



EUROPEAN CENTRAL BANK

EUROSYSTEM

## EURO AREA MONETARY AND FINANCIAL STATISTICS 2010 QUALITY REPORT

### SUMMARY

This data quality report is a contribution to the ECB's Statistics Quality Framework.<sup>1</sup> Euro area monetary and financial statistics (MFS) have been published with a high level of quality for more than a decade. In 2010, all monthly press releases on monetary developments and related data on monetary financial institutions (MFI) balance sheet statistics were *issued in a timely and punctual manner*. Moreover, all other press releases, i.e. on MFI interest rate statistics (monthly), securities issues statistics (monthly), investment funds statistics (monthly) and the list of MFIs (annual), were also published on time and in line with the advance release calendar. All underlying detailed tables and time series were regularly published in the ECB's Statistical Data Warehouse (SDW) and on the ECB's website.

A quantitative analysis of the stability of MFI balance sheet statistics shows that *revisions to the broad monetary aggregate M3 have been very small overall*: about 60% of the revisions to (quite sensitive) month-on-month M3 growth rates are below 0.05 percentage point (p.p.), and in comparison to the M3 average monthly growth rate (0.52%), the average revisions and bias (less than 0.01%) have remained very low. Among the components, the initial estimates of the M3-M2 component, and in particular debt securities issued, were the most revised. The latter component's monthly growth rates were often revised by more than one percentage point. In the period from summer 2007 to the end of 2008 somewhat higher revisions were more frequent and moved in the same direction, but over the full comparison period of 2005 to 2010

the first estimates have on average remained reliable (the mean absolute error was just under 0.06 p.p.). Compared with other economic statistics, these revisions are negligible and underline the accuracy of the first assessment of monthly MFI balance sheet statistics. It should also be borne in mind that revisions are generally necessary to improve the quality of the statistics.

A set of new statistics for *MFI balance sheet statistics* in accordance with Regulation ECB/2008/32<sup>2</sup> were transmitted for the first time in July 2010 with reference to June 2010 data (except for MFI securitisation and financial vehicle corporation (FVC) statistics, where the first report concerned the data for December 2009 because these data have a high priority in the current context). The updated regulation requires an enlarged set of data to cater for a better analysis of monetary developments, including for example information on loan sales and securitisations or on loans backed by real estate collateral. It also contains extended provisions for cutting off the tail, intended to minimise the statistical reporting obligations of many reporting institutions. The publication of the new data is planned for mid-2011.

A set of new statistical indicators for *MFI interest rates* (MIR) in accordance with the new Regulation ECB/2009/7 (amending Regulation ECB/2001/18) were collected from mid-2010, and are planned for release from early Summer 2011 onwards. Amongst other benefits, these

<sup>1</sup> See <http://www.ecb.europa.eu/stats/html/sqf.en.html>

<sup>2</sup> Regulation (EC) No 25/2009 of 19 December 2008 concerning the balance sheet of the monetary financial institutions sector (Recast) (ECB/2008/32), OJ L 15, 20.01.2009, pp. 14-62.

additional data items will enable users to access more harmonised data, facilitate comparisons across countries and provide further insights into the financing of small and medium-sized enterprises (as well as unincorporated businesses). The regulation also establishes a legal basis for a non-compliance regime for MIR statistics to ensure that high standards of data reported by MFIs are maintained.

An in-depth *user review* of the *securities issues statistics* was prepared and launched to assess the extent to which the data compiled are still “fit for policy use”. A clear definition of the current user requirements, including where possible an outline of future user needs, will also be needed before the processing of securities issues (SEC) data is re-examined and the use of the Centralised Securities Database (CSDB) as the key reference source for SEC statistics is assessed.

The monthly amounts outstanding (published since September 2006) of *short-term European paper (STEP)*, the weekly release of daily yield statistics (since April 2007), and the weekly release of detailed daily amounts outstanding and new issues statistics (since November 2009), which enabled STEP to become eligible as collateral for monetary policy operations, have been complemented by a *weekly release of amounts outstanding broken down by individual programme and by issuance currency* (as of end-September 2010 this included the delivery of data in the form of csv files and via the Statistical Data Warehouse). The latter move increased considerably the level of detail and the visibility of STEP statistics. Another enhancement was the adoption on 25 October 2010 of the new STEP Market Convention, which enables the ECB to use the STEP statistics for non-statistical purposes.

*Statistics on assets and liabilities of investment funds* collected under Regulation ECB/2007/8 were successfully produced and disseminated

in 2010, following full implementation of the regulation in 2009. In addition, since May 2009 the Register of Institutions and Assets Database (RIAD) system has on a quarterly basis received from and re-disseminated to NCBs the list of investment funds that represent the reporting population. Since November 2009 this list has also been available on the ECB website.

New statistics based on the new *Regulation concerning statistics on financial vehicle corporations* (ECB/2008/30) were collected from February 2010 for reference periods from December 2009. Once released, together with new data under Regulation ECB/2008/32 concerning the consolidated balance sheet of the monetary financial institutions sector (which recast and replaced Regulation ECB/2001/13), those statistics will help to close a major gap and provide harmonised information on the *securitisation* market and risk transfer. In addition, since March 2010, the RIAD system has on a quarterly basis also received from and re-disseminated to NCBs the list of financial vehicle corporations that represent the respective reporting population. Like the investment fund list, the list includes information on the individual securities issued by the entities. The list has been available on the ECB's website since the same date.

Work in 2010 also sought to further enhance the new quarterly statistics on assets and liabilities of euro area *insurance corporations and pension funds*. The first external publication of these data is tentatively scheduled for mid 2011.

## I EURO AREA MONETARY AND FINANCIAL STATISTICS

Adherence to high quality standards is considered to be a key factor in maintaining the public's confidence in ECB statistics, upon which monetary policy decisions are based.

This report follows the statistical principles of the ‘Public commitment on European Statistics by the ESCB’, which was published in 2007 and further amended in 2009. In line with its Mission Statement, the ECB has committed itself to adhere to values such as integrity, competence, efficiency and transparency. Moreover, in April 2008 the ECB published its Statistics Quality Framework (SQF) and quality assurance procedures. These contain the main principles and elements guiding the development, collection, compilation and dissemination of the ECB’s statistics.

This quality report has been prepared in line with the quality principles laid down in the SQF, of which a first group of six relate to the ECB’s institutional environment: (i) *independence and accountability*, (ii) *mandate for data collection*, (iii) *impartiality and objectivity*, (iv) *statistical confidentiality*, (v) *coordination and cooperation among the members of the ESCB and with European and international organisations* and (vi) *resources and efficiency*. The implementation of these high-level principles is considered a given for the purpose of the MFS quality report; however, references to some of these principles are made in Section 1 of this report for various types of MFS statistics.<sup>3</sup>

The second group of the SQF’s quality principles concerns the statistical processes. It comprises the following two principles: (i) *sound methodology and appropriate statistical procedures* and (ii) *cost effectiveness and non-excessive burden on reporting agents*. Examples are cited in Section 1 of this report.

The third group of quality principles refers to aspects of the statistical output, namely (i) *relevance*, (ii) *accuracy and reliability (stability)*, (iii) *consistency and comparability*, (iv) *timeliness and punctuality* and (v) *accessibility and clarity*. Various aspects are emphasised in Section 1 in connection with different MFS statistics. In addition, Section 2 contains a detailed analysis of revisions to MFI balance sheet statistics intended to assess their quality in terms of (ii) accuracy and reliability (stability).

The table below provides an overview of the quality principles adopted by the ECB.

<sup>3</sup> See footnote 1 for a more detailed discussion of the general quality features of ECB statistics.

Area	Principles
1 Institutional environment	(i) independence and accountability (ii) mandate for data collection (iii) impartiality and objectivity (iv) statistical confidentiality (v) coordination and cooperation among the members of the ESCB and with European and international organisations (vi) resources and efficiency
2 Processes	(i) sound methodology and appropriate statistical procedures (ii) cost effectiveness and non-excessive burden on reporting agents
3 Output	(i) relevance (ii) accuracy and reliability (stability) (iii) consistency and comparability (iv) timeliness and punctuality (v) accessibility and clarity

## 1.1 MONETARY FINANCIAL INSTITUTIONS BALANCE SHEET STATISTICS

In 2010 production of MFI balance sheet statistics in accordance with Regulation ECB/2008/32 (*see quality principle 1 (ii)*) continued in close cooperation between the ECB and NCBs (*1(v)*). Transmission deadlines as laid down in Guideline ECB/2007/9<sup>4</sup> were met by all NCBs, and all monthly press releases on monetary developments and related data on MFI balance sheet statistics were issued without delay, i.e. in general on the 19<sup>th</sup> working day following the reference month (*3(iv)*). The underlying data were made available in the ECB's Statistical Data Warehouse and on the ECB's website (*3(v)*). Data for the most recent reference period is flagged as provisional and may be revised in the following reference period. These "regular" revisions generally have an impact of less than +/- 0.1 p.p. on the annual growth rate of M3 (*3(ii)*) (further quantitative information on the revisions relating to MFI balance sheet statistics can be found in Section 2). In each production round a range of quality checks and time-series analyses are performed on both the national and the euro area data (*3(iii)*).

MFI balance sheet statistics are in principle collected by means of a census, i.e. the full population of MFIs is generally expected to report monthly and quarterly. However, NCBs may grant derogations to MFIs, provided that the MFIs which fully contribute to the monthly consolidated balance sheet account for at least 95% of the total MFI balance sheet in terms of stocks, in each participating Member State (*2(iii)*). NCBs which grant derogations to small MFIs must gross up the data to a full coverage for the purpose of monthly and quarterly balance sheet item (BSI) statistics (*2(i)*).

This option of "cutting off the tail" is currently used by seven euro area NCBs, where either certain item breakdowns are not collected from "tail institutions" or their data are collected with a lower frequency or timeliness than for the "full reporters". As a consequence, a small fraction of the euro area statistics is estimated. In some

euro area countries the use of this option was reviewed and enhanced in 2010.

The compliance of MFIs with Regulation ECB/2008/32 is being monitored systematically by NCBs and the ECB on a monthly basis (*3(ii)*).<sup>5</sup> A review of the non-compliance regime for MFI BSI statistics was conducted in 2010. The ECB's previous non-compliance regime had been in place since 2004. It consisted of a non-published Guideline (ECB/2004/NP9), a non-published Decision (ECB/2004/NP8) and a public Notice (2004/C/195/10). A review was launched in October 2009, as required by the Guideline. This confirmed that the non-compliance regime had been effective in helping to ensure the high quality of the statistics and had only rarely been applied in practice. The main features of the proposed new set of legal documents are the following: (i) there is to be a streamlined legal framework, improving the current structure and merging BSI and MIR requirements in only two common legal acts, a public decision and a non-published guideline; (ii) the decision will improve the transparency and accountability of the ECB's legal framework vis-à-vis the general public (previously only the notice was public); (iii) some of the provisions have been clarified, particularly those regarding the procedural steps and rules involved in the initiation of an infringement procedure; and (iv) new elements have been introduced to further secure the existing level playing field across the euro area, in line with the recommendations of the Internal Auditors Committee of December 2009. This new framework will apply for reference periods from end-2010 onwards.

MFI balance sheet statistics also serve as a building-block for the quarterly integrated (non-financial and financial) euro area accounts. Work continues to investigate discrepancies in the statistical data included, for example between the net external assets of MFIs in

4 OJ L 341, 27.12.2007, p. 1.

5 Notice of the ECB on the imposition of sanctions for infringements of balance sheet statistical reporting requirements OJ C 195, 31.7.2004, p. 8.

monetary and external statistics, and to reconcile data for specific instruments.<sup>6</sup>

The updated/recast Regulation ECB/2008/32, approved by the Governing Council in December 2008,<sup>7</sup> was implemented in 2010. The first transmission of data took place in July with reference to June 2010 data (except for MFI securitisation and FVC statistics, where the first reporting concerned the data for December 2009 because these data have a high priority in the current context), providing reporting agents and NCBs with an appropriate lead time for implementation. The updated regulation requires an enlarged set of data to cater for a better analysis of monetary developments, including, for example, information on loan sales and securitisations or on loans backed by real estate collateral. It also contains extended provisions for cutting off the tail, intended to minimise the statistical reporting obligations of many reporting institutions (2(ii) and 3(iii)). The application of these provisions, which also differentiate in terms of the size of the contribution of individual countries to the euro area balance sheet, will not lead to a deterioration of the euro area results (2(i)). The publication of the new data is planned for mid-2011.

## 1.2 LIST OF MFIs

In 2010 production of the MFI list, as collated in accordance with ECB/2007/9 (1(ii)), continued in close cooperation between the ECB and NCBs (1(v)). In addition, all NCBs fulfilled the MFI ad-hoc updating requirements laid down in ECB/2007/9 (3(iv)). Updates of the number of MFIs were made available at the end of every month in the ECB's Statistical Data Warehouse and on the ECB's website (3(v)). To ensure that the list of MFIs is homogenous and accurate, regular monitoring is undertaken either through dedicated correspondence with NCBs or via automated facilities. Monitoring measures include checking of foreign branches and a consistency check between the list of MFIs and the list of eligible counterparties for monetary policy operations (3(iii)).

## 1.3 MFI INTEREST RATE STATISTICS

In 2010 production of MFI interest rate statistics in accordance with Regulation ECB/2001/18, now amended by Regulation ECB/2009/7 (1(ii)), continued in close cooperation between the ECB and NCBs (1(v)). Transmission deadlines laid down in Guideline ECB/2009/23<sup>8</sup> amending Guideline ECB/2007/9 were met by all NCBs (i.e. transmission by the 19th working day<sup>9</sup> following the end of the reference month), and all monthly press releases on monetary developments and related data on MFI interest rate statistics were issued without delay (3(iv)). The underlying data were made available in the ECB's Statistical Data Warehouse and on the ECB's website (3(v)) on the 23rd working day following the end of the reference month. Revisions are usually received from the countries in the following month and refine data for the previous month(s),<sup>10</sup> their impact on the euro area aggregates is generally negligible. Data checking procedures are similar to those used for the MFI balance sheet statistics (3(iii)). The first reporting of new MIR statistical indicators (3(i)), in compliance with Regulation ECB/2009/7, commenced with the reference period of June 2010. In October 2010 these "new Regulation" data for the reference periods of June to August 2010 were subject to a detailed quality assessment<sup>11</sup> (2(i)) involving the Eurosystem NCBs. A further assessment is scheduled for early 2011, following which it is

6 E.g. valuation rules and accrual accounting conceptually differ between the MFI balance sheet data and the System of National Accounts framework and thus require adjustment and reconciliation.

7 Regulation (EC) No 25/2009 of 19 December 2008 concerning the consolidated balance sheet of the monetary financial institutions sector (recast) (ECB/2008/32), OJ 20.01.2009, L15/14-L15/62.

8 Guideline ECB/2009/23 (OJ L 16, 21.1.2010, p. 6); Guideline ECB/2007/9 (OJ L 341, 27.12.2007, p. 1).

9 MIR data from the Member States that are not yet members of the euro area are transmitted two days later, i.e. on the 21<sup>st</sup> working day.

10 E.g. data flagged as "provisional" in the previous month are often revised to the status of "actual" data in the following reference month.

11 MIR Data Quality Review <https://darwin.escb.eu/livelink/livelink/overview/37142510>; <https://darwin.escb.eu/livelink/livelink/overview/37115942>

planned to publish a selected set (or all) of these indicators in early summer 2011.

MFI interest rate statistics are collected either via a census or using a stratified sampling approach (2(ii)), with the proviso that in the latter case the sample must be constructed in such a way that it is representative of the potential reporting population.

The legal basis for monitoring the (non-compliance of MFIs with Regulation ECB/2009/7 amending Regulation ECB/2001/18 was established in the form of two legal instruments in August 2010: the non-public Guideline ECB/2010/NP15 and the published Decision ECB/2010/10. Subsequently, in November 2010, the ECB successfully carried out a regression testing exercise with Eurosystem NCBs, including Eesti Pank, to ensure that the ECB and all NCBs were adequately prepared to transmit MIR non-compliance data via the RIAD system. There will be systematic, monthly monitoring of compliance by NCBs and the ECB (3(ii)) from the reference period of February 2011<sup>12</sup> onwards.

#### 1.4 SECURITIES ISSUES AND STEP STATISTICS

In 2010, production of securities issues statistics in accordance with the MFS Guideline ECB/2007/9, as amended (1(ii)), continued in close cooperation between the ECB and NCBs (1(v)). All monthly press releases on developments in the securities issues statistics were issued without delay. The underlying data were made available in the ECB's Statistical Data Warehouse and on the ECB's website (3(v)).

During 2010, the coverage of debt securities issued by residents in Ireland and Luxembourg was significantly improved and now includes non-MFI corporations and short-term debt securities issued by the general government sector. In addition, the coverage of quoted shares has been expanded to include international listings by Irish residents.

Progress on the Centralised Securities Database (CSDB) is gradually offering opportunities to review and analyse the aggregated SEC data. Furthermore, the CSDB is supposed to supplement the coverage of SEC statistics in some Member States, in particular regarding the reporting by other financial intermediaries and non-financial corporations (2(iii), 3(ii), 3(iii)).

After ten years using a "short-term approach" – based on available data at national level – with some partial enhancements, and in the light of the publication of the Handbook on *Securities Statistics*,<sup>13</sup> an in-depth review of SEC statistics was prepared and launched in 2010 to assess to what extent the data compiled are still "fit for use". This took into account the fact that SEC statistics are also a building block for other financial statistics, including the future securities holdings statistics and the euro area accounts. In addition, a heightened need for internationally comparable statistics in this field has been identified, in part as a lesson from the financial crisis.<sup>14</sup> The review is intended to reassess the relevance of the statistics and examine the possibility of broadening the scope and user group. Finally, a clear definition of the current user requirements, including where possible an outline of future user needs, will be a necessary input before at a second stage SEC data processing is re-examined and the use of the CSDB as the key reference source for SEC statistics is assessed.

On 9 June 2006 Euribor ACI and Euribor FBE adopted the Short-Term European Paper (STEP) Market Convention. The Convention requires issuers to put in place any arrangements with the securities settlement systems, the issuing

<sup>12</sup> From the reference month of December 2010 onwards.

<sup>13</sup> *Handbook on Securities Statistics* (Part I published in May 2009 by the BIS, ECB and IMF; cf. <http://www.imf.org/external/np/sec/pr/2009/pr09162.htm>).

<sup>14</sup> In this context, there have been increased efforts to harmonise standards and reporting guidelines for international financial statistics and in particular securities statistics. The 2008 SNA and 2010 ESA will serve as references for the reviewed SEC statistics. Another concrete step in this direction is the Handbook on Securities Statistics, loc. cit., which includes detailed reporting guidelines.

and paying agents, the dealers, the arrangers or any other relevant entity that are necessary to provide the eligible data provider with complete and accurate data for the production of statistics by the ECB (1(ii)). Aggregated daily yields and spreads for euro-denominated STEP market securities have been released on the ECB's website weekly (first working day at 2 p.m.) since April 2007 and have been disseminated to internal and external SDWs since August 2009 (3(v)). Statistics were published on a timely basis in 2010, except on one occasion when there was a delay of less than one hour (3(iv)). In addition, daily amounts outstanding broken down by issuer sector, maturity, rating category and currency; new issues broken down by issuer sector, maturity and rating category; and spreads between the EONIA and the yields on new issues of euro-denominated STEP securities, also broken down by issuer sector, maturity and rating category have been published weekly since 30 November 2009 (3(i, ii, v)). The web design was upgraded at the same time. Furthermore, all series are also disseminated via the Statistical Data Warehouse, thereby increasing considerably the visibility of the STEP statistics (3(v)). Since the end of September 2010 the ECB has also published outstanding amounts for each individual STEP programme, including a detailed currency breakdown, on a weekly basis. For all statistics, algorithms are designed that guarantee confidentiality for yields of individual programmes (1(iv)). These statistics help to increase transparency in the market and provide investors with valuable information allowing them, for example, to assess their risk concentration. The statistics also provide issuers with greater visibility as regards their programmes and are useful for the ECB's analysis of the implementation of monetary policy and assessment of financial stability. Another major enhancement in 2010 was the adoption of the new STEP Market Convention on 25 October 2010. Under the new Convention, the ECB is entitled to collect statistical information not only for production and publication of STEP statistics but also, under Article 1(10)(1), to use aggregated and individual statistical information for non-

statistical purposes, i.e. to contribute to the implementation of the single monetary policy or the analysis of financial stability. All contracts between data providers and the ECB have therefore been renewed to reflect this change.

## 1.5 OTHER FINANCIAL INSTITUTIONS STATISTICS

### 1.5.1 INVESTMENT FUNDS' STATISTICS AND LIST

In 2010, production of statistics on assets and liabilities of investment funds, collected in accordance with Regulation ECB/2007/8,<sup>15</sup> continued in close cooperation between the ECB and NCBs (1(ii)). These statistics have been transmitted by the NCBs to the ECB since February 2009, and the first public release took place in December 2009. 2010 thus marked the first full year of production. The transmission deadlines laid down in Guideline ECB/2007/9 were met by all NCBs and all monthly press releases were issued without delay, i.e. on the 35th working day following the reference month (3(iv)). In the light of the experience gained, the scheduled release date will be brought forward to the 34th working day, starting from the release of December 2010 data in February 2011.<sup>16</sup> The data were made available in the ECB's Statistical Data Warehouse and on the ECB's website (3(v)). Regarding revisions, the headline series on investment fund shares/units issued (outstanding amount at the euro area level) was revised by at most 0.5% the month following the initial release. On average, the revisions of this item were 0.2% in 2010. In each production round a range of quality checks and time series analyses are performed on both the national and the euro area data (3(iii)).

There are a number of items transmitted by the NCBs in accordance with the Guideline ECB 2007/9 whose quality and/or coverage does not allow for their publication yet. These items are the sectoral breakdown of holders of investment fund shares/units issued, sales and

<sup>15</sup> Regulation (EC) No 958/2007 of the ECB of 27 July 2007 concerning statistics on the assets and liabilities of investment funds (ECB/2007/8), OJ L 211, 14.8.2007, p. 8.

<sup>16</sup> As set out in the WG MFS 2011 delivery calendar.

redemptions of investment fund shares/units issued, financial derivatives (currently included in remaining assets/liabilities in the released data), and monthly transactions data (excluding investment fund shares/units issued).

Data is compiled at the NCB level using the CSDB to produce the required statistical breakdowns and, where relevant, also valuations. This has allowed the investment funds to report security-by-security data (as available in their internal systems), thus reducing their reporting burden (2(ii)).

In 2010, as laid down in ECB/2007/9, the RIAD system continued on a quarterly basis to receive from and re-disseminate to NCBs the list of investment funds that represent the reporting population of close to 50,000 institutions. This investment fund list and an overview table of the number of institutions is also made available on the ECB's website each quarter (3(v)).<sup>17</sup>

#### 1.5.2 FINANCIAL VEHICLE CORPORATIONS STATISTICS AND LIST

The new Regulation concerning statistics on the assets and liabilities of financial vehicle corporations engaged in securitisation transactions (ECB/2008/30)<sup>18</sup> and the related partial update of Guideline ECB/2007/9 (Guideline ECB/2008/31) were adopted by the Governing Council on 19 December 2008. They establish the framework for the reporting of new statistics regarding holdings of securitised assets and the issuance by FVCs of securities backed by these assets. These new statistics, combined with enhanced reporting by MFIs involved in securitisation transactions, will fill a major gap in the ESCB statistics and will improve transparency in a market segment that has become very complex and is widely considered opaque. FVC statistics were first reported to the ECB in February 2010.

A dedicated list of FVCs that support the data collection, statistics compilation and analysis of developments in this sector is now maintained in the RIAD system and has thus been available

within the ESCB since March 2010. In parallel, this list, together with an overview table of the number of institutions, is published on the ECB's website with quarterly updates. Since the 3rd edition (September 2010) the list of published FVCs has also included the ISIN codes of securities issued by individual FVCs, in so far as they are not subject to confidentiality restrictions.

#### 1.6 INSURANCE CORPORATIONS AND PENSION FUNDS STATISTICS

The ECB has been receiving quarterly insurance corporations and pension funds (ICPF) statistics, transmitted by NCBs under a gentlemen's agreement, since March 2008 (first data: ref. December 2007) (1(ii) and (v), 2(iii)). The euro area ICPF statistics are compiled using a short-term approach, exploiting all balance sheet data available for the ICPF sector at the national level, without imposing new data requirements on the reporting agents (2(ii)). NCBs have worked extensively first to build up consistent balance sheet data for the sector on a quarterly basis, and then to derive transactions. In some cases the contribution of (solo accounts) data by the respective national supervisory authority has been much enhanced (2(ii)). This work is ongoing. Nonetheless, the euro area aggregates are not fully harmonised and estimates are sometimes needed to replace missing data and so be able to derive the euro area aggregates (2(i)). In 2011 the dissemination and publication of the ICPF data should, in addition to their direct analytical potential, contribute (as a 'building block' for the ICPF sector) to the compilation of the euro area financial accounts (EAA) (3(iii) and (iv)).

Required improvements mainly concern (i) the transactions data (3(iii)) and (ii) the timeliness of the initial transmission of data to the ECB (the transmission of data to the ECB is T+80 calendar days) and of the transmission of any

<sup>17</sup> <http://www.ecb.europa.eu/stats/money/mfi/funds/html/index.en.html>

<sup>18</sup> Regulation (EC) No 24/2009 of 19 December 2008 concerning statistics on the assets and liabilities of financial vehicle corporations engaged in securitisation transactions (ECB/2008/30), OJ L 15, 20.01.2009, pp. 1-13.

revisions to the data (within two working days during quarterly production rounds) (3(iv)). The first external publication of these data is tentatively scheduled for mid-2011 (3(v)).

Longer-term work will aim to harmonise recording practices (e.g. for pension funds) (2(i)) and meet additional user demands (e.g. for financial stability analysis, and the demands of European Systemic Risk Board (ESRB) and European Commission users (3(i)).

In this context, the Committee of European Insurance and Occupational Pensions Supervisors and its successor, the European Authority for Insurance and Occupational Pensions (EIOPA), are in the process of developing harmonised reporting templates on insurance corporations for supervisory purposes (Solvency II Directive<sup>19</sup>). The reporting by insurance corporations to national supervisory bodies and the EIOPA under Solvency II is planned to start in 2013. It is considered that this will also be a major step forward in meeting further statistical needs for monetary policy and macro-prudential purposes in the case of insurance corporations (1(v)). Taking the current proposals as a basis, it is expected that the reporting schemes for insurance corporations developed for supervisory purposes may cover the vast majority of current and prospective ECB/ESRB data requirements<sup>20</sup> (2(i)(ii)). This is also important if the reporting burden for insurance companies is to be minimised as much as possible. Harmonised reporting templates on pension funds for supervisory purposes are also to be developed in the future. However, no exact timetable has yet been agreed upon.

## 1.7 PAYMENTS AND SECURITIES SETTLEMENT SYSTEMS STATISTICS

Payments statistics (and statistics on securities clearing, trading and settlement) are primarily collected from all 27 EU NCBs, mainly in accordance with MFS Guideline ECB/2009/23<sup>21</sup> amending ECB/2007/9 (1(ii)), but a number of other sources are also used. In 2010, data production continued in close

cooperation between the ECB and NCBs (1(v)). Annual payments statistics were published on 13 September 2010<sup>22</sup> for the 2009 reference period. This reflects a timeliness of eight and a half months; the target release date was also met (3(iv)).

As in previous years, between June and July 2010 NCBs were asked to provide data for the latest reference year, as well as historical revisions, and these underwent a comprehensive set of quality checks. Additionally, in 2010 the ECB sent country-specific graphs of all payments statistics indicators to NCBs to aid them in their internal quality-checking processes. The reporting instructions were also transmitted to NCBs two months earlier than in previous years, as this was a “suggestion for improvement” endorsed by NCBs in the Data Quality Review<sup>23</sup> of payments statistics performed in 2009 (3(ii) and 3(iii)).

Payments statistics were made available to the public in various ways. An annual press release including key features of the data was published on the ECB’s website on 13 September 2010. Methodological and background information, as well as euro area national data, can also be accessed via the ECB’s website. EU national-level data, EU and euro area aggregates, pan-European systems data and derived indicators are also available in both time series format and in pre-defined report format (i.e. as .pdf tables<sup>24</sup>); these are accessible in the SDW, alongside the “Notes to tables” which provide country-level explanations for any data deviations from the harmonised methodology in place (3(v)). As in

19 Directive 2009/138/EC of the European Parliament and of the Council of 25 November 2009 on the taking-up and pursuit of the business of Insurance and Reinsurance (Solvency II), OJ L 335, 17.12.2009, p. 1.

20 The data to be collected under the Solvency II Directive will be highly disaggregated, which will allow both the supervisory and the statistical requirements to be derived from them.

21 Guideline ECB/2009/23 (OJ L 16, 21.1.2010, p. 6); Guideline ECB/2007/9 (OJ L 341, 27.12.2007, p. 1).

22 Securities, clearing, trading and settlement data were published in July 2010.

23 *Payments Statistics Quality Review* (mfs09.152): <https://darwin.escb.eu/livelink/livelink/overview/29794753>

24 E.g. pre-defined tables for euro area countries: <http://sdw/reports.do?node=1000001961>

previous years, external requests were dealt with via the “statistics hotline”.

## 1.8 FINANCIAL MARKETS AND INSTRUMENTS STATISTICS

On 17 December 2009, the governors of 25 NCBs signed the Financial Markets Data usage agreement, enabling their NCBs to access a significant subset of MDP financial markets data via the ESCB version of the SDW. Since 15 January 2010, the ECB has shared with those 25 NCBs a set of *daily* financial market data, including Thomson Reuters data, euro area aggregates, and other derived financial market indicators, as well as monthly, quarterly and annual (averages and end-of-period) series derived from the business frequency time series. The MDP, together with the SDW, provides a smooth and stable production facility for financial markets statistics and indicators derived from data obtained from commercial sources (3(v)).

Since July 2007 daily euro area government bond yield curves have been produced and published punctually in the SDW and on the ECB’s website every day at noon (3(iv)). They are also disseminated at the same time to the ESCB, Eurostat and the BIS. On 13 October 2010, the ECB released historical data for the euro area yield curves going back to 6 September 2004. These data use the same sources and methodology as the official daily estimates.

Owing to extraordinary financial market conditions during 2010 and the new quarterly White Book publication to support the ESRB, there were many specific data requests for both MDP and euro area yield curve statistics, mainly requests for new indicators and monitoring of yield spreads between countries and also between credit ratings.

## 1.9 STATISTICAL INDICATORS USED FOR THE ANALYSIS OF FINANCIAL INTEGRATION AND FINANCIAL STABILITY

Under Article 105(5) of the Treaty establishing the European Community and Article 3 of

the Statute of the ESCB and of the ECB, “the ESCB shall contribute to the smooth conduct of policies pursued by the competent authorities relating to the prudential supervision of credit institutions and the stability of the financial system” (1(ii)). In line with this mandate, the Directorate General Statistics of the ECB has been involved in a number of activities related to the production of indicators for financial integration and stability.

As regards financial integration, the range of indicators included in the annual ECB report on “Financial integration in Europe” has been extended incrementally over the last few years. Most indicators are updated twice a year and published on the web. The most recent issue of the report was published on time in the first half of April 2010 and the infra-annual update of indicators was carried out in October 2010 (3(iv) and (v)).

Regarding financial stability, since 2007 the ECB’s Directorate General Statistics has been responsible for producing the statistical annex of the Financial Stability Review, published twice a year, typically in June and December (in 2010 publication took place on time on 31 May and 9 December) (3(iv)). The statistical annex includes a wide range of indicators of interest for financial stability analysis, covering developments of both financial and non-financial sectors and relating to both euro area and global markets. The technical production system is based on the integration of various (mostly automated) modules, and as a result the indicators can be derived at any point in time to support the analyses in a timely manner (3(i)). In addition, the methodology behind existing indicators has been reviewed so as also to increase quality and consistency across sectors and reference areas, while a set of new indicators has been included to improve the coverage.

Moreover, the Eurosystem statistics function provides data and indicators on the consolidated balance data (balance sheet, profit and loss, asset quality, capital adequacy) of credit institutions and structural financial indicators,

both derived from existing data collections, to support, inter alia, the production of annual reports relating to financial stability. In autumn 2010, semi-annual EU consolidated banking data (CBD) were successfully collected for the first time. The enhanced frequency of CBD data considerably increases their usefulness as input into policy discussions and in particular for ESRB purposes.

The ECB's Directorate General Statistics is also responsible for the production of the statistical annex of the ECB report on EU banking sector stability, the most recent issue of which was published in September 2010. The consolidated banking data are the main statistical input for this report and are also published on the website of the ECB (3(v)).

Finally, statistics on financial structural indicators are collected and compiled in accordance with Annex III of Guideline ECB/2007/9 (as amended) (1(ii)), which concerns statistics; these are the main statistical source for the ECB report on EU Banking Structures.

### 1.10 EURO MONEY MARKET SURVEY

To satisfy the need for timely and accurate statistical data on euro money market activity, the Eurosystem has been collecting second-quarter data on euro money market activity since 1999 on a voluntary basis (1(ii)). The data include average daily turnover for a variety of market segments (unsecured market, repo market, derivatives market, short-term securities market) and maturity ranges (from overnight to over ten years).

The ECB's Directorate General Statistics took over the production of the Euro Money Market Survey (MMS) in 2007 and, even before the 2010 round, the MMS production had reached a steady state of stable and timely data collection and dissemination. The most recent data, relating to the second quarter of 2010, were published on time on 23 September 2010 (3(iv)) and announced in a press release. Furthermore, the publication entitled "Euro Money Market Survey" has been put on the ECB's website.

It summarises the main developments in the euro money market in charts and tables. In order to increase usability, since 2010, data for individual charts and tables can be downloaded from the website. Finally, the 2010 survey data have been made available via the SDW (3(v)).

## 2 REVISION ANALYSIS OF THE EURO AREA MFI BALANCE SHEET STATISTICS

### 2.1 BACKGROUND

The revision analysis in this section evaluates the reliability of first releases. This is an important quality feature, alongside the compliance with harmonised definitions, the timely incorporation of methodological changes and the consistency with other statistics (e.g. external statistics). However, it should be noted that low revisions of first estimates are not necessarily an indicator of accurate measurement; revisions are primarily intended to improve statistics.

The revision policy for MFI balance sheet statistics entails few restrictions as, in principle, it allows data to be revised at any release. The only restriction is that revisions to the monthly data have to be submitted when quarterly statistics are submitted, in order to ensure consistency between the monthly and the quarterly statistics. A distinction is made between "ordinary" and "exceptional" revisions. Data are generally considered "provisional" at first release; therefore, revisions can be expected in the next update at t+1. Data collected quarterly provide more detailed breakdowns and can thus, in principle, lead to the detection of errors in the monthly data and to corresponding revisions. Exceptional revisions owing to reclassifications and improved reporting procedures, for example, can be made at any release.

In the following analysis, the vintages in the ECB's Statistical Data Warehouse (July 2005 to October 2010) covering data for the reference periods June 2005 to September 2010 have been used to analyse monthly data on monetary aggregates and components as regularly



published in the press release.<sup>25</sup> This revision analysis updates the one presented in the 2009 Data Quality Report and extends the data range used by 12 months.

## 2.2 METHOD OF ANALYSIS

In order to assess the revisions of the monthly monetary aggregates and components, differences between the revised, non-seasonally adjusted,<sup>26</sup> period-on-period growth rates at a pre-determined lag and the first release are calculated. The period-on-period growth rate is calculated as the ratio of the monthly flow to the respective stock at the end of the preceding period. This can be expressed as the following formula:

$$g = \frac{F_t^{\text{vintage}}}{S_{t-1}^{\text{vintage}}}$$

Furthermore, in order to assess the contributions of different instruments to the revision of M3, the growth rates of M3 components are also rescaled by multiplying them by the ratio of (S vintage) to the stock of total M3 in the same period. It should be noted that the M3 stock series used to adjust the growth rates (S M3) is the one corresponding to the vintage of September 2010. This can be expressed as the following formula:

$$adj\ g = \frac{F_t^{\text{vintage}}}{S_{t-1}^{\text{vintage}}} \cdot \frac{S_{t-1}^{\text{vintage}}}{S_{t-1}^{\text{M3}}} = \frac{F_t^{\text{vintage}}}{S_{t-1}^{\text{M3}}}$$

As an indicator of the magnitude of revisions, the average of the absolute revisions is calculated at each lag (with N reflecting the number of revisions considered):

$$\text{Absolute mean} = \frac{1}{N} \sum_{x=1}^n |\text{Revision}|_x$$

Furthermore, in order to detect whether revisions to first releases suffer from a bias, the average of the differences between the observation value at a certain time lag and the first release is calculated as:

$$\text{Simple mean} = \frac{1}{N} \sum_{x=1}^n \text{Revision}_x$$

In the text, revisions are expressed in percentage points while, in the charts they are expressed in hundredths of percentage points, i.e. a revision of 10 equals a revision of the monthly growth rate of 0.1 percentage point (p.p.). These units were chosen because the vast majority of all revisions of M3 growth are smaller than 0.1 p.p. The revision analysis is therefore carried out at a higher level of precision than for other variables published by the ECB. Furthermore, the revision analysis focuses on month-on-month changes instead of annual changes, in order to better identify the timing of a given revision.<sup>27</sup>

## 2.3 REVISIONS OF EURO AREA MONETARY AGGREGATES

Revisions to the broad monetary aggregate M3 for the euro area are very small. Chart 1 shows the *revisions to the month-on-month growth rates of M3* at different lags.

One month after the first release, 40 out of the 64 reported revisions (63%) are within the range of +0.05 to -0.05 p.p., compared with 11 revisions in total in the ranges -0.10 to -0.06 and 0.06 to 0.10 p.p., and 13 revisions exceeding +/- 0.10 p.p. After three months, 35 out of 62 revisions (56%) are within the narrow range of -0.05 to +0.05 p.p., with 17 revisions between -0.10 to -0.06 and 0.06 to 0.10 p.p., the remaining ten amounting to more than 0.10 p.p. in absolute terms. At lag t+6, there are 31 revisions in the narrowest band (53%), compared with 30 (57%) at lag t+12. Overall, while there are some differences among the various lags, 57% of all revisions are less than or equal to 0.05 p.p. After an initial revision has taken place, which

25 Before June 2005 only the most recent vintage of data was saved in the SDW.

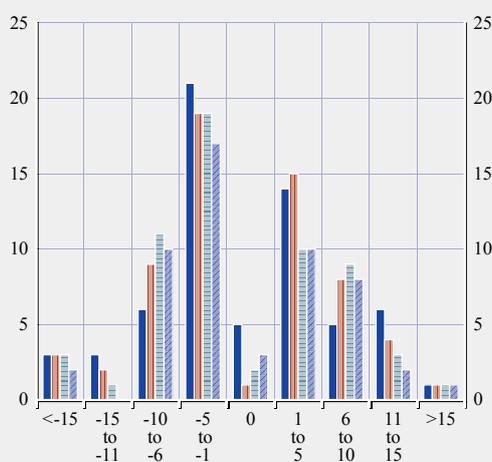
26 While seasonal adjustment factors applied by the ECB are revised when the need arises (usually at annual intervals) and can thus also retroactively alter monetary data, mixing the effect of updating seasonal adjustment factors with the effects of genuine revisions to the raw data would be misleading. This analysis therefore concentrates on the revisions to non-seasonally adjusted data.

27 A revision occurring in a given month may affect two monthly changes and 13 annual changes. Of course, the latter are affected to a lesser extent.

**Chart 1 Revisions to month-on-month growth rates of euro area M3**

x-axis: hundredths of a percentage point  
y-axis: number of occurrences

■ t+1  
■ t+3  
■ t+6  
■ t+12

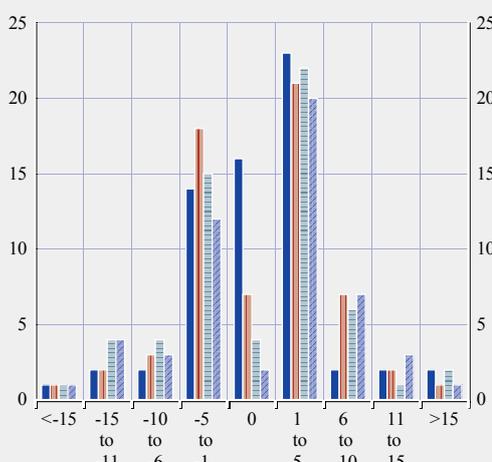


Source: ECB.

**Chart 2 Revisions to month-on-month growth rates of euro area M2**

x-axis: hundredths of a percentage point  
y-axis: number of occurrences

■ t+1  
■ t+3  
■ t+6  
■ t+12



Source: ECB.

usually happens within the first three months after the initial release, there are usually no significant further revisions in the subsequent periods.

To date, the most significant revisions to M3 period-on-period growth rates were for the months March 2008, May 2008, December 2008 and December 2009: the first was revised by -0.31 p.p. at lag t+3, the second by -0.22 p.p. at lag t+1, the third by 0.25 p.p. at lag t+1, and the fourth by -0.20 p.p. at lag t+6.

The absolute mean of revisions to the M3 growth rate (see Annex 1, Table 1) is close to 0.06 p.p. for all lags, and close to last year's results. The bias (simple mean) of the early estimates for the M3 period-on-period growth rates varies between 0.004 at lag t+1 to -0.013 p.p. at t+6. Compared with the average monthly growth rate of M3 (0.52%),<sup>28</sup> the average revisions and bias have remained at very low levels.

Chart 2 presents the same information for revisions of M2. Revisions are even more concentrated within the range of -0.05 to +0.05 p.p.: 53 out of 64 (83%) at lag t+1, 46 out of 62 (74%) at lag t+3, 41 out of 59 (69%) at lag t+6 and 34 out of 53 (64%) at lag t+12.

Examining the occurrence of exceptional revisions over different lags reveals that the few revisions of this size occurred at lag t+1 (-0.21 p.p. for the reference period July 2008, +0.18 p.p. for December 2008 and -0.14 p.p. for November 2009).

The average absolute revisions of the month-on-month growth rate of M2 varied between 0.034 p.p. (t+1) and 0.053 p.p. (t+12). This is

<sup>28</sup> The average monthly growth rate is calculated as

$$avgg = \left( \sqrt[63]{\frac{Stock_{SEP10}}{Stock_{JUN05}}} - 1 \right) \cdot 100$$

not much higher than last year, when all lags ranged between 0.035 p.p. and 0.049 p.p. The bias of the initial M2 growth rates is a little narrower than in the 2009 analysis, in this case ranging between -0.0002 and 0.006 p.p. across all lags. All in all, revisions to M2 monthly growth rates have been marginal. The average monthly growth rate of M2 in the period of the revision analysis was 0.56%.

Chart 3 presents the *revisions of M1*. 73% of all revisions to the M1 period-by-period growth rate at lag t+1 are between -0.05 and +0.05 p.p., compared with 60%, 56% and 49% at lags t+3, t+6 and t+12 respectively.

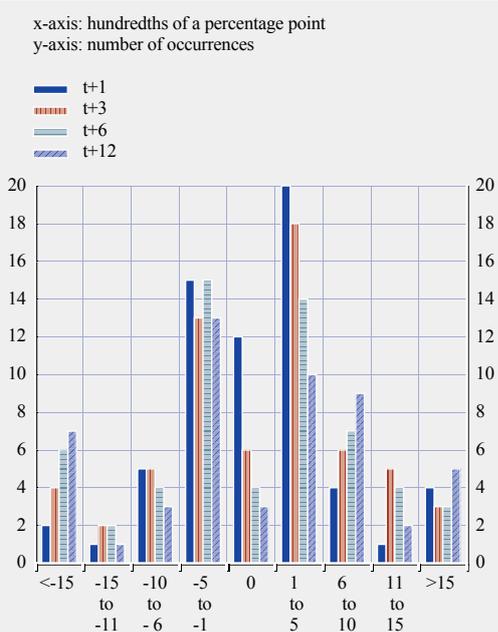
The number of revisions exceeding 0.15 p.p. in absolute terms is larger for M1 than for M2 or M3. Contrary to the broader aggregates, exceptional revisions for M1 can also be found for the longer lags: twice at lag t+12 (referring to June 2006 and April 2007, revised by -0.21 p.p. and 0.18 p.p. respectively) and twice at lag t+6 (referring to August 2007 and July 2009,

revised by -0.22 p.p. and -0.20 p.p. respectively). At lag t+3, exceptional revisions occurred three times (referring to October 2007 (-0.16 p.p.), December 2007 (-0.18 p.p.) and September 2009 (0.15 p.p.)), compared with six times at lag t+1 (June 2005 revised by 0.44 p.p., November 2005 by -0.16 p.p., January 2008 by 0.24 p.p., July 2008 by -0.35 p.p., December 2009 by 0.16 p.p. and September 2010 by 0.24 p.p.).

The absolute mean of the revisions to the month-on-month growth rate of M1 is close to last year's analysis results: between 0.052 p.p. at t+1 and 0.082 p.p. at t+12. The bias was between -0.001 and 0.01 p.p. for all lags. These average revisions are small in comparison to the average month-on-month growth rate of M1, which was 0.55%.

Most of the revisions are sufficiently small to not be visible in the monthly growth rates for the monetary aggregates, which are published at a precision of one decimal: at lag t+1, 61% of all M3 period-on-period growth rates remain unchanged and more than 50% are unrevised compared with the initial release if revisions up to lag t+3 are included. Furthermore, if M3 period-on-period growth rates were to be revised, only in exceptional cases would the revision be more than 0.1 p.p. The same is true of M1 (70% of published M1 period-on-period growth rates were unchanged at t+1, and more than 55% were not visibly revised at lag t+3) and especially to M2 (83% unrevised at lag t+1, 73% unrevised at lag t+3).

Chart 3 Revision of M1 growth rate



Source: ECB.

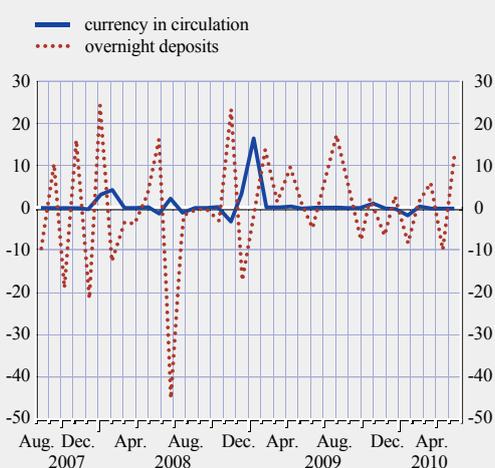
#### 2.4 REVISIONS OF COMPONENTS OF EURO AREA MONETARY AGGREGATES

Revisions to the components of the monetary aggregates are shown below, including information on their development over time. In order to keep the presentation concise, only lag t+3 is shown. This is also because revisions closer to the first data release affect the monetary analysis more than revisions occurring at lag t+6 or later. Furthermore, in order to provide a recent picture of the revisions made, the following graphs shows information

**Chart 4 Revisions to month-on-month growth rates of M1 components**

(hundredths of a percentage point)

**Revisions to M1 components at T+3**

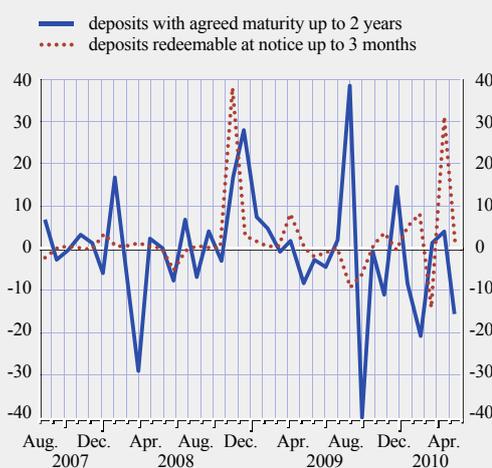


Source: ECB.

**Chart 5 Revisions to month-on-month growth rates of M2-M1 components**

(hundredths of a percentage point)

**Revisions to M2-M1 components at T+3**



Source: ECB.

for only the last three years' observations: from August 2007 to September 2010.

Chart 4 shows the revisions of the month-on-month growth rates of the M1 components: currency in circulation and overnight deposits. The revisions to month-on-month growth rates for *currency in circulation* are almost always close to zero, except for one bigger revision in February 2009. Regarding revisions to *overnight deposits*, as pointed out in last year's analysis, a change in the pattern occurred from around August 2007. Up to then revisions had been generally rather narrow but from mid-2007 onwards, the revisions in overnight deposits have moved in a corridor of +/- 0.25 p.p., except for the reference period July 2008 (-0.45 p.p.), when exceptional revisions in two euro area countries caused a deviation.

Chart 5 shows the revisions of the month-on-month growth rates for the components of M2-M1. In the case of *deposits with an agreed maturity of up to two years*, large revisions occurred for the reference periods October and November 2009. Further exceptional revisions

occurred for April 2008 and January 2009. The latter revision was partly the result of a number of institutions joining the MFI sector in December 2008 in one country, institutions which started reporting for the first time for the reference period January 2009.

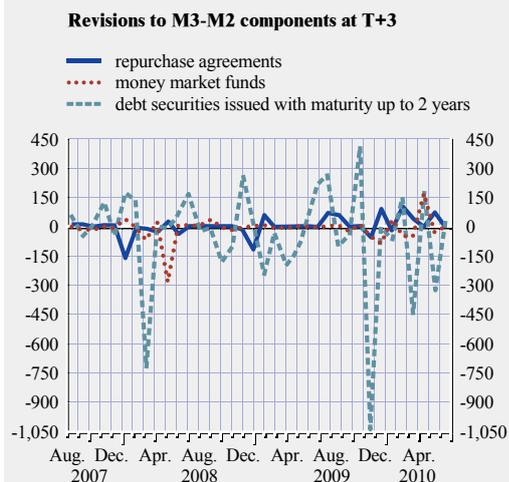
*Deposits redeemable at a period of notice of up to three months* are comparatively less revised, although revisions exceeded 0.01 p.p. on four occasions. Of these, the revisions to the reference periods June 2010 and December 2008 were exceptionally large, the latter owing to a change of reporting scheme in one country.

Chart 6 shows that the month-on-month growth rates of the components of M3-M2 continued to be revised much more than those of the components shown earlier.<sup>29</sup> Of the three series, *repurchase agreements* are typically the least revised, except for three remarkably high revisions, of -1.56 p.p., -1.15 p.p. and 1.02 p.p, for January 2008, January 2009 and March 2010

<sup>29</sup> It should be noted that the scale of Chart 6 is different from that of Charts 4 and 5.

**Chart 6 Revisions to month-on-month growth rates of M3-M2 components**

(hundredths of percentage points)



respectively. The revisions of the growth rates of *money market fund shares/units* show large downward adjustments for the reference months March 2008 (-0.73 p.p.), May 2008 (-2.83 p.p.). The growth rates of *debt securities issued* are often revised by more than one p.p.; in around

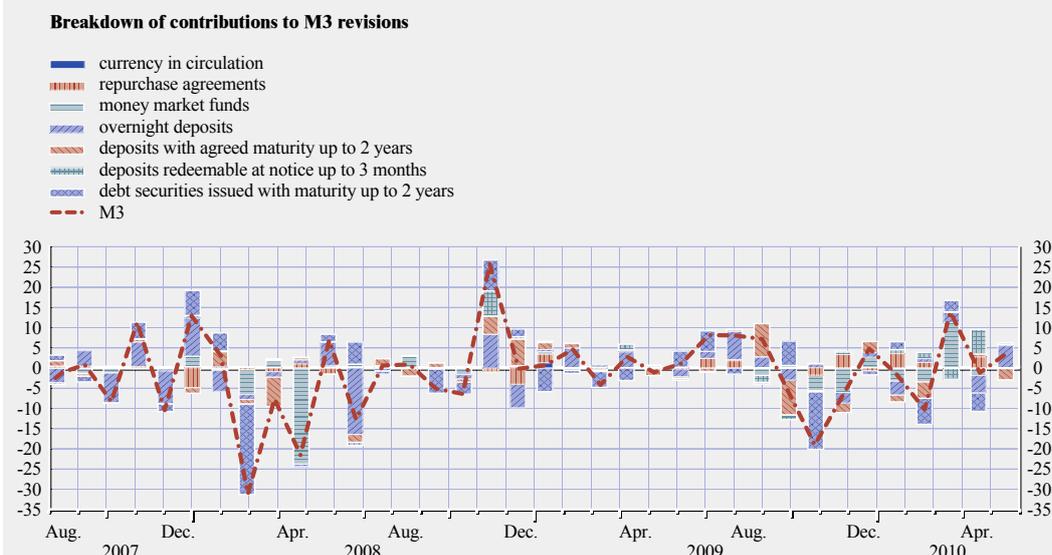
40% of cases the revisions actually amount to more than 1.5 p.p.. Two very exceptional revisions occurred for the reference months March 2008 and December 2009, which were revised by -7.23 p.p. and -10.40 p.p. respectively. These revisions have to be seen in the context of rather large flow movements and relatively small outstanding amounts in the underlying series. This leads to highly volatile month-on-month growth rates.

### 2.5 CONTRIBUTIONS TO M3 REVISIONS

In order to assess the contributions of individual instruments to the revisions of M3, the share of each instrument in the aggregate needs to be taken into account. Chart 7 shows that the largest contributions to the overall M3 revisions stem from revisions to debt securities issued and to overnight deposits. In recent periods, revisions to money market fund shares/units proved to be an important driver of M3 revisions on a regular basis, but their relative importance declined from late 2006 to mid 2009. Moreover, contributions from individual instruments in the more recent period have been less pronounced than in the period from summer 2007 to end-2008.

**Chart 7 Contributions of revisions in instruments to overall M3 revisions**

(lag t+3; hundredths of a percentage point)



## ANNEX I

### Bias (simple means) and revision averages (absolute means) in euro area monetary statistics

(hundredths of a percentage point, i.e. a value of 1.0 indicates a revision of 0.01 percentage point of the month-on-month growth rate of the respective instrument; June 2005 to September 2010)

Revisions at:	t+1	t+3	t+6	t+12
<b>Currency in circulation</b>				
Simple mean	0.27	0.43	0.44	0.46
Absolute mean	0.56	0.89	0.97	1.13
<b>Overnight deposits</b>				
Simple mean	1.17	0.81	-0.22	0.16
Absolute mean	6.16	8.04	9.19	9.95
<b>M1</b>				
Simple mean	1.02	0.74	-0.12	0.20
Absolute mean	5.18	6.74	7.59	8.22
<b>Deposits with agreed maturity up to two years</b>				
Simple mean	-2.08	-0.92	-1.06	0.24
Absolute mean	7.53	7.96	8.83	10.08
<b>Deposits redeemable at notice up to three months</b>				
Simple mean	1.69	1.66	1.39	1.82
Absolute mean	2.97	3.86	3.64	3.68
<b>M2</b>				
Simple mean	0.53	0.60	0.02	0.64
Absolute mean	3.42	4.43	5.10	5.33
<b>Repurchase agreements</b>				
Simple mean	4.68	3.00	2.20	0.80
Absolute mean	20.76	24.30	27.49	25.77
<b>Money market fund shares/units</b>				
Simple mean	-6.25	-7.30	-9.76	-7.28
Absolute mean	22.86	25.76	24.58	21.99
<b>Debt securities with maturity up to two years</b>				
Simple mean	-31.42	-44.05	-40.07	-28.79
Absolute mean	133.26	152.10	152.01	143.24
<b>M3</b>				
Simple mean	-0.37	-0.79	-1.33	-0.60
Absolute mean	5.68	6.26	6.59	5.90

Cells marked grey (green) indicate a decline (increase) [in absolute value] of 1.0 or more compared with the absolute value from the analysis in the previous year.

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ISSN XXXX-XXXX (online)