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Introduction

This Factbook contains two sections:

- Section A provides an overview of the CSD landscape in Europe. The analysis, based on 2015 data from the ECSDA online database, looks at different aspects of CSD activities: (1) the legal framework, (2) corporate governance, (3) CSD services, (4) users and (5) securities transactions.

- Section B contains 41 factsheets with basic facts and figures on individual ECSDA members. The information contained in these factsheets is simplified in order to facilitate comparability, so we strongly encourage readers who would like to find out more about an individual CSD to visit this CSD’s website, indicated at the top of each factsheet.

For the purpose of this report, the term "CSD" covers both national and international central securities depositories, unless otherwise specified. CSDs are mostly referred to using their short names (see Table 1).

Table 1. List of ECSDA members

For ease of reading, individual CSDs are described with an acronym or short name, as follows:

<table>
<thead>
<tr>
<th>Code</th>
<th>Market</th>
<th>Acronym</th>
<th>Full name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT</td>
<td>Austria</td>
<td>OeKB CSD</td>
<td>OeKB CSD GmbH</td>
</tr>
<tr>
<td>BA</td>
<td>Bosnia-Herzegovina</td>
<td>CR HoV RS</td>
<td>Central Registry of Securities JSC Banja Luka</td>
</tr>
<tr>
<td>BA</td>
<td>Bosnia-Herzegovina</td>
<td>RVP</td>
<td>Registry of Securities</td>
</tr>
<tr>
<td>BE</td>
<td>Belgium</td>
<td>EB</td>
<td>Euroclear Bank</td>
</tr>
<tr>
<td>BE</td>
<td>Belgium</td>
<td>EBE</td>
<td>Euroclear Belgium</td>
</tr>
<tr>
<td>BG</td>
<td>Bulgaria</td>
<td>CDAD</td>
<td>Central Depository AD</td>
</tr>
<tr>
<td>CH</td>
<td>Switzerland</td>
<td>SIX SIS</td>
<td>SIX SIS Ltd</td>
</tr>
<tr>
<td>CY</td>
<td>Cyprus</td>
<td>CSE</td>
<td>Cyprus Stock Exchange</td>
</tr>
<tr>
<td>CZ</td>
<td>Czech Republic</td>
<td>CSD Prague</td>
<td>Central Securities Depository Prague</td>
</tr>
<tr>
<td>DE</td>
<td>Germany</td>
<td>CBF</td>
<td>Clearstream Banking AG</td>
</tr>
<tr>
<td>DK</td>
<td>Denmark</td>
<td>VP</td>
<td>VP Securities</td>
</tr>
<tr>
<td>EE</td>
<td>Estonia</td>
<td>ECSD</td>
<td>Estonian CSD</td>
</tr>
<tr>
<td>ES</td>
<td>Spain</td>
<td>Iberclear</td>
<td>Iberclear</td>
</tr>
<tr>
<td>FI</td>
<td>Finland</td>
<td>EFI</td>
<td>Euroclear Finland</td>
</tr>
<tr>
<td>FR</td>
<td>France</td>
<td>EF</td>
<td>Euroclear France</td>
</tr>
<tr>
<td>GR</td>
<td>Greece</td>
<td>ATHEXCSD</td>
<td>Hellenic Central Securities Depository SA</td>
</tr>
<tr>
<td>HR</td>
<td>Croatia</td>
<td>SKDD</td>
<td>Central Depository &amp; Clearing Company Inc.</td>
</tr>
<tr>
<td>HU</td>
<td>Hungary</td>
<td>KELER</td>
<td>KELER Ltd.</td>
</tr>
<tr>
<td>IS</td>
<td>Iceland</td>
<td>NCSD</td>
<td>Nasdaq CSD Iceland</td>
</tr>
<tr>
<td>IT</td>
<td>Italy</td>
<td>Monte Titoli</td>
<td>Monte Titoli</td>
</tr>
<tr>
<td>LT</td>
<td>Lithuania</td>
<td>CSDL</td>
<td>Central Securities Depository of Lithuania</td>
</tr>
<tr>
<td>LU</td>
<td>Luxembourg</td>
<td>CBL</td>
<td>Clearstream Banking Luxembourg</td>
</tr>
<tr>
<td>LU</td>
<td>Luxembourg</td>
<td>globeSettle</td>
<td>globeSettle SA</td>
</tr>
<tr>
<td>LU</td>
<td>Luxembourg</td>
<td>LuxCSD</td>
<td>LuxCSD SA</td>
</tr>
<tr>
<td>LV</td>
<td>Latvia</td>
<td>LCD</td>
<td>Latvian Central Depository</td>
</tr>
<tr>
<td>ME</td>
<td>Montenegro</td>
<td>CDA</td>
<td>Central Depository Agency of Montenegro</td>
</tr>
<tr>
<td>Code</td>
<td>Market</td>
<td>Acronym</td>
<td>Full name</td>
</tr>
<tr>
<td>------</td>
<td>----------</td>
<td>---------</td>
<td>-----------------------------------------------------</td>
</tr>
<tr>
<td>MK</td>
<td>Macedonia</td>
<td>CSD AD Skopje</td>
<td>Central Securities Depository AD Skopje</td>
</tr>
<tr>
<td>MT</td>
<td>Malta</td>
<td>MSE</td>
<td>Malta Stock Exchange</td>
</tr>
<tr>
<td>NL</td>
<td>Netherlands</td>
<td>ENL</td>
<td>Euroclear Nederland</td>
</tr>
<tr>
<td>NO</td>
<td>Norway</td>
<td>VPS</td>
<td>The Norwegian Central Securities Depository</td>
</tr>
<tr>
<td>PL</td>
<td>Poland</td>
<td>KDPW</td>
<td>The Central Securities Depository of Poland</td>
</tr>
<tr>
<td>PT</td>
<td>Portugal</td>
<td>Interbolsa</td>
<td>Interbolsa</td>
</tr>
<tr>
<td>RO</td>
<td>Romania</td>
<td>DC</td>
<td>Depozitarul Central</td>
</tr>
<tr>
<td>RS</td>
<td>Serbia</td>
<td>CR HoV</td>
<td>Central Securities Depository and Clearing House</td>
</tr>
<tr>
<td>RU</td>
<td>Russia</td>
<td>NSD</td>
<td>National Settlement Depository</td>
</tr>
<tr>
<td>SE</td>
<td>Sweden</td>
<td>ESE</td>
<td>Euroclear Sweden</td>
</tr>
<tr>
<td>SI</td>
<td>Slovenia</td>
<td>KDD</td>
<td>Central Securities Clearing Corporation</td>
</tr>
<tr>
<td>SK</td>
<td>Slovakia</td>
<td>CDCP SR</td>
<td>Central Securities Depository of the Slovak Republic</td>
</tr>
<tr>
<td>TR</td>
<td>Turkey</td>
<td>MKK</td>
<td>Central Securities Depository of Turkey</td>
</tr>
<tr>
<td>UA</td>
<td>Ukraine</td>
<td>NDU</td>
<td>National Depository of Ukraine</td>
</tr>
<tr>
<td>UK</td>
<td>United Kingdom</td>
<td>EUI</td>
<td>Euroclear UK &amp; Ireland</td>
</tr>
</tbody>
</table>

To view the full ECSDA database online or to download it in Excel, scan this QR code or go to: [http://ecsda.eu/facts/2015database](http://ecsda.eu/facts/2015database)
Section A: The CSD landscape in Europe

1. Legal framework

1.1 Countries covered

As of 1 January 2016, ECSDA had 41 member organisations, headquartered in 37 countries across Europe (see Chart 1).

ECSDA’s membership has remained unchanged since 2014. With the exception of Ireland, all countries in the European Union have a CSD operating on their territory. Euroclear UK and Ireland, which is headquartered in London, offers CSD services for Irish as well as UK securities.

Luxembourg hosts four CSDs: Clearstream Banking Luxembourg, LuxCSD, globeSettle, and VPLux, the latter being a wholly-owned subsidiary of VP Securities, the Danish CSD. VPLux is not included in this Factbook because it is not a direct member of ECSDA.

Belgium is home to three CSDs: Euroclear Belgium, Euroclear Bank, and the CSD of the National Bank of Belgium. As of today, ECSDA’s membership does not include central banks operating their own securities settlement system, usually for transactions in government securities.

1.2 Applicable standards

All CSDs in Europe are subject to national laws in the country in which they are incorporated. Often, national securities law contains a section on the role and responsibilities of the central securities depository. Sometimes, there is even a dedicated legal act on the CSD. In addition to being regulated as central securities depositories, 7 ECSDA members (OeKB CSD, EB, KELER, CBF, CBL, NSD, SIX SIS) operate with a banking license and therefore are also subject to the relevant banking laws.

Furthermore, the 32 CSDs established in the European Economic Area (EEA) are subject to European regulations, including EU Regulation 909/2014 on central securities depositories and securities settlement, the so-called CSD Regulation or “CSDR” (see Table 2).

With the exception of EBE, ECSD, ATHEXCSD and globeSettle, all CSDs established in a euro area country are eligible securities settlement systems (SSSs) under the Eurosystem assessment framework, which means that they can be used by their participants for mobilising collateral to secure central bank credit in the context of Eurosystem monetary policy operations\(^1\). The “User addendum” consisting of questions for assessing SSSs and links within the Eurosystem

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\(^1\) The list of eligible securities settlement systems is publicly available on the ECB website at: http://www.ecb.europa.eu/paym/coll/coll/eliblesss/html/index.en.html
framework was last updated in January 2014 and replaces the former ESCB User Standards. Eligible CSDs and eligible CSD links are regularly assessed in terms of their compliance with the Eurosystem framework.

Finally, all European CSDs are also subject to international oversight standards elaborated by the Committee on Payment and Market Infrastructures (CPMI) and the technical committee of the International Organization of Securities Commissions (IOSCO), representing central banks and securities regulators respectively. In April 2012, the CPMI and IOSCO published the Principles for Financial Market Infrastructures (PFMI) which replace the former Recommendations for securities settlement systems, and cover all aspects of CSD activities such as the legal framework, governance, risk management and efficiency.

### Table 2. Main European and international rules governing CSD activities

<table>
<thead>
<tr>
<th>Rules</th>
<th>Author</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Settlement Finality Directive</td>
<td>European Union</td>
<td>1998</td>
</tr>
<tr>
<td>Principles for Financial Market Infrastructures</td>
<td>CPMI, IOSCO</td>
<td>2012</td>
</tr>
<tr>
<td>Eurosystem Assessment Framework for SSSs and links</td>
<td>Eurosystem</td>
<td>2014</td>
</tr>
<tr>
<td>CSD Regulation</td>
<td>European Union</td>
<td>2014</td>
</tr>
</tbody>
</table>

1.3 Settlement systems

All ECSDA members but one offer delivery-versus-payment (DvP) settlement as a core service. This means that the transfer of securities from the seller to the buyer only occurs if the payment has been made from the buyer to the seller (and vice-versa). globeSettle currently only offers free of payment transfers (FoP), whereby a delivery of securities is not linked to a corresponding cash payment (for example, moving securities from one account to another for collateralisation purposes). The DvP process is essential because it reduces risk in the market. Thanks to the simultaneous and irrevocable transfer of securities and cash, CSD participants have the guarantee that they will not pay for securities without receiving them, and that they will not deliver securities without receiving the corresponding payment.

### Table 3. BIS settlement models

<table>
<thead>
<tr>
<th></th>
<th>SECURITIES TRANSFER</th>
<th>CASH TRANSFER</th>
</tr>
</thead>
<tbody>
<tr>
<td>MODEL 1</td>
<td>Gross</td>
<td>Gross</td>
</tr>
<tr>
<td>MODEL 2</td>
<td>Gross</td>
<td>Net</td>
</tr>
<tr>
<td>MODEL 3</td>
<td>Net</td>
<td>Net</td>
</tr>
</tbody>
</table>

The Bank for International Settlements (BIS) identifies three DvP models, as illustrated in Table 3. All BIS models are in use, and it is common for a CSD to use more than one model depending on the market it serves. BIS model 1 is also called RTGS or “real-time gross settlement” and is used by the vast majority of CSDs (35 out of 41), either alone (13 CSDs) or in combination with model 2 or 3 (14 and 7 CSDs respectively). Only NSD, the Russian CSD, uses all three models. Following the migration to the TARGET2-Securities platform, some CSDs have stopped - or will stop - using net settlement models, adopting Model 1 on an exclusive basis. This is the case, for instance, of Interbolsa since March 2016. globeSettle currently does not use any of the models because it provides free of payment (FoP) transfers.

In cases where more than one model is used, Model 1 is typically used for over-the-counter (OTC) transactions. On-exchange transactions usually involve some form of netting and are thus settled according to Model 2 or 3. Five CSDs (CDAD, CSD Prague, NCSD, VPS, CR HoV) settle exclusively with Model 2.

As of 1 January 2016, 20 ECSDA members had signed the T2S framework agreement, which means that they have outsourced or will outsource settlement to a joint technical platform operated by the Eurosystem. TARGET2-Securities is expected to deliver harmonised DvP settlement in central bank money for most European securities. Among the ECSDA members participating in T2S, 16 are established in the euro area.

The four CSDs established outside the euro area (SIX SIS, VP, KELER, DC) are using or will use T2S for the settlement of transactions in euros. As of 2018 however, T2S will settle in Danish Kroner (DKK) as well as in EUR.

In addition to ECSDA members, three other CSDs (the National Bank of Belgium CSD, the Greek central bank CSD BOGS, and VPLux) have also opted for the T2S platform. More details on the T2S project and migration plan can be found at www.t2s.eu.
2. Corporate Governance

2.1 Ownership models

CSDs display a great diversity of corporate structures and ownership models. One could almost argue that each CSD has a unique ownership structure. In order to aggregate information on ownership models, ECSDA collected data on the proportion of CSD shares owned by the following seven types of entities: state authorities (the Ministry of Finance, for example), central banks, trading venues, central clearing counterparties (CCPs), CSD participants, private investors (including, for example, institutional investors like sovereign funds, pension funds and insurers), and other entities.

Based on this information, one way to look at CSDs' ownership across Europe is to add the ownership stakes of the different categories of entities for all 41 CSDs put together. This is the approach adopted in Chart 2, which illustrates the proportion of shareholders from different categories in a theoretical CSD, contrasting the prevalent shareholder types in the EU and outside the EU.

**Chart 2. Main shareholder types in European CSDs**

2a. EU CSDs

2b. Non-EU European CSDs

In the EU, trading venues (primarily stock exchanges) hold by far the largest stake in CSDs, whereas non-EU European CSDs typically have a stronger involvement of the State in CSDs' share capital. In both EU and non-EU CSDs, CSD participants represent a little less than a third of CSD owners.

Another way to compare CSD ownership models is to look at the majority shareholder(s) in each CSD, as is done in Table 4. This allows us to group CSDs in five categories and to make a few observations.
Table 4. Type of shareholders owning 50% of the shares or more in a CSD

<table>
<thead>
<tr>
<th>Majority shareholder(s)</th>
<th>CSDs</th>
<th>No. of CSDs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trading venue (securities exchange)</td>
<td>CSD Prague (100%), CBF (100%), ECSD (100%), Iberclear (100%), ATHEXCSD (100%), NCSD (100%), CSDL (100%), CBL (100%), globeSettle (100%), LCD (100%), Interbolsa (100%), NSD (100%), CDCP SR (100%), Monte Titoli (98.9%), DC (69%)</td>
<td>15 (37%)</td>
</tr>
<tr>
<td>CSD participants (users)</td>
<td>EB (100%), EBE (100%), ENL (100%), EFI (100%), EF (100%), ESE (100%), EUI (100%), SIX SIS (95.7%), VP (68%), CSD AD Skopje (54.9%)</td>
<td>10 (24%)</td>
</tr>
<tr>
<td>The State (state authorities and/or central banks)</td>
<td>CR HoV (100%), CSE (100%), MSE (100%), SKDD (86.2%), RVP (75%), KDPW (66.6%), KELER (53.3%)</td>
<td>7 (17%)</td>
</tr>
<tr>
<td>Other (banks, private investors, CCPs)</td>
<td>VPS (71.7% various institutional investors), MKK (64.9% Takasbank), OeKB CSD (100% owned by a specialised bank, OeKB)</td>
<td>3 (7%)</td>
</tr>
<tr>
<td>No majority shareholder</td>
<td>CDAD (43.7% State, 40% users, 6.6% Exchange, 9.7% others), CR HoV RS (42.5% users, 33% State, 24.5% Exchange), KDD (36.5% users, 36.2% private investors, 24% State, 3.3% others), NDU (50% State and central bank, 35% users, 10.9% private investors, 4.1% others), LuxCSD (50% central bank, 50% Clearstream), CDA (40% users, 35% State, 25% private investors)</td>
<td>6 (15%)</td>
</tr>
</tbody>
</table>

When trading venues are shareholders in a CSD, it is usually as full owners, and often as part of an integrated corporate group including one or more exchange(s), clearing house(s) and CSD(s). Among the 41 ECSDA members:
- 13 CSDs are fully owned by an exchange;
- 2 CSDs are majority-owned by an exchange;
- Exchanges hold minority stakes in 5 CSDs (46.7% in KELER, 33.3% in KDPW, 30.1% in MKK, 24.5% in CR HoV RS, 6.6% in CDAD).

Looking at user ownership more in detail, it appears that:
- The 7 Euroclear (I)CSDs are entirely user-owned;
- 1 CSD, SIX SIS is almost entirely user-owned (95.7%) but is part of a corporate group, the SIX group, which includes a securities exchange;
- 2 CSDs are primarily owned by CSD participants (VP, CSD AD Skopje);
- 10 CSDs have CSD participants as minority shareholders (42.5% CR HoV RS, 40% CDA, 40% CDAD, 36.5% KDD, 35% NDU, 30.8% VPS, 25.1% DC, 25% RVP, 9.1% SKDD, 5% MKK);
- 21 CSDs do not have CSD participants among their shareholders.
State-owned CSDs include different variants, from full state ownership to mixed models. In particular:

- 3 CSDs are fully owned by the State (two of which, MSE and CSE are departments of the Stock Exchange, which in turns is fully-owned by the national government);
- 2 CSDs have the government as the majority shareholder (RVP, SKDD);
- 1 CSD, KELER, is majority-owned by the central bank (53.3%);
- 1 CSD, KDPW, counts both the central bank and the Ministry of Finance as shareholders, each holding 1/3 of the shares (the Warsaw Stock Exchange being the third shareholder).

Three CSDs are primarily owned by banks or private investors:

- VPS' main shareholders include various national and international financial institutions, including asset management and insurance companies;
- MKK is majority-owned by Takasbank-Istanbul Settlement and Custody Bank, which offers CCP and other post trade services in the Turkish market;
- In 2015, the CSD activities previously performed by OeKB for the Austrian market were transferred to a new legal entity, OeKB CSD, which is fully owned by OeKB.

Finally, 6 CSDs have a hybrid ownership structure with no single majority shareholder type.

Irrespective of their ownership models, the vast majority of European CSDs (93%) operate as for-profit entities. Only 3 CSDs operate on a not-for-profit basis (CSE, KDPW, CR HoV).

2.2 Employment

As at 31 December 2015, ECSDA members collectively employed more than 8,000 people, among which 82% were employed by CSDs established in the European Union. Overall, this represents an increase of 2.5% compared to 2014, adding to the slightly upward trend in CSD employment figures since 2010.

Chart 3: Total number of CSD employees

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3 The list of the top 20 shareholders in Oslo Børs VPS Holding ASA is available at: http://www.osloborsvps.no/obvps_eng/Oslo-Boers-VPS/The-share/Top-20-Shareholders
Excluding the two ICSDs, the average CSD has slightly more than 100 employees. This illustrates that the CSD business, unlike the retail banking business for example, is more IT-intensive than labour-intensive, and many CSDs indeed qualify as small or medium businesses in their respective countries. The range of the figures is broad. While the smallest CSDs are run by fewer than 10 full-time employees, the largest ICSD had more than 3,000 employees.

It is important to note that employee data reflects various corporate structures and arrangements, and in cases where the CSD is not a separate entity (e.g. when the CSD is a department of the Exchange or when the CSD is part of an integrated corporate group with shared services among the different businesses of the group), the reported figures show the actual number of full-time equivalent staff (FTEs) dedicated to the CSD activity rather than the actual number of employees reported in the financial statements of the corporate entity.
3. Services

3.1 Financial instruments accepted for settlement

CSDs accept a wide variety of financial instruments for deposit and/or settlement. All European CSDs settle equities and, with one exception, they all settle corporate bonds. A significant majority of CSDs settle government securities (government bonds and Treasury bills). In those markets where government securities are not settled by the CSD, it is usually because there is a dedicated securities settlement system for such securities operated by the central bank. For Treasury bills for instance, this is the case in Belgium, Bulgaria, the Czech Republic, Poland, Romania and Ukraine. 80% of CSDs have developed services for investment funds, not only limited to settlement but also including order routing and valuation services. Other instruments often accepted for settlement include Depository Receipts, eurobonds, cooperative share units, asset backed securities, other structured products and investment certificates.

![Chart 4. Financial instruments accepted for settlement in European CSDs](chart)

3.2 National numbering agencies

Most European CSDs (32 out of 41) act as national numbering agencies (NNAs), which means that they are responsible for allocating ISIN codes (International Securities Identification Numbers) to new securities. This function reflects the central role played by CSDs in financial markets and in the issuance process in particular. In Austria, the function of NNA remains with OeKB and has not been transferred to the new legal entity, OeKB CSD, established in 2015.

3.3 Legal Entity Identifier (LEI)

5 CSDs (CSD Prague, LuxCSD, KDPW, NSD, CDCP SR) are also authorised to allocate Legal Entity Identifiers (LEIs) in their market. The global LEI initiative aims to allow for the identification, not of financial instruments, but of financial counterparties to securities and derivatives transactions. As of January 2016, KDD will also be issuing LEIs for the Slovenian market. More details can be found on the website of the Global LEI Foundation at: [www.gleif.org](http://www.gleif.org).
4. Users

4.1 Participants

CSD participants are typically wholesale financial firms. If we exclude the two ICSDs and globeSettle, European CSDs had on average around 105 participants as of end 2015, a relatively stable but slightly declining number compared to 2013 and 2014. The number of participants ranges from 20 or less (10 CSDs) to 250 or more (4 CSDs, in addition to the two ICSDs). Within the EU, the domestic CSD with the highest number of participants is CBF with 288. The two ICSDs have more than 1,400 participants each.

Chart 5. Proportion of non-domestic participants per CSD

Chart 5 reveals important differences regarding the balance between domestic and non-domestic participants. On average, leaving the ICSDs aside (since they are by nature not operating in a domestic environment), European CSDs had 19% of non-domestic participants in 2015, a stable proportion compared to 2014. Interestingly, CSDs operating in small countries within the EU tend to have a higher share of non-domestic participants than CSDs operating in larger markets and outside the EU. The level of regional integration (e.g. Benelux, Nordics) is also a factor explaining a high proportion of non-domestic participants.
The CSDs with the highest proportion of foreign participants in 2015 (excluding the ICSDs) were ENL (77%) and EBE (75%). On the other hand, fifteen ECSDA members had fewer than 10% of foreign participants, and 6 CSDs had exclusively domestic institutions as participants. However, if we look at previous years, there seems to be a trend for CSDs in the more domestically-focused markets to attract more foreign institutions as participants. In 2012, more than half of ECSDA members still had less than 10% of non-domestic participants and 10 CSDs had only domestic participants.

4.2 CSD account structures

Although only wholesale financial institutions are typically eligible for CSD participation, in some cases, CSDs maintain end investor accounts in their books. In these so-called “direct holding markets”, end investor accounts are segregated at the level of the CSD and managed through the intermediation of CSD participants acting as account operators. In contrast, in the “indirect holding” or wholesale model, CSD participants usually maintain omnibus accounts in the CSD and end investor accounts are maintained at a lower level in the securities holding chain, e.g. at the level of the CSD participant.

54% of European CSDs offer a special type of securities account for end investors whereby the CSD has direct access to information on the identity of end investors. These 22 CSDs operate in 21 countries, of which 9 allow CSD participants to use omnibus accounts, and 12 impose the use of end investor accounts by CSD participants, at least for domestic investors and/or for certain types of instruments (e.g. shares). In the remaining markets (46% of ECSDA members), there is no special type of account for end investor holdings. CSDs typically allow their users to segregate client assets in a flexible way, but they do not have direct access to information on the identity of end investors, which is kept by the relevant intermediary(ies) with which the investor has a contractual relationship. A special report published by ECSDA in October 2015 describes account segregation practices at CSDs in greater detail.

The total number of securities accounts held at European CSDs in 2015 was around 83 million. There are however great variations at the level of individual CSDs, depending on whether end investor accounts are commonly used (see Tables 5a and 5b).

Table 5a. CSDs with the highest number of securities accounts

<table>
<thead>
<tr>
<th>CSD</th>
<th>Number of securities accounts</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKK (Turkey)</td>
<td>45,620,850</td>
</tr>
<tr>
<td>DC (Romania)</td>
<td>8,470,553</td>
</tr>
<tr>
<td>CR HoV (Serbia)</td>
<td>8,443,231</td>
</tr>
<tr>
<td>VP (Denmark)</td>
<td>3,305,228</td>
</tr>
<tr>
<td>ESE (Sweden)</td>
<td>3,200,000</td>
</tr>
</tbody>
</table>

Table 5b. CSDs with the lowest number of securities accounts*

<table>
<thead>
<tr>
<th>CSD</th>
<th>Number of securities accounts</th>
</tr>
</thead>
<tbody>
<tr>
<td>OeKB CSD (Austria)</td>
<td>713</td>
</tr>
<tr>
<td>Interbolsa (Portugal)</td>
<td>708</td>
</tr>
<tr>
<td>EBE (Belgium)</td>
<td>576</td>
</tr>
<tr>
<td>Iberclear (Spain)</td>
<td>339</td>
</tr>
<tr>
<td>LuxCSD (Luxembourg)</td>
<td>19</td>
</tr>
</tbody>
</table>

*globeSettle is not included in the Table.
4.3 New issues and redemptions

Until 2013, ECSDA collected data on newly issued and redeemed securities based on the nominal value of the securities. Nominal values are however not always available or meaningful for financial instruments like equities. As a result, since 2014, ECSDA collects information on the number of new issues and redemptions, i.e. the number of new ISIN codes entered into or deleted from CSD systems, irrespective of the nominal or market value of the securities.

From January to December 2015, ECSDA members collectively accepted more than 900,000 new ISINs, whereas more than 1 million ISINs were deleted from CSD systems as a result of redemptions. If we exclude the ICSDs, the number of new issues actually exceeded the number of redemptions: 605,000 versus 545,000 respectively. This translates into an average number of new issues per CSD of around 16,000 - and 14,000 for redemptions.

37 CSDs also provided data on issuers, i.e. the entities responsible for issuing the securities recorded in CSD systems. As of 31 December 2015, the average European CSD held securities issued by around 1,400 issuers. Once more there are significant differences across markets, with 3 CSDs holding securities on behalf of fewer than 100 issuers, and four CSDs holding securities on behalf of more than 3,000 issuers (ICSDs excluded).
5. Securities transactions

5.1 Securities held in CSDs

From 2014 to 2015, the total value of all securities held at ECSDA member CSDs increased by 4.2%, adding to the upward trend since 2010 (see Chart 7). Over the past five years, more than EUR 9 trillion worth of securities were added in accounts held at European CSDs. Like in 2014, the increase in the value of securities on accounts was slightly more pronounced in EU CSDs than in those ESCDA members located outside the EU.

Chart 7: Total value of securities held on CSD accounts (in EUR trillion)

European CSDs collectively held client securities worth around EUR 53.7 trillion. EU CSDs represent more than 92% of this amount, with EUR 49.4 trillion.

Whereas in 11 CSDs, the total value of securities held on accounts is less than EUR 20 billion, 5 of the largest EU (I)CSDs represent 71% of the total, with more than EUR 5.5 trillion each. Excluding the ICSDs, the average EU CSD holds EUR 1.1 trillion worth of assets.

5.2 Delivery instructions

In 2015, European CSDs collectively processed around 644 million delivery instructions. More than 1/4 of these deliveries (27%) were processed by MKK, the Turkish CSD, which maintains more than 45 million securities accounts, in what is by far the largest European market operating with end investor accounts. If we subtract MKK from the total, deliveries at European CSDs amounted to 473 million (see Chart 8).

9 CSDs processed fewer than 50,000 deliveries, whereas 5 CSDs processed more than 50 million deliveries. Leaving MKK aside, this translates into an average annual settlement volume per CSD of 11 million instructions or around 46,000 instructions per day of operation⁴.

---

⁴ Assuming an average of 256 days of operation per year.
In terms of value, delivery instructions processed annually by European CSDs represent **EUR 1.15 quadrillion**, down by a little less than 1% compared to 2014. Three CSDs account for 70% of this amount: EB, EF, and EUI. Overall, 7 CSDs processed more than EUR 50 trillion worth of deliveries in 2015, versus a value of less than EUR 5 billion in the 9 smallest CSDs.

**Chart 8: Delivery instructions processed by ECSDA members**

Looking at the 29 EU CSDs only\(^5\), 378 million securities deliveries were processed in 2015, worth EUR 1.12 quadrillion. Excluding the ICSDs, this translates into an average of EUR 22 trillion worth of deliveries per CSD.

Lastly, based on these figures, the average size of a single delivery instruction was around EUR 2.4 million (excluding MKK).

\(^5\) In 2015, globeSettle did not yet have transaction data to report.
Section B: Individual factsheets

This section of the report contains a 1-page factsheet on each ECSDA member organisation. Unless otherwise specified, all information provided is valid as at 31 December 2015.
OeKB CSD
OeKB CSD GmbH, Strauchgasse 3, 1011 Vienna, Austria
www.oekb-csd.at

Basic information
- Banking license
- Designated SSS
- Eurosystem eligible SSS
- T2S (EUR)

BIS settlement model:
- Model 1 (OTC transactions)
- Model 2
- Model 3 (Exchange transactions)

Users
- Securities accounts: 713
- End investor accounts at CSD: No
- End investor accounts mandatory: No
- Total participants: 94

<table>
<thead>
<tr>
<th></th>
<th>Domestic</th>
<th>Non-domestic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>70%</td>
<td>30%</td>
</tr>
</tbody>
</table>

Services
- Financial instruments accepted for deposit and/or settlement:
  - Equities
  - ETFs
  - Government bonds
  - Corporate bonds
  - Treasury bills
  - Commercial paper
  - Investment funds
  - Warrants and rights
  - Emission rights
  - Other: -

Other services:
- NNA
- LEI

Corporate information
For profit
33 employees (33 FTEs)

CSD ownership:

Corporate information

Securities transactions 2015

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>New issues</td>
<td>1,408</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Redemptions</td>
<td>1,358</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value of securities held on accounts (EUR million)</td>
<td>523,169</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value of deliveries (EUR million)</td>
<td>177,333</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of deliveries (thousands)</td>
<td>1,185</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Value of deliveries (billion €) vs. Number of deliveries (millions)
Central Registry of Securities JSC Banja Luka (CR HoV RS)
Centralni registar hartija od vrijednosti a.d. Banja Luka, Sime Šolaje 1, 78000 Banjaluka, Republic of Srpska
Bosnia and Herzegovina
www.crhovrs.org

Basic information

- Banking license
- Designated SSS
- Eurosystem eligible SSS
- T2S

BIS settlement model:
- Model 1 (Money market transactions & block transactions)
- Model 2 (Exchange transactions)
- Model 3

Corporate information

For profit
32 employees (31.8 FTEs)

CSD ownership:

- State authorities: 43%
- Trading venue: 24%
- CSD participants: 33%

Users

Securities accounts: 1,254,555
End investor accounts at CSD: Yes
End investor accounts mandatory: Yes
Total participants: 11

- Domestic
- Non-domestic

100%

Services

Financial instruments accepted for deposit and/or settlement:

- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: -

Other services:
- NNA
- LEI

Securities transactions 2015

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>New issues</td>
<td>26</td>
</tr>
<tr>
<td>Redemptions</td>
<td>57</td>
</tr>
<tr>
<td>Value of securities held on accounts (EUR million)</td>
<td>6,569</td>
</tr>
<tr>
<td>Value of deliveries (EUR million)</td>
<td>74</td>
</tr>
<tr>
<td>Number of deliveries (thousands)</td>
<td>19</td>
</tr>
</tbody>
</table>

Value of deliveries (million €) vs Number of deliveries (thousands)

- 2010: 80
- 2011: 80
- 2012: 31
- 2013: 88
- 2014: 115
- 2015: 74

2010 2011 2012 2013 2014 2015
0 € 20 € 40 € 60 € 100 € 120 € 140 €
Basic information

- Banking license
- Designated SSS
- Eurosystenm eligible SSS
- T2S

BIS settlement model:
- Model 1 (T-bills)
- Model 2 (Exchange transactions)
- Model 3

Users

Securities accounts: 674,373
End investor accounts at CSD: Yes
End investor accounts mandatory: Yes

Total participants: 13

- Domestic
- Non-domestic

100%

Services

Financial instruments accepted for deposit and/or settlement:
- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: -

Other services:
- NNA
- LEI

Corporate information

For profit
27 employees (27 FTEs)

CSD ownership:
- State authorities
- CSD participants

25%
75%

Securities transactions 2015

| New issues | 48 |
| Redemptions | 56 |
| Value of securities held on accounts (EUR million) | 6,313 |
| Value of deliveries (EUR million) | 2,556 |
| Number of deliveries (thousands) | 44 |

Note: The large increase in the value of delivery instructions from 2014 to 2015 is due to a significant transfer of shares (approximately BAM 4 billion) from the ministries to the Federation which took place during 2015.
Basic information

- Banking license
- Designated SSS
- Eurosystem eligible SSS
- T2S

BIS settlement model:
- Model 1
- Model 2
- Model 3

Corporate information

For profit
3,008 employees (2,902 FTEs)

CSD ownership:

100%

Users

Securities accounts: 24,469
End investor accounts at CSD: No
End investor accounts mandatory: No

Total participants: 1,602

Domestic 98%

Services

Financial instruments accepted for deposit and/or settlement:
- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: Depositary Receipts

Other services:
- NNA
- LEI

Securities transactions 2015

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>New issues</td>
<td>277</td>
<td>333</td>
<td>309</td>
<td>342</td>
<td>405</td>
<td>440</td>
</tr>
<tr>
<td>Redemptions</td>
<td>48.2</td>
<td>59.9</td>
<td>64.9</td>
<td>70.1</td>
<td>75.7</td>
<td>83.7</td>
</tr>
<tr>
<td>Value of deliveries (EUR million)</td>
<td>12,273,202</td>
<td>439,953,613</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of deliveries (thousands)</td>
<td>83,725</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Value of deliveries (trillion €)

Number of deliveries (millions)
Basic information

- Banking license
- Designated SSS
- Eurosystem eligible SSS
- T2S (EUR)

BIS settlement model:
- Model 1
- Model 2
- Model 3

Corporate information

For profit
38 employees (34 FTEs)

Securities transactions 2015

<table>
<thead>
<tr>
<th>Category</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>New issues</td>
<td>3,316</td>
</tr>
<tr>
<td>Redemptions</td>
<td>3,211</td>
</tr>
<tr>
<td>Value of securities held on accounts (EUR million)</td>
<td>271,106</td>
</tr>
<tr>
<td>Value of deliveries (EUR million)</td>
<td>933,545</td>
</tr>
<tr>
<td>Number of deliveries (thousands)</td>
<td>2,467</td>
</tr>
</tbody>
</table>

Users

Securities accounts: 576
End investor accounts at CSD: No
End investor accounts mandatory: No

Total participants: 77

- Domestic
- Non-domestic
25% 75%

Services

Financial instruments accepted for deposit and/or settlement:

- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: VVPR strips

Other services:
- NNA
- LEI

Corporate information

CSD ownership:
100%

Users

Securities accounts: 576
End investor accounts at CSD: No
End investor accounts mandatory: No

Total participants: 77

- Domestic
- Non-domestic
25% 75%

Services

Financial instruments accepted for deposit and/or settlement:

- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: VVPR strips

Other services:
- NNA
- LEI

Corporate information

CSD ownership:
100%

Users

Securities accounts: 576
End investor accounts at CSD: No
End investor accounts mandatory: No

Total participants: 77

- Domestic
- Non-domestic
25% 75%

Services

Financial instruments accepted for deposit and/or settlement:

- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: VVPR strips

Other services:
- NNA
- LEI

Corporate information

CSD ownership:
100%

Users

Securities accounts: 576
End investor accounts at CSD: No
End investor accounts mandatory: No

Total participants: 77

- Domestic
- Non-domestic
25% 75%

Services

Financial instruments accepted for deposit and/or settlement:

- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: VVPR strips

Other services:
- NNA
- LEI
Central Depository AD (CDAD)

Central Depository AD, 6 Tri Ushi Str., 1000 Sofia, Bulgaria
www.csd-bg.bg

Basic information
- Banking license
- Designated SSS
- Eurosystem eligible SSS
- T2S

BIS settlement model:
- Model 1
- Model 2
- Model 3

Corporate information
For profit
26 employees (25 FTEs)

CSD ownership:
- State authorities
- Trading venue
- CSD participants
- Other

Users
Securities accounts: 3,000,627
End investor accounts at CSD: Yes
End investor accounts mandatory: Yes
Total participants: 96
- Domestic
- Non-domestic

Services
Financial instruments accepted for deposit and/or settlement:
- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: Compensatory Instruments

Other services:
- NNA
- LEI

Securities transactions 2015

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>New issues</strong></td>
<td>36</td>
</tr>
<tr>
<td><strong>Redemptions</strong></td>
<td>1,612</td>
</tr>
<tr>
<td><strong>Value of securities held on accounts (EUR million)</strong></td>
<td>33,213</td>
</tr>
<tr>
<td><strong>Value of deliveries (EUR million)</strong></td>
<td>89</td>
</tr>
<tr>
<td><strong>Number of deliveries (thousands)</strong></td>
<td>72</td>
</tr>
</tbody>
</table>
Basic information

- Banking license
- Designated SSS
- Eurosystem eligible SSS
- T2S (EUR)

BIS settlement model:
- Model 1
- Model 2
- Model 3

Users

- Securities accounts: 28,193
- End investor accounts at CSD: No
- End investor accounts mandatory: No

Total participants: 341

<table>
<thead>
<tr>
<th>Domestic</th>
<th>Non-domestic</th>
</tr>
</thead>
<tbody>
<tr>
<td>55%</td>
<td>45%</td>
</tr>
</tbody>
</table>

Services

Financial instruments accepted for deposit and/or settlement:

- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: -

Other services:
- NNA
- LEI

Corporate information

For profit
338 employees (319 FTEs)

CSD ownership:

- CSD participants: 96%
- Other: 4%

Securities transactions 2015

<table>
<thead>
<tr>
<th>Description</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value of deliveries (billion €)</td>
<td>9,275</td>
<td>9,406</td>
<td>5,552</td>
<td>4,459</td>
<td>6,223</td>
<td>9,370</td>
</tr>
<tr>
<td>Number of deliveries (millions)</td>
<td>57.4</td>
<td>65.2</td>
<td>49.9</td>
<td>49.8</td>
<td>55.1</td>
<td>66.6</td>
</tr>
</tbody>
</table>

Note: From 2014 to 2015, there was a notable increase in the value of securities held at SIX SIS in EUR. This increase is mostly due to exchange rate volatility. Indeed, the figures in CHF actually reveal a slight decrease (from CHF 3.2 trillion to CHF 3.1 trillion).
Services

Financial instruments accepted for deposit and/or settlement:

- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: GDRs

Other services:
- NNA
- LEI

Corporate information

Not for profit
21 employees (21 FTEs)

CSD ownership:

State authorities 100%

Users

Securities accounts: 338,538
End investor accounts at CSD: Yes
End investor accounts mandatory: No

Total participants: 33

<table>
<thead>
<tr>
<th>Domestic</th>
<th>Non-domestic</th>
</tr>
</thead>
<tbody>
<tr>
<td>55%</td>
<td>45%</td>
</tr>
</tbody>
</table>

Securities transactions 2015

| New issues | 59 |
| Redemptions | 63 |
| Value of securities held on accounts (EUR million) | 6,896 |
| Value of deliveries (EUR million) | 2,007 |
| Number of deliveries (thousands) | 52 |

Value of deliveries (million €) - Number of deliveries (thousands)
Central Securities Depository Prague (CSD Prague)

Centrální depozitář cenných papírů, a.s., Rybná 14, 110 05 Prague, Czech Republic
www.centralnidepozitar.cz

Basic information
- Banking license
- Designated SSS
- Eurosystem eligible SSS
- T2S

BIS settlement model:
- Model 1
- Model 2
- Model 3

Corporate information
For profit
43 employees (38 FTEs)

CSD ownership:
- Trading venue 100%

Users
Securities accounts: 1,499,588
End investor accounts at CSD: Yes
End investor accounts mandatory: No
Total participants: 28
- Domestic 71%
- Non-domestic 29%

Securities transactions 2015

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>New issues</td>
<td>192</td>
</tr>
<tr>
<td>Redemptions</td>
<td>198</td>
</tr>
<tr>
<td>Value of securities held on accounts (EUR million)</td>
<td>76,146</td>
</tr>
<tr>
<td>Value of deliveries (EUR million)</td>
<td>92,947</td>
</tr>
<tr>
<td>Number of deliveries (thousands)</td>
<td>908</td>
</tr>
</tbody>
</table>

Services
Financial instruments accepted for deposit and/or settlement:
- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: -

Other services:
- NNA
- LEI

Graph showing Value of deliveries (billion €) and Number of deliveries (thousands) from 2010 to 2015.
Clearstream Banking Frankfurt (CBF)
Clearstream Banking AG, Mergenthalerallee 61, 65760 Eschborn, Germany
www.clearstream.com

Basic information
- Banking license
- Designated SSS
- Eurosystem eligible SSS
- T2S (EUR)

BIS settlement model:
- Model 1
- Model 2
- Model 3

Corporate information
For profit
328 employees (299 FTEs)

CSD ownership:
100%

Users
Securities accounts: 10,168
End investor accounts at CSD: No
End investor accounts mandatory: No
Total participants: 288

- Domestic 59%
- Non-domestic 41%

Services
Financial instruments accepted for deposit and/or settlement:
- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: -

Other services:
- NNA
- LEI

Securities transactions 2015

<table>
<thead>
<tr>
<th>Category</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>New issues</td>
<td>4,728</td>
</tr>
<tr>
<td>Redemptions</td>
<td>3,824</td>
</tr>
<tr>
<td>Value of securities held on accounts (EUR million)</td>
<td>7,806,765</td>
</tr>
<tr>
<td>Value of deliveries (EUR million)</td>
<td>66,724,515</td>
</tr>
<tr>
<td>Number of deliveries (thousands)</td>
<td>61,175</td>
</tr>
</tbody>
</table>

Value of deliveries (trillion €)

Number of deliveries (millions)
VP Securities A/S, Weidekampsgade 14, 2300 Copenhagen S, Denmark
www.vp.dk

Basic information
- Banking license
- Designated SSS
- Eurosystem eligible SSS
- T2S (EUR from 2016 & DKK from 2018)
- BIS settlement model:
  - Model 1
  - Model 2
  - Model 3 (most commonly used)

Corporate information
For profit
175 employees (172.5 FTEs)

CSD ownership:
- Central bank
- CSD participants
- Private investors

Users
Securities accounts: 3,305,228
End investor accounts at CSD: Yes
End investor accounts mandatory: No
Total participants: 179

Securities transactions 2015
- New issues: 662
- Redemptions: 584
- Value of securities held on accounts (EUR million): 1,036,381
- Value of deliveries (EUR million): 7,132,295
- Number of deliveries (thousands): 17,037

Services
Financial instruments accepted for deposit and/or settlement:
- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: Non-tradeable certificates issued by special-purpose UCITS

Other services:
- NNA
- LEI

Corporate information
For profit
175 employees (172.5 FTEs)

CSD ownership:
- Central bank
- CSD participants
- Private investors

Users
Securities accounts: 3,305,228
End investor accounts at CSD: Yes
End investor accounts mandatory: No
Total participants: 179

Securities transactions 2015
- New issues: 662
- Redemptions: 584
- Value of securities held on accounts (EUR million): 1,036,381
- Value of deliveries (EUR million): 7,132,295
- Number of deliveries (thousands): 17,037

Services
Financial instruments accepted for deposit and/or settlement:
- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: Non-tradeable certificates issued by special-purpose UCITS

Other services:
- NNA
- LEI
Basic information

- Banking license
- Designated SSS
- Eurosystem eligible SSS
- T2S (EUR)

BIS settlement model:
- Model 1
- Model 2
- Model 3

Corporate information

For profit
23 employees (20 FTEs)

CSD ownership:

100%

Trading venue

Users

Securities accounts: 108,029
End investor accounts at CSD: Yes
End investor accounts mandatory: No

Total participants: 16

- Domestic: 75%
- Non-domestic: 25%

Services

Financial instruments accepted for deposit and/or settlement:

- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: -

Other services:
- NNA
- LEI

Securities transactions 2015

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>New issues</td>
<td>515</td>
</tr>
<tr>
<td>Redemptions</td>
<td>544</td>
</tr>
<tr>
<td>Value of securities held on accounts (EUR million)</td>
<td>8,139</td>
</tr>
<tr>
<td>Value of deliveries (EUR million)</td>
<td>1,955</td>
</tr>
<tr>
<td>Number of deliveries (thousands)</td>
<td>78</td>
</tr>
</tbody>
</table>

- Value of deliveries (million €)
- Number of deliveries (thousands)
Basic information

- Banking license
- Designated SSS
- Eurosystem eligible SSS
- T2S (EUR)

BIS settlement model:
- Model 1 (CADE Platform)
- Model 2 (SCLV Platform)
- Model 3

Corporate information

For profit
111 employees (111 FTEs)

CSD ownership:
100%

Users

Securities accounts: 339
End investor accounts at CSD: No
End investor accounts mandatory: No
Total participants: 128

- Domestic
- Non-domestic

74% 26%

Services

Financial instruments accepted for deposit and/or settlement:
- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: -

Other services:
- NNA
- LEI

Securities transactions 2015

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>New issues (EUR million)</td>
<td>88</td>
<td>88</td>
<td>76</td>
<td>67</td>
<td>71</td>
<td>64</td>
</tr>
<tr>
<td>Redemptions (EUR million)</td>
<td>19.7</td>
<td>22.7</td>
<td>25.9</td>
<td>28.3</td>
<td>33.3</td>
<td>31.8</td>
</tr>
<tr>
<td>Number of deliveries (thousands)</td>
<td>0 €</td>
<td>10 €</td>
<td>20 €</td>
<td>30 €</td>
<td>40 €</td>
<td>50 €</td>
</tr>
<tr>
<td>Value of deliveries (EUR million)</td>
<td>0 €</td>
<td>10 €</td>
<td>20 €</td>
<td>30 €</td>
<td>40 €</td>
<td>50 €</td>
</tr>
<tr>
<td>Value of deliveries (trillion €)</td>
<td>2010</td>
<td>2011</td>
<td>2012</td>
<td>2013</td>
<td>2014</td>
<td>2015</td>
</tr>
</tbody>
</table>

Iberclear
Sociedad de Gestión de los Sistemas de Registro, Compensación y Liquidación de Valores, S.A. Unipersonal, Plaza de la Lealtad 1, 28014 Madrid, Spain
www.iberclear.com
Services

- Financial instruments accepted for deposit and/or settlement:
  - Equities
  - ETFs
  - Government bonds
  - Corporate bonds
  - Treasury bills
  - Commercial paper
  - Investment funds
  - Warrants and rights
  - Other: Finnish Depositary Receipts (FDR)

- Other services:
  - NNA
  - LEI

Corporate information

For profit
97 employees (89 FTEs)

CSD ownership:

100%

Users

- Securities accounts: 1,369,020
- End investor accounts at CSD: Yes
- End investor accounts mandatory: Yes
- Total participants: 25

- Domestic
- Non-domestic

<table>
<thead>
<tr>
<th>Domestic</th>
<th>Non-domestic</th>
</tr>
</thead>
<tbody>
<tr>
<td>56%</td>
<td>44%</td>
</tr>
</tbody>
</table>

Securities transactions 2015

| New issues | 9,031 |
| Redemptions | 7,572 |
| Value of securities held on accounts (EUR million) | 309,298 |
| Value of deliveries (EUR million) | 553,681 |
| Number of deliveries (thousands) | 6,817 |

Note: The increase in the number of new issues and redemptions from 2014 to 2015 is mainly due to significant growth in the warrants market.
**Basic information**

- Banking license
- Designated SSS
- Eurosystem eligible SSS
- T2S (EUR)

**BIS settlement model:**
- Model 1
- Model 2
- Model 3

**Users**

- Securities accounts: 1,087
- End investor accounts at CSD: No
- End investor accounts mandatory: No
- Total participants: 147

**Services**

Financial instruments accepted for deposit and/or settlement:

- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: -

**Corporate information**

For profit

- 327 employees (319 FTEs)

**CSD ownership:**

100% CSD participants

**Securities transactions 2015**

<table>
<thead>
<tr>
<th>Description</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>New issues</td>
<td>184,000</td>
</tr>
<tr>
<td>Redemptions</td>
<td>185,060</td>
</tr>
<tr>
<td>Value of securities held on accounts (EUR million)</td>
<td>6,073,838</td>
</tr>
<tr>
<td>Value of deliveries (EUR million)</td>
<td>92,117,739</td>
</tr>
<tr>
<td>Number of deliveries (thousands)</td>
<td>25,612</td>
</tr>
</tbody>
</table>

**Value of deliveries (trillion €)**

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value of deliveries (trillion €)</td>
<td>137</td>
<td>147</td>
<td>123</td>
<td>131</td>
<td>110</td>
<td>92</td>
</tr>
</tbody>
</table>

**Number of deliveries (millions)**

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of deliveries (millions)</td>
<td>26.1</td>
<td>27.6</td>
<td>23.6</td>
<td>24.4</td>
<td>24.3</td>
<td>25.6</td>
</tr>
</tbody>
</table>
Basic information

- Banking license
- Designated SSS
- Eurosystem eligible SSS
- T2S

BIS settlement model:
- Model 1 (beneficiary account level)
- Model 2
- Model 3

Corporate information

For profit
108 employees (108 FTEs)

CSD ownership:

Users

Securities accounts: 1,694,782
End investor accounts at CSD: Yes
End investor accounts mandatory: Yes

Total participants: 62

Services

Financial instruments accepted for deposit and/or settlement:

- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: Hellenic Depository Receipts, Structured Products

Other services:
- NNA
- LEI

Securities transactions 2015

<table>
<thead>
<tr>
<th></th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>New issues</td>
<td></td>
</tr>
<tr>
<td>Redemptions</td>
<td>1,000</td>
</tr>
</tbody>
</table>

Value of securities held on accounts (EUR million): 47,310
Value of deliveries (EUR million): 43,702
Number of deliveries (thousands): 6,242

Trading venue

Value of deliveries (million €)
Number of deliveries (millions)

2010 2011 2012 2013 2014 2015

<table>
<thead>
<tr>
<th>Value of deliveries (million €)</th>
<th>Number of deliveries (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>45,010</td>
<td>100%</td>
</tr>
<tr>
<td>32,440</td>
<td></td>
</tr>
<tr>
<td>50,183</td>
<td></td>
</tr>
<tr>
<td>71,003</td>
<td>100%</td>
</tr>
<tr>
<td>43,702</td>
<td></td>
</tr>
</tbody>
</table>

CSD ownership:

100%
Central Depository & Clearing Company Inc. (SKDD)
Središnje kliroško depozitarno društvo d.d., Heinzelova 62a, 10000 Zagreb, Croatia
www.skdd.hr

Basic information

- Banking license
- Designated SSS
- Eurosystem eligible SSS
- T2S

BIS settlement model:
- Model 1 ("trade-for-trade" service)
- Model 2
- Model 3 (contractual service)

Corporate information

For profit
44 employees (44 FTEs)

CSD ownership:

State authorities 45%
Trading venue 1%
CSD participants 41%
Private investors 5%
Other 8%

Users

Securities accounts: 885,843
End investor accounts at CSD: Yes
End investor accounts mandatory: Yes
Total participants: 59

- Domestic
- Non-domestic

Services

Financial instruments accepted for deposit and/or settlement:
- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: Croatian government rights, Certificates

Other services:
- NNA
- LEI

Securities transactions 2015

- New issues: 190
- Redemptions: 195
- Value of securities held on accounts (EUR million): 50,271
- Value of deliveries (EUR million): 42,797
- Number of deliveries (thousands): 473

Value of deliveries (million €)
Number of deliveries (thousands)
Basic information

- Banking license
- Designated SSS
- Eurosystem eligible SSS
- T2S (EUR)

BIS settlement model:
- Model 1 (OTC transactions)
- Model 2
- Model 3 (Exchange transactions)

Users

Securities accounts: 4,530
End investor accounts at CSD: No
End investor accounts mandatory: No

Total participants: 149

- Domestic: 88%
- Non-domestic: 12%

Services

Financial instruments accepted for deposit and/or settlement:
- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: Futures, Options, Mortgage Bonds, Capital Bill

Other services:
- NNA
- LEI

Corporate information

For profit
135 employees (131.7 FTEs)

CSD ownership:

- Central bank: 47%
- Trading venue: 53%

Securities transactions 2015

- New issues: 40,000
- Redemptions: 38,000
- Value of securities held on accounts (EUR million): 118,483
- Value of deliveries (EUR million): 702,200
- Number of deliveries (thousands): 666
Basic information

- Banking license
- Designated SSS
- Eurosystem eligible SSS
- T2S

BIS settlement model:
- Model 1
- Model 2
- Model 3

Users

- Securities accounts: 51,335
- End investor accounts at CSD: Yes
- End investor accounts mandatory: No

Total participants: 20

<table>
<thead>
<tr>
<th>Domestic</th>
<th>Non-domestic</th>
</tr>
</thead>
<tbody>
<tr>
<td>90%</td>
<td>10%</td>
</tr>
</tbody>
</table>

Services

Financial instruments accepted for deposit and/or settlement:

- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: -

Other services:
- NNA
- LEI

Corporate information

For profit
6 employees (6 FTEs)

CSD ownership:

100%

Trading venue

Securities transactions 2015

<table>
<thead>
<tr>
<th>New issues</th>
<th>111</th>
</tr>
</thead>
<tbody>
<tr>
<td>Redemptions</td>
<td>48</td>
</tr>
<tr>
<td>Value of securities held on accounts (EUR million)</td>
<td>28,339</td>
</tr>
<tr>
<td>Value of deliveries (EUR million)</td>
<td>15,386</td>
</tr>
<tr>
<td>Number of deliveries (thousands)</td>
<td>32</td>
</tr>
</tbody>
</table>

Value of deliveries (million €) Number of deliveries (thousands)
Monte Titoli
Monte Titoli S.p.A, Piazza degli Affari 6, 20123 Milan, Italy
www.montetitoli.it

Basic information

☐ Banking license
✓ Designated SSS
✓ Eurosystem eligible SSS
✓ T2S (EUR)

BIS settlement model:
✓ Model 1
☐ Model 2
☐ Model 3

Users

Securities accounts: 923
End investor accounts at CSD: No
End investor accounts mandatory: No

Total participants: 183

Services

Financial instruments accepted for deposit and/or settlement:
✓ Equities
✓ ETFs
✓ Government bonds
✓ Corporate bonds
✓ Treasury bills
✓ Commercial paper
✓ Investment funds
✓ Warrants and rights
☐ Emission rights
✓ Other: Cooperative shares (issued by Italian cooperative banks) and shares with increased voting rights

Other services:
☐ NNA
☐ LEI

Corporate information

For profit
122 employees (122 FTEs)

CSD ownership:

- Trading venue
- Other

Securities transactions 2015

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>New issues</td>
<td>77,357</td>
<td>72,160</td>
<td>58,456</td>
<td>62,349</td>
<td>75,945</td>
<td>66,409</td>
</tr>
<tr>
<td>Redemptions</td>
<td>25.9</td>
<td>23.5</td>
<td>21.3</td>
<td>21.0</td>
<td>24.7</td>
<td>23.7</td>
</tr>
<tr>
<td>Value of deliveries</td>
<td>90,000</td>
<td>90,000</td>
<td>90,000</td>
<td>90,000</td>
<td>90,000</td>
<td>90,000</td>
</tr>
<tr>
<td>Number of deliveries</td>
<td>20,000</td>
<td>20,000</td>
<td>20,000</td>
<td>20,000</td>
<td>20,000</td>
<td>20,000</td>
</tr>
</tbody>
</table>
Central Securities Depository of Lithuania (CSDL)

Lietuvos centrinis vertybiniių popierių depozitorijas, Konstitucijos avenue 29, 08105 Vilnius, Lithuania

www.cSDL.lt

Basic information

- Banking license
- Designated SSS
- Eurosystem eligible SSS
- T2S (EUR)

BIS settlement model:
- Model 1 (OTC transactions)
- Model 2 (Exchange transactions)
- Model 3

Users

Securities accounts: 1,096
End investor accounts at CSD: No
End investor accounts mandatory: No

Total participants: 22

- Domestic
- Non-domestic

Services

Financial instruments accepted for deposit and/or settlement:
- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: -

Other services:
- NNA
- LEI

Corporate information

For profit
17 employees (17 FTEs)

CSD ownership:

100%

Securities transactions 2015

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>New issues</td>
<td>351</td>
</tr>
<tr>
<td>Redemptions</td>
<td>140</td>
</tr>
<tr>
<td>Value of securities held on accounts (EUR million)</td>
<td>10,314</td>
</tr>
<tr>
<td>Value of deliveries (EUR million)</td>
<td>7,242</td>
</tr>
<tr>
<td>Number of deliveries (thousands)</td>
<td>69</td>
</tr>
</tbody>
</table>

Value of deliveries (million €)

Note: The increase in the value of delivery instructions from 2014 to 2015 mainly relates to the euro changeover on 1 January 2015.
Clearstream Banking Luxembourg (CBL)
Clearstream International SA, 42 Avenue JF Kennedy, 1855 Luxembourg
www.clearstream.com

Basic information
- Banking license
- Designated SSS
- Eurosystem eligible SSS
- T2S

BIS settlement model:
- Model 1
- Model 2
- Model 3

Corporate information
For profit
1075 employees (1004 FTEs)

CSD ownership:
- 100%

Users
Securities accounts: 9,914
End investor accounts at CSD: No
End investor accounts mandatory: No
Total participants: 1,421
- Domestic 8%
- Non-domestic 92%

Services
Financial instruments accepted for deposit and/or settlement:
- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: Eurobonds, foreign and structured bonds, depositary receipts, asset-backed securities

Other services:
- NNA
- LEI

Securities transactions 2015
- New issues: 91,000
- Redemptions: 22,000
- Value of securities held on accounts (EUR million): 5,979,505
- Value of deliveries (EUR million): 85,383,943
- Number of deliveries (thousands): 24,014
<table>
<thead>
<tr>
<th>Basic information</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Banking license</td>
</tr>
<tr>
<td>- Designated SSS</td>
</tr>
<tr>
<td>- Eurosystem eligible SSS</td>
</tr>
<tr>
<td>- T2S</td>
</tr>
<tr>
<td>BIS settlement model: n/a</td>
</tr>
<tr>
<td>Currently, globeSettle only offers free of payment (FoP) transfers</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Corporate information</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>For profit</td>
<td></td>
</tr>
<tr>
<td>9 employees (9 FTEs)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CSD ownership:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trading venue</td>
</tr>
</tbody>
</table>

100%

<table>
<thead>
<tr>
<th>Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Securities accounts: n/a</td>
</tr>
<tr>
<td>End investor accounts at CSD: No</td>
</tr>
<tr>
<td>End investor accounts mandatory: No</td>
</tr>
<tr>
<td>Total participant: 1 (non-domestic)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial instruments accepted for deposit and/or settlement:</td>
</tr>
<tr>
<td>- Equities</td>
</tr>
<tr>
<td>- ETFs</td>
</tr>
<tr>
<td>- Government bonds</td>
</tr>
<tr>
<td>- Corporate bonds</td>
</tr>
<tr>
<td>- Treasury bills</td>
</tr>
<tr>
<td>- Commercial paper</td>
</tr>
<tr>
<td>- Investment funds</td>
</tr>
<tr>
<td>- Warrants and rights</td>
</tr>
<tr>
<td>- Emission rights</td>
</tr>
<tr>
<td>- Other: Eurobonds</td>
</tr>
</tbody>
</table>

Other services: |
- NNA
- LEI

<table>
<thead>
<tr>
<th>Securities transactions 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable</td>
</tr>
</tbody>
</table>
LuxCSD

LuxCSD SA, 42 Avenue JF Kennedy, 1855 Luxembourg
www.luxcsd.com

Basic information
- Banking license
- Designated SSS
- Eurosystem eligible SSS
- T2S (EUR)

BIS settlement model:
- Model 1
- Model 2
- Model 3

Users
- Securities accounts: 19
- End investor accounts at CSD: No
- End investor accounts mandatory: No

Total participants: 15
- Domestic
- Non-domestic

Services
Financial instruments accepted for deposit and/or settlement:
- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other -

Other services:
- NNA
- LEI

Corporate information
For profit
- 6 employees (4 FTEs)

CSD ownership:
- Central bank: 50%
- Trading venue: 50%

Securities transactions 2015
- New issues: 10,000
- Redemptions: 11,000
- Value of securities held on accounts (EUR million): 14,404
- Value of deliveries (EUR million): 9,463
- Number of deliveries (thousands): 20

Value of deliveries (million €)
Number of deliveries (thousands)
- 2013: 13,100
- 2014: 9,416
- 2015: 9,463
Basic information

- Banking license
- Designated SSS
- Eurosystem eligible SSS
- T2S (EUR)

BIS settlement model:
- Model 1 (OTC transactions, same day settlements)
- Model 2
- Model 3

Corporate information

For profit
18 employees (17 FTEs)

CSD ownership:

100%

Trading venue

Users

Securities accounts: 895
End investor accounts at CSD: No
End investor accounts mandatory: No

Total participants: 21

- Domestic
- Non-domestic

Services

Financial instruments accepted for deposit and/or settlement:

- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: -

Other services:
- NNA
- LEI

Securities transactions 2015

| New issues | 51 |
| Redemptions | 36 |
| Value of securities held on accounts (EUR million) | 4,427 |
| Value of deliveries (EUR million) | 5,616 |
| Number of deliveries (thousands) | 34 |

Note: The large increase in the value of deliveries in 2015 is due to the growth of international operations and a marked increased in bond deliveries reflecting an increasingly active secondary market for debt securities.
Basic information

- Banking license
- Designated SSS
- Eurosysten eligible SSS
- T2S

BIS settlement model:
- ☑ Model 1 (default model)
- ☑ Model 2 (under certain conditions)
- ☐ Model 3

Corporate information

For profit
15 employees (15 FTEs)

CSD ownership:

- 25% Central bank
- 35% CSD participants
- 40% Private investors

Users

Securities accounts: 472,180
End investor accounts at CSD: Yes
End investor accounts mandatory: Yes
Total participants: 14
- Domestic
- Non-domestic

100%

Services

Financial instruments accepted for deposit and/or settlement:
- ☑ Equities
- ☑ ETFs
- ☑ Government bonds
- ☑ Corporate bonds
- ☑ Treasury bills
- ☑ Commercial paper
- ☐ Investment funds
- ☐ Warrants and rights
- ☐ Emission rights
- ☐ Other: -

Other services:
- ☑ NNA
- ☐ LEI

Securities transactions 2015

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>New issues</td>
<td>10</td>
</tr>
<tr>
<td>Redemptions</td>
<td>19</td>
</tr>
<tr>
<td>Value of securities held on accounts (EUR million)</td>
<td>5,214</td>
</tr>
<tr>
<td>Value of deliveries (EUR million)</td>
<td>495</td>
</tr>
<tr>
<td>Number of deliveries (thousands)</td>
<td>10</td>
</tr>
</tbody>
</table>
Central Securities Depository AD Skopje (CSD AD Skopje)

Centralen depozitar za hartii od vrednost AD Skopje, bul. Kuzman Josifovski Pitu 1, 1000 Skopje, MK
www.cdhv.mk

Basic information
- Banking license
- Designated SSS
- Eurosystem eligible SSS
- T2S

BIS settlement model:
- Model 1 (Government securities, OTC transactions)
- Model 2
- Model 3

Corporate information
For profit
20 employees (20 FTEs)

CSD ownership:
- CSD participants
- Private investors
45% 55%

Users
Securities accounts: 267,052
End investor accounts at CSD: Yes
End investor accounts mandatory: Yes
Total participants: 10
- Domestic
- Non-domestic
100%

Services
Financial instruments accepted for deposit and/or settlement:
- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other:

Other services:
- NNA
- LEI

Securities transactions 2015
New issues | 99
Redemptions | 103
Value of securities held on accounts (EUR million) | 5,007
Value of deliveries (EUR million) | 102
Number of deliveries (thousands) | 19

Note: There was an unusually large transaction in 2014 which created a spike in the data.
Malta Stock Exchange (MSE)
Malta Stock Exchange PLC, Garrison Chapel, Castile Place, Valletta VLT 1063, Malta
www.borzamalta.com.mt

Basic information

- Banking license
- Designated SSS
- Eurosystem eligible SSS
- T2S (EUR)

BIS settlement model:
- Model 1
- Model 2
- Model 3

Corporate information

For profit
12 employees (12 FTEs)

CSD ownership:

State authorities 100%

Users

- Securities accounts: 285,721
- End investor accounts at CSD: Yes
- End investor accounts mandatory: Yes

Total participants: 14

- Domestic
- Non-domestic

93% 7%

Services

Financial instruments accepted for deposit and/or settlement:

- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: -

Other services:
- NNA
- LEI

Securities transactions 2015

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>New issues</td>
<td>99</td>
</tr>
<tr>
<td>Redemptions</td>
<td>89</td>
</tr>
<tr>
<td>Value of securities held on accounts (EUR million)</td>
<td>12,959</td>
</tr>
<tr>
<td>Value of deliveries (EUR million)</td>
<td>2,540</td>
</tr>
<tr>
<td>Number of deliveries (thousands)</td>
<td>40</td>
</tr>
</tbody>
</table>

Value of deliveries (million €) versus Number of deliveries (thousands)

Year 2010 2011 2012 2013 2014 2015
Value of deliveries (million €): 1,400, 1,210, 1,570, 1,600, 2,011, 2,540
Number of deliveries (thousands): 24, 19, 17, 14, 31, 40

Malta Stock Exchange (MSE)
Malta Stock Exchange PLC, Garrison Chapel, Castile Place, Valletta VLT 1063, Malta
www.borzamalta.com.mt
Basic information

- Banking license
- Designated SSS
- Eurosystem eligible SSS
- T2S (EUR)

BIS settlement model:
- Model 1
- Model 2
- Model 3

Users

- Securities accounts: 788
- End investor accounts at CSD: No
- End investor accounts mandatory: No
- Total participants: 69

- Domestic
- Non-domestic

23% 77%

Corporate information

For profit
- 45 employees (40 FTEs)

CSD ownership:

100%

Security transactions 2015

- New issues: 46,086
- Redemptions: 44,026
- Value of securities held on accounts (EUR million): 993,406
- Value of deliveries (EUR million): 4,889,184
- Number of deliveries (thousands): 6,242

Services

Financial instruments accepted for deposit and/or settlement:

- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other:

Other services:

- NNA
- LEI
Basic information

- Banking license
- Designated SSS
- Eurosystem eligible SSS
- T2S

BIS settlement model:
- Model 1
- Model 2
- Model 3

Corporate information

For profit
116 employees (115 FTEs)

CSD ownership:

- 31% CSD participants
- 69% Private investors

Users

Securities accounts: 1,287,925
End investor accounts at CSD: Yes
End investor accounts mandatory: Yes

Total participants: 38

<table>
<thead>
<tr>
<th>Domestic</th>
<th>Non-domestic</th>
</tr>
</thead>
<tbody>
<tr>
<td>79%</td>
<td>21%</td>
</tr>
</tbody>
</table>

Services

Financial instruments accepted for deposit and/or settlement:

- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: -

Other services:
- NNA
- LEI

Securities transactions 2015

New issues: 1,631
Redemptions: 1,657

Value of securities held on accounts (EUR million): 520,634
Value of deliveries (EUR million): 3,905,024
Number of deliveries (thousands): 23,682

Value of deliveries (billion €) vs Number of deliveries (millions)
Services

Financial instruments accepted for deposit and/or settlement:

- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: Investment & other certificates, international bonds

Other services:

- NNA
- LEI

Corporate information

Not for profit
188 employees (185.8 FTEs)

CSD ownership:

- State authorities 33.3%
- Central bank 33.3%
- Trading venue 33.3%

Securities transactions 2015

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>New issues</td>
<td>893</td>
</tr>
<tr>
<td>Redemptions</td>
<td>891</td>
</tr>
<tr>
<td>Value of securities held on accounts</td>
<td>271,686</td>
</tr>
<tr>
<td>(EUR million)</td>
<td></td>
</tr>
<tr>
<td>Value of deliveries (EUR million)</td>
<td>13,170,804</td>
</tr>
<tr>
<td>Number of deliveries (thousands)</td>
<td>13,325</td>
</tr>
</tbody>
</table>

Note: The marked decrease in the number of deliveries in 2015 is mainly due to the launch of a netting service by KDPW CCP.
Interbolsa
Sociedade Gestora de Sistemas de Liquidação e de Sistemas Centralizados de Valores Mobiliários S.A., Avenida da Boavista 3433, 4100-138 Porto, Portugal
www.interbolsa.pt

Basic information
- Banking license
- Designated SSS
- Eurosystem eligible SSS
- T2S (EUR)

BIS settlement model:
- Model 1 (OTC transactions, realignments and others)
- Model 2 (Exchange transactions)
- Model 3

Corporate information
For profit
36 employees (36 FTEs)

CSD ownership:
- Trading venue 100%

Users
Securities accounts: 708
End investor accounts at CSD: No
End investor accounts mandatory: No

Total participants: 36
- Domestic 89%
- Non-domestic 11%

Services
Financial instruments accepted for deposit and/or settlement:
- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Other: -

Other services:
- NNA
- LEI

Securities transactions 2015
New issues 4,944
Redemptions 5,177
Value of securities held on accounts (EUR million) 566,443
Value of deliveries (EUR million) 169,441
Number of deliveries (thousands) 984

Value of deliveries (billion €)
Number of deliveries (thousands)
- 2010: 151
- 2011: 125
- 2012: 116
- 2013: 170
- 2014: 263
- 2015: 169

100%
Securities transactions 2015

<table>
<thead>
<tr>
<th>Category</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>New issues</td>
<td>87</td>
</tr>
<tr>
<td>Redemptions</td>
<td>654</td>
</tr>
<tr>
<td>Value of securities held on accounts (EUR million)</td>
<td>20,901</td>
</tr>
<tr>
<td>Value of deliveries (EUR million)</td>
<td>8,406</td>
</tr>
<tr>
<td>Number of deliveries (thousands)</td>
<td>1,148</td>
</tr>
</tbody>
</table>

Users

- Securities accounts: 8,470,553
- End investor accounts at CSD: Yes
- End investor accounts mandatory: No
- Total participants: 51

Corporate information

For profit
- 52 employees (52 FTEs)

CSD ownership:

- Trading venue: 6%
- CSD participants: 25%
- Private investors: 69%

Services

- Financial instruments accepted for deposit and/or settlement:
  - Equities
  - ETFs
  - Government bonds
  - Corporate bonds
  - Treasury bills
  - Commercial paper
  - Investment funds
  - Warrants and rights
  - Emission rights
  - Other: Structured products, Municipal bonds

- Other services:
  - NNA
  - LEI

Value of deliveries (million €)

- 2010: 1,195
- 2011: 1,177
- 2012: 1,011
- 2013: 963
- 2014: 1,148
- 2015: 1,148

Number of deliveries (thousands)

- 2010: 3,590
- 2011: 3,010
- 2012: 2,900
- 2013: 4,538
- 2014: 5,575
- 2015: 8,406
Financial instruments accepted for deposit and/or settlement:

- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: Municipal bonds

Other services:

- NNA
- LEI

Corporate information

Not for profit
35 employees (35 FTEs)

CSD ownership:

State authorities 100%

Users

Securities accounts: 8,443,231
End investor accounts at CSD: Yes
End investor accounts mandatory: Yes
Total participants: 55

- Domestic
- Non-domestic

100%

Securities transactions 2015

<table>
<thead>
<tr>
<th>Year</th>
<th>New issues</th>
<th>Redemptions</th>
<th>Value of securities held on accounts (EUR million)</th>
<th>Value of deliveries (EUR million)</th>
<th>Number of deliveries (thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>77,406</td>
<td>45,040</td>
<td>5,838</td>
<td>4,004</td>
<td>10,000</td>
</tr>
<tr>
<td>2011</td>
<td>13,045</td>
<td>64,870</td>
<td>5,589</td>
<td>78,939</td>
<td>45,992</td>
</tr>
<tr>
<td>2012</td>
<td>94,563</td>
<td>350</td>
<td>578</td>
<td>350</td>
<td>20,000</td>
</tr>
<tr>
<td>2013</td>
<td>100%</td>
<td></td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>2014</td>
<td>78,939</td>
<td></td>
<td>45,992</td>
<td>45,992</td>
<td>45,992</td>
</tr>
<tr>
<td>2015</td>
<td>350</td>
<td></td>
<td>20,000</td>
<td>20,000</td>
<td>20,000</td>
</tr>
</tbody>
</table>

Value of deliveries (million €)

Number of deliveries (thousands)
National Settlement Depository (NSD)

National Settlement Depository, 12, Spartakovskaya Street, Moscow 105066, Russia
www.nsd.ru

Basic information

- Banking license
- Designated SSS
- Eurosystem eligible SSS
- T2S

BIS settlement model: 
- Model 1 (OTC and Exchange transactions)
- Model 2 (OTC transactions)
- Model 3 (OTC and Exchange transactions)

Users

- Securities accounts: 3,748
- End investor accounts at CSD: No
- End investor accounts mandatory: No

Total participants: 893

- Domestic: 98%
- Non-domestic: 2%

Services

Financial instruments accepted for deposit and/or settlement:

- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: Eurobonds, Depositary receipts

Other services:
- NNA
- LEI

Corporate information

For profit
499 employees (444 FTEs)

CSD ownership:

100%

Securities transactions 2015

New issues: 999
Redemptions: 684
Value of securities held on accounts (EUR million): 397,629
Value of deliveries (EUR million): 3,251,633
Number of deliveries (thousands): 2,462

Users

Securities accounts: 3,748
End investor accounts at CSD: No
End investor accounts mandatory: No

Total participants: 893

- Domestic: 98%
- Non-domestic: 2%

Services

Financial instruments accepted for deposit and/or settlement:

- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: Eurobonds, Depositary receipts

Other services:
- NNA
- LEI

Corporate information

For profit
499 employees (444 FTEs)

CSD ownership:

100%

Securities transactions 2015

New issues: 999
Redemptions: 684
Value of securities held on accounts (EUR million): 397,629
Value of deliveries (EUR million): 3,251,633
Number of deliveries (thousands): 2,462
Basic information

- Banking license
- Designated SSS
- Eurosystem eligible SSS
- T2S

BIS settlement model:
- Model 1
- Model 2
- Model 3

Users

- Securities accounts: 3,200,000
- End investor accounts at CSD: Yes
- End investor accounts mandatory: No

Total participants: 49

- Domestic: 73%
- Non-domestic: 27%

Services

Financial instruments accepted for deposit and/or settlement:
- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: Funds, Lottery bonds, Swedish Depositary Receipts

Other services:
- NNA
- LEI

Corporate information

For profit
- 76 employees (70.3 FTEs)

CSD ownership:

- 100% CSD participants

Securities transactions 2015

- New issues: 30,000
- Redemptions: 26,000
- Value of securities held on accounts (EUR million): 1,062,662
- Value of deliveries (EUR million): 9,940,815
- Number of deliveries (thousands): 13,282

![Graph showing value of deliveries and number of deliveries from 2010 to 2015](image)
Central Securities Clearing Corporation (KDD)
Centralna klijinško depotna družba, d.d., Tivolska cesta 48, 1000 Ljubljana, Slovenia
www.kdd.si

Basic information
- Banking license
- Designated SSS
- Eurosystem eligible SSS
- T2S (EUR)

BIS settlement model:
- Model 1 (OTC DvP transactions)
- Model 2 (Exchange transactions)
- Model 3

Users
Securities accounts: 343,215
End investor accounts at CSD: Yes
End investor accounts mandatory: Yes
Total participants: 25

- Domestic: 96%
- Non-domestic: 4%

Services
Financial instruments accepted for deposit and/or settlement:
- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Other: -

Other services:
- NNA
- LEI

Corporate information
For profit
62 employees (62 FTEs)

CSD ownership:

- State authorities: 24%
- CSD participants: 36%
- Private investors: 37%
- Other: 3%

Securities transactions 2015

<table>
<thead>
<tr>
<th>Category</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>New issues</td>
<td>78</td>
</tr>
<tr>
<td>Redemptions</td>
<td>114</td>
</tr>
<tr>
<td>Value of securities held on accounts (EUR million)</td>
<td>26,100</td>
</tr>
<tr>
<td>Value of deliveries (EUR million)</td>
<td>23,925</td>
</tr>
<tr>
<td>Number of deliveries (thousands)</td>
<td>97</td>
</tr>
</tbody>
</table>

Value of deliveries (million €)
- 2010: 267
- 2011: 166
- 2012: 120
- 2013: 98
- 2014: 154
- 2015: 97

Number of deliveries (thousands)
- 2010: 28,023
- 2011: 24,400
- 2012: 25,570
- 2013: 22,690
- 2014: 20,060
- 2015: 18,060
Central Securities Depository of the Slovak Republic (CDCP SR)

Centrálny depozitár cenných papierov SR, a.s., ul. 29.augusta 1/A, 81480 Bratislava, Slovak Republic
www.cdcp.sk

Basic information

- Banking license
- Designated SSS
- Eurosystem eligible SSS
- T2S (EUR)

BIS settlement model:
- Model 1
- Model 2
- Model 3

Corporate information

For profit
71 employees (70 FTEs)

CSD ownership:

100%

Users

Securities accounts: 259,573
End investor accounts at CSD: Yes
End investor accounts mandatory: No

Total participants: 20

- Domestic
- Non-domestic

Services

Financial instruments accepted for deposit and/or settlement:
- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Other: Co-operative units

Other services:
- NNA
- LEI

Securities transactions 2015

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>New issues</td>
<td>164</td>
</tr>
<tr>
<td>Redemptions</td>
<td>197</td>
</tr>
<tr>
<td>Value of securities held on accounts (EUR million)</td>
<td>39,976</td>
</tr>
<tr>
<td>Value of deliveries (EUR million)</td>
<td>33,600</td>
</tr>
<tr>
<td>Number of deliveries (thousands)</td>
<td>57</td>
</tr>
</tbody>
</table>

Note: The significant decrease in the number of deliveries since 2012 is in great part the consequence of a programme allowing individual to sell securities of low value and to transfer them to the National Property Fund of the Slovak Republic.
Central Securities Depository of Turkey (MKK)
Merkezi Kayıt Kuruluşu A.Ş., Askercagı Cad. Süzer Plaza No 6 Kat: 3, 34367 Elmadag-Sisli, Istanbul, Turkey
www.mkk.com.tr

Basic information
- Banking license
- Designated SSS
- Eurosystem eligible SSS
- T2S

BIS settlement model:
- Model 1 (Transactions between direct and indirect participants)
- Model 2
- Model 3 (Exchange transactions between direct participants)

Services
Financial instruments accepted for deposit and/or settlement:
- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: ABS, Covered Bonds, Certificates, Sukusks

Other services:
- NNA
- LEI

Corporate information
For profit
213 employees (213 FTEs)

CSD ownership:
- Trading venue
- CCP
- CSD participants

Users
Securities accounts: 45,620,850
End investor accounts at CSD: Yes
End investor accounts mandatory: Yes
Total participants: 136

100%

Services transactions 2015

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>New issues</td>
<td>1,911</td>
<td>1,833</td>
<td>2,411</td>
<td>2,850</td>
<td>2,649</td>
<td>12,527</td>
</tr>
<tr>
<td>Redemptions</td>
<td>271.5</td>
<td>283.2</td>
<td>236.0</td>
<td>216.5</td>
<td>187.2</td>
<td>172.1</td>
</tr>
<tr>
<td>Value of securities held on accounts (EUR million)</td>
<td>277,285</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value of deliveries (EUR million)</td>
<td>12,526,855</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of deliveries (thousands)</td>
<td>172,126</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: The value of deliveries in 2015 is unusually high. This is due to the closing of an ETF and to specific operations related to fund assets.
Basic information

- Banking license
- Designated SSS
- Eurosystem eligible SSS
- T2S

BIS settlement model:
- Model 1 (OTC and some Exchange transactions)
- Model 2
- Model 3 (Exchange transactions)

Corporate information

For profit
132 employees (117 FTEs)

CSD ownership:

- State authorities
- Central bank
- CSD participants
- Private investors
- Other

Users

Securities accounts: 11,045
End investor accounts at CSD: No
End investor accounts mandatory: No
Total participants: 287
  - Domestic
  - Non-domestic
  100%

Services

Financial instruments accepted for deposit and/or settlement:

- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: Investment certificates, eurobonds, option certificates

Other services:
- NNA
- LEI

Securities transactions 2015

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>New issues</td>
<td>488</td>
</tr>
<tr>
<td>Redemptions</td>
<td>650</td>
</tr>
<tr>
<td>Value of securities held on accounts (EUR million)</td>
<td>50,229</td>
</tr>
<tr>
<td>Value of deliveries (EUR million)</td>
<td>22,764</td>
</tr>
<tr>
<td>Number of deliveries (thousands)</td>
<td>322</td>
</tr>
</tbody>
</table>

Value of deliveries (million €) vs. Number of deliveries (thousands)
Basic information

- Banking license
- Designated SSS
- Eurosystem eligible SSS
- T2S

BIS settlement model:
- Model 1 (EUR and GBP)
- Model 2 (USD)
- Model 3

Users

Securities accounts: 377,727
End investor accounts at CSD: Yes
End investor accounts mandatory: No
Total participants: 233

Services

Financial instruments accepted for deposit and/or settlement:
- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: -

Other services:
- NNA
- LEI

Corporate information

For profit
350 employees (336 FTEs)

CSD ownership:

CSD participants

100%

Securities transactions 2015

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>New issues</td>
<td>9,612</td>
</tr>
<tr>
<td>Redemptions</td>
<td>8,821</td>
</tr>
<tr>
<td>Value of securities held on accounts (EUR million)</td>
<td>6,215,293</td>
</tr>
<tr>
<td>Value of deliveries (EUR million)</td>
<td>272,086,949</td>
</tr>
<tr>
<td>Number of deliveries (thousands)</td>
<td>57,669</td>
</tr>
</tbody>
</table>

Users

Securities accounts: 377,727
End investor accounts at CSD: Yes
End investor accounts mandatory: No
Total participants: 233

Services

Financial instruments accepted for deposit and/or settlement:
- Equities
- ETFs
- Government bonds
- Corporate bonds
- Treasury bills
- Commercial paper
- Investment funds
- Warrants and rights
- Emission rights
- Other: -

Other services:
- NNA
- LEI

Corporate information

For profit
350 employees (336 FTEs)

CSD ownership:

CSD participants

100%

Securities transactions 2015

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>New issues</td>
<td>9,612</td>
</tr>
<tr>
<td>Redemptions</td>
<td>8,821</td>
</tr>
<tr>
<td>Value of securities held on accounts (EUR million)</td>
<td>6,215,293</td>
</tr>
<tr>
<td>Value of deliveries (EUR million)</td>
<td>272,086,949</td>
</tr>
<tr>
<td>Number of deliveries (thousands)</td>
<td>57,669</td>
</tr>
</tbody>
</table>
Annex: Methodology

The data presented in this report has been collected in the first half of 2016 based on information provided by ECSDA members as of 31 December 2015.

1. Basic information and legal framework

<table>
<thead>
<tr>
<th>Column title</th>
<th>Description</th>
<th>Responses</th>
</tr>
</thead>
</table>
| 1 Country          | 2-letter ISO country code of the country in which the head office of the CSD is established | AT: Austria  
                     |                                                               | BA: Bosnia Herzegovina  
                     |                                                               | BE: Belgium  
                     |                                                               | Etc.  
| 2 Group            | Regional institutional grouping to which the country of incorporation of the CSD belongs | EA: euro area country  
                     |                                                               | EU: non-euro area country, member of the European Union  
                     |                                                               | EEA: non-EU country, member of the European Economic Area  
                     |                                                               | Other: all other European countries  
| 3 Short name       | Short or abbreviated name of the CSD used for commercial purposes and/or within ECSDA | Free text  
| 4 Full legal name  | Official name of the CSD in English or in local language                    | Free text  
| 5 Registered address | Full address of the CSD head office                                       | Free text  
| 6 Banking license  | Indicates whether the CSD is licensed as a credit institution               | Yes or No  
| 7 Designated SSS (SFD) | Indicates whether the CSD is designated as securities settlement system (SSS) under the EU Settlement Finality Directive (SFD) | Yes or No  
| 8 Eurosystem eligible SSS | Indicates whether the CSD is eligible for use in the collateralisation of Eurosystem credit operations following a positive assessment against the Eurosystem user standards | Yes or No  
| 9 T2S participation | Indicates whether the CSD had signed the TARGET2-Securities Framework Agreement as of 31 December | Yes or No  


<table>
<thead>
<tr>
<th>Column title</th>
<th>Description</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 T2S currency</td>
<td>When a CSD has signed the T2S framework agreement, indicates which currency will be accepted for settlement in T2S by that CSD using the 3-letter currency code</td>
<td>EUR: euro</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DKK: Danish kroner</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Etc.</td>
</tr>
<tr>
<td>11 BIS model</td>
<td>Indicates which of the 3 settlement models identified by the Bank of International Settlement (BIS) is used by the CSD</td>
<td>▪ Model 1: Securities and funds are transferred on a simultaneous, irrevocable and real-time gross settlement (RTGS) basis;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Model 2: Securities are settled on a gross basis and cash is settled on a net basis;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Model 3: Both securities and cash are exchanged simultaneously on a net basis once a day.</td>
</tr>
<tr>
<td>12 BIS model - Comments</td>
<td>Provides further explanations on the use of BIS settlement models, for example when more than one model is used by the CSD.</td>
<td>Free text</td>
</tr>
</tbody>
</table>
## 2. Corporate governance

<table>
<thead>
<tr>
<th>Column title</th>
<th>Description</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>13 Ownership category</td>
<td>Describes the main types of shareholders owning the CSD or, where applicable, the holding company, as at 31 December</td>
<td>13% (rounded to 1 decimal) of company shares/capital owned by the following categories of shareholders:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• State authorities (e.g. Ministry of finance)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Central bank</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Trading venues (securities or derivatives exchange, MTF or other trading platform)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Clearing venue (CCP)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• CSD participants (whether banks, brokers, issuers, or other institutions)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Private/institutional investors (e.g. pension funds, hedge funds, insurance firms…)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Other</td>
</tr>
<tr>
<td>14 Ownership details</td>
<td>Further details, if applicable, on CSD ownership</td>
<td>Free text</td>
</tr>
<tr>
<td>15 Profit aim</td>
<td>Indicates whether the CSD is a for-profit or not-for-profit institution</td>
<td>FP: for profit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NP: not for profit</td>
</tr>
<tr>
<td>16 Number of employees - Actual</td>
<td>Total number of employees working for the CSD as of 31 December (in case the CSD is not an independent legal entity or in case it shares human resources with other legal entities within the same corporate group, an estimation of the actual number of people actually working for the CSD is provided)</td>
<td>Number (no decimals)</td>
</tr>
<tr>
<td>17 Number of employees - FTEs</td>
<td>Total number of full time equivalents (FTEs) working for the CSD as of 31 December</td>
<td>Number (no decimals)</td>
</tr>
</tbody>
</table>
## 3. CSD services

<table>
<thead>
<tr>
<th>Column title</th>
<th>Description</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>Financial instruments</td>
<td>Indicates the types of financial instruments that are accepted by the CSD for deposit and/or settlement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ <strong>Equities</strong>: ordinary shares, preferred shares and convertible shares</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ <strong>ETFs</strong>: Exchange-traded funds</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ <strong>Government bonds</strong>: debt securities issued by national or supranational public authorities with a maturity of more than 1 year</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ <strong>Corporate bonds</strong>: debt securities issued by private sector entities with a maturity of more than 1 year</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ <strong>Treasury bills</strong>: debt securities issued by national or supranational public authorities with a maturity of less than 1 year</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ <strong>Commercial paper</strong>: debt securities issued by private sector entities with a maturity of less than 1 year</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ <strong>Investment funds</strong>: units in collective investment schemes (UCITS), units in various types of open-ended funds, pension funds and/or real estate funds</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ <strong>Rights and warrants</strong>: warrants, allotment rights, subscription rights, other rights issues</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ <strong>Greenhouse Gas Emissions</strong>: Certified Emission Rights (CER) and EU Emission Allowances (EEA)</td>
</tr>
<tr>
<td>19</td>
<td>Other</td>
<td>Indicates other types of financial instruments that are accepted by the CSD for deposit and/or settlement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Free text</td>
</tr>
<tr>
<td>20</td>
<td>NNA</td>
<td>Indicates whether the CSD act as national numbering agency (NNA)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes or No</td>
</tr>
<tr>
<td>21</td>
<td>LEI</td>
<td>Indicates whether the CSD is authorised to allocate Legal Entity Identifiers (LEI) for one or more markets</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes or No</td>
</tr>
</tbody>
</table>
### 4. CSD users

<table>
<thead>
<tr>
<th>Column title</th>
<th>Description</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>22 Domestic participants</td>
<td>Number of participants as at 31 December. Participants include banks, other intermediaries, central banks, CCPs, other (I)CSDs and any other entities having signed a participation agreement with the CSD. Participants do not include retail investors or issuers using the CSD’s registration service. Domestic participants are those located (incorporated) in the same country as the CSD.</td>
<td>Number (no decimals)</td>
</tr>
<tr>
<td>23 Non-domestic participants</td>
<td>Same as above, but includes those participants located (incorporated) in a different country from that where the CSD is established</td>
<td>Number (no decimals)</td>
</tr>
<tr>
<td>24 Total number of participants</td>
<td>Sum of domestic and non-domestic participants</td>
<td>Number (no decimals)</td>
</tr>
<tr>
<td>25 Number of securities accounts</td>
<td>Number of securities accounts opened by participants at the level of the CSD as of 31 December (including sub-accounts and, in non-tiered systems, beneficial owner accounts)</td>
<td>Number (no decimals)</td>
</tr>
<tr>
<td>26 End investor accounts at CSD level</td>
<td>Indicates whether the CSD provides end investor accounts, defined as a special type of securities accounts in which all the securities belong to a single end investor, and whereby the CSD has access to information on the beneficial owner’s identity.</td>
<td>Yes or No</td>
</tr>
<tr>
<td>27 End investor accounts at CSD level - Legal requirement</td>
<td>Are end investor accounts at CSD level required by national law or made compulsory by certain rules, at least for certain types of instruments and investors?</td>
<td>Yes or No</td>
</tr>
<tr>
<td>28 Number of issuers</td>
<td>Number of issuers using the CSD notary service, defined as the initial record of securities in book-entry form in the CSD system, as at 31 December. The number should include all issuers whose securities are recorded in the CSD system and where the securities. It excludes securities that are held in the CSD through a link (and for which the CSD does not provide notary service).</td>
<td>Number (no decimals)</td>
</tr>
<tr>
<td>29 New issues</td>
<td>Total number of new ISIN codes added to the CSD system from 1 January to 31 December. ISIN codes of stripped securities are not included.</td>
<td>Number (no decimals)</td>
</tr>
<tr>
<td>30 Redemptions</td>
<td>Total number of ISIN codes deleted in the CSD system from 1 January to 31 December. ISIN codes of stripped securities are not included.</td>
<td>Number (no decimals)</td>
</tr>
</tbody>
</table>

Indirect participants are excluded. In tiered system (indirect holding markets), participants are typically account holders whereas in tiered systems (direct holding markets), participants will often correspond to account operators. If in a non-tiered system private investors have two types of accounts – holding accounts and trading accounts – and only the trading accounts are operated by an account operator (e.g. in Cyprus or Slovakia), the number of direct participants is the number of trading account operators.
## 5. Transactions

<table>
<thead>
<tr>
<th>Column title</th>
<th>Description</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>31 Securities held on accounts</td>
<td>Value of securities held on accounts as at 31 December. This comprises securities issued or safe-kept in the reporting CSD, or transferred into the CSD through a link. A security may be issued or safe-kept in a CSD in paper form and, later, some units of this security may be physically removed from the CSD and transferred, for example, to the owners; those units are not considered to be securities held on accounts with the reporting CSD.</td>
<td>Value in million (no decimals), EUR⁶</td>
</tr>
<tr>
<td>32 Number of deliveries</td>
<td>Number of delivery instructions from 1 January to 31 December. This number covers all instructions to move securities between accounts. Trades cleared by a CCP relate to delivery instructions on a post-netting basis. Delivery instructions include instructions to block (and de-block) securities for collateralisation purposes on a borrowers’ securities account with the CSD, as well as securities movements owing to automatic securities lending or automatic collateralisation (including self-collateralisation). If there is segregation on a participant’s account with the CSD, delivery instructions to move securities from the participant’s own account to its omnibus account and vice versa are included. Similarly, if in a non-tiered system, securities are transferred from one account to another and both accounts have the same account operator, delivery instructions related to these transactions are included. An instruction to transfer two (or more) different securities is included as two (or more) instructions. Delivery instructions for the settlement of transactions between two clearing members of the CCP and also delivery instructions to transfer collateral from a clearing member to the CCP and back are included.</td>
<td>Number in thousands (no decimals)</td>
</tr>
<tr>
<td>33 Delivery instructions</td>
<td>Same as above²</td>
<td>Value in million (no decimals), EUR³</td>
</tr>
</tbody>
</table>

⁷ These data items are based on the same methodology as the ECB statistics on securities settlement systems, see [http://www.ecb.int/stats/pdf/securities/sec_methodologicalnote_tcs.pdf?7ba520e792693d66332c1df5e6c28960](http://www.ecb.int/stats/pdf/securities/sec_methodologicalnote_tcs.pdf?7ba520e792693d66332c1df5e6c28960)

² Where needed, ECSDA converts non-EUR amounts into EUR based on the bilateral annual average exchange rate of the relevant year published by the ECB in accordance with [ECB Blue book methodology](http://www.ecb.int) (where available, see detailed notes below)
### Detailed Notes

<table>
<thead>
<tr>
<th>Data item(s) impacted</th>
<th>CSD(s) impacted</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of participants</strong></td>
<td>Euroclear UK &amp; Ireland</td>
<td>Difference between ECSDA and ECB data for the UK: The number of participants should only include all financial institutions having signed a participation agreement. Historically (at least until 2015), the ECB has reported more than 20,000 participants for EUI because the Bank of England template includes not only the +/-250 participants of the CSD, but also the thousands of account holders (institutions or individuals) sponsored by a CREST participant (partly tiered system). However, to ensure consistency across CSDs, only participants (not account holders) should be included in this field.</td>
</tr>
</tbody>
</table>
| **Currency conversion** | Non-EUR area CSDs | Where needed, ECSDA converts non-EUR amounts into EUR based on the bilateral yearly average exchange rate of the relevant year published by the ECB (in accordance with ECB Blue book methodology). This rate is available at: [http://sdw.ecb.europa.eu/browse.do?node=2018794](http://sdw.ecb.europa.eu/browse.do?node=2018794)  
For currencies not included in the ECB database, ECSDA uses the bilateral yearly average exchange rate of the relevant year published by the national central bank of the respective CSD. For example, the exchange rate for UAH is available on the website of the [National Bank of Ukraine](http://www.nbu.gov.ua).  
Where neither of the above are available, ECSDA uses the bilateral yearly average rate according to the exchange rate converter available at: [http://www.oanda.com/currency/average](http://www.oanda.com/currency/average) |
| **Number of delivery instructions** | NCSD | The number of deliveries for Nasdaq CSD Iceland only includes delivery-versus-payment transfers. |
|  | MKK | The number of deliveries in MKK is particularly high compared to other CSDs and is thus not always included in the aggregate or average figures provided by ECSDA. MKK operates more than 40 million end investor accounts in what is by far the largest direct holding market in Europe. |
| **Number and value of delivery instructions** | All | Self-collateralisation: Delivery instructions linked to self-collateralisation should be included.  
Remark: Prior to 2013, the UK figures excluded these instructions, but this has been corrected from 2013 onwards. |
<p>|  | Iberclear | Exclusion of the regional SSSs: The figures do not include the value and volume of delivery instructions processed by the regional securities settlement systems, which are reported separately by the ECB. |
|  | Monte Titoli | Scope of delivery instructions: Delivery instructions do not include corporate actions, deposits and withdrawals on securities, money transfers and roll over transactions. |
|  | All | Avoid the double-counting of instructions: Transactions that are based on two instructions, one to deliver securities and one to receive the securities should be counted as one delivery instruction. |</p>
<table>
<thead>
<tr>
<th>Data item(s)</th>
<th>CSD(s) impacted</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value of delivery instructions</td>
<td>All</td>
<td><strong>Transaction value by default, market value otherwise:</strong> Securities transactions are valued at transaction values. If there is no counter value in the delivery instruction (e.g. free-of-payment transfers, blocking/unblocking of securities in relation to collateral movements), then the market value of the securities should be used. If no market value is available, the latest available price is used.</td>
</tr>
</tbody>
</table>
| New issues/redemptions       | All             | **Nominal value:** Until 2013, ECSDA was relying on the ECB Blue Book methodology which required that the value of new issues and redemptions be based on the nominal value of the securities. This value can be very different from market value, especially for equities, and so including equities was a challenge.  
As a result, from 2014 onwards, ECSDA only collects data on the number of new issues and redemptions (irrespective of the nominal value). This number should correspond to the number of new ISINs created and deleted during the year. |