

## 2 PAYMENT AND SECURITIES SETTLEMENT SYSTEMS

The Eurosystem has the statutory task of promoting the smooth operation of payment systems. Payment systems and securities clearing and settlement systems are fundamental infrastructures that are necessary for the proper functioning of market economies. They are indispensable for the efficient flow of payments for goods, services and financial assets, and their smooth functioning is crucial for the implementation of a central bank's monetary policy and for maintaining the stability of and confidence in the currency, the financial system and the economy in general. For the performance of this task, the Eurosystem applies three approaches: it takes on an operational role, conducts oversight activities and acts as a catalyst (for further details on the second and third of these, see Sections 4 and 5 of Chapter 3). In terms of its operational role, the Eurosystem may, in accordance with the Statute of the ESCB, provide facilities to ensure efficient and sound clearing and payment systems.

### 2.1 THE TARGET2 SYSTEM

The Eurosystem operates the TARGET2 system for large-value and urgent payments in euro. TARGET2 plays an important role in the smooth implementation of the single monetary policy and the functioning of the euro money market. It offers a real-time settlement service in central bank money and broad market coverage. It processes large-value and urgent transactions without any upper or lower limit on the value of payments and has also attracted a variety of other payments. The system is based on a single technical infrastructure, the Single Shared Platform (SSP). Three Eurosystem central banks – the Deutsche Bundesbank, the Banque de France and the Banca d'Italia – jointly provide the SSP and operate it on behalf of the Eurosystem.

By December 2012 TARGET2 had 985 direct participants. The overall number of banks (including branches and subsidiaries) that can be addressed worldwide through TARGET2 reached 55,000. In addition, TARGET2 settled the cash positions of 82 ancillary systems.

#### TARGET2 OPERATIONS

The TARGET2 system functioned smoothly in 2012 and settled a large number of euro payments. The system's market share remained stable, with 92% of the total value of payments in euro large-value payment systems being executed via TARGET2. In 2012 the system processed a total of 90,671,378 transactions, with a daily average of 354,185 transactions. The total value of TARGET2 traffic in 2012 was €634,132 billion, with an average daily value of €2,477 billion. Table 12 provides an overview of payment traffic in the TARGET2 system in 2012, comparing it with traffic in the previous year.

**Table 12 Payment traffic in TARGET2**

	Value (EUR billions)			Volume (number of transactions)		
	2011	2012	Change (%)	2011	2012	Change (%)
<b>TARGET2 overall</b>						
Total	612,936	634,132	3.4	89,565,697	90,671,378	1.2
Daily average	2,385	2,477	3.8	348,505	354,185	1.6

Source: ECB.

Note: There were 257 operating days in 2011 and 256 in 2012.

In 2012 the overall availability<sup>9</sup> of the SSP of TARGET2 reached 100%.

Over the course of the year 99.98% of the payments in the SSP were processed within five minutes and the system's positive performance met with the satisfaction of participants.

### **COOPERATION WITH TARGET2 USERS**

The Eurosystem maintains close relations with TARGET2 users. Regular meetings were held between the NCBs and national TARGET2 user groups in 2012. In addition, joint meetings of the Eurosystem's Working Group on TARGET2 and the TARGET Working Group of the European credit sector associations took place on a semi-annual basis to discuss TARGET2 business issues at the pan-European level. An ad hoc group created in 2011 and composed of representatives from these two groups continued its work, addressing major changes affecting TARGET2, such as the connection of TARGET2-Securities (T2S). Further strategic issues were addressed in the Contact Group on Euro Payments Strategy, a forum composed of senior representatives from commercial and central banks.

### **MANAGEMENT OF NEW SYSTEM RELEASES**

The Eurosystem attaches the greatest importance to the development of TARGET2 in order to further increase the level of service offered and to meet the needs of its participants.

In view of the considerable effort involved in preparing for T2S, the Eurosystem decided in 2011 that there would not be an annual release of TARGET2 in 2012. The Eurosystem nonetheless continued to work on the TARGET2 system in 2012, preparing for the adaptations that will be necessary in order to connect to T2S. A final decision was taken on the services that TARGET2 will offer to its participants to support their cash activities in T2S. These services will be made available to participants when T2S goes live. The Eurosystem also launched a review of the strategy for migrating TARGET2 to the new industry standards (ISO 20022). It was decided that all current messaging standards should move to their equivalents in ISO 20022 in a "big bang" scenario scheduled for November 2017.

### **COUNTRIES PARTICIPATING IN TARGET2**

All euro area countries participate in TARGET2, as its use is mandatory for the settlement of all payment orders related to the Eurosystem's monetary policy operations. Non-euro area EU central banks may connect to the TARGET2 system on a voluntary basis in order to facilitate the settlement of euro-denominated transactions in these countries. From a legal and business point of view, each central bank is responsible for managing its system component and for maintaining relationships with its participants. In addition, some financial institutions located in other EEA countries participate in TARGET2 via remote access.

24 central banks of the EU and their respective user communities are currently connected to TARGET2: the 17 euro area NCBs, the ECB and six central banks of non-euro area countries.<sup>10</sup>

<sup>9</sup> The level of availability is the extent to which participants were able to use the TARGET2 system during their business hours without incident.

<sup>10</sup> Bulgaria, Denmark, Latvia, Lithuania, Poland and Romania.

## 2.2 TARGET2-SECURITIES

TARGET2-Securities (T2S) is the future Eurosystem service for securities settlement in central bank money in Europe. The project is currently in the development phase and is due to go live in June 2015. Virtually all traded securities in Europe will be settled in T2S, leading to significant economies of scale and a reduction of settlement costs. By removing the distinction between cross-border and domestic settlement, T2S will constitute a major breakthrough in the creation of an integrated capital market for Europe, providing a solid basis for increasing efficiency and competition in the entire post-trading sector. T2S will enable significant savings in terms of collateral and liquidity, a particularly valuable feature at a time when the demand for high-quality collateral is ever-increasing as a result of the financial turmoil and new regulatory developments. It will harmonise market processes and thus facilitate back office streamlining.

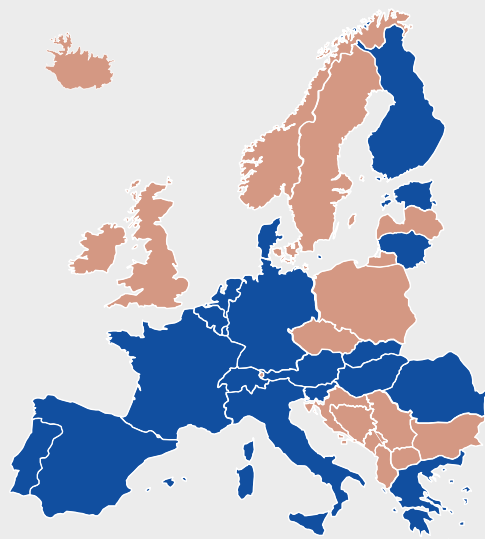
By the end of June 2012 a total of 22 central securities depositories (CSDs) had signed the T2S Framework Agreement<sup>11</sup>, i.e. almost all of the CSDs based in the euro area and five CSDs based outside the euro area. These CSDs account for almost 100% of settlement volumes in euro, and the T2S entry fee will be waived for them in view of their decision for early participation in the system. Furthermore, in June Denmark's Nationalbank signed the Currency Participation Agreement<sup>12</sup> and agreed to make the Danish krone available in T2S as of 2018. The signing of these agreements marks the end of more than two years of contractual negotiations, but T2S remains open to new participants; non-euro area central banks and CSDs may still sign the Currency Participation Agreement or the Framework Agreement at a later stage. However, CSDs will henceforth have to pay an entry fee.

11 The T2S Framework Agreement is the contract stipulating the rights and obligations of the Eurosystem and of CSDs outsourcing their settlement function to the Eurosystem.

12 The T2S Currency Participation Agreement is the contract governing the relationship between the Eurosystem and non-euro area NCBS that wish to make their currency available in T2S.

**Chart 37 Central securities depositories participating in T2S**

- Bank of Greece Securities Settlement System – BOGS (Greece)
- Centrálny depozitár cenných papierov (Slovakia)
- Clearstream Banking (Germany)
- Depozitarul Central (Romania)
- Eesti Väärtpaberikeskus (Estonia)
- Euroclear Belgium
- Euroclear Finland
- Euroclear France
- Euroclear Nederland
- Iberclear – BME Group (Spain)
- Interbolsa – Sociedade Gestora de Sistemas de Liquidação e de Sistemas Centralizados de Valores Mobiliários (Portugal)
- KDD – Centralna Klirinško Depotna Družba (Slovenia)
- Központi Elszámolóház és Értéktár – KELER (Hungary)
- Lietuvos centrinis vertybinių popierių depozitoriumas (Lithuania)
- LuxCSD (Luxembourg)
- Malta Stock Exchange
- Monte Titoli (Italy)
- National Bank of Belgium Securities Settlement System – NBB-SSS (Belgium)
- Oesterreichische Kontrollbank (Austria)
- SIX SIS (Switzerland)
- VP LUX (Luxembourg)
- VP Securities (Denmark)



With these two contractual agreements entering into force, a new governance structure was put in place as of 1 July 2012. The new governance structure, which remains based on the principles of wide market involvement and transparency, assigns greater influence to the contractual counterparties of the Eurosystem and will also apply after T2S begins live operations. It is divided into steering, advisory and working levels. The first comprises the T2S Board, responsible for the day-to-day management of the project and live operations, and the CSD Steering Group, which represents the “single voice” of the CSDs vis-à-vis the Eurosystem. At the advisory level, the T2S Advisory Group brings together all stakeholder categories, i.e. central banks, CSDs and the banking community as well as regulators, overseers and the industry. The National User Groups represent the formal link between national markets and the Advisory Group. At the working level, the ECB’s T2S Programme Office and the Technical Groups support the steering-level bodies.

Significant technical progress was achieved in 2012. Among other things, the Eurosystem published the T2S User Handbook as well as amended versions of the User Requirements Document, the User Detailed Functional Specifications and the Business Process Description. The four central banks responsible for developing and operating the T2S platform (the Deutsche Bundesbank, the Banco de España, the Banque de France and the Banca d’Italia) expect to finish developing the necessary software (core functions) in the first quarter of 2013 and have made good progress in their internal testing of the software. CSDs and NCBs completed their feasibility assessments in June 2012, resulting in more than 30 change requests. At the end of 2012 the CSDs and the Eurosystem agreed on the timing and composition of three migration waves, planned to take place between June 2015 and November 2016. In early 2013 they continued to discuss the possibility of alternative migration solutions in order to better balance the operational efforts involved in migration.

Progress was also made on connectivity to T2S, i.e. the choice of networks through which market participants and CSDs will be able to send instructions to and receive messages from T2S. Licences were awarded to two value-added network service providers following a tender procedure launched in 2011. The Eurosystem also largely completed its legal framework for the dedicated link service that will be made available in parallel to the two value-added network solutions, if there is demand for such a service from the market.

Market participants stressed the need for T2S to become more involved in post-trade harmonisation in order for the full benefits of T2S to be reaped. The T2S Harmonisation Steering Group supports the T2S Advisory Group in pursuing several harmonisation activities and prepared the third T2S harmonisation progress report in the course of 2012, for publication in early 2013. For further details on T2S harmonisation activities and their impact on European financial integration, see Section 4 of Chapter 3.

### **2.3 SETTLEMENT PROCEDURES FOR CROSS-BORDER COLLATERAL**

Eligible assets may be used to collateralise all types of Eurosystem credit operation, not only at the domestic level but also across national borders. The cross-border mobilisation of collateral in the euro area is conducted mainly via the correspondent central banking model (CCBM) and through eligible links between euro area securities settlement systems (SSSs). Whereas the first solution is provided by the Eurosystem, the latter is a market-led initiative. In addition, cross-border collateral can be mobilised on the accounts of NCBs with a non-domestic (international) CSD on an exceptional basis.

At the end of 2012 the amount of cross-border collateral (including both marketable and non-marketable assets) held by the Eurosystem stood at €643 billion, down from €731 billion at

the end of 2011. Overall, at the end of 2012 cross-border collateral represented 22.8% of the total collateral provided to the Eurosystem (compared with 29.9% in 2011).

#### **COLLATERAL MANAGEMENT SERVICES**

The CCBM remained the main channel for transferring cross-border collateral in Eurosystem monetary policy and intraday credit operations in 2012. Assets held in custody through the CCBM decreased from €434 billion at the end of 2011 to €354 billion at the end of 2012. Cross-border collateral held on accounts of NCBs with a non-domestic (international) CSD on an exceptional basis amounted to €134 billion at the end of 2012.

The CCBM was initially set up in 1999 as an interim solution and, since it builds upon the principle of minimum harmonisation, market participants have called for some improvements. In particular, they have requested that it no longer be necessary to repatriate (marketable) assets from investor CSDs to issuer CSDs before they are mobilised as collateral through the CCBM, and that tri-party collateral management services which are currently only used domestically may also be used on a cross-border basis. The Eurosystem supports the inclusion of these enhancements to the CCBM and is currently working on their incorporation into the framework in 2014.

Issues related to euro securities settlement and collateral mobilisation in Eurosystem credit operations were discussed in the Contact Group on Euro Securities Infrastructures, which is a forum for representatives of market infrastructures, market participants and central banks.

#### **ELIGIBLE LINKS BETWEEN NATIONAL SECURITIES SETTLEMENT SYSTEMS**

Cross-border collateral can also be mobilised by using links between national SSSs. However, such links are only eligible for Eurosystem credit operations if they meet the Eurosystem's user standards. Once the securities have been transferred to another SSS via eligible links, they can be used through local procedures in the same way as any domestic collateral. The amount of collateral mobilised through direct and relayed links decreased from €175 billion at the end of 2011 to €156 billion at the end of 2012.

In 2012 one new direct link was added to the list of eligible links and three direct links were removed. In total, there were 52 direct and 8 relayed links available to counterparties at the end of 2012, of which only a limited number are actively used.

## **3 BANKNOTES AND COINS**

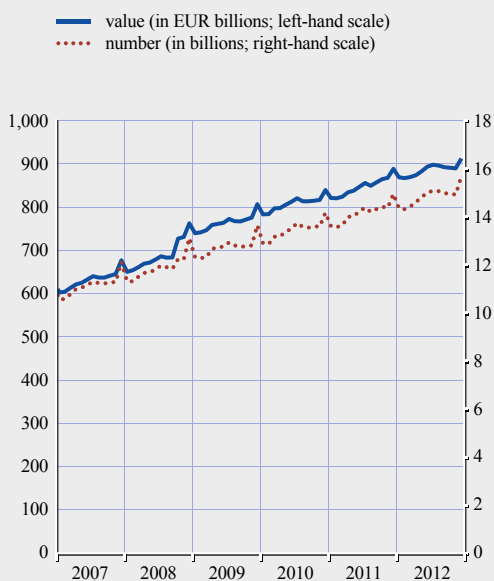
In accordance with Article 128 of the Treaty, the Governing Council of the ECB has the exclusive right to authorise the issuance of euro banknotes within the EU. The ECB and the NCBs may issue these banknotes.

### **3.1 THE CIRCULATION OF BANKNOTES AND COINS**

#### **DEMAND FOR EURO BANKNOTES AND COINS**

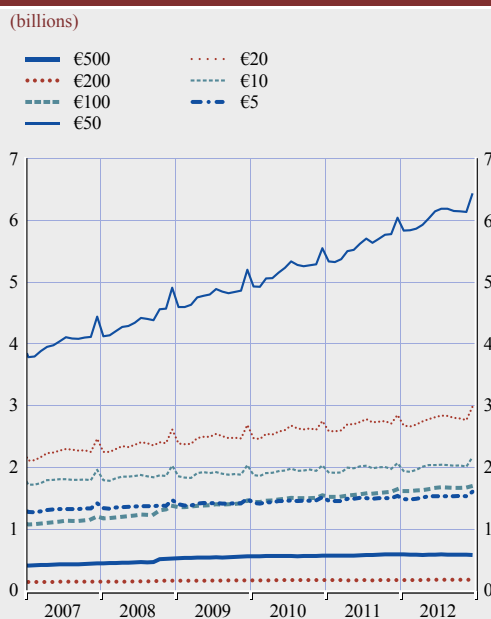
At the end of 2012 there were 15.7 billion euro banknotes in circulation, with a total value of €912.6 billion. This compares with 14.9 billion banknotes, with a total value of €888.6 billion, at the end of 2011 (see Chart 38). In terms of value, the €50 and the €500 banknotes accounted for the largest shares of the banknotes in circulation, standing at 35% and 32% respectively at the end of the

**Chart 38 Number and value of euro banknotes in circulation**



Source: ECB.

**Chart 39 Number of euro banknotes in circulation by denomination**



Source: ECB.

year. The €50 banknote was the most-used denomination in terms of volume, accounting for 41% of all euro banknotes in circulation (see Chart 39). In 2012 the annual growth rate of banknotes in circulation was 2.7% in value terms and 4.9% in volume terms. The €50 banknotes showed by far the highest annual growth rate, at 6.5%, followed by the €20 and €10 banknotes at 4.7% and the €5 banknotes at 4.4%. The growth rate of the €500 banknote, which had been considerable in the past, turned negative (-2.0%).

It is estimated that, in terms of value, 20-25% of the euro banknotes in circulation (with the figure likely to lie towards the upper end of that range) are held outside the euro area, predominantly in countries neighbouring the euro area. In 2012 net shipments of euro banknotes by financial institutions to regions outside the euro area increased by 19%, or €2.1 billion, as compared with 2011. Euro banknotes, mainly high-value denominations, are held outside the euro area as a store of value and for settling transactions on international markets.

In 2012 the total number of euro coins in circulation (i.e. net circulation excluding stocks held by the euro area NCBS) increased by 4.4% to stand at 102.0 billion. The low-value coins of 1, 2 and 5 cent accounted for 62% of the total number of coins in circulation. At the end of 2012 the value of coins in circulation stood at €23.7 billion, 2.5% higher than at the end of 2011.

#### **BANKNOTE HANDLING BY THE EUROSISTEM**

In 2012 the euro area NCBS issued 33.1 billion banknotes worth €1.0 trillion, while 32.2 billion banknotes worth €1.0 trillion were returned to them. These figures were similar to those recorded in 2011. 34.6 billion banknotes were processed using fully automated banknote processing machines,

which checked the banknotes for both authenticity and fitness for circulation in order to maintain the quality and integrity of the banknotes in circulation according to the common minimum sorting standards established by the Eurosystem. In that process, some 5.6 billion banknotes were identified as being unfit for circulation and destroyed. The replacement rate<sup>13</sup> of the banknotes in circulation (i.e. the share of banknotes that needed to be replaced because they became unfit) was 44% for the denominations up to and including €50 and 9% for the high-denomination banknotes.

The average return frequency<sup>14</sup> of banknotes in circulation was 2.16 at end-2012, meaning that, on average, a banknote returned to a euro area NCB around every six months. The return frequencies were 0.34 for €500 banknotes, 0.46 for €200 banknotes and 0.70 for €100 banknotes, while the return frequencies of the denominations which are typically used for transactions were higher (1.56 for €50 banknotes, 3.38 for €20 banknotes, 4.11 for €10 banknotes and 2.27 for €5 banknotes).

### 3.2 BANKNOTE COUNTERFEITING AND COUNTERFEIT DETERRENCE

#### COUNTERFEIT EURO BANKNOTES

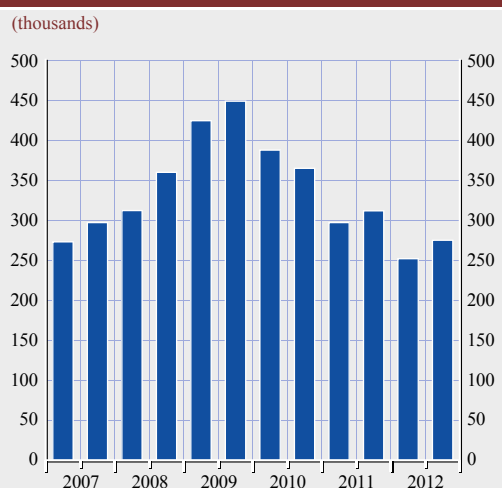
In 2012 the National Analysis Centres<sup>15</sup> received some 531,000 counterfeit euro banknotes. When compared with the number of genuine euro banknotes in circulation, the proportion of counterfeits remains at a very low level. Long-term developments in the quantity of counterfeits removed from circulation are shown in Chart 40. Counterfeiters tend to target the €20 and €50 banknotes, which in 2012 accounted for 42.5% and 40.0% of total counterfeits respectively. Further details of the denominational breakdown are shown in Chart 41.

13 Defined as the number of banknotes identified as being unfit in a year divided by the average number of banknotes in circulation during that year.

14 Defined as the total number of banknotes returned to euro area NCBs in a year divided by the average number of banknotes in circulation during that year.

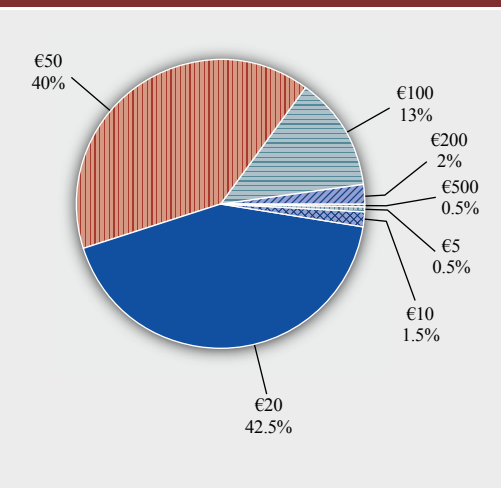
15 Centres established in each EU Member State for the initial analysis of counterfeit euro banknotes at the national level.

**Chart 40 Number of counterfeit euro banknotes recovered from circulation**



Source: ECB.

**Chart 41 Breakdown of counterfeit euro banknotes by denomination in 2012**



Source: ECB.

Although confidence in the security of the euro is fully justified by the ongoing anti-counterfeiting measures of European and international authorities, this should not give rise to complacency. The ECB continues to advise the public to remain alert to the possibility of fraud, to remember the “feel-look-tilt” test,<sup>16</sup> and never to rely on just one security feature. In addition, training is offered to professional cash handlers on a continuous basis, both in Europe and beyond, and up-to-date information material is made available to support the Eurosystem’s fight against counterfeiting. The ECB’s well-established cooperation with Europol and the European Commission also serves this goal.

### COUNTERFEIT DETERRENCE AT THE GLOBAL LEVEL

Cooperation on counterfeit deterrence goes beyond the European level. The Eurosystem participates actively in the work of the Central Bank Counterfeit Deterrence Group<sup>17</sup>. The ECB hosts the International Counterfeit Deterrence Centre (ICDC), which acts as the technical centre for this group. The ICDC maintains a website<sup>18</sup> which provides information and guidance concerning the reproduction of banknote images, as well as links to country-specific websites.

## 3.3 BANKNOTE PRODUCTION AND ISSUANCE

### PRODUCTION ARRANGEMENTS

In 2012 NCBs were responsible for the production of 8.5 billion euro banknotes, with the new €5 banknote, which is to be introduced in May 2013 (see below), accounting for 2.9 billion of that total (around 34% of the banknotes produced). The €5 banknote of the first series ceased to be produced. The allocation of euro banknote production continued to be based on decentralised production with pooling, an arrangement initially established in 2002. Under this arrangement, each euro area NCB is responsible for the procurement of an allocated share of the total requirement for certain denominations (see Table 13).

### ROADMAP FOR GREATER CONVERGENCE OF NCB CASH SERVICES

In 2007 the Governing Council adopted a roadmap for procedural steps contributing, in the medium term, to increased convergence of NCB cash services. On 1 October 2012 electronic messaging between NCBs and national and international professional clients for cash transactions – one of the remaining items from the roadmap – was put in place by the NCBs of Belgium, Germany, Ireland, Cyprus, Luxembourg, Malta, the Netherlands, Austria and Finland. The principles governing this facility are laid down in the ECB Guideline on the Data Exchange for Cash Services.<sup>19</sup> An interface hosted by the ECB ensures that messages can be exchanged between NCBs using different data formats. This allows professional clients that wish to transact cash with a non-domestic NCB to send the order for withdrawal, or notification of deposit, via

**Table 13 Allocation of euro banknote production in 2012**

	Quantity (millions of banknotes)	NCB commissioning production
€5	2,915.30	BE, ES, FR, IT, AT
€10	1,959.04	DE, GR, FR, IE, PT
€20	1,703.95	CY, EE, FR, IT, MT, LU, NL, SI, SK, FI
€50	1,530.43	BE, DE, ES, IT
€100	298.13	DE
€200	50.00	DE
€500	0.00	-
<b>Total</b>	<b>8,456.87</b>	

Source: ECB.

<sup>16</sup> See the “Security features” section of the ECB’s website under “The Euro”, then “Banknotes”.

<sup>17</sup> A group comprising 32 central banks and banknote printing authorities that work together under the auspices of the G10.

<sup>18</sup> See <http://www.rulesforuse.org>

<sup>19</sup> Guideline ECB/2012/16 of 20 July 2012 (OJ L 245, 11.9.2012, p. 3).



their domestic NCB. The remaining euro area NCBs will connect to the interface in the course of 2013 and 2014.

The electronic exchange of messages facilitates the organisation of cash transportation across national borders and thus complements Regulation (EU) No 1214/2011 of the European Parliament and of the Council of 16 November 2011 on the professional cross-border transport of euro cash by road between euro area Member States<sup>20</sup>, which entered into force on 30 November 2012. This interface also makes possible bulk transfers between NCBs, which will be useful with regard to the introduction of the second series of euro banknotes.

### **RECIRCULATION OF BANKNOTES**

When putting euro banknotes back into circulation, cash handlers (credit institutions, cash in transit companies and other economic agents, such as retailers and casinos) must adhere to the rules laid down in Decision ECB/2010/14 on the authenticity and fitness checking and recirculation of euro banknotes<sup>21</sup>. This Decision aims in particular to ensure that all banknotes distributed to the public via cash dispensers have been checked for both authenticity and fitness. According to data reported by cash handlers to the euro area NCBs, around one-third of the total number of euro banknotes that were put back into circulation in 2012 after machine processing were recirculated by cash handlers using banknote handling machines.

In preparation for the issuance of the second series of euro banknotes, the scope of Decision ECB/2010/14 has been amended by Decision ECB/2012/19<sup>22</sup>, which entered into force on 20 September 2012. The amended Decision ensures that the checking procedures to be followed by cash handlers when recirculating euro banknotes are also applicable to the new banknotes.

### **THE EXTENDED CUSTODIAL INVENTORY PROGRAMME**

Following the decision by the Governing Council in 2011 that the Extended Custodial Inventory (ECI) programme for euro banknotes would be extended from Asia to North America and the Middle East, an open tender was conducted in 2012. The successful bidders will be selected in the course of 2013. The programme follows on from the pilot ECI programme which was originally planned to end in January 2012, but was extended until the end of January 2013. The ECI programme aims to ensure the smooth circulation of euro banknotes in geographically remote regions and to provide detailed statistical data on the international use of euro banknotes.

### **THE SECOND SERIES OF EURO BANKNOTES**

The Eurosystem continued work on a new series of euro banknotes in 2012, focusing on the large-scale production of the new €5 banknote, which will be the first denomination of the new series to be launched. The Eurosystem also helped the relevant stakeholders to prepare for the introduction of the new banknotes and continued developing the subsequent denominations of the new series. The new series is called the Europa series and features a portrait of Europa, a figure from Greek mythology, in the watermark and hologram. The Europa series will have the same denominations as the first series of banknotes – €5, €10, €20, €50, €100, €200 and €500 – and most of the same design elements.<sup>23</sup>

20 OJ L 316, 29.11.2011, p. 1.

21 OJ L 267, 9.10.2010, p. 1.

22 OJ L 253, 20.9.2012, p. 19.

23 For more details, see <http://www.newfaceoftheeuro.eu>

The Governing Council decided on 9 March 2012 that the new €5 banknote would be introduced on 2 May 2013. The exact timing of the issuance of the other denominations of the Europa series will be determined at a later stage. It is anticipated that the new banknotes will be introduced gradually over several years in ascending order. The Eurosystem will inform the public, cash handlers and banknote equipment manufacturers well in advance about the modalities of the introduction of the new banknotes. The banknotes of the first series will remain legal tender for a relatively long period and their withdrawal from circulation will be gradual and communicated to the public well in advance. Even after the banknotes of the first series have been withdrawn, it will be possible to exchange them at the euro area NCBs for an unlimited period of time.

## 4 STATISTICS

The ECB, assisted by the NCBs, develops, collects, compiles and disseminates a wide range of statistics which support the monetary policy of the euro area, various other tasks of the ESCB and the tasks of the European Systemic Risk Board (ESRB). These statistics are also used by public authorities (for example, in the European Commission's scoreboard for monitoring macroeconomic imbalances), financial market participants, the media and the general public. In 2012 regular euro area statistics continued to be provided in a smooth and timely manner. In addition, work focused on strengthening the information basis for the fulfilment of the mandates given to the ECB and the ESRB, although this represented a considerable challenge in view of the limited resources available. In accordance with the annually reviewed statistical work programme, significant efforts were devoted to meeting new data requirements, particularly in the fields of monetary policy and financial stability analysis.

The challenges associated with the growing data demands were discussed in April 2012 at the ECB's sixth biennial conference on statistics, which was devoted to the theme of "Central bank statistics as a servant of two separate mandates – price stability and mitigation of systemic risk".

### 4.1 NEW AND ENHANCED EURO AREA STATISTICS

Complying with its duty to provide statistical support to the ESRB, the ECB was heavily involved in 2012 in the preparation of the ESRB risk dashboard, which was released for the first time after the ESRB General Board meeting on 20 September 2012. In order to improve the dashboard's ability to capture systemic risks, the initial set of 45 indicators will be regularly updated and revised (see also Section 2.2 of Chapter 3).

In September 2012 the ECB also published for the first time an adjusted statistical measure of the broad monetary aggregate M3 and credit to the private sector in the euro area, which excludes repurchase agreement transactions conducted through central counterparties.

### 4.2 OTHER STATISTICAL DEVELOPMENTS

The ESCB continued its work on enhancing the availability and quality of statistics on the basis of micro-databases, as these provide more flexibility in meeting user needs and help to minimise the burden for reporting agents.