



EUROPEAN CENTRAL BANK

EUROSYSTEM

# MANUAL ON MFI BALANCE SHEET STATISTICS

APRIL 2012







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## INTRODUCTION

For the performance of its tasks, the ECB requires a large amount of statistical data which are provided by the Eurosystem (the ECB and the national central banks (NCBs) of euro area countries). Balance sheet statistics for monetary financial institutions (MFIs) are some of the core statistics used by the ECB and provide information that is crucial for the conduct of euro area monetary policy.

In a broad sense, MFIs make up the banking sector in both the euro area and the European Union. In December 2011, the euro area MFI sector consisted of the ECB, 17 NCBs, about 6,210 credit institutions, around 1,275 money market funds, and a handful of other financial institutions which satisfy the definition of an MFI. Elsewhere in the European Union there were 2,054 MFIs, most of which were credit institutions and money market funds. In terms of total balance sheet assets, MFIs are by far the largest group of financial intermediaries in Europe. In particular, their aggregated balance sheets in the euro area amounted to around €38.2 trillion at end-December 2011, representing about 60% of all balance sheet assets of the financial sector, and the equivalent of about four times annual GDP.

MFIs in the euro area provide a detailed monthly balance sheet for statistical purposes. Central banks aggregate the national data for submission to the ECB, which sums them up, adjusts for intra-sector transactions and uses the results primarily to compile monetary aggregates and their counterparts for the euro area.<sup>1</sup> MFIs also provide various quarterly and lower frequency data. All this is done in accordance with an ECB regulation currently Regulation ECB/2008/32, as amended by Regulation ECB/2011/12, supplemented by an ECB guideline addressed to the Eurosystem (Guideline ECB/2007/9 as amended by Guideline ECB/2009/23).

This area of statistics is broad and rather complex. Data can only be aggregated if definitions, concepts, valuation and other accounting practices are sufficiently comparable

across countries. The compilation process also entails the derivation of transaction flows (on which growth rates of monetary aggregates and their counterparts are based) mainly from the outstanding balance sheet amounts reported by MFIs. MFI balance sheets are also the source of data for the Eurosystem's minimum reserve requirements for credit institutions (which, as seen above, form the bulk of the MFI population). Furthermore, MFI balance sheet data are linked not only to interest rates reported by MFIs, but also to data reported by investment funds and financial vehicle corporations under separate ECB legislation. In particular, data reported by money market funds and investment funds together provide an account of the business carried out by collective investment undertakings in the euro area, while data on financial vehicle corporations are important because they complement the information reported by MFIs for the purposes of securitisation statistics. MFI balance sheet data are also used as an input to the quarterly insurance corporation and pension fund statistics compiled by the European System of Central Banks (ESCB) and to the quarterly integrated economic and financial accounts for the euro area compiled by the ECB and Eurostat. Furthermore, they are combined with monthly balance of payments statistics to enable monetary and balance of payments developments to be analysed together in a monetary presentation of the balance of payments.

The main elements of the statistical requirements for MFI balance sheet statistics, including key concepts and definitions, are included in the Regulation and Guideline mentioned above. The underlying concepts are those set out in international statistical standards, namely the world System of National Accounts (of which the SNA 2008 is the latest version) and the European System of National and Regional

<sup>1</sup> In order to compile monetary aggregates and their counterparts for the euro area, the Eurosystem also collects data from post office giro institutions and data on monetary liabilities of central government, which are significant in some countries.

Accounts 1995 (ESA 95).<sup>2</sup> As further clarified below, adherence to these standards fosters international comparability of the (national and euro area) statistics and ensures a sound methodological background for the aggregation of data.

This manual provides guidance on the preferred approach which has been agreed among central bank statisticians whenever international statistical standards remain open or are not sufficiently precise, and supplements the information contained in the ECB legal acts. It has a number of aims. In particular, it provides statisticians in central banks with a comprehensive reference source on the requirements of ECB legislation relating to MFI balance sheet statistics. It also contains various supplementary explanations and recommendations to help with the implementation of the requirements and thereby further improve the comparability of the statistics. Statisticians in government statistical offices and European and international organisations may use the manual in their own statistical work, and it may also help the suppliers of the underlying micro data in MFIs to understand how their work is used and why the requirements take the form they do. Users of the data, in central banks and elsewhere, may benefit from knowing more about the conceptual basis of the data they analyse and use, and what is done to the raw information to make it usable for policy purposes. This is a wide audience, and the manual seeks to explain technical issues in a way that the interested but non-specialist reader can understand, while also satisfying specialist needs.

Part 1 describes what is reported by MFIs under Regulation ECB/2008/32. Chapter 1 covers definitions, the reporting population, accounting principles and the ECB's reporting requirements at various frequencies, and also includes a detailed discussion on the derivation of transactions data at the level of the reporting institution. Chapter 2 focuses on the instrument categories, and addresses the difficult subject of loan securitisation. Chapter 3 concerns more administrative and technical issues related to the provision of data to the ECB.

While Part 1 is mainly input oriented, Part 2 focuses to a large extent on the statistical compilation that the ECB carries out on the basis of the data sent to it by the NCBs (the euro area MFI balance sheet statistical). Chapter 4 discusses these aspects in detail. First, the derivation of monetary aggregates and their counterparts for the euro area is presented, focusing on, among other things, the relationship between national contributions and euro area aggregates. The methodological framework underlying the derivation of monetary aggregates for individual money-holding sectors is then reviewed. Another important aspect of MFI balance sheet statistical compilation concerns the derivation of transactions and growth rates from balance sheet outstanding amounts net of the impact of non-transaction-related effects. This is also discussed in Chapter 4, together with a brief description of the seasonal adjustment procedures adopted by the ECB for monetary aggregates and their counterparts and of the compilation of balance sheet data for sub-groups of the MFI population (credit institutions and money market funds). Furthermore, this part includes an overview of the statistical data supplied by non-euro area countries as part of their preparations for future adoption of the single currency.

Chapter 5 then turns to the linkages of MFI balance sheet data with other domains. As already mentioned, there is an important administrative use, in calculating the Eurosystem's minimum reserve requirements, and several statistical uses, notably as an input to the quarterly financial accounts and the euro area balance of payments. To conclude, Chapter 6 reviews the principles underlying the preservation of confidentiality when exchanging/publishing data, while Chapter 7 describes the compliance regime applicable

2 The ESA 95 is broadly consistent with the SNA 1993 (the previous version of the SNA) and is currently being revised in line with the SNA 2008. In particular, the adoption of the new ESA 2010 (which will become an EU regulation) will require several changes to the reporting framework for MFI balance sheet statistics (as well as in other European statistical domains). These revisions are not covered in this manual, but will be reflected in an update in due time.



in the (exceptional) event that MFIs fail to comply with the reporting requirements for MFI balance sheet statistics.

The need for a robust conceptual framework follows from the practice of viewing monetary developments and the business of MFIs in general within the framework of integrated economic and financial accounts, using MFI data as a source of information on the financial transactions and positions of counterparty sectors, and analysing monetary and balance of payments developments together. For these purposes, as noted above, consistency across datasets is essential. International and European statistical standards – the SNA, the ESA 95, and the IMF’s Monetary and Financial Statistics Manual (2000) and Monetary and Financial Statistics Compilation Guide (2008)<sup>3</sup> – provide the conceptual framework for MFI balance sheet statistics. MFI balance sheet statistics are fully consistent with international and European statistical standards in terms of the definitions of the MFI population itself, counterparty sectors,<sup>4</sup> and instruments on the MFI balance sheet. The statistics are also very largely consistent with these standards in terms of valuation and other accounting practices, the notion of transactions and the timing of their recording. This means that MFI balance sheet statistics do not stand alone, but exhibit a high degree of consistency with other related statistics within the framework provided by international and European standards, thereby ensuring comparability with data of other EU Member States and countries outside the EU, and meeting the information needs of international organisations. Nevertheless, as the manual explains at various points, MFI balance sheet data depart from international and European statistical standards in a few respects, usually because the statistical standards differ from the international accounting standards applicable to business and, in their balance sheet reporting, MFIs have some discretion to follow International Accounting Standards (IAS), International Financial Reporting Standards (IFRS) or national Generally Agreed Accounting Principles (GAAP).

Moreover, statistical standards are often not the same as those required for financial supervision and the assessment of financial stability. There are differences in valuation and other accounting principles, as mentioned above, and the focus of supervisory and financial stability needs is much more the concentration of risk (including in the form of some instruments which do not appear on statistical balance sheets). Perhaps most importantly, statistical standards observe strict distinctions between economic sectors and resident and non-resident status, whereas group consolidated data (including branches and subsidiaries abroad, and financial affiliates which are not MFIs) are more important for supervisory and financial stability purposes. Although, owing to their high frequency and timeliness, MFI balance sheet data may be of some use for these purposes, financial supervisors (and the ECB and many central banks in monitoring financial stability) primarily use other data which are not easily reconciled with the MFI balance sheet source described in this manual.

This manual includes various references to the ECB regulations and guideline in the field of MFI balance sheet statistics which are legally binding standards for the reporting of relevant statistics in the euro area. However, some aspects are left to national discretion, and in those cases the manual aims to provide guidance to statistical reporters and compilers that reflects best statistical practice and the outcome of discussions among expert statisticians in the ESCB. These best practices are encouraged so as to ensure a better consistency in the aggregates and greater certainty for users when analysing the figures.

3 The IMF’s Monetary and Financial Statistics Manual (together with other related material) is also being revised in line with the SNA 2008.

4 The ECB publishes a detailed manual to provide general guidance on the sectoral classification of institutional units (both MFIs and their counterparties) as well as on the distinction between the euro area and the “rest of the world”, following international standards – see *Monetary financial institutions and markets statistics sector manual*, ECB, March 2007, available on the ECB’s website (<http://www.ecb.europa.eu>).



# PART I MFI BALANCE SHEET ITEMS STATISTICS – METHODOLOGY UNDERPINNING THE STATISTICAL REPORTING



## I GENERAL ISSUES

### I.1 DEFINITIONS

#### Monetary financial institutions

According to Article 1 of Regulation ECB/2008/32, as amended by Regulation ECB/2011/12, a monetary financial institution (MFI) is a resident undertaking falling into one of four groups: central banks, credit institutions (the largest group), money market funds (MMFs), which are a type of collective investment undertaking, and other MFIs. The last group, which is relatively small, includes certain financial institutions whose business is (i) to receive deposits and/or close substitutes for deposits from entities other than MFIs; and (ii) for their own account, at least in economic terms, to grant credits and/or make investments in securities. For example, certain asset management or leasing corporations fulfil these criteria. Electronic money institutions that are principally engaged in financial intermediation in the form of issuing electronic money are also included in the “other MFIs” group. The MFI sector, as defined by the ECB for statistical purposes, corresponds to the sub-sectors central banks (S.121) and other monetary financial institutions (S.122) as defined in the ESA 95 (2.41).

*Credit institutions* are defined in Article 4(1) of European Parliament and Council Directive 2006/48/EC<sup>1</sup> as undertakings whose business is to receive deposits or other repayable funds from the public and to grant credits for their own account. Deposits or other repayable funds also include proceeds from the sale of bank bonds to the public. Substitutability for deposits is determined by the liquidity of the liability instrument concerned, combining the characteristics of transferability, convertibility, certainty and marketability, and having regard, where appropriate, to its term of issue (its initial or original maturity). These characteristics are further explained in Annex I, Part 1 of Regulation ECB/2008/32. All credit institutions within the meaning of Directive 2006/48/EC are MFIs. Institutions not falling within the scope of Directive 2006/48/EC may still be considered to be subject to the Eurosystem statistical reporting and minimum reserves legal frameworks,

provided that they fulfil the criteria of Regulation ECB/2003/9 on the application of minimum reserves.<sup>2</sup>

*Money market funds* (MMFs) are defined in ECB/2008/32, as amended by Regulation ECB/2011/12, as collective investment undertakings (CIUs)<sup>3</sup> that (1) pursue the investment objective of maintaining the principal value of the fund and providing a return in line with interest rates on money market instruments, (2) invest in assets which comply with the criteria for money market instruments set out in Directive 2009/65/EC, or in deposits with credit institutions or, alternatively, ensure that the liquidity and valuation of the portfolio in which they invest is assessed on an equivalent basis, and (3) ensure that the money market instruments they invest in are of high quality, as determined by the management company. Article 1a of the amended Regulation presents a number of additional identification criteria which MMFs should meet, while Annex I, Part 1 provides further guidance on identifying them. The criteria for identifying MMFs in the Regulation are generally in line with the criteria for supervisory purposes, following the guidelines on a common definition of European MMFs adopted by the Committee of European Securities Regulators (CESR), the predecessor of the European Securities and Markets Authority (ESMA), in May 2010. It should be noted that these criteria are mandatory for statistical purposes, whether or not they are applied for supervisory purposes at national level.

*Electronic money institutions* (ELMIs) are defined in Article 2(1) of European Parliament and Council Directive 2009/110/EC. Broadly, they are entities authorised to issue electronic money, which is electronically or magnetically stored monetary value as represented by a claim on the issuer and which may be used to make

1 Directive 2006/48/EC of the European Parliament and of the Council of 14 June 2006 relating to the taking up and pursuit of the business of credit institutions (OJ L 177, 30.6.2006, p. 1).

2 OJ L 250, 2.10.2003, p. 10.

3 CIUs are undertakings the sole object of which is the collective investment of capital raised from the public and the units of which are, at the request of the holders, repurchased or redeemed directly or indirectly out of the undertaking's assets.

payments to a variety of other entities. Directive 2009/110/EC removed ELMIs from the scope of the EU law definition of “credit institutions”. However, following its update in 2011, Article 1(1)(a)(iii) of Regulation ECB/2008/32 makes clear that ELMIs remain within the MFI sector after they cease to be credit institutions if their principal activity is the issuance of e-money.

According to Directive 2009/110/EC, monetary value stored on specific pre-paid instruments does not represent electronic money when the instruments are designed to address precise needs and can be used only in a limited way, because they allow the electronic money holder to purchase goods or services only on the premises of the electronic money issuer or within a limited network of service providers under direct commercial agreement with a professional issuer, or because they can be used only to acquire a limited range of goods or services.

#### Residence and institutional units

Regulation ECB/2008/32 refers to the concept of *residence* as defined in Article 1 of Regulation (EC) No 2533/98: “*resident*’ and ‘*residing*’ shall mean having a centre of economic interest in the economic territory of a country”, which is also the ESA 95 definition. In accordance with this definition, Regulation (EC) No 2533/98 also indicates that for the purposes of the compilation of euro area statistics “*cross-border positions*’ and ‘*cross-border transactions*’ shall mean respectively *positions and transactions in the assets and/or liabilities of residents of participating Member States seen as one economic territory vis-à-vis residents of non-participating Member States and/or residents of third countries*”.

In explaining residence further, the ESA 95 defines “resident units” of a country as “*those which have a centre of economic interest on the economic territory of that country*” (2.04) and states that “*The term centre of economic interest indicates the fact that there exists some location within the economic territory on, or from, which*

*a unit engages ... in economic activities and transactions on a significant scale*” (2.07). The notion of “centre of interest” has more recently been interpreted to include entities (special purpose entities, or SPEs) which are registered or incorporated in a country, even if they have little or no presence there.<sup>4</sup> The forthcoming revision of the ESA will also include this interpretation. In practice, and explicitly in some legal instruments, the ECB has anticipated this clarification in the new statistical standards.

The concept of *notional residency* applied for certain transactions by non-resident owners of real estate is not used in MFI balance sheet statistics: borrowing or debt service transactions are treated as undertaken by the non-resident, not by a *notional resident*.<sup>5</sup>

Resident credit institutions include resident branches of institutions headquartered abroad, but exclude foreign branches of resident institutions. Similarly, MMFs resident in the euro area but managed from outside the euro area are part of the reporting population, while the statistics do not cover MMFs established in offshore locations outside the euro area, even if their management companies are resident in the euro area.

*Institutional units* are defined in the ESA 95 as “*economic entities that are capable of owning goods and assets, of incurring liabilities and of engaging in economic activities and transactions with other units in their own right*” (1.28). All institutional units are grouped into *institutional sectors* (see below); no unit is in more than one sector.

#### Institutional sectors

The MFI institutional sector comprises all resident MFIs (included in the list of MFIs published by the ECB) and is further split into two sub-sectors, central banks (S.121) and other MFIs (S.122). In addition, Regulation

<sup>4</sup> See, for example, the System of National Accounts 2008 (SNA 2008) and the sixth edition of the IMF’s Balance of Payments and International Investment Position Manual (BPM6).

<sup>5</sup> This is consistent with the treatment in the BPM6.

ECB/2008/32 requires MFIs' counterparties to be allocated to sectors.

Excluding MFIs themselves, institutional units are classified as:

- non-financial corporations (S.11 – entities engaged in the production of goods and non-financial services for the market);
- non-monetary financial corporations (S.12, excluding MFIs), comprising other financial intermediaries except insurance corporations and pension funds (OFIs) (S.123), financial auxiliaries (S.124), and insurance corporations and pension funds (S.125);
- general government (S.13 – entities which are principally engaged in the production of non-market goods and services intended for individual and collective consumption, and/or in the redistribution of national income and wealth), comprising central government (S.1311), state government (S.1312), local government (S.1313), and social security funds (S.1314);
- households (S.14), comprising individuals and many unincorporated businesses; households are grouped together with non-profit institutions serving households (S.15).

There is also the sector “rest of the world” (S.2) made up of all non-resident entities. Rest of the world transactions and positions are recorded only to the extent that residents are party to them and correspond, with some modifications, to the balance of payments and international investment position. By convention EU institutions and other bodies and international organisations are treated statistically as non-resident in both national and euro area statistics, regardless of their physical location. The exception is the ECB, which is classified as a central bank in the MFI sector of the euro area, although not as resident in any individual Member State. However, within the reporting

scheme for MFI balance sheet statistics for the purpose of the geographic allocation of the counterparty, the ECB is classified as an MFI resident in Germany. Financial transactions or positions between the EU institutions (except the ECB) and entities in the euro area are thus treated in both national statistics and euro area aggregates as transactions or positions with the rest of the world.

Like other EU institutions except the ECB, the European Investment Bank (EIB) is treated statistically as resident outside the euro area.<sup>6</sup> In May 2009, however, the EIB was granted the status of eligible counterparty to the Eurosystem's refinancing operations for an initial period of three years, since extended. During this period, the EIB is treated for operational purposes, although not for statistical purposes, as a credit institution resident in the euro area (and has thus been included in the list of MFIs published by the ECB) and is subject to reserve base statistics reporting. Credit institutions in the euro area may deduct any liabilities to the EIB from their reserve base for the purposes of the Eurosystem's minimum reserve requirement (the use of MFI balance sheet data for calculating the reserve base is discussed in Section 5.1). In the balance sheet returns submitted by MFIs to NCBs under Regulation ECB/2008/32, the NCBs may choose between requiring MFIs (i) to continue treating the EIB as a non-bank resident in the rest of the world, or (ii) to treat the EIB as a credit institution resident in the euro area. However, in the data which the NCBs transmit to the ECB, the EIB must be treated as a non-bank resident in the rest of the world.

These classifications, which are further elaborated in Annex II, Part 3 of Regulation ECB/2008/32 and in the ECB's sector manual, conform to the ESA 95. Because the MFI balance sheet data are used to compile aggregates for the euro area as a

<sup>6</sup> More specifically, the EIB is classified as a non-bank in the category “other” (meaning not general government) sectors resident in the rest of the world (that is, outside the euro area) – see *Monetary Financial Institutions and Markets Statistics Sector Manual*, ECB, March 2007, p. 13 (<http://www.ecb.europa.eu>).



whole, Regulation ECB/2008/32 requires MFIs resident in the euro area to provide a sector classification of business with both domestic counterparties and counterparties resident in other euro area countries.<sup>7</sup> For some purposes, categories are merged, but the Regulation sometimes requires sectors to be further subdivided (for instance, central counterparties and financial vehicle corporations must be identified within the merged S.123/S.124, and sole proprietors/unincorporated partnerships within S.14/S.15). Business conducted with counterparties resident outside the euro area is reported in more summary form.

#### Transactions, revaluation and “other” changes

The ESA 95 defines a *transaction* as “an economic flow that is an interaction between institutional units by mutual agreement or an action within an institutional unit that it is useful to treat as a transaction, often because the unit is acting in two different capacities” (1.33). It goes on to define financial transactions as “transactions in financial assets and liabilities between institutional units, and between them and the rest of the world” (5.01).

It is clear that taking or repaying a deposit, granting a loan or receiving repayment, and buying or selling a security (or relinquishing it on redemption) are all transactions, since they represent interactions between units by agreement. Debt forgiveness is also a transaction, as are other forms of capital transfer which may take the form of, for example, a transfer of financial assets free of charge or for a payment below market price. But other events, which do not represent an interaction between institutional units by mutual agreement, may affect the total amount of assets and liabilities recorded on MFI balance sheets, or their disposition among balance sheet categories, such as changes in the prices of securities, write-offs of loans arising from defaults (as opposed to debt forgiveness), reclassification of instruments or changes in the residence or sector of counterparties. The ESA treats such events, not as transactions, but as “other” (meaning non-transactional) flows, and records them in the *revaluation account*

(comprising the effect of price and other valuation changes) and in the *other changes in the volume of assets account* (ESA 95, Chapter 6, “Other flows”).

The distinction between transactions and other influences on balance sheet levels is also critical in MFI balance sheet statistics. Under Regulation ECB/2008/32, in addition to balance sheet levels, MFIs report valuation changes (“revaluation adjustments”) for at least certain balance sheet items (the minimum requirement). Article 3 of Guideline ECB/2007/9, as amended, requires NCBs to report to the ECB these revaluation adjustments, supplemented by other information on valuation changes if necessary, together with information on reclassifications and other non-transactional factors (“reclassification and other adjustments”). In addition to changes in business structure (e.g. in the sector classification of counterparties, etc.), “reclassification and other adjustments” may include adjustments to prevent revisions from causing a break in the series between the first corrected and the last uncorrected observation, since such a break would distort the growth rate of the item concerned. In addition, the ECB itself corrects aggregated MFI balance sheets for the effect of exchange rate changes.<sup>8</sup> All these adjustments are subject to the same double-entry accounting system as stocks and transactions: thus adjustments always have a counterpart which will often be “capital and reserves” or “remaining liabilities”, depending on the operation or the national accounting rules.

Section 1.6.3 and Section 4.2 explain how these adjustments are made and transactions derived (or, as in some Member States, how transactions are reported directly and valuation effects derived as a residual).

<sup>7</sup> Including with the SPEs mentioned in the previous section on residence. As with all other entities, MFIs should classify their business with SPEs according to the entity’s main activity: if that is financial, the SPE should be classified in S.12 (probably S.123); if the SPE (for example) holds licences or engages in trading/merchandising activities, it should be classified in S.11.

<sup>8</sup> Unless the NCBs provide more exact information on exchange rate adjustments.

All growth rates<sup>9</sup> of monetary aggregates and counterpart information derived from MFI balance sheet data are based on transactions, which, in conformity with the ESA 95, are not calculated exclusively from changes in balance sheet levels. In practice, however, MFI statistics as required under Regulation ECB/2008/32 and Guideline ECB/2007/9, as amended, depart somewhat from the requirements (or at least from the preferred treatment) in the ESA. For example MFI balance sheet statistics treat *write-offs* and *write-downs* as revaluations, whereas in the ESA 95 such unilateral operations by the creditor are regarded as “other changes in the volume of assets”.<sup>10</sup> A more important departure from the ESA 95 concerns the treatment of *accrued interest*: whereas the ESA prefers accrued interest to be recorded in the instrument category, the MFI balance sheet Regulation requires it to be recorded in “remaining assets” or “remaining liabilities”, to prevent the inclusion of accrued interest in the monetary aggregates until it is paid out or charged (see further below). The concepts, however, and the critical distinction between transactions and other influences on balance sheet levels, are the same.

## 1.2 ACCOUNTING PRINCIPLES

Article 7 of Regulation ECB/2008/32 lays down the relevant accounting principles for the purposes of statistical reporting.

As in the ESA 95, *deposits and loans* are to be reported at the principal amount outstanding, excluding amounts written off or written down. As an exception to this rule, NCBs may allow the reporting of loans net of provisions and the reporting of purchased loans at the price agreed at the time of their acquisition, provided that such reporting practices are applied by all resident reporting MFIs and are necessary to maintain continuity in the statistical valuation of loans with the data before January 2005. Deposit liabilities and loans must not be netted against each other or against any other assets or

liabilities. More broadly, Article 7 states that, without prejudice to accounting practices and netting arrangements prevailing in Member States, all financial assets and liabilities must be reported on a gross basis.<sup>11</sup> This requirement conforms to a general requirement, or at least a preference, for gross reporting in the ESA 95.

An exception to the rule of gross recording is the treatment of holdings of own instruments issued. For the purposes of MFI balance sheet statistics, holdings of own instruments issued (holdings of own shares and other securities issued by the MFI) should be recorded on a net basis (i.e. the holding and the liability should not be recorded gross on separate sides of the balance sheet). However, the gross recording of holdings of own instruments issued is permitted if this is required by local accounting rules. If gross recording is applied, holdings of own instruments should be classified under the relevant instrument category and not under the balance sheet item “remaining assets”. The netting treatment is strongly recommended as the level of own holdings may not be negligible under certain market conditions.

The valuation and treatment of other balance sheet items are covered by the general requirement in Article 7 to follow the national

9 For a detailed description of the methodology underlying the derivation of growth rates in MFI balance sheet statistics, see Section 4.3.

10 More specifically, the ESA 95 makes a distinction between write-offs/write-downs, which are regarded as “other changes in volume” (6.27d), and, in the case of the sale of loans, the difference between selling price and initial transaction price, which should be treated as a revaluation (6.51).

11 This approach ensures consistency between MFI balance sheet statistical reporting and FINREP, as long as the accounting rules follow the guidance provided in international accounting standards (IAS). IAS 1.32-35 establish as a general principle that assets and liabilities, and incomes and expenses, cannot be offset, unless allowed by another international financial reporting standard (IFRS). In addition, as prescribed by IAS 32.422, a financial asset and a financial liability are to be offset and the net amount presented in the balance sheet when, and only when, an entity (a) currently has a legally enforceable right to set off the recognised amounts and (b) intends either to settle on a net basis or to realise the asset and settle the liability simultaneously. In particular, it should be underlined that the first condition is very restrictive and implies that, in practice, netting is rarely applied by financial institutions using the IAS.

transposition of Council Directive 86/635/EEC on the annual accounts and consolidated accounts of banks and other financial institutions, as well as any other international standards applicable. While Annex V, Part 2, Section 2 of Guideline ECB/2007/9, as amended, expresses a preference for market valuation, it recognises that in practice valuation practices for securities and other assets and liabilities vary. In addition to market price, which is the general requirement of the ESA 95 and other international statistical and accounting practices, acquisition value and the lower of market price and acquisition value are also used. The Guideline accepts this as long as the book value does not diverge significantly from the market value. In this respect, the revaluation adjustments reported by euro area MFIs in different countries also reflect the impact of the different national accounting practices and accordingly avoid distortions when transactions data are compiled.

With specific regard to statistical reporting by central banks (S.121), Guideline ECB/2007/9, as amended, states that NCBs and the ECB itself in their statistical reporting should follow the harmonised accounting rules in Guideline ECB/2002/10. There are limited exceptions: NCBs are required for statistical purposes to revalue their securities portfolio on a monthly rather than quarterly basis (see Section 1.6.1); intra-Eurosystem positions are to be reported on a gross basis (not on a net basis); revaluation accounts are to be reported on a net basis (not on a gross basis); and unrealised losses are to be reported under “other assets”.

Since the data are mainly used for monetary analysis, the treatment of *accrued interest* in MFI balance sheet statistics departs (at least for deposits and loans) from the ESA 95, which prefers accrued interest to be recorded in the relevant instrument category, while accepting that national practice, where different, may also be followed (5.130).<sup>12</sup> This implies that accrual of interest shows as a transaction in the instrument concerned, matching the entry under interest income in the non-financial accounts. Regulation ECB/2008/32, by contrast, requires accrued

interest on deposits and loans to be recorded in “remaining liabilities” or “remaining assets”. The Regulation contains no rule on the treatment of accrued interest on securities issued or held by MFIs. In the interest of coherent data, Annex V of Guideline ECB/2007/9, as amended, suggests that accrued interest which is intrinsic to the accounting price as reported on the MFI balance sheet should be subject to revaluation adjustment, while accrued interest which is excluded from the reported value of the securities to which it relates should be classified under “remaining assets” or “remaining liabilities”, and not be treated as a revaluation adjustment. In neither case would the accrual of interest be recorded as a transaction in the security concerned.

Transactions are recorded net within each instrument and sector category, in the sense that loans extended are net of repayments, purchases of securities are net of sales, etc. Thus the data do not measure gross financial transactions or turnover. This is consistent with the ESA 95. Another provision of the ESA 95 applied to MFI balance sheet statistics is that financial transactions are recorded at the transaction value (5.134), which may not necessarily be the same as the price quoted in the market at the time of the transaction (5.136). The transaction value excludes charges, fees, commissions, etc., which are treated as separate transactions in services (5.137).

How transactions data are compiled in practice is explained in Section 1.6.3 and in Section 4.2.

#### Reference day for balance sheet data

End-of-month and end-of-quarter balance sheet data should refer to the last calendar day.

If this is not possible, data relating to the last working day should be used, in accordance with national market or accounting rules.

Where the last working day is used, if regional holidays fall at the end of the month or quarter,

<sup>12</sup> In the balance of payments and international investment position, accruals are recorded in the relevant instrument category.

countries may adopt the last working day in the region(s) or the last common working day in the country as the reference day. Where the last working day is used, but the last calendar day falls on a weekend or a public holiday, countries should preferably attribute any business on that and any preceding non-working day(s) to that reference month or quarter. It is acceptable, however, to attribute the business to the first working day of the next month or quarter.

### Conversion of balances in foreign currencies

In accordance with ESA 95, items denominated in foreign currencies should be converted into euro at market exchange rates prevailing on the day to which the data relate. ECB reference exchange rates should be used.<sup>13</sup>

If data do not relate to the last calendar day but to an earlier working day, the last ECB reference rates of the reference month or quarter should preferably be used.<sup>14</sup> It is acceptable, however, to use the ECB reference rates relating to that last working day.

### Time of recording

The ESA 95 states that financial transactions and their counterpart transactions (financial or non-financial) must be recorded at the same point in time (5.142). A distinction is made between two main cases, depending on the nature of the counterpart transaction. When the counterpart of a financial transaction is a non-financial transaction (e.g. sale of a non-financial asset), both transactions are to be recorded at the *time when the non-financial transaction takes place* (5.143), i.e. when the ownership of the non-financial asset changes, which may not coincide with payment (1.57).<sup>15</sup> MFI balance sheet outstandings, however, are mostly affected by transactions within the financial account (where the counterpart of a financial transaction is another financial transaction). In this case, the ESA 95 criterion usually relates to the *time when the payment is made* (5.144). In particular, three possibilities can be distinguished: i) if both financial transactions are transactions in means of payment<sup>16</sup>

(for example, where currency or deposits are exchanged), they should be recorded at the time the first payment is made; ii) if only one of the two financial transactions is a transaction in means of payment (e.g. a sale of securities for deposits), they should be recorded at the time payment is made; iii) if neither of the two financial transactions is a transaction in means of payment (e.g. an exchange of securities), they should be recorded at the time the first financial transaction takes place (i.e. the change in ownership). In accordance with these criteria, an MFI loan should be recorded when the payment is made to the borrower (which also coincides with the creation of the claim against the borrower) (case ii). Similarly, when an MFI buys a security in exchange for cash, the transaction should be recorded when the payment occurs, not when the security is traded or delivered (case ii). In contrast, when an MFI exchanges a loan against a security, the financial transactions are to be recorded when the first change in ownership (whether of the loan or the security) takes place (case iii).

The time of recording in accounting rules often differs from the treatment envisaged by the ESA 95 for transactions within the financial account. In particular, under international financial reporting standards (IFRS), transactions in financial assets are to be recorded either on the *“trade date”* or on the *“settlement date”*. The trade date is defined as the date when two entities commit to the purchase or sale of an asset (IFRS 9.B3.1.5), while the settlement date is the date on which an asset is delivered to or by an entity, which is the moment when the ability to exercise the rights associated with the transacted financial asset are received/transferred

<sup>13</sup> See the ECB press release of 8 July 1998 “Setting-up of common market standards” on the ECB’s website (<http://www.ecb.europa.eu>).

<sup>14</sup> When estimating the exchange rate adjustment (see Section 4.2.2), the ECB uses its last reference exchange rates of the month or quarter.

<sup>15</sup> For instance, when a service is provided giving rise to a claim on the customer (e.g. trade credit), this financial transaction is to be recorded when the entries are made in the non-financial account.

<sup>16</sup> Means of payment in the ESA 95 comprise monetary gold, special drawing rights, currency and transferable deposits (5.04).

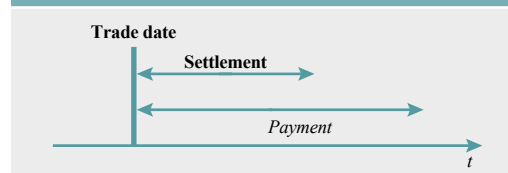
(IFRS 9 B3.1.6). The payment, however, may take place on a different date and does not determine the time of recording under IFRS. The trade date and the settlement date often coincide, but in many cases they do not. For instance, regulated stock exchanges have often developed in such a way that, for transactions in equity instruments, the delivery is made on the trade date, while the corresponding payment follows at a later stage. In these cases, the counterpart of the transaction in the equity instrument is a receivable/payable which will be reversed when the payment is made. As regards transactions in bonds, however, regulated exchanges are sometimes organised in such a way that delivery is recorded when payment occurs, which may not coincide with the trade date.<sup>17</sup> In these cases, the counterpart of the transaction in the bond instrument is the payment and no receivable/payable amounts arise.

In the context of MFI balance sheet statistics, MFIs should record financial transactions on the date when delivery is made<sup>18</sup> (i.e. the settlement date in IFRS terminology).<sup>19</sup> In cases where, in accordance with the accounting provisions, MFIs do not record transactions when the delivery is made (e.g. they record transactions on the trade date), they may do the same for MFI balance sheet statistics reporting, provided this does not create significant distortions in the reported figures. If significant distortions arise as a result of not using the settlement date, the NCB should develop suitable techniques to make the necessary adjustments to remove such distortions.

Recording transactions on the settlement date may give rise to amounts receivable or payable. MFIs should record such amounts on a net basis under “remaining assets” or “remaining liabilities”, according to their sign. (This may also apply if transactions are recorded on the trade date.)

The suggested practice for MFI balance sheet statistics is thus broadly in line with the ESA 95 (as the settlement may well coincide with the

#### Recording of transactions under IFRS and payment date



payment) and IFRS, as the settlement date is one of the options available under IFRS.

National variations in the determination of the “reference day for balance sheet data” (see Section 1.2) may lead to different practices in relation to the time of recording. This can lead to quality issues, in particular for short-term comparisons, and may contribute to discrepancies between aggregated inter-MFI assets and liabilities. These should, however, even out over longer time periods.

#### Consolidation

The principle of gross reporting stated above does not prevent consolidation in certain circumstances. Annex II, Part 1 of the Regulation requires MFIs to consolidate the business of all their offices (registered or head office and branches) located within the same national territory. Furthermore, if an MFI has subsidiaries (as opposed to branches) in the same country which are also MFIs, the parent MFI may consolidate in its statistical returns the business of these subsidiaries, keeping separate, however, the business of credit institutions and other MFIs among them for minimum reserves purposes. By contrast, the Regulation permits no consolidation across

<sup>17</sup> Securities exchanges do not all operate in the same way with respect to the timing of trading versus delivery and payment, so there may be differences across countries.

<sup>18</sup> For transactions in financial assets which do not take place on regulated exchanges (e.g. deposits, loans and non-negotiable securities), the delivery usually takes place when the payment occurs.

<sup>19</sup> The sixth edition of the IMF’s Balance of Payments and International Investment Position Manual (BPM6) recommends to record transactions “when economic ownership changes”, i.e. the date when the delivery is made in IFRS terms, which is also the recommended option of this manual for MFI balance sheet statistics (BPM6, however, uses the expression ‘delivery date’ with a different meaning compared to IFRS).



national boundaries. An MFI must report business with branches and subsidiaries abroad (whether in another participating Member State or outside the euro area) or with a parent abroad (if the reporting institution is itself a branch or subsidiary) as if it were business with an unaffiliated MFI in the country concerned. Nor does the Regulation permit consolidation across sectoral boundaries. Thus, in its statistical reporting, an MFI may not consolidate the business of financial subsidiaries which are not MFIs with its own business.

### Group reporting

To alleviate the reporting burden, Annex III, Part 2, Section 1 of Regulation ECB/2008/32 permits group reporting by credit institutions. There are two variants, both of which are conditional on the holding of minimum reserves as a group via an intermediary in the sense of Regulation ECB/2003/9 on the application of minimum reserves, as amended.

With reference to the first variant, Regulation ECB/2008/32 allows the intermediary to apply to the ECB for permission to report the statistical data regarding the reserve base for the group on a consolidated basis. Other statistical data required by the Regulation must, however, be reported on an aggregated basis. If authorisation is granted, the intermediary is exempted from the obligations defined in Article 10(6) of Regulation ECB/2003/9 to report individual minimum reserves related data for each group member. The group members will then no longer benefit individually from the lump sum allowance as defined in Article 5(2) of Regulation ECB/2003/9, as the group as a whole is entitled to it only once.

The second variant of group reporting does not imply exemptions from the requirements defined in Regulation ECB/2003/9. An NCB may allow an intermediary to report MFI balance sheet data, other than items related to the reserve base, in aggregate for the group. Nevertheless, the data relating to minimum reserves still need to be reported in a way such that data relating to each member of the group can be identified.

### 1.3 DISTRIBUTION OF REQUIREMENTS BETWEEN THE REGULATION AND THE GUIDELINE

Article 5 of the Statute of the ESCB and of the ECB requires the ECB to collect the statistical information necessary to carry out its functions. The relevant EU legislation setting a framework for the ECB's statistical work is Council Regulation (EC) No 2533/98, as amended by Council Regulation (EC) No 951/2009.

To carry out the functions of the Eurosystem, the ECB may, subject to constraints imposed by EU legislation, adopt legal instruments that have a direct effect on certain entities resident in the euro area. These entities comprise the reference population for ECB statistics, which includes all MFIs and other financial intermediaries (S.123 and S.125 in the ESA 95). These legal instruments are ECB *regulations*, which set out the ECB's statistical requirements for MFIs and other financial corporations in the euro area and are binding on the entities to which they are addressed, and are directly applicable, meaning that they do not need to be transposed into national law. These regulations instruct reporting entities on, for example, statistical reporting requirements in terms of definitions, classifications, frequency and timeliness. The applicable regulation for MFI balance sheet statistics is Regulation ECB/2008/32.

The ECB also adopts *guidelines* which are binding on members of the Eurosystem, including on the ECB itself. Statistical guidelines instruct central banks on what data must be submitted to the ECB, by when, in what format, etc. Where the relevant statistics are not the subject of a regulation, a guideline informs euro area central banks of the ECB's needs, leaving some discretion as to the choice of source for the data, provided that certain standards are met. The applicable guideline for MFI balance sheet statistics is Guideline ECB/2007/9, as amended.

Apart from regulations and guidelines, the ECB may also use other instruments to provide guidance, including recommendations, notices, decisions and guidance notes. An ECB *recommendation* is like a guideline, but without binding force. The only statistical recommendation currently in effect is addressed to certain euro area statistical agencies outside the Eurosystem who are responsible for balance of payments and related statistics in their Member State. The purpose of an ECB *notice* is to inform. The only statistical notice issued so far concerned the imposition of sanctions in connection with an infringement of the MFI balance sheet Regulation; see also Section 7. The purpose of an ECB *decision* is to ensure the performance of the tasks of the ESCB. A decision is binding in its entirety. If it specifies to whom it is addressed, it is binding only on the addressees. A decision with addressees will take effect upon its notification to the addressees. A new ECB decision on non-compliance replaced the ECB notice mentioned above at the end of 2010; see also Chapter 7. The ECB also publishes *guidance notes* in various forms, including manuals like this one. Although they may, implicitly or explicitly, describe or recommended best practice, guidance notes have no binding force.

#### 1.4 LIST OF MFIs FOR STATISTICAL PURPOSES

Under the ESA 95, the population of MFIs is defined by the ECB (2.49) as this population plays an essential role in the transmission of monetary policy decisions. Accordingly, the ECB establishes a list of MFIs for statistical purposes. This list is also used as a basis for producing consistent and comprehensive monthly lists for the Eurosystem's minimum reserve requirements and of the counterparties eligible for Eurosystem operations.

The list of MFIs for statistical purposes comprises all institutions resident in all Member States of the European Union, and therefore comprises all EU MFIs, whether or not the Member State in which they are located is a euro

area country. However, the reporting population for the purpose of Regulation ECB/2008/32 is confined to MFIs resident in the euro area.

#### Maintaining the list of MFIs

MFIs in the list are identified by an MFI identification (ID) code, which is unique to each institution. Each NCB in the European Union is responsible for allocating a unique MFI ID code to each MFI resident in its territory.<sup>20</sup> The MFI ID code comprises the two-digit ISO code of the country of residence of the MFI followed by a series of alphanumeric characters (no maximum length has been specified, but there must be at least three digits after the two-digit ISO code). The MFI ID code convention has been agreed by the ECB and the NCBs. This convention is legally binding and is laid down in Article 19 of Guideline ECB/2007/9, as amended.

A number of details are reported by NCBs for each MFI included in the list in accordance with Guideline ECB/2007/9. NCBs immediately update these details when there are changes in attributes of existing MFIs (e.g. name, address, etc.).

#### Changes in the population of MFIs

A change in the population of MFIs occurs whenever an institution joins or leaves the MFI sector (i.e. as the result of a merger or takeover, the division of an existing MFI, the establishment of a brand new MFI, a change in the status of a non-MFI to an MFI or an MFI to a non-MFI, or the liquidation of an MFI).

When a new MFI is created, NCBs immediately register the entity together with all mandatory details. Similarly, when an institution leaves the MFI sector it is deleted from the list of MFIs immediately.

Institutions that are credit institutions under EU law are classified as MFIs. Former credit institutions that no longer meet the definition of a credit institution under EU law, and which

<sup>20</sup> NCBs should avoid reallocating the MFI identification codes of deleted MFIs to new MFIs.

do not otherwise meet the definition of an MFI, are declassified as MFIs. This means that credit institutions joining/leaving the MFI sector are added to/removed from the list of MFIs once the competent supervisory authority has granted/cancelled their licence.

In the case of collective investment undertakings (CIUs), NCBs classify CIUs as MFIs if they fall within the definition in Regulation ECB/2008/32. NCBs immediately remove CIUs from the list of MFIs if they no longer satisfy the legal definition of an MMF. If a CIU ceases to be classified as an MMF but continues in business, it is included in the list of investment funds (IFs) for the purpose of reporting as an IF under Regulation ECB/2007/8. Similarly, a CIU that is reclassified as an MMF is removed from the list of IFs.

After a credit institution or an MMF has been included in the updated list of MFIs, it must start reporting statistical information in accordance with the Regulation without undue delay.<sup>21</sup>

The definition of an MFI may be met by financial institutions that are neither credit institutions according to EU law, nor MMFs according to the agreed EU-wide definition for supervisory purposes, as adopted by the ECB in Regulation ECB/2008/32. To identify such institutions, NCBs check regularly whether financial institutions not on the list of MFIs nevertheless meet the statistical criteria for inclusion (these are usually institutions classified under the ESA 95 sector “other financial intermediaries”, S.123). They also check regularly that financial institutions on the list of MFIs continue to meet the definition of an MFI. As the procedures can be complex, the ECB recognises that such a comprehensive check might occur only once a year. Financial institutions should be added to the list of MFIs as soon as they have been identified as meeting the definition of an MFI, and removed as soon as they are identified as no longer meeting the definition. These changes to the list should be made in accordance with the procedures for updating the list outlined above.

When an institution is included in the list, it must start reporting in accordance with the Regulation without undue delay.

#### Public release

Updates of the list of MFIs, together with details of the individual institutions, are released daily on the ECB’s website.<sup>22</sup> The list can be downloaded or user-defined searches can be performed. Explanatory notes available on the website provide further information and definitions.

### 1.5 ACTUAL REPORTING POPULATION

According to Regulation ECB/2008/32, the reporting population for MFI balance sheet statistics consists of the MFIs resident in the territory of the participating Member States. The Regulation distinguishes between MFIs which are subject to full reporting requirements and “small” MFIs to which derogations are applicable (the “tail”). Annex IV of Regulation ECB/2008/32 specifies the minimum standards that reporting agents must meet to satisfy the ECB’s reporting requirements for MFI balance sheet statistics.

As noted above, the MFI population includes MMFs, which issue shares/units rather than take deposits. For the purposes of monetary statistics, it is important to identify and exclude holdings of these by non-residents of the euro area, because the ECB’s measures of money stock are confined to holdings of monetary instruments by residents of the euro area.<sup>23</sup> Under Article 2(4) of Regulation ECB/2008/32, where MMFs themselves cannot identify holders of their shares/units, the ECB and NCBs may request such information from OFIs (S.123), which may therefore be included in the actual

<sup>21</sup> The relevant NCB may determine the actual scope and details of statistical reporting requirements imposed on joining/leaving MFIs on a case-by-case basis in agreement with the ECB.

<sup>22</sup> See the *Monetary and financial statistics* section of the ECB’s website (<http://www.ecb.europa.eu>).

<sup>23</sup> With the exception of euro banknotes and coins, where the total amount in circulation is included in money stock.

reporting population in connection with, for example, custodial activities involving MMF shares/units.

### **Derogations granted to reporting institutions**

#### ***Derogations granted to small MFIs (MFIs in the tail)***

Under Article 8(1) of Regulation ECB/2008/32, NCBs may grant derogations as follows:

- i) NCBs may grant derogations to small MFIs, provided that their combined contribution to the national MFI balance sheet in terms of stocks does not exceed 5%;
  - with regard to credit institutions, the derogations must have the effect of reducing the statistical reporting requirements without prejudice to the requirements for the calculation of minimum reserves (see Section 5.1);
  - with regard to small MFIs included in the tail, NCBs must continue, as a minimum, to collect data relating to the total balance sheet at least annually so that the size of the reporting “tail” can be monitored (and in order to gross-up properly, see Section 3.1).<sup>24</sup>
- ii) NCBs may grant derogations to credit institutions with respect to a limited set of reporting requirements, as indicated below, provided that their combined contribution in terms of stocks exceeds neither 10% of the national MFI balance sheet nor 1% of the euro area MFI balance sheet.

As indicated in Part 7 of Annex I of ECB/2008/32, credit institutions qualifying for this derogation may be exempted from the following requirements:

- monthly reporting with respect to the breakdown by currency, the separate identification of positions with central counterparties, syndicated loans, and debt securities of up to two years’

maturity and with a nominal capital guarantee below 100%;

- quarterly reporting with respect to the sector breakdown of business with counterparties outside the participating Member States as included in Table 2 in Part 3, Annex I of ECB/2008/32, the breakdown by country as included in Table 3 in Part 3, Annex I of ECB/2008/32, and the breakdown by currency as included in Table 4 in Part 3, Annex I of ECB/2008/32.

In addition, these credit institutions may fulfil the reporting requirements related to balance sheet stocks data, revaluation adjustments data and loan securitisations and other loan transfers, all of which are normally monthly requirements, by reporting data on a quarterly basis.

NCBs can grant or withdraw derogations with effect from the start of each year, after checking that the conditions for inclusion in the 5% and 10% tails are met.

Small MFIs may choose not to make use of any derogation and, instead, to fulfil the full reporting requirements.

#### ***Derogations granted to money market funds (MMFs)***

According to Article 8(2) of Regulation ECB/2008/32, NCBs may grant derogations to MMFs from the reporting requirements set out in the Regulation, provided that they instead report balance sheet data in accordance with Regulation ECB/2007/8 concerning statistics on assets and liabilities of investment funds,

<sup>24</sup> Article 8(1)(c) of Regulation ECB/2008/32 explicitly mentions this provision only in the paragraph addressed to small MFIs that are not credit institutions. However, for all tail institutions, annual information on total assets is the minimum needed to check that the tail does not exceed 5% of total MFI assets and to ensure proper grossing up.

and the data are provided according to the timeliness requirements set out in Regulation ECB/2008/32.

#### Minimum standards to be applied by the actual reporting population

According to Annex IV of Regulation ECB/2008/32, reporting agents must satisfy the following minimum standards when fulfilling their reporting obligations in the context of MFI balance sheet statistics:

##### i) Minimum standards for transmission:

- reporting to NCBs must be timely and within the deadlines set by the relevant NCB;
- statistical reports must take their form and format from the technical reporting requirements set by NCBs;
- the contact person(s) within the reporting agent must be identified; and
- the technical specifications for data transmission to NCBs must be followed.

##### ii) Minimum standards for accuracy:

- the statistical information must satisfy the linear constraints (e.g. assets and liabilities must balance, subtotals must add up to totals) and must be consistent across all frequencies;
- reporting agents must be able to provide information on the developments implied by the data supplied;
- the statistical information must be complete: existing gaps must be acknowledged, explained to NCBs and, where applicable, bridged as soon as possible;
- the statistical information must not contain continuous and structural gaps;

- reporting agents must follow the dimensions and decimals set by NCBs for the technical transmission of the data; and

- reporting agents must follow the rounding policy set by NCBs for the technical transmission of the data.

##### iii) Minimum standards for conceptual compliance:

- the statistical information must comply with the definitions and classifications contained in Regulation ECB/2008/32;
- in the event of deviations from these definitions and classifications, where applicable, reporting agents must monitor on a regular basis and quantify the difference between the measure used and the measure contained in Regulation ECB/2008/32; and
- reporting agents must be able to explain breaks in the data supplied compared with the previous period's figures.

##### iv) Minimum standards for revisions:

The revisions policy and procedures set by the ECB and the NCBs must be followed. Revisions deviating from regular revisions must be accompanied by explanatory notes; see also Section 3.4.

## 1.6 STATISTICAL REPORTING REQUIREMENTS

The MFI balance sheet was designed principally for the production of euro area aggregates. Reported inter-MFI positions are netted out across the euro area by the ECB to obtain the consolidated MFI balance sheet. This is the main source for the euro area monetary aggregates and counterparts, and sectorisation of counterparties covers both domestic positions and positions with residents of other euro area countries. The MFI balance sheet is also used in calculating the



Eurosystem's minimum reserve requirement, for which purpose a distinction between credit institutions and other MFIs is necessary in some areas of the reporting.

Regulation ECB/2008/32 requires MFIs which are subject to full reporting requirements to report to the NCB of the Member State in which they are resident monthly stocks relating to the end-of-month balance sheet and monthly revaluation adjustments. Aggregated revaluation adjustments are reported in respect of write-offs/write-downs of loans granted, and also in respect of changes in the prices of securities. Further data on certain balance sheet and non-balance sheet items are reported quarterly or annually.

Guideline ECB/2007/9, as amended, indicates what information on monthly and quarterly reclassifications and revaluations may need to be provided by NCBs (and the ECB) in respect of their own balance sheets beyond the minimum requirements of Regulation ECB/2008/32.

As indicated in Article 3 of Guideline ECB/2007/9, as amended, NCBs and the ECB derive the required statistical information concerning their own balance sheets from their own accounting systems in accordance with the indications provided in the bridging tables in Annex I of the Guideline. The bridging tables provide a detailed link between the items in the accounting balance sheet and in the statistical balance sheet, for monthly and quarterly requirements.

## 1.6.1 VALUATION PRINCIPLES

### 1.6.1.1 Balance sheet valuation in ECB statistical regulations and guidelines

The valuation principles for outstanding amounts reported under Regulation ECB/2008/32 are to use nominal value for currency, deposits and loans (including finance leases)<sup>25</sup>, and market value for securities. Loans are to be reported at less than nominal value only if they have been written off or written down as wholly or partially irrecoverable.

As noted in Section 1.2 above, instruments denominated in foreign currency are to be reported as euro amounts converted at market exchange rates prevailing on the day to which the data relate.

Currency, deposits and loans (including finance leases) are indeed generally or always valued at nominal by reporting MFIs. Departures from the recommended practice of reporting loans gross of provisions (up to the point of writing them off or down) are nevertheless accepted, as discussed in Section 1.2.

In the valuation of securities, however, Regulation ECB/2008/32 accepts various practices, if national accounting procedures require them. Indeed, the accounting rules followed by MFIs in drawing up their accounts are expected to comply with the national transposition of the Bank Accounts Directive (Council Directive 86/635/EEC) and with any other international standards applicable, which may require valuation methods other than current market values or fair values for some or all of their assets/liabilities, in particular for their holdings and issues of securities and positions in financial derivatives. However, if valuation methods other than the current market value or fair value would give rise to noticeable distortions, where the reported book values for policy-sensitive items differ substantially from market values, NCBs should consider the possibility of removing these distortions, for instance by applying indices or data from security-by-security systems as a proxy for market valuations on a case-by-case basis. In principle, consistency in the valuation of issues and holdings of securities issued by MFIs is important, because they may be monetary instruments, and because holdings of the money-holding sector are calculated as a residual. Nevertheless, owing to the close link to the accounting balance sheets, the valuation of securities at market price in MFI balance sheet statistics is the exception rather than the rule,

<sup>25</sup> To be valued as if they are loans repayable by instalment, such as mortgages; see also Section 2.1.

while acquisition price, the lower of acquisition and current market price, redemption value, and some other measures of book value are all used. Usually, securities on the liability side are not reported at market value, while on the asset side at least some of the holdings are valued at current market prices. In some Member States the market value is used for the trading portfolio or for the “available for sale” category, while other valuation methods are applied for securities which the reporting institution holds in a longer-term portfolio, such as the “held to maturity” portfolio. The use of different methods inevitably affects balance sheet outstanding amounts as well as transactions (see also Section 1.6.3).

#### 1.6.1.2 Balance sheet valuation in the ESA 95

The ESA 95 requires financial assets and liabilities to be valued on balance sheets as follows (the AF codes are the ESA 95 instrument classification codes; the numbers in italics refer to paragraphs in the ESA 95):

- *monetary gold (AF.11)*, at the price established in organised gold markets (7.45);
- *SDRs (AF.12)*, at the value determined daily by the IMF (7.45);
- *currency (banknotes and coins) (AF.21)*, at nominal or face value (7.46);
- *deposits (AF.22, 29)*, at the amount of principal that the debtor is contractually obliged to repay the creditor (7.46); interest should be recorded as it accrues, not when it is paid; while the preference is for imputing accrued interest to the relevant asset category (5.130), the ESA 95 accepts that national accounting practices may be otherwise, in which case the counter-entry should be in “other accounts receivable/payable” (AF.79);
- *debt securities (AF.33)*, at market prices on the balance sheet date (7.25); regarding accrued interest, see the remarks on deposits; where debt securities are issued at a premium or discount, the difference between the issue price and the redemption price is to be treated as (negative or positive) interest accruing over the life of the instrument (5.138);
- *financial derivatives (AF.34)*, at market prices on the balance sheet date; where no market price is quoted, the instrument should be valued at either the amount required to buy out the contract or (for an option) the premium paid (7.50);
- *loans (AF.4)*, at the amount of principal that the debtor is contractually obliged to repay the creditor, even where the loan has been traded at a discount or premium (7.51); regarding accrued interest, see the remarks on deposits;
- *quoted shares (AF.511)*, at a representative mid-market price on the stock exchange or other organised financial market on the balance sheet date (7.53);
- *unquoted shares (AF.512)*, which are not regularly traded on an organised market, to be estimated by reference to quoted shares, but with allowance for inferior liquidity; the nature of the business and accumulated reserves should also be considered (7.54);
- *other equity (AF.519)*, to be estimated by reference to own funds or nominal value (7.56);
- *investment fund shares (AF.52)*, at their current stock market price, if they are quoted, or at their current redemption value, if they are redeemable by the fund itself (7.57);
- *other accounts receivable/payable (AF.7)*, the amount the debtor is contractually obliged to repay the creditor (7.61).

Foreign currency amounts should be converted into national currency at the mid-market exchange rate on the balance sheet date (7.31).

Practice in valuing certain items (for instance, the various categories of securities) in the MFI balance sheet is not fully consistent with balance sheet valuation in the ESA 95; for a detailed discussion of these differences for the instruments concerned, see Section 2.1.

## 1.6.2 COVERAGE AND TIMELINESS

### 1.6.2.1 The monthly MFI balance sheet

Regulation ECB/2008/32 requires an end-of-month balance sheet with instrument, maturity, currency and counterparty breakdowns. As separate reporting requirements apply to liabilities and assets, the two sides of the balance sheet are considered below in turn. For detailed information on instrument categories, see Section 2.1.

#### Liabilities

The following components are collected on a monthly basis: currency in circulation (a liability of the Eurosystem only); deposit liabilities, including balances on pre-paid cards; repurchase agreements (repos); MMF shares/units; debt securities issued, including money market paper; capital and reserves; and remaining liabilities. Deposit liabilities are further broken down into overnight deposits, deposits with an agreed maturity, and deposits redeemable at notice. Transferable deposits are identified separately as a sub-item of overnight deposits. MFIs also identify any liabilities in the form of debt securities with less than a full guarantee of nominal capital value. Remaining liabilities include accrued interest on liabilities (as noted elsewhere, this is a departure from the preferred treatment in the ESA 95, which recommends that accrued interest be included in the corresponding instrument category). Regulation ECB/2007/18 clarifies the conditions under which credit union shares may be considered as deposits for statistical purposes.

Original (rather than residual) maturity cut-offs may provide a substitute for an instrument

breakdown where financial instruments are not fully comparable across markets. Furthermore, original maturities are assumed to provide more indications of the underlying motivation of the debtor or investor which is the main focus of MFI balance sheet statistics.

The cut-offs for the maturity bands (or for the periods of notice) in monthly statistics are one and two years' maturity at issue for deposits with an agreed maturity; and three months' notice and (on a voluntary reporting basis) two years' notice for deposits redeemable at notice. Non-transferable sight deposits (sight savings deposits) are included in the "up to three months" band. Repurchase agreements (which are usually very short-term instruments, commonly agreed for less than three months) are not broken down by maturity. The maturity breakdown for debt securities issued by MFIs (including money market paper) is at one and two years. There is no maturity breakdown for shares/units issued by MMFs as the concept is not relevant for them.

#### Assets

MFI holdings of assets are broken down into cash; loans; securities other than shares, including short-term paper; MMF shares/units; shares and other equity; fixed assets; and remaining assets, which include accrued interest on assets. A maturity breakdown by original maturity is required for loans, at one and five years, and for securities other than shares (debt securities), at one and two years. Under Regulation ECB/2008/32, MFIs identify, within loans to non-financial corporations and to households, revolving loans and overdrafts, and "convenience" and "extended" credit card credit. Syndicated loans are reported separately (here the MFI reports the amount it has itself lent as part of the syndicate).

#### Currencies

For all relevant balance sheet items, amounts denominated in euro and in other currencies must be reported separately. Quarterly information identifying the main foreign currencies individually is used on a monthly

basis to remove the effect of exchange rate changes when deriving transactions data from changes in the outstanding amounts (see below in this section and in Section 4.2.2).

### Counterparties

Counterparties in the euro area are identified from the list of MFIs (if they are MFIs) or in line with the sector manual published by the ECB<sup>26</sup> which is consistent with the ESA 95. In both cases a distinction is made in the monthly MFI balance sheet between counterparties resident in the same country as the reporting MFI and counterparties resident elsewhere in the euro area. Monetary instruments held by MFIs themselves, by central government and by non-residents of the euro area are excluded from the ECB's monetary aggregates and must be identified in order to isolate the amounts in the hands of the money-holding sectors.

Since there is considerable interest in individual money-holding sectors for the purposes of analysis, MFIs provide a monthly breakdown of deposit liabilities identifying those held by general government other than central government, by non-financial corporations, by OFIs (including financial auxiliaries), by insurance corporations and pension funds and by households (including non-profit institutions serving households). In the categories of deposits with over two years' agreed maturity and deposits redeemable at over two years' notice, and in repos, for the purposes of the minimum reserve system additional distinctions are made between liabilities to credit institutions subject to minimum reserve requirements, and to all other MFI and non-MFI counterparties (including the rest of the world).

MFI lending is broken down monthly into lending to general government and lending to the other sectors listed above, with a further split of lending to households into credit for consumption, lending for house purchase and other lending. Under Regulation ECB/2008/32, the category "other" lending to households separately identifies loans to sole proprietors and unincorporated enterprises, which are

frequently classified to the household sector. In certain deposit and lending categories, business with OFIs and financial auxiliaries will show separately positions with central counterparties (specialised intermediaries operating in the money market), and with financial vehicle corporations (see also Section 2.3 on loan securitisation).

The Eurosystem and other MFIs are not identified as separate counterparty sectors, but only as a combined MFI sector. This implies that it is not possible to derive from the reporting a presentation of assets and liabilities of the Eurosystem against other MFIs, or vice versa.

### Cross-relating instrument and maturity categories with currencies and counterparties

The compilation of monetary statistics for the euro area and the calculation of the reserve bases of credit institutions require certain cross-relationships between instruments, maturities, currencies and counterparties to be reported monthly. The most detail is required on counterparties that are part of the money-holding sector. Breakdowns of positions vis-à-vis other MFIs are needed only in so far as necessary to allow the netting out of inter-MFI balances or (in respect of positions with credit institutions) to calculate reserve bases. Also for reserve base purposes, and as noted above, breakdowns of positions vis-à-vis non-residents of the euro area are required for deposits with an agreed maturity of over two years, deposits redeemable at over two years' notice, and repos. A maturity breakdown at one year for deposits held by non-residents is needed for balance of payments purposes.

### Financial derivative business

A financial derivative is a financial instrument that is linked to another financial instrument, index or commodity and enables specific risks (of changes in interest rates, foreign exchange rates, prices or credit standing, for example)

<sup>26</sup> *Monetary financial institutions and markets statistics sector manual*, ECB, March 2007, available on the ECB's website (<http://www.ecb.europa.eu>).

to be traded in financial markets in their own right. The ESA 95 requires positions in financial derivatives to be recorded if they have a market value or can be offset in the market, i.e. if a party to the contract can in effect reverse it by taking out another contract with the opposite effect. The current market price of a derivative values the claim of one party on the other. It is this value that is recorded in the MFI balance sheet statistics if an MFI is a party to the contract. Whether it is recorded as an asset or as a liability depends on the market value which may fluctuate between positive (an asset) and negative (a liability) over the life of the contract (the same derivative instrument could thus be recorded as an asset or a liability over the course of its lifetime). The market price can also be zero, as it is at the start of a swap contract. Derivatives are recorded in the MFI balance sheet on a gross basis at market value unless business accounting rules require off-balance sheet recording. They are classified under *remaining assets* if they have a positive value for the reporting MFI or *remaining liabilities* if they have a negative value, with no further details being provided.

For statistical purposes, a derivative is treated as a separate financial instrument from the instrument on which the contract is based. Thus derivative positions recorded in the MFI balance are not linked to the underlying financial instrument, nor do they reveal the nominal amount for which the contract was struck.

#### Timeliness

The ECB receives from NCBs aggregated monthly balance sheets covering the positions of MFIs in each euro area country by the close of business on the 15th working day following the end of the month to which the data relate.<sup>27</sup> Every year by September the ECB communicates to NCBs a reporting schedule for the following year. The NCBs arrange to receive data from reporting institutions in time to meet this deadline.

Euro area aggregates, including the monthly monetary aggregates drawn from the MFI

balance sheet, are first published in a press release on the 19th working day following the month to which they relate; see also Section 3.3.

#### 1.6.2.2 Balance sheet statistics at quarterly frequency

Certain additional data are needed for the further analysis of monetary developments or to serve other statistical purposes, such as compiling the financial accounts. The quarterly balance sheet statistics are used for such purposes. The additional details are described below.

#### Maturity and sector breakdown of lending in the euro area

In order to enable the maturity structure of MFIs' overall credit financing (loans and securities) to be monitored quarterly, loans to general government other than central government are broken down at one and five years' original maturity and holdings of securities issued by these agencies are split at one year's original maturity, both items being cross-related to a sub-sector breakdown of general government other than central government. Holdings by MFIs of debt securities issued by OFIs, insurance corporations and pension funds and non-financial corporations are broken down by original maturity at one year. Issuers of shares and other equity held by MFIs are broken down quarterly into the following sectors: non-financial corporations, OFIs (including financial auxiliaries), and insurance corporations and pension funds. MFIs also provide a quarterly report of their loans to central government and their holdings of debt securities issued by central government, with no further breakdown (in the monthly statistics, MFI credit to central government is not shown separately within credit to general government). In addition to information on original maturity, for euro denominated loans to non-financial corporations and to households, Regulation ECB/2008/32 also requires information on

<sup>27</sup> The number of working days is defined taking into account the public holidays in individual euro area countries. In broad terms, a calendar day is considered a non-working day for the definition of the reporting calendar to the ECB if it is a holiday in at least three euro area countries.



remaining (or residual) maturity and interest rate reset period.

#### **Lending in the euro area backed by real estate collateral**

An important innovation of Regulation ECB/2008/32 compared to the previous collection framework for MFI balance sheet statistics is that MFIs report quarterly the amount of loans to non-financial corporations and to households backed by real estate.

#### **Quarterly sector breakdown of liabilities in the euro area**

Deposit liabilities to general government other than central government are broken down by sub-sector (i.e. state government, local government, and social security funds).

#### **Country breakdown of positions vis-à-vis residents of EU Member States**

For deposit liabilities, loans and holdings of securities (which comprise securities other than shares; MMF shares/units; and shares and other equity), MFIs provide a quarterly breakdown by country of counterparty (the country in which the issuer is resident in the case of holdings of securities). For deposits, loans and holdings of debt securities, there is a further breakdown by whether or not the counterparty is an MFI.

#### **Currency breakdown**

Some breakdowns of MFIs' positions by individual currency are required to enable transactions to be adjusted for exchange rate changes. Key balance sheet items are broken down quarterly into major international currencies (the US dollar (USD), the British pound (GBP), the Japanese yen (JPY) and the Swiss franc (CHF)), a total for currencies of other non-euro area EU Member States, and remaining currencies combined. In addition, loans denominated in EU currencies other than euro are broken down by individual currencies. The latest quarterly information on currency shares is used for the compilation of the monthly statistics.

#### **Sector breakdowns of positions with counterparties outside the euro area**

A limited sector breakdown is required for positions with counterparties outside the euro area (i.e. non-euro area EU Member States and the rest of the world), distinguishing only between positions with banks (or MFIs in EU Member States outside the euro area) and non-banks, the latter being split between general government and others. The sector classification according to the SNA 2008 applies where the ESA 95 is not in force. These data are required principally for balance of payments purposes.

#### **Timeliness**

Quarterly statistics are transmitted by NCBs to the ECB by close of business on the 28th working day following the end of the quarter to which they relate. As noted above, every year by September the ECB communicates to NCBs a reporting schedule for the following year. NCBs arrange to receive data from reporting institutions in time to meet this deadline.

In addition to monthly statistics, the ECB publishes additional euro area aggregates based on the quarterly requirements of Regulation ECB/2008/32. These data are released with a one-month lag compared with monthly data – e.g. data for Q1 are released together with monthly data for April; see also Section 3.3.

#### **1.6.2.3 Information at annual frequency**

For payment statistics and other purposes, Regulation ECB/2008/32 requires MFIs to report (i) the number of transferable overnight deposit accounts which are held with them by non-MFIs (non-banks for the rest of the world); and, as a sub-item, (ii) the number of such deposit accounts which are internet or personal computer (PC) linked. The latter refers to those accounts where the holder can access and use the account electronically via the internet or PC banking, using dedicated software and telecommunication lines, in order to make payments. These statistics are transmitted by NCBs to the ECB according to the calendar

for the reporting of payment system statistics. NCBs arrange to receive data from reporting institutions in time to meet this deadline.

#### 1.6.2.4 Additional requirements in the context of electronic money

Article 5 of Guideline ECB/2007/9, as amended by Guideline ECB/2011/13, requires NCBs to report to the ECB an additional set of information relating to electronic money issuance, with the aim of drawing a picture of the overall size of this market segment and its development.<sup>28</sup> The scope of the Guideline goes beyond the MFI population, as not all ELMIs fulfil the MFI definition.

#### Reporting requirements for electronic money issued by MFIs that have not been granted a derogation under Article 8(1) of Regulation ECB/2008/32

The requirements relate to the issuance of hardware-based and software-based e-money, with the separate identification of balances in euro and foreign currencies; see Table 1, Part 2, Annex III to Guideline ECB/2007/9, as amended. Depending on the availability of data to NCBs, the time series may be reported at monthly or quarterly frequency. Data should be transmitted to the ECB at least twice a year – by the last working day of April (for data up to the end of March) and by the last working day of October (for data up to the end of September). More frequent transmission may take place if the data are available at NCBs (at monthly or quarterly frequency by the last working day of the month following the end of the reference period). NCBs arrange to collect data from reporting institutions or other sources according to their needs. In the absence of actual data, NCBs should use estimates or provisional data where possible.

#### Reporting requirements for electronic money issued by all ELMIs that are not credit institutions or by small MFIs that have been granted a derogation under Article 8(1) of Regulation ECB/2008/32

The requirements cover all ELMIs that are not credit institutions, whether they fulfil the MFI definition or not, and, additionally, all small MFIs that have been granted a derogation under Article 8(1) of Regulation ECB/2008/32. NCBs must report to the ECB at annual frequency their total assets/liabilities and, as a sub-item, the issuance of e-money in accordance with Table 2 in Part 2 of Annex III to Guideline ECB/2007/9, as amended. (The panel below reviews the coverage of electronic money issuance under the requirements of Tables 1 and 2 respectively.) Data should be reported annually to the ECB by the last working day of the month following the end of the reference period. NCBs arrange to collect data from reporting institutions or other sources, including supervisory authorities (which may well be needed as some of these institutions are outside the scope of the regular MFI balance sheet requirements). In the absence of actual data, NCBs should use estimates or provisional data where possible.

#### 1.6.3 TRANSACTIONS AND ADJUSTMENTS

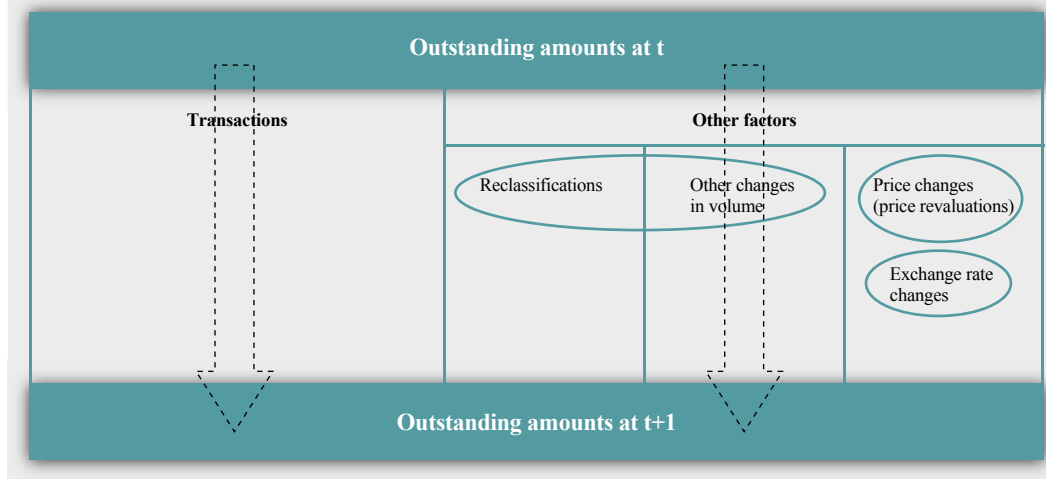
An important element in MFI balance sheet statistics is the distinction between *transactions* and other factors affecting balance sheet outstandings and their change over a reference period. These other factors comprise *valuation effects arising from changes in prices or in exchange rates* on the one hand, and

<sup>28</sup> While ELMIs are no longer *automatically* credit institutions, credit institutions may issue e-money and thus can be ELMIs; see Section 1 above for more information.

Coverage of electronic money issuance and reporting requirements under Guideline ECB/2007/9

		Derogation under Article 8(1) of Regulation ECB/2008/32	
		No	Yes
ELMIs	MFIs	Credit institutions Table 1	MFIs other than credit institutions Table 2
	Non-MFIs	Table 2	

## Factors affecting balance sheet outstandings over a reference period



reclassifications and what the ESA 95 calls *other changes in the volume of assets* on the other hand. However, it is transactions that are used to measure the flow of financing between MFIs and other sectors and the rest of the world, and it is from transactions that growth rates of monetary aggregates and certain counterparts are calculated.

As noted elsewhere, the ESA 95 defines a transaction as “an economic flow that is an interaction between institutional units by mutual agreement or an action within an institutional unit that it is useful to treat as a transaction, often because the unit is operating in two capacities” (1.32). The ESA 95 goes on to define financial transactions as “transactions in financial assets and liabilities between institutional units, and between them and the rest of the world” (5.01). Transactions would cover sales and purchases of items recorded on balance sheets at the start and at the end of a reporting period, as well as transactions reversed within the reference period. The ESA 95 states that financial transactions are to be recorded at transaction values (5.134) independently of the valuation principle in use for on-balance sheet recording. Transaction values may not necessarily be the same as prices quoted in the

market at the time of the transaction (5.136), and they exclude charges, fees, etc. which are to be recorded separately as transactions in services.

Regarding financial transactions, Regulation ECB/2008/32 states that “Financial transactions are computed by the ECB as the difference between stock positions at end-of-month reporting dates, from which the effect of changes that arise due to influences other than transactions is removed.” Financial transactions are thus derived, as explained in Section 4.2, from input received by the ECB from NCBs, which includes data on:

- *outstanding amounts*, as collected from reporting agents;
- *price revaluation adjustments* on securities (issued or held by MFIs), fixed assets, remaining assets and liabilities;
- *loan write-offs/write-downs*, as collected from reporting agents;
- *reclassifications* and “*other*” adjustments (in one category), as derived by the NCBs using available information.

Price revaluation adjustments are typically reported directly by MFIs in relation to at least a minimum set of items. For securities, however, NCBs can approach reporting agents in two distinct ways. One approach is to let reporting agents *report directly observed transactions from which NCBs derive revaluation adjustments*. Sub-section 1.6.3.1 describes the two approved methods for doing this, the *transaction method* and the *balance sheet method*. When MFIs report transactions, the NCB will derive revaluation adjustments to be transmitted (on an aggregated basis) to the ECB. Alternatively, MFIs can report revaluation adjustments, as explained in sub-section 1.6.3.2. NCBs also transmit price *revaluation adjustments* for some items specific to their balance sheet, namely gold and gold receivables, and receivables from the IMF. However, price revaluation adjustments on non-marketable financial assets and liabilities (namely currency, deposits and loans) are not collected as they do not apply to these items.

The reporting requirements relating to the transmission of loan write-offs/write-downs data are reviewed in sub-section 1.6.3.3. In turn, sub-section 1.6.3.4 below reviews the compilation principles for reclassification adjustments and concludes with Box 1.1, which discusses the treatment of euro area

enlargements, which may be seen as a special type of reclassification.

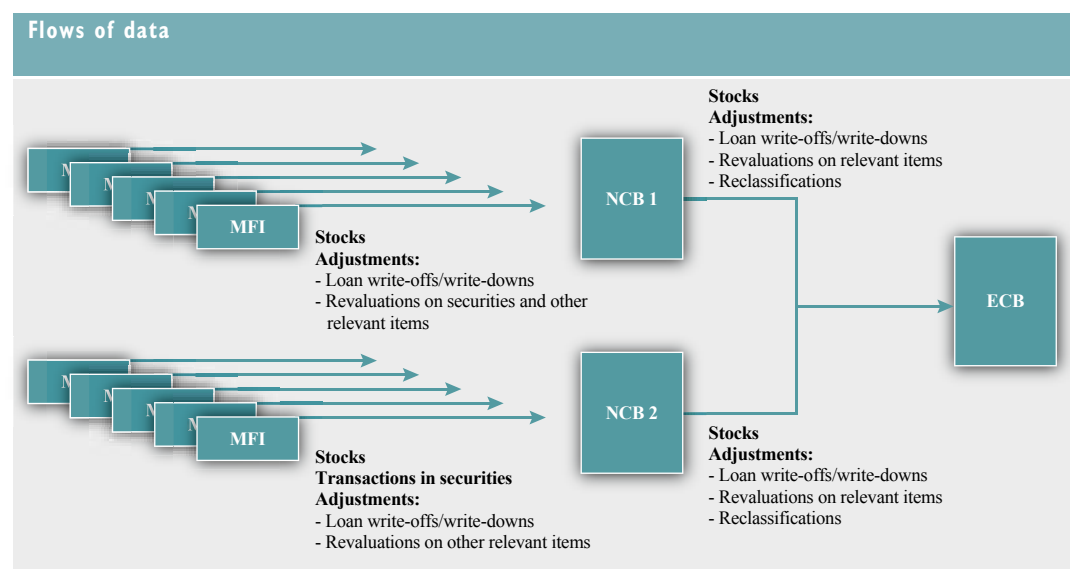
Proxies for valuation effects arising from exchange rate fluctuations are calculated by the ECB, unless provided by NCBs (in those cases where more detailed information is available at national level, thus leading to better estimations); see sub-section 1.6.3.5 for further details.

Finally, Annex 1.1 reviews various numerical examples of the derivation of price revaluation adjustments on securities and data on loan write-offs/write-downs, and also provides some further technical information.

The flow chart below shows the data flows from individual reporters to NCBs and from NCBs to the ECB, with NCB 1 receiving revaluation adjustments for securities from MFIs and NCB 2 receiving transactions data from MFIs.

### 1.6.3.1 Direct recording of transactions in securities by MFIs

In those cases where reporting agents are allowed to directly record transactions in securities, they may do so following one of two distinct methods: the *transaction method* or the *balance sheet method*. As will be seen, these may give different results and may affect



the allocation among counterparts of changes in M3. The two methods are also relevant to the use of MFI balance sheet data in financial accounts constructed on ESA 95 principles – this point is also further explained in Section 5.2.

– *Transaction method*

The *transaction method* records all sales and purchases of items held on balance sheets at the start and/or end of a reporting period, and also transactions reversed within the reference period.

The transaction method requires the flow to be valued at the transaction value, which is normally the market value of the securities on the transaction day, in accordance with the ESA 95. This method, however, may make it difficult to relate recorded transactions in some categories to developments in reporting MFIs' balance sheets. This is because recorded transactions will include purchases that are reversed during the period, whose effects are thus not visible in the end-of-month balance sheet positions for the securities portfolio. Moreover, transactions may be valued at different prices from those at which the relevant securities are valued on the balance sheet (where they do indeed appear on the balance sheet), since MFIs report transactions at transaction value, but will still follow national practice in valuing securities when it comes to balance sheet outstandings.

– *Balance sheet method*

The *balance sheet method* records all sales and purchases of items held on balance sheets at the start and/or end of a reporting period, but not the purchases reversed within the reference period.

Under the *balance sheet method*, the sale during the month of any securities held on the balance sheet at the end of the previous month is deemed to have taken place at

the price at which the securities were recorded on the previous month's balance sheet, irrespective of the price at which the sale actually took place. Similarly, the purchase during the month of any securities retained on the balance sheet at the end of the current month is deemed to have taken place at the price at which the securities are recorded on the current month's balance sheet. Thus, if securities are carried on balance sheets at current market prices, sales and purchases will be recorded at the market prices on the previous and current balance sheet dates respectively, although the transactions may have taken place at other market prices. Similarly, if securities are carried at their nominal value, sales and purchases will be valued at nominal too. Moreover, if securities are carried at their acquisition price, a sale will be recorded at the price originally paid no matter how long ago, whilst the purchase of a security will be recorded at the price paid for it, which will also be its carrying value on the end-of-period balance sheet.

The balance sheet approach does not record transactions reversed during the reference period; it includes only those transactions that influence balance sheet positions (e.g. sales of securities that were on the previous balance sheet, and purchases of securities that are retained on the current balance sheet date), recorded at the value at which they affect the balance sheet. If a security held on the opening balance sheet is sold and subsequently repurchased and retained, this is considered to be an entirely new purchase.

Examples 1 and 2 in Annex 1.1 below illustrate numerically the two methods for the direct recording of transactions in securities.

Each method has advantages and disadvantages. The direct recording of transactions via the transaction method is in line with the ESA 95, is consistent with other statistics, such as financial accounts and the balance of payments, and gives a clear meaning to the flow by identifying



it as total net transactions measured at market value, but it complicates the comparison of transactions with balance sheet stocks, and therefore it is not ideal for the purposes of calculating growth rates, as operations that have no link to end-of-period stocks are included. The lack of harmonisation of valuation rules across the euro area and the fact that even the same reporting institution may use different valuation rules to value different portfolios supports the use of the balance sheet method, which gives a closer link between statistics on outstanding amounts and transactions and is thus a better basis for calculating growth rates reflecting only transactions with an impact on end-of-period stocks. However, the balance sheet method omits an important element of transactions, namely those undertaken and reversed during the reference period, and accordingly departs from the definition of transactions in the ESA 95, leading to possible inconsistencies with other statistics.

The two methods also have different implications in terms of the relationship between the price revaluation adjustments they imply and gains/losses on holdings of securities. In particular, while the revaluation adjustments implied by the transaction method are conceptually equivalent to (realised and unrealised) gains/losses on holdings of securities, the balance

sheet method delivers revaluation adjustments that cover the changes in the carrying value of securities held throughout the reference period only. For a detailed discussion of these aspects, see Section 2 of Annex 1.1 below.

In general, the magnitude of the differences between the two methods depends on a number of factors. The higher the turnover in securities, the larger the number of purchases reversed within the reference period that are omitted under the balance sheet method. The length of the reference period has a similar impact; i.e. the longer the period is, the more likely the reversal of a purchase within the period will be. For instance, if a security is purchased in January and sold in February, the transactions constitute a reversed purchase for quarterly statistics, but not for monthly statistics. In addition, volatility in market prices and the valuation methods used in the balance sheet also play a role (valuation at market prices will usually reduce the differences).

The two approaches also have different implications for monetary statistics as they may attribute a change in M3 to different counterparts (see Section 4.1 for a detailed discussion of the MFI consolidated balance sheet and of M3 and its counterparts). This can be illustrated by an example.

#### Example

Suppose that, within the reference period, MFIs buy corporate bonds from households for 100 and sell them back to households for 105. M3 must fall, both under the transaction method and under the balance sheet method, by the net amount of the transactions (5), as households reduce cash or deposits by 5. However, with regard to the counterparts of M3, the results of the two methods differ. The transactions method will record a withdrawal of credit by MFIs to non-financial corporations (NFCs) (-5 in the counterpart “credit to euro area residents”), because, in net terms, MFIs have sold 5 of corporate bonds. But MFIs have not in fact withdrawn credit from NFCs: the amount of funds available to the NFC sector is unchanged. By contrast, the balance sheet method will record no asset transaction to match the fall in M3, because the trades in corporate bonds took place within the reference period. By default, the counterpart for the decline in M3 will appear in the residual “other counterparts” category (i.e. it will lead to a compensating increase of the position “capital and reserves” via the profit-and loss account, or “remaining liabilities”, depending on the accounting treatment).

For monetary analysis, i.e. the analysis of M3, credit and other counterparts to M3, the balance sheet method proves in this case more helpful (or less misleading) than the transaction method.<sup>29</sup> The two methods also have different implications for the financial accounts when MFI balance sheet statistics are used as an input. These linkages will be clarified in Section 5.2. Briefly, the transactions method is consistent with the conceptual basis of the financial accounts, whereas the balance sheet method is not.

When MFIs record transactions directly and report these to NCBs, NCBs derive revaluation adjustments to be transmitted (on an aggregated basis) to the ECB as a residual from the change in balance sheet outstandings corrected for the impact of reclassifications and other volume changes,<sup>30</sup> and from reported transactions. As discussed above, the revaluation adjustments indirectly obtained under the transaction method equal the (realised and unrealised) gains/losses on the security holdings, while the balance sheet method would only cover the change in carrying value of securities held throughout the period. NCBs then transmit to the ECB the same consistent set of data for outstanding amounts, reclassifications and revaluation adjustments, from which the ECB derives transactions data. Example 3 in Annex 1.1 describes how NCBs can derive the revaluation adjustment indirectly from data on outstanding amounts and transactions.

### 1.6.3.2 Reporting of price revaluation adjustments on securities by MFIs and derivation of transactions

For the most part, however, MFIs report revaluation adjustments to NCBs, not transactions. Where transactions in securities are not reported by MFIs, Regulation ECB/2008/32 requires MFIs instead to provide data on price revaluation adjustments, intended to capture the price-related effects on the outstanding amounts of their holdings of securities recorded on the balance sheet. MFIs report monthly revaluation adjustments in accordance with the minimum requirements set out in Table 1A of Part 5 of Annex I. MFIs must report valuation

adjustments for at least the following instrument categories on the assets side: securities other than shares (totals, and broken down into securities issued by domestic and other euro area MFIs and general government); and shares and other equity (totals, and broken down into shares and other equity issued by domestic and other euro area MFIs). NCBs may, however, request valuation adjustments for more categories,<sup>31</sup> they must in any case provide further information on assets from other available sources if there are significant valuation effects on MFI balance sheets that have not been covered in the reporting by MFIs themselves.

Regulation ECB/2008/32 does not, however, prescribe how reporting agents should calculate revaluation adjustments on holdings of securities: what matters is that they should be consistent with the valuation applied to securities on the balance sheet. In practice, MFIs have various options when deriving price revaluation adjustments. In particular, they can report:

- *Price-related (realised and unrealised) gains/losses on holdings of securities*

In particular, the adjustments equal the realised gains/losses of the MFI on sales of securities, including purchases reversed during the period (the selling price minus the carrying value at the beginning of the period or, in the case of the purchases reversed

29 The transaction method may, however, be applied if one of the following conditions is met: (i) market valuation is the only, or at least the most commonly used, method of valuing holdings of securities; or (ii) the transaction method proves to be less costly to implement than the balance sheet method. Even so, the transaction method is applied only if it provides data of a sufficiently high quality and within the necessarily tight deadlines required for compiling monetary statistics.

30 The change in the stocks is also to be corrected for changes in exchange rates. NCBs are required to do so on the basis of internal estimates of the adjustments.

31 NCBs may also request valuation adjustments on the liabilities side. On this point, Annex I, Part 5 of Regulation ECB/2008/32 states “No minimum reporting requirement is established for the liability side of the balance sheet. However, if valuation practices applied by reporting agents to debt securities issued result in changes to their end-period stocks, NCBs are permitted to collect data relating to such changes. Such data are reported as ‘other revaluation’ adjustments”.

during the period, minus the purchase price, each multiplied by the corresponding number of securities), plus the unrealised gains/losses on securities that are carried on the balance sheet throughout the period (change in carrying value, multiplied by the number of securities) or that were purchased during the period and are still held at the end of the period (carrying value at the end of the reference period minus the purchase price, multiplied by the number of securities). The calculations exclude the effects of changes in exchange rates. This method relies on the availability of detailed data on individual transaction prices and on the value at which securities are carried on the balance sheet.

The price revaluation adjustments obtained under this option are equivalent to the application of the transaction method for the derivation of transactions.

– *The change in the carrying value of securities held throughout the period*

Under this approach, the adjustments equal the changes in valuation of the securities that are kept on the balance sheet over the reference period multiplied by their number, and therefore do not cover any sales or purchases that take place during the period. The calculations exclude the effects of changes in exchange rates. This method requires only data on the value at which securities are carried on the balance sheet.

The price revaluation adjustments obtained under this option are equivalent to the application of the balance sheet method for the derivation of transactions.

In most cases, MFIs apply the second approach when reporting price revaluation data.<sup>32</sup> As described above, in this case the adjustments will only depend on the method used by the reporting MFI to value securities on its balance sheet. If, for example, it has no transactions in the securities concerned in the relevant month, and it reports holdings of debt securities at

market prices on the balance sheet date, balance sheet outstandings will be fully affected by the change in price. If it reports holdings at historic cost, the change in market prices will have no impact on the balance sheet. If it reports holdings at the lower of market price and historic cost, there may be a valuation effect, depending on where the market price stands in relation to the acquisition price. The revaluation adjustments reported therefore depend not only on the movement in prices between the opening and closing balance sheet dates, but also on the valuation method used.

NCBs aggregate the price revaluation adjustments they receive from their reporting agents and transmit them to the ECB, which then calculates transactions as a residual, after taking account of reclassifications and any other non-transactional effects on balance sheet outstandings, and exchange rate changes. When reporting agents follow the first method described above, transactions estimated using this approach are consistent with the ESA 95. In most cases, however, MFIs follow the second method and therefore the estimated transactions exclude any trades reversed within the reference period, and also do not fully reflect valuation changes in securities sold or purchased during the period. As noted earlier, this outcome is not consistent with the ESA 95, although it may facilitate monetary analysis.

Sections 2 and 3 in Annex 1.1 below review in more technical detail the relationship between the derivation of price revaluation adjustments and the direct recording of transactions.

#### **The case of money market funds**

It might be noted that the liabilities issued by MMFs, although they may experience moderate price changes, have not always been subject to valuation adjustment. This is reflected in Annex V,

<sup>32</sup> It is also accepted that reporting agents – under certain conditions – derive price revaluations by applying the changes in valuation to the number of securities carried on the balance sheet at the beginning or the end of the period, whichever is the lower. This is acceptable if it reduces reporting costs. For further details, see Section 3 in Annex 1.1.

Part 3 of Guideline ECB/2007/9, as amended, which states: *“In summary, if the derogation in respect of the ‘revaluation adjustments’ is not applied, MMF assets are treated in accordance with the common procedure.<sup>33</sup> Under liabilities, to calculate the ‘money market fund shares/units’ flow, it is enough to exclude the ‘reclassification’ adjustments from the difference between the balances as long as no revaluation adjustment is reported for this instrument.”* For MMF shares/units, the purchase/sale of shares/units is considered equivalent to credits to/debits from deposits; and positive changes in the value of shares/units are considered equivalent to the payment (as opposed to the accrual) of interest on deposits. However, with respect to cases where MMF shares/units decline in price as a result of losses on the fund’s asset side, this cannot be compared to interest payments. While this may have been rare in former times, after the start of the financial crisis in 2007 a number of funds experienced substantial declines in the value of their assets and therefore in practice also in the value of their shares/units issued. Regulation ECB/2008/32 introduces a series key for revaluation adjustments to MMF shares/units in the reporting tables, allowing countries to transmit revaluation adjustments for the shares/units issued, rather than for “remaining liabilities”. Transactions in MMF shares/units have been calculated taking into account revaluation adjustments so far as possible since June 2010. When appropriate, NCBs may transmit revaluation adjustments for MMF shares/units issued, rather than within remaining liabilities.

With reference to the treatment of exchange rate changes in the context of MMF shares/units, MMFs may hold foreign currency denominated assets, the amount of which in euro may be affected by changes in exchange rates. The change in shares/units on the liabilities side of their balance sheet is attributed to non-resident holdings of these instruments.<sup>34</sup> The effect of exchange rate changes on the outstanding value of MMF shares/units through its effect on assets held by MMFs therefore has no impact on monetary aggregates (stocks or flows). See Section 4.2 for insights on

the mathematical allocation of the exchange rate adjustment in this special case.

### Security-by-security reporting

NCBs may collect the required statistical information on securities issued and held by MFIs on a security-by-security basis, to the extent that the aggregated data can be derived in accordance with minimum statistical standards as specified in Regulation ECB/2008/32.<sup>35</sup> In this case, transactions according to the transaction method can only be derived if the security-by-security reporting covers not only stocks data, but also transactions. Similarly, when the balance sheet method is applied, transactions can only be derived if, together with the stocks of securities on a security-by-security basis, reporting agents also transmit for each security its carrying value on the balance sheet. The same principle applies for the calculation of revaluation adjustments. According to Regulation ECB/2008/32, NCBs may grant derogations in respect of the reporting of price revaluations (including the complete exemption) to credit institutions following security-by-security reporting whenever the information reported includes, for each security, its carrying value on the balance sheet.

#### 1.6.3.3 Loan write-offs/write-downs

Like price revaluations on securities, the (whole or partial) removal from the balance sheet of loans that are subject to write-offs or write-downs needs to be taken into account when deriving transactions in loans. In particular, a write-off or write-down of loans has an impact on the reported value of the outstanding amount of loans, but is not related to a change in the amount of MFI financing to the economy, and is not recorded as a transaction. The adjustment refers to the impact

<sup>33</sup> The counterpart of the revaluation on the assets side, in the case of MMFs, is not “money market fund shares/units” but “remaining liabilities”.

<sup>34</sup> The allocation of the exchange rate adjustment affecting MMF shares/units to non-resident holdings also reflects the observation that MMFs resident in the euro area which hold foreign currency denominated securities tend to be those set up by non-euro area financial institutions for non-euro area investors.

<sup>35</sup> For details regarding the derivation of transactions when the security-by-security method is used, refer also to *Manual on investment fund statistics*, ECB, May 2009, Chapter 7, available on the ECB’s website (<http://www.ecb.europa.eu>).

of write-offs/write-downs on the value of loans recorded on the balance sheet and data are reported in accordance with the minimum requirements set out in Table 1A in Part 5 of Annex I of Regulation ECB/2008/32, with full sector details for loans to domestic and other euro area residents. This adjustment also reflects the changes in the level of loan-loss provisions, where outstanding stocks are recorded net of provisions (Article 7(4) of Regulation ECB/2008/32 explains when reporting net of provisions is acceptable). Write-downs recognised only when the loans are sold or transferred to a third party (e.g. a financial vehicle corporation) are also included, where identifiable.

A write-off/write-down should be recorded only to the extent that the action is reflected in the reported loans outstanding. As such, the statistically recorded write-offs/write-downs cannot be interpreted as a proxy for developments in non-performing loans, as the criteria for the associated partial or total loan derecognition are subject to national Generally Accepted Accounting Principles (GAAP). It does not matter whether the reporting MFI records write-offs/write-downs continuously or only at intervals, nor whether a final court judgement is pending, provided national accounting practice supports a reduction in the carrying amount of the loans due to impairment. As discussed above, write-downs recognised only when the loan is sold or transferred should also be recorded (where identifiable).

While loan data are to be collected in the MFI balance sheet statistical framework at nominal outstanding amounts and on a gross basis (i.e. without regard to any loan-loss provisions made against them), reporting net of provisions is possible under the provisions of Article 7 of Regulation ECB/2008/32 – see Section 2.1.4 for further details. A complication may arise in such a case with reference to the derivation of write-offs/write-downs if the reporting MFI has already made a loan-loss provision against the loan in question. In that case, the provision is already reflected in the reported value of the loan (and in the related adjustment), so, when

the final write-off/write-down takes place, only the marginal change compared to the value of the provision is to be deducted (or added if the provision was too high) from the outstanding amounts and recorded in the related adjustment.

The counterpart entry to a write-off/write-down will usually be in capital and reserves or in remaining liabilities. Examples 5 and 6 in Annex 1.1 below provide a numerical overview of the derivation of write-offs/write-downs statistics.

#### 1.6.3.4 Reclassifications and other adjustments

Reclassifications comprise any change in the balance sheet of the MFI sector that arises as a result of changes in the MFI reporting population, corporate restructuring, reclassification of counterparties and of assets and liabilities, the (partial) correction of reporting errors, and the introduction of new statistical concepts or definitions, all of which give rise to breaks in the series and, hence, affect the comparability of successive end-of-period levels.

NCBs compile data on *reclassifications and other adjustments* in accordance with Guideline ECB/2007/9, as amended, using supervisory information, plausibility checks, ad hoc enquiries (e.g. related to outliers), information on joiners and leavers of the reporting population and any other source available to them (including other national statistical requirements), and report them to the ECB. Annex V of Guideline ECB/2007/9, as amended, contains specific guidance on the treatment of certain types of reclassification. In principle, as a minimum, NCBs send information on all reclassifications and other adjustments exceeding €50 million. Where developments give rise to reclassification adjustments across national frontiers, NCBs may need to collaborate to ensure consistent treatment throughout the euro area. As explained in Box 1.1, enlargement of the euro area (which is a special case of reclassification) is the clearest example of this need, but other cases may also arise.

*Changes in the composition of the reporting sector* may give rise to the transfer of business



across economic sector boundaries. Such transfers do not represent transactions and are therefore treated as an adjustment in “reclassifications and other adjustments”. An institution that joins the reporting sector may transfer business into the sector, whereas an institution leaving the reporting sector may transfer business out of the sector. Example 7 in Annex 1.1, Section 5 shows the implications of the suggested treatment. However, to the extent that the joining institution starts its business from scratch after joining the reporting sector, this represents a financial transaction that is not removed from statistical data.<sup>36</sup> Similarly, where a leaving institution decreases its activities prior to leaving the reporting sector, this is captured as a transaction in the statistical data.

The impact of a transfer of a business into/out of the reporting sector on the sector’s outstanding assets and liabilities depends on whether the institution is a full or a tail reporter. An institution joining the MFI sector as a full reporter will usually report its first data at the end of the month in which it joins or at the end of the same quarter. Similarly, the data of a full reporter leaving the reporting sector are removed at the time of its departure. To the extent that the first/last assets and liabilities reported are transferred into/out of the reporting sector, an adjustment may be made in the reporting period in which this transfer occurs. Where institutions join or leave as reporters in the reporting “tail”, the impact on the asset and liability items depends on the grossing-up procedure used.

Most of the information needed to make an adjustment for changes in statistical coverage is usually available within the statistical reporting system. However, it may be necessary for NCBs to collect ad hoc information from institutions entering the reporting sector in order to determine whether the first reported assets and liabilities have been transferred from outside the reporting sector or built up after entry. Similar information is collected from institutions leaving the reporting sector.

The net effect of the joiners or leavers on the aggregated assets and liabilities of the reporting

sector is calculated by aggregating the first assets and liabilities reported by new entrants and the last assets and liabilities reported by leavers and, for each item, taking the difference between the two. This net figure is entered under “reclassifications and other adjustments”. In certain circumstances there can be an effect on counterparty reporting, so this effect must also be included in the adjustments, in this case as a change in sector. For instance, if an MFI surrenders its authorisation but continues to operate as an OFI funded through the interbank market, the recorded rise in MFI lending to OFIs requires an adjustment (covered by “changes in the classification of counterparty sector”).

*Changes in the structure of the MFI sector* arise in the context of intra-group reorganisations or mergers, acquisitions and divisions. These corporate restructuring operations typically lead to changes in the valuation of financial assets and liabilities; revaluation adjustments are entered to reflect these changes and thus allow transactions to be correctly derived. Moreover, the operations often give rise to the transfer of financial assets and liabilities from the balance sheet of one institutional unit to another (change in ownership). Accounting for these asset transfers is not always easy, but the ESA 95 definition of transactions mentioned above provides a good basis for addressing the various cases. In broad terms, the boundary for treating transfers of assets as transactions is defined by the existence of two separate institutional units which act by mutual agreement. If, however, the transfers occur as a result of the creation or disappearance of an institutional unit, they should be treated as reclassifications (see also ESA 95, (6.30), on “*Changes in structure of institutional units*”).

Suppose first that in the context of an intra-group reorganisation two corporations of the group undergo restructuring operations and

<sup>36</sup> This criterion applies in borderline cases. For example, the establishment of a new bank that takes over the operations previously carried out by a representative office on behalf of a non-resident bank gives rise to a transaction that is not removed when compiling transaction data.

transfers of assets take place. As these operations involve separate institutional units which act by mutual agreement, they represent transactions. Examples 8 and 9 in Annex 1.1, Section 5 help to clarify the implication of this suggested treatment in two specific cases: when a financial corporation engaged in lending (classified in the OFI sector) transfers loans to an MFI of the same financial group which is resident in the same territory, and when a foreign MFI subsidiary transfers securities to the parent MFI.

Transfers of assets often take place in the context of (intra-group) reorganisations in relation to mergers, acquisitions or divisions. If the merger or acquisition is cross-border or involves institutional units in different sectors, funds will usually flow across countries/sectors and it is crucial to have clear criteria defining when such transfers should be treated as transactions and when they should be treated as reclassifications. According to the principles outlined above, if a merger or acquisition takes place, but no corporation ceases to exist, transfers are treated as transactions. This happens, for example, in a *subsidiary merger* (SNA 2008, paragraph 21.21), i.e. when the acquired corporation becomes a subsidiary of the parent corporation.<sup>37</sup> However, if the merger or acquisition leads to the disappearance of one or more institutional units, a distinction is made between transfers taking place before the disappearance of the units, which are treated as transactions, and those taking place at the moment when the units cease to exist, which are treated as reclassifications. In the latter case, two instances can be distinguished: a merger or acquisition where one corporation ceases to exist and is absorbed by another unit or units – a *statutory merger* (SNA 2008, paragraph 21.21); and a merger or acquisition where two or more corporations join to form an entirely new unit – a *consolidation* (SNA 2008, paragraph 21.21). In both instances, all cross-positions that existed between the merging institutions disappear from the system and reclassification adjustments must be reported accordingly. Corporate divisions are treated symmetrically. These various instances are analysed in detail in Annex 1.1, Section 5, which also contains numerical examples.

Appendix 1 to Annex V of the Guideline also gives more information on the matter.

The information sources used to identify adjustments (when needed) are the final assets and liabilities reported by the old institutions and the first assets and liabilities reported by the new institutions. NCBs identify the outstanding balances between the institutions that have been restructured.

Reclassification adjustments can also arise in connection with changes in the classification of financial instruments or counterparties, and changes in statistical definitions, or take place to correct reporting errors. See Section 5 in Annex 1.1 for numerical examples.

*Changes in the sector classification or residence of customers* give rise to a reclassification of assets/liabilities vis-à-vis these counterparties. Such reclassifications result in a change in the reported outstanding positions in the period in which the change takes place. As this change is a book-entry transfer of business between sectors and instrument classes and does not represent a transaction, an adjustment must be introduced to remove its impact from the statistics. Such changes in classification occur for a number of reasons, for example because a governmental entity (which is not a market producer while in the government sector) is privatised,<sup>38</sup> or because mergers/divisions alter the principal activity of corporations.

<sup>37</sup> In addition to being ESA 95 compliant, this approach has the advantage of guaranteeing consistency with the treatment in other statistical domains like balance of payments and government finance statistics. It is also worth noting that whenever the merger or acquisition takes place within the same national territory, the flows will cancel out anyway and there will be no impact on the national aggregated MFI balance sheet. However, in the case of restructuring across national boundaries, this approach will impact national results in the sense that intra-group transfers of assets will be reflected in the national aggregated MFI balance sheet. While the statistical treatment does not appear to be controversial, it is important to stress that, from a national perspective, such transfers may affect analysis and users may request that national series be adjusted for the impact of these effects in a similar way to adjustments for securitisation (see Section 2.3, and Section 4.3).

<sup>38</sup> While, as here, privatisations may mean a change in sector, this is often not the case, because corporations which are market producers will be classified as financial or non-financial corporations regardless of who owns them.

*Instruments* may be reclassified, as when loans become negotiable and are accordingly regarded statistically as debt securities. (Most securitisations are, however, treated as transactions, as described in Section 2.3.) When a Member State adopts the euro, national banknotes and coins which remain in circulation are by convention recorded as such (remaining in the MFI balance sheet liabilities category “currency in circulation”) for 12 months, at the end of which they are reclassified to “remaining liabilities”; a reclassification adjustment ensures that the resulting drop in the monetary aggregates outstanding is not reflected in their growth rates.

*Correction of reporting errors* may give rise to an adjustment. Ideally, the corrections of the outstanding amounts should be provided for the whole period concerned, entirely removing the error from the data. However, where the error affects historical data and a correction of past data is not made, or can only be made for a limited time range, a break occurs in the outstanding amounts between the first observation with the corrected figure and the last one containing the incorrect figure. In this case, NCBs identify the size of the break that occurs and enter an adjustment under “reclassifications and other adjustments”. Similar practices apply to the implementation of *changes of statistical definitions* affecting reported data, as well as to correcting for breaks that may be due to the introduction, change or abandonment of grossing-up methods.

Although unlikely in this context, *confiscation or loss of an asset* would also be treated as a reclassification.

Some operations that might be regarded as reclassifications are in fact treated as transactions. An example is *debt assumption*, where one entity takes the place of another as debtor, as a government may do for a publicly-owned corporation in a privatisation, or for some other entity in the event of a rescue. Under the ESA 95, debt assumption is treated as a capital transfer (i.e. as a transaction); this approach is

reflected in MFI balance sheet statistics. Thus where, for example, a government takes over the debt represented by bank loans to a public corporation in the non-financial corporation sector, the operation is treated in MFI balance sheet statistics as a repayment of loans by non-financial corporations and an extension of MFI credit to general government. It does not give rise to a reclassification adjustment. Debt forgiveness is also treated as a transaction (a capital transfer). A write-off or write-down of loans, however, is not a transaction (see sub-section 1.6.3.3 above), as it is a unilateral action by the creditor.

Another example is the transfer of assets (in most cases impaired) from a reporting MFI to an entity established for the purpose of winding down the asset portfolio and to enable a balance sheet split between the ongoing business of the MFI and the “bad bank” or defeasance structure. This transfer usually meets the ESA 95 criteria for “*an economic flow that is an interaction between institutional units by mutual agreement*”.

Another case that does not usually give rise to a reclassification adjustment is a *change in the investment policy of an investment fund* that leads to it being classified as an MMF (or, alternatively, a change in the investment policy of an MMF that leads to it being dropped from the MFI list). As any change in investment policy must be agreed by investors, if they retain their holdings they are deemed to have made a conscious decision to switch their portfolios from one sector (MFIs) to another (investment funds other than MMFs), and there is no reclassification adjustment. An NCB may deviate from this treatment and report a reclassification adjustment only if it learns that investors were unaware of the policy change, or were otherwise unable to react to it. Where there is no change in investment policy, but an MMF is reclassified following a change in definition (e.g. the recent adoption of the new European definition of MMF), a reclassification adjustment should be made.

### EURO AREA ENLARGEMENT AS A SPECIAL CASE OF RECLASSIFICATION ADJUSTMENT

This box describes the treatment of enlargements of the euro area in MFI balance sheet statistics and monetary statistics as a special type of reclassification. The focus here is the data required from NCBs. Section 4.3.2 describes in some technical detail how the ECB reflects this information in the calculation of euro area aggregates.

To date the euro area has undergone five enlargements involving six EU Member States – Greece in 2001, Slovenia in 2007, Cyprus and Malta in 2008, Slovakia in 2009, and Estonia in 2011. Each accession adds the aggregated and consolidated balance sheets of the MFI sector of the new euro area country to the respective euro area totals.

All MFI balance sheets statistics reflect the actual composition of the euro area at the time to which the data relate. Hence, each enlargement brings a one-off change in the outstanding amounts of the euro area aggregates. For example, euro area monetary aggregates increase both by the amount of holdings of monetary instruments by residents of the new euro area country representing claims on domestic MFIs (and in some cases central government agencies) and claims on MFIs resident in other euro area countries, and by the amount of holdings of monetary instruments by residents of other euro area countries representing claims on MFIs resident in the new euro area country. Among the counterparts of M3, outstanding credit to euro area residents increases in a similar way, and the external counterpart (net external assets) in both the new and old euro area countries is affected by the changed status of the Member State adopting the euro.

None of these changes in outstanding balance sheet positions and in aggregates derived from them represent transactions. Thus, for example, the increase in M3 stock resulting from an enlargement of the euro area is not reflected in a corresponding increase in its growth rate. Rather, the increases in outstanding positions and related aggregates are treated as reclassifications, although, as explained below, new euro area countries are asked not to directly report reclassification adjustments relating to the enlargement. The calculation of flows and growth rates of MFI balance sheet items and monetary aggregates is explained in more detail in Section 4.3.

#### Data requirements for the Member States joining the euro area

As from the reference month in which the enlargement takes place, MFIs in the new euro area country are required to report to their NCB according to the template for euro area countries under Regulation ECB/2008/32. The NCB then compiles the national aggregated MFI balance sheet and transmits it to the ECB. In addition, the NCB is also required to report to the ECB at least three years of back data according to the euro area reporting scheme, i.e. monthly and quarterly MFI aggregated balance sheet statistics as if the Member State had already been part of the euro area.<sup>1</sup> These historical data are collected to provide euro area aggregates reflecting the new composition for several years before the enlargement (needed for policy analysis and

<sup>1</sup> No input is generally required from individual MFIs to perform this exercise, as the underlying raw data are already reported under the template set for EU Member States not participating in the monetary union under Regulation ECB/2008/32. Essentially, apart from recoding the time series according to the naming conventions for euro area countries, the NCB must add positions in national currency to the corresponding ones in euro. For three to six months prior to the enlargement, the ECB may also, for testing and data validation reasons, require the NCB to report both as a euro area country and as an EU Member State outside the euro area.

forecasting) for use alongside other sets of statistics representing the euro area in its latest composition. At the same time, these data allow transactions relating to the new euro area country around the time of enlargement to be correctly derived. Accordingly, the new euro area country should not send any reclassification adjustments relating to the change in the composition of the euro area implied by its joining.

### Data requirements for the Member States already in the euro area

In the month (or quarter) in which the enlargement takes place, MFIs in the existing euro area countries are required to reclassify positions vis-à-vis the new euro area country as well as positions denominated in the national currency of the joiner. In particular:

- 1) all positions vis-à-vis the new euro area country are reclassified from “rest of the world” to “other euro area residents”;
- 2) all positions denominated in the joiner’s national currency are reclassified from “all other currencies combined” to “euro”.

Each euro area NCB then compiles its national aggregated MFI balance sheet for the enlarged euro area and transmits it to the ECB, taking care to also transmit reclassification adjustments accounting for the change in the stocks series arising from the enlargement. In addition, for all time series in the monthly reporting scheme, the NCBs are also required to report, upon request, at least three years of back data (“delta series”) showing, for each time series, the positions vis-à-vis the new euro area country both in euro and in the joiner’s national currency, so that time series can be compiled as if the new euro area country had already been part of the euro area.<sup>2</sup> These historical data will generally enable aggregates for the euro area in its new composition to be derived for several years before the enlargement.<sup>3</sup>

### Special requirements when two or more countries join the euro area

The reporting requirements are more complex if two or more countries enter the euro area at the same time. In particular, each of the joiners should report historical series as if it had already been part of the euro area without taking into account the other joiners, i.e. these historical data must exclude positions vis-à-vis the other new euro area countries. This implies that, in order to allow a correct derivation of flows at the time of enlargement, each of the joiners should report reclassification adjustments according to the same rules outlined for Member States already in the euro area, but only referring to positions vis-à-vis the other joiners. Similarly, each of the new euro area countries should report delta series (when required by the ECB) vis-à-vis the other new joiners in order for the ECB to be able to derive historical euro area aggregates reflecting the new composition.

<sup>2</sup> Whether or not the ECB requires these positions may depend on their significance for the euro area aggregates.

<sup>3</sup> The enlargement also has an impact on the structure of Tables 3 and 4 of the reporting scheme under Regulation ECB/2008/32. In particular, in Table 3, series which have the new euro area country as a geographical counterparty become mandatory, while, in Table 4, series originally denominated in the national currency of the new euro area country cease to be reported. Moreover, in Table 4, positions in the national currency of the new euro area country must be removed from the moving composition currency aggregate “EU currencies other than euro”.



#### 1.6.3.5 Exchange rate changes

Movements in exchange rates against the euro between end-period reporting dates give rise to changes in the value of foreign currency assets and liabilities when expressed in euro. As these changes represent holding gains/losses and not financial transactions, the valuation effects need to be identified so that they can be excluded from transactions.

Unlike in the case of price changes, reporting MFIs do not provide exchange rate adjustments – their price adjustments in respect of foreign currency items on the balance sheet exclude exchange rate effects. Instead, they convert assets and liabilities denominated in foreign currencies into euro using market exchange rates; see Section 1.2.

The monthly MFI balance sheet return distinguishes only between positions denominated in euro and positions in (all) foreign currencies. A quarterly return (quarterly stocks (currency breakdown) – Table 4) records relevant balance sheet positions in other EU currencies (of which, GBP), and positions in USD, JPY, CHF, and all other currencies combined. The ECB calculates a standard adjustment using these quarterly data on the currency composition of main categories of MFI assets and liabilities. Where only summary information is available (e.g. the foreign currency component of an instrument class, but not of its constituent parts; a limited sectoral breakdown of foreign currency assets and liabilities of MFIs), the ECB spreads the pattern of currencies in the category across its components, estimating the effect of currency changes on the current balance sheet compared with that of the previous month. Section 4.2.2 explains in more detail the ECB methodology for deriving exchange rate adjustments. This estimation procedure is acceptable because only a small proportion of MFI balance sheet items are denominated in currencies other than euro.<sup>39</sup> When the share of foreign currency denominated instruments is significant, and NCBs have access to more disaggregated and/or monthly information to compile more accurate adjustments, NCBs may transmit these adjustments to the ECB.

<sup>39</sup> For instance, for periods between January 2003 and December 2011, on average only about 2.7% of M3 related to instruments denominated in foreign currencies.

## ANNEX I.1

## NUMERICAL EXAMPLES AND FURTHER MATERIAL TO EXPLAIN TRANSACTIONS AND ADJUSTMENTS

## I DERIVING REVALUATION ADJUSTMENTS ON SECURITIES UNDER DIRECT RECORDING OF TRANSACTIONS

This section aims to provide a deeper understanding of the methods used for the direct recording of transactions and of the corresponding derivation of revaluations data under this approach by means of a detailed example.

Suppose that, during the reference month of February, the security portfolio of an MFI involves four bonds (A, B, C and D respectively).

For the sake of simplicity, the bonds are assumed to be euro denominated, so no exchange-rate related effects arise, and to have the same market price evolution as shown below.

In particular, on 31 January the MFI holds one bond A and one bond B, each of which has a market price on that date of 99. Both bonds were bought at 98 on 15 January. While bond A is kept on balance sheet until the end of the reference period, bond B is sold on 20 February at 102. In addition, on 10 February the MFI buys one bond C at 101 and one bond D at 101. While bond D is kept on balance sheet until the end of the period, bond C is sold on 20 February at 102. Thus on 28 February the MFI holds one bond A and one bond D, each of which has a market price on that date of 103.

	Prices	15 Jan. 98	31 Jan. 99	10 Feb. 101	20 Feb. 102	28 Feb. 103
Securities	A	Buy 1	1 in stock			1 in stock
	B	Buy 1	1 in stock		Sell 1	
	C			Buy 1	Sell 1	
	D			Buy 1		1 in stock

Before discussing the derivation of transactions, it is worth analysing the structure of the balance sheet at the beginning and at the end of the reference period, distinguishing between two cases: where securities are carried at *market value* and where they are carried at *historic cost* (acquisition value). Similar examples can be constructed under other valuation criteria. Although this is not strictly relevant for the derivation of transactions *per se*, it is of importance for identifying the revaluation adjustments implied by the direct recording of transactions.

## CASE I

## SECURITIES ARE CARRIED AT MARKET VALUE

On 31 January the MFI records on balance sheet one bond A and one bond B, each at a value of 99. Similarly, on 28 February the MFI records on balance sheet one bond A and one bond D, each at a value of 103. Hence, during the reference period the holdings of securities have increased by 8, from 198 to 206:

		31 Jan.	10 Feb.	20 Feb.	28 Feb.	
Amounts outstanding	A	99			103	
	B	99				
	C					
	D				103	
		1-Open			2-Close	3-Difference = (2)-(1)
Total outstandings		198			206	8

## CASE 2

### SECURITIES ARE CARRIED AT HISTORIC COST

On 31 January the MFI records on balance sheet one bond A and one bond B, each at

a value of 98. On 28 February the MFI still carries bond A at 98, while bond D is recorded at 101, which is its acquisition cost. Hence, during the reference period the holdings of securities have increased by 3, from 196 to 199:

		31 Jan.	10 Feb.	20 Feb.	28 Feb.	
Amounts outstanding	A	98			98	
	B	98				
	C					
	D				101	
		<b>1-Open</b>			<b>2-Close</b>	<b>3-Difference = (2)-(1)</b>
Total outstandings		196			199	3

As discussed above, the derivation of transactions under the transaction method is independent of the valuation criterion applied to record securities on the balance sheet. In particular, transactions are valued

at their own transaction prices, following the ESA 95 methodology. In addition, all acquisitions and disposals are considered, including purchases reversed within the reference period.

#### Example 1

Two inflows are recorded on 10 February related to the purchases of bonds C and D; the value of each transaction is 101, which is the market price of each of the securities on that date. In turn, two outflows are recorded on 20 February related to the sale of securities B and C; the transactions are each valued at 102, which represents the market price of each of the securities on that date. Overall, in this case *transactions in securities amount to -2*, as follows:

Transactions		31 Jan.	10 Feb.	20 Feb.	28 Feb.	
Transactions method	A					
	B			-102		
	C		101	-102		
	D		101			
					<b>4-Total flow</b>	<b>-2</b>

Example 2 uses the same case to illustrate the direct reporting of transactions under the balance sheet method. The transactions involving bond C (a purchase and resale

within the period) are not recorded under this approach. How securities are valued on the balance sheet also affects the estimate of transactions.

#### Example 2

Suppose first that securities are carried on the balance sheet at *market value* (Case 1); the prices used for the valuation of the individual transactions would then be 99 for the sale of bond B (because this was its balance sheet value on the end-January balance sheet) and 103 for the purchase of bond D (because this is the balance sheet value on 28 February). The method would

then record an outflow of 99 related to the disposal of bond B and an inflow of 103 related to the purchase of bond D. Overall, in this case *transactions in securities amount to 4*, as follows:

Transactions	31 Jan.	10 Feb.	20 Feb.	28 Feb.	
Balance sheet method	A				
	B			-99	
	C				4-Total flow
	D		103		4

Suppose now that securities are valued on the balance sheet at *historic cost* (Case 2); the prices used for the valuation of the individual transactions would then be 98 for the sale of bond B (because this was its balance sheet value on the end-January balance sheet) and 101 for the purchase of bond D (because this is the balance sheet value on 28 February). The method would then record an outflow of 98 related to the disposal of bond B and an inflow of 101 related to the purchase of bond D. Overall, in this case *transactions in securities amount to 3*, as follows:

Transactions	31 Jan.	10 Feb.	20 Feb.	28 Feb.	
Balance sheet method	A				
	B			-98	
	C				4-Total flow
	D		101		3

As already mentioned in the main text, where MFIs report transactions directly, NCBS nevertheless, for computational reasons, use the transactions data to derive a valuation adjustment to be transmitted to the ECB. In particular, ignoring the effect of reclassifications

and exchange rate adjustments, price revaluation adjustments would be obtained as the difference between the change in outstanding amounts and transactions. A further example, based on the cases illustrated above, may help to explain this process.

### Example 3

Suppose that securities are carried on the balance sheet at *market value* (Case 1); the difference in stocks over the reference period then amounts to 8. The following two cases can be distinguished:

- If transactions are reported using the transaction method, transactions amount to -2, so the NCB derives as a residual a revaluation adjustment of 10:

3-Difference = (2)-(1)	8		
4-Total flow	-2	5-Revaluation = (3)-(4)	10

- If transactions are reported using the balance sheet method, transactions amount to 4, so the NCB derives as a residual a revaluation adjustment of 4:

3-Difference = (2)-(1)	8		
4-Total flow	4	5-Revaluation = (3)-(4)	4

Suppose now that securities are recorded on the balance sheet at *acquisition price* (Case 2); the difference in stocks over the reference period then amounts to 3. The following two cases can be distinguished:

- If transactions are reported using the transaction method, transactions amount to -2, so the NCB derives as a residual a revaluation adjustment of 5:

3-Difference = (2)-(1)		
	3	
4-Total flow		5-Revaluation = (3)-(4)
	-2	5

- If transactions are reported using the balance sheet method, transactions amount to 3, so the NCB derives as a residual a revaluation adjustment of 0:

3-Difference = (2)-(1)		
	3	
4-Total flow		5-Revaluation = (3)-(4)
	3	0

These examples show that where transactions are reported by MFIs, the NCB will derive (by residual) different estimates of the revaluation adjustment depending on whether the MFI reports transactions according to the transaction method or the balance sheet method, and also depending on what practice it follows in valuing balance sheet outstandings. Section 2 below also provides an interpretation of the revaluation adjustments obtained in the various cases in terms of gains/losses on holdings of securities.

## 2 INTERPRETING PRICE REVALUATION ADJUSTMENTS OBTAINED UNDER DIRECT RECORDING OF TRANSACTIONS

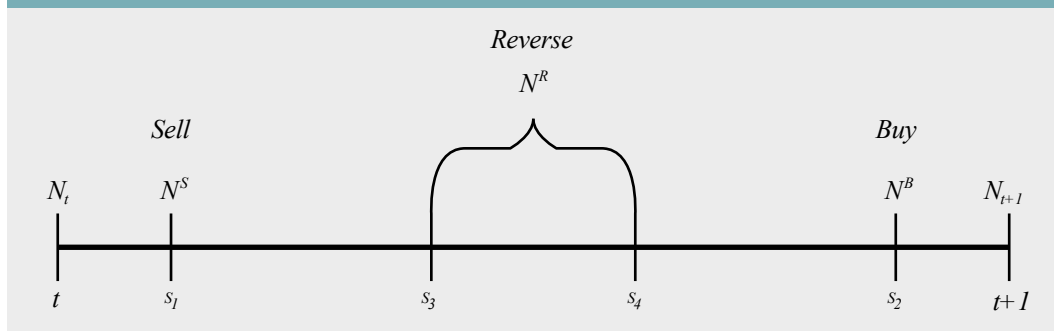
The section provides a detailed overview of the mathematical aspects of the derivation of revaluation data in the context of MFI balance sheet statistics under direct recording of transactions. In particular, it is shown that the revaluation adjustments implied by the transaction method are equivalent to (realised and unrealised) gains/losses on holdings of securities, while the balance sheet method delivers revaluation adjustments that cover the

changes in carrying value of securities held throughout the reference period only.

Suppose that an MFI trades only in one security  $S$ , and denote by  $N_t$  the number of such securities at time  $t$ . Between  $t$  and  $t+1$  the MFI sells  $N^S$  securities at time  $s_1$  and purchases securities  $N^B$  at time  $s_2$  which are then kept until time  $t+1$ . In addition, a number  $N^R$  of securities are purchased and sold back during the period at times  $s_3$  and  $s_4$  respectively.

If  $N^K$  denotes the number of securities that are kept on the balance sheet between  $t$  and  $t+1$ , it is easy to see that  $N_t = N^K + N^S$  and, similarly,  $N_{t+1} = N^K + N^B$ . Let now  $p_t$  represent the value at which securities  $S$  are carried on balance sheet at time  $t$  and let  $p'_t$  be the corresponding market value. Without loss of generality, assume that all securities are recorded according to the same valuation criterion and that the same carrying value applies to each of the securities within  $N^K$ ,  $N^S$  and  $N^B$  ( $p_t^K$ ,  $p_t^S$  and  $p_t^B$  denoting the corresponding carrying values). The outstanding amounts  $S_t$  of the securities holdings satisfy the following equations:

Sales and purchases of securities from  $t$  to  $t+1$



$$S_t = p_t^K \times N^K + p_t^S \times N^S \quad [A1.1.1]$$

$$S_{t+1} = p_{t+1}^K \times N^K + p_{t+1}^B \times N^B \quad [A1.1.2]$$

As discussed in the main text, ignoring the effect of reclassifications and exchange rate adjustments (without loss of generality), price revaluation adjustments  $R_{t+1}$  at time  $t+1$  under direct recording of transactions can be obtained as the difference between the change in outstanding amounts between  $t$  and  $t+1$  and the estimated transactions  $T_{t+1}$ :

$$R_{t+1} = (S_{t+1} - S_t) - T_{t+1} \quad [A1.1.3]$$

Two cases can thus be distinguished, depending on the method used to record transactions. Suppose first that transactions are derived using the transaction method; then

$$T_{t+1} = p_{s_2}^B \times N^B - p_{s_1}^S \times N^S + (p_{s_4}^R - p_{s_3}^R) \times N^R \quad [A1.1.4]$$

Substituting expressions [A1.1.1], [A1.1.2] and [A1.1.4] into [A1.1.3] yields:

$$R_{t+1} = (p_{t+1}^K - p_t^K) \times N^K + (p_{t+1}^B - p_t^S) \times N^B + (p_{s_1}^S - p_t^S) \times N^S + (p_{s_4}^R - p_{s_3}^R) \times N^R \quad [A1.1.5]$$

The first two terms represent the unrealised gains/losses related to changes in valuation of, respectively, securities that were held from time  $t$  to  $t+1$  (change in carrying value, multiplied by the number of securities) and securities that were bought during the period (carrying value at time  $t+1$  minus cost, multiplied by the number

of securities). In turn, the latter two terms represent the realised gains/losses related to, respectively, securities that were held at time  $t$  but were sold during the period (selling price minus carrying value at time  $t$ , multiplied by the number of securities) and securities that were traded (reversed purchases) during the period (selling price minus cost, multiplied by the number of securities).

It thus follows that price revaluation statistics obtained by residual under direct derivation of transactions with the transaction method are conceptually equivalent to the gains/losses on MFIs' security holdings during the reference period.<sup>1</sup>

If transactions are derived using the balance sheet method, however, the derivation yields different results, as the purchases that are reversed during the period are not taken into account and the values at which securities are recorded on the balance sheet are all that matters for the valuation of sales and purchases. In particular:

$$T_{t+1} = p_{t+1}^B \times N^B - p_t^S \times N^S \quad [A1.1.6]$$

<sup>1</sup> It should be stressed, however, that gains/losses implied by MFI balance sheet statistics may still differ from gains/losses effectively imputed in the income statement, as the valuation criteria may differ. For example, following the general reporting instructions for MFI balance sheet statistics, many NCBs require credit institutions to value quoted securities (i.e. securities listed on a stock exchange for public trading) classified under IFRS as "held to maturity" and "loans and receivables" at market price for MFI balance sheet purposes, while the financial statement follows the general IFRS requirement to value these items at amortised cost.



Substituting expressions [A1.1.1], [A1.1.2] and [A1.1.6] into [A1.1.3] yields:

$$R_{t+1} = (p_{t+1}^K - p_t^K) \times N^K \quad [A1.1.7]$$

Hence, unlike the revaluation adjustments implied by the transaction method, the balance

sheet method only reflects the change in carrying value of securities held throughout the period.

The discussion can be further clarified with an example based on the cases illustrated in Section 1 above.

#### Example 4

Suppose that securities are carried on the balance sheet at *market value* (Case 1). The following two cases can be distinguished:

- If transactions are reported using the transaction method, the imputed revaluation adjustments amount to 10, as discussed above. This is the sum of the unrealised gains on bonds A and D (4 and 2 respectively, making a total of 6) and the realised gains on B and C (3 and 1 respectively, making a total of 4):

Transactions	31 Jan.	10 Feb.	20 Feb.	28 Feb.	Revaluation components
Transactions method A					4
B			-102		3
C		101	-102		1
D		101			2
				4-Total flow	5-Revaluation = (3)-(4)
				-2	10

- If transactions are reported using the balance sheet method, the imputed revaluation adjustments amount to 4, as discussed above. This is equivalent to the change in carrying value of bond A, which is held throughout the period:

Transactions	31 Jan.	10 Feb.	20 Feb.	28 Feb.	Revaluation components
Balance sheet method A					4
B			-99		0
C					0
D		103			0
				4-Total flow	5-Revaluation = (3)-(4)
				4	4

Suppose now that securities are recorded on the balance sheet at *acquisition price* (Case 2). The following two cases can be distinguished:

- If transactions are reported using the transaction method, the imputed revaluation adjustments amount to 5, as discussed above. This is the sum of the realised gains on B and C (4 and 1 respectively, making a total of 5):

Transactions	31 Jan.	10 Feb.	20 Feb.	28 Feb.	Revaluation components
Transactions method A					0
B			-102		4
C		101	-102		1
D		101			0
				4-Total flow	5-Revaluation = (3)-(4)
				-2	5

- If transactions are reported using the balance sheet method, the imputed revaluation adjustments amount to 0, as discussed above. This is because the carrying value of bond A, which is held throughout the period, does not change over the reference period:

Transactions	31 Jan.	10 Feb.	20 Feb.	28 Feb.	Revaluation components
Balance sheet method A					0
B			-98		0
C				4-Total flow 5-Revaluation = (3)-(4)	0
D		101		3	0

### 3 DIRECT REPORTING OF PRICE REVALUATION ADJUSTMENTS ON SECURITIES BY MFIs

As discussed in the main text, Regulation ECB/2008/32 does not state in detail which method should be followed by reporting agents to derive revaluation data on holdings of securities directly.

One option is to report price-related (realised and unrealised) gains/losses on holdings of securities, according to expression [A1.1.5]. This is equivalent to obtaining the adjustments indirectly, by recording transactions with the transaction method. This approach, however, is difficult to implement because it relies on the availability of detailed price data on individual transactions and the value at which securities are carried on the balance sheet. In most cases, reporting agents use expression [A1.1.7] to derive price revaluation adjustments, which then match the changes in carrying value of securities held throughout the period. This is equivalent to deriving transactions data under the balance sheet method. Example 4 above provides detailed guidance on how revaluation adjustments can be derived directly on the basis of [A1.1.5] or [A1.1.7].

Although simpler than [A1.1.5], the application of expression [A1.1.7] can nevertheless be burdensome for reporting agents. It is therefore accepted that whenever securities of the same type are recorded at market value (or following any other procedure that guarantees the same recording value for all securities), it is acceptable to derive price revaluations by applying the

change in carrying value to the lower of the two balances at  $t$  and  $t+1$ :

$$R_{t+1} = (p_{t+1}^K - p_t^K) \times \min(N_t, N_{t+1}) \quad [\text{A1.1.8}]$$

This clearly represents a deviation from the definition of the balance sheet method, especially at a time of high turnover; i.e.  $N^K \leq \min(N_t, N_{t+1})$ . Nevertheless, this deviation is considered acceptable in view of the cost-saving that it could imply for reporting agents. In cases where securities are recorded at historic cost or the lower of purchase or market value, this simplified method cannot always be applied, as the valuation rule could imply that similar securities are recorded at different prices.

### 4 DERIVATION OF LOAN WRITE-OFFS/ WRITE-DOWNS DATA

As explained in the main text, the derivation of data on loan write-offs/write-downs is largely straightforward. Nonetheless, some numerical examples may help to clarify the data reporting requirements.

Consider the loan portfolio of an MFI vis-à-vis non-financial corporations at time  $t$ . For the sake of simplicity, suppose that all loans are euro denominated, so no adjustments for changes in exchange rates need to be taken into account. Between time  $t$  and  $t+1$ , the MFI does not provide new loans and none of the loans outstanding at time  $t$  are paid back.

The first example considers the case where loans are reported gross of provisions.

### Example 5

Suppose that the loan portfolio amounts to 100 at time  $t$ . At time  $t+1$  some of the loans are written-down and the loan portfolio falls to 95; the change in outstanding amounts is -5. The MFI will then have to report a revaluation adjustment of -5, so (using the notation of sub-section 1.6.3.2 above) transactions at time  $t+1$  can be estimated as  $T_{t+1} = -5 - (-5) = 0$ .

The case where loans are reported net of provisions is slightly more complicated. The next example considers the case presented above in this situation.

### Example 6

As above, the loan portfolio amounts to 100 at time  $t$ , but loan provisions amount to 2, so the on-balance-sheet loans amount to 98. At time  $t+1$  no loans are written-down or written-off, but loan provisions increase by 3 so loans outstanding decreases to 95 and the change in outstanding amounts is -3. The MFI will then have to report a revaluation adjustment of -3, which equals the change in loan-loss provisions (with opposite sign). Hence, transactions at time  $t+1$  are  $T_{t+1} = -3 - (-3) = 0$ .

Finally, suppose again that the loan portfolio amounts to 100 at time  $t$ , with loan-loss provisions of 2. Hence, as above, on-balance-sheet loans at time  $t$  amount to 98. At time  $t+1$  all provisioned loans are written-down by 5 and no new provisions are made, so loans outstanding decrease to 95 and the change in outstanding amounts is -3. The MFI will then have to report a revaluation adjustment of -3, which equals (with opposite sign) the write-down (5) minus the loan-loss provisions which were previously recorded (2). Hence, transactions at time  $t+1$  are  $T_{t+1} = -3 - (-3) = 0$ .

## 5 DERIVATION OF RECLASSIFICATION DATA

As discussed in the main text, reclassification adjustments are aimed at correcting breaks in balance sheet series which affect the comparability of successive end-of-period levels. As described in Section 1.6.3 above, such non-transaction related effects may arise in various contexts. This section reviews the various cases by means of detailed examples. First, an example relating to the change in the MFI population is presented. Then the case where changes in the structure of the MFI sector arise in the context of intra-group reorganisations or mergers, acquisitions and divisions is analysed in detail, considering various possible instances. The section concludes by discussing reclassification adjustments which arise in connection with changes in the classification of financial instruments or

counterparties, changes in statistical definitions, and changes which correct reporting errors.

It should be noted that, as for other adjustments, a net increase in stocks due to reclassifications is entered in the adjustment data provided to the ECB with a positive sign, and a net decrease in stocks due to reclassifications with a negative sign.

### 5.1 CHANGES IN THE MFI POPULATION

The MFI population changes as a result of a reclassification of institutional units. As discussed above, institutions may join or leave the MFI population, and the impact of these changes on the outstanding amounts reported for the MFI sector as a whole must be accounted for by means of reclassification

adjustments. The example below shows the impact of a new institution joining the MFI population. The discussion is limited to the point of joining and does not take into account the activities of the institution after it has joined the MFI population (when operations will be treated as transactions). For the sake of

simplicity, it is also assumed that the joining institution does not have cross-positions with the MFI sector (otherwise the change in the MFI population would also lead a change in the classification of counterparties; the impact of such changes is discussed in Example 13 below).

### Example 7

*An OFI joins the MFI population.* A financial corporation engaged in lending (OFI) to (domestic) households is granted a banking licence and therefore joins the MFI population. Suppose that its balance sheet is as follows:

OFI			
Assets		Liabilities	
Loans and deposits	100	Loans and deposits	70
o/w loans to B	100	Capital and reserves	30
Total assets	100	Total liabilities	100

From the moment the OFI joins the MFI population, all its assets and liabilities are included in the aggregated data of the MFI sector, resulting in changes in outstanding amounts, which are recorded as reclassifications:

MFI sector – Amounts outstanding before the join				MFI sector – Amounts outstanding after the join			
Assets		Liabilities		Assets		Liabilities	
Loans and deposits	1,000	Loans and deposits	800	Loans and deposits	1,100	Loans and deposits	870
o/w loans to B	900	Capital and reserves	200	o/w loans to B	1,000	Capital and reserves	230
Total assets	1,000	Total liabilities	1,000	Total assets	1,100	Total liabilities	1,100

MFI sector – Changes in amounts outstanding				MFI sector – Reclassifications			
Assets		Liabilities		Assets		Liabilities	
Loans and deposits	100	Loans and deposits	70	Loans and deposits	100	Loans and deposits	70
o/w loans to B	100	Capital and reserves	30	o/w loans to B	100	Capital and reserves	30
Total assets	100	Total liabilities	100	Total assets	100	Total liabilities	100

## 5.2 CHANGES IN THE STRUCTURE OF THE MFI SECTOR ARISING IN THE CONTEXT OF CORPORATE RESTRUCTURING (RELATED TO INTRA-GROUP REORGANISATIONS OR TO MERGERS, ACQUISITIONS AND DIVISIONS)

Corporate restructuring operations arising, for instance, in the context of intra-group reorganisations or in the context of mergers, acquisitions and divisions often give rise to the transfer of financial assets and liabilities from the balance sheet of one institutional unit to another (change in ownership). In addition, when a merger, acquisition or division takes

place, funds often flow across countries/sectors. This section reviews the treatment of these flows in detail on the basis of the principles discussed above. The boundary for treating transfers of assets as transactions is broadly defined by the existence of two separate institutional units. If, however, the transfers coincide with the creation or disappearance of an institutional unit, they should be treated as reclassifications.

### Intra-group transfers

Asset transfers relating to corporate restructuring in the context of intra-group reorganisations usually involve separate

institutional units (acting by mutual agreement) and should therefore be treated as transactions. The following two examples might clarify the implications of this suggested treatment.

#### Example 8

*An OFI transfers loans to an MFI.* An MFI and a financial corporation engaged in lending to (domestic) households (an OFI) are resident in the same territory and belong to the same financial group. Suppose that their balance sheets are as follows:

MFI				OFI			
Assets		Liabilities		Assets		Liabilities	
Loans and deposits	100	Loans and deposits	80	Loans and deposits	20		
o/w loans to households	80	Capital and reserves	20	o/w loans to B	20	Capital and reserves	20
Total assets	100	Total liabilities	100	Total assets	20	Total liabilities	20

In connection with an intra-group reorganisation, it is decided to transfer part of the loan portfolio from the OFI to the MFI (for a total amount of 10); in exchange for the loans, the OFI then has a claim on the MFI for the corresponding amount. After the operation takes place, the balance sheets become:

MFI				OFI			
Assets		Liabilities		Assets		Liabilities	
Loans and deposits	110	Loans and deposits	90	Loans and deposits	20		
o/w loans to households	90	o/w deposit by the OFI	10	o/w loans to households	10	Capital and reserves	20
		Capital and reserves	20	o/w deposit by the MFI	10		
Total assets	110	Total liabilities	110	Total assets	20	Total liabilities	20

The asset transfer and its counterpart are both recorded as transactions. As a result of this operation, loans to households provided by the domestic MFI sector show a positive change of 10.

#### Example 9

*A foreign subsidiary transfers securities to the parent MFI.* An MFI has a foreign subsidiary (also an MFI). For sake of simplicity, suppose that the subsidiary is fully owned by the parent MFI (the capital of the subsidiary MFI appears under “Holdings of shares” on the balance sheet of the parent MFI). The balance sheets of the two MFIs are as follows:

Domestic MFI				Foreign subsidiary			
Assets		Liabilities		Assets		Liabilities	
Loans and deposits	100	Loans and deposits	80	Loans and deposits	30	Loans and deposits	40
o/w loans to the subsidiary	20			Holdings of government securities	20	o/w loans from parent MFI	20
Holding of shares	10	Capital and reserves	30			Capital and reserves	10
Total assets	110	Total liabilities	110	Total assets	50	Total liabilities	50

Due to some intra-group reorganisation, the parent MFI takes over the government securities owned by the subsidiary (for a total amount of 20); in exchange for the securities, the liability the subsidiary had to the parent MFI is cancelled. After the operation takes place, the balance sheets become:

Domestic MFI		Foreign subsidiary	
Assets		Liabilities	
Loans and deposits	80	Loans and deposits	80
Holdings of government securities	20	Capital and reserves	30
Holding of shares	10		
<b>Total assets</b>	<b>110</b>	<b>Total liabilities</b>	<b>110</b>

Domestic MFI		Foreign subsidiary	
Assets		Assets	Liabilities
Loans and deposits	80	Loans and deposits	20
Holdings of government securities	20	Capital and reserves	10
Holding of shares	10		
<b>Total assets</b>	<b>110</b>	<b>Total liabilities</b>	<b>30</b>

The asset transfer and its counterpart are both recorded as transactions. As a result of this operation, the holdings by the domestic MFI sector of government securities show a positive change of 20.

### Intra-group reorganisations due to mergers, acquisitions and divisions

Whenever a merger, acquisition or division is cross-border or involves institutional units in different sectors, funds flow across countries/sectors (possibly due to transfers of assets between the institutions involved). As discussed above, the criterion used to distinguish between flows that represent transactions and those to be recorded as reclassifications relies on the existence of two separate institutional units at the moment when the transfer takes place. Various cases are analysed next, each assuming that only two corporations are involved. More complicated cases can be decomposed into these underlying operations or treated analogously. In addition, a distinction is made between the case where the operation takes place within the same sector and the case where the corporations involved belong to different sectors (including the case where one corporation is non-resident). The discussion is limited to mergers and acquisitions, but corporate divisions can be treated symmetrically.

A final point relates to changes in valuation practices that often take place in relation to mergers, acquisitions and divisions. These changes in balance sheet positions are not transactions and in all cases must be reflected in revaluation adjustments. For the sake of simplicity, the description below will not cover these aspects.

### Merger or acquisition in which no corporation ceases to exist

If no corporation involved in the merger or acquisition ceases to exist, there is no change in the reporting population(s). However, restructuring operations often take place in these mergers or acquisitions and the related transfers of assets and liabilities between the units involved need to be treated as transactions. Similar operations take place in the case of disinvestment (e.g. the parent corporation sells a subsidiary); these are to be treated analogously. In brief, these situations are in all respects similar to those described in Examples 8 and 9 above.



### Example 10

*Merger or acquisition in which no corporation ceases to exist.* Financial corporations A and B have balance sheets:

Corporation A				Corporation B			
Assets		Liabilities		Assets		Liabilities	
Cash	30			Cash	20		
Loans and deposits o/w loans to B	20 10	Loans and deposits	10			Loans and deposits o/w loans from A	30 10
		Capital and reserves	40	Holdings of shares	30	Capital and reserves	20
Total assets	50	Total liabilities	50	Total assets	50	Total liabilities	50

In order to acquire B, A raises new capital and purchases shares in B with the proceeds of that operation. As a consequence, B becomes a subsidiary of A, while remaining a separate institutional unit. This is reflected in an increase in the capital and reserves of A, counterbalanced by an equivalent increase in A's holdings of shares. It is assumed that A purchases the shares in B from third parties who do not belong to same the sector as either A or B. The same assumption applies to the units purchasing the new shares issued by A. These changes are transactions. Following the acquisition, the balance sheets become:

Corporation A				Corporation B			
Assets		Liabilities		Assets		Liabilities	
Cash	30			Cash	20		
Loans and deposits o/w loans to B	20 10	Loans and deposits	10			Loans and deposits o/w loans from A	30 10
Holdings of shares o/w shares in B	20 20	Capital and reserves	60	Holdings of shares	30	Capital and reserves	20
Total assets	70	Total liabilities	70	Total assets	50	Total liabilities	50

Some intra-group operations then take place, and 20 shares held by B are transferred to A in exchange for cash (10) and the cancellation of the loan claim that A has on B (10). The following transactions take place at this stage (the capital increase by A and the consequent purchase of shares in B are not covered here):

Corporation A				Corporation B			
Assets		Liabilities		Assets		Liabilities	
Cash	-10			Cash	10		
Loans and deposits o/w loans to B	-10 -10	Loans and deposits				Loans and deposits o/w loans from A	-10 -10
Holdings of shares	20	Capital and reserves		Holdings of shares	-20	Capital and reserves	
Total assets	0	Total liabilities		Total assets	-10	Total liabilities	-10

Hence, all transfers and their counterparts are shown as transactions, including the decrease in cross positions between the two corporations. No reclassifications arise and the final balance sheets are:

Corporation A				Corporation B			
Assets		Liabilities		Assets		Liabilities	
Cash	20			Cash	30		
Loans and deposits o/w loans to B	10 0	Loans and deposits	10			Loans and deposits o/w loans from A	20 0
Holdings of shares o/w shares in B	40 20	Capital and reserves	60	Holdings of shares	10	Capital and reserves	20
Total assets	70	Total liabilities	70	Total assets	40	Total liabilities	40

In terms of aggregates for institutional sectors and sub-sectors, two cases can be distinguished.

## Case 1

Corporations A and B belong to the same sector. Compared to the position before the acquisition, the total assets and liabilities of the sector increase by 10, as the result of the increase of A's capital by 20 and the corresponding purchase of shares of B, and the intra-group transactions (-10). No reclassifications arise.

Sector of A and B - Transactions				Sector of A and B - Reclassifications			
Assets		Liabilities		Assets		Liabilities	
Cash	0			Cash	0		
Loans and deposits	-10	Loans and deposits	-10	Loans and deposits	0	Loans and deposits	0
o/w loans by A to B	-10	o/w loans by A to B	-10	o/w loans by A to B	0	o/w loans by A to B	0
Holdings of shares	20	Capital and reserves	20	Holdings of shares	0	Capital and reserves	0
Total assets	10	Total liabilities	10	Total assets	0	Total liabilities	0

## Case 2

Corporations A and B belong to different sectors. All transfers and their counterparts are shown as transactions affecting the sectoral aggregates. No reclassifications arise. Compared to the situation before the acquisition, the sectoral balance sheets are affected as follows:

Sector of A – Transactions				Sector of B – Transactions			
Assets		Liabilities		Assets		Liabilities	
Cash	-10			Cash	10		
Loans and deposits	-10	Loans and deposits				Loans and deposits	-10
o/w loans by A to B	-10					o/w loans by A to B	-10
Holdings of shares	40	Capital and reserves	20	Holdings of shares	-20	Capital and reserves	
Total assets	20	Total liabilities	20	Total assets	-10	Total liabilities	-10

Sector of A – Reclassifications				Sector of B - Reclassifications			
Assets		Liabilities		Assets		Liabilities	
Cash	0			Cash	0		
Loans and deposits	0	Loans and deposits				Loans and deposits	0
o/w loans by A to B	0					o/w loans by A to B	0
Holdings of shares	0	Capital and reserves		Holdings of shares	0	Capital and reserves	
Total assets	0	Total liabilities		Total assets	0	Total liabilities	0

### Merger or acquisition in which one corporation ceases to exist (“statutory merger”)

When one of the corporations involved in the merger or acquisition ceases to exist, there is a change in the population of the sector to which the absorbed corporation belonged, with the acquiring corporation taking over the (residual) balance sheet of the unit which has been absorbed. This operation leads to reclassification adjustments. If the two corporations belong to the same sector, the adjustment will only relate to the decrease in the cross-positions between the merging institutions (including the shareholding of the acquiring corporation in the absorbed

corporation). If they belong to different sectors, the reclassifications will relate to all balance sheet positions existing when the acquired corporation ceases to exist, including the decrease in cross-positions between the merging institutions.

However, all transfers of assets and liabilities between the units involved prior to the disappearance of the acquired corporation are transactions, and should be treated along the lines described above. Similar operations take place in the case of disinvestments involving the creation of a new company (e.g. a corporate spin-off); these should be treated analogously.

### Example 11

*Acquisition in which one corporation ceases to exist.* Corporations A and B are as in Example 10 above, but after having acquired the shares of B (and increased its capital by 20), corporation A decides to wind it down and absorb its business activities.<sup>1</sup> Suppose that prior to the winding down the balance sheets of A and B are:

Corporation A				Corporation B			
Assets		Liabilities		Assets		Liabilities	
Cash	30			Cash	20		
Loans and deposits o/w loans to B	20 10	Loans and deposits	10			Loans and deposits o/w loans from A	30 10
Holdings of shares o/w loans to B	20 20	Capital and reserves	60	Holdings of shares	30	Capital and reserves	20
Total assets	70	Total liabilities	70	Total assets	50	Total liabilities	50

The cash (20) and the shares (30) owned by B will move to the balance sheet of A, together with B's liabilities to third parties (20), while the cross-positions (the shares in B held by A (20) and the loan from A to B (10), making a total of 30) will disappear from the system. None of those changes represent a transaction. The net changes on the balance sheets of A and B relating to the winding down of B (the increase in the capital of A and the purchase of the shares in B are excluded here) are as follows:

Corporation A				Corporation B			
Assets		Liabilities		Assets		Liabilities	
Cash	20			Cash	-20		
Loans and deposits o/w loans to B	-10 -10	Loans and deposits	20			Loans and deposits o/w loans from A	-30 -10
Holdings of shares o/w loans to B	10 -20	Capital and reserves	0	Holdings of shares	-30	Capital and reserves	-20
Total assets	20	Total liabilities	20	Total assets	-50	Total liabilities	-50

After B is wound down, the balance sheet of A becomes:

Corporation A			
Assets		Liabilities	
Cash	50		
Loans and deposits o/w loans to B	10 0	Loans and deposits	30
Holdings of shares	30	Capital and reserves	60
Total assets	90	Total liabilities	90

In terms of aggregates for institutional sectors, two cases can be distinguished.

<sup>1</sup> Asset transfers taking place before B is wound down are treated as transactions along the lines of Example 10. The assumptions of Example 10 are also kept here: A purchases shares in B from third parties that do not belong to the same sector as either A or B, and the same applies to the units purchasing the new shares issued by A. This example properly relates to an acquisition in which the shareholders of B receive cash in exchange for their shareholdings (transactions). The case of a merger in which the shareholders of B receive new shares in A in exchange for their shareholdings is similar: the two offsetting transactions of the shareholders of B involve, as a counterparty, corporation A, which is exchanging the new capital for the shares in corporation B.

**Case 1**

Corporations A and B belong to the same sector. In aggregated terms, reclassifications apply to all balance sheet items where cross-positions exist between A and B at the moment B is wound down. Taking into account the increase in the capital of A and A's purchase of the shares in B (which are transactions), the following sectoral developments are observed:

Sector of A and B - Changes in amounts outstanding				Sector of A and B – Reclassifications			
Assets		Liabilities		Assets		Liabilities	
Cash	0			Cash	0		
Loans and deposits	-10	Loans and deposits	-10	Loans and deposits	-10	Loans and deposits	-10
o/w loans by A to B	-10	o/w loans by A to B	-10	o/w loans by A to B	-10	o/w loans by A to B	-10
Holdings of shares	0	Capital and reserves	0	Holdings of shares	-20	Capital and reserves	-20
<b>Total assets</b>	<b>-10</b>	<b>Total liabilities</b>	<b>-10</b>	<b>Total assets</b>	<b>-30</b>	<b>Total liabilities</b>	<b>-30</b>

Sector of A and B – Transactions			
Assets		Liabilities	
Cash	0		
Loans and deposits	0	Loans and deposits	0
o/w loans by A to B	0	o/w loans by A to B	0
Holdings of shares	20	Capital and reserves	20
<b>Total assets</b>	<b>20</b>	<b>Total liabilities</b>	<b>20</b>

**Case 2**

Corporations A and B belong to different sectors. In this case, reclassifications apply to all balance sheets items relating to the movement of assets from B to A, and to the cross-positions existing between A and B at the moment B is wound down. Taking into account the increase in the capital of A and A's purchase of the shares in B (which are transactions), the following sectoral developments are observed:

Sector of A – Changes in amounts outstanding				Sector of B – Changes in amounts outstanding			
Assets		Liabilities		Assets		Liabilities	
Cash	20			Cash	-20		
Loans and deposits	-10	Loans and deposits	20			Loans and deposits	-30
o/w loans by A to B	-10					o/w loans by A to B	-10
Holdings of shares	30	Capital and reserves	20	Holdings of shares	-30	Capital and reserves	-20
<b>Total assets</b>	<b>40</b>	<b>Total liabilities</b>	<b>40</b>	<b>Total assets</b>	<b>-50</b>	<b>Total liabilities</b>	<b>-50</b>

Sector of A – Reclassifications				Sector of B – Reclassifications			
Assets		Liabilities		Assets		Liabilities	
Cash	20			Cash	-20		
Loans and deposits	-10	Loans and deposits	20			Loans and deposits	-30
o/w loans by A to B	-10					o/w loans by A to B	-10
Holdings of shares	10	Capital and reserves	0	Holdings of shares	-30	Capital and reserves	-20
<b>Total assets</b>	<b>20</b>	<b>Total liabilities</b>	<b>20</b>	<b>Total assets</b>	<b>-50</b>	<b>Total liabilities</b>	<b>-50</b>

Sector of A – Transactions				Sector of B – Reclassifications			
Assets		Liabilities		Assets		Liabilities	
Cash	0			Cash	0		
Loans and deposits o/w loans by A to B	0 0	Loans and deposits	0			Loans and deposits o/w loans by A to B	0 0
Holdings of shares	20	Capital and reserves	20	Holdings of shares	0	Capital and reserves	0
Total assets	20	Total liabilities	20	Total assets	0	Total liabilities	0

### Merger in which two corporations form an entirely new corporation (“consolidation merger”)

Both corporations involved in the merger cease to exist. There is therefore a change in the population(s) of the sector(s) of the merging corporations, with the newly established corporation taking over the balance sheets of the merging units. This operation leads to reclassification adjustments. If the two merging corporations and the new corporation belong to the same sector, the adjustment will only relate to the decrease in the cross-positions between the merging institutions and the disappearance from the system of the shares of the merging institutions. If the two merging

corporations belong to the same sector, but the new corporation belongs to a different sector, the reclassifications within the sector of the merging units will relate to all their balance sheet positions, including the decreases in cross-positions between the merging institutions, while the reclassifications within the sector of the new corporation will relate only to its balance sheet positions (and not the raising of new capital and the corresponding purchases of the shares in the merging corporations, which represent transactions). Cases in which the two merging corporations do not belong to the same sector are treated analogously. Cases in which a corporation is split into two new entities are also treated analogously.

### Example 12

*Merger in which two corporations form an entirely new corporation.* Let corporations A and B have balance sheets as in Example 10 above:

Corporation A				Corporation B			
Assets		Liabilities		Assets		Liabilities	
Cash	30			Cash	20		
Loans and deposits o/w loans to B	20 10	Loans and deposits	10			Loans and deposits o/w loans from A	30 10
		Capital and reserves	40	Holdings of shares	30	Capital and reserves	20
Total assets	50	Total liabilities	50	Total assets	50	Total liabilities	50

Suppose that A and B merge into a new corporation C.<sup>1</sup> C issues new capital for 60 which is exchanged for the shares in A and B. The shareholders of A and B receive new shares in C (40 and 20 respectively) in exchange for their old shares in A and B. These operations are transactions.

Corporation C			
Assets		Liabilities	
Holdings of shares o/w shares in A and B	60 60	Capital and reserves	60
Total assets	60	Total liabilities	60

<sup>1</sup> Asset transfers taking place before A and B are wound down are treated as transactions along the lines of Example 10. The assumptions of Example 10 are also kept here: the shareholders of A and B do not belong to the sector of either A or B.

A and B are then wound down and their assets and liabilities are moved to the balance sheet of C. None of the consequent changes in balance sheet outstandings represent transactions. The net changes on the balance sheets of A and B are as follows:

Corporation A				Corporation B			
Assets		Liabilities		Assets		Liabilities	
Cash	-30			Cash	-20		
Loans and deposits o/w loans to B	-20 -10	Loans and deposits	-10			Loans and deposits o/w loans from A	-30 -10
Holdings of shares	0	Capital and reserves	-40	Holdings of shares	-30	Capital and reserves	-20
Total assets	-50	Total liabilities	-50	Total assets	-50	Total liabilities	-50

The assets and liabilities of A and B (excluding the cross-positions existing between them) are transferred to the balance sheet of C in exchange for the shares in A and B which C had on its balance sheet and which now disappear from the system:

Corporation C			
Assets		Liabilities	
Cash	50		
Loans and deposits	10	Loans and deposits	30
Holdings of shares	30	Capital and reserves	60
Total assets	90	Total liabilities	90

In terms of aggregates for institutional sectors, four cases can be distinguished.

### Case 1

Corporations A and B and the new corporation C belong to the same sector. In aggregate terms, there are no changes in outstanding amounts, except in balance sheet items where cross-positions existed between A and B. These changes are recorded as reclassifications. Reclassifications will also be entered for the shares of A and B once they disappear from the system:

Sector of A, B and C – Changes in amounts outstanding				Sector of A, B and C – Reclassifications			
Assets		Liabilities		Assets		Liabilities	
Cash	0			Cash	0		
Loans and deposits o/w loans by A to B	-10 -10	Loans and deposits o/w loans by A to B	-10 -10	Loans and deposits o/w loans by A to B	-10 -10	Loans and deposits o/w loans by A to B	-10 -10
Holdings of shares	0	Capital and reserves	0	Holdings of shares	-60	Capital and reserves	-60
Total assets	-10	Total liabilities	-10	Total assets	-70	Total liabilities	-70

Sector of A, B and C – Transactions			
Assets		Liabilities	
Cash	0		
Loans and deposits o/w loans by A to B	0 0	Loans and deposits o/w loans by A to B	0 0
Holdings of shares	60	Capital and reserves	60
Total assets	60	Total liabilities	60



## Case 2

Corporations A and B belong to the same sector, but C belongs to a different sector. The aggregated balance sheet of the sector of A and B shows changes in outstanding amounts which relate to their assets and liabilities at the time when they cease to exist, including decreases in balance sheet items where cross-positions existed between A and B. All these changes are recorded as reclassifications. Similarly, the aggregated balance sheet of the sector of C shows changes relating to the assets and liabilities of the new corporation. In addition, while the issuance of capital by C and its counterparts (the purchases of the capital of A and B) are recorded as transactions, all other operations are recorded as reclassifications:

Sector of A and B – Changes in amounts outstanding				Sector of C – Changes in amounts outstanding			
Assets		Liabilities		Assets		Liabilities	
Cash	-50			Cash	50		
Loans and deposits	-20	Loans and deposits	-40	Loans and deposits	10	Loans and deposits	30
o/w loans by A to B	-10	o/w loans by A to B	-10				
Holdings of shares	-30	Capital and reserves	-60	Holdings of shares	30	Capital and reserves	60
Total assets	-100	Total liabilities	-100	Total assets	90	Total liabilities	90

Sector of A and B – Reclassifications				Sector of C – Reclassifications			
Assets		Liabilities		Assets		Liabilities	
Cash	-50			Cash	50		
Loans and deposits	-20	Loans and deposits	-40	Loans and deposits	10	Loans and deposits	30
o/w loans by A to B	-10	o/w loans by A to B	-10				
Holdings of shares	-30	Capital and reserves	-60	Holdings of shares	-30	Capital and reserves	0
Total assets	-100	Total liabilities	-100	Total assets	30	Total liabilities	30

Sector of A and B – Transactions				Sector of C – Transactions			
Assets		Liabilities		Assets		Liabilities	
Cash	0			Cash	0		
Loans and deposits	0	Loans and deposits	0	Loans and deposits	0	Loans and deposits	0
o/w loans by A to B	0	o/w loans by A to B	0				
Holdings of shares	0	Capital and reserves	0	Holdings of shares	60	Capital and reserves	60
Total assets	0	Total liabilities	0	Total assets	60	Total liabilities	60

## Case 3

Corporations A and B do not belong to the same sector, while C belongs to the same sector as A. The aggregated balance sheet of the sector of B shows changes in outstanding amounts which relate to its assets and liabilities at the time when it ceases to exist, including the cross-positions between A and B. All these changes are recorded as reclassifications. The aggregated balance sheet of the sector of A and C shows changes in outstanding amounts which relate to the assets and liabilities that C inherited from B when it ceased to exist and also reflect the cross-positions which existed between A and B. In addition, while the issuance of capital by C and its counterparts (the purchases of the capital of A and B) are recorded as transactions, all other operations are recorded as reclassifications:

Sector of A and C – Changes in amounts outstanding				Sector of B – Changes in amounts outstanding			
Assets		Liabilities		Assets		Liabilities	
Cash	20			Cash	-20		
Loans and deposits	-10	Loans and deposits	20			Loans and deposits	-30
o/w loans by A to B	-10					o/w loans by A to B	-10
Holdings of shares	30	Capital and reserves	20	Holdings of shares	-30	Capital and reserves	-20
Total assets	40	Total liabilities	40	Total assets	-50	Total liabilities	-50
Sector of A and C – Reclassifications				Sector of B – Reclassifications			
Assets		Liabilities		Assets		Liabilities	
Cash	20			Cash	-20		
Loans and deposits	-10	Loans and deposits	20			Loans and deposits	-30
o/w loans by A to B	-10					o/w loans by A to B	-10
Holdings of shares	-30	Capital and reserves	-40	Holdings of shares	-30	Capital and reserves	-20
Total assets	-20	Total liabilities	-20	Total assets	-50	Total liabilities	-50
Sector of A and C – Transactions				Sector of B – Transactions			
Assets		Liabilities		Assets		Liabilities	
Cash	0			Cash	0		
Loans and deposits	0	Loans and deposits	0			Loans and deposits	0
o/w loans by A to B	0					o/w loans by A to B	0
Holdings of shares	60	Capital and reserves	60	Holdings of shares	0	Capital and reserves	0
Total assets	60	Total liabilities	60	Total assets	0	Total liabilities	0

#### Case 4

None of corporations A, B or C belong to the same sector. This case is not covered here, but can be described along the same lines.

### 5.3 OTHER CASES OF RECLASSIFICATION ADJUSTMENTS

Reclassification adjustments can also arise in connection with changes in the classification of financial instruments or counterparties,

changes in statistical definitions, or to correct reporting errors. As all these cases have similar consequences for sectoral balance sheets, only the case of a change in the classification of a counterparty is presented with an example; the other cases are analogous.

#### Example 13

Corporation A is reclassified from the OFI sector to the non-financial corporations sector. The aggregated balance sheet of the MFI sector will be affected by this change in classification: all claims and liabilities that MFIs have vis-à-vis A are reclassified as positions with the non-financial corporations sector. Suppose, for instance, that the MFI sector had granted loans to A, and that no other balance sheet positions are affected. The aggregated balance sheet of the MFI sector will then be affected as follows:

MFI sector – Outstanding amounts before the change				MFI sector – Outstanding amounts after the change			
Assets		Liabilities		Assets		Liabilities	
Loans and deposits	100	Loans and deposits	80	Loans and deposits	100	Loans and deposits	80
o/w loans to OFIs	30			o/w loans to OFIs	20		
o/w loans to A	10			o/w loans to non-financial corporations	60		
o/w loans to non-financial corporations	50	Capital and reserves	20	o/w loans to A	10	Capital and reserves	20
Total assets	100	Total liabilities	100	Total assets	100	Total liabilities	100

As a consequence, the changes in stocks affecting the of-which positions under “Loans and deposits” must be balanced by reclassifications to allow the correct derivation of financial transactions:

MFI sector – Changes in outstanding amounts				MFI sector – Reclassifications			
Assets		Liabilities		Assets		Liabilities	
Loans and deposits	0	Loans and deposits	0	Loans and deposits	0	Loans and deposits	0
o/w loans to OFIs	-10			o/w loans to OFIs	-10		
o/w loans to non-financial corporations	10	Capital and reserves	0	o/w loans to non-financial corporations	10	Capital and reserves	0
Total assets	0	Total liabilities	0	Total assets	0	Total liabilities	0

## 2 STATISTICAL TREATMENT OF SELECTED INSTRUMENT CATEGORIES

Rather than detailing individual instruments, Regulation ECB/2008/32 lists *instrument categories* to which reporting agents (guided where necessary by NCBs) allocate the financial instruments found at national level. This section draws on the detailed description of the instrument categories in Annex II, Part 2 of the Regulation.

Regarding the accounting rules to be followed by the MFIs in their statistical reporting, the Regulation imposes a particular treatment in only a few cases (such as recording of deposits and loans at nominal value). In cases where the accounting rules are not specified, the national transposition of Council Directive 86/635/EEC and any other international standards applicable should be applied, as set out in Article 7 of the Regulation. The international standards may be accounting, supervisory or statistical standards. This section provides additional guidance on valuation and other accounting practices. The corresponding accounting requirements included in the ESA 95 are referred to for completeness and comparison. The order of instrument categories follows the ESA 95. The numbers correspond to the numbers on the MFI balance sheet return as shown in the Regulation.

### Required breakdowns

Where relevant, the Regulation requires information on the following.

- *Maturity* of certain instruments – maturity at issue (original maturity) refers to the fixed period of life of a financial instrument before which it cannot be redeemed (e.g. debt securities) or before which it can be redeemed only subject to a penalty (e.g. some types of deposit). Some instruments have a period of notice corresponding to the time between the date the holder gives notice of an intention to redeem the instrument and the date on which the holder may do so without incurring a penalty. Financial instruments are classified according to the period of notice only when there is no agreed maturity. Most of the maturity breakdowns required under the Regulation concern original maturity, which may be more indicative of the nature of the instrument. Thus, for example, a bond issued for ten years which has only one year left to run is recorded in the maturity category “over two years”. The category “up to two years” includes bonds issued for exactly two years. For loans, however, the Regulation requires, in addition to information on original maturity, some information on (i) remaining (or residual) maturity, which is the remaining life of the instrument on the reporting date, and (ii) interest rate reset periods, where an interest rate reset is understood as a change in the interest rate of a loan which is foreseen in the current loan contract.
- *Currency breakdown* of balance sheet positions – data are typically available broken down into positions in euro and in all currencies other than euro combined (mostly at monthly level; additional breakdowns by individual currency of certain positions in foreign currencies are required quarterly).
- *Residency breakdown* of positions vis-à-vis domestic residents, residents of other euro area countries, and non-residents of the euro area. The distinction between positions with entities in the euro area and with non-residents of the euro area is critical to the compilation of euro area aggregates. The distinction between positions vis-à-vis domestic residents and residents of other euro area countries is necessary because MFI balance sheet data are used for certain national statistical purposes as well as for compiling euro area aggregates.
- Further breakdowns of relevant positions by *sector of counterparty*. The sectors follow the ESA 95, although the Regulation requires somewhat more detail for certain items (central counterparties and financial vehicle corporations within the ESA 95 category “other financial intermediaries”; sole proprietors/unincorporated partnerships

within the ESA 95 category “households”). In other respects, the Regulation requires less detail: for example financial auxiliaries (S.124 in the ESA 95) are bracketed with other financial intermediaries, and non-profit institutions serving households (S.15) with households.

## 2.1 INSTRUMENT CATEGORIES

### 2.1.1 CASH (ASSETS); CURRENCY IN CIRCULATION (LIABILITIES)

These items on the MFI balance sheet correspond to “currency” (AF.21) in the ESA 95, i.e. banknotes and coins in circulation that are commonly used to make payments. Commemorative coins, which are legal tender across the euro area, are included. Unissued banknotes held by central banks, gold coins and collector coins (which are not intended for circulation and are only legal tender in the country of issue) are, in principle, excluded. See below for further details.

The *asset* category cash (1) comprises banknotes and coins held by reporting MFIs (“*vault cash*” held by MFIs other than central banks in order to meet day-to-day business needs).<sup>1</sup> For MFIs resident in the euro area, these will mostly be euro banknotes and coins, but amounts of foreign currency banknotes and coins held are to be included and separately identified.

In the euro area, currency in circulation (8) is a *liability* of the Eurosystem only (in some countries outside the euro area commercial banks may issue banknotes). Amounts held in stock and not yet issued are not recorded on the balance sheet. For banknotes in issue, Eurosystem central banks record the amount of their liability according to the banknote allocation key (a notional allocation of the amount of euro banknotes issued among Eurosystem central banks according to their shares in the ECB’s capital, with 8% of the issue allocated to the ECB itself). The allocation is unlikely to coincide with the amount that

an NCB actually issues, and the difference is recorded elsewhere on the balance sheet. Where the actual amount issued is less than the allocation key amount, the NCB records a claim on the Eurosystem (under remaining assets (7)). Where the actual amount issued exceeds the allocation key amount, it records a liability to the Eurosystem (under remaining liabilities (13)). In all euro area countries, coins in circulation are not a liability of the central bank, but of central government. However, coins are part of the monetary aggregates and, by convention, a liability equal to the amount issued is entered under the category “currency in circulation” on the central bank balance sheet, with a notional claim on central government in “remaining assets” (7).

Whenever a new country joins the euro area, *banknotes and coins denominated in the former national currency* which remain outstanding after the adoption of the euro continue to be reported under *cash* (assets) or under *currency in circulation* (liabilities) for 12 months after the enlargement. After this period they are transferred to remaining assets (7)<sup>2</sup> or remaining liabilities (13), thus ceasing to be included in the euro area monetary aggregates. (Their removal from the monetary aggregates is a reclassification and should not be reflected in monetary growth rates.)

*Coins intended for circulation* include commemorative coins produced to celebrate special occasions (e.g. the 2004 Olympic Games in Athens, and the enlargement of the European Union). Countries may issue a commemorative €2 euro coin once a year to celebrate a subject of major national or European relevance. These coins are issued at face value and are meant to be used for making payments. They are legal tender throughout the euro area, and must be accepted for payments like any other euro

1 NCBs should not report holdings of their own currency (meaning, for the Eurosystem, holdings of euro) on the assets side; such holdings should be deducted from the reported issuance of currency on the liabilities side.

2 This point is mainly theoretical as MFIs will typically transfer banknotes and coins not in circulation to NCBs as soon as they receive them.

coin. These are recorded under *cash* (assets) or under *currency in circulation* (liabilities) as explained above. In contrast, gold coins and collector coins are excluded from *currency in circulation* (see also below).

#### 2.1.1.1 Accounting treatment of currency in the ESA 95

Chapter 7 of the ESA 95 requires currency to be recorded at nominal or face value<sup>3</sup> (7.46). Foreign currency banknotes and coins should be converted into national currency at the mid-market closing exchange rate (the mid-point between the buying and selling rates) on the balance sheet date (7.31).

Since currency is recorded at nominal or face value, a currency transaction will always be recorded at nominal or face value, converted at the market exchange rate at the time of the transaction if foreign currency is involved. For national currency, the change in holdings between two balance sheet dates must equal net transactions in the intervening period. Transactions involving foreign currency banknotes and coins cannot be derived directly from the change in balance sheet levels, since exchange rate changes between balance sheet dates must be taken into account.

#### 2.1.1.2 Accounting treatment of currency in MFI balance sheet statistics

Banknotes and coins in euro are reported, as assets and liabilities, at face value. No valuation difficulties arise. Currency in circulation (as a liability) excludes amounts held by NCBs as vault cash.

Holdings of banknotes and coins in foreign currency are converted into euro at market exchange rates (as are other items denominated in foreign currency); see Section 1.2. Since the quarterly reporting requirements do not include breakdowns by currency of holdings of non-euro-denominated banknotes and coins, the ECB assumes, for the purpose of compiling transaction statistics, that the currency composition of these positions for NCBs and other MFIs separately is the same as that of their deposit liabilities vis-à-vis domestic non-MFIs

(excluding general government); see also Section 4.2.2 on the calculation of exchange rate adjustments.

#### Gold coins and coins not intended for circulation

Reporting agents should treat gold coins and coins not intended for circulation as non-financial assets recorded under “remaining assets” (holdings) or “remaining liabilities” (issues).<sup>4</sup>

Commemorative coins are legal tender and thus are in active circulation. They should be included in currency.

*Coins not intended for circulation* are normally collector, numismatic or bullion coins, which have (limited) legal tender status (in the country of issue) but are not produced with a view to their use as a means of payment. Collector coins must be readily distinguishable from coins intended for circulation.

For the purpose of MFI balance sheet statistics, coins that meet at least one of the following three objective criteria would not be considered to be in active circulation:<sup>5</sup>

- (i) the coins have legal tender status in the country of issue, but they are not produced with a view to their use as a means of payment, at least not in the euro area as a whole;
- (ii) the coins are issued at a price above their face value and are not intended for circulation (this applies, for example, to most coins that are made of precious metals where the issue price will normally, but not always, exceed the face value, but not to normal circulation coins issued in

<sup>3</sup> The nominal or face value is the value of a coin or banknote stamped or printed on the coin or banknote by the issuing authority.

<sup>4</sup> Monetary gold held by central banks is, however, a financial asset, and is reported as such on their MFI return in a separate category; see also Box 2.3 below.

<sup>5</sup> These criteria apply only to issues denominated in euro, and not to past issues in national currencies.



special packages (sets or rolls of coins) at a price above their face value);

(iii) the coins have a non-standard denomination.

In terms of instrument classification, while collector coins issued by NCBs are classified under “remaining liabilities”, collector coins issued by the Treasury that are deemed not to be in circulation are not reported on the statistical balance sheet of the NCB.

### 2.1.2 DEPOSITS (LIABILITIES ONLY)

The ESA 95 distinguishes between transferable deposits (AF.22) and other deposits (AF.29). MFI balance sheet reporting identifies transferable deposits, and also distinguishes between overnight deposits (only some of which may be transferable) and other categories of deposit, as explained in more detail below.

The ESA 95 says that all sectors (including MFIs) may hold deposits as assets. This is not, however, the practice in MFI balance sheet statistics. The Regulation explains that, by convention, the category “deposits” appears on the liability side of the MFI balance sheet only. Deposit-type assets held by MFIs are to be recorded as loans, or in some circumstances (as explained below) as securities. A consequence of this convention is that an interbank placement will be recorded as a deposit by the debtor MFI and as a loan by the creditor MFI.

*Deposits* (some types of which may be called shares – see below) (9) are amounts which are owed to creditors by reporting agents and which are not negotiable instruments, and therefore not marketable. They combine the features of transferability, convertibility, and certainty (in terms of their nominal value) as described in Annex I, Part 1, Section 1 of the Regulation. Instruments may be “non-negotiable” in the sense that there are restrictions on the transfer of legal ownership such that they cannot be marketed or, although technically negotiable, cannot be traded owing to the absence of an organised market. Non-negotiable instruments

issued by reporting agents that subsequently become negotiable and can be traded on secondary markets should be reclassified as debt securities (11).

This category may include deposits with embedded derivatives (so-called hybrid deposits). For accounting purposes, these may be recorded either entirely as deposits or separated into the host contract (i.e. the deposit) and the embedded financial derivative. The classification used for accounting purposes should also be followed in the statistical reporting.<sup>6</sup>

For the purposes of the reporting scheme, deposits are broken down into overnight deposits (9.1), deposits with agreed maturity (9.2), deposits redeemable at notice (9.3) and repurchase agreements (also known as “repos”) (9.4).

*Overnight deposits* (9.1) are convertible into currency and/or transferable on demand by cheque, banker’s order, debit entry or similar means, without significant delay, restriction or penalty. They include balances (interest-bearing or not) which are convertible on demand or by close of business on the following day without significant penalty or restriction, but which are not transferable, and balances (interest-bearing or not) representing prepaid amounts in hardware or software-based e-money schemes (e.g. prepaid cards).

Deposit accounts (typically opened via the internet) that do not have payment instruments attached (e.g. debit card or direct transfers to third parties) and are only accessible via transfers to other accounts are also regarded as overnight deposits to the extent that they do not carry an agreed maturity or a period of notice, even if the conversion into currency may involve a delay due to the clearance time of the transfers.

<sup>6</sup> This approach would ensure consistency between statistical reporting and the financial reporting framework (FINREP), as long as the accounting rules applied by the MFI follow the guidance on embedded derivatives provided in the international accounting standard (IAS) 39.11.

*Transferable deposits* are, for the purpose of MFI balance sheet statistics, a sub-category of overnight deposits, namely those which are directly transferable on demand to make payments to other economic agents by commonly used means of payment, such as credit transfer, direct debit, credit or debit card, e-money transactions, cheques, or similar means, without significant delay, restriction or penalty. Deposits that can only be used for cash withdrawal and deposits from which funds can be withdrawn or transferred only through another account of the same owner are not transferable deposits.

Transferable deposits held with central banks include the accounts that each credit institution has with its domestic NCB and which serve payment/settlement functions. TARGET2 accounts fall within this category, including when the end-of-day balance on a credit institution's TARGET2 account serves to fulfil its minimum reserve obligations.<sup>7</sup> Some central banks also have current accounts for employees. These are typically usable for payment transactions and thus should be included in the category of transferable deposits; the same may apply to deposits held by the government sector and by entities located in the rest of the world.

*Deposits with agreed maturity* (9.2) are non-transferable deposits which cannot be withdrawn before an agreed fixed term, or that can be withdrawn only subject to a penalty. This item includes, in the maturity band "over two years", administratively regulated savings deposits where the maturity-related criterion is not relevant, and deposits held for specific purposes, even if technically they are redeemable on demand (e.g. as qualification for a housing loan in due course), for which the interest rates and/or terms and conditions are specified in national legislation. Deposits with roll-over provisions must be classified according to the earliest maturity. Deposits with agreed maturity which permit early redemption subject to notice, or are redeemable on demand subject to a penalty, are nevertheless classified as deposits with agreed maturity. In the first

of these cases, after notification has been given, balances are reclassified as deposits redeemable at up to three months' notice or as deposits redeemable at over three months' notice, as applicable.

The maturity periods to be reported are "up to and including one year", "over one year and up to and including two years", and "over two years" – in each case with reference to original maturity.

This item also includes deposits related to securitisation transactions in which the loans or other assets remain on the MFI's statistical balance sheet. In this case, a balancing liability is recorded and, by convention, these deposits are assigned to the category "over two years' agreed maturity".

*Deposits redeemable at notice* (9.3) are non-transferable deposits, usually with no agreed maturity, but which may be withdrawn without penalty only after a period of notice. The notice periods to be reported are "up to and including three months" and "over three months" (with a sub-category for "of which, over two years"). Item 9.3 includes deposits which, although legally withdrawable on demand, would be subject to penalties and restrictions according to national practice and thus do not qualify as "overnight" deposits; these are classified in the first maturity band. It also includes investment accounts which do not have a period of notice or agreed maturity, but which have restrictive drawing provisions (classified in the second band, namely "over three months' notice" and "of which over two years' notice"). In certain cases item 9.3 also includes deposits

<sup>7</sup> The Trans-European Automated Real-time Gross settlement Express Transfer system (TARGET) consists of various modules in which different types of accounts are kept. Not all of the accounts would qualify as transferable for the purposes of MFI balance sheet statistics; in particular, NCBs should not include any "technical" TARGET accounts and those from the ancillary systems within transferable deposits (for example, NCB-ECB accounts are technical accounts). It is worth noting that, although these do not qualify as transferable, they are, nonetheless, inter-MFI deposits/loans and, as such, should not be reported under "remaining assets" or "remaining liabilities".

placed with a fixed term to maturity/agreed maturity which allow early redemption after prior notification. These are normally classified under item 9.2 (deposits with agreed maturity), but once notification has been given they are included in item 9.3 (and allocated to the first or second maturity band, depending on the period of notice applicable).

*Repos* (9.4). The amount recorded as a deposit liability in the form of a repo is the counterpart of cash received in exchange for securities sold by the reporting MFI with a commitment to repurchase them at a fixed price on a specified future date. In this case, an MFI will have sold securities for cash, with an obligation to return the cash (reflected in item 9.4) when the securities are bought back – see Box 2.1 below for further explanation.

Liabilities arising from the following repo-type operations are also recorded in item 9.4:

- cash as collateral against a loan of securities or gold made by the MFI;

- cash deposited with an MFI in exchange for securities transferred under a sale/buy-back agreement.

A loan of securities or gold without cash collateral (whether with no collateral or with collateral other than cash) is not recorded on the balance sheet at all – for further information, see Box 2.1 below.

Liabilities vis-à-vis central counterparties resident in the euro area under repos are also recorded separately as a sub-position in repos with other financial intermediaries and financial auxiliaries (S.123/S.124).<sup>8</sup> These requirements enable the monitoring of MFIs' transactions in the interbank market via central counterparties and the impact of these transactions on monetary aggregates and their counterparts. Section 4.1.6 reviews the impact of operations with central counterparties on monetary aggregates and their counterparts.

<sup>8</sup> MFIs can also act like central counterparties in the interbank market, but any such activities should be reported as inter-MFI operations and thus not included in positions with central counterparties.

#### Box 2.1

### REPURCHASE AGREEMENTS, SECURITIES LENDING AND SIMILAR OPERATIONS

The treatment of repurchase operations (repos and reverse repos)<sup>1</sup>, securities lending against cash collateral, and similar transactions is also discussed in the sections on deposits and loans. Briefly, such transactions are treated statistically as loans against collateral and not as transactions in the security or other instrument involved, which remains on the balance sheet of the original holder. Where an MFI is party to such an operation, it records a deposit liability where it has in effect borrowed cash (the corresponding asset being the cash received), and a loan where it has lent funds against the collateral of the security or other instrument. The recording practice is the same where an MFI (usually an NCB in this case) swaps (lends or borrows) gold against cash, usually in the form of foreign currency deposits. Furthermore, if the entity borrowing the security or other instrument sells it, it should record a negative holding on its balance sheet to avoid double counting (since both the original holder and the purchaser will record the security or other instrument on their balance sheet).

<sup>1</sup> A repurchase agreement (repo) is the sale of securities combined with a binding agreement to buy them back later. A reverse repo is the purchase of securities combined with a binding agreement to sell them back later. Thus what is a repo for one party to the transaction is a reverse repo for the other party.

Where, however, such operations are undertaken without cash collateral – the collateral may be some other instrument, or there may be no collateral – *nothing* should be entered on the balance sheet. As in repo-type operations, securities lent without cash collateral remain on the original owner's balance sheet if there is a binding agreement to reverse the operation. Since no cash has changed hands, no entries are to be made under “deposits” or “loans”. As before, if the temporary acquirer later sells the securities outright, the sale should be recorded as a transaction in securities and entered on the balance sheet of the temporary acquirer as a negative position in the instrument.

#### Example: Repurchase transactions

The parties to a repo or similar transaction agree to exchange bonds or other financial instruments for an equivalent amount of cash, with a binding agreement to reverse the transaction. Such a transaction is rather confusingly sometimes called a sale of bonds against cash collateral, whereas the statistical treatment (which reflects the economic reality) is that of a loan of cash against collateral in the form of bonds. As noted elsewhere, the bonds remain on the balance sheet of the original holder, who retains all the benefits and risks of owning them (including entitlement to the interest accruing on them). When the repo matures, the borrower of cash will return more than he originally received, the difference reflecting interest for the use of the cash during the life of the contract. This interest should be accrued under “remaining liabilities” on the balance sheet of the cash borrower and under “remaining assets” on the balance sheet of the cash lender.

#### Example: Short selling of securities and reverse repos

A trader in securities who does not own a particular security but expects its price to fall may nevertheless sell it in the expectation of buying it back more cheaply later. This is called going *short*. The short seller must deliver the security to the buyer; to do so he must borrow the security, probably through a *reverse repo*. Since the security will remain on the balance sheet of the original owner, and appear on the balance sheet of the new owner, the short seller must record a negative holding to avoid double counting.

#### Classification of specific deposit-type instruments

The Regulation (Annex II, Part 2) indicates how various kinds of instrument are to be reported. Thus:

*Non-negotiable debt instruments* issued by reporting agents are generally classified as deposit liabilities. These are instruments where the transfer of legal ownership is subject to restrictions which imply that they cannot be marketed or, although they are technically negotiable, cannot be traded owing to the absence of an organised market. Non-negotiable instruments issued by MFIs that subsequently become negotiable and can be traded on secondary markets should be reclassified as debt securities.

*Margin deposits* (margins) placed under derivative contracts should be classified as deposits with agreed maturity by reporting MFIs where they represent cash collateral deposited with them and where they remain in the depositor's ownership and are repayable to the depositor when the contract is closed out. The maturity classification is determined by the period of the derivative contract. The MFI receiving the amount should be free to use the funds. Where part of the margin must be retained, e.g. for the clearing house, only the part at the disposal of the MFI should, in principle, be classified as a deposit liability. If in practice the distinction is difficult, these margins may be classified as deposits (9) or as “remaining liabilities” (13).

*Earmarked balances* relating to, for example, leasing or other loan contracts (e.g. deposits “blocked” to serve as collateral for specific loans or guarantees) are classified as deposits with agreed maturity (9.2) or redeemable at notice (9.3) depending on the provisions of the underlying contract, the maturity/period of notice reflecting the underlying leasing/loan contract. Deposits which are only partly blocked should be treated accordingly with respect to the part serving as collateral, while the other part should continue to be recorded within overnight deposits.

*Subordinated debt* issued by an MFI in the form of deposits or non-negotiable loans is recorded under deposits (9) in the appropriate maturity category.

Some deposit-type instruments issued by MFIs are called “*shares*”. However, if the relationship between the issuing MFI and the holder is essentially that of debtor and creditor (regardless of any property rights in these shares) and the shares can be converted into currency or redeemed without significant restrictions or penalties (though perhaps with a notice period), these should be classified as deposits (9) and not as capital and reserves (12) (see Regulation ECB/2008/32, Annex I, Part 2). The shares must also comply with the following conditions:

- regulatory provisions give the MFI no unconditional right to refuse to redeem them;
- the shares will normally be redeemed at nominal value; and
- holders cannot lose more than the nominal value of the shares if the MFI goes bankrupt.

*Earmarked shares* relating to loans made by the MFI should also be classified as deposit liabilities, and their breakdown by agreed maturity or period of notice follows the maturity provisions of the loan contract.

The treatment suggested by the Regulation for shares that are deposit-type instruments is consistent with the provision of international accounting and supervisory standards regarding *cooperative shares* issued by MFIs.<sup>9</sup> However, where “significant restrictions or penalties” associated with redemption of the shares would lead to their classification under capital and reserves in statistical reporting, this criterion is not included in the accounting and supervisory standards and could possibly result in divergences between them and the statistical treatment.

Reporting MFIs which hold such shares as assets should classify them as loans (2), under the convention that deposits do not appear on the assets side of an MFI’s balance sheet.

*Deposits received on a trust basis* (or *fiduciary deposits*) are *not* recorded on the statistical balance sheet of the MFI acting as a trustee. Such deposits are placed with an MFI (the recipient) by a trustee, typically an MFI or other financial intermediary,<sup>10</sup> on behalf of another party (the beneficiary). The trustee is responsible for repaying them to the beneficiary. Its involvement is confined to the administration of the account, and the funds are protected in the event that the trustee MFI fails. The recipient bank classifies the deposits as deposits vis-à-vis the beneficiary. (See also the paragraphs below on *trust accounts and sector classification of beneficiaries* and on *loans granted on a trust basis* in Section 2.1.4).

#### 2.1.2.1 Accounting treatment of deposits in the ESA 95

Chapter 7 of the ESA 95 requires deposits to be valued at the amount of principal that the debtor is contractually obliged to repay the creditor (7.46). The value may include accrued

<sup>9</sup> In particular, “IFRIC Interpretation 2” on “Members’ shares in cooperative entities and similar instruments” defines the criteria under which the cooperative shares should be classified as equity. These criteria are adopted in the “Guidelines for implementation of the framework for consolidated financial reporting” (FINREP) of 15 December 2009.

<sup>10</sup> The trustee may also be the recipient MFI.

interest. In general, the ESA 95 requires interest to be recorded as it accrues, not when it is paid, with a matching entry in the financial account (4.50, 5.17). But the ESA 95 does not prescribe exactly how this imputed transaction should be recorded. It may be allocated to the relevant instrument category, which in the case of deposits would mean that the accrual of interest is treated as a transaction in deposits, as if the holder of the financial asset had promptly reinvested the accrued interest by adding to his holding of deposits (and the debtor had promptly taken more deposits). Alternatively, accrued interest may be recorded in some catch-all category in the financial account. Although 5.130 expresses a preference for imputing accrued interest to the relevant asset category, the ESA 95 accepts that national accounting practice may be otherwise, in which case the counter-entry should be in “other accounts receivable/payable” (AF.79). Foreign currency deposits should be converted into national currency at the mid-market closing exchange rate on the balance sheet date (7.31).

### 2.1.2.2 Accounting treatment of deposits in MFI balance sheet statistics

Article 7 of Regulation ECB/2008/32 states that “*Deposit liabilities and loans shall be reported at their principal amount outstanding at the end of the month. ... Deposit liabilities and loans shall not be netted against any other assets or liabilities.*” In detail this means the following.

- Deposit liabilities are reported at the nominal amount outstanding and on a gross basis, where “nominal amount” means the amount of principal that a debtor (in this case the reporting MFI) is contractually obliged to repay to a creditor and “on a gross basis” means that no claims against the deposit-holder are deducted from the deposit.
- Interest payable on deposits should be reported on the balance sheet as it accrues rather than when it is actually paid, but it should be recorded under the category “remaining liabilities” and not added to

the deposit to which it relates. As noted elsewhere, this is a departure from the ESA 95 which prefers accruing interest to be recorded in the appropriate instrument category, although it is not prescriptive on this point. The treatment in MFI balance sheet statistics is preferred for monetary policy analysis since it records the amount actually in the account of the deposit holder, and not an imputed amount (the accruing interest) not yet credited to the account.

- The transaction value of deposits excludes fees and any other charges.
- MFIs must distinguish between deposits denominated in euro and in foreign currency in monthly reporting. When submitting MFI balance sheet data to the ECB, NCBs ensure that liability (and asset) positions denominated in foreign currencies are converted using market exchange rates (see also Section 1.2). MFIs report quarterly the amounts of deposits denominated in each of the main foreign currencies, and this information is used by the ECB to remove (as an approximation) the effect of exchange rate changes from the “flows” data (see Section 4.2.2).

These requirements ensure that MFI balance sheet reporting of deposits for statistical purposes is unaffected by the introduction of “fair value” in international accounting standards.

### Trust accounts and sector classification of beneficiaries

An MFI which receives funds as a trustee/fiduciary from a customer (the trustor/beneficiary) for placement on deposit with another MFI or some other institution (the recipient) should not report them as a deposit on its own balance sheet. Rather, the funds must be recorded as a deposit on the recipient’s balance sheet. This rule avoids double counting. The recipient (if an MFI) should make every effort to classify such accounts according to the beneficial owner based on information that is usually available



to MFIs. If, however, the recipient bank has insufficient information about the beneficiary to provide an accurate sector classification, the deposit should be classified according to the residency and sector of the trustee.

#### **Gold swaps and gold loans/deposits**

Gold swaps, which are mentioned briefly in Box 2.1, represent the liability counterpart of cash (usually foreign currency deposits) received by MFIs (in most cases NCBs) in exchange for gold which they have temporarily relinquished, but retain on their balance sheet, under a binding agreement to reverse the transaction at an agreed price and on a specific future date. The treatment is similar to that of repos and also applies to a gold loan against cash collateral. The economic risks and benefits of ownership of the gold (such as the right to holding gains and losses) remain with the original owner (here, the reporting MFI, usually an NCB). The institution lending the gold records the cash received as an asset, with a matching liability in deposits; the institution borrowing the gold records a decline in cash assets and an offsetting increase in loans to the lender.

The statistical treatment of gold swaps (where cash is received in exchange for gold which has been temporarily relinquished) thus differs from the case in which gold temporarily changes hands without collateral, or against a pledge of securities or other non-cash collateral. In these cases, no cash is recorded on the asset side, nor is a corresponding deposit entry made under deposit liabilities. Where no cash is transferred or pledged, the gold swap or loan is not recorded on the balance sheet at all, i.e. it should be treated as an off-balance-sheet operation.

Where the temporary acquirer of gold (under either a gold swap or a gold loan) later sells the gold outright, the sale should be recorded as a transaction in gold and entered on the balance sheet of the temporary acquirer (the short seller) as a negative position in gold. This is to prevent double counting, since the gold will be recorded by both the original owner

(on whose balance sheet it has remained) and the new buyer.

#### **Travellers' cheques**

Travellers' cheques issued by MFIs have similar properties to currency in circulation. The Regulation does not state how they should be classified within the reporting scheme. Nevertheless, the ECB would expect travellers' cheques to receive similar treatment to prepaid money balances stored on technical devices (electronic money), i.e. to be classified as "overnight deposits".

#### **2.1.3 SECURITIES OTHER THAN SHARES (ASSETS); DEBT SECURITIES ISSUED (LIABILITIES)**

These items on the MFI balance sheet correspond to "securities other than shares, excluding financial derivatives" (AF.33) in the ESA 95. The ESA 95 has two original maturity classes, one year or less (AF.331) and more than one year (AF.332). Exceptionally, the breakdown may be at two years.

In MFI reporting, the maturity categories (also in terms of original maturity) are (1) up to and including one year, (2) over one year and up to and including two years, and (3) over two years. Where the reporting MFI issues securities up to and including two years, the Regulation requires any amount issued within this maturity band with a less than 100% nominal capital guarantee to be separately identified. This is because debt securities issued by an MFI with original maturity of up to two years are monetary instruments included in M3, and items carrying some capital uncertainty at redemption may be viewed differently from other instruments in this category.

Securities other than shares, or "debt securities", are securities which are negotiable and can be traded on secondary markets, or can anyway be sold on the market, and which do not grant the holder any ownership rights over the issuer (see also Section 2.1.4 below on loans regarding the classification

of borderline instruments). They give the holder the unconditional right to a fixed or contractually determined income in the form of coupon payments and/or a stated fixed sum on a specific date or dates or starting from a date specified at the time of issue. The category includes negotiable deposits (liabilities) or loans (assets) that have been restructured into a large number of identical documents that can be traded on secondary markets (even if in practice they are never or hardly ever traded). It also includes securities in the form of shares which provide fixed payments but do not allow the holder to participate in the issuer's residual assets on liquidation, as well as debt instruments which are convertible into shares (as long as the conversion has not taken place).

Annex II, Part 2 of Regulation ECB/2008/32 indicates how various sorts of instrument are to be reported.

Subordinated debt issued by MFIs in security form is classified as debt securities issued (11) (just as subordinated debt issued by MFIs in the form of deposits is classified as deposits (9)). Where all subordinated debt issued by an MFI is identified as a single amount for statistical purposes, the Regulation classifies the amount as "debt securities issued" on the grounds that most subordinated debt is in security form. Subordinated debt should not be included in capital and reserves (12).

These balance sheet categories exclude financial derivatives. Nevertheless, negotiable instruments combining debt and derivative features, including negotiable debt instruments containing embedded derivatives, and negotiable instruments whose redemption value and/or coupon is linked to the performance of an underlying reference asset, asset price or other reference indicator over the life of the instrument, are classified under securities other than shares (3), if assets, or under debt securities issued (11), if liabilities.

Debt securities issued by MFIs with nominal capital guarantee below 100%, as mentioned above, are hybrid instruments combining debt and derivative features.

Securities temporarily acquired or sold under a repo or similar agreement, or borrowed or lent under a securities lending operation, remain on the original owner's balance sheet and are not to be recorded on the balance sheet of the temporary acquirer. An MFI which sells securities acquired under a repo or borrowed must record a negative holding of them under securities other than shares (3).

*Depository receipts* are not recorded on the MFI statistical balance sheet of the holder MFI; instead the MFI records a holding of the underlying securities. (See also the paragraph on *depository receipts* below.)

*"Schuldscheine" and similar instruments* are not recorded as debt securities. (See also the subsection on their treatment in Section 2.1.4 below.)

NCBs' external reserves in the form of securities other than shares are classified in this category for the purposes of MFI balance sheet statistics. See Box 2.3 below for further details on reserve assets of the Eurosystem.

#### 2.1.3.1 Accounting treatment of securities other than shares/debt securities issued in the ESA 95

Chapter 7 of the ESA 95 requires securities other than shares/debt securities to be valued at market prices on the balance sheet date (7.25).

In general, the ESA 95 requires interest to be recorded as it accrues, not when it is paid, with a matching entry in the financial account, as if the holder of the financial asset had promptly reinvested the accrued interest (4.50, 5.17). Furthermore, where securities are issued at a premium or discount, the difference between the issue price and the redemption price is to be treated as (negative or positive) interest accruing over the life of the instrument (5.138), with the

imputed entry in the property income account matched by an offsetting entry in the financial account, again as if the holder, having received interest, promptly reinvested it in the instrument. However, the ESA 95 does not prescribe exactly how this imputed transaction should be recorded. In particular, while it expresses a preference for imputing accrued interest to the relevant instrument category (5.130), which in the case of debt securities would mean that the accrual of interest is treated as a transaction in debt securities, the ESA 95 accepts that national accounting practices may be otherwise, in which case the counter-entry should be in “other accounts receivable/payable” (AF.79). The ESA 95 does, however, insist (7.47) that the balance sheet valuation of debt securities should be consistent with the treatment of accrued interest and its allocation to specific asset headings. Thus, if in the financial account the counter-entry to accrued interest is in “other accounts receivable/payable”, the value of accrued interest should be recorded in AF.79 on the balance sheet, and the value of debt securities recorded in AF.33 should not reflect any accrued interest. Debt securities denominated in foreign currency should be converted into national currency at the mid-market closing exchange rate on the balance sheet date (7.31).

If current market prices are not available, the ESA 95 requires that short-term debt securities issued at par should be valued at face value plus accrued interest, while short-term securities issued at a discount should be valued at issue price plus accrued interest. These treatments should be confined to debt securities of three months’ original maturity or less (7.48), while longer-term debt securities are always to be valued at current market price, whether they are coupon bonds or deep-discounted/zero coupon paper (7.48).

#### **2.1.3.2 Accounting treatment of securities other than shares/debt securities issued in MFI balance sheet statistics**

Article 7 of Regulation ECB/2008/32 states that “Unless otherwise provided for in this Regulation, the accounting rules followed by

*MFI for the purposes of reporting under this Regulation shall be those laid down in the national transposition of Council Directive 86/635/EEC of 8 December 1986 on the annual accounts and consolidated accounts of banks and other financial institutions, as well as any other international standards applicable. ... Without prejudice to accounting practices and netting arrangements prevailing in Member States, all financial assets and liabilities shall be reported on a gross basis for statistical purposes”.*

Regulation ECB/2008/32 contains no rule concerning the treatment of accrued interest on securities or the valuation of securities generally.

While, for securities, the ECB seeks to follow the market valuation principle in the ESA 95, in practice a good deal remains at the discretion of NCBs, and valuation practices are far from uniform across the European Union (or indeed across the euro area, or even within some Member States). Thus in several euro area countries MFIs value debt securities held for trading purposes at market prices, and debt securities held in the investment portfolio at amortised cost, acquisition value, or the lower of market and acquisition price, or at some other book value. The ECB’s preference is that in balance sheet reporting MFIs should present asset and liability positions at current market values or a close equivalent to market values (fair values), while accepting that in practice MFIs may continue to use local accounting rules requiring valuation other than current market values. If the reported values of policy-sensitive items differ substantially from market values, NCBs may make adjustments.

Accordingly Guideline ECB/2007/9, Annex V, Part 2, states: “The nature and extent of ‘revaluation adjustments’ are determined by the adopted method of valuation. Although it is recommended that both sides of the balance sheet are recorded at market value, in practice, a variety of different valuation methods may be

*employed on both the liabilities and the assets sides. This is acceptable as long as the book value does not diverge significantly from the market value.”*

Concerning the revaluation adjustment, the Guideline further notes: *“On the liabilities side of the balance sheet, revaluations may also be reported for debt securities issued. However, no change in MFI reporting obligations is introduced in this respect, as price revaluation of debt securities issued remains outside the ‘minimum requirements’ set out in Regulation ECB/2001/13.”*<sup>11</sup> This is because, on the liabilities side, most if not all MFIs value debt securities issued at nominal value. The Guideline also states: *“On the assets side of the balance sheet, holdings of securities may be recorded using market price, purchase price, the lower of market or purchase price or redemption value in accordance with standard accounting practice. The content of the adjustment depends on the valuation method applied. ... If no other information is available, it can be assumed that the revaluations corresponding to ‘securities over two years’ is equal to the total amount of revaluation adjustment in respect of holdings of securities other than shares issued for each sector.”*

Different valuation practices are accepted in order to avoid the need for reporting agents to provide data on different bases. It is important, however, that revaluation adjustments properly complement whatever accounting rules are applied, so that changes in stocks corrected for revaluation adjustments result in accurate transaction data, which are the most important data for analysis. In time, security-by-security reporting (see Section 2.2 below) and increasing use of IFRS accounting standards, even for solo accounts, will no doubt improve consistency in the valuation of balance sheet stocks. Meanwhile, how transactions in securities other than shares (assets) are derived from balance sheet levels based on varying valuation practices is discussed in Section 1.6.

MFIs must distinguish between securities other than shares/debt securities issued denominated in euro and in foreign currency in monthly reporting. When submitting MFI balance sheet data to the ECB, NCBs ensure that liability (and asset) positions denominated in foreign currencies are converted using market exchange rates (see also Section 1.2). MFIs report quarterly the amounts of securities other than shares/debt securities issued denominated in each of the main foreign currencies, and this information is used by the ECB to remove (as an approximation) the effect of exchange rate changes from the “flows” data (see Section 4.2.2).

#### Depository receipts

Depository receipts are negotiable instruments issued by a bank to represent securities (bonds or equities) which are listed on a foreign stock exchange. The depository receipt is traded on a local stock exchange and thus enables the holder (indirectly) to trade the underlying security on his local stock exchange, although this security remains listed on its (foreign) home stock exchange.

The mechanism regulating the issuance and life of a depository receipt is as follows:

- the (domestic) bank issuing the depository receipt purchases securities of the (foreign) company on the foreign stock exchange;
- the securities are grouped into packets and each packet is issued as a depository receipt on the local stock exchange; and
- the depository receipt is typically denominated in the local currency.

For the purpose of MFI balance sheet statistics, the holder of a depository receipt records the asset as a holding of the underlying

<sup>11</sup> The same still holds in respect of the minimum requirements set out in Regulation ECB/2008/32.

security and not as a claim on the issuer of the depositary receipt, which merely administers the arrangement. Analogously, the depositary bank excludes the holdings of the underlying securities and the depositary receipts which it has issued from its balance sheet as reported for statistical purposes.

#### 2.1.4 LOANS (ASSETS ONLY)

The ESA 95 instrument category loans (AF.4) comprises instruments created when creditors lend funds to debtors, either directly or through an agent, which are either evidenced by non-negotiable documents or not evidenced by documents at all. There is a distinction in terms of original maturity between short-term loans (one year or less, including loans repayable on demand – AF.41) and long-term loans (more than one year – AF.42). Exceptionally, as for securities, the breakdown may be at two years. The ESA 95 states that all sectors (including MFIs) may incur liabilities in the form of loans, adding that MFIs normally have no short-term loan liabilities.

Regulation ECB/2008/32 departs in several respects from the ESA 95. The criterion of non-negotiability in the Regulation is slightly different in that the Regulation defines loans as “*funds lent by reporting agents to borrowers which are not evidenced by documents or are represented by a single document (even if it has become negotiable)*”, later adding, in respect of traded loans, “*and are, as a general rule, only traded occasionally*”. MFI balance sheet statistics require an extra original maturity breakdown (a distinction between loans over one year and up to five years, and loans over five years). Within loans to non-financial corporations and to households and non-profit institutions serving households in the original maturity categories over one year and over two years, the Regulation requires quarterly information on the amount with *residual* maturity of a year or less (or two years or less) and, where the residual maturity exceeds one year (or two years), the amount on which the interest rate may be reset within a year (or

within two years). In addition, within loans to non-financial corporations and to households and non-profit institutions serving households, the Regulation also requires quarterly information on loans *collateralised* by real estate (collateral is ignored in the ESA 95). Finally, the Regulation goes further than the ESA 95 in confining the loan category to the asset side of the MFI balance sheet. As explained earlier in the section on deposits, the consequence of this convention is that an interbank placement will be recorded as a loan by the creditor MFI and as a deposit by the debtor MFI.

Annex II, Part 2 of the Regulation contains detailed information on the recording of loans by reporting MFIs. Thus:

- Loans granted to households and non-profit institutions serving households are to be broken down into the following categories.
  - Credit for consumption (loans granted for mainly personal consumption of goods and services). This includes (without being separately identified) loans to sole proprietors/unincorporated partnerships if the loan is predominantly used for personal consumption. Loans included in this category may or may not be collateralised by various forms of security or guarantee. Typical examples of loans in this category are loans granted for the financing of motor vehicles, furniture, domestic appliances and other consumer durables, holiday travel, etc. Overdrafts and credit card loans also typically belong in this category.
  - Lending for house purchase (loans for the purpose of investing in houses for own use or rental, including building and refurbishments, or for the purchase of land). Loans included in this category may or may not be collateralised by various forms of security or guarantee. The category includes (without being separately

identified) housing loans to sole proprietors/unincorporated partnerships if the house is predominantly used for personal accommodation.

- Other (loans other than for consumption and house purchase, such as for business, debt consolidation, education, etc.). Loans to sole proprietors/unincorporated partnerships predominantly for business (as opposed to personal) purposes are separately identified, unless the conditions for reduced reporting apply. Loans included in this category may or may not be collateralised.

- Furthermore, for loans granted to households and non-profit institutions serving households and loans granted to non-financial corporations (and denominated in euro), data on the following selected sub-categories are collected.

- Convenience and extended credit card credit. Credit card debt is credit granted via credit cards (providing convenience credit and extended credit) or delayed debit cards (providing convenience credit only), recorded on dedicated card accounts and not on current or overdraft accounts. Convenience credit is the credit granted at 0% interest in the period between the use of the card and the relevant billing date. Extended credit is the amount left outstanding on the account after the relevant billing date, on which interest (or tiered interest) is usually charged. The counterparty for such credit is the cardholder (personal cards) or the company providing them (company cards). In terms of classification by purpose of the loans, convenience and extended credit card credit to households should be classified as credit for consumption.

- Revolving loans and overdrafts; revolving loans have all the following features:

1. the borrower may draw on the facility up to an agreed limit without notifying the lender;
2. the amount of available credit fluctuates as funds are borrowed and repaid;
3. the facility may be used repeatedly; and
4. there is no obligation to repay regularly.

Revolving loans include amounts obtained through a line of credit and not yet repaid (outstanding amounts). A line of credit is an agreement allowing the borrower to draw advances, during a defined period and up to a certain limit, and repay them at his discretion before a defined date. Amounts available through a line of credit that have not been drawn or have already been repaid are not recorded on the MFI's balance sheet.

Overdrafts are debit balances on current accounts.

The MFI reports the total amount owed under such facilities, irrespective of whether it is within or beyond agreed limits.

- Syndicated loans are single loan agreements in which several institutions participate as lenders; the borrower must be made aware of this in the loan contract. For statistical purposes, only amounts actually disbursed by lenders (not total credit lines) are recorded. The syndicated loan is usually arranged and coordinated by one institution (the lead manager). Each participating MFI



reports the amount it has lent as a loan to the borrower, not as a loan to the lead manager.

- Claims vis-à-vis central counterparties under reverse repos are recorded separately as a sub-position in loans to other financial intermediaries and financial auxiliaries;<sup>12</sup> this is because MFIs can use central counterparties to refinance themselves on the interbank market, and the separate identification of these positions helps in interpreting developments in MFI loans to non-MFIs. Section 4.1.6 reviews the impact of operations with central counterparties on monetary aggregates and their counterparts.
- At a quarterly frequency, a country breakdown is required of loans to MFIs and to non-MFIs in other EU Member States.

Furthermore, the following items are recorded (without being separately identified) as part of loans.

- Claims under reverse repos or securities borrowing against cash collateral. The section on deposits explained why a temporary sale of securities by an MFI under a repo, or a loan of securities against cash collateral, gives rise to an entry under repos (9.4). Similarly, a (temporary) purchase of securities by an MFI under a reverse repo, or borrowing of securities against cash collateral, gives rise to a loan recorded under loans (2). There is no separate identification of repo-related positions under loans, with the exception of positions vis-à-vis central counterparties, as discussed above.
- Financial leases are contracts under which the legal owner of a durable good (lessor) lends it to a third party (lessee) for most if not all of its life, in exchange for instalments covering the cost of the good and an imputed interest charge. The lessee enjoys all the benefits from the use of the good and incurs the costs and risks of ownership.

For statistical purposes, financial leases are treated as loans from the lessor (here an MFI) to the lessee. The durable goods which are the subject of the lease are not recorded on the MFI's balance sheet.<sup>13</sup>

- Bad debt loans are loans whose repayment is overdue or which are otherwise identified as being impaired, partially or totally, in accordance with the definition of a default in Directive 2006/48/EC (Annex VII, Part 4, point 44): “A ‘default’ shall be considered to have occurred with regard to a particular obligor when either or both of the two following events has taken place: (a) the credit institution considers that the obligor is unlikely to pay its credit obligations to the credit institution, the parent undertaking or any of its subsidiaries in full, without recourse by the credit institution to actions such as realising security (if held); (b) the obligor is past due more than 90 days on any material credit obligation to the credit institution, the parent undertaking or any of its subsidiaries.”

Bad debt loans are reported at their full amount on the MFI's balance sheet unless they have been written down or written off. For the treatment of write-offs/write-downs, see Section 1.6.3.3.

- Holdings of securities (other than shares and other equity) which are not negotiable and cannot be traded on secondary markets are recorded as loans.<sup>14</sup>

<sup>12</sup> MFIs can also act like central counterparties in the interbank market, but any such activities should be reported as inter-MFI operations and thus not included in positions with central counterparties.

<sup>13</sup> Operating leases (which are unlikely to be offered by MFIs) are treated differently: the durable good which is the subject of the lease is recorded on the balance sheet of the lessor, and payments under the lease are rentals (a form of payment for services). The difference between operating and financial leases is explained in Annex II to the ESA 95.

<sup>14</sup> In contrast, Regulation ECB/2008/32 provides that holdings of securities (other than shares and other equity) which are negotiable and are effectively traded on secondary markets are recorded as securities other than shares. The treatment of borderline cases, where a security is negotiable but is not traded, is currently under investigation.

- An MFI's holdings of subordinated debt (instruments constituting a subsidiary claim on the issuer that can be exercised only after all higher status claims have been satisfied) in the form of deposits or loans are classified as loans. Where holdings of all forms of subordinated debt are recorded as a single figure for statistical purposes, the reporting MFI should record the amount under securities other than shares (3) on the grounds that most subordinated debt is in security form.
- Traded loans are loans that have de facto become negotiable. Provided that they continue to be evidenced by a single document and are, in practice, traded only occasionally, they are to be classified as loans. See also the paragraph below on the treatment of "Schuldscheine" and similar instruments.

Although not explicitly mentioned in the Regulation, assets arising from factoring and project finance are recorded as loans. Factoring in this context refers to a transaction where an MFI purchases accounts receivable (i.e. invoices) from a third party. For further information on the treatment of factoring, see also the dedicated paragraph below. Project finance refers to loans provided to entities which were created specifically to finance and/or operate physical assets and where the primary source of repayment of the obligations is the income generated by the assets being financed rather than the independent capacity of a broader commercial enterprise.

Under Regulation ECB/2008/32, quarterly data are collected on loans backed by real estate collateral to non-financial corporations and to households and non-profit institutions serving households (see the paragraph on real estate collateral below). Due to observed differences in national implementation, work on harmonising these new statistics continues. Euro area aggregates for loans backed by real estate collateral are not yet published.

Loans granted on a trust basis (trust loans/fiduciary loans) are loans made by an MFI (the trustee/fiduciary) on behalf of a third party (the trustor/beneficiary), where the latter assumes the credit risk and the MFI is responsible only for managing the loan. Trust loans are *not* recorded on the balance sheet of the trustee/fiduciary MFI and are not regarded as an asset of the MFI in the event that the MFI goes into liquidation. (See also *trust accounts* above).

NCBs' external reserves in the form of loans are classified in this category for the purposes of MFI balance sheet statistics. See Box 2.3 below for further details on the external reserves of the Eurosystem.

#### 2.1.4.1 Accounting treatment of loans in the ESA 95

Chapter 7 of the ESA 95 requires loans to be valued at the amount of principal that the debtor is contractually obliged to repay the creditor, even where the loan has been traded at a discount or premium (7.51). The treatment of interest accruing on loans (mentioned in 5.17, but not further specified in Chapters 5 or 7) is covered by the requirements for recording accrued interest generally: the ESA 95 requires interest to be recorded as it accrues, not when it is paid, with a matching entry in the financial account (4.50, 5.17). While 5.130 expresses a preference for imputing accrued interest to the relevant asset category, the ESA 95 accepts that national accounting practices may be otherwise, in which case the counter-entry should be in "other accounts receivable/payable" (AF.79). Although Chapter 7 does not say so explicitly, the valuation of loans on the balance sheet should be consistent with the treatment of accrued interest in the financial account. Foreign currency loans should be converted into national currency at the mid-market closing exchange rate on the balance sheet date (7.31).

#### 2.1.4.2 Accounting treatment of loans in MFI balance sheet statistics

Article 7(2) of Regulation ECB/2008/32 states: "*Deposit liabilities and loans shall be reported*

*at their principal amount outstanding at the end of the month. ... Deposit liabilities and loans shall not be netted against any other assets or liabilities.*” The exception is loans written off or written down in accordance with the relevant accounting practices, which are not recorded on the statistical balance sheet (write-offs) or are recorded at their written-down value. Thus the following rules apply.

- Loans are to be reported at the nominal amount outstanding (and not, for example, at “fair value”). “Nominal amount outstanding” corresponds to the ESA 95 requirement for the amount of principal that a debtor is contractually obliged to repay to a creditor (here the reporting MFI).
- Loans are to be reported by MFIs on a gross basis, i.e. without regard to any provisions made against them. Doubt about the debtor’s ability to repay should be reflected on the balance sheet only when a loan is written down or written off. The MFI must report the amount of write-offs and write-downs in the reporting period, with a breakdown by sector of counterparty. This requirement includes write-offs and write-downs recognised when the loan is sold or transferred to another party.

Despite the general requirement for gross reporting, Article 7(4) of Regulation ECB/2008/32 provides as follows: *“NCBs may allow the reporting of provisioned loans net of provisions and the reporting of purchased loans at the price agreed at the time of their acquisition, provided that such reporting practices are applied by all resident reporting agents and are necessary to maintain continuity in the statistical valuation of loans with the data reported for periods prior to January 2005”*. If loans are reported net of provisions, MFIs should report any change in provisioning: thus Guideline ECB/2007/9, Annex V, Part 2 states: *“This [revaluation] adjustment also reflects the changes in the level of loan-loss provisions, if an NCB decides that*

*the outstanding stocks are recorded net of provisions. Write-offs recognised at the time the loans are sold or transferred to a third party are also included, where identifiable.”* (This is to ensure that the recorded transactions in loans and the change in their balance sheet value can be reconciled.)

- Loan write-offs are treated in MFI balance sheet statistics as “revaluations”, whereas in the ESA 95 (and in the international investment position) they are regarded as “changes in volume” (Guideline ECB/2007/9, Annex V, Part 1). Since, however, write-offs (and write-downs) are the only revaluation item affecting the instrument category “loans”, MFI balance sheet data can easily be converted to the ESA 95 basis for inclusion in financial accounts or for comparison with the international investment position.
- Interest receivable on loans should be recorded on the balance sheet as it accrues rather than when it is actually received, but in the category “remaining assets” and not in loans. Accrued interest is excluded from the loan to which it relates. Although permitted by the ESA 95, this is not the ESA’s preference, which is for accruing interest to be recorded in the instrument category to which it relates. The treatment in MFI balance sheet statistics is preferred for monetary policy analysis, since only loans actually extended, net of repayments, are recorded, and not the larger amounts including accruing interest.
- The transaction value of loans excludes fees and any other charges.
- MFIs must distinguish between loans denominated in euro and loans denominated in foreign currency in monthly reporting. When submitting MFI balance sheet data to the ECB, NCBs ensure that asset (and liability) positions denominated in foreign currencies are converted into euro using market exchange rates (see also Section 1.2).

MFI's report quarterly the amounts of loans denominated in each of the main foreign currencies, and this information is used by the ECB to remove (as an approximation) the effect of exchange rate changes for the purpose of compiling "flows" data.

- Loans are recorded when they are disbursed (i.e. when they are paid out to the borrower) and not when they are agreed (i.e. when the contract is signed).

#### Real estate collateral in the MFI balance sheet statistics and in the supervisory framework

For the new breakdowns of loans backed by real estate collateral, the Regulation does not provide detailed guidance. It is possible to assess the value of the real estate collateral once (at the inception of the loan) and to carry forward this value until the loan matures or is re-negotiated. It is similarly possible to re-assess the value of the collateral at regular intervals and to determine the loan-to-value ratio based on the most recent information, not only regarding the outstanding amount of the loan but also with reference to its collateral value. In the light of the observed differences in national implementation and results, work on harmonising these new statistics continues. Meanwhile, as noted earlier, the new breakdowns are not being published.

For the purpose of defining loans secured by real estate collateral, the Regulation refers to the definition of real estate collateral in Annex VIII, Part 1, points 13-19 of Directive 2006/48/EC. If these rules are not applied by the reporting agent, the determination of the loans to be included is based on the approach chosen to comply with capital requirements. The requirement covers all loans with an outstanding loan/collateral ratio not exceeding one.<sup>15</sup>

The supervisory framework (COREP) requires only those parts of individual loan exposures that are actually backed by collateral to be classified as collateralised loans, which could imply recording different parts of loans

in different categories. Under Regulation ECB/2008/32, the whole loan is classified as collateralised (i.e. in a single statistical category) if it is 100% or more backed by real estate collateral. For statistical purposes loans are usually not split into separate tranches.

#### Maturity of impaired/overdue loans

In cases where the repayment of the loan is overdue or the loan is otherwise identified as impaired,<sup>16</sup> the ECB recommends that, for statistical purposes, the MFI reports the original maturity of the loan until the loan is repaid or written off, even if the reporting MFI expects the loan to be written off soon. However, if overdue or impaired loans form part of a debt restructuring or become immediately repayable, and there is a contractual agreement between creditor and debtor to this effect, the new agreed maturity should be applied (in effect there is a transaction under which the old loan is repaid and a new one extended).

#### Bill-based lending operations

A bill of exchange is an unconditional order in writing whereby one party (the drawer) instructs another (the drawee) to pay a certain amount of money at a future date to the payee (the payee may be the drawer himself or a third party). The payment can take place on demand, and either immediately (sight bill) or on a fixed or determinable future date (term bill). Bills of exchange are negotiable, in the sense that the payee (and all future holders) may endorse it to a new party, who then becomes the new beneficiary of the bill. When a bill is transferred, all associated risks and rewards are also transferred and the holder has a primary claim on the drawee, but only a contingent claim on previous holders. *Trade bills* are bills of exchange used as a means of payment for services or goods.

<sup>15</sup> Note that under FINREP such a restriction in loan/collateral ratio does not exist.

<sup>16</sup> As mentioned above, these loans are identified as bad debt in accordance to the definition of default in Directive 2006/48/EC (Annex VII, Part 4, point 44).

The Regulation does not specify how bill-based operations should be treated in MFI balance sheet statistics. The recommendation here is, however, to treat a bill of exchange as a claim of the payee (or the subsequent holders) on the drawee, who is the final debtor (the drawee principle), and not on the previous holder(s) (the presenter principle). As regards the instrument classification, bills of exchange should be recorded under “securities other than shares” if they are expected to go into circulation, or under “loans”/“deposits” otherwise (non-negotiable debt securities are classified as loans/deposits). The degree of standardisation of the instruments and the structure of the markets on which they can be traded can also be used as criteria.

Whenever an MFI is the holder of a bill of exchange, the ECB recommends the following.

- Reporting agents should record bills of exchange under “loans” or “securities other than shares”, according to the principles outlined above.
- Reporting agents should classify bills of exchange as claims on the drawee and not on the previous holder.

An MFI can also be the drawee of a bill of exchange, as is the case with *bank acceptances*. Whenever the MFI is the drawee, the ECB recommends the following.

- Reporting agents should record the bills drawn on them under “deposits” vis-à-vis the payee (this party is typically the first and last beneficiary of the instrument if it does not go into circulation) or, if the bills are expected to go into circulation, under “debt securities issued” (in which case the holder is not known and no counterparty sector breakdown is required).<sup>17</sup>
- As a counter-entry, reporting agents should record a loan to the drawer (i.e. to the party who asked the bank for the acceptance) or, if the bill is drawn on a deposit, a decrease in the deposits placed by the drawer.

### Treatment of “Schuldscheine” and similar instruments

German Schuldscheine and similar instruments (e.g. promissory notes) are classified as loans for the purposes of MFI balance sheet statistics, since, based on their characteristics at the date of contract or issuance, they are considered to be more like loans than securities. Although they can be transferred (usually at nominal value, and among MFIs), they are not negotiable (e.g. there is no bid-ask spread) and they are subject to restrictions on the number of times they may be transferred.

### Factoring

Factoring refers to the sale of a firm’s (the “*factoring client’s*”) claims (in full or in part) recorded under accounts receivable (in the form of invoices), representing money due from its *customers*, to a financial institution known as a “*factoring company*”. The factoring company, which may be an MFI, buys the receivables at a price which is lower than the face value of the invoice, thereby effectively charging the applicable fees and interest. The factoring company manages the sales ledger and the collection of the accounts under the terms agreed by the factoring client. The customers send their payments directly to the factoring company. Thus, finance is extended for the length of the trade debt.

The factoring company may assume the full risk of default by the customer (“*non-recourse factoring*”), or this risk may be retained by the factoring client, in which case the factoring company is able to hold the factoring client liable if a debtor is unable to pay (“*recourse factoring*”). In particular, in the case of recourse factoring the factoring company buys the receivables at a discount from the face value of the invoice. The discount is retained as collateral to cover the risks associated with the operation. Upon payment of the invoices by the customers, the factoring company transmits the proceeds net of the advanced cash and the applicable fees

<sup>17</sup> In some countries, bank acceptances are considered by default to be in circulation (and are thus classified as securities) unless they are sold back to the issuing bank.



and interest charges to the factoring client. In the case of non-recourse factoring, however, the factoring company assumes the full risk of default by the customer and therefore fees and interest are charged immediately to the factoring client, who receives the full amount of the trade credit net of these charges.<sup>18</sup>

By analogy to the treatment proposed for trade bills, MFIs acting as factoring companies should record their factoring operations as loans. For the purposes of the counterparty sector classification, in the case of non-recourse factoring the counterparty is the customer, as the factoring company assumes the risk. In the case of recourse factoring, the ultimate debtor is the factoring client who should then be the counterparty of the loan.

Example 1 in Annex 2.1 below illustrates how factoring operations should be recorded on the balance sheet of the factoring company (the MFI providing the finance).

### Securitisation of loans and other loan transfers

The recording of loan securitisation and other loan transfers is discussed extensively in Section 3 below.

### 2.1.5 SHARES AND OTHER EQUITY (ASSETS)

The ESA 95 defines shares and other equity as instruments which represent property rights in corporations or quasi-corporations, generally entitling the holder to a share in the profits and in net assets in the event of liquidation (5.86). The definition in Regulation ECB/2008/32 is the same. The asset category shares and other equity (5) on the MFI balance sheet includes holdings by a reporting MFI of mutual or investment fund shares (other than MMF shares/units) without these being separately identified. (Issues of equity by a reporting MFI are included without being separately identified in the liability category capital and reserves (12), along with undistributed profits and other elements of shareholders' funds, unless the reporting institution is an MMF issuing shares/units – see above.)

#### 2.1.5.1 Accounting treatment of shares and other equity in the ESA 95

Chapter 7 of the ESA 95 requires quoted shares to be valued at market price (7.53). The general rule of market price also applies to unquoted shares and other equity, though by definition no market prices are available for these items. The ESA 95 sets out a clear aim for the valuation of unquoted shares. Their values should be estimated with reference to the values of quoted shares, but taking account of liquidity (assumed to be inferior for unquoted shares), reserves accumulated by the business, and its branch of activity (7.54). 7.55 goes on to suggest a formula, taking into account own funds (but with discretion, having regard to differences between quoted and unquoted corporations):

$$\frac{\text{current price of unquoted shares}}{\text{current price of quoted shares}} \times \left( \frac{\text{own funds of unquoted corporations}}{\text{own funds of quoted corporations}} \right)$$

The ESA 95 defines “own funds” as the sum of net worth (B.90) and shares and other equity issued (7.05). This is called the capitalisation approach.

#### 2.1.5.2 Accounting treatment of shares and other equity in MFI balance sheet statistics

Regulation ECB/2008/32 states that “*Unless otherwise provided for in this Regulation, the accounting rules followed by MFIs for the purposes of reporting under this Regulation shall be those laid down in the national transposition of Council Directive 86/635/EEC of 8 December 1986 on the annual accounts and consolidated accounts of banks and other financial institutions, as well as any other international standards applicable.*” The Regulation contains no specific requirements for the treatment of shares and other equity.

How transactions in shares and other equity (assets) are derived from balance sheet levels based on varying valuation practices, together

<sup>18</sup> Fees and interest charges of non-recourse factoring are usually higher than those of recourse factoring, due to the different service provided and risk borne by the factoring company.



with the special treatment of shares/units issued by MMFs, is discussed at length in Section 1.6.3.

#### 2.1.6 MONEY MARKET FUND (MMF) SHARES/ UNITS (ASSETS); (LIABILITIES)

These MFI balance sheet items correspond to part of the ESA 95 category mutual fund shares (AF.52),<sup>19</sup> namely to shares/units issued by MMFs – for the definition of MMFs, see Section 1.1. Holdings by MFIs of shares/units issued by other mutual (or investment) funds are recorded in the category shares and other equity (5) (see above).

Because MMFs are part of the MFI sector, and their shares/units in the hands of the money-holding sector in the euro area form part of euro area broad money, Regulation ECB/2008/32 requires their shares/units to be shown separately on both sides of the MFI balance sheet. A reporting MFI's holdings of MMF shares/units form asset category 4. A reporting MMF's issues of shares/units form liability category 10.

##### 2.1.6.1 Accounting treatment of MMF shares/ units in the ESA 95

The ESA 95 implicitly applies the same principle of market valuation to shares/units issued by MMFs as it does to shares and other equity.

##### 2.1.6.2 Accounting treatment of MMF shares/ units in MFI balance sheet statistics

For valuation purposes, shares/units issued by MMFs were traditionally treated in ECB statistics as quasi-deposits. As Guideline ECB/2007/9, Annex V, Part 3, Section 3 explains: *“In summary, if the derogation in respect of the ‘revaluation adjustments’ is not applied, MMF assets are treated in accordance with the common procedure (i.e. the counterpart of the revaluation on the assets side, in the case of MMFs, is not ‘money market fund shares/units’ but ‘remaining liabilities’). Under liabilities, to calculate the ‘money market fund shares/units’ flow, it is enough to exclude the ‘reclassification’ adjustments from the difference between the balances as long as no revaluation adjustment is reported for this instrument.”* For

MMF shares/units, the purchase/sale of shares/units was considered equivalent to credits to/debits from deposits; and positive changes in the value of shares/units were considered equivalent to the payment (as opposed to the accrual) of interest on deposits. During the financial crisis in 2007/08, however, a number of funds experienced substantial declines in the value of their assets and therefore also in the value of their shares/units issued; these could not be treated as negative interest. With the introduction of Regulation ECB/2008/32, a series key for revaluation adjustments to MMF shares/units was introduced in the reporting tables, allowing MMFs to report revaluation adjustments, not under “remaining liabilities” as before, but for the shares/units issued. Transactions in MMF shares/units have been calculated taking into account reported revaluation adjustments since June 2010. At the same time, the tightened definition of MMFs adopted for European supervisory purposes in 2010, and reflected in the amendment to Regulation ECB/2008/32,<sup>20</sup> is expected to further confine their potential exposure to market and credit risk, which in turn implies reduced potential valuation changes affecting the portfolios of MMFs.

#### 2.1.7 CAPITAL AND RESERVES (LIABILITIES)

This category comprises equity capital issued by reporting agents, representing for the holder property rights in the MFI and consequently an entitlement to a share in its profits and in its residual value in the event of liquidation. Undistributed profits and provisions for likely future payments and obligations are also included. Capital and reserves thus includes:

- (a) equity capital;
- (b) non-distributed benefits or funds; and
- (c) specific and general provisions against loans, securities and other types of assets

<sup>19</sup> The ESA 95 uses the term “mutual fund”. ECB legislation calls these institutions “investment funds” as does the SNA 2008. The revised ESA will also adopt this terminology.

<sup>20</sup> Regulation ECB/2011/12; see also Section 1.1.

(the recording of which may follow national accounting rules).

Item (a) includes the full amount of equity capital raised. It therefore includes the share premium (or discount), i.e. the difference between the nominal value of issued equity and the amount actually raised.

Item (b) also includes the portion of “income from the current year” and net income of the period that will not be distributed; dividends awaiting distribution must be included in the item “remaining liabilities” (see also below).

For accounting treatment in the ESA 95 and MFI balance sheet statistics, see the section on shares and other equity above.

“Capital and reserves” generally includes the counterpart of any revaluations of assets held, which is particularly relevant if the reporting agent is subject to fair value accounting.

#### Operating profit and losses

Operating profits/losses are defined as the amounts that (i) accumulate during the MFI’s accounting/financial reporting period (resulting from accumulated interest and commission income and expenditure, gains or losses on financial transactions, etc); and (ii) are acknowledged for prudential reasons but which have not yet been formally recognised as profits/losses in the annual (or quarterly) accounts. They comprise gains/losses and possibly unrealised losses, but generally not unrealised gains (which remain in the revaluation accounts).

As operating profits/losses do not represent a third-party claim, reporting agents should preferably enter them under “capital and reserves” net of any provisions for future tax and dividend payments (which should be classified under “remaining liabilities”). However, NCBs may follow the supervisory/accounting approach, which requires MFIs to enter profits/losses in “remaining liabilities” and move them to “capital and reserves” only after they have

been formally recognised as such when the accounts for the financial reporting period have been closed.

#### 2.1.8 FIXED ASSETS

This category consists of non-financial assets, tangible or intangible, which are intended to be used repeatedly for more than one year by reporting agents. Fixed assets include land and buildings owned by the reporting MFI, as well as equipment, software and other infrastructure.

In the ESA 95, fixed assets (as recorded on the MFI balance sheet) fall into various categories of produced (AN.1) and non-produced (AN.2) non-financial assets.

Financial assets which the reporting MFI may regard as “fixed” (e.g. shareholdings in subsidiaries or affiliates, loans, or debt securities which the MFI intends to hold to maturity) are *not* recorded here but under shares and other equity, securities other than shares, or loans, according to the type of instrument. The category “fixed assets” in MFI balance sheet statistics is confined to non-financial assets.

##### 2.1.8.1 Accounting treatment of non-financial assets in the ESA 95

Chapter 7 of the ESA 95 states that items should be valued as if they were being acquired on the date to which the balance sheet relates (that is, at current market prices); the valuation of non-financial assets should include any associated costs of ownership transfer.

##### 2.1.8.2 Accounting treatment of non-financial assets in MFI balance sheet statistics

Regulation ECB/2008/32 gives no specific guidance on the valuation of fixed assets. These are covered by the general prescription in Article 7 about the national transposition of Council Directive 86/635/EEC.

#### 2.1.9 REMAINING ASSETS; REMAINING LIABILITIES

Remaining assets (or remaining liabilities) are the residual items on the balance sheet,

comprising assets (or liabilities) not included elsewhere. NCBs may require the reporting of specific sub-positions included in this item. Remaining assets (or liabilities) include what the ESA 95 calls “other assets receivable/payable” (AF.7), but also some other items (notably positions in financial derivatives, AF.34 in the ESA 95, and accrued interest on deposits and loans, which the ESA 95 recommends should be recorded in the appropriate sub-category of AF.2 or AF.4). Remaining assets (or liabilities) on the MFI balance sheet include:

*(a) financial derivative positions subject to on-balance-sheet recording*

Unless business accounting rules require the item to be recorded off the balance sheet,

financial derivative positions with gross positive market values are recorded in remaining assets, and positions with gross negative market values are recorded in remaining liabilities with no further details. The current market price of a financial derivative contract values the claim of one party on the other. It is this value that is recorded in MFI balance sheet statistics if an MFI is a party to the contract. The market value may switch from positive (an asset) to negative (a liability), or vice versa, over the life of the contract. A reporting MFI could therefore record the same derivative instrument within remaining assets and within remaining liabilities during its life. The market price may be zero, as it is at the start of a swap contract.

#### Box 2.2

##### INTEREST RATE SWAPS AND CURRENCY SWAPS

Interest rate swaps are derivative contracts that commit two parties to a future exchange of payment streams related to fixed or floating interest rates in the same currency for an agreed period of time. Currency swaps (sometimes called cross-currency interest rate swaps) are similar derivative contracts except that the payment streams relate to fixed or floating interest rates in different currencies. The payments are based on notional amounts of principal, which are fixed at the initiation of the swap. The swap contract may (but typically does not) involve an exchange of these principal amounts.

In accordance with the statistical treatment applicable to all financial derivative instruments, MFI balance sheets should include at market value those interest rate or currency swap contracts that have market value, which is the market price which reflects the net present value of the (known or expected, payable or receivable) streams of cash flows. Such net present value is then allocated according to its sign, i.e. to “remaining assets” if positive or “remaining liabilities” if negative. No other entries should be made on the balance sheet in respect of the outstanding commitment to a future exchange of payment streams or principal.

If accounting conventions require interest rate and currency swaps and other forward-type instruments to be recorded on the balance sheet on a gross basis (i.e. recording the present values of inflows and outflows separately, without netting), reporting agents should, for the purposes of MFI balance sheet statistics, calculate the net value of these entries and allocate it as described above.

*(b) margins lodged under derivative contracts (remaining liabilities)*

The section on deposits (9) noted that margins under financial derivative contracts placed as cash collateral with reporting MFIs should be classified as deposits where they remain in the depositor's ownership and are repayable to the depositor when the contract is closed out and the MFI receiving the amount is free to use the funds. In principle, where part of the margin must be retained, e.g. for the clearing house, only the part at the disposal of the MFI should be classified as a deposit liability. If in practice the distinction is difficult, the earlier section explained that such margins may be classified as deposits (9) or as remaining liabilities (13). Non-repayable margins are to be recorded as remaining liabilities. In practice, reporting MFIs may find it difficult to make these distinctions, and the Regulation accepts the recording of margins under remaining liabilities or as deposit liabilities, according to national practice.

*(c) gross amounts receivable (remaining assets) or payable (remaining liabilities) in respect of suspense items*

Suspense items are balances on an MFI's balance sheet which are not booked in the name of customers but which nevertheless relate to customers' funds (e.g. amounts awaiting investment, transfer or settlement). As a general rule, reporting agents should present suspense items on the balance sheet on a gross basis. Suspense items that represent a liability for the reporting MFI (e.g. customer funds awaiting transfer) should be classified under "remaining liabilities", while asset suspense items should be classified under "remaining assets". There may be exceptions to this general rule. Where asset suspense balances are closely associated with the balance sheet items to which they relate, reporting agents could continue to record suspense balances

within those items without being separately identified, thus retaining the breakdowns by sector, residence, etc. In such cases reallocation of the amount involved to the residual categories of "remaining assets" or "remaining liabilities" would imply a loss of information.

*(d) gross amounts receivable (remaining assets) or payable (remaining liabilities) in respect of transit items*

Transit items represent funds (usually belonging to customers) that are in the course of being transmitted between MFIs. Remaining assets include cheques and other forms of payment that have been sent for collection to other MFIs. Remaining liabilities include credit transfers and other items for which the corresponding payment has not yet been made by the reporting MFI. Reporting agents should record on a gross basis amounts receivable/payable in respect of transit items that are outstanding on the reporting date, classifying them under "remaining assets" or "remaining liabilities", as appropriate.

*(e) net amounts receivable/payable in respect of future settlement of foreign exchange transactions*

For statistical purposes, the exchange of deposits usually associated with spot foreign exchange transactions should be recorded on the settlement date (the ESA 95 requires financial transactions to be recorded when payment takes place – 5.144). Nevertheless, the ECB accepts that this exchange may be recorded on the contract date if this is the current treatment in MFIs' accounting systems. Reporting agents should then enter foreign exchange receivable/payable on the balance sheet on the contract date. The aggregate of amounts receivable/payable should be recorded on a net basis at market value in "remaining assets" or "remaining liabilities", according to the sign. However,

in view of the limited analytical value of the information, the ECB accepts that these amounts receivable/payable may be treated as off-balance-sheet positions for the purposes of MFI balance sheet statistics, if this is the current treatment in MFIs' accounting systems. MFIs' accounting systems may not distinguish such amounts receivable/payable from forward contracts with a residual maturity of 1-2 days. If forward positions are already recorded as financial derivatives on the balance sheet at market value (see paragraph on financial derivatives in sub-section 1.6.1.2), the ECB accepts that the amounts receivable/payable arising from unsettled spot foreign exchange operations may also be classified as financial derivatives (which reporting agents also classify under "remaining assets" or "remaining liabilities").

(f) *net amounts receivable/payable in respect of future settlement of transactions in securities or foreign exchange operations*

(g) *accrued interest receivable on loans (remaining assets) or payable on deposits (remaining liabilities)*

Interest receivable on loans should be recorded on the balance sheet as it accrues, not when it is actually received. In a departure from the treatment preferred by the ESA 95, it should be entered in remaining assets, not added to the loan to which it relates. Similarly, interest payable on deposits should be recorded in remaining liabilities, not added to the deposit to which it relates.

(h) *dividends to be received (remaining assets) or paid (remaining liabilities)*

In accordance with the ESA 95, and unlike interest, dividends are recorded when they become due, not accrued over the period to which they relate. In line with FINREP, dividends to be paid should be included in

"remaining liabilities" at the moment the shareholder's right to receive a payment is established.

(i) *provisions representing liabilities against third parties (pensions)*

Where the reporting MFI provides for employee pensions through a non-autonomous pension scheme, the technical reserves of the fund (meaning its liability to present and future pensioners) are to be recorded under remaining liabilities. This treatment conforms to the requirement of the ESA 95 that non-autonomous pension funds are recorded as a liability of the employer.

(j) *amounts receivable (remaining assets) or payable (remaining liabilities) which do not relate to the reporting MFI's main business*

This category includes amounts receivable or payable in respect of trade credit, tax due or rebates receivable, wages and social contributions payable, etc.

(k) *asset counterpart to coins issued (remaining assets – central bank balance sheets only)*

In euro area countries coins are a liability of central government, not of the central bank. Nevertheless, because coins are included in currency in circulation (part of all monetary aggregates), coins issued are imputed to the central bank (liability item "currency in circulation" (8) – see above) with an offsetting entry in remaining assets.

(l) *liability counterpart to the allocation of special drawing rights (SDRs) (remaining liabilities – central bank balance sheets only)*

This is an imputed entry to reflect a notional liability (under the ESA 95, SDRs are a financial asset with no corresponding liability); see also Box 2.3 below.

*(m) banknotes and coins denominated in the former national currency which remain outstanding after adoption of the euro*

As discussed in Section 2.1.1, outstanding amounts of banknotes and coins in the former national currency continue to be reported under cash (1) or currency in circulation (8) for 12 months, and are then to be transferred to remaining assets and liabilities.

*(n) Intra-Eurosystem net assets or liabilities related to the allocation of euro banknotes*

As discussed in Section 2.1.1, euro currency in circulation is, for statistical purposes, allocated to individual countries based on the banknote allocation key. This allocation is unlikely to coincide with the amount that an NCB actually issues; the difference is then recorded in remaining assets or remaining liabilities depending on the sign.

Some detail on remaining assets and remaining liabilities is reported monthly as a memorandum item (i.e. not as a mandatory item but only to the extent available), namely interest accruals, transit items, suspense items, positions in financial derivatives, and (only for the Eurosystem) intra-Eurosystem positions arising from the allocation of euro banknotes (see Section 2.1.1. and Section 4.1 for an explanation of how these positions arise) as well as the counterpart to holdings of SDRs issued by the IMF. MFIs also report quarterly as memorandum items additional breakdowns of remaining assets and remaining liabilities for the purpose of compiling euro area financial accounts (see Section 5.2).

The categories “remaining assets” and “remaining liabilities” *exclude* certain financial instruments, such as guarantees, commitments, and administered and trust loans, which should not be recorded on the reporting MFI’s statistical balance sheet if the reporting MFI does not bear the economic risks and returns of the loan (another MFI might do so and

in that case will need to report these loans vis-à-vis the beneficiary). They should also exclude non-financial assets, such as land and commodities, which are recorded in fixed assets (6), and liabilities which the reporting MFI may regard as non-financial but which represent shareholders’ funds (to be included in capital and reserves (12)).

These are the contents of remaining assets/remaining liabilities as set out in Regulation ECB/2008/32. However, national practice in recording remaining assets and remaining liabilities on the MFI balance sheet is not uniform. Thus in some Member States remaining assets and remaining liabilities include revaluation accounts (more properly included in capital and reserves), and in some cases other items which should probably not be on the balance sheet at all. Because MFIs are in any case required to include accrued interest on deposits and loans and financial derivatives positions in remaining assets/remaining liabilities (although not all MFIs at present identify the relevant amounts in their balance sheet reporting – see above), further adjustments are needed in order to use this part of the MFI balance sheet as a building block for euro area financial accounts (see Section 5.2).

#### 2.1.9.1 Accounting treatment of other accounts receivable/payable in the ESA 95

Trade credits and advances and other accounts receivable/payable are to be valued on the balance sheet of both creditor and debtor at the amount the debtor is contractually obliged to pay the creditor when the obligation is extinguished (7.61).

For financial derivatives (not included in other accounts receivable/payable in the ESA 95, but a separate instrument category, AF.34), the general rule of market valuation applies.

#### 2.1.9.2 Accounting treatment of remaining assets/remaining liabilities in MFI balance sheet statistics

Regulation ECB/2008/32 gives no specific guidance on the valuation of remaining assets



and remaining liabilities. These are covered by the general prescription in Article 7 about the national transposition of Council Directive 86/635/EEC.

The important difference in accounting treatment from the ESA 95 relating to this category is, however, the inclusion here of accrued interest on loans and deposits.

### Box 2.3

#### EUROSYSTEM ASSETS AND LIABILITIES: THE TREATMENT OF CERTAIN COMPONENTS OF RESERVE ASSETS

Gold<sup>1</sup>, SDRs and external claims of the NCB which meet the IMF's definition of reserve assets in terms of liquidity, ready availability for use, and credit standing of the debtor, constitute external reserves. These external claims will typically include substantial assets denominated in foreign currencies, representing claims on non-residents, typically central banks, other MFIs or governments. For euro area countries, cross-border claims within the euro area (irrespective of the currency of denomination) and claims denominated in euro are not reserve assets, irrespective of the identity of the debtor.

The ECB publishes monthly data on reserve assets of the Eurosystem as part of the balance of payments and international investment position of the euro area.<sup>2</sup> The MFI balance sheet reporting framework for NCBs, however, does not include a position called reserve asset instruments. Rather, monetary gold is recorded in a dedicated sub-item, and holdings of SDRs together with other asset positions vis-à-vis the IMF are reported in the item "receivables from the IMF". The ECB does not show these items separately in published MFI balance sheet statistics, but includes them indistinguishably in MFIs' external assets (see also Section 4.1).

Receivables from the IMF represent the asset position a member country holds vis-à-vis the Fund. In accordance with the IMF's definition, these receivables consist of (a) the "reserve tranche", i.e. any foreign currency holdings (including SDRs) that a member country may draw at short notice, (b) any debt of the IMF (under a loan agreement) in the General Resource Account, the General Arrangements to Borrow and the New Arrangement to Borrow, and (c) any existing claims arising from contributions to trusts, such as the one related to the Poverty Reduction and Growth Facility (formerly ESAF). (a) and (b) correspond to the reserve position vis-à-vis the IMF in balance of payments and international investment position statistics.

As regards the valuation of monetary gold and receivables from the IMF, the former should be valued at its market price on the balance sheet date. Receivables from the IMF are denominated in SDRs and should be converted into euro at the rate published by the IMF on the balance sheet date.<sup>3</sup> SDRs are issued without charge. To balance the holdings of SDRs a notional accounting entry (called "counterpart to IMF special drawing rights") is made in remaining liabilities (not in

1 As noted above, gold held by a central bank is normally classified as monetary gold, and is a financial asset, whereas gold held by anyone else (including other MFIs) is treated statistically as a commodity, and thus as a non-financial asset, and is included in "fixed assets".

2 See Section 7 of the statistical chapter of the ECB's Monthly Bulletin.

3 See the IMF's website (<http://www.imf.org>).

“external liabilities”). General and special allocations of drawing rights are statistically treated as a reclassification, not as a transaction. Since the last allocations of SDRs in 2009, the amounts held by NCBs are quite substantial, as are the notional counter-entries. Fluctuations in the euro amount of all positions denominated in SDRs arising from exchange rate changes need to be taken into account. These should be included by the NCB in the revaluation adjustment series for receivables from the IMF and for remaining liabilities, with the separate identification of revaluations for the notional counterpart of SDRs within remaining liabilities.

## 2.2 SECURITY-BY-SECURITY REPORTING

Regulation ECB/2008/32 requires MFIs to report issues and holdings of debt securities, with a distinction between amounts denominated in euro and in other currencies (with additional currency detail at end-quarters) and with breakdowns by original maturity of the securities. They must also report holdings of shares and other equity (their own liabilities in this form are included in capital and reserves without being separately identified). As Section 1.6.3 explains, various practices are followed in valuing these items. Apart from valuation, much of the information may be difficult for reporting MFIs to provide. Thus interest on debt securities must be reported as it accrues, not when it is paid, and the accrued interest may sometimes be added to the reported amount of the relevant security, or recorded in remaining assets/remaining liabilities. All holdings must be categorised by the residence (domestic, other euro area, or rest of the world) and sector (full sectorisation for the first two categories, limited sectorisation for the rest of the world) of the issuer. In the conventional approach, all this is done by the reporting MFI, which reports one aggregated amount in each relevant category.

Lack of uniformity in the valuation of securities and in the recording of accrued interest introduces inconsistency into balance sheet outstanding amounts, if not into the measurement of transactions (which in principle at least take different valuation approaches into account, as described in Section 1.6.3). Mistakes can also be made in the breakdowns by original maturity, residence and sector.

Recently, security-by-security (s-b-s) reporting has been introduced as an option in investment fund and financial vehicle corporation reporting (Regulations ECB/2007/8 and ECB/2008/30), and has become widespread practice in particular for the reporting by investment funds in the euro area. It has also been introduced in balance of payments and international investment position statistics. S-b-s reporting is an option for MFI balance sheet reporting under Regulation ECB/2008/32 and may help to overcome some of these difficulties. Recital 9 of Regulation ECB/2008/32 states that “*Where this may reduce the reporting burden on credit institutions and support the development of enhanced statistics, NCBs are encouraged to promote security-by-security reporting arrangements for the collection of the statistical information on MFIs’ securities portfolios required by this Regulation. In respect of money market funds (MMFs), NCBs may allow them to report in line with Regulation (EC) No 958/2007 of the European Central Bank of 27 July 2007 concerning statistics on the assets and liabilities of investment funds (ECB/2007/8).*”<sup>21</sup>

Article 4(2) of the Regulation (on statistical reporting requirements) confirms that “*NCBs may collect the required statistical information on securities issued and held by MFIs on a security-by-security basis*”. Article 8(5)(c) (on derogations) further provides that “*NCBs may grant derogations in respect of the reporting of price revaluations of securities,*

<sup>21</sup> See *Manual on investment funds statistics based on Regulation ECB/2007/9*, ECB, May 2009, available on the ECB’s website (<http://www.ecb.europa.eu>).

*including the granting of complete exemption from any such reporting, to credit institutions which report the monthly stocks of securities on a security-by-security basis, subject to the following requirements: (i) the information reported includes, for each security, its carrying value on the balance sheet; (ii) for securities without publicly available identification codes, the information reported includes information on the instrument category, maturity and issuer which is at least sufficient for the derivation of the breakdowns defined as ‘minimum requirements’ in Part 5 of Annex I.”*

Under s-b-s reporting, reporting agents submit a complete list of their securities holdings and securities issued, usually with no breakdowns by instrument, currency, maturity, or residence and sector of the counterparty. It is not necessary to estimate accrued interest. The only information required is the unique security identifier (usually the ISIN code) and the amount held or issued. The NCB runs this information against a detailed and comprehensive securities database containing information on the features of the security relevant to MFI balance sheet (and all other) reporting requirements. With s-b-s reporting, it is possible for NCB compilers to ensure that instrument, residence and sector classifications are correct (assuming of course that the corresponding information in the database is accurate, and that the information provided by reporting agents on ISIN codes and amounts held or issued is accurate and timely).

The securities database normally used for this purpose (possibly in conjunction with national systems) is the centralised securities database (CSDB) developed by the ESCB and managed and maintained by the ECB. The CSDB contains all information relevant to statistical needs (and, to some extent, also financial stability and operational needs), with priority given to securities issued by and/or likely to be held by, euro area and EU residents, and also to securities denominated in euro. Although the CSDB is updated continuously, the need to check and validate the information means that the version

which is accessible to statistical compilers is updated only monthly.<sup>22</sup>

### 2.3 LOAN SECURITISATION AND OTHER LOAN TRANSFERS

A feature of Regulation ECB/2008/32 is the requirement for MFIs to provide data on loan securitisation and other loan transfers. The focus here is on loans transferred in the context of a securitisation operation, but the requirements also cover loan transfers such as, for instance, trades of syndicated loans and transfers which may take place in the context of intra-group reorganisations (e.g. a financial corporation engaged in lending transfers its loan portfolio to an MFI in the same group; see also Annex 1.1).

This section first discusses the impact which securitisations (in their various forms) can have on the balance sheet of an MFI, and then reviews the specific requirements of Regulation ECB/2008/32, with a particular focus on the coverage of flow data on loans securitised or otherwise transferred. In addition, linkages with the treatment of securitisation in the supervisory framework are analysed. The section concludes with a discussion of the differences between securitisation and the use of loans as collateral to issue covered bonds.

Some examples illustrating the impact of securitisation activities on the MFI balance sheet are reviewed in Annex 2.1 below.<sup>23</sup>

It should also be pointed out that additional related data on the securitisation activities of MFIs are collected under the reporting requirements for financial vehicle corporations (FVCs) set out in Regulation ECB/2008/30 (the FVC Regulation). Guideline ECB/2008/31 amending Guideline ECB/2007/9 provides

<sup>22</sup> For a more detailed, non-technical description of the CSDB, see the booklet *The centralised securities database in brief*, available on the ECB's website (<http://www.ecb.europa.eu>).

<sup>23</sup> More detailed examples are available on the FVC section of the ECB's website (<http://www.ecb.europa.eu>).

further complementary information and establishes the link between Regulations ECB/2008/30 and ECB/2008/32. The focus of this manual, however, is on securitisation as it affects MFI balance sheet statistics. Other aspects (e.g. the functioning and operations of FVCs and the structure of financial markets) are not considered here.

### Loan securitisation

Securitisation allows the originator of a loan (here, an MFI) to transfer the loan itself (or part of it), or sometimes only the credit risk that the borrower will default, to another entity (the FVC). In a “traditional” securitisation, the economic ownership of the loan itself is transferred, by sale or through sub-participation. The MFI has no further claim on the borrower (sale), or any such claim is restricted to an administrative role (sub-participation), and the loan is typically put beyond the reach of the MFI’s own creditors in the event that the MFI goes into administration (the FVC is said to be “bankruptcy remote”). In a traditional securitisation, the loan is often removed from the balance sheet of the originating MFI, and is said to have been “derecognised”; the securitisation is then called a “true sale”. However, IAS 39 and national accounting rules may in some circumstances not permit the loan to be removed from the originating MFI’s balance sheet, even in a traditional securitisation – in such cases the loan transfer to an FVC is deemed not to have satisfied the accounting requirements for a “true sale”. Some stylised examples on the accounting treatment of the sale of loans by an MFI to an FVC with and without derecognition are provided in Annex 2.1 below. By contrast, in a “synthetic” securitisation the economic ownership of the loan is not transferred. It remains on the balance sheet of the originating MFI, which accordingly continues to be the creditor, but the credit risk is transferred by means of credit derivatives or guarantees which in effect insure the MFI against the default of the borrower. In this case, the MFI is said to be buying protection on a reference portfolio of underlying assets, and the FVC is said to be selling protection.

In both a traditional securitisation and a synthetic securitisation, the FVC will issue securities. In the case of traditional securitisation, the proceeds finance the acquisition of the loans from the originating MFI, even if the loans are not derecognised; in the case of a synthetic securitisation, the proceeds are used to acquire assets to place as collateral against a default in the underlying pool of assets. This collateral often takes the form of a deposit with the MFI originating the loans, or it may be invested by the FVC in high grade assets. If the collateral raised by the issuance of debt securities by the FVC in a synthetic securitisation is equivalent to the exposure to the reference portfolio on which it has sold protection, the securitisation is said to be “fully funded”. (In some securitisations, it may be the case that the collateral does not fully reflect the exposure, but may be related to expected losses, including recovery value in the event of default on the reference portfolio).

It is important to avoid confusing a traditional securitisation that does not qualify as a “true sale” with a synthetic securitisation. This confusion often occurs because in both cases the loans remain on the balance sheet of the MFI, although for different reasons (in the former an accounting requirement, in the latter the absence of an asset disposal of any kind). The impact on the MFI balance sheet liabilities is, however, different because a traditional securitisation without derecognition of the loan typically creates a deposit liability for the full amount of the securitised assets (for the same reason that a repo gives rise to a deposit liability – here, the MFI undertaking the securitisation receives cash, but the loans remain on its balance sheet. It is as if the MFI has itself borrowed against collateral provided by the loans). It should be added that in a traditional securitisation without derecognition the loans also appear on the balance sheet of the FVC, and care is needed to avoid counting them twice; see also the paragraph on reporting requirements for loan securitisation and other loan transfers below.

Securitisations are transactions, since they involve the exchange of economic value between

entities by mutual agreement. Traditional loan securitisations which qualify as a “true sale” may, however, conceal underlying credit developments. If only the removal of loans from the balance sheet of the originating MFIs is recorded on the MFI balance sheet, it will appear that loans have been repaid, whereas in reality the borrowers still owe the same amount of debt and no credit has been withdrawn overall from the economy. A synthetic securitisation is not open to the same misinterpretation because the original loans remain on the balance sheet of the original lender (the MFI), but it may conceal where the credit risk lies, which is important for financial stability purposes. The same may be said in the case of traditional securitisation that does not qualify as a “true sale”, although with some qualifications with respect to the issue of the concealment of the allocation of risk (since failure to qualify as “true sale” often has to do with the degree of risk transfer occurring as assessed by accounting standards). In this case, too, as noted above, there is a risk of double counting the loans. Furthermore, if the originating MFI, or the MFI sector as a whole, purchases the securities issued by the FVC acquiring the loans, it will appear (if the loans are mortgage or consumer credit loans, or loans to non-financial businesses) that there has been a switch from lending to households/non-financial corporations to credit to other financial intermediaries, which, although correct if the MFI balance sheet is considered in isolation, does not capture the economic reality of what has happened. For instance, this may arise in a so-called retained or internal securitisation, where the FVC issues debt securities, not for the purpose of selling to investors, but to be placed with the originating MFI (which may use them, for example, as collateral in repurchase agreements with other financial institutions or in central bank refinancing operations).

For various reasons, therefore, the information on the assets side of an MFI’s balance sheet needs to be supplemented, either by further information on its securitisation activities, which can be provided by the MFI itself, or by the partner FVC taking on the loans or assuming the credit risk, or some combination of the two. The main concern

so far as MFI balance sheet statistics and the data based on them are concerned, is the effect of traditional loan securitisation on outstanding MFI loans, which has usually led to a derecognition of the loan from the MFI balance sheet and so to an apparent withdrawal of MFI credit.<sup>24</sup> But if the loans are not derecognised, it is important to know that too. Since synthetic securitisation is of no consequence from this perspective, because the loans remain on the originator’s balance sheet and the FVC does not record a holding of loans, the MFI balance sheet reporting does not contain special reporting requirements for synthetic securitisation (though, of course, any deposits placed by the FVC involved with the MFI in a synthetic securitisation as well as any FVC securities held by the MFI are included in the respective positions on the MFI balance sheet).

#### Other loan transfers

Besides loan securitisation, loans can be transferred from an MFI to another MFI or a non-MFI financial (or non-financial) institution in the context of various operations. For instance, in the case of syndicated loans, trades of the tranches often take place (see the example below). Similarly, in the context of intra-group operations, an MFI can receive a pool of loans from or transfer a pool of loans to a subsidiary institution (e.g. a foreign subsidiary MFI or a financial corporation engaged in lending; see Annex 1.1 for further details on the recording of these operations). These operations have an impact on the MFI’s balance sheet similar to securitisation operations and are therefore also covered by the reporting requirements, as explained below.

#### Reporting requirements for loan securitisation and other loan transfers

Under the requirements of Annex I, Part 6 of Regulation ECB/2008/32, MFIs must report on a monthly and quarterly basis a comprehensive

<sup>24</sup> This is the case because, when it comes to credit institutions, obligatory application of IAS/IFRS is fairly widespread at the level of consolidated accounts only, whereas statistical reporting is typically based on (individual) accounts at legal entity level, where, with some exceptions, local accounting practices prevail. This may, however, change in the future.

set of information regarding loans securitised or otherwise transferred. The main requirements relate to net flows of loans securitised or otherwise disposed of during the relevant period minus loans acquired during the period. All such loan transfers should be included with the exception of:

- (i) loans transferred to or acquired from another euro area MFI; and
- (ii) loans whose transfer occurs as a result of a merger, takeover or division involving the reporting agent.

The reason for provision (i) is that, from the perspective of the euro area MFI sector as a whole, the flows cancel out. The provision allows consistency at euro area level, reduces the burden for reporting agents and limits the risk of asymmetric treatments by different euro area countries whenever the transfer is within the euro area MFI sector. The risk can be particularly high in the case of traded loans (e.g. syndicated loans), which are often characterised by a high number of transactions and mainly involve euro area MFIs. Where, on the other hand, the transfer involves an institutional unit which is not a euro area

MFI, the transfer is covered by the reporting requirement.

This treatment, however, does not provide a complete picture of loan transfers at *national* level, as loans that are transferred from a domestic MFI to an MFI which is resident in another euro area country (or vice versa) will not be covered (loan transfers within the national MFI sector would have no impact on the national consolidated results for the MFI sector).<sup>25</sup> This approach also leads to asymmetric treatment of loan transfers to an MFI resident in another euro area country when compared to loan transfers to a non-euro area MFI, as only the latter are covered by the reporting requirements. The example below illustrates the sale of a share in a syndicated loan by a domestic MFI to a foreign MFI. Intra-group transfers of assets would follow similar lines.

Provision (ii) applies in cases where the merger, takeover or division gives rise to the appearance or disappearance of an institutional unit.

<sup>25</sup> The extension of the coverage to loans transferred to or acquired from an MFI resident in another euro area country is currently under discussion.

### Example

#### A DOMESTIC MFI SELLS ITS SHARE OF A SYNDICATED LOAN TO A FOREIGN MFI

A domestic MFI has a share in a syndicated loan to (domestic) non-financial corporation *A* (for a total amount of 20). A foreign MFI buys the share from the domestic MFI. The initial balance sheets of the two MFIs are as follows:

Domestic MFI				Foreign MFI			
Assets		Liabilities		Assets		Liabilities	
Loans and deposits o/w syndicated loans to corporate <i>A</i>	100 20	Loans and deposits	70	Cash	20	Loans and deposits	60
		Capital and reserves	30	Loans and deposits	80	Capital and reserves	40
Total assets	100	Total liabilities	100	Total assets	100	Total liabilities	100



The foreign MFI purchases the share in the loan for 20 in cash. The balance sheets become:

Domestic MFI				Foreign MFI			
Assets		Liabilities		Assets		Liabilities	
Cash	20	Loans and deposits	70	Loans and deposits o/w syndicated loans to corporate A	100 20	Loans and deposits	60
Loans and deposits	80	Capital and reserves	30			Capital and reserves	40
Total assets	100	Total liabilities	100	Total assets	100	Total liabilities	100

The asset transfer and its counterpart are both recorded as transactions. As a result of this operation, loans to non-financial corporations provided by domestic MFIs fall by 20, while loans to non-financial corporations reported by foreign MFIs rise by 20. For the purposes of the reporting requirements of loans securitised or otherwise transferred, the operation is covered if the acquiring MFI is not resident in the euro area, but not if it is resident in another euro area country.

As such events are recorded from other sources in MFI balance sheet statistics (reclassification adjustment), including the loan transfers in this part of the reporting requirements would lead to a double correction for the purposes of deriving statistics on loans adjusted for loan transfers. Moreover, cases where the loan transfer is treated as a transaction rather than a reclassification (because, for instance, it takes place when the two entities which are merging still represent two distinct institutional units – see Annex 1.1 for further information) are not covered by the provision; transfers between entities which are still separate institutional units are to be included in net flows of loans securitised or otherwise transferred (unless they are both euro area MFIs, in which case provision (i) applies).

Data on net flows of loans securitised or otherwise transferred are covered as follows.

(a) The net amount of loans securitised or otherwise transferred during the month which have an impact on the reported loan stocks (i.e. which are derecognised) is reported. The reporting contains a sector breakdown of the borrowers where these are domestic residents or residents of other euro area countries (no sector breakdown is requested for borrowers resident outside the euro area). This information is essential to the

assessment of MFI lending, and is the input to the ECB's calculation of the securitisation-adjusted growth in lending (see also Section 4.3.1). MFIs must also report whether the counterparty to the operation is an FVC and, if so, whether it is resident in the euro area. This information provides a link to FVC balance sheet statistics. MFIs are required to provide more detailed information quarterly. In addition to the breakdown by sector of borrower, which is provided monthly, the quarterly reporting includes information on the purpose of loans to households and non-profit institutions serving households (i.e. consumption, house purchase, and "other lending", within which loans to sole proprietors/unincorporated partnerships) and on the original maturity of loans to non-financial corporations (with breaks at one and five years).

Example 2 in Annex 2.1 below illustrates the impact that a loan sale with derecognition has on the balance sheet of the MFI.

(b) The net amount of loans securitised or otherwise transferred during the quarter without impact on reported loan stocks (i.e. which are not derecognised due to the application of IAS 39 or other national accounting rules prevent MFIs from

derecognising securitised loans) is reported. This information is useful to achieve a complete picture regarding traditional securitisation and is particularly valuable while accounting practices for derecognition of securitised loans differ across countries due to different account practices applied. MFIs provide a sector breakdown of the borrowers.

The impact on the balance sheet of the originating MFI of a loan sale without derecognition is illustrated in Example 3 in Annex 2.1 below.

In addition, the following components are also covered.

- (c) The outstanding amount of loans transferred in a securitisation which are serviced by the reporting MFI is reported quarterly and with sector and maturity breakdowns as in (a). This is important because it enables the ECB and NCBS to continue to receive information on the loans after they have been transferred. In particular, repayments will show in these outstanding amounts, as they would if the loans had remained on the balance sheet of the originating MFI. Identifying (as MFIs must) securitised loans serviced on behalf of FVCs resident in the euro area permits a link to be made with the information provided by FVCs themselves, and indeed may be a (partial) substitute for reporting by FVCs under the “integrated approach” which avoids seeking the same information from two sources. (Article 18a(6), which was introduced into Guideline ECB/2007/9 by amending Guideline ECB/2008/31, explains how this may work, if necessary with exchanges of information among NCBS.)
- (d) The outstanding amount of securitised loans not derecognised is reported at monthly frequency and with a breakdown by sector of the borrower, identifying loans securitised through a euro area FVC. These requirements are important for a complete picture on securitisation regardless of the derecognition

practice, and allow a comprehensive analysis of outstanding credit. Securitised loans are reported on the statistical balance sheet of the FVC, regardless of the accounting treatment applied. Collecting data on outstanding amounts of loans which have not been derecognised from the balance sheet of the MFI reveals the amounts which appear on both MFI and FVC balance sheets, and is essential to prevent double counting. Recording the amount of non-derecognised loans is also important in analysing the counterpart FVC deposit which is created (see below).<sup>26</sup>

- (e) MFIs also report monthly their deposit liabilities to FVCs in the euro area (broken down by domestic FVCs and FVCs resident in other euro area countries) with a maturity breakdown at two years, so that the monetary component can be identified. Deposits of FVCs mainly consist of two components: (1) a counter-entry to loans securitised (or otherwise transferred) but not derecognised (recorded in the over two years’ maturity category); (2) collateral placed by FVCs with the MFI in the form of deposits in the case of synthetic securitisation. In addition, there may be some deposits from FVCs which arise in the normal course of their business.
- (f) Finally, MFIs report monthly their holdings of securities issued by FVCs in the euro area (again broken down by domestic FVCs and FVCs resident of other euro area countries), providing further links with data submitted under the FVC Regulation. This requirement includes securities held by MFIs as part of a retained securitisation. It should be emphasised that, as is the case for other balance sheet items, MFIs must not net off assets (security claims on FVCs) against deposit liabilities to FVCs.

<sup>26</sup> No data are currently being collected for the outstanding amounts of securitised loans which are derecognised. The collection of this information is currently under review, as discussed in Section 4.3.1.

### Comparison with loan securitisation in the supervisory framework

This section briefly compares the statistical requirements for MFI balance sheet statistics under Regulation ECB/2008/32 with the supervisory requirements for data on securitisation transactions. Supervisory requirements focus on credit risk transfer by individual credit institutions, while statistical requirements are aimed at providing a comprehensive picture of credit developments regardless of the impact of securitisation deals on the MFI balance sheet in order to enhance macroeconomic and monetary analysis. This is reflected in the requirement that all securitisation transactions are to be recorded for MFI balance sheet statistics, while, according to Annex IX, Part 2 of Directive 2006/48/EC, the originating credit institution engaging in a traditional securitisation may exclude securitised exposures from the calculation of risk-weighted exposure amounts and expected loss amounts if significant credit risk associated with the securitised exposures has been transferred to third parties.<sup>27</sup>

A further point to underline relates to the coverage of securitisation transactions under the two reporting frameworks. Under the supervisory framework, credit institutions are required, in accordance with Directive 2006/48/EC, to disclose both traditional and synthetic securitisation transactions. In contrast, MFI balance sheet statistics do not cover synthetic

securitisation, as this has no impact on outstanding amounts of credit.<sup>28</sup>

Moreover, securitisation transactions are disclosed for supervisory purposes whether or not they are set up using a securitisation special purpose entity (SSPE) because of the importance for prudential purposes of recording transfers of risk which in turn affect capital requirements. In contrast, the definition of securitisation in MFI balance sheet statistics covers only securitisation transactions undertaken using SSPEs or FVCs.<sup>29</sup> The requirements of Regulation ECB/2008/32, however, also cover other types of loan transfer (see above for the specific provisions), including securitisation transactions that are undertaken without using SSPEs or FVCs. Hence traditional securitisation transactions reported under the supervisory framework should also be captured in MFI balance sheet statistics.

27 The forthcoming revised templates for the Guidelines on Common Reporting (COREP Rev. 4) will also include a section covering all securitisation transactions, irrespective of whether a significant credit risk transfer has taken place or not.

28 Synthetic securitisation activities, however, are covered by the requirements of Regulation ECB/2008/30 concerning the assets and liabilities of FVCs.

29 The FVC definition in the Regulation ECB/2008/30 does not match exactly the corresponding concept of SSPE used in Directive 2006/48/EC. While FVCs may have secondary activities in addition to their principal activity of performing securitisation transactions, SSPEs are required to limit their business to securitisation. FVCs which undertake secondary activities may therefore not be classified as SSPEs. However, securitisation vehicles resident in the euro area that are SSPEs will almost always be covered by Regulation ECB/2008/30.

#### Coverage of loan securitisation in Regulation ECB/2008/32 and Directive 2006/48/EC

Requirements	Reporting of	Use of SSPE/FVC	Tranching	Credit risk transfer
Regulation ECB/2008/32 – insofar as it affects credit institutions	Traditional securitisations	Securitisations undertaken with an SSPE/FVC and other loan transfers	Tranched and non-tranched securitisations	Not a criterion
Directive 2006/48/EC – credit institutions	Traditional and synthetic securitisations	Securitisations undertaken with or without an SSPE	Tranched securitisations	Securitisation exposures with significant credit risk transfer are excluded
Relative scope (greater than, less than or equal to)	ECB/2008/32 < Directive 2006/48/EC	ECB/2008/32 ≈ Directive 2006/48/EC	ECB/2008/32 > Directive 2006/48/EC	ECB/2008/32 > Directive 2006/48/EC

An important difference between the two frameworks, however, relates to the treatment of the tranching of debt instruments that are backed by securitised loans. The definition of securitisation in Directive 2006/48/EC requires for supervisory purposes that the credit risk transferred through a securitisation is divided into different tranches (i.e. junior, mezzanine, senior) whose ranking determines the distribution of potential losses on the underlying assets among the holders of such asset-backed securities. Tranching is not, however, a necessary condition for inclusion in statistical reporting under Regulation ECB/2008/32, so MFI balance sheet statistics may include securitisation transactions that are not trached and thus not compliant with the supervisory requirements.

The table above compares the scope of the concepts of securitisation applied in the MFI statistical framework and in Directive 2006/48/EC.

#### **Loan securitisation and covered bonds**

Covered bond issuance is governed by special legal frameworks and subject to special prudential supervision. It should be noted that the securitisation of loans and the use of loans as collateral for the issuance of covered bonds are distinct operations. In contrast to the case of securitisation, covered bonds are debt securities issued by a credit institution directly (or fully guaranteed by a credit institution) and covered by a pool of loans (typically mortgage loans) or public sector debt which do not leave the balance sheet of the issuer. Covered bonds represent payment obligations of the originator, and are not dependent on the performance of the pool of assets itself. In the event of default of the issuing or guarantor credit institution, bond holders have a priority claim on the cover pool, in addition to their ordinary claim on the credit institution (“dual recourse”). A transfer of the credit risk – which is a common objective of securitisation – is therefore not achieved by the issuance of covered bonds.

## ANNEX 2.1

### NUMERICAL EXAMPLES

#### I FACTORING

As discussed in Section 2.1.4 above, factoring refers to the sale of a firm's (the "factoring client's") claims (in full or in part) recorded under accounts receivable (in the form of

invoices), representing money due from its customers, to a financial institution known as a "factoring company". The example below relates to the case of recourse factoring, where the risk of default by the customer is retained by the factoring client (meaning that the factoring company – an MFI in this example – is able to hold the factoring client liable if a customer is unable to pay). Non-recourse factoring should be treated analogously.

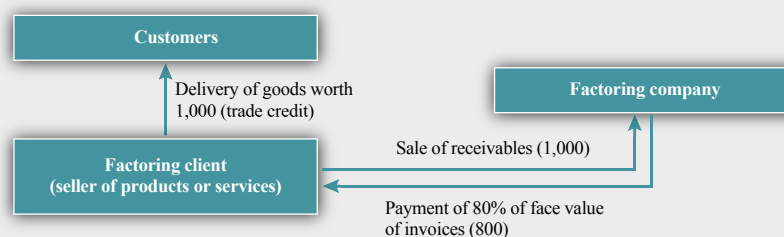
#### Example I

##### RECOURSE FACTORING

The factoring client bills its customers and sends copies of the invoices amounting to 1,000 to the factoring company (the reporting MFI). The factoring company then advances to the client, for example, 80% of the face amount of the invoices. The other 20% is retained as collateral.

##### Flows at the start of the factoring agreement

Face amount of company's invoices	1,000
Reserve fund held as collateral	200
Cash advanced to client by the factoring company	800

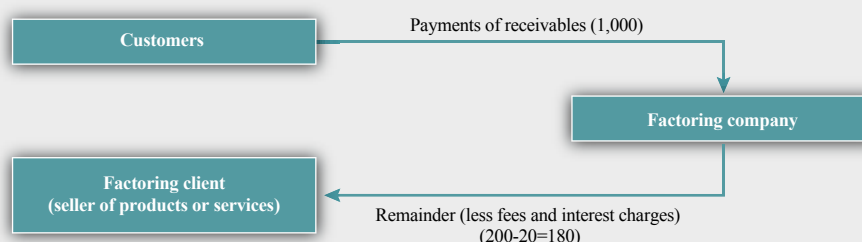


The factoring company records a loan to the factoring client of 800, matched on the balance sheet by an outflow of cash. Once the factoring company has received payments of 1,000 from the customers in respect of the outstanding invoices, it will release to the client the retained amount of the invoice (200), minus the appropriate financing fees and interest on the advanced cash (for example 2%). In terms of balance sheet flows, the inflow of cash (1,000) is matched by an outflow of cash to the factoring client (180), the cancellation of the loan to the factoring client (800) and an increase in capital and reserves via profit and loss equal to the total proceeds from fees and interest (20).

If the customers pay only a part of their debts, the factoring company uses the reserve fund held as collateral to cover the difference. If the fund is not sufficient to cover the difference, a claim vis-à-vis the factoring client would arise for the amount in excess of the reserve fund.

### Flows upon payment of receivables

Reserve fund paid to client less fees and interest	180
Cash proceeds retained by the factoring company (fees and interest)	20



A similar example could be drawn up in the case of non-recourse factoring, where the factoring company assumes the full risk of default by the customer. In such a case, a loan would be recorded vis-à-vis the customer for an amount equal to the trade credit. Fees and interest would be charged immediately to the factoring client, who would then receive the full amount of the trade credit net of these charges.

## 2 SOME STYLISTED EXAMPLES RELATING TO SECURITISATION ACTIVITIES

The following examples illustrate the sale of loans by an MFI to an FVC with and without

derecognition. The focus here is on the reporting of the transaction (and of the subsequent servicing) by the originating MFI. More detailed examples are available on the FVC section of the ECB's website (<http://www.ecb.europa.eu>).

### Example 2

#### SALE OF LOANS WITH DERECOGNITION

An MFI sells at face value loans recorded on its balance sheet at 100. It receives from the FVC 50 in cash and 50 in the senior tranches of the securities issued by the FVC. If expected losses in the portfolio are (for example) 15 and the FVC's junior tranches amount to 50, all risks of the portfolio are deemed to have been transferred through the junior tranches, and so IAS 39 allows the MFI to derecognise the portfolio of securitised loans. The MFI accordingly records on its balance sheet in the reference month a reduction of 100 of loans, matched by increased holdings of cash and FVC securities of 50 each.

	Assets	Liabilities
Cash	+50	
FVC securities	+50	
Loans	-100	

Assuming that the reporting MFI continues to service the loans, it will report on the next quarterly return outstanding amounts of serviced loans of 100 (less any possible redemptions taking place in the quarter).



### Example 3

#### SALE OF LOANS WITHOUT DERECOGNITION

In this case the 50 in FVC securities received by the originating MFI consists of junior tranches only. Risks related to the loans are accordingly deemed to remain with the MFI, and the loan portfolio cannot be derecognised from the MFI balance sheet. The securitisation is therefore effectively treated as a secured borrowing by the MFI. The MFI reports in the reference month receipts from the FVC of 50 in cash and 50 in securities issued by the FVC, but this time records no change in holdings of loans. Instead, a deposit liability of 100 is recorded under deposits with agreed maturity over two years.

	Assets	Liabilities
Cash	+50	
FVC securities	+50	
Deposits with agreed maturity over 2 years (liabilities side)		+100

In accordance with Regulation ECB/2008/32, the MFI must not net the FVC securities acquired against the deposit liability arising from the securitisation. As before, if the reporting MFI continues to service the loans, it will report on the next quarterly return outstanding amounts of serviced loans of 100.

## 3 DATA REPORTING TO THE ECB

The following information refers to the reporting of MFI balance sheet aggregates by NCBs to the ECB. In addition, NCBs have specific reporting procedures for the reporting of statistical data by MFI reporting agents to the NCB.

### 3.1 GROSSING-UP PROCEDURES

As mentioned in Section 1.5, Regulation ECB/2008/32 distinguishes between MFIs which are subject to full reporting requirements and small MFIs to which derogations are applicable. Where NCBs grant derogations to MFIs in accordance with Article 8(1)(a) and or (d) of the Regulation, NCBs gross up the data to 100% coverage for these MFIs in the compilation of the monthly and quarterly MFI balance sheet data reported to the ECB.

The procedure used for grossing up the data to 100% coverage must fulfil the following minimum standards (see Article 3(4) of Guideline ECB/2007/9, as amended by Guideline ECB/2009/23):

- i) missing breakdowns are estimated by applying ratios based on a sub-set of the actual reporting population considered to be more representative of the “tail”, as follows:
  - for euro area countries whose contribution to the euro area aggregated MFI balance sheet is larger than 2%, the sub-set is determined such that the total balance sheet of the entities in the sub-set does not exceed 35% of the national aggregated MFI balance sheet, unless the balance sheets of the institutions to which the derogations are granted account for less than 1% of the national MFI balance sheet;
  - the same arrangement is adopted for euro area countries whose contribution to the total aggregated MFI balance sheet of the euro area is less than 2%, unless significant costs are involved, in which case ratios based on the entire reporting population are applied instead;
- ii) in applying point (i), both the “tail” and the sub-set of the actual reporting population may be divided into different groups according to the type of institution (e.g. MMFs or credit institutions);
- iii) whenever the contribution of MMFs that report their total assets only once a year exceeds 30% of the total MMF balance sheet in the euro area country concerned, data reported by MMFs and credit institutions are grossed up separately as follows:
  - if there is sufficient coverage from MMFs that are full reporters, their aggregated balance sheet is used as the basis for grossing-up;
  - if the coverage from MMFs that are full reporters is insufficient or there are no MMFs that are full reporters, the balance sheet for the MMF sector is estimated from alternative data sources, at least once a year, and used as the basis for grossing up;
- iv) where breakdowns are available, but with a longer delay or at a lower frequency, reported data are carried forward into the missing periods by:
  - repeating the data when the results have proved to be adequate; or
  - applying appropriate statistical estimation techniques to take into account trends in the data or seasonal patterns;
- v) ratios or any other intermediate calculation required to implement the minimum standards for grossing up may be derived from data obtained from supervisory authorities whenever a reliable link can be established between the statistical series to be grossed up and such data.

NCBs are requested to inform the ECB of any significant changes in their grossing-up procedures. This is important for various reasons. For instance, such changes may determine breaks in the time series. Similarly, when new data become available, the assumptions used for the grossing-up may change and a need to revise past data may arise to improve the quality of the estimates.

### 3.2 ROUNDING POLICY AND DATA TRANSMISSION

MFI balance sheet data are reported by NCBs to the ECB in millions of euro.<sup>1</sup> Amounts are rounded to the nearest million. Exact half millions are rounded up.

Statistics are reported as missing (value “NC”) when the specific balance sheet item relates to instruments which do not exist in the reference area (e.g. owing to legal restrictions) or which exist but for which the data are not collected (e.g. for non-mandatory items) and not estimated. Where the balance sheet item covers instruments which exist in the reference area and for which data are collected (or estimated), but the corresponding amounts outstanding are less than €0.5 million, the reporting country should report “0” (and not a missing value).

NCBs must report an observation status value attached to each exchanged observation. Missing values are reported with observation status flag “M” when they relate to instruments which do not exist in the reference area, and “L” when the data exist but are not collected (and not estimated). When data are not reported as missing, the observation status flags are “A” for normal values, “E” for estimated values, and “P” for provisional values (the latter attribute is often used for the last/most recent observation and is usually replaced by an “A” in the subsequent transmission). If an observation is qualified by two characteristics, the more important is reported. For example, when an observation is both a *provisional* value and the result of an estimate, priority is given to the “*estimate*” property, and the flag “E” is used.

Data on MFI balance sheet statistics are transmitted by NCBs to the ECB using special data exchange arrangements. The data exchanges use standardised platform-independent messages (SDMX-EDI format – known as Gesmes/TS), including data (numeric values) and/or attributes (metadata explaining the data).<sup>2</sup>

In order to exchange statistical messages, the data are structured according to precise “key families” (i.e. data structure definitions) consisting of statistical concepts and code lists, which allow the data content to be described adequately and unambiguously. Each data set must conform to a known key family definition.

The key families define the structure of the series keys, i.e. the set of their dimensions, in terms of concepts and associated code lists, and their relationship with the relevant attributes. In the Gesmes/TS messages exchanged, statistical concepts can be used either as dimensions (in composing the “keys” identifying the time series) or as attributes (providing information about the data). Coded dimensions and attributes take their values from predefined code lists.

The ECB disseminates MFI balance sheet statistics using the same data exchange standards.

### 3.3 DATA RELEASE CALENDARS AND PUBLICATION DATES

As discussed above in Section 1.6, NCBs transmit data to the ECB according to a reporting schedule which the ECB communicates to NCBs by September each year for the following calendar year.

As regards publication by the ECB, statistics on euro area aggregates and selected national

1 Non-euro area EU Member States, however, report MFI balance sheet data in millions of national currency.

2 SDMX (Statistical Data and Metadata eXchange) is an initiative to promote internationally agreed standards for the exchange of statistical data and is sponsored by several institutions (ECB, Eurostat, IMF, BIS, OECD, UN, World Bank); for more details, see the SDMX website (<http://sdmx.org>).

results are released on the 19th working day after the end of the reporting period.<sup>3</sup> Additional quarterly breakdowns based on the quarterly tables of the reporting scheme are released with a one-month lag compared with monthly data – e.g. data for Q1 are released together with monthly data for April. The release calendar for MFI balance sheet statistics in the euro area is published on the ECB website for the following year.<sup>4</sup>

In accordance with Guideline ECB/2007/9, NCBs are not allowed to publish national contributions to the euro area monetary aggregates or counterparts before the ECB publishes the euro area data. Individual components of the monetary aggregates and of their counterparts are also covered by this embargo.

### 3.4 REVISION POLICY

Statistical series may be subject to revision. High-frequency data may be revised in the light of later, more complete or more correct information, and methodological improvements may from time to time call for revisions to earlier data. The ECB's policy is to announce revision cycles in advance, to provide full documentation on revisions, to keep their size and pattern under review, and, as far as possible, to revise earlier data where this can be done at reasonable cost.

As mentioned in Guideline ECB/2009/23, two types of revisions to national aggregates for MFI balance sheet data are possible: (i) regular revisions, which refer to the period immediately preceding the most recent one; and (ii) exceptional revisions, which refer to earlier dates or periods.

Regular revisions are part of the normal routine. Exceptional revisions are, in principle, less common and are normally due to the correction of mistakes, reclassifications, improved reporting procedures, etc. The principles to which the revision policy should conform are listed below.

- (a) In transmitting revised data, NCBs must take into consideration the established timeliness of regular reporting so as not to clash with the regular production period. Exceptional revisions should be transmitted only outside the regular production cycle (but see further below).
- (b) Any significant revisions (not due to grossing up or to minor routine corrections) should be accompanied by an explanatory note. Exceptional revisions should always be accompanied by an explanatory note.

In view of the need to ensure a good balance between the quality of monetary statistics and their stability, and in order to enhance the consistency between the monthly and the quarterly returns, the ECB prefers exceptional revisions to the monthly data to be submitted with the quarterly returns. Where the current national reporting scheme does not allow revised quarterly data to be reported together with monthly revisions referring to the same end-quarter month, NCBs must ensure that the consistency between monthly and quarterly data is maintained.<sup>5</sup>

When exceptional and ordinary revisions and updates are reported in the same data file, all data are processed simultaneously. If exceptional revisions are reported separately during the production period, after updates and regular revisions have been transmitted, the ECB may decide to postpone the processing and storage of the exceptional revisions until after the production period, to avoid delays in the regular data processing and in the production of euro area aggregates. That said, if incoming exceptional revisions would significantly affect

<sup>3</sup> As clarified above, the number of working days is defined taking into account the public holidays in individual euro area countries; see Section 1.6 for further details.

<sup>4</sup> See the release calendar for monetary developments in the euro area on the ECB's website (<http://www.ecb.europa.eu>).

<sup>5</sup> For this purpose, estimates can be derived for the quarterly breakdowns corresponding to the revised monthly series, at least for the more significant aggregates, which are then replaced by actual quarterly data as soon these are available.

the data at euro area level, or correct notable mistakes, these revisions may also be accepted during the production period.

Finally, the ECB has formalised the monitoring of the quality of statistics by requiring periodic reports on revisions. Such reports are published regularly for monetary and financial statistics. In publishing statistics and revising data after publication, the ECB coordinates its actions with the NCBs and, where necessary, internally across different areas of statistics. The aim is to present the most up-to-date information, while maintaining in as far as possible consistency across statistics and over time.<sup>6</sup>

<sup>6</sup> See, for example, *Euro area monetary and financial statistics 2010 data quality report*, ECB, March 2011, available on the ECB's website (<http://www.ecb.europa.eu>).

## PART 2 ECB MONETARY STATISTICS COMPILATION: METHODS AND CONCEPTS

### 4 COMPILATION OF EURO AREA STATISTICS

#### 4.1 DERIVATION OF THE EURO AREA AGGREGATED AND CONSOLIDATED BALANCE SHEET

The main source of information for euro area monetary statistics (monetary aggregates and counterparts to M3) is the MFI balance sheet, aggregated across the euro area and then consolidated (inter-MFI positions cancelled out). Supplementary information is also taken into account concerning monetary liabilities of central government and post office giro institutions, and holdings of certain monetary instruments by non-residents of the euro area. The ECB compiles monetary statistics for the euro area as amounts outstanding (stocks) and as transactions, with the aim of capturing financial transactions between the MFI sector and the other economic sectors during the reference period. Financial transactions are calculated by adjusting the difference between end-of-month stocks for the effect of “non-transactions-related” factors which do not imply a flow of financing between sectors (i.e. reclassifications and other adjustments, exchange rate changes, price revaluations and loan write-offs/write-downs – see Section 1.6.3 and Section 4.2).

As discussed above, all monthly MFI balance sheet information, including required data on “reclassifications and other adjustments” and “revaluation adjustments”, must be submitted by NCBs to the ECB by the 15th working day after the end of the calendar month to which the data relate. NCBs also report data on monetary assets and liabilities of central government and post office giro institutions. In addition, ECB compilers receive information concerning the ECB’s own balance sheet and obtain some estimates of the geographical breakdowns of the holders of negotiable instruments issued by MFIs from other sources (see Section 4.1.4).

##### 4.1.1 THE EURO AREA AGGREGATED MFI BALANCE SHEET

The euro area aggregated MFI balance sheet consists of the aggregated balance sheets of the Eurosystem and of the MFI sector excluding the

Eurosystem. The aggregated balance sheet for the Eurosystem is obtained by aggregating the national balance sheets of all NCBs in the euro area and the ECB, item by item. Similarly, the national balance sheets of all MFIs excluding the NCBs, for all countries participating in the euro area, are aggregated by summing them up. The format of the NCB/ECB balance sheet is identical to that of the other MFIs with the exception of three additional balance sheet items specific to central banks (“Gold”,<sup>1</sup> “Receivables from the IMF” and “Counterparts of special drawing rights”). The two aggregated balance sheets, one for the Eurosystem and one for the other euro area MFIs, are compiled on a gross basis (i.e. without netting out inter-MFI positions), and include all MFI assets and liabilities vis-à-vis the sectors identified within the balance sheet structure, including the MFI sector itself. They are published by the ECB each month.

The aggregated balance sheets of the Eurosystem and of other MFIs are then aggregated by summing them up, item by item, into the aggregated balance sheet of the euro area MFI sector as a whole, which provides the basis for the derivation of the consolidated balance sheet as described in the next paragraph. The same procedure is adopted for amounts outstanding and for transactions.

While the aggregate balance sheet is compiled for the Eurosystem and for other MFIs separately, it should be noted that it is not possible to identify, for example, the loans of the Eurosystem to other MFIs, or the deposits placed by other MFIs with the Eurosystem. This is because the standard reporting system distinguishes these two on the reporting side, but does not distinguish between the Eurosystem and other MFIs on the counterparty side. However, this information may be derived from the weekly financial statement of the Eurosystem (though with limited breakdowns), which is not further discussed in

<sup>1</sup> As noted in Section 2.1, gold held by a central bank is normally classified as monetary gold, and is a financial asset, whereas gold held by anyone else (including other MFIs) is treated statistically as a commodity, and thus as a non-financial asset, and is included in “fixed assets”.





## Derivation of the aggregated balance sheet of the euro area MFI sector

### Derivation of the aggregated balance sheet for the Eurosystem

Stocks (transactions) for each balance sheet item of NCB in country *l*

+

.....

+

Stocks (transactions) for each balance sheet item of NCB in country *n*

+

Stocks (transactions) for each balance sheet item of the ECB

=

Aggregated stocks (transactions) for each balance sheet item of the Eurosystem

### Derivation of the aggregated balance sheet for MFIs other than the Eurosystem

Stocks (transactions) for each balance sheet item of "other MFIs" in country *l*

+

.....

+

Stocks (transactions) for each balance sheet item of "other MFIs" in country *n*

=

Aggregated stocks (transactions) for each balance sheet item of the euro area MFIs other than the Eurosystem

### Derivation of the aggregated balance sheet for the MFI sector

Aggregated stocks (transactions) for each balance sheet item of the Eurosystem

+

Aggregated stocks (transactions) for each balance sheet item of euro area MFIs other than the Eurosystem

=

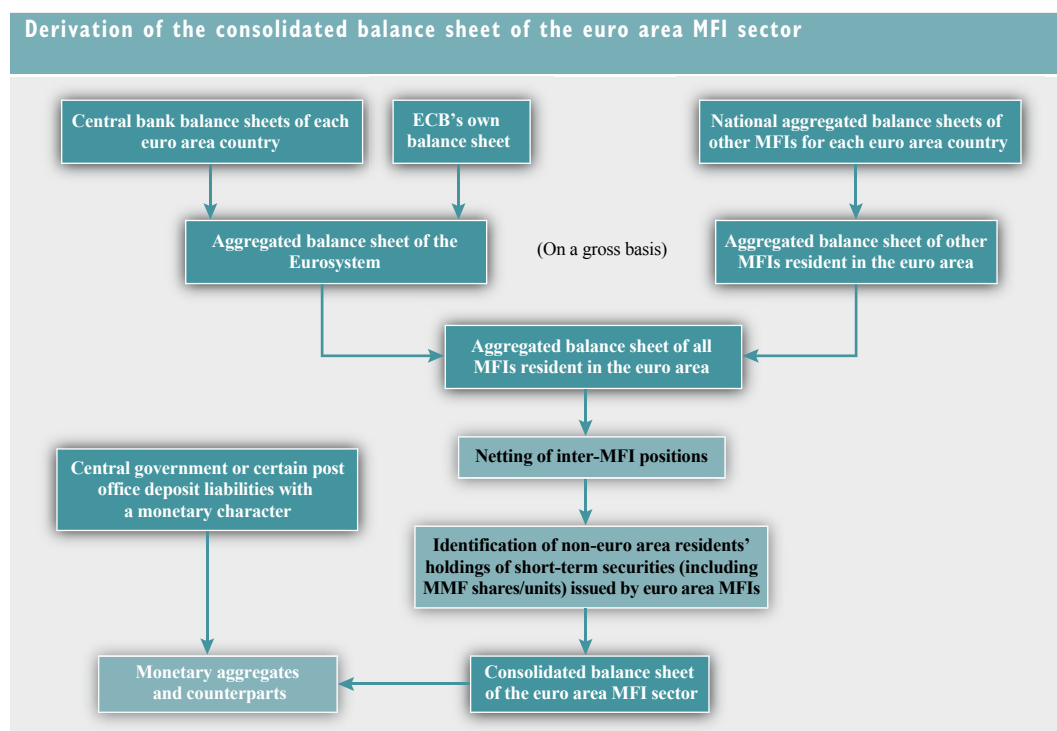
Aggregated stocks (transactions) for each balance sheet item of the euro area MFI sector

this manual, or from data which NCBs transmit to the International Monetary Fund (IMF) via the ECB. The latter are transmitted within the regular monthly data flow for MFI balance sheet statistics (see also the specifications in Article 12 of Guideline ECB/2007/9 and Part 9 of Annex III to the Guideline).

#### 4.1.2 THE EURO AREA CONSOLIDATED MFI BALANCE SHEET

The starting point for the derivation of the consolidated balance sheet is the aggregated

balance sheet of the MFI sector as a whole. The consolidated balance sheet of the euro area MFI sector provides statistical information on the MFI sector's assets and liabilities vis-à-vis residents of the euro area outside the MFI sector (i.e. general government and all other euro area residents) and vis-à-vis non-residents of the euro area, and is obtained by netting the inter-MFI positions within the euro area. The netting of inter-MFI positions is not confined to deposits and loans, but covers all balance sheet items where counterparty information allows the amount of the MFI liability held within the



MFI sector to be determined. For example, in the case of *currency* issued, the amounts held within the MFI sector are netted out. By convention, the remainder, which may be held by the euro area money-holding sector, by central government or by residents of the rest of the world, is allocated fully to the euro area money-holding sector and is thus included in the monetary aggregates. Similar difficulties also arise for *shares/units issued by MMFs and debt securities issued by MFIs with an original maturity of up to two years* (both of which are monetary instruments included in M3): inter-MFI positions are netted, and, in this case, estimated holdings by non-euro area residents are excluded from M3 (see also Section 4.1.4).

In the case of *debt securities issued by MFIs with original maturity over two years* no further estimations are made. After inter-MFI holdings have been netted out, the remainder is assumed to be held in the euro area and is allocated to the counterpart “longer-term financial liabilities” (see below). The same applies to the remainder of *capital and reserves* after holdings by other MFIs have been deducted from shares issued by MFIs.

The diagram above outlines the process leading from national submissions to the consolidated balance sheet of the euro area MFIs and to the euro area monetary aggregates.

#### 4.1.3 FROM THE EURO AREA CONSOLIDATED BALANCE SHEET TO MONETARY AGGREGATES AND COUNTERPARTS

##### Monetary aggregates

For euro area monetary statistics, the *money-holding sector* comprises all non-MFIs resident in the euro area except central government, i.e. households, non-financial corporations, financial corporations which are not MFIs, state government, local government and social security funds. Central government is considered to constitute a *money-neutral sector*, except that central government liabilities with a monetary character are included in monetary aggregates. Central government holdings of monetary assets issued by MFIs (the deposits that central government holds with MFIs and central government holdings of other monetary instruments issued by MFIs) are not counted as holdings of the money-holding sector.

Thus the liabilities side of the consolidated balance sheet provides the basis for the calculation of monetary aggregates. The liability breakdowns of the MFI sector allow different degrees of moneyness to be distinguished and monetary aggregates are derived by adding to these monetary liabilities certain short-term deposit liabilities of central government (national savings accounts and treasury accounts) and of post office giro institutions held by the money-holding sector which have similar characteristics to short-term bank deposits.<sup>2</sup>

A monetary aggregate can be defined as the sum of currency in circulation plus the outstanding amounts of certain financial instruments which have a high degree of moneyness or liquidity in a broad sense. The Eurosystem has defined a narrow (M1), an intermediate (M2) and a broad aggregate (M3). These aggregates differ with respect to the degree of moneyness of the financial instruments included.

The table below shows the definitions of the euro area monetary aggregates comprising liabilities issued by the MFI sector and by entities in the central government sector and certain post office giro institutions in the euro area. These aggregates include only positions of the euro area money-holding sector held with MFIs resident in the euro area. Holdings by euro area residents of liquid assets denominated in foreign currency can be close substitutes for euro-denominated assets, and the monetary aggregates include

them if they represent liabilities issued by MFIs resident in the euro area.

*M1 (narrow money)* comprises currency in circulation (banknotes and coins) and balances that can immediately be converted into currency or used for cashless payments (overnight deposits).

*M2 (intermediate money)* comprises M1 and, in addition, deposits with original maturities of up to two years and deposits redeemable at notice of up to three months. Depending on their degree of moneyness, such deposits can be converted into components of narrow money, but in some cases there may be restrictions, such as the need for advance notification, delays, penalties or fees. The definition of M2 reflects the particular interest in analysing and monitoring a monetary aggregate that, in addition to currency and overnight deposits, includes a wide range of other deposits.

*M3 (broad money)* comprises M2 and marketable instruments issued by the MFI sector. Certain money market instruments, in particular MMF shares/units and repurchase agreements, are included in this aggregate. M3 also includes bonds

2) These corrections for the short-term deposit liabilities of central government and certain post office giro institutions (classified as non-financial corporations, S.11 – see Article 1 of Regulation ECB/2006/8 addressed to them) are significant for only a few euro area countries. In most euro area countries, post office giro institutions have MFI status and, as such, their deposit liabilities are already included in the NCBs' returns as part of the national aggregated balance sheet of other MFIs.

#### Definition of euro area monetary aggregates

Liabilities <sup>1)</sup>	M1	M2	M3
Currency in circulation	X	X	X
Overnight deposits	X	X	X
Deposits with an agreed maturity of up to 2 years		X	X
Deposits redeemable at notice of up to 3 months		X	X
Repurchase agreements			X
MMF shares/units			X
Debt securities issued by MFIs with a maturity of up to 2 years			X

1) Liabilities of the money-issuing sector and central government and certain post office liabilities with a monetary character held by the money-holding sector.

issued by MFIs with an original maturity of up to two years. A high degree of liquidity and price certainty make these instruments close substitutes for deposits. As a result of their inclusion, M3 is less affected by substitution between various liquid asset categories than narrower definitions of money, and is therefore more stable.

Longer-term liabilities of MFIs are excluded from the definition of M3 as they are regarded more as portfolio instruments than as a means of carrying out transactions. Nevertheless, they may be regarded as substitutes for some of the components of M3, at least as they approach redemption.

### Counterparts to monetary aggregates

The consolidated balance sheet also provides the basis for the regular analysis of the counterparts of M3, i.e. all the items other than M3 on the consolidated balance sheet (both on the assets and on the liabilities side) rearranged

to “explain” (in the statistical sense) changes in broad money in an analytically useful way.

The relationship between M3 and its counterparts rests on an accounting identity. Using the balance sheet identity, it is possible to present the monetary aggregate M3 in terms of other components of the MFI balance sheet as follows:

Schematic consolidated balance sheet of euro area MFIs

Assets	Liabilities
Credit to euro area residents	M3 <sup>1)</sup>
	Longer-term financial liabilities
External assets	External liabilities
Other assets (including fixed assets)	Other liabilities (including MFI deposits held by central government)

1) Including central government deposit liabilities of a monetary nature held by the money holding sector.

### M3 and counterparts

$$M3 = \text{credit to euro area residents} + \text{net external assets} - \text{longer-term financial liabilities} + \text{other counterparts (net)} \quad [4.2.1]$$

*Credit* is defined as loans granted to non-MFI euro area residents plus MFI holdings of securities issued by non-MFI euro area residents. As securities can be seen as an alternative to loans as a source of funds, this definition provides fuller information on the amount of financing supplied by the MFI sector to the economy than a narrow definition comprising only loans. It is worth noting that, unlike the widely used concept of credit, comprising loans and debt securities (based on the concept of a creditor-debtor relationship), in the context of monetary statistics credit also includes shares and other equity instruments.

*Net external assets* are defined as external assets held by MFIs minus external liabilities of MFIs. External assets are holdings of cash in currencies other than euro, holdings of securities issued by non-residents of the euro area, loans to

non-residents of the euro area (including banks), and gold and receivables from the IMF (including special drawing rights (SDRs)) held by the Eurosystem. External liabilities are deposits held by non-residents of the euro area with euro area MFIs (including any “loans” made by non-residents of the euro area to euro area MFIs, which by convention are recorded on the MFI balance sheet as deposits), and holdings by non-residents of the euro area of MMF shares/units and of debt securities with maturity of up to two years issued by MFIs in the euro area. External assets and liabilities may be denominated in euro or in foreign currency; what matters is that they represent claims on or liabilities to non-residents of the euro area.<sup>3</sup>

<sup>3</sup> See “The external dimension of monetary analysis”, *Monthly Bulletin*, ECB, August 2008, p. 71.

*Longer-term financial liabilities* are deposits with an agreed maturity of over two years, debt securities issued by euro area MFIs with an original maturity of more than two years (including, for practical reasons, holdings of such instruments by non-residents of the euro area, which should be more properly regarded as external liabilities, but for which no estimates are currently made), deposits redeemable with a period of notice of over three months, and the capital and reserves of the MFI sector.

The item *other counterparts (net)* comprises all remaining items on the consolidated balance sheet. Among these are deposits that central government holds with the MFI sector, and capital and reserves. In addition, there are fixed assets, i.e. non-financial assets of MFIs, such as buildings. The remaining assets and liabilities include a variety of items, such as financial derivative positions, amounts receivable or payable in respect of suspense and transit items, accrued interest receivable/payable on loans and deposits, dividends to be received/paid, amounts receivable/payable not related to the main MFI business, the asset counterpart to coins issued, and net amounts payable in respect of the future settlement of transactions in securities (see also Section 2.1.9). This category also includes the counterparts to SDRs held by the Eurosystem.<sup>4</sup> Some specific breakdowns of the remaining assets and liabilities are collected for euro area accounts purposes. The “other counterparts” position also includes a notional entry to balance the short-term deposit liabilities of central government which are included in M3.

Movements in individual counterparts to M3 often relate to changes in M3. For example, suppose that an MFI grants a loan for 100 to a non-financial corporation, which keeps the money on its current account to meet future payments; this will translate into an increase of 100 in M3:

Assets		Liabilities	
Credit to euro area residents	+100	M3	+100
External assets	-	External liabilities	-
Other assets	-	Other liabilities	-

On the other hand, changes in M3 counterparts may not be reflected in changes in M3. Suppose, for instance, that euro area residents are granted a loan by a euro area MFI for 100, but then use the borrowed funds to buy foreign assets (e.g. US government bonds, or the dollars needed to buy them in the US market) from euro area MFIs. As these foreign assets represented external assets of euro area MFIs, in this case the increase in the item “credit to euro area residents” is matched by a decrease in the MFIs’ net external assets – the observed changes in counterparts are connected and offsetting, with no impact on M3:

Assets		Liabilities	
Credit to euro area residents	+100	M3	-
External assets	-100	External liabilities	-
Other assets		Other liabilities	-

The measures of growth of euro area monetary aggregates and counterparts are always based on transactions data and thus exclude changes in balance sheet amounts arising from revaluations, reclassifications and any other non-transactional influences. The methods used to calculate transactions and measures of growth are explained below in Section 4.3.

#### 4.1.4 NATIONAL CONTRIBUTIONS TO EURO AREA MONETARY AGGREGATES AND COUNTERPARTS AND THEIR RELATIONSHIP TO NATIONAL AGGREGATES

##### National monetary aggregates before adoption of the euro

Before entry into the monetary union, the money stock in a euro area country will have comprised national currency in circulation (excluding holdings by MFIs), holdings by residents of certain types of deposit with resident MFIs and – though in some countries these were of negligible importance – holdings by residents of certain liquid marketable claims on resident MFIs.

<sup>4</sup> Since 2009, an imputed liability matching holdings of SDRs has been recorded in remaining liabilities rather than in external liabilities. This treatment is more faithful to the ESA 95 requirement that SDRs are assets without a liability counterpart.

Monetary aggregates and their counterparts could readily be measured from balance sheet data supplied by the NCB and other resident MFIs.

### National counterparts to national broad money (M3) before adoption of the euro

The main counterparts are domestic credit and net foreign assets (the “external” counterpart). Before euro area entry, in national monetary statistics, these items were MFI (including NCB) lending to residents in all forms (including the acquisition of securities), and lending in all forms to non-residents less all liabilities to non-residents.

### Euro area M3 and counterparts

As explained above, for the euro area as a whole, broad money (M3) consists of euro banknotes and coins in circulation outside the euro area MFI sector, deposits held by euro area residents (other than MFIs and central government) with MFIs anywhere in the euro area, and euro area residents’ holdings of certain liquid marketable securities issued by MFIs anywhere in the euro area, including shares/units issued by MMFs.

In euro area statistics, the equivalent of the “domestic credit” counterpart to M3 is lending in all forms (including through the acquisition of securities) by MFIs in the euro area (including the Eurosystem) to euro area residents other than MFIs, whether domestic residents or residents of other euro area countries. The “external” counterpart consists of euro area MFIs’ net claims on non-residents of the euro area.

### National contributions to euro area M3 and counterparts

The national contributions to euro area M3 are not the same as national monetary data before entry into the euro area. Before entry into the euro area, national monetary aggregates comprised instruments issued by domestic MFIs and held by the domestic money-holding sector. The concept of *residency* changes for national contributions to euro area aggregates. For each euro area country, the national contribution to euro area aggregates relates to the monetary

instruments issued by MFIs resident in the country and held by the money-holding sector throughout the euro area (i.e. by residents of the same country and residents of all other euro area countries). Similarly, the national contribution to counterparts to M3 reflects a euro area rather than a national residency perspective.

For various reasons, it is not possible to calculate how much of the euro area money stock is held by residents of an individual euro area country. Instead, NCBs provide to the ECB, and may publish, the national contribution to euro area monetary statistics based on resident MFIs’ balance sheets, including information on reclassifications and valuation changes to enable transactions to be calculated. Similarly, they may publish the national contribution to at least the “credit to euro area residents” counterpart to euro area M3.

In conceptual terms, there is no fundamental difference between compiling a monetary aggregate and its counterparts for a single country or for the euro area. However, in practice, particular issues need to be considered. The first concerns accounting for currency in circulation. The second concerns the identification of holders (domestic, residents of other euro area countries or the rest of the world) of negotiable debt instruments (including shares/issues of MMFs) issued by MFIs in individual euro area countries.

### National contribution to the banknotes and coins component of euro area monetary aggregates

Before the adoption of the euro, the amount of currency issued by an NCB, minus amounts held by resident MFIs, was in most cases a good measure of the national currency in circulation with resident money-holding sectors (though in the case of Germany, significant amounts of Deutsche Mark were known to be held by non-residents). In the euro area, under the *banknote allocation key*, the share of each NCB in the total issue of banknotes by the Eurosystem is deemed to be that central bank’s share in the paid-up capital of the ECB, adjusted



for a notional 8% of the total issue which is attributed to the ECB itself. The accounting takes this form because euro banknotes are not a liability of the central bank which happens to issue them, but of the Eurosystem as a whole. The banknote allocation key determines the amount recorded as banknotes issued within “currency in circulation” on the liabilities side of the NCB’s balance sheet, both in the NCB’s (usually weekly) financial statement and in its monthly MFI balance sheet return (balance sheet item No 8 in Guideline ECB/2007/9,

Annex III, Part 4). An individual NCB may issue more than this amount, or less, depending on demand; the excess or shortfall appears elsewhere on the NCB’s balance sheet as an intra-Eurosystem liability or asset in remaining liabilities (No 14) or remaining assets (No 7) (see also Sections 2.1.1 and 2.1.9).

The numerical example below (which ignores the currency issue of other Eurosystem central banks and the 8% notionally allocated to the ECB) helps to explain the accounting practice.

#### Example

Consider two national central banks, NCB A and NCB B, and suppose that at time *t* their balance sheets have a very simple structure, with no currency in issue and balances on the current accounts of commercial banks (CB) matched by holdings of gold:

NCB A				NCB B			
Assets		Liabilities		Assets		Liabilities	
Gold	200	Currency	-	Gold	300	Currency	-
		CB current accounts	200			CB current accounts	300
Remaining assets	-	Remaining liabilities	-	Remaining assets	-	Remaining liabilities	-

Suppose that the two NCBs have equal shares in the capital of the ECB, and that the banknote allocation key attributes to each of them a banknote issue of 100. NCB A actually issues 80, while NCB B issues 120. The deposits of commercial banks with NCB A fall by 80 as they buy the banknotes from the NCB, but on its balance sheet the NCB records an increase of 100 (the banknote allocation key amount) in its liabilities in the form of currency. So its liabilities have increased by 20 (net). Conversely, NCB B, which also records an increase of 100 in liabilities in the form of currency, sees its liabilities to resident commercial banks fall by 120 – an overall decrease of 20 in its liabilities. In neither NCB have assets changed. NCB A’s liability in respect of the 200 banknotes issued in total is indeed 100, i.e. the amount of the banknote allocation, not the 80 which it happens to have issued. Accordingly, NCB A enters 20 as an intra-Eurosystem claim (in remaining assets), which restores the balance sheet to balance. Similarly, NCB B’s true liability in respect of the 200 banknotes issued in total is 100, not 120; so NCB B enters 20 as an intra-Eurosystem liability (in remaining liabilities) to maintain equilibrium on its balance sheet. At time *t*+1 the two balance sheets will have the following structure:

NCB A				NCB B			
Assets		Liabilities		Assets		Liabilities	
Gold	200	Currency	100	Gold	300	Currency	100
		CB current accounts	120			CB current accounts	180
Remaining assets	20	Remaining liabilities	-	Remaining assets	-	Remaining liabilities	20

Aggregated across the Eurosystem (including the notional 8% of the issue attributed to the ECB), the banknote issue is thus correct, and intra-Eurosystem positions cancel out. The consequence is that in the national data submitted by NCBs to the ECB the item “currency in circulation” (balance sheet item No 8) is a notional amount, and does not measure the amount actually issued by the NCB. The amount of euro currency in the hands of residents of the euro area country concerned may be different again, since large amounts of euro banknotes may be brought into the country by tourists and other visitors, taken out in the course of visits abroad, or cross the border in the form of remittances, with no direct way of measuring them.

Although in all euro area countries coins are a liability of government, by convention they are deemed to be a liability of the central bank on the statistical balance sheet. This liability is balanced with a notional claim on government recorded in “remaining assets” (balance sheet item No 7) on the NCB’s statistical balance sheet. However, because they are only a notional liability of the Eurosystem, and not a legal liability, euro coins in issue are not covered by the banknote allocation key. Instead, each NCB’s balance sheet records the amount of coins actually issued by the national government, matched by a notional claim in “remaining assets” (see also Sections 2.1.1 and 2.1.9). (The ECB’s own balance sheet includes no amount for coins issued.) Thus the liability item “currency in circulation” (balance sheet item No 8) on individual NCB balance sheets comprises an imputed amount for banknotes issued by the NCB (based on the banknote allocation key) and the actual amount of coins issued by the government. Aggregation across the Eurosystem gives the correct amount of euro currency issued in the two forms.

A euro area country’s contribution to the change in the banknote and coin component of euro area consolidated balance sheet and monetary aggregates is the NCB’s recorded currency in issue minus holdings of euro banknotes and coins reported by other MFIs resident in that country.

A possible outcome is a negative national contribution in this category, as it is conceivable that resident MFIs may report larger holdings of currency than the NCB’s share in the total amount issued. Although highly unlikely, this scenario illustrates the fundamental difference at national level between accounting for banknotes and coins before and after adoption of the euro.

#### National contribution to the bank deposits component of euro area monetary aggregates

The national contribution to the *bank deposits* component of euro area M3 comes directly from the balance sheets of resident MFIs. Note, however, that the domestic resident share in this is not the full share of the country’s residents in the deposit component of euro area M3, since they may also hold deposits with MFIs elsewhere in the euro area. (Country-by-country information on such cross-border holdings is available under the quarterly reporting requirements of Regulation ECB/2008/32.)

Thus the national contribution to the components of euro area M3 *overnight deposits, deposits with agreed maturity up to two years, and deposits redeemable at notice with a period of notice of up to three months* comprises the corresponding deposits denominated in euro and in currencies other than euro placed by the euro area money-holding sector with MFIs (i.e. the NCB and all other MFIs) and central government (and possibly also the post office) in the euro area country concerned. The series for each euro area country is constructed by aggregating the amounts deposited with resident MFIs and central government (and the post office, where applicable) by the euro area money-holding sector.

The national contribution in the form of repos comprises claims of the euro area money-holding sector on domestic MFIs (including the NCB) related to *repurchase agreements* denominated in euro and in currencies other than euro.<sup>5</sup>

<sup>5</sup> Central governments and post office giro institutions do not report series for repurchase agreements.

### National contribution to the negotiable monetary instruments component of euro area monetary aggregates

The national share in the *negotiable monetary instruments* component of euro area M3 (*short-term bank bonds and MMF shares/units*) bears some resemblance to the share in currency in circulation, in the sense that the holders of such paper and their residency are difficult to identify accurately. However, estimates of non-resident holdings are made where actual data are not available. The estimated holdings of non-residents of the euro area are thus excluded from M3. In addition, to derive the national contributions to the corresponding euro area aggregates, the holdings by resident MFIs and central government of negotiable instruments issued in all euro area countries are deducted.

Holdings by the money-holding sectors in the euro area of debt securities with an original maturity of up to two years and of shares/units issued by MMFs form part of euro area M3, provided that the instruments are issued by MFIs resident in the euro area. Such holdings by residents of an individual euro area country (like their holdings of banknotes and coins) are not directly observable via the MFI reporting sector: MFIs issue the instruments in the first place, but, since such instruments may be frequently traded in secondary markets, the initial holder will often not be the current holder. However, a geographical breakdown of the holders into domestic, other euro area countries and rest of the world is requested in Guideline ECB/2007/9 with the purpose of excluding holdings outside the euro area. Where the data available to the NCBs are not deemed reliable, the ECB makes estimates based on data from other sources.<sup>6</sup>

Since MFIs in some euro area countries rarely issue such instruments, but may hold instruments issued by MFIs in other euro area countries, a negative national contribution to this component of M3 is possible. The approach adopted shows again that the compilation procedures provide only national contributions to the euro area aggregates, and that those cannot be used as

proxies for the national share in holdings of euro area M3 instruments.

Summarising the above, instead of national monetary aggregates, Eurosystem NCBs typically publish the contribution of resident MFIs (including the NCB itself) to the euro area aggregates. This comprises:

- a) the notional issue of euro currency by the NCB according to the banknote allocation key, and its issue of euro coins, *less* holdings of euro banknotes and coins reported by resident MFIs;
- b) deposits of the kind included in euro area monetary aggregates held by domestic residents and by residents of other euro area countries with resident MFIs, including repos but excluding any deposits held by central governments and MFIs (since such deposits are excluded from the ECB's monetary aggregates); and
- c) any marketable instruments of the kind included in euro area M3 issued by resident MFIs, *less* estimated holdings by non-residents of the euro area, and *less* holdings by (resident) central government and by resident MFIs of such instruments issued by MFIs resident anywhere in the euro area.

Where residents' holdings of currency and negotiable monetary instruments are required to be broken down by sector (for national financial accounts) and cross-border flows of currency and negotiable instruments are needed (for national balance of payments), amounts must be derived from sources other than MFI balance sheets or estimated. See also Section 4.1.5 below on sectoral money holdings.

<sup>6</sup> For Germany, Ireland and the Netherlands the data available provide only total debt securities issued, with no data on non-residents' holdings. For these countries, non-residents' holdings are derived by the ECB using monthly data from external data providers. For more details, see "Adjustments of M3 for holdings of negotiable instruments by non-residents of the euro area", *Monthly Bulletin*, ECB, November 2001, pp. 10-13.

### National contributions to the credit counterpart to euro area M3

The national contributions to the credit counterpart in euro area statistics are readily obtained from MFI balance sheet data, which show resident MFIs' loans to euro area residents other than MFIs, and their acquisition of securities of all kinds issued by euro area residents other than MFIs. Thus national contributions to *credit to general government* and *credit to other euro area residents* are obtained as the total amount of loans provided by domestic MFIs to (i) general government anywhere in the euro area and (ii) other euro area residents,<sup>7</sup> and holdings by domestic MFIs of securities in all forms issued by euro area residents in these categories.

### National contributions to the external counterpart to euro area M3

In national monetary statistics the external counterpart to M3 comprises net external assets (claims in all forms on all non-domestic residents minus liabilities to them). The national contribution to the *external counterpart* in euro area monetary statistics is resident MFIs' claims on non-residents of the euro area minus liabilities to them. Resident MFIs' claims on non-residents of the euro area are readily available, since reporting MFIs will know the residence status of their debtors. They can also identify deposit liabilities to non-residents of the euro area. It is much harder for them to know who holds negotiable instruments which they have issued (certificates of deposit, bank bonds, etc.), so it is also harder for the NCBs to calculate *net* claims of resident MFIs on non-residents of the euro area. NCBs and the ECB estimate non-resident holdings of these instruments, at least partly, as discussed above.

For the national contribution to the external counterpart in euro area monetary statistics, *external assets* of the NCBs and other MFIs comprise their loans to non-residents of the euro area, their holdings of MMF shares/units, securities other than shares, and shares and other equity, in each case issued by entities resident outside the euro area, and their holdings of

cash denominated in currencies other than euro (the difference between their total holdings of cash and their holdings of euro-denominated cash). In addition, from the NCB balance sheet, *gold and gold receivables* and *receivables from the IMF* are included.

*External liabilities* for the NCB and other MFIs comprise deposits placed with them by non-residents of the euro area and holdings by non-residents of the euro area of MMF shares/units and debt securities with maturity of up to two years issued by resident MFIs. Since no distinction between euro area and non-euro area resident holders of debt securities above two years' original maturity issued by resident MFIs is available, such instruments are not included in external liabilities (see also Section 5.3).

How the external counterpart to euro area M3 relates to developments in the euro area balance of payments is described in Section 5.3 on the monetary presentation of the balance of payments.

### National contributions to the longer-term financial liabilities counterpart to euro area M3

Longer-term financial liabilities comprises *deposits with an agreed maturity of over two years, deposits redeemable with a notice of more than three months, debt securities with original maturity of more than two years and consolidated capital and reserves*.

National contributions for the various types of *longer-term deposit* are the total amounts placed with resident MFIs by the euro area money-holding sector. MFI balance sheet data allow the series to be constructed by aggregating the amounts deposited by the euro area money-holding sector with domestic MFIs.

<sup>7</sup> The "other euro area resident" category comprises all sectors other than MFIs and general government, i.e. other financial intermediaries (OFIs), insurance corporations and pension funds (ICPFs), non-financial corporations (NFCs) and households. It should be recalled here that in the context of MFI balance sheet statistics, financial auxiliaries are reported indistinguishably with OFIs, and, similarly, non-profit institutions serving households are reported indistinguishably with households.

National contributions for *debt securities with a maturity of more than two years*, in euro and in currencies other than euro, are the total issuance of longer-term debt securities by domestic MFIs, net of their holdings of such debt securities issued by MFIs resident in the whole euro area. In contrast to debt securities with an original maturity up to two years, no information is currently available on holdings of longer-term instruments by non-residents of the euro area, so amounts are included in this category, not in external liabilities where they more properly belong (see Section 5.3).

National contributions for *capital and reserves* comprise resident MFIs' total liabilities in the form of capital and reserves, net of their holdings of shares issued by MFIs resident in the whole euro area.

Negative national contributions are possible for debt securities and, though highly unlikely, for capital and reserves.

#### 4.1.5 ESTIMATION OF SECTORAL MONEY HOLDINGS

Understanding the determinants of money demand by the private sector is key to the activities of a central bank. However, the analysis of aggregate money holdings may obscure behavioural differences across the money-holding sectors. Looking at individual and more homogeneous sectors is therefore likely to enhance the understanding of the dynamics of overall money demand and thereby facilitate the extraction of signals about future price developments that are relevant for monetary policy.<sup>8</sup>

Since the end of 2007 the ECB has regularly published statistics on holdings of M3 broken down by sector, i.e. non-financial corporations, households (including non-profit institutions serving households), other financial intermediaries (OFIs) (including financial auxiliaries), and insurance corporations and pension funds. No separate estimates are published for the holdings of general government other than central government, which belongs to the money-holding

sectors, or for the holdings of euro banknotes and coins by non-residents of the euro area, which, as noted earlier, are included in M3.

The estimates are based, to a large extent, on the detailed sectoral breakdowns of short-term deposits and repurchase agreements which are collected under Regulation ECB/2008/32 on MFI balance sheet statistics. In contrast, no sectoral data are readily available for the other M3 components. MFIs are unable to report the ownership of the marketable securities they issue, as these instruments are traded and the holders are not necessarily known to them. Similarly, the holders of currency in circulation are not easily identified. The derivation of sectoral estimates must therefore rely on a set of assumptions and on the pooling of a set of different data sources where some information is available, although based on different statistical collection frameworks. Statistical information available at the NCBs and at the ECB is also used to complement these data as appropriate. The estimation methodology is reviewed in more detail below.

The estimation procedure yields series on outstanding amounts (stocks) and transactions (flows). Growth rates are derived in accordance with the standard procedure adopted for MFI balance sheet statistics – see Section 4.3. The estimates of holdings of M3 by sector are available at quarterly and monthly frequencies starting with the reference period Q1 1999 and January 2003 respectively. Data releases are subject to a degree of delay relative to headline M3 figures, owing to the lag in timeliness of the source data used to estimate the sectoral allocation of non-deposit instruments.

#### Methodology for series on outstanding amounts

The sectoral M3 estimates are the sum of each sector's holdings of currency in circulation, deposits included in M3, MMF shares/units and

<sup>8</sup> For an in-depth analysis of sectoral money-holding developments in the euro area, including an overview of their conceptual determinants, see “Sectoral money holding: determinants and recent developments”, *Monthly Bulletin*, ECB, August 2006.

debt securities issued by MFIs with an original maturity of up to two years. The estimation method can be summarised as follows:

- The series on total *currency in circulation* available as part of MFI balance sheet statistics is attributed to the different institutional sectors in proportion to the data on holdings of currency in circulation reported to the ECB in the context of the quarterly financial accounts under Guideline ECB/2005/13. Internal ECB estimates of holdings of euro currency outside the euro area are also taken into account.
- For *deposits included* in M3, Regulation ECB/2008/32 on MFI balance sheet item statistics provides the information that is needed for the computation of sectoral holdings at a monthly frequency from January 2003 onwards. For the period 1999–2002, the quarterly series are estimated on the basis of quarterly data collected in accordance with the methodology developed by the ECB in 2006.<sup>9</sup>
- Regarding the sectoral allocation of *MMF shares/units* and *debt securities issued by MFIs with an original maturity of up to two years*, the first step consists of identifying the holdings of OFIs. The estimates are based on data collected in accordance with Part 11 of Guideline ECB/2007/9 relating to statistics on other (non-monetary) financial intermediaries, and under Regulation ECB/2007/8 regarding investment fund balance sheet statistics.<sup>10</sup> The remainder is then attributed to the other sectors in proportion to quarterly financial accounts data collected in accordance with Guideline ECB/2005/13.

#### Methodology for series on transactions

In line with international statistical standards, transactions data relating to sectoral M3 holdings are derived by taking the difference between stock positions at two end-month reporting dates and removing the effect of changes in stocks not due to financial transactions (i.e. non-

transactions-related factors or adjustments) – see also Section 4.2.

MFI balance sheet statistics provide the information that is necessary for the computation of sectoral adjustments for deposits included in M3 at a monthly frequency from January 2003 onwards. For earlier periods, the estimates have been derived from information available at NCBs.

For the other instruments included in M3, sectoral adjustments are computed by comparing the adjustments reported to the ECB in the context of MFI balance sheet item statistics with the sectoral transaction series collected in the context of quarterly financial accounts (Guideline ECB/2005/13), other (non-monetary) financial intermediary statistics (Guideline ECB/2007/9) and investment fund balance sheet statistics (Regulation ECB/2007/8). This evidence is complemented with some additional statistical information available at NCBs and at the ECB.

#### 4.1.6 IMPACT ON MONETARY AGGREGATES AND COUNTERPARTS OF OPERATIONS WITH CENTRAL COUNTERPARTIES

One way for MFIs to access the secured interbank lending market is through tri-party repurchase agreements (repos).<sup>11</sup> Such lending operations are mediated by a third party, typically a custodian bank or central counterparty, and have the advantage of reducing counterparty risk for the lender compared to a normal inter-MFI bilateral repo operation. Tri-party repos are structured as follows: i) the borrower enters into a repurchase agreement with the third party, borrowing the required amount and pledging collateral to the third party as required; ii) the lender enters into a reverse repurchase agreement with the third party (as discussed in Section 2.1.4, reverse

<sup>9</sup> For further details, see “New euro area historical series on holdings of M3 deposits by sectors”, *Monthly Bulletin*, ECB, August 2006.

<sup>10</sup> It is envisaged that data collected under Regulation ECB/2008/30 regarding financial vehicle corporation balance sheet statistics will also be included in the estimation process in due course.

<sup>11</sup> See Section 2.1.2 and Box 2.1 for a detailed description of repos.



repurchase agreements are classified as loans in MFI balance sheet statistics); iii) the third party administers the transaction and the collateral, acting as the direct counterparty to the seller and the buyer, thus assuming the risk of default of the borrower. In addition, the collateral management is highly standardised in terms of profiling and margining with the consequence of improving the transparency of the product, and the administrative burden for the counterparties is significantly reduced compared to a bilateral repo.

Whenever a tri-party repo involves a euro area MFI and the third party is a euro area central counterparty (classified in the other (non-monetary) financial corporations sector, S.123 in the ESA 95) the resulting transactions can have a distorting effect on M3, and on MFI lending. For example, if two euro area MFIs engage in a tri-party repo where the third party is a euro area central counterparty, the borrowing MFI records an increase in deposits (repos) vis-à-vis the OFI sector, while the lending MFI records an increase in loans to the OFI sector. M3 and loans to other euro area residents reflect this activity, and are therefore higher than they would have been if the two MFIs had engaged in a repo without intermediation. Similarly, if a euro area MFI and a non-resident of the euro area (as the borrower and the lender respectively) engage in a tri-party repo with a euro area central counterparty, the borrowing MFI records a deposit (repo) liability to the central counterparty and, as a result, M3 is higher than it would have been if the two units

had engaged in a repo without the central counterparty. MFI lending to other euro area residents remains unchanged in this case, but the balance of payments records a loan from non-residents to OFIs in the euro area (rather than a loan to MFIs, as would be recorded without the central counterparty's involvement). Suppose now that a euro area MFI and an "other euro area resident" (as the borrower and the lender respectively) engage in a tri-party repo with a euro area central counterparty. The borrowing MFI records a deposit (repo) liability to the central counterparty, but in this case M3 is not higher than it would have been if the two units had engaged in a repo without intermediation. Although the holder of the repo claim on the MFI changes, the claim remains within the money-holding sector and so the net impact on the consolidated (and aggregated) balance sheet is nil. Similar examples can be drawn for cases where the euro area MFI engages as the lender in a tri-party repo transaction with an "other euro area resident". The table below provides an overview of the impact of tri-party repos, where the third party is a euro area central counterparty, on euro area M3 and on loans to other euro area residents, compared to the case where the repo operations take place without intermediation.<sup>12</sup>

<sup>12</sup> Tri-party repos where the third party is a euro area MFI have no implications in terms of impact on M3 and MFI lending. Whenever the third party is not resident in the euro area, however, these aggregates can be affected relative to the case where the repo takes place without intermediation of a central counterparty. For instance, this is the case when the borrower is a euro area MFI and the lender is a euro area other resident.

**Impact (relative to bilateral repos) of tri-party repos via a euro area central counterparty on euro area M3 and loans to other euro area residents<sup>1)</sup>**

		and the cash borrower (reporting a repo on the liabilities side) is a ...			
		euro area MFI	euro area general government	euro area private sector	non-euro area resident
The cash lender (reporting a reverse repo on the asset side) is a ...	euro area MFI	M3 ↑ Loans ↑	Loans ↑	No impact	Loans ↑
	euro area non-MFI (excluding central government)	No impact			
	euro area central government	M3 ↑			
	non-euro area resident	M3 ↑			

1) Other euro area residents are non-MFIs excluding general government.

As discussed in Sections 2.1.2 and 2.1.4, data on MFI liabilities and claims vis-à-vis euro area central counterparties related to repos and reverse repos are collected separately in accordance with Regulation ECB/2008/32. In light of the discussion above, it is easy to see how these series can help the interpretation of developments in monetary aggregates and loans to non-MFIs in the euro area. Although no information is available about the second party to the repo (i.e. the entity dealing with the MFI through the intermediation of the central counterparty), these breakdowns allow some monitoring and analysis of the activities of euro area MFIs with euro area central counterparties. For instance, the difference between euro area MFIs' assets and liabilities in business with euro area central counterparties shows whether the euro area MFI sector is a net borrower (or net lender) in tri-party repos via euro area central counterparties. In this case, the net borrowing (or net lending) must relate to activities where the second parties are either euro area non-MFIs or non-residents of the euro area. Further observations can be made by looking at data at the national level, which distinguish, for instance, between activities via domestic central counterparties and central counterparties resident in other euro area countries.

## 4.2 FINANCIAL TRANSACTIONS

Chapter 1 describes how MFIs report information to enable transactions to be distinguished from valuation and other changes affecting balance sheet outstandings. In contrast, the focus here is on how the ECB derives financial transactions based on the information reported by NCBs (see also Section 1.6.3).

### 4.2.1 DERIVATION OF FINANCIAL TRANSACTIONS

The ESA 95 defines transactions as exchanges between institutional units by mutual agreement. Financial transactions comprise the net acquisition of financial assets or the net incurrence of liabilities for each type of financial instrument during a reporting period.<sup>13</sup> Financial

transactions covering each item specified in Regulation ECB/2008/32 are calculated on a net basis, i.e. there is no requirement to identify gross financial transactions or turnover. In line with international statistical standards, transactions are calculated by taking, for each asset and liability item, the difference between stock positions at end-period reporting dates and then removing the effect of developments that are not the result of transactions, i.e. *other changes*. *Other changes* are grouped into two main categories, *reclassifications and other adjustments* and *revaluation adjustments*.<sup>14</sup> Although the Regulation requires data to enable transactions to be derived, it actually entails some deviation from the ESA concept of financial transactions (see Section 1.1 and Section 1.6).

NCBs report *reclassification and other adjustments* and *revaluation adjustments (flow adjustments)* to the ECB so that these non-transaction effects can be removed in the calculation of transactions. The *revaluation adjustments* reported by NCBs consist of write-offs/write-downs of loans and revaluation adjustments due to price changes. Revaluation adjustments due to exchange rate changes are calculated by the ECB. In some countries, MFIs report transactions directly to the NCB using one of the methods described in Section 1.6.3, in which case revaluation adjustments are compiled by the NCB as a residual.

<sup>13</sup> This is in accordance with the ESA 95 and other international statistical standards.

<sup>14</sup> The definition and classification of *other changes* is largely consistent with the ESA 95. *Reclassifications and other adjustments* is broadly equivalent to "other changes in volume" (K.3-K.10 and K.12), whereas "revaluations" largely corresponds to "nominal holding gains/losses" (K.11). In MFI balance sheet statistics, an important deviation concerns the inclusion of "loan write-offs" within "revaluations", whereas in the ESA 95 (and in the balance of payments and international investment position) they are regarded as "changes in volume" (5.09 in the ESA 95). (Consistency with the ESA is, however, easily achieved because write-offs/write-downs is the only entry in the column *revaluation adjustments* for the item "loans"; see also Sections 1.1 and 2.1.4.2.)

#### DEFINITION OF FINANCIAL TRANSACTIONS IN MFI BALANCE SHEET STATISTICS:

$$T_t = (L_t - L_{t-1}) - C_t - V_t - E_t, \quad [4.2.1]$$

#### LEGEND

$T_t$	= Transactions in period $t$
$L_t$	= Outstanding amounts at the end of period $t$
$C_t$	= Reclassification adjustment in period $t$
$V_t$	= Revaluation adjustment in period $t$
$E_t$	= Exchange rate adjustment in period $t$

#### 4.2.2 REVALUATION ADJUSTMENTS DUE TO EXCHANGE RATE CHANGES

For the purpose of submitting statistical data to the ECB, the NCBs ensure that asset and liability positions denominated in foreign currencies are converted into euro, using market exchange rates prevailing on the day to which the data relate – see also Section 1.2.

Revaluation adjustments due to exchange rate changes (or exchange rate adjustments) comprise changes in the euro value of balance sheet items denominated in currencies other than euro arising from movements in exchange rates (i.e. from changes in the value of the foreign currency against the euro) between reporting dates. These changes represent holding gains/losses and are not financial transactions.

As indicated in Annex V of Guideline ECB/2007/9, as amended, the ECB removes the effect of exchange rate movements against the euro using a standardised method of adjustment for all relevant items, unless exchange rate adjustments are provided by NCBs (i.e. in cases where more detailed information is available at national level, thus leading to better estimations). In particular, the adjustment is calculated for all items except those for which no breakdown by currency of denomination is available.<sup>15</sup> This implies that, on the asset side, holdings of shares and other equity, MMF shares/units, fixed assets and remaining assets do not undergo exchange rate adjustment. On the liability side, capital and

reserves are not adjusted for changes in exchange rates, while remaining liabilities are used as a balancing item and, as such, are allocated any discrepancy between the total adjustment of assets and the total adjustment of liabilities. These adjustments have been made since reference month September 1997 and are calculated monthly for balance sheet items originally denominated in GBP, USD, JPY and CHF. No exchange rate adjustment is made for balances in other currencies. NCBs calculate revaluation adjustments due to exchange rate changes for their “receivables from the IMF” position denominated in SDRs and transmit these to the ECB within the *revaluation adjustment* series, or within *exchange rate adjustment series* if the NCB regularly transmits these. The same applies to the “counterpart to SDRs” position under remaining liabilities. All exchange rate changes are calculated against the euro.

#### Derivation of the exchange rate adjustment

As mentioned above, instruments denominated in currencies other than euro are reported in euro, converted at the exchange rate on the balance sheet date. The derivation of the exchange rate adjustment for such instruments can be divided, in principle, into three steps.

<sup>15</sup> For some items, currency information is not available at the same level of detail with regard to sector, maturity or area of counterparty. However, adjustments can be estimated using standard assumptions, as explained later in this section.

In the *first step*, the outstanding amounts are converted back into the original currency of denomination. In other words, outstanding amounts at the end of the previous and current reporting periods are converted using the exchange rate at the time.

### Step 1: Conversion of outstanding amounts into foreign currency

$$L_{t,FC}^* = \frac{L_{t,FC}}{e_{t,FC}} \quad [4.2.2]$$

$$L_{t-1,FC}^* = \frac{L_{t-1,FC}}{e_{t-1,FC}} \quad [4.2.3]$$

#### LEGEND:

$t-1$  = End of previous reporting period

$t$  = End of current reporting period

$L_{t,FC}$  = Outstanding amount at time  $t$  expressed in euro, having FC as original currency of instrument denomination

$L_{t,FC}^*$  = Outstanding amount at time  $t$  converted to the original currency of instrument denomination FC

$e_{t,FC}$  = Nominal euro/FC exchange rate at time  $t$

In the *second step*, the first differences in the outstanding amounts denominated in foreign currency (as derived in step 1) are computed and converted back into euro using the average value of the daily exchange rates during the reporting period. Using the average rate for this conversion assumes that the transactions were evenly spread over the period.

### Step 2: Computation of first differences and re-conversion into euro

$$\overline{e_{t,FC}} \cdot \Delta L_{t,FC}^* = \overline{e_{t,FC}} \cdot (L_{t,FC}^* - L_{t-1,FC}^*) \quad [4.2.4]$$

#### LEGEND:

$\overline{e_{t,FC}}$  = Average of daily nominal exchange rate during the period from  $t-1$  to  $t$

$\Delta$  = First difference operator

Finally, the *third step* consists of computing the exchange rate adjustment as the difference between the change in outstanding amounts as reported to the ECB in euro and the change in outstanding amounts converted into euro as calculated under step 2. Rearrangement of the terms in this last step (see calculations below) offers an additional interpretation of the exchange rate adjustment, which can be seen as the percentage deviation of the period average exchange rate from the end of period rate multiplied by the corresponding outstanding amounts, minus the same calculation performed at the end of the previous period.

### Step 3: Computation of the exchange rate adjustment for each currency

$$E_{t,FC} = \Delta L_{t,FC} - \overline{e_{t,FC}} \cdot \Delta L_{t,FC}^* \quad [4.2.5]$$

or, equivalently, substituting expressions [4.2.4], [4.2.2] and [4.2.3] in [4.2.5]:

$$E_{t,FC} = - \left[ \left( \frac{\overline{e_{t,FC}} - e_{t,FC}}{e_{t,FC}} \right) \cdot L_{t,FC} - \left( \frac{\overline{e_{t,FC}} - e_{t-1,FC}}{e_{t-1,FC}} \right) \cdot L_{t-1,FC} \right] \quad [4.2.6]$$

**LEGEND:**

$E_{t,FC}$  = Exchange rate adjustment at time  $t$

In MFI balance sheet statistics the procedure described above is applied to all eligible items and separately for the balances in GBP,

USD, JPY and CHF; the final adjustment is thus obtained as the sum of adjustments for each currency.

### Total adjustment

$$E_t = \sum_{FC} E_{t,FC}, \text{ for } FC \in \{GBP, USD, CHF, JPY\} \quad [4.2.7]$$

### Nominal exchange rates

The nominal exchange rates used in the conversions are the ECB reference exchange rates – see also Section 1.2.

### Stocks

The current MFI balance sheet reporting scheme limits the availability of some of the breakdowns needed to compute the exchange rate adjustment. In particular, the identification of monthly stocks referring to each of the four individual currencies is not possible, since these breakdowns are only reported to the ECB quarterly and with a longer delay than for monthly series. Under Regulation ECB/2008/32, the currency breakdowns reported monthly distinguish only between euro positions and positions denominated in all other currencies combined.<sup>16</sup> In addition, the quarterly reporting scheme<sup>17</sup> includes a less detailed instrument and counterparty breakdown than the monthly series. In practice this means that currency breakdowns for some items, for example detailed maturity and counterparty sector breakdowns, are not available in either monthly or quarterly reporting data.

In order to overcome these limitations and to calculate the exchange rate adjustments for those items to which the method described above cannot be directly applied (e.g. because of missing currency breakdowns in the reporting scheme), the ECB makes the following assumptions.

### Assumption I

The ratio of each balance sheet item denominated in GBP, USD, JPY or CHF to the total amount of the same item denominated in all foreign currencies combined, is stable during each quarter. This assumption allows the ECB to estimate the intra-quarter development of outstanding amounts denominated in each of the four currencies, starting from the end-quarter positions in the four currencies and the monthly outstanding amounts of positions in all foreign currencies. The respective currency's share in all foreign currencies calculated from the latest

<sup>16</sup> Monthly data requirements are included in Table 1 of Regulation ECB/2008/32.

<sup>17</sup> Quarterly data requirements related to currency breakdowns are included in Table 4 of Regulation ECB/2008/32.

available quarterly currency breakdowns is carried forward (assumed to remain constant) for the following three months, until new quarterly data become available.

#### Assumption 1: Using quarterly currency information

$$L_{t,FC} = L_{t,non-EUR}^{T1} \cdot \left( \frac{L_{q,FC}^{T4}}{L_{q,non-EUR}^{T1}} \right) \quad [4.2.8]$$

#### LEGEND:

$t$  = End of month  
 $q$  = End of preceding quarter  
 $FC$  = Foreign currency  
 $T1, T4$  = Tables 1 and 4 of Regulation ECB/2008/32

#### Assumption 2

For each balance sheet item, the distribution of outstanding amounts across different currencies does not vary significantly between maturities and counterparty sub-sectors. Using this (admittedly bold) assumption, the ECB calculates the

exchange rate adjustments referring to sectoral or maturity breakdowns, for which no currency information is available in the quarterly reporting scheme, by distributing proportionately the adjustment computed for the closest aggregated item for which currency information is available.

#### Assumption 2: Allocation of the exchange rate adjustment to items without currency information

Suppose that currency information is available in the quarterly reporting scheme for a certain aggregated item (for which the exchange rate adjustment can thus be derived as discussed above) but not for its constituent sub-items A and B. The exchange rate adjustment for such sub-items is then derived as:

$$E_t^{ItemA} = E_t^{AGGREGATE} \cdot \frac{L_t^{ItemA}}{L_t^{AGGREGATE}} \quad [4.2.9]$$

$$E_t^{ItemB} = E_t^{AGGREGATE} \cdot \frac{L_t^{ItemB}}{L_t^{AGGREGATE}} \quad [4.2.10]$$

where  $L_t^{AGGREGATE} = L_t^{ItemA} + L_t^{ItemB}$

#### Adjustment of series for which no monthly currency split is available

The current monthly reporting scheme includes some series for which only total currency data (euro and foreign currency combined) are collected with a monthly frequency. This, in turn, implies that, for these items, assumption 1 is no longer sufficient for estimating an exchange

rate adjustment. In practice, the adjustment is calculated by using the further assumption that the shares of euro and non-euro-denominated positions in the total are also stable within the quarter. Using this assumption to modify equation [4.2.8], the first term on the right-hand side and the ratio's denominator are replaced by the item including all currencies combined.



#### Adjustment of series relating to money market fund shares/units issued

A special case in the category of items for which no currency split is available from the monthly balance sheet is the issuance of MMF shares/units. In fact, the ECB does not collect any currency information concerning this item, as variations in value of the shares/units due to exchange rate movements depend on the currency denomination of the assets in which the fund invests, rather than on the currency of issuance of the shares. As discussed in Section 1.6.3.2, the adjustment here is based on the proportion of non-euro denominated assets held by the MMFs in their total assets (as reported in the quarterly MMF balance sheet statistics<sup>18</sup>). For each of the four currencies considered, a fictional series of non-euro-denominated outstanding amounts of MMF shares/units issued is derived according to a modified version of equation [4.2.8]. In particular, the ratio in parentheses is derived on the basis of the currency split of the aggregated total assets of MMFs in the country concerned. Calculation of the adjustment then proceeds in the standard way. Finally, the adjustment so derived is allocated to the non-resident holdings of MMF shares/units issued (based on the assumption that non-euro-

denominated funds are held by non-euro area residents – see also Section 1.6.3.2), thus insulating the monetary aggregates from the estimated exchange rate adjustment.

#### 4.3 INDEX OF NOTIONAL STOCKS AND GROWTH RATES

As explained earlier, the outstanding amounts at the end of each period reflect not only the cumulative effect of financial transactions but also instrument reclassifications and other breaks in series, changes in exchange rates, price fluctuations, and loan write-offs/write-downs. However, most analyses of monetary and credit developments require data that exclude such non-transaction-related changes, especially when computing growth rates.

One way to compute growth rates that isolates changes in outstanding amounts arising purely from transactions is by means of a chain-index series of notional stocks. A chain-index series is an index series obtained by a recursive multiplicative expression. There are several ways to calculate this, but for the purposes of MFI balance sheet and other financial statistics the ECB uses the chain calculation below to define the index of notional stocks.

#### Recursive definition of the index of notional stocks in MFI balance sheet statistics:

$$I_t = I_{t-1} \cdot \left( 1 + \frac{T_t}{L_{t-1}} \right) \quad [4.3.1]$$

with the chain calculation starting from a base period, setting the index at 100.<sup>1</sup>

#### LEGEND:

$I_t$  = Index of notional stocks at the end of period  $t$

$T_t$  = Transactions in period  $t$

$L_t$  = Outstanding amounts at the end of period  $t$

<sup>1</sup> The base period is currently set at December 2008. It is changed every three to five years. Changes do not affect growth rates, only the level of the index.

The index of notional stocks in [4.3.1] is dimensionless, so the level of the index for any period only depends on the *base period* chosen

<sup>18</sup> MMF statistics, which are a subset of the MFI balance sheet statistics, are collected under a different reporting scheme in accordance with Guideline ECB/2009/23 – see Section 5.1 below.

for the chain calculation, the corresponding initial level and the month-on-month growth rates. Consequently, it does not represent any particular value actually observed for the corresponding series at that or any other point in time.<sup>19</sup>

The rate of change of the index is a measure of growth in outstanding amounts which excludes the effect of non-transactions. Growth rates over any time span can be derived according to the expressions below.

#### Definition of growth rate based on index of notional stocks in MFI balance sheet statistics:

*Annual growth rate (monthly data)*

$$a_t = \left( \frac{I_t}{I_{t-12}} - 1 \right) \cdot 100 \quad [4.3.2]$$

*Month-on-month growth rate (monthly data)*

$$m_t = \left( \frac{I_t}{I_{t-1}} - 1 \right) \cdot 100 \quad [4.3.3]$$

*Growth rate over time span s*

$$g_{t,s} = \left( \frac{I_t}{I_{t-s}} - 1 \right) \cdot 100 \quad [4.3.4]$$

**LEGEND:**

$I_t$  = Index of notional stocks at the end of period  $t$

Furthermore, it is also helpful to combine expressions [4.3.1] and [4.3.4] whilst solving the recursion in [4.3.1]. In particular, this operation

yields an equivalent, recursive expression for a growth rate that depends directly on the outstanding amounts and financial transactions series.

#### Definition of growth rate as function of outstanding amounts and transactions:

*Growth rate over time span s*

$$g_{t,s} = \left[ \prod_{j=0}^{s-1} \left( 1 + \frac{T_{t-j}}{L_{t-j-1}} \right) \right] \cdot 100 \quad [4.3.5]$$

### 4.3.1 GROWTH RATES OF LOANS ADJUSTED FOR SECURITISED LOANS

One of the main effects of the significant development observed in recent years in “true-sale” loan securitisation is that large amounts of assets in the form of loans, which previously were normally kept on the (originating) MFI’s

<sup>19</sup> A notional stocks series which excludes the effect of non-transactions but preserves the dimension of the original stocks series may nonetheless be computed. For instance, choosing a level for the base period equal to the value of the respective balance sheet item would yield such a series. However, as a rule, the ECB does not publish such notional stocks series for the purposes of MFI balance sheet statistics because they would show the amount of the original balance sheet items only at the base date and the divergence from actual outstanding amounts would grow over time. To avoid confusion, only actual stocks (unadjusted for the effects of non-transactions) and the corresponding indices of notional stocks [4.3.1] are published.

balance sheet until redemption, are being sold or otherwise transferred to another entity (usually a financial vehicle corporation (FVC), classified in the other (non-monetary) financial intermediaries (OFI) sub-sector, S.123 in the ESA 95). Loan securitisation is discussed in detail in Section 2.3.

In the case of traditional true-sale securitisation, the loan is “derecognised” and transferred from the MFI balance sheet to the balance sheet of an FVC,<sup>20</sup> thereby reducing recorded MFI loans. However, from the perspective of the borrower, the loan is still outstanding. Traditional securitisation can thus create a discrepancy between the growth rate of total loans granted to the borrowing sector and the growth rate derived from the MFI balance sheet statistics. In the case of synthetic securitisation, only the credit risk of a loan is transferred to the FVC, while the loan itself remains on the MFI balance sheet. Synthetic securitisation therefore has no direct impact on MFI loan statistics.

In turn, the impact of securitisation transactions on *credit* to the private sector is mixed. The ECB’s definition of credit to the private sector is a broad concept which, in addition to loans, includes financing provided through purchases of debt securities (such as corporate bonds) and purchases of shares and other equity issued by non-banks. MFIs may buy debt securities issued by FVCs (OFIs) as a result of the securitisation process. Therefore, as long as the flows of MFI purchases of OFI debt securities correspond in magnitude to the reduction in the outstanding amount of loans due to traditional true-sale securitisation, the securitisation process will just change the composition of MFI credit to the private sector without affecting the overall amount of credit. By contrast, in the case of synthetic securitisation, if the MFI sector buys securities issued by an FVC to provide collateral for the credit risk that the FVC is assuming, there will be an increase in overall credit on the balance sheet, even though households and firms have not received any more financing. There will also appear to be an increase in MFI credit in a traditional securitisation if the loan

is not derecognised and the MFI buys securities issued by the FVC.

For periods up to the reference month May 2010, the ECB has, on a best efforts basis, derived series on outstanding amounts and transactions of loans to other euro area residents adjusted for the derecognition of loans from the MFI statistical balance sheet due to their sale or securitisation. The estimates were derived from data on securitisation and other transfers of MFI loans to non-MFIs collected on a non-mandatory and non-harmonised basis under Article 13 of Guideline ECB/2007/9. The reporting requirements refer to data on loans granted by MFIs to domestic “other residents” (i.e. non-MFIs excluding general government) and sold to third parties (e.g. FVCs). The data collection included, subject to availability, gross flows representing the amount of loans removed from the MFI balance sheets, net flows defined as gross flows minus repayments of derecognised loans, loan buybacks and outstanding amounts of loans derecognised from MFI balance sheets. In particular, the adjustment of transactions was obtained by adding up the securitisation flows net of loan repayments or, depending on national reporting practice, the change in outstanding amounts of loans derecognised from MFI balance sheets. Moreover, for countries that did not report either of the former, gross flows were taken into account as an alternative. In addition to the adjustment of financial transactions, the outstanding amounts of loans to other euro area residents were also adjusted for the stock of securitised (and derecognised) loans, whenever this information was reported. Growth rates adjusted for securitisation and loan sales were then derived on the basis of the index series in formula [4.3.1], computed using adjusted outstanding amounts and transactions.

<sup>20</sup> As discussed earlier, following the adoption of International Accounting Standard (IAS) 39 by euro area MFIs, a traditional securitisation transaction may not lead to a decrease in the loan holdings if the securitised loan is not derecognised, i.e. is not taken off the MFI balance sheet because accounting rules prevent it.

Under Article 5 of Regulation ECB/2008/32, the collection of loan securitisation data has been fully harmonised. The data are complemented by FVC balance sheet statistics collected from euro area FVCs under Regulation ECB/2008/30. Accordingly, MFIs report the monthly net flow of loan securitisations and other loan transfers, broken down by sector of borrower, distinguishing between securitised loans that are derecognised from the balance sheet of the originating MFI and non-derecognised securitised loans. Section 2.3 explains the reporting framework in detail. In line with the new data requirements, the ECB derives a flow adjustment for euro area MFI loans to other euro area residents, non-financial corporations and households using the newly available figures from June 2010.<sup>21</sup> However, it is not possible to perform an analogous adjustment of the outstanding amounts, since no data on outstanding amounts of derecognised (securitised) loans are collected under Regulations ECB/2008/32 or ECB/2008/30.<sup>22</sup> Similarly, no data on repayments of securitised loans that are derecognised are collected under Regulation ECB/2008/32. As a consequence, growth rates are derived for reference periods from June 2010 onwards on the basis of the index series in formula [4.3.1], using transactions data adjusted for disposals and acquisitions of loans, but not adjusted for repayments and outstanding amounts of securitised and derecognised loans.<sup>23</sup>

#### 4.3.2 EURO AREA ENLARGEMENT, MFI BALANCE SHEETS AND EURO AREA MONETARY AGGREGATES (STOCKS, TRANSACTIONS AND GROWTH RATES)

This section describes the treatment of euro area enlargements in MFI balance sheet statistics and monetary statistics (see also Box 1.1 on data requirements relating to enlargements and Section 4.6).

For MFI balance sheet statistics, euro area series refer at each point in time to the changing composition of the euro area. In other words, they represent the aggregate of all EU Member States that had adopted the euro at the time to which the statistics relate. Accordingly, outstanding

amounts and transactions for the euro area for the last month before enlargement will be compiled from the MFI balance sheet of the euro area in its pre-enlargement composition. Outstanding amounts and transactions for the euro area for the first month after enlargement, and for subsequent months, will be compiled from the MFI balance sheet of the euro area in its post-enlargement composition. This procedure implies that, at the point of enlargement, there is a shift in the level of euro area outstanding amounts. This break in the series, however, should be considered a statistical reclassification and should therefore affect neither the flow nor the growth rate of the various components of the euro area (aggregated or consolidated) balance sheet and of the monetary statistics derived from them.

#### Calculation of the euro area flow at the time of enlargement

The following example illustrates the impact of a new country joining the euro area on the calculation of euro area transactions in MFI balance sheet statistics. Although the example refers to the January 2011 euro area enlargement involving Estonia, it can be easily generalised.

Utilising the same notation introduced in paragraph 2.1, it is possible to define the euro area flow for January 2011 (the “*time of enlargement*”) as a special case of equation [4.2.1].

- 21 No adjusted series are currently derived for the other sectors. Similarly, no adjustment is performed at the current stage on the basis of the additional breakdowns by loan purpose in the case of loans to households and by original maturity in the case of loans to non-financial corporations which are available on a quarterly basis under Regulation ECB/2008/32.
- 22 The requirements of Regulation ECB/2008/32 cover data on outstanding amounts of securitised loans serviced by MFIs and of securitised loans not derecognised from the MFI balance sheet. In aggregated terms, the difference between the two could in principle represent a proxy for the stock of securitised loans derecognised from the MFI balance sheet. Although promising, this option has not been implemented at the current stage as further investigations are required.
- 23 The collection of information on outstanding amounts of derecognised loans that are securitised or otherwise transferred is currently under investigation with the aim of deriving more accurate growth rate series on adjusted loans. Information on repayments of derecognised loans is not covered at the current stage, mainly because it is more difficult to collect, but also because of its more limited impact on growth rates.

### Euro area financial transactions at the time of enlargement:

$$T_{Jan\ 11}^{Eur\ 17} = \left( L_{Jan\ 11}^{Eur\ 17} - L_{Dec.\ 10}^{Eur\ 16} \right) - C_{Jan\ 11}^{Eur\ 17} - V_{Jan\ 11}^{Eur\ 17} - E_{Jan\ 11}^{Eur\ 17} \quad [4.3.6]$$

Two features make this flow a special case. First, the difference in outstanding amounts refers to a different composition of the euro area across the respective periods and, for this reason, includes a level shift which has to be accounted for. In turn, the reclassification term  $C_{Jan\ 11}^{Eur\ 17}$  should include two components: *a)* an enlargement-related component to correct the level shift and *b)* other adjustments occurring in the period and unrelated to the euro area enlargement (including in Estonia). In particular, the enlargement-related component of  $C_{Jan\ 11}^{Eur\ 17}$  can be decomposed into three main parts: *a1)* Estonian MFIs' outstanding amounts, *a2)* positions of MFIs resident in the former *euro area 16* vis-à-vis Estonian counterparties (these positions should be reclassified from “rest of the world” to “other euro area” counterparties – reclassification by area) and *a3)* positions of MFIs resident in the former *euro area 16* denominated in Estonia's former national currency (the kroon). The latter is relevant only for a subset of items on the MFI balance sheet (these items should be reclassified from being denominated in “all other currencies combined” to “euro” – reclassification by currency). The enlargement-related components of the reclassification adjustment should relate to balance sheet positions at end-December 2010.

This decomposition of the euro area reclassification term at the time of enlargement

explains why the data requirements set out in Box 1.1 are needed.

- The existing euro area countries are required to send the reclassification adjustments according to points *a2)* and *a3)* for the reference period in which the enlargement takes place.
- The Member States entering the euro area should not, however, transmit reclassifications for outstanding amounts (point *a1)* above) as these are made available indirectly by transmitting historical MFI balance sheet data.

### Calculation of the euro area index of notional stocks at the time of enlargement

For the computation of the index of notional stocks, a further correction is needed in order to ensure that the calculation is not distorted by the level shift at the time of enlargement. The use of equation [4.3.1] in computing the chain index value at the time of enlargement would produce a mismatch in the updating factor in brackets between the *numerator*, which refers to the new composition of the euro area, and the *denominator*, which refers to the pre-enlargement composition of the euro area. This would also distort the growth rate, since this is derived from the percentage change in the chain index. In order to ensure a correct calculation of the updating factor in the chain index at the time of enlargement, the ECB introduces a *denominator correction*.

**Denominator correction at time of enlargement:**

$$I_{Jan. 11} = I_{Dec. 10} \cdot \left( 1 + \frac{T_{Jan. 11}^{Euro 17}}{L_{Dec. 10}^{Euro 16} + L_{Dec. 10}^*} \right) \quad [4.3.7]$$

**LEGEND:**

- $I_t$  = Index of notional stocks at the end of period  $t$   
 $T_t$  = Transactions in period  $t$   
 $L_t$  = Outstanding amounts at the end of period  $t$   
 $L_t^*$  = Denominator correction for period  $t$

The *denominator correction* corresponds to the enlargement-related level shift in the euro area aggregate. The denominator on the right-hand side of equation [4.3.7] can therefore be interpreted as a “notional” outstanding amount for the euro area as if it already included Estonia in December 2010.

Finally, as a result of the method applied in the construction of the notional index series around the point of enlargement, the resulting euro area growth rates after enlargement reflect the fact that the growth rate of the new member contributes to euro area growth in a gradual way. For instance, the euro area annual growth rate in the first month after enlargement results in an (implicit) approximate weight of 1/12th for the new member’s contribution; in the second month after enlargement this weight increases to 2/12ths, and so on up to 12/12ths.<sup>24</sup>

For the treatment of enlargement in the contexts of seasonal adjustment and the Eurosystem’s minimum reserves requirement, see Section 4.4 below and Section 5.1 respectively.

#### 4.4 SEASONAL AND CALENDAR ADJUSTMENT OF MFI BALANCE SHEET STATISTICS

The *seasonal and calendar adjustment of time series* consists of the process of estimating and removing fluctuations that occur in broadly similar recurrent patterns over the year (e.g. M1 is higher than average in December due to the effect of Christmas bonuses and expenditure)

or which are related to end-of-month calendar effects (e.g. end-of-month currency in circulation is higher on average when measured on a Friday as a “cash reserve” is held for the weekend).

The main aim of these adjustments is to provide series from which short-term developments can be better interpreted, as the series are “cleaned” of easily foreseeable patterns that are assumed to be mostly devoid of economic information. In the context of MFI balance sheet statistics, seasonal and calendar adjustments are carried out on the basis of the X-12-ARIMA software, which is supported by the US Census Bureau. The algorithm is based on a two-stage approach. The first stage (referred to as the RegARIMA part) performs a modelling of the time series on the basis of a Regression ARIMA model, and delivers a pre-adjusted time series where calendar effects and possible outliers are removed. The second stage of the algorithm (referred to as the X-11 part) performs the seasonal adjustment of the pre-adjusted series.<sup>25</sup>

<sup>24</sup> The description presented is an approximation in that the implicit “weights” may not be exactly 1/12th, 2/12ths, etc. because of the non-linearities implied by the chain index multiplicative form (see [4.3.4] and [4.3.5]). For most practical purposes, however, the approximation provides a fair depiction of the “smoothness” implied by the procedure. Note that for growth rates calculated over time span  $s$ , the same concept applies, but  $n/12$  is substituted by  $n/s$ . For instance, if  $s$  is one month (i.e. to calculate the month-on-month growth rate), the weight of the new member is fully incorporated in the euro area growth rate in the first month after enlargement.

<sup>25</sup> For a comprehensive review of the X-12-ARIMA algorithm, see the article “New capabilities and Methods of the X-12-ARIMA Seasonal Adjustment Program”, which is available on the US Census Bureau’s website (<http://www.census.gov>).



### Coverage of seasonal and calendar adjustment

The ECB currently publishes seasonally adjusted outstanding amounts, transactions and growth rates of the main euro area monetary aggregates and their counterparts. No seasonally adjusted series on national contributions to euro area aggregates are currently published.

Euro area series can be adjusted directly or indirectly. A *direct seasonal adjustment* is obtained by applying the X-12-ARIMA algorithm directly to the non-adjusted time series. In this case, the adjustment is performed on a measure of the outstanding amounts corrected for non-transactional effects (e.g. index of notional stocks or cumulated flows). Seasonally adjusted series for outstanding amounts, transactions and growth rates are then derived on the basis of this output. By contrast, an *indirect seasonal adjustment* is obtained as a linear combination of other *directly adjusted*

series, as illustrated by equation [4.4.2] below. In all cases, the seasonal adjustment is done at the level of euro area series, not via the seasonal adjustment and aggregation of national contributions to euro area aggregates. The most important reason for following this approach is that euro area monetary aggregates refer to the *consolidated* balance sheet of the euro area MFI sector as a whole. This implies, for instance, that the levels of national contributions may turn negative (e.g. if the MFI sector of a country holds more debt securities issued by euro area MFIs than it itself has issued). In addition, the identification of seasonal patterns in national contributions may be affected by the volatility of the series (e.g. for small countries or for those countries where intra-euro area cross-border positions play a significant role). Finally, the length of national contributions for series referring to new euro area members may be insufficient to produce reliable results.

### Direct and indirect adjustment in MFI balance sheet statistics:

#### *Outstanding amounts and financial transactions*

Let  $Y_t$  and  $Z_t$  represent the breakdowns of variable  $X_t$ , where  $X_t^{NSA} = Y_t^{NSA} + Z_t^{NSA}$

#### *The direct seasonal adjustment is not additive*

$$X_t^{SA (direct)} \neq Y_t^{SA (direct)} + Z_t^{SA (direct)} \quad [4.4.1]$$

#### *The indirect seasonal adjustment is additive*

$$X_t^{SA (indirect)} = Y_t^{SA (indirect)} + Z_t^{SA (indirect)} \quad [4.4.2]$$

In MFI balance sheet statistics, the main reason for applying the indirect adjustment is to preserve additivity between seasonally adjusted aggregates and components and, in general terms, to respect the balance sheet constraints in the adjusted format. Given that direct seasonal adjustment is a non-linear operation on the data, it is not additive. Consequently, as is shown by expression [4.4.1], if each aggregate and its components were to be *directly seasonally adjusted*, the former would not equal the sum of the latter.

Furthermore, when choosing the series which are to be adjusted directly and those which are to be derived indirectly, the following criteria are used:

- i) *regularity of the seasonal pattern* – series with a regular seasonal pattern are more appropriate for a direct adjustment than series with a volatile seasonal pattern;
- ii) *stability of the weight of the component in the total* – when the shares of the

components change significantly over time, and their seasonal patterns differ, direct adjustment of the aggregate is not suitable, so direct adjustment of the components is preferable. However, when the shares of the components change over time, but there is a high degree of substitutability among them, direct adjustment of the aggregate is preferable (and, consequently, one of the components is derived indirectly as a residual);

- iii) *length of the series* – for short series, a higher level of aggregation of the series to adjust is preferable, as a seasonal pattern undistorted by outliers will then be better captured.

The following euro area aggregates are available seasonally adjusted in the context of MFI balance sheet statistics:

- monetary aggregates and selected components and counterparts;
- sectoral breakdowns of MFI loans and deposits in M3.

A detailed overview of the available time series, including starting dates and the methods applied (direct or indirect adjustment) can be found on the ECB's website.<sup>26</sup>

#### First stage: RegARIMA modelling, outlier identification and calendar adjustment

The first stage of the algorithm performs the modelling of the time series on the basis of a user-defined ARIMA model with regressors (hence the name “RegARIMA”). This also entails the identification of and correction for outliers and, where specified, calendar effects. The rationale of this pre-adjustment is that the quality and the stability of the seasonal adjustment estimates carried out in the next stage are much improved if these are based on a series which already takes into account special developments. The RegARIMA model is also used to extend the series using forecasts and backcasts, so that symmetric moving averages can be used in the second stage.

An outlier can be defined as a significant development observed in the evolution of a time series, which is believed not to represent a change in the *seasonal* behaviour of the series, such as a one-off effect or a break in the series trend. For this reason, it is desirable that the series to be adjusted is corrected for such occurrences before the seasonal pattern is estimated. This avoids potential spillovers from the outliers (which are by assumption non-seasonal events) into the estimated seasonal component. Once the second stage (seasonal adjustment) has been completed, the effect of the outliers removed in the first stage is added back, i.e. the final adjusted series is adjusted for calendar and seasonal effects, but not for the effect of outliers. For the purpose of outlier identification, the ECB corrects for *additive outliers (AOs)*, *transitory changes (TCs)* and *level shifts (LSs)* prior to seasonal adjustment.

A subset of series is also adjusted for calendar effects arising from the reference periods ending on different specific weekdays. The calendar adjustment covers M1 (and its sub-components), M2-M1 (and its sub-components), M2 and M3.

#### Second stage: seasonal adjustment

In the second stage of the algorithm, the procedure consists of the decomposition of the pre-adjusted series into its a) *trend*, b) *seasonal* and c) *irregular* components. The first step involves the identification and removal of the trend by means of a user-defined filter. The seasonal component is then calculated as a seasonal moving average of the de-trended series, with a user-defined filter length.<sup>27</sup> The residual part of the series after identifying the *trend* and the *seasonal* components is the *irregular* component, which is mainly a residual containing non-seasonal and non-calendar short-term variations. The series decomposition can be either *additive* or *multiplicative*.

<sup>26</sup> See the section on seasonal adjustment of monetary statistics on the ECB's website (<http://www.ecb.europa.eu>).

<sup>27</sup> In general, the longer the moving average, the more stable the seasonal component over time and the smaller the impact of new data on its estimation.

### Decomposition of time series X:

#### Additive decomposition

$$X_t = Trend_t + Seasonal_t + Irregular_t \quad [4.4.3]$$

#### Multiplicative decomposition

$$X_t = Trend_t \cdot Seasonal_t \cdot Irregular_t \quad [4.4.4]$$

The multiplicative decomposition is used by the ECB for all series in MFI balance sheet statistics, with the sole exception of net external assets, for which the additive decomposition is used.<sup>28</sup>

The *seasonal factors* are the output of the seasonal adjustment process. They represent, for any given item, the transformations (additive or multiplicative) to be applied to the non-adjusted series in order to obtain its adjusted counterpart. In the case of a multiplicative decomposition, the seasonal factors are dimensionless. The ECB obtains multiplicative factors by running the seasonal adjustment on a measure of notional stocks, such as the index of notional stocks as in equation [4.3.1]. The same set of factors thereby obtained is then used to obtain seasonally adjusted outstandings

and seasonally adjusted transactions as described in equations [4.4.5] and [4.4.6]. In the case of additive adjustment, the ECB uses the cumulated sum of flows as input for the process of seasonal adjustment.

In addition, the *additive (multiplicative) seasonal factor* time series has the property that its *moving sum (product) over any one-year time span* is approximately equal to *zero (one)*. This property of seasonal factors implies that the annual flows are approximately equal for adjusted and non-adjusted series.<sup>29</sup>

28 Multiplicative decomposition is not appropriate for series which can assume negative values, such as net external assets.

29 Differences between adjusted and non-adjusted annual flows may also be due to calendar adjustments, the impact of which is assumed not to cancel out over one calendar year.

### Multiplicative adjustment in MFI balance sheet statistics:

#### Outstanding amounts

$$L_t^{SA} = \frac{L_t^{NSA}}{\pi_t} \quad [4.4.5]$$

#### Financial transactions

$$T_t^{SA} = \Delta L_t^{SA} = \frac{\Delta L_t^{NSA} - T_t^{NSA}}{\pi_t} \quad [4.4.6]$$

Additive adjustment in MFI balance sheet statistics:

#### Outstanding amounts

$$L_t^{SA} = L_t^{NSA} - \sigma_t \quad [4.4.7]$$

*Financial transactions*

$$T_t^{SA} = \Delta L_t^{SA} - (\Delta L_t^{NSA} - T_t^{NSA}) \quad [4.4.8]$$

*LEGEND*

- $L_t^{SA}$  = Outstanding amounts at the end of period t, seasonally adjusted
- $L_t^{NSA}$  = Outstanding amounts at the end of period t, non-seasonally adjusted
- $T_t^{SA}$  = Transactions in period t, seasonally adjusted
- $T_t^{NSA}$  = Transactions in period t, non-seasonally adjusted
- $\sigma_t$  = Additive seasonal factor
- $\mu_t$  = Multiplicative seasonal factor
- $\Delta$  = First difference operator

**Derivation of seasonal factors and revision policy**

The *RegARIMA* modelling and the estimation of the seasonal factors are performed by the ECB on an annual basis using information available at the time the models are run. This approach, which preserves the stability of the seasonally adjusted figures, yields time series that include twelve months of projected seasonal adjustment factors, which are then used for the following year. The ECB checks each month that the newly available information does not imply significant revisions to the estimated seasonal patterns. If significant differences are detected (e.g. in the event of large historical revisions), seasonal factors are updated outside the scheduled yearly review.

**4.5. COMPILATION OF BALANCE SHEET STATISTICS FOR MONEY MARKET FUNDS AND CREDIT INSTITUTIONS**

The MFI sector comprises central banks, credit institutions, MMFs and a residual group of other institutions. To complement balance sheet statistics for the entire MFI sector, the ECB compiles quarterly balance sheets for MMFs

and credit institutions separately. Data on credit institutions remain particularly relevant for the compilation of macro-prudential indicators, for the ECB's annual banking structure report and for the European Commission's needs for data on financial services activity. In addition, the analysis of the euro area MMF balance sheet reveals portfolio shifts and changes in investment policy of MMFs on the assets side, and, in conjunction with other investment fund statistics, permits analysis of the investment fund industry as a whole.<sup>30</sup>

The ECB compilation involves:

- MMF balance sheet statistics, based on the input received from NCBs, covering outstanding amounts, reclassifications and revaluation adjustments (where available), in line with the requirements of Guideline ECB/2009/23;
- credit institution balance sheet data, at present derived by the ECB for each euro area country as the difference between the

<sup>30</sup> This does not include pension funds, which are instead included under insurance corporations and pension funds (S.125 in the ESA 95).

aggregated balance sheet of MFIs other than central banks and the quarterly MMF aggregated balance sheet.

Article 8 of Regulation ECB/2008/32 permits NCBs to grant derogations in respect of the reporting of revaluation adjustments by MMFs. Revaluation adjustments for the shares/units on the liabilities side of the MMF balance sheet have not always been reported; until recently they were included in “remaining liabilities” – see Section 1.6.3.2 for further details.

#### 4.5.1 MMF BALANCE SHEET STATISTICS

MMFs are, broadly speaking, collective investment undertakings of which the units are close substitutes for bank deposits in terms of liquidity.<sup>31</sup> As such, MMFs are part of the money-issuing sector. The shares/units issued by MMFs are part of the aggregated and consolidated balance sheet of the MFI sector and contribute to the broad monetary aggregate M3. MMF balance sheet statistics cover assets and liabilities of MMFs resident in the euro area and are reported by MMFs to NCBs in accordance with Regulation ECB/2008/32<sup>31</sup>, as amended by ECB/2011/12, and Article 10 and Annex III, Part 7, Table 1 of Guideline ECB/2009/23. Article 8(2) of Regulation ECB/2008/32 permits NCBs to grant derogations to MMFs, allowing them to report under Regulation ECB/2007/8 concerning investment funds, subject to certain conditions, including the provision of monthly data to the timeliness requirements of Regulation ECB/2008/32.

The *reporting population* comprises MMFs resident in the euro area, including those managed from outside the euro area. Conversely, the statistics do not cover MMFs established outside the euro area, even if the management companies of these MMFs are resident in the euro area. The list of MMFs forming the reporting population is available on the ECB’s website. NCBs send the nationally aggregated statistics on MMFs to the ECB, which derives aggregate results for the euro area.

The issuance of MMF shares/units is reported to the ECB monthly, and the breakdown of MMF assets and liabilities is reported to the ECB quarterly. In addition to amounts outstanding, the data contain transactions during the reference period. In the case of MMF shares/units issued, the transactions provide an approximation to MMFs’ net sales of shares/units to investors during the reference period.

The changes in outstanding amounts between two periods may be due to transactions, price revaluations (though, as noted above, these are not always available for shares/units), exchange rate changes (in the case of instruments denominated in currencies other than euro), or statistical reclassifications (if no derogations have been granted). Transactions data are available for all items in the quarterly and monthly data.

#### Publication

Monthly statistical data on the shares/units issued by MMFs are published by the ECB as part of the MFI sector balance sheet about four weeks after the reference month. Statistical data for MMF shares/units included in the publication of the monthly MFI balance sheet statistics are consistent with the data presented in the monthly and quarterly press release on investment and money market funds. However, for the purpose of the consolidated MFI balance sheet and M3, the MMF shares/units issued are presented net of any holdings by the MFI sector (including by MMFs themselves). By contrast, data are presented without consolidation in the statistical press release on investment funds and MMFs.

With the exception of MMF shares/units issued, all MMF statistics are published quarterly around six weeks after the reference date. The ECB publishes MMF balance sheet statistics for the euro area only. No MMF balance sheet statistics are published by the ECB for individual euro area countries. However, statistics on the MMF issuance of shares/units which are held in the euro area and on MFIs’ holdings of

31 For the complete ECB definition of MMFs, see Section 1.1.

MMF shares/units issued in the euro area are made available for all euro area countries and other EU Member States as part of the national aggregated balance sheets of the MFI sector.

#### MMF balance sheet asset and liability categories

All balance sheet positions and transactions are shown on an aggregated basis, i.e. positions between MMFs are not netted out. Definitions of assets and liabilities items are the same as those used in the context of MFI statistics (Section 2.1 defines the instrument categories). An outline of the MMF balance sheet is presented below:

##### Assets:

- *Deposits and loan claims;*
- *Securities other than shares;*
- *Shares and other equity;*
- *MMF shares/units;*
- *Remaining assets.*

##### Liabilities:

- *MMF shares/units issued* (by far the most important item on the liability side of the MMF balance sheet, representing the value of investors' holdings – this is the only item available at monthly frequency);
- *Loans and deposits received;*
- *Remaining liabilities.*

A number of additional breakdowns are available for asset and liability items.

- (i) Counterparties are split into euro area and non-euro area residents. For example, holdings of securities are broken down according to the residency of the issuer of the security; on the liabilities side, the breakdown of MMF shares/units issued shows the residency of the holders of the shares/units, i.e. the investors in the MMFs (this information is also available monthly).
- (ii) A sector breakdown of counterparties resident in the euro area, distinguishing between MFIs (including MMFs), general government, OFIs (including financial auxiliaries),

insurance corporations and pension funds, non-financial corporations, and households (including non-profit institutions serving households). This breakdown is available for the issuers of securities other than shares and for loans. On the liabilities side, a limited sector breakdown (identifying holdings of shares/units by the money-holding sector) is available monthly.

- (iii) A breakdown by original maturity of MMF holdings of securities other than shares issued by MFIs into three maturity bands: *up to one year, over one year and up to two years, and over two years*. For MMFs' holdings of securities issued by euro area residents other than MFIs, two maturity bands are distinguished: *up to one year and over one year*.
- (iv) A currency breakdown of the denomination of securities other than shares held, into *euro and other currencies*. This breakdown is available for securities issued by euro area MFIs and for securities issued by other euro area residents, without a further breakdown by sector of issuer.

#### 4.5.2 CREDIT INSTITUTION BALANCE SHEET STATISTICS

The aggregated balance sheet of credit institutions is compiled by the ECB as the difference between the MFI aggregated balance sheet excluding the Eurosystem, and the MMF aggregated balance sheet. As this method is based on the assumption that the residual category "other institutions" is negligible (at the end of December 2011 there were only 30 institutions in this category in the euro area), the size of the residual category is regularly monitored and a correction will be applied if it becomes significant.

Data on the credit institution balance sheet are derived quarterly and are published around two months after the reference period, together with MFI balance sheet data for the most recent month.



The credit institution aggregated balance sheet published by the ECB has the same asset/liability structure as the MFI balance sheet, with the exception of those breakdowns not directly computable as a difference, owing to less detailed breakdowns in the quarterly MMF balance sheet. Data on items where MMFs do little or no business, e.g. loans granted to or deposits taken from non-MFI sectors, coincide with the corresponding items in the aggregated MFI balance sheet excluding the Eurosystem. Data are published as amounts outstanding, transactions and growth rates.

All the concepts and definitions described for the compilation of the MFI balance sheet apply to the credit institution balance sheet statistics.

The ECB publishes euro area statistics for credit institutions. No data are published by the ECB for individual euro area countries.

#### 4.6 MFI BALANCE SHEET STATISTICS FOR NON-EURO AREA COUNTRIES

The ECB's legal framework concerning the consolidated balance sheet of the MFI sector, as defined in Regulation ECB/2008/32, does not impose any obligations on non-euro area EU Member States. However, as indicated in Recital 14 of the Regulation, Article 5 of the ESCB Statute, which applies to both participating and non-participating Member States, implies an obligation on non-participating Member States to design and implement at national level all the measures that they consider appropriate to collect the statistical information needed to fulfil the ECB's statistical reporting requirements and to ensure timely statistical preparations for their adoption of the euro.

Accordingly, non-euro area EU Member States compile, and report to the ECB, MFI balance sheet statistics following closely the requirements for euro area countries. The main differences relate to the geographic and the currency breakdowns of the various items: the geographic breakdowns include a split between

domestic counterparties and counterparties resident in the euro area (with the same level of detail as for domestic positions) and in the rest of the world. The currency breakdowns include positions in the domestic currency, as well as in euro and currencies other than euro. These positions are separately identified for all relevant items on the balance sheet.

Data on outstanding amounts, reclassifications and other adjustments, price revaluations and loan write-offs/write-downs are reported to the ECB in the national currency of the country and then converted into euro using the exchange rates prevailing on the day to which the data relate – see also Section 1.2. As for euro area countries, financial transactions are then calculated by adjusting the difference between end-of-month stocks for the effect of “non-transactions-related” factors, which include reclassifications and other adjustments, exchange rate changes, price revaluations and loan write-offs/write-downs (see Section 1.6.3 and Section 4.2). Financial transactions are derived by the ECB directly using the series converted into euro. In particular, the exchange rate adjustments are derived separately for the balances denominated in national currencies and in currencies other than euro using the methodology discussed in Section 4.2.2 above.<sup>32</sup> Growth rates are then computed as explained in Section 4.3.

The ECB publishes on its website the monthly aggregated MFI balance sheet for each non-euro area EU Member State with a delay of about 40 calendar days after the reference month. The results are published only in euro.

As soon as a decision is taken by the European Council on the entry of a Member State into the euro area, work begins to ensure timely transmission of high quality MFI balance sheet

<sup>32</sup> For positions in national currency, the ECB derives exchange rate adjustments using a simplified version of equation [4.2.2], with  $E_{i,FC} = -(e_{t+1,FC} - e_{t,FC}) \cdot L_{t+1,FC} / e_{t+1,FC}$ . This is equivalent to ignoring exchange rate revaluations that affect those amounts that are outstanding at  $t$  but were not outstanding at  $t-1$  (i.e.  $L_{t,FC}^* - L_{t-1,FC}^*$ ).

data for inclusion in euro area aggregates. New members of the euro area are also invited to report available historical data as if they had already been part of the euro area. These data are particularly relevant at the time of joining the euro area so as to allow the calculation of longer enlarged euro area series for monetary analysis and forecasting.

As indicated in Box 1.1 and Section 4.3.2, at the time of the euro area enlargement, some extra information is needed from the new euro area country and from all existing euro area countries in order to derive transactions and growth rates for the euro area for the first month after the enlargement and thereby prevent the step change in balance sheet levels from distorting growth rates.

## 5 LINKAGES OF MFI BALANCE SHEET STATISTICS WITH OTHER DOMAINS

### 5.1 MFI BALANCE SHEET STATISTICS FOR THE PURPOSES OF MINIMUM RESERVES

#### The Eurosystem's minimum reserve requirements

Article 19.1 of the Statute permits the ECB to require credit institutions established in participating Member States to hold minimum reserves on account with the Eurosystem for monetary policy purposes. EU legislation (Council Regulation (EC) No 2531/98) further establishes the framework for the Eurosystem's regime of minimum reserves. The details of the scheme are set out in ECB legislation (currently Regulation ECB/2003/9, as amended).

The main aims of the Eurosystem's minimum reserve system are to stabilise money market interest rates and create (or enlarge) a structural liquidity shortage. Holdings of required reserves are remunerated at the rate of the Eurosystem's main refinancing operations. As explained below, the reserve requirement of each institution is determined in relation to elements of its balance sheet. To stabilise interest rates, the system enables institutions to make use of averaging provisions. Thus compliance with the reserve requirement is determined on the basis of an institution's average daily reserve holdings over the maintenance period of approximately one month.

The following paragraphs note the relevant provisions of Regulation ECB/2003/9, and explain how the MFI balance sheet Regulation ECB/2008/32 relates to them.

#### The maintenance period

Each maintenance period begins on the settlement day of the first main refinancing operation following the meeting of the Governing Council at which the monthly assessment of the monetary policy stance is pre-scheduled (which is usually the first Thursday of the month). The ECB publishes a calendar of reserve maintenance periods at least three months before the start of each year.

#### Coverage

The obligation to hold minimum reserves applies to credit institutions resident in the euro area, including branches in the euro area of institutions with head offices outside the euro area. Branches outside the euro area of credit institutions resident in the euro area are not covered by the requirement. The requirement does not apply to an institution whose authorisation is withdrawn or renounced, or which becomes subject to winding-up procedures, from the start of the relevant maintenance period. The ECB may also exempt institutions subject to reorganisation measures; institutions subject to the freezing of funds; institutions prohibited from exercising active banking functions in competition with other credit institutions; and institutions authorised to pursue special purpose functions only, or obliged to earmark deposits for regional or international development assistance.

#### The reserve base

The reserve base of an institution is defined in relation to elements of its balance sheet, and each credit institution subject to minimum reserve requirements uses the statistical information collected under Regulation ECB/2008/32 to calculate its reserve base and to verify the fulfilment of its reserve requirement over the maintenance period (Article 11).

In the Eurosystem's minimum reserve system,<sup>1</sup> the reserve base comprises the liability categories deposits (item 9 on the MFI balance sheet) and debt securities issued (item 11 on the MFI balance sheet), denominated in both euro and foreign currency, including such liabilities to a branch or head office abroad. Liabilities owed to the ECB or an NCB in the Eurosystem, or to any institution which is itself obliged to hold minimum reserves under the Eurosystem's regime (including the European Investment Bank<sup>2</sup>), are excluded from

<sup>1</sup> See Section 7 of *The implementation of monetary policy in the euro area: General documentation on Eurosystem monetary policy instruments and procedures*, ECB, February 2011, available on the ECB's website (<http://www.ecb.europa.eu>).

<sup>2</sup> Although the EIB is treated for all statistical purposes as resident outside the euro area, it is subject to minimum reserve requirements – see also Section 1.1.

the reserve base.<sup>3</sup> The credit institution issuing them must demonstrate the actual amount of these instruments held by other institutions subject to the Eurosystem's minimum reserve requirements, in order to be entitled to exclude them from the reserve base. In the case of debt securities issued (with original maturity up to two years), this may be difficult, as these instruments can also be traded on the secondary market. In the absence of firm information, issuers may apply a standardised deduction coefficient to this balance sheet item.

The *standardised deduction coefficient* is derived from the "macro-ratio", which is calculated by the ECB as:

*debt securities with an original maturity of up to two years issued by euro area credit institutions and held by euro area credit institutions (including any such paper held by the Eurosystem)*

divided by

*total debt securities with an original maturity of up to two years issued by euro area credit institutions*

The calculation is repeated annually. Based on the results, the Governing Council decides on the standardised deduction coefficient to apply to the reserve base. This has been 30% since 1999.

The components of the reserve base are summarised below (this table is taken from the general documentation on Eurosystem monetary policy instruments and procedures mentioned in footnote 1 of this chapter).

### Reserve base and reserve ratios

#### **A. Liabilities included in the reserve base and to which the positive reserve ratio is applied**

##### *Deposits*

- Overnight deposits.
- Deposits with an agreed maturity of up to and including two years.

- Deposits redeemable at notice of up to and including two years.

##### *Debt securities issued*

- Debt securities with an original maturity of up to and including two years.

#### **B. Liabilities included in the reserve base and to which a zero reserve ratio is applied**

##### *Deposits*

- Deposits with an agreed maturity of over two years.
- Deposits redeemable at notice of over two years.
- Repos.

##### *Debt securities issued*

- Debt securities with an original maturity of over two years.

#### **C. Liabilities excluded from the reserve base**

- Liabilities vis-à-vis other institutions subject to the Eurosystem's minimum reserve requirements (including the EIB).
- Liabilities vis-à-vis the Eurosystem.

The amount of minimum reserves to be held by each institution in respect of a particular maintenance period is calculated by applying the *reserve ratios* to each relevant item of the reserve base for that period, then deducting €100,000 (the lump-sum allowance) from the calculated reserve requirement. Where institutions report statistical data as a group on a consolidated basis, only one such allowance is granted to the group.

The reserve ratios are determined by the ECB subject to a maximum limit specified in Council Regulation (EC) No 2531/98. The ECB applies a uniform non-zero reserve ratio, currently 1%, to some of the items included in the reserve base, as indicated above. This reserve ratio is specified in Regulation ECB/2011/21, the latest amendment

<sup>3</sup> This is why, on the MFI balance sheet, liability positions vis-à-vis credit institutions subject to minimum reserves and the Eurosystem are reported separately.

to Regulation ECB/2003/9. A zero reserve ratio applies to liabilities with maturity longer than two years and to repurchase agreements.

The ECB may change the reserve ratio at any time. Changes are announced in advance of the first maintenance period in which the change is effective.

#### Calculation and notification of minimum reserves

The reserve base is calculated using the credit institution's end-of-month balance sheet of two months earlier (e.g. the requirement for the maintenance period starting on 14 December 2011 was calculated using the balance sheet for the end of October 2011). The NCB decides whether the credit institution or the NCB itself is to make the calculation. Either way, the other party is notified of the amount at least three working days before the start of the maintenance period; any objections must be lodged at latest on the working day preceding the start of the maintenance period. Once agreed, the amount cannot be revised subsequently. Final figures on the reserve base are then reported to the ECB both for the compilation of the euro area reserve requirement, and for statistical purposes. Aggregated data are published by Reuters.

#### Further details concerning the administration of the minimum reserve system

Each institution must hold its minimum reserves in a reserve account (or accounts) with the NCB in the Member State in which it is established. An institution with establishments in more than one Member State is required to hold minimum reserves with the NCB of each Member State in which it has an establishment in relation to its reserve base in that Member State. The daily reserve holding of an institution is calculated as the end-of-day balance on its reserve account, and the obligation is to hold at least the required amount on average over the maintenance period. A shortfall in holdings may give rise to sanctions under Regulation ECB/2003/9 (as distinct from sanctions for breaches of Regulation ECB/2008/32 – see Section 7).

Regulation ECB/2003/9 permits an institution to apply to the NCB in the Member State in which it is resident for permission to hold all its minimum reserves indirectly through an intermediary. This option is restricted to institutions which are structured in such a way that part of the administration (e.g. treasury management) is normally carried out by the intermediary. Thus, for example, networks of savings banks and cooperative banks may centralise their reserve holdings.

Part 2, Section 1 of Annex III to Regulation ECB/2008/32 contains rules on statistical reporting on an aggregated basis as a group by credit institutions subject to the minimum reserve requirements. The ECB's Executive Board may allow such credit institutions to carry out reporting as a group within a single national territory in accordance with Article 11 (*Reserve holding on a consolidated basis*) of Regulation ECB/2003/9:

- *Institutions allowed to report statistical data as a group on a consolidated basis (as defined within the ECB's reporting framework for money and banking statistics [...]) must hold minimum reserves through one of the institutions in the group which is acting as intermediary exclusively for these institutions and in accordance with the provisions in Article 10 [on indirect holding of minimum reserves through an intermediary].*
- *The institution acting as the intermediary for the group may apply to the ECB for exemption from the provisions in Article 10(6). If the ECB accepts its application, only the group as a whole shall be entitled to receive the allowance referred to in Article 5(2).*

In the case of credit institutions which have been permitted to hold minimum reserves through an intermediary, and which do not benefit from group reporting, the relevant NCB may authorise the intermediary to carry out aggregated statistical reporting (other than in

respect of the reserve base) on behalf of the credit institutions.

If an institution has no head office in a Member State in which it conducts business as a credit institution, it must designate a principal branch to be responsible for fulfilling the aggregate minimum reserve requirements of all the establishments of the institution in that Member State.

Credit institutions benefiting from a derogation from full monthly balance sheet reporting because they are in the “tail” (see Section 1.5), are nevertheless required to hold minimum reserves. They must provide, as a minimum, the information necessary to calculate their reserve requirement on a shortened quarterly return as set out in Part 1 of Annex III to Regulation ECB/2008/32. The reserve base calculated from their quarterly return is then used for three consecutive maintenance periods, starting in the third month following the end-quarter to which their data relate (e.g. the requirement for the maintenance period starting on 14 December 2011 is calculated using the balance sheet for end-September 2011).

Part 2, Section 2 of Annex III to Regulation ECB/2008/32 contains rules for reserve requirements, including for the treatment of the lump-sum allowance where credit institutions are involved in mergers. Broadly speaking, merging institutions may each benefit from the lump-sum allowance in the maintenance period in which the merger takes place, but the merged institution enjoys only one allowance thereafter. Where a credit institution is divided up, each of its components benefits from a lump-sum allowance in the maintenance period in which the division takes place.

#### **The minimum reserve requirement and euro area enlargement**

When a Member State enters the euro area, its resident credit institutions become subject to the Eurosystem’s minimum reserve regime. They may exclude from their reserve base any

liabilities which would otherwise contribute to the reserve base which are owed to other institutions subject to the regime, whether domestic or resident elsewhere in the euro area. The reserve base of credit institutions resident elsewhere in the euro area will also be reduced at the time of enlargement to the extent that their liabilities otherwise subject to the requirement are owed to credit institutions resident in the Member State adopting the euro.

The maintenance period coinciding with Estonia’s adoption of the euro ran from 8 December 2010 to 18 January 2011. A credit institution’s reserve base for that period was calculated from its balance sheet from end-October 2010. Since credit institutions resident in Estonia were required to hold minimum reserves from the date of enlargement, a reserve base was calculated from their balance sheets for the end of October to determine the amount of minimum reserves to be maintained for the period 1-18 January 2011. Credit institutions in other euro area countries were permitted to exclude from their reserve base for the whole of the 8 December to 18 January maintenance period any liabilities to credit institutions resident in Estonia. Balance sheets for end-November 2010 were then used to calculate the reserve bases for Estonian and all other euro area credit institutions for the first full maintenance period following enlargement, namely that running from 19 January to 8 February 2011.

As noted above, where liabilities are in the form of deposits, the holder can be readily identified by the reporting credit institution and, if the holder is another credit institution resident in the euro area, the appropriate adjustment made to the reserve base. This may be impossible where the reporting institution has issued negotiable paper, since it may not know who holds it. The macro-ratio used by the Eurosystem to address this problem (see above) could, in principle, be revised in the light of the marketable-instrument issuing and holding behaviour of credit institutions in the new euro area country, but this has not happened so far.



## 5.2 MFI BALANCE SHEET STATISTICS AS AN INPUT TO FINANCIAL ACCOUNTS

The integrated quarterly euro area accounts have been compiled jointly by Eurostat and the ECB since June 2007. The accounts provide an exhaustive record of economic and financial transactions for each main institutional sector in the euro area. The non-financial accounts cover production, the generation, distribution and use of income (for consumption or saving), and the acquisition of non-financial assets (covering capital formation, i.e. the acquisition of produced non-financial assets such as buildings and machinery, and the acquisition of non-produced non-financial assets, such as land and mineral reserves). The balancing item or bottom line of the non-financial accounts is net lending or net borrowing. The financial accounts record transactions in financial instruments, representing the decisions of economic agents on how to invest surpluses (net lending) or how to finance shortfalls (net borrowing) arising from the non-financial accounts. The financial accounts also include balance sheets recording the outstanding amounts of financial assets and liabilities (and also some non-financial assets), and accounts reconciling financial transactions in the relevant period with the change in balance sheets between the beginning and end of the period in terms of “other” (meaning non-transactional) changes which arise from price and exchange rate changes, reclassifications and certain other items which are not treated as transactions but do affect balance sheets.

The legal basis for the accounts is a combination of EU and ECB legislation. EU legislation (Regulation (EC) No 1161/2005) requires Member States to provide Eurostat with quarterly non-financial accounts for resident institutional sectors, and for the rest of the world (viewed from the national perspective). Separate EU legislation (Regulations (EC) Nos 1221/2002, 501/2004 and 1222/2004) governs the provision of quarterly data on the non-financial and financial transactions and debt of the general government sector (S.13). An ECB Guideline (ECB/2002/7 as amended, notably by ECB/2005/13) requires euro area

countries to provide the ECB with quarterly national financial accounts and financial balance sheets for main resident institutional sectors and sub-sectors and the rest of the world (also viewed from the national perspective).<sup>4</sup>

MFIs are the dominant financial intermediaries in all euro area countries, and the monthly and quarterly returns provide sectoral breakdowns of their counterparties for most instrument categories. The MFI balance sheet data provide much of the transaction and balance sheet information which national compilers submit to the ECB in the context of financial accounts. In this respect, the MFI balance sheet information collected by NCBs and reported to the ECB as described above is directly relevant to the compilation of financial accounts. Furthermore, at the euro area level, the “MFI building block” is used in the compilation of euro area aggregates to ensure as much consistency as possible with main indicators, such as monetary and credit aggregates. The raw data collected for other areas of euro area statistics also provide sources for the financial accounts, the most important being balance of payments/international investment position statistics, data on investment funds and other (non-monetary) financial intermediaries, notably FVCs and insurance corporations and pension funds, and securities issues statistics.

However, the MFI balance sheet data, though timely, frequent, of high quality, and designed for the production of euro area aggregates, often cannot be used as they stand for euro area institutional sector accounts. The main reason is that the data depart in limited but important ways from the ESA 95 definitions and accounting principles which underlie the institutional sector accounts.

The most important definitional and conceptual departures from the ESA 95 in the MFI balance sheet statistics are the treatment of interest accruing on deposits and loans and the valuation of securities (both of these issues are mentioned in earlier sections of this manual – see, for instance, Section 2.1), and the difficulty in linking some

<sup>4</sup> Most non-participating Member States submit similar information.

MFI balance sheet statistics instruments with relevant ESA 95 financial asset categories. Thus, in line with the preferred treatment for monetary analysis purposes, Regulation ECB/2008/32 requires accrued interest to be recorded in “remaining assets” or “remaining liabilities”, not in the relevant instrument category, as the ESA 95 prefers.<sup>5</sup> Furthermore, in order to enable accounting information to be used for statistical purposes, MFI balance sheet statistics allow discretion in the valuation of securities, whereas the ESA 95 requires the use of market prices for both transactions and positions.<sup>6</sup> The MFI balance sheet items “remaining assets” and “remaining liabilities” do not coincide with the ESA 95 instrument category “other accounts receivable/payable” (apart from accrued interest, they include business in financial derivatives, in some cases current profit and loss, which properly belongs in capital and reserves, and frequently other items which the ESA 95 would record elsewhere – although there is some variation in national recording practice).

Bringing together information from different sources may present national and ECB compilers with the need to make choices. For example, MFI balance sheets may show amounts for deposits from and loans to other (non-monetary) financial intermediaries (OFIs) that differ from supposedly mirror data from the OFI side. Similarly, the government financial accounts data provided under EU legislation may be inconsistent with the MFI data on business with government entities. National compilers will choose what they consider to be the more reliable source, making compensatory adjustments to the counterpart data as necessary, although they may be constrained in doing so, for example by a requirement to give priority to the government accounts source.

While much of the financial accounts data prepared by national compilers as described above will be based on MFI balance sheet and other data submitted to the ECB for other statistical purposes, differences may arise for the reasons explained. The ECB is also subject to certain constraints in the euro

area financial accounts aggregates, such as the need to balance vertically the whole non-financial and financial accounts of the financial corporation, general government and rest of the world sectors, and to balance horizontally the various instrument categories. All these consistency requirements may imply further deviations from the data originally transmitted by the NCBs for MFI balance sheet statistics purposes.

The reconciliation procedure followed in compiling the euro area accounts is described sequentially for the sake of clarity; in practice, much of it proceeds simultaneously, in an iterative process.

- Any discrepancy (usually small) between general government non-financial and financial accounts is eliminated (in effect, using the general government integrated accounts as published for the euro area).
- Consistency with key monetary statistics is achieved by substituting the latest euro area aggregated MFI deposits and loans data (as published by the ECB) for total MFI deposits and loans submitted by national compilers.<sup>7</sup> An equivalent adjustment is made in deposits and loans of the counterparty sectors. The difference usually evident in the overall MFI balance sheet between reported claims on and liabilities to MFIs in the euro area (called “Excess of inter-MFI liabilities over inter-MFI assets” on the consolidated MFI balance sheet table published by the ECB) is resolved by taking the asset side (loans) as correct, and allocating the discrepancy to the remaining sectors in the horizontal reconciliation of loans and deposits.

<sup>5</sup> A similar point relates to accruing interest on debt securities, where the MFI Balance Sheet Regulation gives reporting agents some discretion to follow national accounting principles.

<sup>6</sup> For further details, see Section 1.6.

<sup>7</sup> This requirement for consistency with published monetary statistics implies some departure from the ESA 95, because of the treatment of accruing interest on deposits and loans.

### Example

Suppose that, within the reference period, MFIs buy corporate bonds from households for 100 and sell them back to households for 105. M3 must fall under both methods by the net amount of the transactions (5), as households reduce cash or deposits by 5. However, regarding the counterparts of M3 the results of the two methods differ. As the bonds do not appear on the MFI's end-of-month balance sheet, under the balance sheet method no transactions are recorded and the fall in M3 is matched by an increase in capital and reserves. It thus follows in this case that if the MFI balance sheet data are used unaltered as an input for the financial accounts, no transaction is recorded, yet M3 has fallen by 5 matched, presumably, by an entry in capital and reserves on the liabilities side of the balance sheet of MFIs. What should appear as a transaction will probably be recorded in valuation or other changes. The transaction approach, on the other hand, records a net sale of 5 of corporate bonds (a withdrawal of domestic credit by the MFI sector), matching the fall of 5 in M3. This is indeed correct, though it should be noted that the corporate sector will have experienced no withdrawal of credit.

- The rest of the world accounts submitted by the national compilers are replaced by euro area balance of payments/international investment position data (the rest of the world column is a requirement in Guideline ECB/2005/13 for completeness only and, as it contains no split for cross-border transactions between positions within the euro area and outside, cannot be used directly in compiling euro area accounts). In the process, acknowledged discrepancies in cross-border transactions and positions within the euro area result in horizontal discrepancies that need to be resolved.<sup>8</sup>
- The financial accounts are then balanced horizontally, and the financial corporation and rest of the world sectors are simultaneously balanced vertically. This step may require significant changes to the rest of the world account, where errors and omissions in the euro area balance of payments must be resolved, and to the financial accounts of some resident sectors. When the adjustments are made, due regard is paid to the reliability of the items concerned.

A final point in connection with the use of MFI balance sheet data in the financial

accounts concerns the balance sheet and transaction approaches to the reporting of transactions. Section 1.6.3 explained that the two approaches have different implications for the analysis of monetary aggregates and their counterparts. They also have different consequences for the financial accounts. In particular, the transaction approach is more appropriate for financial accounts purposes, though not necessarily the most helpful for monetary analysis. The example above, based on the example discussed in Section 1.6.3, further illustrates this point.

### 5.3 MONETARY PRESENTATION OF THE EURO AREA BALANCE OF PAYMENTS

The monetary presentation is a tool for assessing the impact on monetary developments of external transactions involving resident non-MFIs; these transactions are recorded in the current, capital and financial accounts of the balance of payments. It uses the fact that changes in the net external assets of the MFI

<sup>8</sup> Since bilateral data on cross-border transactions within the euro area reveal large discrepancies, the sum of resident sectors' transactions mirroring rest of the world transactions as recorded in national data cannot be correct. Hence some adjustments to resident sectors' transactions in the balancing process are unavoidable.

sector (the external counterpart to M3 – see Section 4.1 above) are reflected in the balance of payments – with some qualifications – as the mirror image of external transactions by non-MFIs in the euro area<sup>9</sup>. Such external financial transactions have had an important impact on euro area monetary dynamics in recent years.

Leaving out some detail which matters in practice but obscures the main picture, the monetary presentation relies on two identities. The first identity is derived directly from the structure of the MFI consolidated balance sheet, as described in Section 4.1.2 above; in particular, equation [4.1.1] can be rewritten as:

$$\begin{aligned} \text{Net external assets (of MFIs)} &= M3 - \text{credit to euro area residents} \\ &+ \text{longer-term financial liabilities} - \text{other counterparts (net)} \end{aligned} \quad [5.3.1]$$

The second identity is derived from the fact that the balance of payments is based on a double-entry principle, so the sum of all reported

transactions is, by definition, zero. In other words, decomposing the balance of payments into its main components yields:

$$\text{Current and capital account balance} = \text{External financial transactions of residents} \quad [5.3.2]$$

where

$$\begin{aligned} \text{External financial transactions of residents} &= \text{External financial transactions of resident MFIs} \\ &+ \text{External financial transactions} \\ &\text{of resident non-MFIs} \end{aligned} \quad [5.3.3]$$

In particular, the external financial transactions of resident units can be decomposed by type of transaction (direct, portfolio and “other” investment, as well as transactions in official reserves by the central bank) and, to some extent, by underlying financial instrument. As

changes in the MFI net external assets in monetary statistics should in principle match the external financial transactions of the MFIs as recorded in the balance of payments, the substitution of [5.3.3] and [5.3.2] in [5.3.1] yields the monetary presentation of the balance of payments.

### Monetary presentation of the balance of payments

$$\begin{aligned} \text{Current and capital account balance} - \text{External financial transactions of resident non-MFIs} \\ \equiv \Delta M3 - \Delta \text{ credit to euro area residents} \quad [5.3.4] \\ + \Delta \text{ longer-term financial liabilities} - \Delta \text{ other counterparts (net)} \\ (\equiv \Delta \text{ Net external assets (of MFIs)}) \end{aligned}$$

where  $\Delta$  is used in this context to denote flows in the corresponding aggregate.

This identity can also be expressed as:

$$\begin{aligned} \Delta M3 \equiv \text{Current and capital account balance} - \text{External financial transactions of resident non-MFIs} \\ + \Delta \text{ credit to euro area residents} - \Delta \text{ longer-term financial liabilities} + \Delta \text{ other} \\ \text{counterparts (net)} \end{aligned}$$

As shown in the equation above, the change in the net external assets of the MFI sector is the mirror image of the financial transactions of non-MFIs with non-residents of the euro area (on a net basis) and the current and capital

account balance. The foreign transactions of MFIs and the resulting change in their net

<sup>9</sup> See “The monetary presentation of the euro area balance of payments”, *Occasional Paper Series*, No 96, ECB, September 2008, available on the ECB’s website (<http://www.ecb.europa.eu>).

external asset position can in this way be linked to the external transactions of the non-MFI sector. Accordingly, it is possible to say, for example, that a rise of €X billion in M3 was associated with a rise of €Y billion in domestic credit and a positive contribution of €Z billion from external transactions (i.e. an increase in MFIs' net external assets of €Z billion) which in turn reflected a balance of payments surplus for non-MFI sectors, of which €xx was on current account, €yy represented a direct/portfolio/other investment inflow, and so on. For some detailed examples on how the linkage between in monetary aggregates and the balance of payment may arise, see the ECB Occasional Paper mentioned in footnote 9 of this Chapter.

In practice, neither the change in net external assets of MFIs in the monetary statistics nor their external financial transactions as recorded in the balance of payments is a comprehensive statement of the change in MFIs' external assets and liabilities. Some external assets and liabilities of MFIs are included indistinguishably in other MFI balance sheet categories, and not all balance of payments categories distinguish between transactions of MFIs and those of other resident sectors. This is why the heading in the monetary presentation (Table 7.4 of the statistical chapter of the ECB's Monthly Bulletin) reads "*B.o.p. items mirroring net transactions by MFIs*" – the table does not pretend that either the external counterpart to M3 or external transactions of MFIs as identified in the balance of payments is a complete representation of transactions in the assets and liabilities of MFIs with non-residents, and therefore (with sign reversed) of the external transactions of non-MFIs in the euro area. The consequence is that the change in net external assets of MFIs in the monetary statistics only approximately corresponds to the balance of payments of other resident sectors. Some qualifications therefore should be made.

(1) Foreign holdings of long-term bonds (i.e. with an original maturity above two years) and equity issued by euro area

MFIs are not recorded as external liabilities in the MFI balance sheet statistics. This is because the financial intermediation chains often do not allow the MFI issuing securities to identify who their final holders are. In contrast, estimates of foreign holdings of long-term bonds and equity issued by euro area MFIs are available in the balance of payments (based on the information on holdings of securities reported by other resident sectors).

(2) Another point applies to MFIs' assets and liabilities arising from financial derivatives contracts with non-residents, which are recorded indistinguishably in remaining assets/liabilities in the MFI balance sheet statistics, and as a single net figure for MFIs and all other resident sectors in the balance of payments.

(3) Valuation and other accounting practices give rise to discrepancies between transactions in the external counterpart to M3 and transactions in MFIs' external assets and liabilities as recorded in the euro area balance of payments. While in most euro area countries the balance of payments financial account is based on direct recording of transactions, for MFI balance sheet purposes the recording practices vary across countries as discussed in detail in Section 1.6.3. The discrepancy between the external counterpart of M3 and the related entries in the balance of payments arising from differences in valuation is likely to diminish with the growing use of security-by-security reporting supported by a single comprehensive securities database, but it is unlikely ever to be eliminated completely.

(4) Although a somewhat different point, the treatment of errors and omissions in the balance of payments should also be mentioned. The monetary presentation attributes errors and omissions to the external transactions of non-MFIs. This is not because the recorded external transactions of MFIs are deemed to be

correct, and all blame for errors and omissions in the balance of payments is attributed to non-MFI transactions, but rather because the monetary presentation seeks to identify balance of payments items corresponding to the external counterpart of M3, and so allocates errors and omissions to the other sectors.

These qualifications are explained in more detail in the ECB Occasional Paper referred to above. They do not, however, seriously diminish the value of linking monetary and balance of payments developments in this way.



## 6 CONFIDENTIALITY OF STATISTICAL INFORMATION AND ARRANGEMENTS FOR EXCHANGING DATA

The general basis for the collection of statistical information by the ESCB is outlined in the Statute of the ESCB and of the ECB (the “Statute”). In particular, Article 5.1 of the Statute requires the ECB, assisted by the NCBs, to collect any statistical information, either from the competent national authorities or directly from economic agents, which is necessary for the tasks of the ESCB. Furthermore, Council Regulation (EC) No 2533/98,<sup>1</sup> as amended by Council Regulation (EC) No 951/2009,<sup>2</sup> defines the general framework for the collection of statistical information by the ECB, which has the right to collect statistical information “*within the limits of the reference reporting population and of what is necessary to carry out the tasks of the ESCB*”.

The Council Regulation also lays down the confidentiality regime applying to confidential statistical information transmitted to the ECB for the performance of the tasks of the ESCB.<sup>3</sup> Specifically, Article 1(12) states that: “*‘confidential statistical information’ shall mean statistical information which allows reporting agents or any other legal or natural person, entity or branch to be identified, either directly from their name or address or from an officially allocated identification code, or indirectly through deduction, thereby disclosing individual information. To determine whether a reporting agent or any other legal or natural person, entity or branch is identifiable, account shall be taken of all the means that might reasonably be used by a third party to identify the said reporting agent or the other legal or natural person, entity or branch.*”

In turn, Article 8 of Council Regulation (EC) No 2533/98, as amended, determines the protection and use of confidential statistical information collected by the ESCB. In particular, confidential information must be used exclusively for the exercise of the tasks of the ESCB, except in four specific circumstances mentioned in Article 8(1), including if the reporting agent has explicitly given its consent to the use of the information for other purposes.

Article 8 also provides that the reporting agent must be informed of the statistical and other administrative uses to which the data may be put (Article 8(2)), and that measures must be taken to ensure the physical and logical protection of confidential statistical information (Article 8(3)). However, according to Article 8(7), “*Statistical information taken from sources which are available to the public in accordance with national legislation shall not be considered confidential.*”

Moreover, in line with Article 8b of Council Regulation (EC) No 2533/98, the ECB publishes an annual confidentiality report on the measures adopted to safeguard the confidentiality of the statistical information referred to above.<sup>4</sup>

Further standards and measures are laid down in Guideline ECB/1998/NP28 of 22 December 1998 concerning the common rules and minimum standards to protect the confidentiality of the individual statistical information collected by the ECB assisted by the NCBs.<sup>5</sup>

The application of the confidentiality framework to MFI balance sheet statistics thus rests on the concurrence of three distinct elements, namely the existence of *individual statistical information* which if disclosed to a third party (outside the ESCB) would expose the reporting agent, or individual customers of banks, to a *risk of identification* (direct or indirect) through means which third parties may reasonably be expected to use and which is *not already in the public domain*.

1 OJ L 318, 27.11.1998, p. 8.

2 OJ L 269, 14.10.2009, p. 1.

3 This confidentiality regime does not affect special national or EU provisions relating to the transmission of other types of information to the ECB. As regards these other types of information, the rules on statistical confidentiality applied by the national statistical institutes and the Commission on the statistical information they collect on their own behalf must be respected (see recital 22 of Council Regulation (EC) No 2533/98).

4 Such confidentiality reports are published yearly on the statistics section of the ECB’s website (<http://www.ecb.europa.eu>).

5 OJ L 55, 24.02.2001, p. 72.

Several points are worth considering on the basis of these elements. First, data are treated as confidential statistical information where a third party (outside the ESCB) could identify the relevant reporting agents. The case where the identification can only be carried out by the relevant NCB on the basis of specific information not available to third parties is not covered here. Second, as MFI balance sheet statistics are highly aggregated in terms of counterparties and types of instrument, they typically do not reveal information on transactions with individual customers. In addition, MFI balance sheet positions are not always confidential, as they may already be reflected in the public statements that MFIs are required to produce. Hence, the figures are treated as confidential statistical information only if they are not already available to the public through other sources, such as national statistics or the financial reporting of the reporting agent in accordance with public disclosure requirements.

Article 2(3) of Guideline ECB/1998/NP28 also provides that *“All appropriate measures shall be taken to ensure that confidential statistical information is arranged in such a way that any published data covers at least three economic agents. Where one or two economic agents make up a sufficiently large proportion of any observation to make them indirectly identifiable, published data shall be arranged in such a way as to prevent their indirect identification.”*<sup>6</sup>

In the case of MFI balance sheet statistics, which relate to the whole MFI population, euro area and national statistics typically entail such a high level of aggregation that this provision does not affect them. The case where a specific financial instrument is issued by only one or two MFIs resident in a specific country does not constitute confidential statistical information unless, notwithstanding the provisions discussed in the previous paragraph, a third party would be able to identify the reporting agent(s) using the reported information. Similarly, the same treatment should be applied in cases where the specific data are such that one or two entities are predominant in the reported total.

In addition, Article 8(1) of Council Regulation (EC) No 2533/98, as amended, states that the ECB can use confidential statistical information transmitted to it for purposes other than the exercise of the tasks of the ESCB (e.g. for dissemination to the Eurosystem, Eurostat or the IMF, or for publication) if *“the reporting agent or the other legal or natural person, entity or branch which can be identified, has explicitly given its consent to the use of the said statistical information for other purposes.”* Along the same line of reasoning, Article 2(3) of Guideline ECB/1998/NP28 provides that the rules stated in the article *“shall not apply if the reporting agents or the other legal persons, natural persons, entities or branches that can be identified have explicitly given their consent to the disclosure.”* Therefore, even identifiable figures can be disseminated or published if the agent has explicitly consented to such dissemination and/or publication.

<sup>6</sup> The criterion used to identify cases of predominance (i.e. when a proportion is “sufficiently large” to make economic agents identifiable) is not specified in Guideline ECB/1998/NP28, nor in other official EU legislation. Following an investigation undertaken in 2002 within the ESCB which was aimed at identifying national practices in the treatment of confidential data in the context of balance of payments and international investment position statistics, the share of 85% has been indicated as a general rule of thumb to identify predominance. Similar guidance has been applied to other statistics, including monetary and financial statistics.

## 7 COMPLIANCE REGIME

The ECB must ensure that reporting agents comply with their reporting obligations as set out in the legal acts on the ECB's statistical requirements. To this end, Article 7(1) of Council Regulation (EC) No 2533/98 empowers the ECB to impose sanctions (within the limits set out in Article 7(4)) if a reporting institution does not meet its legal obligations.

The ECB's non-compliance regime for MFI balance sheet statistics has been in place since 2004. A review of this framework took place in 2009 and a streamlined non-compliance regime concerning both statistics on the MFI balance sheet and statistics on interest rates applied by MFIs to deposits and loans vis-à-vis households and non-financial corporations was adopted in August 2010.

The current regime consists of an unpublished Guideline (ECB/2010/NP15) and a published Decision (ECB/2010/10). The published Decision explains in broad terms the scope of application of the non-compliance framework, stages in the non-compliance procedure and principles for the application of sanctions, while the unpublished Guideline contains detailed information regarding the logging and reporting of non-compliance and the calculation of sanctions.

To ensure equal treatment of reporting agents, the ECB's non-compliance regime has adopted a harmonised approach to the logging and reporting of infringements by NCBs, the calculation of possible sanctions and the steps to be followed in an infringement procedure. NCBs follow the procedure institution by institution, using a common approach which recognises degrees of seriousness in non-compliance. The following are key aspects of the BSI non-compliance regime.

(1) Types of infringement: sanctions may be imposed in the event of failure by the actual reporting population to comply with the minimum standards set out in Annex IV to Regulation ECB/2008/32. As discussed in Section 1.5, these standards relate to

transmission (in relation to timeliness and technical reporting requirements), accuracy (in relation to linear constraints and data consistency across frequencies) and conceptual compliance (in relation to definitions and classifications). Sanctions may also be applied in the case of serious misconduct, which includes cases where there is a systematic or intentional reporting of incorrect, delayed or incomplete data or an insufficient degree of diligence or cooperation by the reporting agent with the relevant NCB or the ECB.

- (2) Logging of infringements: one of the circumstances taken into account in deciding whether to impose a sanction is the repetition and frequency of the logged infringements. It is thus crucial that the system identifies the relevant period within which the repetition and frequency is to be assessed. It is relevant to note, however, that a sanction may be imposed even for a solitary case of serious misconduct.
- (3) Assessment phase and infringement procedure: in the event that an NCB detects a case of non-compliance with the reporting requirements, it may give an early warning to the reporting agent concerned informing it of the nature of the non-compliance detected and recommending that corrective measures be taken in order to avoid repetition of the non-compliance. After repeated non-compliance logged by the NCB, an infringement procedure must be initiated unless: (i) the ECB or the NCB considers, in view of the information provided by the reporting agent, that one or more of the cases of non-compliance is beyond the reporting agent's control; or (ii) the potential fine does not reach the minimum established threshold for the imposition of a sanction. If the ECB or the NCB initiates an infringement procedure, it will be carried out in accordance with Article 3 of Regulation (EC) No 2532/98, including the issuing of a written notification and the adoption of a reasoned decision by the ECB.

- (4) Application of sanctions: the determination of a sanction follows a two-stage procedure.
- impact of the infringement or a record of no (or infrequent) infringements.
- (a) In the first stage, an amount is calculated on the basis of quantitative aspects. In the case of infringements relating to timeliness, the seriousness of the infringement depends on the number of working days of delay vis-à-vis the NCB's deadline. In the case of infringements relating to accuracy and/or conceptual compliance, the seriousness of the infringement depends on the size of the error. The amount of the sanction will also reflect the economic size of the reporting agent. It is relevant to note that the ECB does not take into account errors of a rounding nature or that are negligible. As regards conceptual compliance, ordinary revisions, i.e. non-systematic revisions to the series reported within the period (month or quarter) following the initial reporting, are also not regarded as cases of non-compliance. Article 7(4) of Regulation (EC) No 2533/98 establishes the maximum sanctions which the ECB may impose on reporting agents, i.e. €100,000 in the case of an infringement of the obligation of timeliness and €200,000 in the case of inaccuracy or conceptual non-compliance.
- Overall, the aim of the non-compliance regime is to encourage good reporting by MFIs, rather than to impose sanctions. In practice, the regime has been effective in contributing to the quality of the statistics and has only rarely been applied. A review of the non-compliance framework must take place at least every five years, and the ECB monitors the national application of the logging procedure. This contributes to ensuring a level playing field among all reporting agents across the euro area.
- (b) In the second stage, the circumstances of the case (i.e. aggravating or extenuating factors) are taken into account, which may result in an increase or decrease of the amount calculated in the first stage. Aggravating circumstances include frequent infringements, inadequate cooperation, a record of earlier sanctions, or possible profits obtained by the reporting agent by reason of the infringement. Extenuating circumstances include good diligence and effective cooperation shown by the reporting agent, good faith, lack of

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