EUROPEAN CENTRAL BANK

ECB MONTHLY BULLETIN – EURO AREA STATISTICS METHODOLOGICAL NOTES

SECTION 3 – FINANCIAL AND NON-FINANCIAL ACCOUNTS

1. Introduction

As outlined in the ECB publication of 2000 on "Statistical information collected and compiled by the ESCB", the ECB has started to compile quarterly financial transaction accounts and financial balance sheet accounts for the euro area (quarterly Monetary Union financial accounts or MUFAs). The first milestone towards this aim has been the regular publication, since May 2001, of a Table on Financing and Investment (TFI) for non-financial sectors, and, since March 2003, for insurance corporations and pensions funds (Tables 3.1, 3.2 and 3.3 of the "Euro area statistics" section). These tables provide an overview of the main financial assets and liabilities of the non-financial sectors and insurance corporations and pension funds in the euro area. They are based on quarterly national financial accounts, euro area money and banking and securities issues statistics and international banking statistics of the Bank for International Settlements (BIS).

A further step involves the implementation of the so-called seven-sector-approach, covering in addition to the three non-financial sectors (non-financial corporations, general government and households) and to insurance corporations and pension funds (ICPFs) also monetary financial institutions (MFIs), the remaining financial corporations (other financial intermediaries, excluding ICPFs, including financial auxiliaries) and the rest of the world.

The quarterly TFI data are complemented by annual euro area capital and financial accounts in Table 3.4 (annual saving, investment and financing table). All financial and non-financial investment and financing transactions are included. The table is derived from annual national capital and financial accounts provided by the euro area countries.

2. Methodological framework

Four conceptual elements are central for the compilation of quarterly MUFAs: the set of financial accounts as a sub-set of national accounts, the categories of financial assets and liabilities, the breakdown of the economy into institutional sectors and the accounting principles.

2.1. Set of accounts

The European System of Accounts (ESA 95) records flows and stocks (balance sheets) in an ordered set of accounts describing the economic cycle from the generation of income, through its distribution and

redistribution and finally to its accumulation in the form of assets.

By nature, flows (or changes in balance sheets) are classified into *transactions*, *other changes in the volume of assets and revaluations* (Table 1).

Table 1

Components of the system of accounts

Flows (Changes in assets and liabilities owing to transactions and other flows)
Transactions
Other changes in the volume of assets
Revaluations
Stocks (Outstanding amounts of assets and liabilities in balance sheets)

A *transaction* is defined as "an economic flow that is an interaction between institutional units by mutual agreement or an action within an institutional unit that is analytically useful to treat like a transaction, often because the unit is operating in two different capacities". *Transactions* are distinguished from *other economic flows*, which are events other than transactions that give rise to economic value. These include the depletion of natural resources, write-offs, natural growth of resources, etc, which are included in *other changes in the volume of assets*. Finally, economic values also change due to changes in prices (*revaluations*).

In the system of accounts, the transaction accounts, showing the generation, distribution, redistribution and use of income are the *current accounts*. A second group of flow accounts, the *accumulation accounts*, comprise the *capital account* (transactions in non-financial assets), the *financial transaction account* (transactions in financial assets and liabilities), the *other changes in the volume of assets account* and the *revaluation account*. Changes in net worth are changes in assets minus changes in liabilities (due to transactions and other flows).

2.2. Assets and liabilities

Seven categories of financial assets or instruments are distinguished in the ESA 95; they are classified according to liquidity factors and legal characteristics (ESA 95 codes in brackets):

- Monetary gold and special drawing rights (F.1);
- Currency and deposits (F.2);
- Securities other than shares (F.3);
- Loans (F.4);
- Shares and other equity (F.5);
- Insurance technical reserves (F.6); and
- Other accounts receivable/payable (F.7).

Provision is made for a further diversification of the list of financial assets, in particular according to maturity and market capacity. With regard to securities other than shares and loans, a distinction is made between short- and long-term original maturity. Account has also been taken of financial derivatives, which are included as a separate item under securities other than shares. Shares and other equity are broken down into quoted and unquoted shares, mutual fund shares and other equity. Insurance technical reserves are divided into net equity of households in life insurance reserves and in pension funds reserves, and prepayments of insurance premiums and reserves for outstanding claims. Finally, other accounts receivable and payable are further broken down into trade credits and advances, and other.

In addition to financial assets, the balance sheet comprises non-financial assets, which in turn can be broken down into produced or non-produced. Net worth (B.90) is calculated as the difference between all assets –

produced, non-produced and financial – and liabilities. The concept of net worth is to be distinguished from that of net financial assets (BF.90). The latter is defined as the difference between financial assets and liabilities.

2.3. Institutional sectors

The ESA 95 groups the institutional units of a national economy into five resident sectors according to the type of economic behaviour of the corresponding institutional units included: non-financial corporations, financial corporations, general government, households and non-profit institutions serving households (Table 2). The rest of the world covers the flows and stocks between the resident sectors and non-residents. Most of the sectors may be further broken down by sub-sector. For instance, financial corporations are split into the national central bank, other monetary financial institutions, other financial intermediaries, except insurance corporations and pension funds, financial auxiliaries, and insurance corporations and pension funds. The national central bank and the other monetary financial institutions constitute the MFIs. Furthermore, the general government sector covers the central, state and local governments and the social security funds.

Table 2

Classification by institutional sector and subsector according to the ESA 95

Non-financial corporations (S.11)
Financial corporations (S.12) • National central bank (S.121) • Other monetary financial institutions (S.122) • Other financial intermediaries, except insurance corporations and pension funds (S.123) • Financial auxiliaries (S.124) • Insurance corporations and pension funds (S.125)
General government (S.13) • Central government (S.1311) • State government (S.1312) • Local government (S.1313) • Social security funds (S.1314)
Households (S.14)
Non-profit institutions serving households (S.15)
Rest of the world (S.2) • The European Union (S.21) • Third countries and international organisations (S.22)

The abbreviations given in brackets are the sectors as they are numbered in the ESA 95.

2.4. Valuation principles, time of recording, consolidation and maturity breakdown

Following ESA 95 principles, flows and stocks should be recorded at exchange value, i.e. the value at which the financial assets involved are created, liquidated, exchanged or assumed between institutional units. Thus and especially when the exchange is made or can be made through a market, ESA 95 recommends market prices as a general reference for valuation.

A transactions is recorded when the value is created, liquidated, exchanged or assumed, and not when the payments are made, i.e. the accrual principle is followed. The components of balance sheets and their associated flows are shown in gross terms, without netting out liabilities from assets.

The original maturity split – short-term versus long-term – is normally based on a one-year cut-off and in

exceptional cases on a two-year cut-off. Therefore, short-term financial instruments are those with an original maturity up to one year and – in exceptional cases – up to two years, while long-term financial instruments are those with an original maturity of more than one year and, in exceptional cases, of more than two years.

3. Main financial assets and liabilities of non-financial sectors and insurance corporations and pension funds (Tables 3.1, 3.2 and 3.3)

The TFIs present quarterly (non-seasonally adjusted) balance sheets (outstanding amounts), transactions and annual growth rates for the main financial assets and liabilities. Annual growth rates are calculated on the basis of financial transactions and therefore exclude reclassifications, revaluations, exchange rate variations and any other changes, which do not arise from transactions. The rates are compiled as the cumulated amount of investment in financial assets and incurrence of liabilities in the latest four quarters as a percentage of the stock one year before.

Most of the financial asset and liability categories defined in ESA 95 are covered. These are currency and deposits, securities other than shares, loans (except those granted by general government and non-financial corporations), quoted shares, mutual fund shares and insurance technical reserves. Other financial instruments like financial derivatives, unquoted shares and other equity, and other receivables and payables are not included. In essence, the instruments currently covered are those which are either mediated through financial corporations or traded on capital markets.

3.1. Non-financial sectors (Tables 3.1 and 3.2)

The tables (Table 3) show data for the non-financial sectors, which are non-financial corporations, households and non-profit institutions serving households and general government.

On the liability side, the data presented are broken down by sector and original maturity. On the asset side, the information is currently less detailed because a breakdown by sector is not yet possible.

Table 3

Main financial assets and liabilities of non-financial sectors

Main financial assets (Table 3.1)	Main liabilities (Table 3.2)
Main financial assets	**Main liabilities**
Currency and deposits	**Loans taken from euro area MFIs and other financial corporations by**
Currency	o/w taken from euro area MFIs
Deposits of non-financial sectors other than central government with euro area MFIs	General government
Overnight	Short-term
With agreed maturity	Long-term
Redeemable at notice	Non-financial corporations
Repos	Short-term
Deposits of central government with euro area MFIs	Long-term
Deposits with non-MFIs	Households[3)]
Memo: Deposits of non-banks with banks outside the euro area	Short-term
Securities other than shares[1)]	Long-term
Short-term	Memo: Loans taken from banks outside the euro area by euro area non-banks
Long-term	**Securities other than shares[1)] issued by**
Shares[2)]	General government
Quoted shares	Short-term
Mutual fund shares	Long-term
O/w money market fund shares	Non-financial corporations
Insurance technical reserves	Short-term
Net equity of households in life insurance reserves and pension fund reserves	Long-term
Prepayments of insurance premiums and reserves for outstanding claims	**Quoted shares issued by non-financial corporations**
	Deposit liabilities of central government
	Pension fund reserves of non-financial corporations

1) Excluding financial derivatives. 2) Excluding unquoted shares. 3) Including non-profit institutions serving households.

3.2. Insurance corporations and pension funds (Table 3.3)

On the asset side, the data are broken down by financial instrument and original maturity. On the liability side, the information is less detailed because the financing of insurance corporations and pension funds mainly takes the form of insurance technical reserves.

Table 4

Financial investment and financing of insurance corporations and pension funds (Table 3.3)

Main financial assets	Main liabilities
Main financial assets	**Main liabilities**
Deposits with euro area MFIs	**Loans taken from euro area MFIs and other financial corporations**
Overnight	o/w taken from euro area MFIs
With agreed maturity	**Securities other than shares[2)]**
Redeemable at notice	**Quoted shares**
Repos	**Insurance technical reserves**
Loans	Net equity of households in life insurance reserves and pension fund reserves
Short-term	Prepayments of insurance premiums and reserves for outstanding claims
Long-term	
Securities other than shares[1)]	
Short-term	
Long-term	
Shares[2)]	
Quoted shares	
Mutual fund shares	
o/w money market fund shares	
Prepayments of insurance premiums and reserves for outstanding claims	

1) Excluding financial derivatives. 2) Excluding unquoted shares.

3.3. Data sources

Four statistical data sources are used to compile the current set of quarterly MUFAs – quarterly national financial accounts data provided by the Working Group on Monetary Union financial accounts (WG MUFA), euro area MFI balance sheet and securities issues statistics, and BIS international banking statistics.

3.3.1. Quarterly national financial accounts data

Quarterly data sets based on national financial accounts are requested and transmitted by the WG MUFA. Since November 2002, the required data sets are specified in an ECB Guideline.1 The data request relates to quarterly stocks and financial transactions (from 1997 Q4 onwards) in securities other than shares, quoted shares, mutual fund shares, money market fund shares, insurance technical reserves and various types of loans provided by non-MFI financial corporations, i.e. insurance corporations and pension funds and other financial intermediaries.

3.3.2. MFI balance sheet and securities issues statistics

For the time being, the euro area MFI balance sheet (BSI) and securities issues (SEC) statistics are used in the compilation of quarterly MUFAs.

Table 5

MFI balance sheet and securities issues statistics as data sources for the compilation of quarterly MUFAs

MFI balance sheet statistics
Monthly data
Quarterly data
Securities issues statistics
Monthly issues of debt securities and quoted shares

Monthly and quarterly BSI are based on an ECB Regulation (ECB/2001/13).2 The available data sets are well suited to compile deposits and loans vis-à-vis euro area MFIs. The definitions of the financial instruments almost entirely follow the sector and maturity breakdowns as proposed in ESA 95. However, the available data do not allow the presentation of the link between short-term investment and monetary aggregates. Stock data are available from the third quarter of 1997 onwards and transaction data from October 1997 onwards.

SEC comprise monthly data starting in 1990 including stocks (outstanding amounts) and transactions of securities other than shares (debt securities) issued by euro area residents broken down into euro and other currencies. Quarterly data are also available on stocks and transactions on the issuance by non-residents in euro provided by the BIS. In relation to the maturity, sector and instrument splits, SEC comply with the ESA 95 methodology. However, the data for issuance of debt securities are valued at nominal value, which deviate from the market-value approach applied in quarterly MUFAs. Stock and transaction data on issues of quoted shares are also available from January 1999 onwards, broken down by the issuing sector. Whereas the SEC stock data as published in Table 4.4 of the Monthly Bulletin are fully reconcilable with MUFA data on a

[1] ECB Guideline (ECB/2002/7) – "On the statistical reporting requirements of the European Central Bank in the field of quarterly financial accounts" – dated 21 November 2002.

[2] Which amended the ECB Regulation (ECB/1998/16).

quarterly basis,3 the transaction data are slightly different due to some methodological differences.

3.4. Revision policy

A new quarter, as well as major revisions to previous quarters, is incorporated into Tables 3.1 to 3.3 coinciding with the publication of the new data in the press release on "financing and financial investment in the euro area". The releases incorporate the quarterly national financial accounts data transmitted by the WG MUFA in accordance with the ECB Guideline (ECB/2002/07). In 2004, the press release dates are: 18 February; 19 May; 18 August; and, 17 November. Revisions might also take place between two consecutive quarterly releases of data due to revisions in the BSI monthly data used. In practice, every time the BSI data are revised, the MUFA data are also revised and the users are informed in the section "New in Statistics" that can be found under the Statistics section of the ECB Website. Contrarily, revisions of the also monthly SEC data used are not incorporated on a monthly basis in order to keep the consistency between assets and liabilities in the accounts of the non-financial sectors and insurance corporations and pension funds. Finally, the BIS international banking statistics data are usually available two weeks after the release of the press release on "financing and financial investment in the euro area". Therefore, new data and revisions to previous quarters are incorporated in the January, April, July and October issues of the Monthly Bulletin.

4. Annual saving, investment and financing (Table 3.4)

4.1. The capital and the financial transaction account as components of the accumulation account

Balance sheets are statements, drawn up at a particular point in time, of the values of assets, non-financial and financial, owned and of liabilities outstanding. The balancing item is net worth (Table 6).

Table 6

Balance sheet

Assets	Liabilities and net worth
Non-financial assets	Liabilities
Financial assets	Net worth

Changes in the values of assets owned, of the liabilities outstanding and of net worth are presented in the accumulation account by taking into consideration that such changes are broken down into transactions, other changes in the volume of assets and revaluations. Table 7 provides an overview of the main components of the accumulation account.

[3] Both data sources are fully reconcilable when the press release on "financing and financial investment in the euro area" is published. See Section 3.4 for more detailed information on the revision policy.

Table 7

Accumulation account as the presentation of the changes in the values of assets, of the liabilities outstanding and of the net worth

Changes in assets	Changes in liabilities and net worth
Changes in non-financial assets ▪ Transactions (net acquisition of non-financial assets) ▪ Net fixed capital formation ▪ Changes in inventories ▪ Net acquisition of other non-financial assets ▪ Other changes in the volume of non-financial assets ▪ Revaluations (holding gains or losses) of non-financial assets	**Changes in liabilities** ▪ Transactions (net incurrence of liabilities) ▪ Other changes in the volume of liabilities ▪ Revaluations (holding gains or losses) of liabilities
Changes in financial assets ▪ Transactions (net acquisition of financial assets) ▪ Other changes in the volume of financial assets ▪ Revaluations (holding gains or losses) of financial assets	**Changes in net worth** ▪ Net saving ▪ Net capital transfers (capital transfers received minus capital transfers paid)

The accumulation account as presented in Table 7 distinguishes between changes in stocks due to portfolio allocation decisions (transactions) and changes in stocks due to other factors, which are in many cases revaluations. The changes in net worth cover the 'wealth accumulated from income' in the form of net saving and net capital transfers. Table 3.4 of the "Euro area statistics" section shows only the changes in assets, liabilities and net worth due to transactions as presented in Table 8. For the sake of accuracy, the table also presents consumption of fixed capital that is subtracted from both investment and financing to arithmetically draw changes in net worth. Other investment summarises the net transactions (assets minus liabilities) of financial derivatives and of other accounts receivable/payable as well as the statistical errors and omissions.

Table 8

Saving, investment and financing for all sectors in the euro area

Investment	Financing
Net acquisition of non-financial assets Gross fixed capital formation (-) Consumption of fixed capital Changes in inventories[1)] Non-produced assets	**Net incurrence of liabilities** Currency and deposits Securities other than shares[2)] Loans Shares and other equity Insurance technical reserves
Net acquisition of financial assets Monetary gold and SDRs Currency and deposits Securities other than shares[2)] Loans Shares and other equity Insurance technical reserves Other investment (net)[3)]	**Changes in net worth[4)]** Gross saving (-) Consumption of fixed capital Net capital transfers receivable

Including net acquisition of valuables. 2) Excluding financial derivatives. 3) Financial derivatives, other accounts receivable/payable and statistical discrepancies. 4) Arising from saving and net capital transfers receivable, after allowance for consumption of fixed capital (-).

4.2. Data sources

The Members of the WG MUFA transmit the annual national sectoral capital and financial transaction accounts data, which are used to compile Table 3.4. This information is supplemented by national non-financial accounts data as shown in Table 1 of the ESA 95 Transmission Programme, and by MFI balance sheet, securities issues and government finance statistics. For the time being, no full coverage has been achieved for data on unquoted shares, other equity, trade credits, financial derivatives and inter-company

loans.

4.3. Revision Policy

The first releases of data, as well as the major revisions to previous years, occur around July each year when most of the annual national financial accounts become available. The data are revised as the coverage of annual national accounts is being completed, from June to September, and also when any of the other underlying data sources is revised, which means that these data might be revised every month.

5. Download of data and contacts

The data presented in Tables 3.1 to 3.4 of the "Euro area statistics" section are also available for downloading in this section of the ECB's website – "Monthly Bulletin Euro area statistics – download". These data are available in a format, which can be imported into most spreadsheets and ASCII editors (CSV files, comma separated values). The numbering of the columns follows the layout of the tables.

If you have any questions related to these tables, please contact ecb_mufa@ecb.int.