



EUROPEAN CENTRAL BANK
EUROSYSTEM

Securities trading, clearing and settlement statistics

For data reference period up to 2018

June 2019



Contents

Methodological notes	1
1 Trading in securities exchanges	1
2 Clearing by central counterparties	3
3 Settlement in central securities depositories	8
Annex 1: Valuation of transactions	12
Compilation notes	13
1 Notes for data on Securities Exchanges (SEE)	13
2 Notes for data on Central Clearing Counterparties (CCP)	14
3 Notes for data on Centralised Securities Depositories (SST)	17
Comparative tables	13

Methodological notes

1 Trading in securities exchanges

1.1 Number of participants at the end of the year

A participant in a securities exchange is a legal entity that can submit (buy and sell) orders to the exchange on its own behalf or on behalf of its customers.

Domestic participants are those located in the same country as the securities exchange.

	Number of participants with access to the trading system		
		Domestic	Non-domestic
	1	2	3
Total number of participants			
of which Central banks			
of which Central clearing counterparties			
of which Credit institutions			
of which Others			

1.2 Number of listed securities at the end of the year

The number of debt instruments and 'other' can be approximated with the number of ISIN¹ codes listed. In the case of equity, this refers to the number of listed companies (including investment funds) whose shares are listed on the stock market.

A company (investment fund) with several classes of shares is counted only once.

The distinction between domestic and non-domestic securities refers to the country of issue (rather than for example the country of residence of the issuer). Thus, a security that has been issued in the country of the securities exchange is considered domestic.

Depository receipts are considered domestic (equities).

¹ ISIN: International Securities Identification Number

	Total number of listed securities		
		Domestic	Non-domestic
	1	2	3
Type of instrument			
Debt instruments			
Equity			
of which investment fund shares/units			
Other (e.g. securitised derivatives)			

1.3 Market capitalisation of listed companies at the end of the year

Total market value of company, i.e. the total number of a company's shares outstanding multiplied by the current market price per share. In this context, the market capitalisation of listed companies refers only to domestic equities and exclusive foreign listings. An exclusive listing means that the foreign shares listed at the respective exchange are not listed at any exchange in their home country.

If shares are listed on several exchanges they are only taken into account for the calculation of the market capitalisation on the exchange where the shares have been issued.

In case of exchanges that are part of a large international group (e.g. Euronext, OMX), all securities listed in one of the participating countries are included.

Investment fund shares/units are not included in the market capitalisation.

	Total market capitalisation
	1
Equity excluding investment fund shares/units	

1.4 Executed trades

Each transaction is counted once, regardless of whether the transaction has been executed on an order-driven or on a quote-driven system.

Unsecuritised derivatives transactions and repo transactions are not included.

	Total number/value of executed trades		
	1	Electronic order book transactions	Negotiated deals
		2	3
Type of instrument			
Debt instruments			
Equity			
of which investment fund shares/units			
Other (e.g. securitised derivatives)			

2 Clearing by central counterparties

A central clearing counterparty is an entity that interposes itself, in one or more markets, between the counterparties to the contracts traded, becoming the buyer to every seller and the seller to every buyer and thereby guaranteeing the performance of open contracts².

2.1 Number of clearing members at the end of the year

Clearing members are broken down by central banks, CCPs, credit institutions, and other (types of institutions). They comprise the following types:

- individual or direct clearing members: CCP participants that are able to clear only their own obligations; and
- general clearing members: CCP participants that are able to clear their own obligations as well as those of clients/non-clearing members.

The number of clearing members refers to the last day of the year.

Domestic participants are those located in the same country as the CCP.

² Source of definition: [ECB Glossary](#).

	Total number of clearing members			
		Domestic	Non-domestic EU	Non-domestic non-EU
	1	2	3	4
Type of institution				
Central banks				
Central clearing counterparties				
Credit institutions				
Other				

2.2 Non-OTC derivatives contracts cleared

The number and value of non-OTC derivatives contracts cleared are broken down by type of instrument³ and payment (euro and other currencies). Non-OTC derivatives contracts are executed on a regulated market or multilateral trading facility (MTF). Derivative contracts executed or entered as pre-arranged trades on a regulated market or MTF are also included as non-OTC derivative contracts. Non-OTC derivative contracts are reported on a post-novation basis (rather than a pre-novation basis). When several contracts are traded in one transaction, the number of non-OTC derivatives contracts cleared refers to the number of individual contracts only.

Some CCPs may provide a guarantee that obligations from trades are being fulfilled, but do not interpose themselves between buyer and seller as long as buyer and seller are able to fulfil their obligations. These reporting institutions do not apply novation as a rule. Consequently, contracts are to be reported only once. If, however, one party involved fails to fulfil its obligations and the reporting institution interposes itself between buyer and seller to ensure that the other party is satisfied, then the original transaction is included twice (this applies also to repos and securities – see below) .

Transfers of underlying assets to fulfil obligations from open positions in derivatives on expiry of a derivatives contract are not counted as derivatives transactions.

³ Financial futures, financial options, other financial derivatives, commodity futures, commodity options and other commodity derivatives.

	Total number/value of non-OTC derivatives contracts cleared		
	1	Payment denominated in EUR	Payment denominated in other currencies
		2	3
Type of instrument			
Financial futures			
Financial options			
Other financial derivatives			
Commodity futures			
Commodity options			
Other commodity derivatives			

2.3 OTC derivatives transactions cleared

The number and value of OTC derivatives contracts cleared are broken down by type of instrument⁴ and payment (euro and other currencies). OTC derivatives transactions are not executed on a regulated market or multilateral trading facility (MTF). Derivative transactions executed or entered as pre-arranged trades on a regulated market or MTF are not reported as OTC derivative transactions (but as non-OTC derivatives contracts, see above).

	Total number/value of OTC derivatives transactions cleared		
	1	Payment denominated in EUR	Payment denominated in other currencies
		2	3
Type of instrument			
Financial futures			
Financial options			
Other financial derivatives			
Commodity futures			
Commodity options			
Other commodity derivatives			

2.4 Repo transactions cleared

The number and value of repo transactions cleared are broken down by type of instrument⁵ and payment (euro and other currencies).

Each repo transaction is counted once, although this comprises two steps: the delivery of the underlying and the redelivery of the underlying.

For derivatives transactions, the numbers and values of repo transactions are reported on a post-novation basis.

⁴ Financial futures, financial options, other financial derivatives, commodity futures, commodity options and other commodity derivatives.

⁵ Debt securities repos, equity repos and other repos.

	Total number/value of repo transactions cleared		
	1	Payment denominated in EUR	Payment denominated in other currencies
		2	3
Type of instrument			
Debt securities repos			
Equity repos			
Other repos			

2.5 Cash (outright) securities transactions cleared

The number and value of cash (outright) securities transactions cleared are broken down by type of instrument⁶ and payment (euro and other currencies). In a cash (outright) securities transaction, securities are bought or sold outright in the market. Spot market securities transactions are considered as cash (outright) securities transactions. Transfers of underlying assets to fulfil obligations from open positions in derivatives on expiry of a derivatives contract are counted as cash (outright) securities transactions, if the underlying is a security. As for derivatives and repo transactions, numbers and values of outright securities transactions are reported on a post-novation basis.

	Total number/value of cash securities transactions cleared		
	1	Payment denominated in EUR	Payment denominated in other currencies
		2	3
Type of instrument			
Debt securities			
Equity			
of which investment fund shares			
Other securities			

2.6 Contracts cleared through a clearing link

The number and value of contracts/transactions cleared through a clearing link are broken down by type of instrument.⁷ So, the contracts/transactions in this item are contained in the previous items.

A contract/transaction is cleared through a clearing link between two CCPs, e.g. CCP 1 and CCP 2, when the buying clearing member is clearing member of CCP 1

⁶ Debt securities, equity and other securities.

⁷ Financial derivatives contracts, commodity derivatives contracts, repo transactions, and cash (outright) securities transactions.

and the selling clearing member is clearing member of CCP 2. CCP 1 interposes itself between the buyer and CCP 2 (buys from CCP 2 and sells to the buyer). CCP 2 interposes itself between the seller and CCP 1 (buys from the seller and sells to CCP 1).

Note that in the novation process the transaction between the buyer and the seller is transformed into three transactions: one between the buyer and CCP 1, one between CCP 1 and CCP 2 and one between CCP 2 and the seller.

For other derivatives, repo and (cash) outright contracts/transactions, reporting is done (by each involved) CCP on a post-novation basis. However, each CCP reports only those transactions in which it is involved.

	<i>Of which: number/value of contracts cleared through a clearing link</i>
	1
Type of instrument	
Financial derivatives contracts	
Commodity derivatives contracts	
Repo transactions	
Cash (outright) securities transactions	

2.7 Securities transfers

The number and value of contracts/transactions cleared through a clearing link are broken down by type of instrument and payment.

A securities transfer refers to a movement of securities from one account to another. Only securities transfers that result directly from the clearing by novation of derivative, repo or securities transactions are counted. Transfers from a clearing member to the CCP or from the CCP to a clearing member are counted only if the securities are transferred as collateral. Transfers from one clearing member to another clearing member without an operational involvement of an account of the CCP are only counted if the CCP legally interposes itself between buyer and seller.

Transfers for rebalancing purposes are not counted, e.g. from one account of the reporting CCP (for example with a CSD 1) to another account of the reporting CCP (for example with another CSD 2). Securities transfers to fulfil obligations from open positions in derivatives at expiration of a contract are counted (transfers from a clearing member to the CCP or vice versa).

	Total number/value of securities transfers from one account (with CSD x) to another account (with CSD x)						
	1	Securities transfers from an account of the reporting CCP to an account of a clearing member or vice versa			Securities transfers from the account of one clearing member directly to the account of another clearing member (no account of the CCP involved)		
		Free of payment	Payment in EUR	Payment in other currency	Free of payment	Payment in EUR	Payment in other currency
	2	3	4	5	6	7	
Type of instrument							
Debt securities							
Equity							
Other securities							

3 Settlement in central securities depositories

A central securities depository (CSD) is an entity that: 1) enables securities transactions to be processed and settled by book entry; 2) provides custodial services (e.g. the administration of corporate actions and redemptions); and 3) plays an active role in ensuring the integrity of securities issues. Securities can be held in a physical (but immobilised) form or in a dematerialised form (whereby they exist only as electronic records).

A securities settlement system (SSS) is a system which allows the transfer of securities, either free of payment (FOP) or against payment (delivery versus payment).

3.1 Number of direct participants at the end of the year

Direct participants are direct account holders in a tiered system and account operators in case of non-tiered systems. 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 (as, for example, in Cyprus or Slovakia), the number of direct participants is the number of trading account operators. Domestic participants are those located in the same country as the CSD.

	Direct participants		
	Total	Domestic	Non-domestic
	1	2	3
Type of institution			
1.11 Central banks			
1.12. Central Counterparties (CCPs)			
1.13 Central securities depositories (CSDs)			
1.14 Credit institutions			
1.15 Other			

3.2 Securities held on accounts with the reporting CSD at the end of the year

Securities held on accounts with the reporting CSD comprise those 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.

	Value of securities held on accounts with the reporting CSD by source				
	1	Issued or safekept in the reporting CSD 2	Transferred into the reporting CSD through a (direct) link to		
			Total 3	Another CSD 4	A custodian bank 5
Type of instrument					
Bonds					
Short-term paper					
Equity					
Other					

	Value of securities held on accounts with the reporting CSD by use		
	Held on an account of:		
		another CSD	Other participants (e.g. credit institutions, brokers, dealers, central banks, CCPs)
	6	7	8
Type of instrument			
Bonds			
Short-term paper			
Equity			
Other			

3.3 Delivery instructions

Delivery instructions cover all instructions to move securities between accounts.

Those instructions where one of the accounts involved is the account of a CCP are identified as “of which”.

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 his omnibus account and vice versa are included.

Similarly, if in a non-tiered system (like Finland), 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.

	Total number/value of delivery instructions processed									
	Total	Internal transfer: transfer from one account with the reporting CSD to another account with the reporting CSD, neither of them being a link account of another CSD			Internal transfer: transfer from one account with the reporting CSD to another account with the reporting CSD, at least one of them is a link account of another CSD			Transfer through an account of the reporting CSD with (link of the reporting CSD to) another entity (i.e. only one account with the reporting CSD is credited or debited)		
		Free of payment	Payment in EUR	Payment in other currencies	Free of payment	Payment in EUR	Payment in other currencies	Free of payment	Payment in EUR	Payment in other currencies
	1	2	3	4	5	6	7	8	9	10
Type of instrument										
Bonds										
Short-term paper										
Equity										
Other										

3.4 New issues and redemptions

The new issues correspond to the new ISIN codes of securities issued or safe-kept in the reporting CSD.

Redemptions correspond to the ISIN codes of securities issued or safe-kept in the reporting CSD that are deleted.

New or deleted ISIN codes of stripped securities are not considered.

	Number of new issues and redemptions		
	Total	Number of new issues	Number of redemptions
	1	2	3
Type of instrument			
Bonds			
Short-term paper			
Equity			
of which investment fund shares/units			
Other			

Annex 1: Valuation of transactions

Derivatives transactions

Derivatives transactions are valued at the market value of the underlying. In the case of option contracts, the exercise (strike) price of the underlying is used as the value of the contract (rather than the actual premium of the option to be paid by the option buyer). In the case of futures contracts, the market value of the underlying at the time of transaction or – for futures with notional underlying – the market price of the futures contract at the time of the transaction is used.

Repo transactions

Each repo transaction is valued at the amount of money borrowed through it. The value excludes the interest to be paid by the borrower.

Securities transactions

Transactions in securities, i.e. debt instruments and equity securities are valued at transaction values. In the case that free-of-payment transactions are cleared, the market value of the securities is used. In cases where market values are not available, the latest available price is used.

Transactions denominated in a currency other than the reporting currency

The values of cleared contracts/transactions denominated in a currency other than the reporting currency, are converted to the reporting currency, taking the exchange rate on the day when the transaction takes place.

Compilation notes

1 Notes for data on Securities Exchanges (SEE)

Source of data for the following securities exchanges is the Federation of European Stock Exchanges (FESE):

Irish Stock Exchange, Athens Stock Exchange (Greece), BME Spanish Exchanges, Cyprus Stock Exchange, Société de la Bourse de Luxembourg, Malta Stock Exchange, CEESEG – Vienna (Austria), CEESEG – Ljubljana (Slovenia), Prague Stock Exchange (Czech Republic), Budapest Stock Exchange (Hungary), Gielda Papierow Wartosciowych w. Warszawie (Poland), Bursa de Valori Bucuresti (Romania), NYSE Euronext and NASDAQ OMX Nordic and Bulgarian Stock Exchange

As of 2015, Bratislava Stock Exchange is no longer a member of FESE. As a result, as of reference period from 2015, data for Bratislava Stock Exchange is reported by the National Bank of Slovakia.

As of July 2016, Ljubljana Stock Exchange is no longer a member of FESE. As a result, for reference period from 2016, a subset of the SEE data for Ljubljana Stock Exchange was reported by the National Bank of Slovenia.

As of 2018, Bulgarian Stock Exchange's membership in FESE is renewed.

Furthermore, when it comes to FESE data collection, FESE has attempted to collect that on a more granular level. Several data providers (i.e. stock exchanges) have not yet fully implemented the increased granularity in their reporting schemes for 2017, and as a result some data is unavailable for 2017. Aggregates were created by summing up all the available data and not taking into account missing data. For example, if three values are necessary to create an aggregate but only two of the values are available, the total is created using only the two available values. This approach has been taken for calculating the quantity of listed (domestic and non-domestic) debt securities as well as for any items including debt securities (i.e. total listed securities).

Data for the London Stock Exchange is reported directly by the organisation itself.

All other SEE data are reported by the National Central Banks of the country in which the system(s) is(are) located.

Time series on securities exchanges are identified with the first dimension code of "SEE".

- At the moment data for the **Zagreb Stock Exchange (Croatia)** is not planned for inclusion.

- **Fonds des Rentes (Belgium):** On 31 March 2012, the Fonds des Rentes (Securities Regulation Fund) registered in Brussels, ceased to operate.
- **Deutsche Börse AG (Germany):** On 23 May 2011, Frankfurt Floor Trading was transferred to Xetra, the state-of-the-art and international established trading platform of Deutsche Börse AG. The trading venue “Frankfurt” is named “Xetra Frankfurt Specialist”. As of 31 December, 2017, the Eurex Bond GmbH has terminated its business operations.
- **BME (Spanish Exchanges):** Bolsas y Mercados Españoles (BME) is the company that manages the main official secondary markets (regulated markets) in Spain, and other multilateral electronic trading systems. BME is made up of, amongst others, the Madrid, Barcelona, Bilbao and Valencia stock exchanges.
- **Mercado de Deuda Pública en Anotaciones:** Since the beginning of 2018, with the entry into force of the new regulations on securities markets (MIFID II and MIFIR), Spanish Public Debt instruments are traded in the Fixed Income Market AIAF. As a result, AIAF has assumed the role of a reference market for Spanish Public Debt, taking on the activity of disseminating information related to Public Debt instruments, previously managed by Mercado de Deuda Pública en Anotaciones.
- **TLX S.p.A. (Italy):** On 1 January 2010, the TLX S.p.A, registered in Italy, ceased to operate as a regulated market.
- **Euronext Amsterdam Cash Market (The Netherlands):** Euronext Amsterdam Cash Market reports the data on the securities exchange on Euronext Amsterdam NV. The information of number of participants to Euronext Amsterdam is not collected since the data would include information on the total number of participants to the whole Euronext group and not only to Euronext Amsterdam diminishing the relevance.
- **RM-SYSTEM Czech stock exchange (Czech Republic):** The number of participants declined from 2007 to 2008 as a consequence of an off-market exchange becoming a full stock exchange at the beginning of December 2008.
- **BondSpot S.A. (Poland):** As from 1 August 2013 BondSpot Regulated Market formally operates trading solely in debt instruments.
- **MTI Wholesale Market (Italy):** As from 31 December 2016 the MTI Wholesale Market (corporate and intl organisations’ bonds), registered in Italy, is no longer active.
- **MTI BONDVISION (Italy):** As from 1 January 2018 the MTI BONDVISION, registered in Italy, is a Multilateral Trading Facility (MTF).

2 Notes for data on Central Clearing Counterparties (CCP)

Data for Nasdaq OMX DM are reported by NASDAQ OMX directly.

All other CCP data are reported by the National Central Banks of the country in which the system(s) is(are) located.

Time series on central clearing counterparties are identified with the first dimension code of "CCP".

- **Central Counterparty Austria (Austria):** Trading on the non-OTC derivatives market has fallen sharply in 2013, because options and futures products were delisted as a preparation for the market shutdown. From 21/03/2014 trading of non-OTC derivatives has been completely stopped.
- **BME Clearing (Spain):** In October 2012, "MEFF Sociedad Rectora de Productos Derivados, S.A.U." (MEFF), which cleared derivatives contracts, was authorised to perform the central counterparty activities for fixed income securities (activity carried out by MEFFCLEAR until that moment). As a consequence, MEFFCLEAR was taken over, and MEFF became the CCP for derivatives and fixed income securities (repo transactions).
- In September 2013, and in order to meet the requirements of the European Market Infrastructure Regulation, MEFF split up into two companies. A new company, called "MEFF Sociedad Rectora del Mercado de Productos Derivados" (MEFF Exchange) in charge of the derivatives trading activities was created, while "BME Clearing" assumed the entire activity of MEFF, providing clearing and settlement services.
- **European Central Counterparty N.V. (The Netherlands):** Previously known as European Multilateral Clearing Facility (EMCF). As from the end of 2013, EMCF and EuroCCP combined their strengths. The name of the new combined company is EuroCCP N.V. For the indicators on the "Number- and Value of securities transfers for settlement of cleared transactions", the "totals" include transactions of the EuroCCP with the non-EU counterpart central securities depositories of Switzerland (SIX SIS) and Norway (VPS).
- **ICE Clear Netherlands (The Netherlands):** ICE Clear Netherlands is a central counterparty for derivatives. Previously named Holland Clearing House. As from May 2017, the ICE Clear Netherlands is no longer providing clearing services for the Dutch market
- **KDPW_CCP S.A. (Poland) :** KDPW_CCP started clearing of EUR OTC trade as of 3 April 2018. Consequently, the amendments of the Detailed Rules of the OTC Clearing System applicable to EUR OTC trade entered into force, including provisions governing trades denominated and cleared in EUR concerning the application of the EURIBOR and EONIA rates, as well as provisions governing the calculation of margins and valuation of such trades. KDPW_CCP's new service offers the clearing of EUR OTC trade in interest rate derivatives whose underlying is EURIBOR or EONIA
- **Casa Romana de Compensatie SA (RCH) (Romania):** Romanian Clearing House (RCH) acted as central counterparty for financial, equity and commodities derivatives contracts traded at SIBEX Sibiu Stock Exchange,

Romania. Romanian Clearing House was established in 1998, has been authorised as a CCP by the Romanian regulatory authority (i.e. the Romanian National Securities Commission) in 2005. Casa Romana de Compensatie ceased its activity at the end of 2014 and the transactions in derivatives concluded on SIBEX Sibiu Stock Exchange are now cleared by the Athens Exchange Clearing House – Athex Clear.

- **Casa de Compensare Bucuresti SA (CCB) (Romania):** Bucharest Clearing House (CCB) is authorised as a clearing house and central counterparty. Since 14 September 2007, it performs specific activities under the oversight of the Romanian Securities Commission. CCB is owned by (with a share of 52.5%) the Bucharest Stock Exchange (BVB). The CCB role is to perform the registration, guarantee, clearing and settlement of transactions involving financial derivatives (FD), concluded on the Bucharest Stock Exchange Derivatives Market, using an integrated platform with the trading system, thus offering one single point of access for the participants. CCB ensures the adequate carrying out of operations mentioned in the previous paragraph, by performing the functions of clearing house and central counterpart as well as administrating risks to which is exposed by means of using specific mechanisms, techniques and instruments. Casa de Compensare Bucuresti SA has been inactive since 2014. As of 2016, the Financial Supervisory Authority in Romania withdrew the authorisation of CCB.
- **Nasdaq OMX DM (Sweden):** Repo transactions were reported for the first time, from 2013.
- **LME Clear (United Kingdom):** LME Clear is the clearing house of the London Metal Exchange. It was launched in September 2014.
- **CME CE (United Kingdom):** Launched in May 2011, CME Clearing Europe (CMECE) is a London-based clearing house which operates in an English law and European regulatory environment. As from October 2017, the CME Clearing Europe is no longer providing clearing services.
- **OMIClear (Portugal):** OMIClear runs the Iberian energy clearing house, central counterparty and settlement system, since July 2006, having obtained the re-authorization to operate as a CCP under EMIR in October 2014. Currently, OMIClear's main focus is on the clearing of Spanish, Portuguese, French and German power financial derivatives, exchange traded as well as bilaterally registered (OTC) at OMIP for several types of instruments: futures, swaps, forwards, options and Financial Transmissions Rights, covering multiple maturities and profiles (baseload, peakload and solar), with financial or physical delivery.

3 Notes for data on Centralised Securities Depositories (SST)

Data for Euroclear Sweden is reported directly by the organisation itself.

All other data are reported by the National Central Banks of the country in which the system(s) is(are) located.

Time series on centralised securities depositories are identified with the first dimension code of "SST".

- Data for the **Central Depository and Clearing Company Inc. (Središnje klirinško depozitarno društvo) (Croatia)** is not yet planned for inclusion.
- **Euroclear Belgium:** In January 2009, the platform ESES (Euroclear Settlement of Euronext-zone Securities) was launched in Belgium.
- **Euroclear France:** The figures since 2007 are based on a new methodology related to the implementation of the single platform ESES (Euroclear Settlement of Euronext-zone securities), launched in November 2007 in France. This may trigger a break in series when comparing the figures with those from previous years.
- **Monte Titoli (Italy):** Delivery instructions do not include corporate actions, deposits and withdrawals on securities, money transfers and roll over transactions.
- **Euroclear Netherlands:** Until 2009, bonds include short-term papers. As from 2009 bonds exclude short-term papers. In January 2009, the platform ESES (Euroclear Settlement of Euronext-zone Securities) was launched in The Netherlands.
- **OeKB (WSB SYSTEM)(Austria):** 'Number of direct participants': the domestic central securities depository (CSD) that participates in OeKB is OeKB itself.
- **Euroclear Finland:** Number of direct participants': Euroclear Finland's link participants are CSDs (free-of-payment links). 'Value of securities held in central securities depositories': Warrants and exchange-traded funds are included in "Equity" in 2004, and "Other" in 2005 and 2006.
- **SKD, RM-SYSTEM, SCP and CDCP (Czech Republic):** The CSD (CDCP) started its operations in the Czech Republic in 2010. Commonly with the SKD, which is a Securities Settlement System (SSS) and register for short-term securities run by Česká národní banka, they fulfil a role of institutions in the Czech Republic which fully carries out the functions of a CSD. The Securities Centre (SCP) stopped its activities in 2010 and at the same time the Central Securities Depository (CDCP, former UNIVYC) took over the records`
- **Regional SSSs (Spain): Bolsas y Mercados Españoles ("BME") decided to integrate all the services related to central securities depositories**

provided by the regional Securities Settlement Systems in the **Sociedad de Gestión de los Sistemas de Registro, Compensación y Liquidación de Valores, S.A. ("IBERCLEAR")**. Therefore, SCL Valencia, SCL Bilbao and SCL Barcelona transferred all their securities positions to IBERCLEAR on January 2016, September 2016 and December 2016 respectively and do no longer provide SSS services.

- **SC Depozitarul Sibex SA (Romania):** As of 2017, the SC Depozitarul Sibex SA is no longer active.
- **ECSD (Estonia):** Since 17 September 2017, the ECSD is no longer providing services.
- **SITEME (Banco de Portugal):** Since 30 November 2012, SITEME (Banco de Portugal) is no longer providing services.
- **Nasdaq CSD SE Estonian Securities Settlement System:** On 18 September 2017, the Nasdaq CSD SE Estonian SSS started operating.
- **LCD-DENOS (Latvia):** Since 17 September 2017, the LCD-DENOS is no longer providing services.
- **Nasdaq CSD SE Latvian Securities Settlement System:** On 18 September 2017, the Nasdaq CSD SE Latvian SSS started operating.
- **CSLD (Lithuania):** Since 17 September 2017, the CSLD is no longer providing services.
- **Nasdaq CSD SE Lithuanian Securities Settlement System:** On 18 September 2017, the Nasdaq CSD SE Lithuanian SSS started operating.
- **The National Central Securities Depository (NCDCP):** In the Slovak Republic the new CSD was established in 2014, namely The National Central Securities Depository, joint-stock company (NCDCP).

Comparative tables

Securities Exchange Statistics

	Number of participants		Number of executed trades (in thousands of transactions)		Value of executed trades (in millions of euro)	
	2017	2018	2017	2018	2017	2018
Euro area countries						
Belgium						
Euronext Brussels SA	147	133	19,691	19,692	108,353	125,188
Germany						
Deutsche Börse AG ³⁾	170	169	150,140	144,677	1,565,919	1,779,402
Ireland						
Irish Stock Exchange Ltd	21	22	3,326	3,802	135,059	101,495
Greece						
Athens Stock Exchange	52	48	4,389	5,073	14,820	13,696
Bank of Greece	23	23	0	5	555	5,002
Spain						
BME (Spanish Exchanges)	57	56	51,393	44,507	6,685,717	1,105,463
France						
NYSE Euronext Paris	147	148	145,383	137,708	1,187,723	1,250,368
Italy						
Borsa Italiana SpA	104	98	80,273	81,992	953,148	923,370
MTI Wholesale Market (government securities)	55	51	213	212	1,215,566	1,161,554
MTI BONDVISION	189	175	156	144	979,151	889,123
MTI Wholesale Market (corporate and intl organisations' bonds) ^{*)}	-	-	-	-	-	-
Cyprus						
Cyprus Stock Exchange	15	13	29	27	170	113
Luxembourg						
Société de la Bourse de Luxembourg SA	26	26	16	12	198	177
Malta						
Malta Stock Exchange	17	18	31	26	572	394
The Netherlands						
Euronext Amsterdam Cash Market	-	-	69,387	68,837	586,606	596,439
Austria						
CEESEG - Vienna	79	80	6,793	5,609	33,768	35,910
Portugal						
Euronext Lisbon SA	94	99	5,446	4,483	25,874	25,168
Slovenia						
CEESEG - Ljubljana	14	12	50	38	347	337
Slovakia						
Bratislava Stock Exchange	14	13	7	10	7,240	480
Non-euro area countries						
Bulgaria						
Bulgarian Stock Exchange	51	49	78	51	963	239
Czech Republic						
Prague Stock Exchange	19	18	782	712	5,519	5,927
RM-SYSTEM Czech Stock Exchange	15	15	178	169	241	219
Hungary						
Budapest Stock Exchange	19	19	1,941	1,890	9,790	11,213
Poland						
Gielda Papierow Wartosciowych w Warszawie	53	50	21,095	19,026	64,023	51,864
BondSpot S.A.	14	13	0	0	56	46
Romania						
Bursa de Valori Bucuresti	37	29	947	617	2,459	3,393
United Kingdom						
London Stock Exchange Ltd	338	336	288,909	258,009	12,133,633	3,105,140
<i>NYSE Euronext¹⁾</i>	-	-	240,481	230,469	2,621,303	2,001,670
<i>NASDAQ OMX Nordic & Baltics²⁾</i>	116	120	140,751	156,827	2,346,368	912,031

1) Includes the exchanges in Brussels, Paris, Amsterdam, Lisbon and London.

2) Includes the exchanges in Helsinki, Copenhagen, Tallinn, Riga, Vilnius, Stockholm and Reykjavik.

3) The system was closed during year 2017.

*) The system was closed.

Securities clearing statistics

1 Number of participants in central counterparty clearing

	2014	2015	2016	2017	2018
Euro area countries					
EUREX Clearing AG (<i>Germany</i>)	183	186	195	190	209
Hellenic Exchanges Holdings SA (<i>Greece</i>)	27	25	24	19	19
BME Clearing (<i>Spain</i>)	58	60	65	65	64
LCH.Clearnet SA (<i>France</i>)	110	110	100	99	125
CC&G (<i>Italy</i>)	81	82	87	86	84
European Central Counterparty N.V. (<i>The Netherlands</i>)	48	45	43	44	42
ICE Clear Netherlands (<i>The Netherlands</i>) *)	2	3	4	-	-
CCP (<i>Austria</i>)	57	53	50	49	51
OMIClear - C.C., S.A (<i>Portugal</i>)	-	-	14	14	13
Non-euro area countries					
KELER CCP Zrt. (<i>Hungary</i>)	29	25	21	21	21
KDPW_CCP S.A. (<i>Poland</i>)	38	39	38	37	35
Nasdaq OMX DM (<i>Sweden</i>)	97	92	92	88	88
LCH.Clearnet Ltd (<i>United Kingdom</i>)	161	154	158	157	161
ICE Clear Europe (<i>United Kingdom</i>)	80	73	78	80	81
CME CE (<i>United Kingdom</i>) *)	-	19	17	-	-
LME Clear Limited(<i>United Kingdom</i>)	42	42	44	46	46

*) The system was closed.

2 Number of cash (outright) securities transactions cleared through central counterparty clearing (in thousands)

	2014	2015	2016	2017	2018
Euro area countries					
EUREX Clearing AG (<i>Germany</i>)	188,019	236,147	233,987	246,942	243,566
Hellenic Exchanges Holdings SA (<i>Greece</i>)	1	1	1	1	1
BME Clearing (<i>Spain</i>)	-	-	69,734	101,961	88,737
LCH.Clearnet SA (<i>France</i>)	392,147	482,870	467,723	488,400	484,008
transactions cleared in France	249,584	302,759	291,495	296,929	296,186
transactions cleared in Belgium	29,548	39,415	38,766	39,581	39,564
transactions cleared in Germany	-	-	-	-	-
transactions cleared in Spain	-	-	-	5	0
transactions cleared in Italy	506	384	388	368	398
transactions cleared in Luxembourg	44	34	29	31	23
transactions cleared in the Netherlands	96,748	126,905	126,240	140,337	138,928
transactions cleared in Portugal	15,520	13,207	10,693	11,068	8,819
transactions cleared in the United Kingdom	184	156	106	82	91
CC&G (<i>Italy</i>)	150,858	163,053	170,417	156,344	159,359
European Central Counterparty N.V. (<i>The Netherlands</i>)	1,267,535	1,738,966	1,960,011	1,633,387	1,642,262
transactions cleared in The Netherlands	845	41	-	-	-
transactions cleared in Germany	890	1,198	3,504	1,683	779
transactions cleared in Sweden	155,179	199,765	214,529	233,086	36,802
transactions cleared in the United Kingdom	1,110,573	1,537,594	1,723,652	1,377,817	1,556,087
transactions cleared in Norway	49	369	1,749	327	179
transactions cleared in Hungary	-	-	-	-	-
ICE Clear Netherlands(<i>The Netherlands</i>) *)	4	5	4	-	-
CCP (<i>Austria</i>)	9,341	12,296	13,307	13,589	11,225
OMIClear - C.C., S.A (<i>Portugal</i>)	-	-	-	-	-
Non-euro area countries					
KELER CCP Zrt. (<i>Hungary</i>)	1,380	1,552	1,640	1,957	1,902
KDPW_CCP S.A. (<i>Poland</i>)	13,983	17,808	18,657	21,095	19,025
Nasdaq OMX DM (<i>Sweden</i>)	-	-	-	-	-
LCH.Clearnet Ltd (<i>United Kingdom</i>)	-	717,566	925,578	1,122,757	1,671,409
ICE Clear Europe (<i>United Kingdom</i>)	0	0	0	0	0

*) The system was closed.

3 Value of cash (outright) securities transactions cleared through central counterpart clearing (in billions of euro)

	2014	2015	2016	2017	2018
Euro area countries					
EUREX Clearing AG (<i>Germany</i>)	3,003	3,757	3,097	3,088	3,270
Hellenic Exchanges Holdings SA (<i>Greece</i>)	0	0	0	0	0
BME Clearing (<i>Spain</i>)	-	-	762	1,295	1,137
LCH.Clearnet SA (<i>France</i>)	7,143	7,385	6,894	6,608	7,198
transactions cleared in France	2,377	2,974	2,465	2,653	2,981
transactions cleared in Belgium	181	260	238	213	263
transactions cleared in Germany	-	-	-	-	-
transactions cleared in Spain	-	-	-	18	0
transactions cleared in Italy	2,910	2,380	2,648	2,200	2,255
transactions cleared in Luxembourg	1	0	0	0	0
transactions cleared in the Netherlands	908	1,159	1,020	1,155	1,225
transactions cleared in Portugal	78	56	44	47	49
transactions cleared in the United Kingdom	654	526	453	321	425
CC&G (<i>Italy</i>)	3,663	3,764	3,422	3,173	2,981
European Central Counterparty N.V. (<i>The Netherlands</i>)	7,039	10,877	10,684	9,969	10,134
transactions cleared in The Netherlands	7	0	-	-	-
transactions cleared in Germany	4	9	17	9	6
transactions cleared in Sweden	1,148	1,433	1,323	1,340	163
transactions cleared in the United Kingdom	5,879	9,433	9,127	8,164	9,415
transactions cleared in Norway	0	1	4	1	1
transactions cleared in Hungary	-	-	-	-	-
ICE Clear Netherlands (<i>The Netherlands</i>) *)	1	2	1	-	-
CCP (<i>Austria</i>)	49	59	57	68	72
OMIClear - C.C., S.A (<i>Portugal</i>)	-	-	-	-	-
Non-euro area countries					
KELER CCP Zrt. (<i>Hungary</i>)	8	8	8	10	11
KDPW_CCP S.A. (<i>Poland</i>)	50	55	45	58	52
Nasdaq OMX DM (<i>Sweden</i>)	-	-	-	-	-
LCH.Clearnet Ltd (<i>United Kingdom</i>)	-	2,623	3,368	13,376	10,152
ICE Clear Europe (<i>United Kingdom</i>)	0	0	0	0	0

*) The system was closed.

Securities settlement statistics

1 Number of participants in central securities depositories (end of period)

	2014	2015	2016	2017	2018
Euro area countries					
Belgium					
NBB SSS	81	69	66	65	67
Euroclear Belgium	78	77	74	74	75
Euroclear Bank	1,539	1,602	1,617	1,639	1,650
Germany					
Clearstream Banking AG	298	288	270	302	330
Estonia					
ECSD ¹⁾	16	16	16	16	-
Nasdaq CSD SE Estonian Securities Settlement System	-	-	-	19	18
Greece					
BOGS	74	40	39	38	37
Hellenic Exchanges (HELEX)	59	62	61	43	51
Spain					
Iberclear	138	128	116	93	74
Regional SSSs ^{*)}	50	44	34	-	-
France					
Euroclear France	152	147	137	139	141
Italy					
Monte Titoli	224	183	184	184	175
Cyprus					
CDCR	37	33	35	36	33
Latvia					
LCD-DENOS ¹⁾	21	21	21	21	-
Nasdaq CSD SE Latvian Securities Settlement System	-	-	-	26	24
Lithuania					
CSDL ¹⁾	21	22	21	19	-
Nasdaq CSD SE Lithuanian Securities Settlement System	-	-	-	22	29
Luxembourg					
Clearstream Banking Luxembourg	1,371	1,421	1,334	1,043	1,438
VP Lux	16	16	16	14	14
LUX CSD	12	15	14	15	15
Malta					
MSE	14	14	17	17	18
Netherlands					
Euroclear Netherlands	71	69	69	69	75
Austria					
OEKB (WSB SYSTEM)	138	94	84	79	77
Portugal					
Interbolsa	38	36	40	40	46
Slovenia					
KDD	28	25	25	22	21
Slovakia					
CDCP SR	20	20	23	22	25
NCDCP	-	-	-	-	7
Finland					
Euroclear Finland	24	25	24	23	23
Non-euro area countries					
Bulgaria					
CDA	94	95	93	88	88
GSD	29	29	27	27	26
Czech Republic					
SKD	20	20	20	23	28
RM-SYSTEM	27	24	18	15	15
CDCP	26	28	28	25	24
Denmark					
VP Securities	167	161	157	156	152
Hungary					
KELER	154	149	145	137	98
Poland					
KDPW S.A.	63	61	60	64	63
SKARBNET4	44	42	43	44	41
Romania					
SC Depozitarul Central SA	52	51	51	47	39
SaFIR	38	35	36	35	33
SC Depozitarul Sibex SA ^{*)}	13	12	10	-	-
Sweden					
Euroclear Sweden AB	52	49	46	45	44
United Kingdom					
Euroclear UK and Ireland	23,648	23,648	17,050	15,351	14,660

1) The system was closed during year 2017.

*) The system was closed.

2 Value of securities held on accounts with central securities depositories (end of period)

	Value of securities (EUR millions)					Increase in the value of securities (% per annum)				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Euro area countries										
Belgium										
NBB SSS	557,305	575,431	612,534	614,188	621,035	3	3	6	0	1
Euroclear Belgium	224,852	271,106	237,006	239,833	179,893	11	21	-13	1	-25
Euroclear Bank	1,791,413	12,273,202	12,641,026	13,019,828	13,604,921	11	4	3	3	4
Germany										
Clearstream Banking AG	7,573,774	7,806,765	7,719,215	8,275,940	8,777,554	19	3	-1	7	6
Estonia										
ECSD ¹⁾	12,905	8,139	8,238	9,012	-	25	-37	1	9	-
Nasdaq CSD SE Estonian SSS	-	-	-	8,547	9,316	-	-	-	-	9
Greece										
BOGS	125,515	125,779	115,753	109,596	110,695	6	0	-8	-5	1
Hellenic Exchanges (HELEX)	53,557	47,310	45,866	55,680	46,918	-21	-12	-3	21	-16
Spain										
Iberclear	2,179,678	2,228,493	2,259,848	2,369,801	2,285,614	-1	2	1	5	-4
Regional SSSs ^{*)}	48,766	12,470	2,806	-	-	-6	-74	-77	-	-
France										
Euroclear France	5,756,799	6,073,838	6,278,449	6,693,923	6,558,767	2	6	3	7	-2
Italy										
Monte Titoli	3,349,197	3,305,694	3,175,087	3,296,671	3,304,941	2	-1	-4	4	0
Cyprus										
CDCR	9,199	6,896	8,303	5,853	6,669	24	-25	20	-30	14
Latvia										
LCD-DENOS ¹⁾	3,266	4,427	4,070	3,967	-	1	36	-8	-3	-
Nasdaq CSD SE Latvian SSS	-	-	-	4,341	3,714	-	-	-	-	-14
Lithuania										
CSDL ¹⁾	11,469	10,314	11,036	11,559	-	6	-10	7	5	-
Nasdaq CSD SE Lithuanian SSS	-	-	-	12,087	11,976	-	-	-	-	-1
Luxembourg										
Clearstream Banking Luxembourg	5,588,676	5,979,505	6,220,119	7,328,126	7,472,514	7	7	4	18	2
VP Lux	33,215	16,579	12,697	8,150	3,460	-17	-50	-23	-36	-58
LUX CSD	9,769	14,404	14,975	21,512	24,244	63	47	4	44	13
Malta										
MSE	10,042	12,959	14,732	14,984	14,489	6	29	14	2	-3
Netherlands										
Euroclear Netherlands	1,028,016	993,406	1,006,512	1,067,927	964,007	7	-3	1	6	-10
Austria										
OEKB (WSB SYSTEM)	505,180	523,169	559,256	610,116	588,997	-1	4	7	9	-3
Portugal										
Interbolsa	557,185	566,443	618,089	644,991	2,222,419	-6	2	9	4	245
Slovenia										
KDD	27,603	26,100	28,217	30,885	34,705	8	-5	8	9	12
Slovakia										
CDCP SR	40,825	39,976	46,813	49,493	51,566	1	-2	17	6	4
NCDCP	-	-	-	-	565	-	-	-	-	-
Finland										
Euroclear Finland	289,348	309,298	340,431	366,092	358,671	6	7	10	8	-2
Non-euro area countries										
Bulgaria										
CDA	34,073	33,213	33,638	34,962	36,210	5	-3	1	4	4
GSD	4,219	3,724	3,438	3,432	2,789	31	-12	-8	0	-19
Czech Republic										
SKD	29,598	41,240	37,164	158,371	155,658	-1	39	-10	326	-2
RM-SYSTEM	0	0	0	0	0	-	-	-	-	-
CDCP	111,209	76,146	81,505	114,737	115,620	0	-32	7	41	1
Denmark										
VP Securities	979,700	1,036,381	1,070,682	1,154,465	1,094,975	8	6	3	8	-5
Hungary										
KELER	110,593	118,483	120,789	138,788	144,658	-17	7	2	15	4
Poland										
KDPW S.A.	276,365	271,686	287,096	341,211	315,011	-9	-2	6	19	-8
SKARBNET4	19,812	17,383	18,436	22,605	12,386	-30	-12	6	23	-45
Romania										
SC Depozitarul Central SA	22,199	20,901	21,040	23,937	21,452	2	-6	1	14	-10
SaFIR	25,491	26,338	28,451	30,238	35,060	4	3	8	6	16
SC Depozitarul Sibex SA ^{*)}	47	99	122	-	-	74	111	23	-	-
Sweden										
Euroclear Sweden AB	1,180,297	1,293,144	1,391,842	1,392,426	1,053,841	-8	10	8	0	-24
United Kingdom										
Euroclear UK and Ireland	5,691,140	6,215,293	6,787,311	6,072,333	5,265,064	13	9	9	-11	-13

1) The system was closed during year 2017.

*) The system was closed.

3 Transactions processed by central securities depositories: Number of transactions

	Number of delivery instructions (thousands)					Increase in number of delivery instructions (% per annum)				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Euro area countries										
Belgium										
NBB SSS	949	498	517	791	917	72	-48	4	53	16
Euroclear Belgium	2,118	2,467	2,377	2,488	2,651	11	16	-4	5	7
Euroclear Bank	75,708	83,725	84,550	95,188	106,599	8	11	1	13	12
Germany										
Clearstream Banking AG	55,331	61,175	56,048	59,525	63,261	-10	11	-8	6	6
Estonia										
ECSD ¹⁾	74	78	89	72	-	-14	5	14	-19	-
Nasdaq CSD SE Estonian SSS	-	-	-	20	109	-	-	-	-	445
Greece										
BOGS	196	111	91	134	94	26	-43	-18	47	-30
Hellenic Exchanges (HELEX)	7,568	6,242	4,859	4,547	5,281	3	-18	-22	-6	16
Spain										
Iberclear	33,256	31,761	14,905	8,226	9,208	18	-4	-53	-45	12
Regional SSSs ^{*)}	63	33	5	-	-	3	-48	-85	-	-
France										
Euroclear France	24,296	25,612	25,562	26,174	27,952	0	5	0	2	7
Italy										
Monte Titoli	24,663	23,718	22,234	28,291	27,858	17	-4	-6	27	-2
Cyprus										
CDCR	45	52	37	30	28	13	16	-29	-19	-7
Latvia										
LCD-DENOS ¹⁾	31	34	30	23	-	-26	10	-12	-23	-
Nasdaq CSD SE Latvian SSS	-	-	-	8	20	-	-	-	-	150
Lithuania										
CSDL ¹⁾	86	69	77	64	-	-13	-20	12	-17	-
Nasdaq CSD SE Lithuanian SSS	-	-	-	45	62	-	-	-	-	38
Luxembourg										
Clearstream Banking Luxembourg	24,897	24,014	25,805	26,063	22,344	13	-4	7	1	-14
VP Lux	6	6	3	2	1	-15	-5	-50	-26	-55
LUX CSD	24	20	17	18	17	1,100	-17	-15	8	-6
Malta										
MSE	31	40	43	37	37	71	29	6	-14	-1
Netherlands										
Euroclear Netherlands	5,707	6,242	5,894	6,084	6,288	7	9	-6	3	3
Austria										
OEKB (WSB SYSTEM)	1,324	1,185	1,138	1,216	1,311	6	-10	-4	7	8
Portugal										
Interbolsa	1,240	984	923	933	896	27	-21	-6	1	-4
Slovenia										
KDD	154	97	305	132	69	57	-37	214	-57	-48
Slovakia										
CDCP SR	124	57	33	16	22	-16	-54	-42	-51	38
NCDCP	-	-	-	-	0	-	-	-	-	-
Finland										
Euroclear Finland	6,332	6,817	7,085	7,567	9,263	2	8	4	7	22
Non-euro area countries										
Bulgaria										
CDA	172	72	58	68	38	-66	-58	-19	17	-44
GSD	8	6	4	3	4	-20	-25	-33	-25	33
Czech Republic										
SKD	10	8	10	19	29	0	-20	25	90	53
RM-SYSTEM	316	255	219	178	169	-21	-19	-14	-19	-5
CDCP	750	908	1,023	1,338	1,250	2	21	13	31	-7
Denmark										
VP Securities	15,453	17,037	16,409	17,012	16,332	18	10	-4	4	-4
Hungary										
KELER	690	666	725	695	526	28	-3	9	-4	-24
Poland										
KDPW S.A.	28,947	13,325	8,686	9,466	7,792	1	-54	-35	9	-18
SKARBNET4	1	1	0	0	0	-67	0	-	-	-
Romania										
SC Depozitarul Central SA	1,114	1,148	1,047	1,083	752	16	3	-9	3	-31
SaFIR	25	24	24	28	40	-19	-4	0	17	43
SC Depozitarul Sibex SA ^{*)}	0	0	1	-	-	-	-	-	-	-
Sweden										
Euroclear Sweden AB	14,111	13,282	13,870	15,796	14,992	12	-6	4	14	-5
United Kingdom										
Euroclear UK and Ireland	57,669	57,669	60,155	64,251	64,884	1	0	4	7	1

1) The system was closed during year 2017.

*) The system was closed.

4a Transactions processed by central securities depositories: Value of transactions

	Value of delivery instructions (EUR billions)					Average value per delivery instruction (EUR thousands)				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Euro area countries										
Belgium										
NBB SSS	10,838	8,028	8,714	10,475	15,143	11,421	16,121	16,856	13,242	16,514
Euroclear Belgium	836	934	958	946	964	394	378	403	380	364
Euroclear Bank	388,500	439,954	445,981	495,689	527,775	5,132	5,255	5,275	5,207	4,951
Germany										
Clearstream Banking AG	79,740	66,725	46,578	45,297	50,250	1,441	1,091	831	761	794
Estonia										
ECSD ¹⁾	3	2	3	1	-	34	25	39	20	-
Nasdaq CSD SE Estonian SSS	-	-	-	0	8	-	-	-	13	77
Greece										
BOGS	1,589	3,679	3,438	4,026	4,005	8,105	33,145	37,779	30,041	42,602
Hellenic Exchanges (HELEX)	71	44	33	27	31	9	7	7	6	6
Spain										
Iberclear	70,820	63,712	54,467	42,314	29,229	2,130	2,006	3,654	5,144	3,174
Regional SSSs ^{*)}	41	24	4	-	-	646	724	862	-	-
France										
Euroclear France	109,907	92,118	103,286	79,725	92,370	4,524	3,597	4,041	3,046	3,305
Italy										
Monte Titoli	75,945	66,409	66,682	78,756	86,534	3,079	2,800	2,999	2,784	3,106
Cyprus										
CDCR	1	2	2	0	6	15	39	65	15	231
Latvia										
LCD-DENOS ¹⁾	3	6	5	3	-	87	165	155	116	-
Nasdaq CSD SE Latvian SSS	-	-	-	2	4	-	-	-	199	215
Lithuania										
CSDL ¹⁾	3	7	3	2	-	36	105	36	32	-
Nasdaq CSD SE Lithuanian SSS	-	-	-	4	8	-	-	-	94	136
Luxembourg										
Clearstream Banking Luxembourg	86,462	85,384	83,692	86,356	134,032	3,473	3,556	3,243	3,313	5,999
VP Lux	174	174	42	27	2	27,613	28,994	13,983	11,997	2,185
LUX CSD	7	9	4	21	16	281	473	223	1,124	930
Malta										
MSE	2	3	5	3	3	65	63	106	79	78
Netherlands										
Euroclear Netherlands	4,366	4,889	4,695	5,101	5,313	765	783	797	838	845
Austria										
OEKB (WSB SYSTEM)	231	177	199	794	870	175	150	175	653	664
Portugal										
Interbolsa	263	169	172	182	164	212	172	186	195	183
Slovenia										
KDD	28	24	27	25	17	182	247	89	190	249
Slovakia										
CDCP SR	31	34	40	60	40	248	589	1,201	3,775	1,809
Finland										
Euroclear Finland	599	554	583	633	1,463	95	81	82	84	158
Non-euro area countries										
Bulgaria										
CDA	1	0	0	0	0	4	1	1	1	2
GSD	33	20	11	11	16	4,121	3,391	2,857	3,733	4,014
Czech Republic										
SKD	1,370	1,091	1,426	4,772	6,919	136,977	136,322	142,616	251,138	238,573
RM-SYSTEM	0	0	0	0	0	1	1	1	1	1
CDCP	84	93	85	211	142	112	102	83	157	114
Denmark										
VP Securities	6,503	7,132	6,300	5,581	5,123	421	419	384	328	314
Hungary										
KELER	1,420	702	745	670	698	2,058	1,054	1,027	965	1,326
Poland										
KDPW S.A.	10,621	13,171	12,675	13,078	13,171	367	988	1,459	1,382	1,690
SKARBNET4	74	83	106	121	147	74,109	83,490	-	-	-
Romania										
SC Depozitarul Central SA	6	8	7	9	9	5	7	6	8	12
SaFIR	130	130	88	163	201	5,209	5,409	3,673	5,822	5,025
SC Depozitarul Sibex SA ^{*)}	0	0	0	-	-	-	-	2	-	-
Sweden										
Euroclear Sweden AB	9,376	9,941	10,172	10,858	10,568	664	748	733	687	705
United Kingdom										
Euroclear UK and Ireland	284,643	272,087	277,190	276,800	309,898	4,936	4,718	4,608	4,308	4,776

1) The system was closed during year 2017.

*) The system was closed.

4b Transactions processed by central securities depositories: Value of transactions (continued)

	Increase in value of delivery instructions (%; HICP adjusted)					Value of delivery instructions as a ratio to GDP				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Euro area countries										
Belgium										
NBB SSS	32	-27	6	18	42	27	19	20	23	33
Euroclear Belgium	7	10	0	-3	0	2	2	2	2	2
Euroclear Bank	14	12	-1	9	4	964	1,056	1,037	1,112	1,149
Germany										
Clearstream Banking AG	34	-17	-32	-4	9	27	22	15	14	15
Estonia										
ECSD ¹⁾	-18	-22	76	-63	-	0	0	0	0	-
Nasdaq CSD SE Estonian SSS	-	-	-	-	-	-	-	-	-	-
Greece										
BOGS	-7	131	-7	16	-1	9	21	19	22	22
Hellenic Exchanges (HELEX)	44	-39	-25	-18	12	0	0	0	0	0
Spain										
Iberclear	7	-10	-16	-24	-32	69	59	49	36	24
Regional SSSs ^{*)}	-8	-41	-83	-	-	0	0	0	-	-
France										
Euroclear France	-16	-16	11	-24	14	51	42	46	35	39
Italy										
Monte Titoli	22	-13	0	17	9	47	40	39	45	49
Cyprus										
CDCR	-66	194	19	-81	1,339	0	0	0	0	0
Latvia										
LCD-DENOS ¹⁾	-4	107	-19	-45	-	0	0	0	0	-
Nasdaq CSD SE Latvian SSS	-	-	-	-	-	-	-	-	-	-
Lithuania										
CSDL ¹⁾	-4	136	-64	-30	-	0	0	0	0	-
Nasdaq CSD SE Lithuanian SSS	-	-	-	-	-	-	-	-	-	-
Luxembourg										
Clearstream Banking Luxembourg	13	-2	-4	2	53	1,735	1,640	1,525	1,520	2,232
VP Lux	-22	-1	-77	-38	-94	3	3	1	0	0
LUX CSD	-48	39	-62	444	-24	0	0	0	0	0
Malta										
MSE	-12	25	76	-36	-3	0	0	0	0	0
Netherlands										
Euroclear Netherlands	-1	11	-5	7	2	7	7	7	7	7
Austria										
OEKB (WSB SYSTEM)	5	-24	10	297	8	1	1	1	2	2
Portugal										
Interbolsa	55	-36	0	5	-11	2	1	1	1	1
Slovenia										
KDD	55	-14	13	-9	-33	1	1	1	1	0
Slovakia										
CDCP SR	-18	10	17	51	-36	0	0	0	1	0
NCDCP	-	-	-	-	-	-	-	-	-	-
Finland										
Euroclear Finland	22	-7	4	8	130	3	3	3	3	6
Non-euro area countries										
Bulgaria										
CDA	-1	-84	-34	28	-23	0	0	0	0	0
GSD	7	-37	-43	-4	41	1	0	0	0	0
Czech Republic										
SKD	17	-21	27	224	40	9	6	8	25	33
RM-SYSTEM	-15	0	-17	-11	-13	0	0	0	0	0
CDCP	-35	10	-11	139	-36	1	1	0	1	1
Denmark										
VP Securities	4	9	-12	-12	-9	24	26	22	19	17
Hungary										
KELER	-12	-51	5	-13	5	13	6	6	5	5
Poland										
KDPW S.A.	-2	24	-1	-1	0	26	31	30	28	26
SKARBNET4	8	13	31	10	21	0	0	0	0	0
Romania										
SC Depozitarul Central SA	23	52	-18	32	2	0	0	0	0	0
SaFIR	-26	0	-31	86	23	1	1	1	1	1
SC Depozitarul Sibex SA ^{*)}	39	672	-85	-	-	0	0	0	-	-
Sweden										
Euroclear Sweden AB	-9	8	2	7	1	21	22	22	23	22
United Kingdom										
Euroclear UK and Ireland	-17	-14	13	4	11	123	103	114	117	128

1) The system was closed during year 2017.

*) The system was closed.