. In spite of the differences, both statistics apply very

<sup>13</sup> International statistical standards do not provide a definition of money, which is deemed to depend on various factors to be assessed at national level. See e.g. the MFSM, paragraphs 282 and 283.

**Table 2 Correspondence between the consolidated MFI balance sheet and the b.o.p. with regard to instrument definitions and terminology**

MFI (consolidated) balance sheet terminology	Balance of payments terminology
Shares and other equity	Direct investment “equity capital” and portfolio investment “equities”
Securities other than shares	Portfolio investment debt securities
Loans and deposits	Other investment and direct investment “other capital”
Gold and gold receivables	Monetary gold
Receivables from the IMF	Special Drawing Rights and reserve position in the IMF
Money market fund shares/units	<i>Included in portfolio investment</i>
Debt securities up to two years	<i>Included in portfolio investment</i>

similar underlying concepts, with only a few inconsistencies (described in Sub-section 3.2.1 of this paper). Table 2 shows how the data may be compared, item by item.

### 3.1.2 IDENTIFYING THE MFIS' NET EXTERNAL ASSET CATEGORIES IN THE EURO AREA BALANCE OF PAYMENTS

In principle, the euro area b.o.p. should be split into two parts: (i) the external transactions of the MFI sector, and (ii) the external transactions of the non-MFI sector, along the lines stated in Section 2 of this paper. However, for practical reasons (see Sub-section 3.2.2), the distinction is made between (i) the transactions mirroring

those derived from “net external assets”, as defined in the consolidated balance sheet of the MFI sector, and (ii) other transactions. Table 3 below illustrates the allocation for the first quarter of 2007.

Money market fund shares/units and debt securities of up to two years held by non-euro area residents are not separately identified within the b.o.p. collection systems.<sup>14</sup> However, they are included in the net external assets (as external liabilities) of the MFI sector, as

<sup>14</sup> These breakdowns are not required by b.o.p. international statistical standards.

Table 3 Euro area b.o.p.

(EUR billions; Q1 2007)				
No	Item	Item included in MFI “net external assets”	Item not included in MFI “net external assets”	Total
(a)	Current account		-0.2	-0.2
(b)	Capital account		5.0	5.0
(c)	Direct investment equity and reinvested earnings abroad – MFI sector	-4.7		-4.7
(d)	Direct investment equity and reinvested earnings abroad – non-MFI sector		-54.9	-54.9
(e)	Direct investment – other capital abroad – MFIs	2.1		2.1
(f)	Direct investment – other capital abroad – non-MFIs		-34.5	-34.5
(g)	Direct investment equity and reinvested earnings in the euro area – MFI sector <sup>1)</sup>		0.9	0.9
(h)	Direct investment equity and reinvested earnings in the euro area – non-MFIs		47.4	47.4
(i)	Direct investment – other capital in euro area – MFIs	-0.8		-0.8
(j)	Direct investment – other capital in euro area – non-MFIs		29.9	29.9
(k)	Portfolio investment – equity assets – MFI sector	-19.0		-19.0
(l)	Portfolio investment – equity assets – non-MFI sector		1.4	1.4
(m)	Portfolio investment – debt securities assets – MFIs	-73.7		-73.7
(n)	Portfolio investment – debt securities assets – non-MFIs		-56.0	-56.0
(o)	Portfolio investment – equity liabilities		113.5	113.5
(p)	Portfolio investment – debt securities liabilities		163.7	163.7
(q)	Financial derivatives		-16.4	-16.4
(r)	Other investment – MFI sector – assets	-295.7		-295.7
(s)	Other investment – non-MFI sector – assets		-77.4	-77.4
(t)	Other investment – MFI sector – liabilities	272.1		272.1
(u)	Other investment – non-MFI sector – liabilities		8.5	8.5
(v)	Reserve assets – monetary gold	0.4		0.4
(w)	Reserve assets – Special Drawing Rights and reserve position in the IMF	0.8		0.8
(x)	Reserve assets – currency and deposits	-3.6		-3.6
(y)	Reserve assets – equity securities	0.4		0.4
(z)	Reserve assets – debt securities	0.3		0.3
(aa)	Reserve assets – financial derivatives and other claims	0.0		0.0
(ab)	Errors and omissions <sup>2)</sup>		-9.5	-9.5
(ac)	Total	-121.4	121.4	0.0

1) The reason why this item is not included in MFI net external assets is explained in Sub-section 3.2.2.

2) By construction, errors and omissions are allocated to the non-MFI sector.

**Table 4 Sector identification of certain items included in the b.o.p.**

(Q1 2007; EUR billions)

No	Item	Item included in MFIs' "net external assets"	Item not included in MFIs' "net external assets"	Total
(ad)	Portfolio investment – equity – money market fund shares/units	+18.7	-18.7	0
(ae)	Portfolio investment – debt securities with a maturity up to two years and issued by euro area MFIs	+12.9	-12.9	0

defined in the MFI consolidated balance sheet. The monetary presentation of the b.o.p. is adjusted accordingly, as shown in Table 4.

The adjustments described above in Tables 3 and 4 allow the ECB to produce the monetary presentation of the b.o.p. in the ECB Monthly Bulletin, as shown in Table 5. The table in the Monthly Bulletin focuses on the items of the column entitled "items not included in MFIs' net external assets" in Tables 3 and 4 above, to support the explanation of the developments in the MFIs' net external assets.

Table 5 summarises the transactions which mirror the changes in the net external assets of the euro area MFIs. The sum of columns 1 to 10 represents the total external transactions of non-MFIs, i.e. ETN in equation (2) in Section 2.2. Column 12 represents the total external transactions of MFIs, i.e. ETB in equation (1) in Section 2.2.

Apart from portfolio investment liabilities, where the specific compilation method applies as explained above (cf. Table 4), all columns of Table 7.4 of the "Euro area statistics" section of the ECB's Monthly Bulletin refer to the standard b.o.p. items as presented in Sub-sections 7.1 to 7.3. The analysis of the monetary presentation may therefore be further supplemented by more detailed breakdowns available in the euro area b.o.p.

### 3.2 LIMITATIONS AND CHALLENGES

Compiling the monetary presentation of the b.o.p. raises challenges for statisticians. This is particularly true with respect to monitoring the consistency between the two data sources, i.e. the b.o.p. and the MFI consolidated balance sheet, and identifying MFI versus non-MFI transactions. Furthermore, the balancing item of the b.o.p., labelled "errors and omissions", may distort the analysis, if significant.

**Table 5 Monetary presentation of the euro area b.o.p. in the ECB Monthly Bulletin**

(Q1 2007; EUR billions)

B.o.p. items balancing transactions in the external counterpart of M3											Memo: Transactions in the external counterpart of M3
Current and capital account balance	Direct investment		Portfolio investment			Other investment		Financial derivatives	Errors and omissions	Total of columns 1 to 10	
	By resident units abroad (non-MFIs)	By non-resident units in the euro area	Assets Non-MFIs	Liabilities		Assets Non-MFIs	Liabilities Non-MFIs				
1	2	3	4	5	6	7	8	9	10	11	12
a+b	d+f	g+h+j	l+n	o+ad	p+ae	s	u	q	ab	sum	
4.8	-89.5	78.3	-54.6	94.8	150.8	-77.4	8.4	-16.4	-9.5	89.7	101.6

1) Excluding money market fund shares/units.

2) Excluding debt securities with a maturity up to two years issued by euro area MFIs.



### 3.2.1 DATA CONSISTENCY BETWEEN MFI BALANCE SHEET STATISTICS AND THE BALANCE OF PAYMENTS

Even though in principle the b.o.p. and the MFI balance sheet both comply with consistent international statistical standards (cf. Sub-section 2.1 above), a number of differences can be identified with regard to their practical implementation, including the use of different statistical sources, differences in the timeliness of the data reporting and a number of differences related to simplifications in one or the other reporting system, which are accepted for the sake of reducing the reporting burden. The following points may be noted:

#### PRACTICAL DIFFERENCES RESULTING FROM THE USE OF DIFFERENT SOURCES

In terms of compilation systems, the transactions in the b.o.p. for the MFI sector are, in some countries, directly reported by the MFIs on the basis of *transactions*, whereas in the MFI balance sheet, transactions are derived from differences in *stock data* (adjusted for reclassifications, foreign exchange rate changes

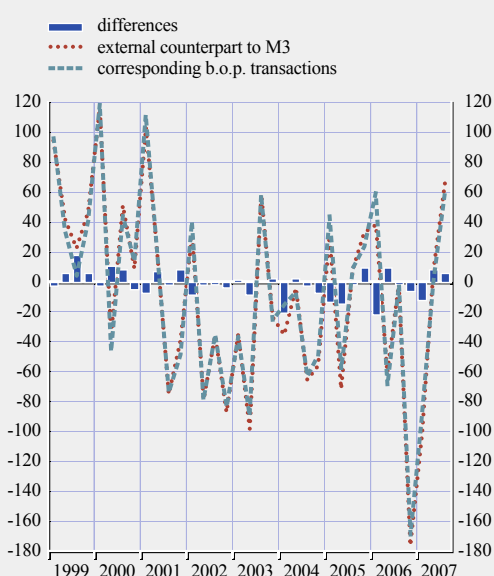
and price revaluations). In practice, this may give rise to a number of differences in the resulting net transaction data.

#### LIMITATIONS RELATED TO DIFFERENCES IN THE TIMELINESS OF DATA REPORTING

The euro area b.o.p. and monetary statistics are collected according to different deadlines: b.o.p. data are to be provided within 30 working days of the reference period, whereas monetary data are to be reported within only 15 working days. This short time frame for the production of monetary data is one of the main reasons why the methodological framework for monetary statistics is largely based on balance sheet reporting, and therefore business accounting rules, which in some cases deviate from statistical accounting rules. The b.o.p. statistics, for which the timing constraint is less stringent, and for which homogenous rules have to be applied across various sources, tend to conform more with the statistical accounting rules, e.g. regarding the valuation of some transactions or the definition of certain instruments.

Chart 2 Comparison between transactions for the external counterpart to M3 and corresponding transactions in the euro area b.o.p.

(EUR billions)



Source: ECB.

In general, the existence of two distinct reporting schemes implies the risk of slight differences in the data reported by resident MFIs. Over the longer term this may suggest the need to adopt a single reporting scheme for both statistics or to develop a top-down approach to resolve discrepancies in the framework for compiling integrated euro area quarterly sector accounts.<sup>15</sup> In the short run it has led b.o.p. and MFI balance sheet compilers to permanently monitor data consistency. As can be seen in Chart 2 below, which summarises quarterly transactions from 1999 to 2007, discrepancies have been rather limited in practice since 1999, as compared with the underlying (net) transactions.

### 3.2.2 DISTINCTION BETWEEN BALANCE OF PAYMENTS TRANSACTIONS BY MFIS AND BY NON-MFIS

As explained in Sub-section 3.1.2, in principle the monetary presentation involves splitting

<sup>15</sup> See also Section 3.2.2.

b.o.p. transactions into those of the MFI sector and those of the non-MFI sector, since only the latter can simultaneously affect the net external assets of the banking sector and broad money M3.

However, in practice, some b.o.p. transactions are not split between the MFI and non-MFI sectors. As explained in more detail below, these exceptions refer to (a) current and capital account transactions of the MFIs, (b) foreign direct investment in euro area MFIs in the form of equity and reinvested earnings, (c) financial derivatives transactions of the MFI sector, and (d) transactions in equity and long-term debt securities liabilities of the MFI sector in portfolio investment.

#### **CURRENT AND CAPITAL ACCOUNT**

There is no breakdown in the balance of payments between the current and capital account of the MFI and the non-MFI sector, even though only the transactions reported in the current and capital account of the non-MFI sector can potentially affect money. The bias introduced by this lack of a breakdown is deemed to be relatively small.

#### **DIRECT INVESTMENT IN RESIDENT MFIS BY NON-RESIDENTS**

Direct investment (equity and reinvested earnings) on the liability side of the MFI sector is not included in the b.o.p. transactions that reflect changes in net external assets of the MFI sector, as these transactions are not a component of the external liabilities of the consolidated MFI balance sheet. Again, the amounts involved are usually relatively limited.

#### **FINANCIAL DERIVATIVES**

Transactions in financial derivatives with non-residents of the euro area are not separately identified in the MFI balance sheet, nor does the b.o.p. specifically identify the transactions in derivatives for this sector. As in previous cases, given the limited size of the overall “financial derivatives” item in the b.o.p., recorded on a net basis, this currently does not entail any significant distortion.

#### **PORTFOLIO INVESTMENT LIABILITIES**

Regarding portfolio investment liability transactions, the respective item in the monetary presentation of the euro area b.o.p. is derived by calculating the difference between data from two sources, namely (i) b.o.p. transactions for equity and debt securities covering all sectors; and (ii) transactions compiled within the framework of the consolidated MFI balance sheet that refer to non-euro area resident holdings of short-term negotiable instruments, as explained in Section 3.1.2. This compilation is conceptually in line with the definition of the net external assets of the MFI sector, which currently excludes purchases and sales of equity as well as long-term debt securities issued by euro area MFIs (see Sub-section 3.3.2 regarding work under way in this respect).

#### **3.2.3 ERRORS AND OMISSIONS IN THE B.O.P.**

While in theory, b.o.p. transactions sum up to zero, as explained in Section 2.2.1, in practice this is not always the case owing to, for example, incomplete or overlapping coverage, non-uniform valuation, inconsistent recording times, or inconsistent conversion practices. The net discrepancy observed between total credits and debits in the b.o.p. is recorded under the term “errors and omissions”. Given that, by construction, the monetary presentation of the b.o.p. intends to identify b.o.p. items included in the external assets and liabilities of the banking/MFI sector, it allocates these errors and omissions to the “other” sectors.

#### **3.3 PROSPECTS FOR FURTHER STATISTICAL DEVELOPMENT**

Statistical enhancements currently in preparation should further improve the euro area monetary presentation of the b.o.p. First, further progress in the methodological harmonisation should enhance data consistency. Second, the collection of additional information in the b.o.p. is expected to enable a more refined analysis of the determinants of transactions in MFIs’ net external assets.

### 3.3.1 ENHANCING DATA CONSISTENCY THROUGH FURTHER METHODOLOGICAL HARMONISATION

In general, the methodological and practical differences between the b.o.p. and the transactions derived from the MFI balance sheet are very limited, so the cost of fully resolving them may often outweigh the corresponding benefits. In certain cases, information which is available for external transactions, e.g. accrued interest, would imply an additional data collection within the MFI balance sheet statistics for corresponding domestic transactions (and positions), the cost of which has to be weighed against the impact of the corresponding discrepancy with b.o.p. data. Conversely, some detailed breakdowns collected in the MFI balance sheet are not always included in b.o.p. standard components. Debt securities up to two years issued by MFIs are an example of the latter. These are separately identified in the MFI balance sheet, but are not separately identified in the euro area b.o.p.

However, the current update of international statistical standards is expected to help clarify some borderline cases, e.g. the delineation between loans and securities, which would foster data consistency. Furthermore, some practical enhancements may be implemented on the occasion of the regular review of the legal acts setting out data requirements. Of course, improvements in data quality would need to outweigh any increase in the reporting burden. An example of such trade off may be the adjustment for foreign exchange rates which should in principle be carried out when the transactions in equity securities (assets) are derived from the MFI balance sheet.

### 3.3.2 ADDITIONAL STATISTICAL DATA COLLECTION

Several developments in the Eurosystem's data collection – namely the identification of the issuer sector in the portfolio investment liabilities of the b.o.p. and the compilation of quarterly sector accounts for the euro area – will enhance the analytical content of the monetary presentation of the b.o.p.

### COMPLETE IDENTIFICATION OF SECURITIES ISSUED BY MFIS AND HELD BY NON-RESIDENTS

As explained in Sub-section 3.2.2, often MFIs do not know which investors hold the securities which they have issued. Specific sources are available to assess who are the holding sectors of debt securities up to two years. As a more comprehensive approach, the monetary presentation of the euro area b.o.p. will soon integrate a distinction between issues by euro area MFIs and those by non-MFIs, thanks to the move to security-by-security reporting by euro area compilers and the use of a Centralised Securities Database.

### INTEGRATING THE B.O.P. WITH THE QUARTERLY EURO AREA ACCOUNTS

A monetary presentation of the b.o.p. further articulated at the institutional sector level (splitting the money-holding sector into households, non-financial corporations, general government, insurance corporations and financial intermediaries other than MFIs) would contribute to a better assessment of the origin and economic rationale of external financial outflows. This sector focus greatly widens the scope of the analysis, because each sector has a specific type of economic behaviour and hence a specific role vis-à-vis the main components of aggregate demand, such as savings or investments. In addition, each of these sectors exhibits specific financing patterns and financial investment behaviour. This sector dimension makes it easier to explain the development of the external transactions, and to relate it to the economic behaviour of sectors and their financing constraints. In particular, investment abroad may be due to portfolio and direct investment by non-financial corporations in the framework of M&A activity. Alternatively, it may reflect investment by other financial intermediaries, insurance corporations or pension funds for the purpose of diversifying their portfolios. Such a sectoral focus is also important for risk assessment, as it suggests which sectors are more likely to be affected by, for instance, changes in equity prices in foreign countries or exchange rate variations. It is also helpful for analysing trends in the financing of

non-financial corporations and households by non-residents.

Eurostat/ECB began publishing euro area quarterly financial and non-financial accounts by sector in June 2007.<sup>16</sup> Offering a complete sectorisation of the money-holding sector, distinguishing in particular households, non-financial corporations, insurance corporations and pension funds, and other financial intermediaries, they greatly improve the availability of financial (and non-financial account) data at the sector level. However, for a full sectorisation of the monetary presentation, the accounts should be completed by additional information, in particular a breakdown of b.o.p data across the money holding sector (government, households and non-financial corporations), which is currently not fully available. In this respect, Guideline ECB/2005/13<sup>17</sup> includes a sector breakdown of the main external financial transactions. The transmission of these data will start in the course of 2008.

16 See “Euro area accounts” at <http://www.ecb.int/stats/acc/html/index.en.html>, and the article “Integrated financial and non-financial accounts for the institutional sectors in the euro area”, in the October 2006 issue of the ECB Monthly Bulletin.

17 “Guideline on the statistical reporting requirement of the European Central Bank in the field of quarterly financial accounts”, ECB, 17 November 2005 (ECB/2005/13).

#### 4 THE MONETARY PRESENTATION AS A SUPPORTING TOOL FOR THE ANALYSIS OF MONETARY DYNAMICS IN THE EURO AREA

The monetary presentation of the balance of payments makes it possible to distinguish between the external financial investment of banks and non-banks. It is therefore particularly suited to analysing the interrelationships between external developments and domestic monetary developments. The following section describes how the monetary presentation of the balance of payments has been used in the context of ECB monetary analysis.

##### 4.1 EXTERNAL TRANSACTIONS AND MONETARY DYNAMICS IN THE EURO AREA SINCE 1997

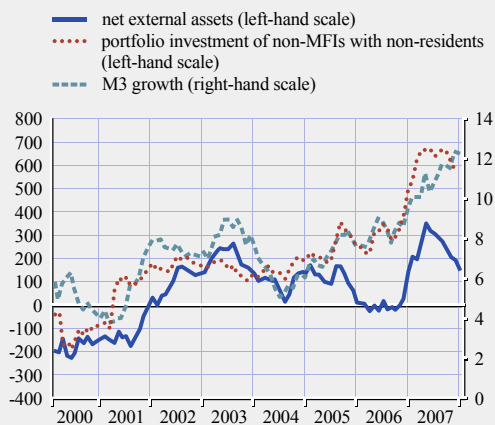
Changes (due to transactions)<sup>18</sup> in the net external assets of the MFI sector represent one counterpart of transactions in M3. This counterpart comprises “domestic sources” of monetary growth, such as credit to general government, loans to the private sector and transactions in the longer-term financial liabilities of MFIs. This is illustrated in equation 3 in Section 2.2.2. above, as well as Table 7.4. of the Monthly Bulletin. Table 7.4 relates the change in the net external assets to M3 (or the “external counterpart of M3”) (column 12) and the underlying external transactions which contributed to it.

In recent years, the external counterpart of money has played an important role in explaining developments in monetary growth, as Charts 3 and 4 illustrate. Although Chart 4 suggests that the *level* of the net external transactions was limited compared with other counterparts, the *volatility* of this counterpart was relatively high and was very closely related to monetary dynamics, especially from 2001 to 2003.

Chart 3 suggests that there was an increase in both the net external assets and M3 between mid-2001 and mid-2003, a move which was partially reversed from mid-2003 to mid-2004. Since the end of 2004 external transactions

Chart 3 Counterparts to M3

(annual transactions; EUR billions)



Source: ECB

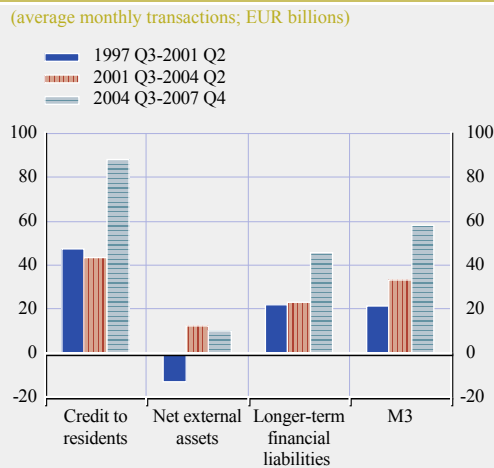
and monetary development have diverged, with growth in money holdings accelerating while the net external assets of euro area MFIs have broadly stabilised. In this latter period, loans to the private sector, and particularly mortgage loans to households, have again played a prominent role in monetary creation. However, it can be observed that co-movements between external portfolio transactions and M3 continued until recently. These phases are also illustrated in Chart 4, which depicts average monthly transactions in major counterparts and M3 over different periods. This chart clearly shows that the net external counterpart was a major driver of M3 growth in the mid-2001 to mid-2004 period, although this contribution has since faded.

The large capital inflows in the period 2001-03<sup>19</sup> (reflected in the rise in the net external assets of the MFI sector) were associated with so-called portfolio shifts into money, which characterised the significant surge in money holdings out of

<sup>18</sup> The net external assets of banks may change due to valuation effects affecting the external assets and the external liabilities of banks, but these valuation effects by definition do not lead to any cash transfer and therefore cannot affect money-holdings.

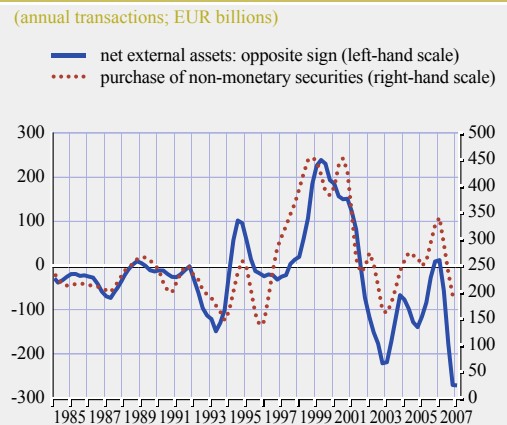
<sup>19</sup> Note that, as in the literature, capital flows here are understood to be in lieu of “financial transactions” in the current international statistical standards.

**Chart 4 Euro area net external assets and M3 growth**



Source: ECB.

**Chart 5 Purchase of non-monetary securities by the money-holding sector and net external assets of the MFI sector**



Source: ECB. Net external assets are estimated before 1997 Q3. The purchase of non-monetary securities is estimated.

securities<sup>20</sup> in that period<sup>21</sup> For a better understanding of the nature of such portfolio shifts, it is useful to analyse which sectors were the counterpart sectors for the sale of securities by euro area residents. Only transactions with banks and non-residents typically have an impact on money holdings. Overall, portfolio shifts by non-banks between money holding and securities can only take place if non-banks (money-holders) exchange cash against securities with non-residents or with domestic banks. The analysis of data over that period suggests that external transactions (those contributing to change in the net external assets of banks) rather than domestic transactions (those affecting the long-term liabilities of banks, or the holding of domestic non-bank securities by banks) were responsible for portfolio shifts over this period.

Chart 5 shows, for instance, a broad correlation between the holdings of non-monetary securities by euro area non-MFI residents (that is, of securities not included in M3)<sup>22</sup> and MFI net external assets.

Overall, residents purchased sizeable amounts of securities, mainly shares, from non-residents in the period from 1998 to 2001, which they

largely repatriated in the period of heightened financial market and geopolitical uncertainty between 2001 and 2003, leading to large capital inflows. These developments were also reflected in the variations in the ratio of net external assets of the MFI sector to GDP (see Chart 6)<sup>23</sup> There was an exceptional decline in the stock of net external assets from 1998 to 2001, followed by an exceptional increase in the level of net external assets in the period 2001-03, which subsequently continued at a more moderate pace. At the end of 2007 the ratio of net external assets to GDP stood at about 6% of GDP, close to its 1981-2007 average.

20 Securities are understood in this section as excluding short-term negotiable instruments included in M3 (debt securities up to two years, and money market fund shares issued by MFIs).

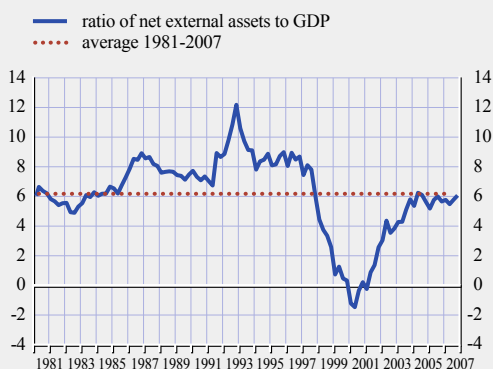
21 See for instance ECB (2003a, 2004, 2005a and 2005b).

22 The purchase of non-monetary securities by non-MFIs is our own estimation. It is calculated as loans to euro residents, plus issuance of securities by the consolidated money-holding sector, plus current account balance, minus instruments included in M3, minus long-term deposits with MFIs and net external transactions of the money-holding sector other than securities. This estimation has been regularly monitored in the ECB monetary analysis in order to assess portfolio shifts affecting monetary growth. See the box entitled "What were the counterparts to the extraordinary portfolio shifts into monetary assets between 2001 and 2003?" in ECB (2004).

23 This back series has been published on the ECB website (statistical page) since February 2005. It has been extended using official data from September 1997 onwards. The constructed stock of net external assets is then compared against GDP. See also ECB (2005a).

**Chart 6 Net external assets of the MFI sector**

(as a percentage of GDP)



Source: ECB.  
Figures estimated prior to 1997 Q3, based on national data.

This correction of the ratio of net external assets to GDP took place through various channels. The purchase of large amounts of foreign shares by euro area companies or households (via mutual funds) in the period 1997-2001 naturally set the stage for the subsequent sale of these foreign securities against liquid assets in a period of economic and financial uncertainty. Symmetrically, the provision of liquidity against equity to foreign investors at a time of strong M&A activity has also increased the leeway for foreign investors to in turn invest in the euro area.

The question of the equilibrium level of the net external assets of the MFI sector may be important for monetary analysis, as investors would tend to rebalance their portfolios towards such a preferred composition, with an impact on money holdings. If the sizeable capital inflows reported in the period 2001-03 were a normal correction of previous excessive portfolio externalisation which peaked in 2001, it is unlikely that the excess liquidity accumulated up to 2003 would be dampened through renewed purchases of foreign assets by euro area residents.<sup>24</sup> If the opposite were true, and some permanent upward shift in the level of net external assets had taken place in the period 1998-2001, the dampening effect of renewed capital outflows would be expected. The

continuous uptrend, albeit with some volatility, in the ratio of net external assets to GDP since 2003 (Chart 6) tends to corroborate the first assumption. At the same time, although historical series are thus far too short to offer firm evidence, the increased internationalisation of investors' portfolios due to globalisation trends and the implementation of Economic and Monetary Union (EMU) may potentially increase the volatility of the external counterpart of money.

#### 4.2 SUPPORTING THE ANALYSIS OF THE EXTERNAL COUNTERPART OF MONEY

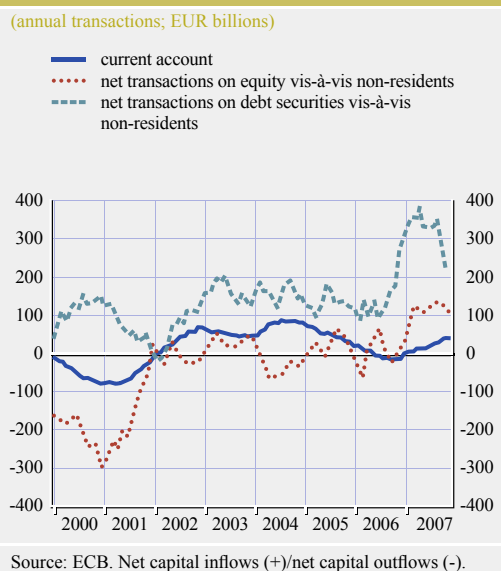
The previous sub-section has shown how important net variations in the external assets are for analysing monetary dynamics. In turn, the monetary presentation of the b.o.p. helps to explain developments in net external assets because it splits the external transactions of the money-holding sector across major instruments (bonds, equities, goods and services).

This is illustrated by assessing Table 7.4 of the Monthly Bulletin (Table 5 above) in conjunction with equation 3 above. The equation shows that money development is driven by the development in domestic credit and net external transactions. Table 7.4 of the Monthly Bulletin identifies the different components of these "net external transactions" (called "transactions in the external counterpart of M3" in the table). It is important for monetary analysis to understand the nature of external transactions that may affect money, with regard to the types of transaction (current account transactions, portfolio decisions or more long-term financial investment) or to their direction (non-residents' investment/disinvestment in the euro area or residents' investment/disinvestment abroad). This may clarify the nature of any distortions that external developments have on money. Furthermore, analyses of global liquidity spillover often focus on the interrelationships between money, credit and asset prices across areas worldwide.<sup>25</sup> The

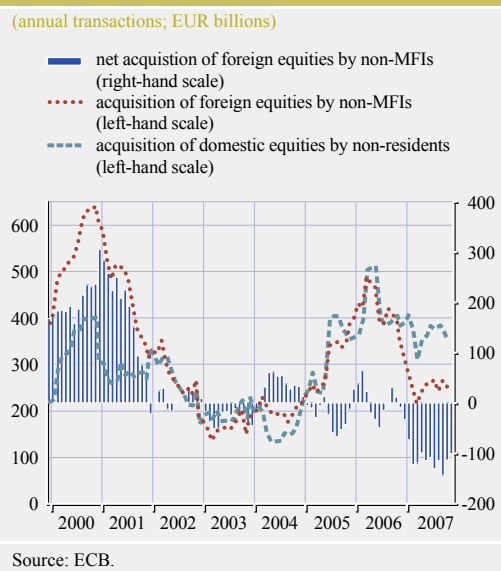
<sup>24</sup> See ECB (2005a).

<sup>25</sup> See ECB (2004).

**Chart 7 Main external transactions underlying transactions in the net external assets of the MFI sector**



**Chart 8 External transactions in equity**



monetary presentation of the balance of payments may provide information on the actual sector channel through which a spillover effect may proceed. Finally, the monetary presentation of the balance of payments helps to analyse the external dimension of corporate finance in the euro area, such as cross-border inter-company loans or mergers and acquisitions and their interrelation with domestic credit growth.<sup>26</sup>

Focusing on the “real-time” analysis of the monetary presentation of the balance of payments in recent years a large amount of foreign assets were purchased by euro area residents in the period 1997-2001. The monetary presentation shows that these flows were mainly related to sizeable acquisitions of foreign equity by euro area companies, which far surpassed foreign acquisitions within the euro area (see Charts 7 and 8). On the one hand, these important capital outflows by euro area companies in the late 1990s may have represented an attempt by corporations to expand internationally, reflecting the increasing degree of globalisation of the world economy. Viewed in this light, these outflows can be seen as a structural phenomenon, whereby the net outflows were associated with the need of euro

area companies to “catch up” with the level of internationalisation of their foreign – largely American – competitors. Such forces may have been compounded by a trend towards further financial market integration, which made it easier to finance such acquisitions than had previously been the case. On the other hand, cyclical factors may have been at play, for example the large productivity growth differential between the United States and the euro area, the rising equity returns in the US technology sector, the rising trend of the US dollar against the euro, and the low cost of financing faced by euro area companies at that time.

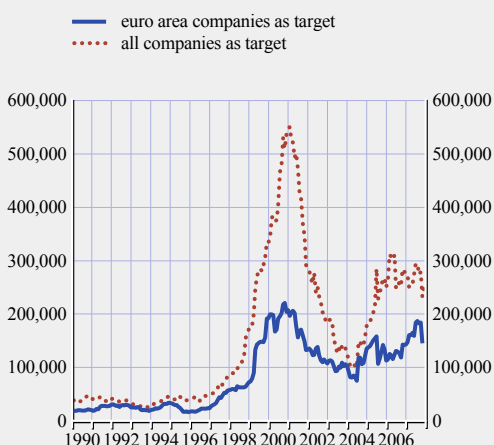
By contrast, since mid-2001 there has been a strong decline in euro area residents’ net purchases of equity abroad owing to various specific factors, such as the worldwide decline in equity prices, the global economic slowdown, the fall in M&A activity (see Chart 9), and the overall increase in geopolitical uncertainty. Overall, this has tended to increase the relative attractiveness of financial assets issued in the euro area as comparatively safer saving vehicles for both resident and international investors.

<sup>26</sup> See ECB (2007).



Chart 9 M&A activity (cash payments)

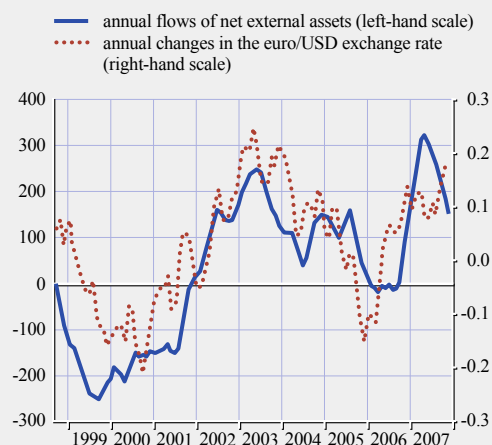
(annual flows; EUR billions)



Source: Thomson Financial.

Chart 11 Annual transactions in the MFI net external assets and in the euro/dollar exchange rate

(annual flows; EUR billions)



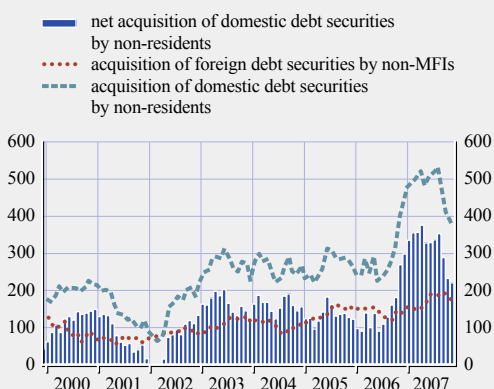
Source: ECB.

While euro area residents have almost continuously been net purchasers of equity abroad since 1997 (in annual terms), non-euro area residents' purchases of euro area bonds has almost constantly exceeded euro area residents' bond purchases abroad over the same period. This development may have been related to the creation of a deeper and more liquid bond market within the euro area associated with the adoption of the euro, and the increased net issuance of debt securities by euro area residents,

in particular at a time when US Treasury issues were subdued owing to the prevailing US fiscal surplus.<sup>27</sup> Some studies confirm that euro area portfolio managers have assigned an increased weight to euro area assets in recent years.<sup>28</sup> In addition, several central banks (in particular in the Middle East and Asia) have attempted to diversify their reserve asset portfolio since 1997, purchasing euro area government bonds in order to reduce their US dollar exposure. Other factors, such as the appreciation of the euro versus the dollar since 2002, may also have contributed to the attractiveness of euro area bonds (see Chart 11).

Chart 10 External transactions in debt securities

(annual flows; EUR billions)



Source: ECB.

Chart 11 also shows how these developments in financial flows have been intertwined with correlated movements in the euro/dollar exchange rate. Such co-movement, if not exactly a causal relationship, can be easily explained: the appreciation or expected appreciation of the domestic currency vis-à-vis other currencies will increase demand for domestic assets; or, symmetrically, greater demand for domestic assets will push up the exchange rate.

27 See also Anderton et al. (2004).

28 See De Santis and Gérard (2006).

Finally, besides financial transactions, current account transactions also contributed to the net external counterpart of M3. As can be seen in Chart 7, the current account surplus exerted a positive effect on domestic monetary growth until 2005, whereupon this effect faded away.

## 5 CONCLUSIONS

External transactions have reached very high levels in recent years, which has undoubtedly influenced monetary developments. In this context, the monetary presentation of the b.o.p. has been particularly useful with regard to further analysing the external dimension of money growth. For instance, the monetary presentation of the b.o.p. has helped to explain the changes in the net external assets of the MFI sector and to illustrate in particular that they are more related to portfolio transactions than to variations in the trade balance. It has also provided a description of the content of these portfolio investments.

Additional information breaking down the transactions into those originated by the money-holding sectors and those originated by the money-issuing sector would enrich the analysis. The economics of the factors behind external transactions may also deserve further research, given the volatility of these transactions and the relatively recent creation of EMU. Furthermore, additional micro information on large transactions may be useful as a complement to the analysis, because the development of macro-accounting aggregates may conceal several opposite transactions. For instance, the b.o.p. may sometimes be strongly affected by large one-off transactions by large companies with various economic or regulatory motives.<sup>29</sup>

The monetary presentation of the b.o.p. should also be seen as part of a general project to compile a full set of euro area sector accounts.<sup>30</sup> The aim of this project is to organise financial statistics according to the main economically relevant sectors (in terms of different economic behaviour), and to identify the counterpart sector of their transactions (“from whom-to-whom” information). Such a comprehensive set of information will allow a flexible and robust analysis of financial flows for the purpose of policy-making. The first euro area accounts to be published quarterly, as of 2007, represent a major step in this project. Further identification of the counterpart sectors (in particular whether

they are resident or non-resident) in line with the ECB guideline on the compilation of MUFA data would allow for a full sectorisation of the monetary presentation of the b.o.p.

Overall, the monetary presentation of the b.o.p. represents an important macro-statistical framework for analysing the external dimension of monetary dynamics, particularly in the context of increasingly globalised asset portfolios. It has already proven very useful for monetary analysis in “real time”<sup>31</sup>, and the statistical developments currently under way will further enhance its use in the years ahead.

29 The objective of ensuring consistency between the macro framework and the microeconomic dimension is embodied in the Eurosystem’s Centralised Securities Database (CSDB) project.

30 See Jellema et al. (2004) and ECB (2007).

31 See ECB (2004).

## ANNEXES

### I EXAMPLES OF EXTERNAL TRANSACTIONS SETTLED VIA RESIDENT BANK ACCOUNTS

To clarify further the concept underlying the monetary presentation of the b.o.p., this annex provides concrete examples of the transactions involved, assuming a simplified economy confined to four economic agents: a resident bank, a resident household, a non-resident bank and a non-resident non-bank issuing debt securities. At the start, the resident bank holds an account with a non-resident bank, with assets worth 200. The resident household holds a deposit account with the resident bank also amounting to 200. Two examples of transactions are now illustrated, together with their impact on the b.o.p. statistics and, consequently, the consolidated balance sheet of the resident banking sector, including the monetary aggregates:

#### EXAMPLE 1: THE RESIDENT HOUSEHOLD PURCHASES DEBT SECURITIES WORTH €100 FROM THE NON-RESIDENT NON-BANK ISSUER. THE TRANSACTION IS SETTLED VIA THE RESIDENT BANK

The resident bank purchases the debt security on behalf of its customer, the resident household. The deal is settled via the resident bank's

Table 6 Balance sheet of resident bank

Assets	Liabilities
<b>Before the transaction<sup>1)</sup></b>	
200 (resident bank's account abroad)	200 (household deposit with the resident bank)
<b>After the transaction<sup>2)</sup></b>	
100 (resident bank's account abroad)	100 (household deposit with the resident bank)

- 1) Net external assets of the resident bank total 200.  
2) Net external assets of the resident bank decrease to 100; deposit liabilities against resident household (M1) decrease to 100.

account with the non-resident bank, by debiting this account by 100. At the same time, the resident bank debits the household's account with the bank by 100 to charge the household for the security purchase. As a consequence, the net external assets of the resident bank will decline by 100 to 100. Keeping all other balance sheet items unchanged, this reduction in net external assets is directly reflected in a decrease in deposit liabilities (M1) by 100 to 100.

#### CORRESPONDING RECORDING IN THE B.O.P.

The purchase of the debt security by the resident household is reflected in the non-bank transactions in the b.o.p. (increase in domestic assets), and in the respective resident bank transactions (decrease in domestic assets). This would be recorded in the domestic b.o.p. as follows:<sup>32</sup>

<b>Resident non-banks</b>	
Portfolio investment – debt securities – assets	- 100
<b>Resident banking sector</b>	
Other investment – loans, currency and deposits – assets	+ 100

#### EXAMPLE 2: THE RESIDENT BANK PURCHASES, ON ITS OWN BEHALF, SECURITIES WORTH 100 FROM THE NON-RESIDENT ISSUER

In this second case, the resident bank purchases the securities on its own behalf and settles the transaction via its account abroad. The transaction is reflected via a change between two external asset categories in the bank's balance sheet (cash -100, securities +100), leaving the net external assets unchanged. The deposit liabilities with the resident household remain unchanged. As a consequence, the domestic monetary aggregate M1 is not affected, nor is M3.

32 Sign convention: an increase in assets (or a decrease in liabilities) is shown with a (-) sign, and a decrease in assets (or an increase in liabilities) is shown with a (+) sign.

Table 7 Balance sheet of resident bank

Assets	Liabilities
<b>Before the transaction<sup>1)</sup></b>	
200 (resident bank's account abroad)	200 (household deposit with the resident bank)
<b>After the transaction<sup>2)</sup></b>	
100 (resident bank's account abroad)	200 (household deposit with the resident bank)
100 (foreign debt securities)	
1) Net external assets of the resident bank total 200. 2) Net external assets of the resident bank remain at 200, while deposit liabilities remain at 200.	

#### CORRESPONDING RECORDING IN THE B.O.P.

In the b.o.p. this transaction is reflected as an offsetting transaction within two asset categories referring to the banking sector, with no net impact on the b.o.p. transactions of the banking sector. The latter are not affected, and this would be recorded in the b.o.p. as follows:

##### Resident non-banks

No impact

##### Resident banking sector

Portfolio investment – debt securities – assets	- 100
Other investment – loans, currency and deposits – assets	+ 100

## 2 EXAMPLES OF EXTERNAL TRANSACTIONS NOT SETTLED VIA RESIDENT BANK ACCOUNTS

Given that the usual explanation of the monetary presentation refers to transactions settled via accounts with resident banks, this annex seeks to clarify, by means of two concrete examples, what happens if cross-border transactions by the non-banking sector are settled via accounts in non-resident banks.

Taking a similar approach to that used in Annex 1, these examples assume a simplified economy confined to four economic agents: a resident bank, a resident household, a non-resident bank and a non-resident entity issuing debt securities. At the beginning the resident bank holds a deposit account with a non-resident bank, with assets worth 200. The resident household also holds a deposit account with the resident bank amounting to 200.

### EXAMPLE 3: THE RESIDENT HOUSEHOLD PURCHASES SECURITIES WORTH €100 FROM THE NON-RESIDENT ISSUER. THE TRANSACTION IS SETTLED VIA THE NON-RESIDENT BANK

This transaction has no impact on the balance sheet of the resident bank.

Table 8 Balance sheet of resident bank

Assets		Liabilities	
<b>Before the transaction</b>			
200		200	
(resident bank's account abroad)		(household deposit with the resident bank)	
<b>After the transaction</b>			
200		200	
(resident bank's account abroad)		(household deposit with the resident bank)	
Net external assets of the resident bank total 200.			

### CORRESPONDING RECORDING IN THE B.O.P.

The purchase of the debt security by the resident household is reflected in the non-bank transactions in the b.o.p. (increase in domestic assets), and in a specific item of the "other investment" account. This would be recorded in the domestic b.o.p. as follows:

<b>Non-bank sector</b>	
Portfolio investment – debt securities – assets	-100
Other investment – currency and deposits – assets	+100
<b>Banking sector</b>	
No impact	

### EXAMPLE 4: THE RESIDENT HOUSEHOLD PURCHASES SECURITIES WORTH €100 FROM THE NON-RESIDENT ISSUER, AND SELLS GOODS FOR €100. THE TWO TRANSACTIONS ARE SETTLED VIA THE NON-RESIDENT BANK

As in the previous example, the balance sheet of the resident bank is not affected. It may be noted that this case gives rise to exactly the same net outcome as the one in which both transactions are settled in accounts with resident banks.

### CORRESPONDING RECORDING IN THE B.O.P.

In the b.o.p. this transaction is reflected as an import of goods, balanced by the purchase of a foreign security. The transactions of the banking sector are not affected, and it would be recorded in the b.o.p. as follows:

<b>Non-bank sector</b>	
Goods – imports	+ 100
Portfolio investment – debt securities – assets	- 100
<b>Banking sector</b>	
No impact	

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