3. Payments

The Bank has a broad responsibility in the area of payments and adopts two different regulatory roles over the payments landscape ; i.e. oversight and prudential supervision as described in chart 12 below. Oversight focuses on payment systems, instruments (1) and schemes (2) while prudential supervision targets payment service providers (PSPs). These approaches are complementary : while oversight concentrates on the sound and safe functioning of payment systems, payment instruments, payment schemes or other payment infrastructures, prudential supervision pursues safe, stable and secure financial institutions delivering payment services to the users.

The interest of central banks for the payments landscape stems from a connection with various core tasks. Directly or indirectly, payment systems, instruments and services may affect the practical implementation of monetary policy, the financial stability of the country, confidence in the currency, as well as a safe, reliable and competitive PSPs' environment in the country.

Section 3.1 describes the two payment systems which are core for the Belgian payment infrastructure : TARGET2 and the Centre for Exchange and Clearing (CEC). TARGET2 is the large-value payment system connecting Belgian banks with other European ones for processing high-value payments and serves as the basic connecting infrastructure needed for the implementation of central bank monetary policy. CEC is the domestic retail payment system processing intra-Belgian domestic payments. CLS Bank, a payment-versus-payment (PvP) settlement system for foreign exchange (FX) transactions, is included in this section as well.

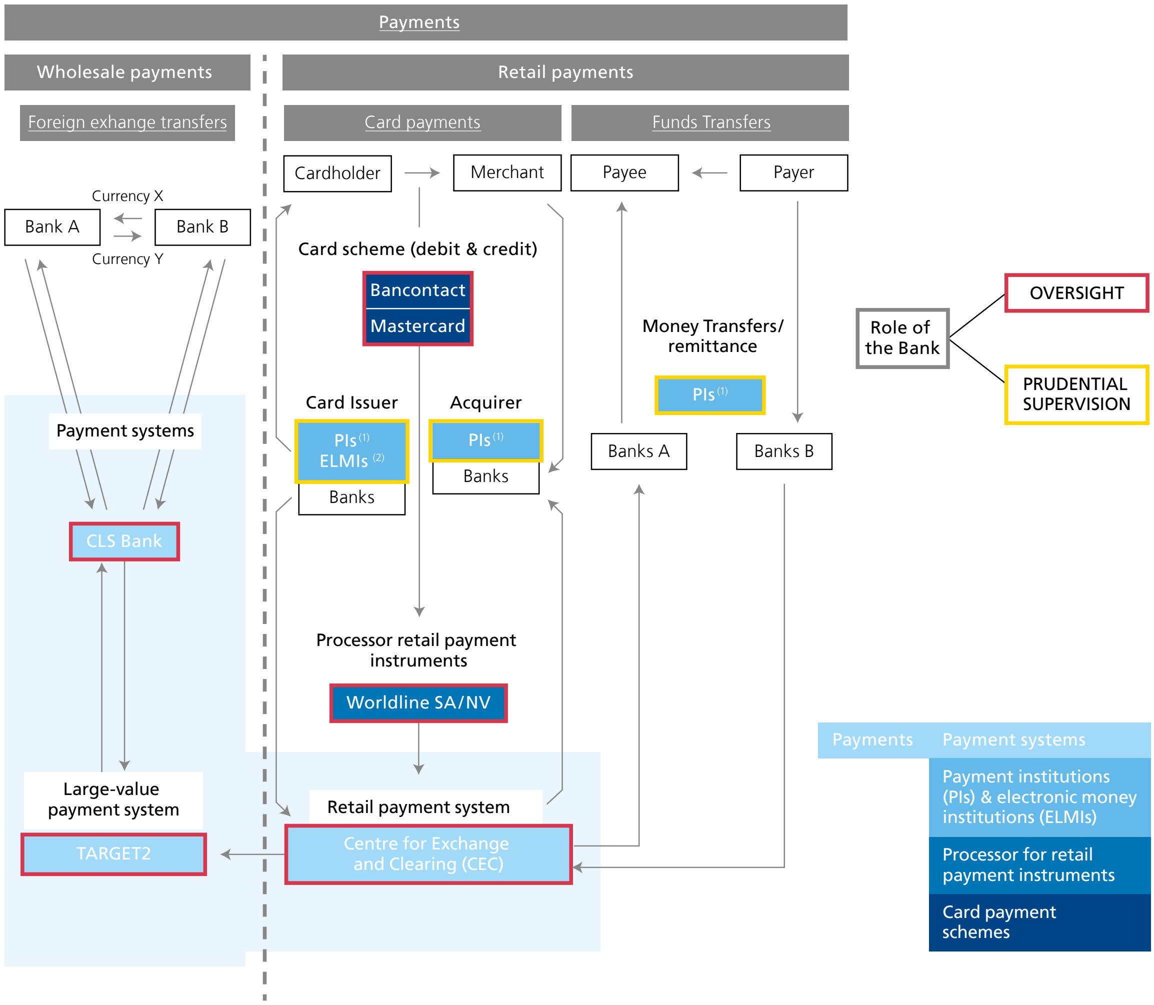
Prudential supervision of payment institutions (PIs) and electronic money institutions (ELMIs) – a relatively new sector for payment services which may offer since 2009, just like banks, payment services in Europe – is depicted in section 3.2.

As processor and acquirer (3) of retail payment instruments in Belgium, Worldline SA/NV is subject to both oversight and prudential supervision by the Bank. Section 3.3 explains this situation and the ongoing changes in the oversight regulatory framework in Belgium. This section looks at the synergies of the oversight and supervisory role a central bank can exert.

Section 3.4 covers the two payment card schemes overseen by the Bank : the domestic Bancontact scheme and the international Mastercard scheme. The Bank also contributes, indirectly, to other payment instrument oversight through the cooperation within the Eurosystem.

(1) A payment instrument is a tool to initiate payments of which currently the most widely used are credit transfers, cards and direct debits.
(2) A payment scheme is set of rules, practices, standards and/or guidelines for the execution of payment transactions.
(3) Acquiring of card payments is the service whereby a payment service provider contracts with a payee (merchant) to accept and process payment transactions, and guarantees the transfer of funds to the payee (merchant). The processing part is often performed by another entity.

CHART 12 SCOPE OF THE BANK'S OVERSIGHT AND PRUDENTIAL SUPERVISION ROLE IN PAYMENTS LANDSCAPE



(1) Payment Institutions (PIs)
– *Card acquiring and processing: Alpha Card, Alpha Card Merchant Services, Bank Card Company, B+S Payment Europe, Instele, Rent A Terminal, Worldline SA/NV*
– *Money Transfers/Remittance: Africash, Belgian Money Corp, Belmoney Transfert, Gold Commodities Forex, HomeSend, Money International, MoneyTrans Payment Services, Munditransfers, Travelex*
– *Direct Debit: EPBF*
– *Hybrid: BMCE EuroServices, Cofidis, eDebex, FX4BIZ, Oonex, PAY-NXT, Santander CF Benelux*

(2) Electronic Money Institutions (ELMIs)
– *Buy Way Personal Finance, Fimaser, HPME, Imagor, Ingenico Financial Solutions, Ingenico Payment Services, Loyaltek Payment Systems, Orange Belgium, RES Credit*

3.1 Payment systems

This section covers both large-value payment systems (LVPS) and retail payment systems (RPS). Most payments made in Belgium are cleared and/or settled through TARGET2, the LVPS, and CEC, the Belgian domestic RPS. CLS Bank is included in box 6.

CHANGES IN REGULATORY FRAMEWORK

The regulatory framework applicable to systemically important payment systems (SIPS), covering both LVPS and RPS, is set out in the ECB Regulation on oversight requirements for SIPS [1], which in turn is based on the Principles for

(1) Regulation of the European Central Bank (EU) No 795/2014 of 3 July 2014 on oversight requirements for systemically important payment systems (ECB/2014/28), *OJ*, 23 July 2014, L.217/16, 1-15 (https://www.ecb.europa.eu/ecb/legal/pdf/oj_jol_2014_217_r_0006_en_txt.pdf)

Financial Markets Infrastructures (PFMI) published by CPMI-IOSCO in April 2012. It creates a strict level playing field for oversight on the SIPS in the euro area. SIPS are identified based on a set of quantitative and qualitative criteria as detailed in box 5.

Only SIPS are subject to the binding legal framework of this European regulation. For the other payment systems, the Eurosystem undertook a comprehensive review of the oversight standards for euro RPS (originally adopted in June 2003) and published in February 2016 the Revised Oversight Framework for RPS (1). Besides the SIPS defined in the ECB Regulation (qualified as SIRPS in the context of RPS), this revised framework for RPS creates two additional categories of payment systems, i.e. the prominently important retail payment systems (PIRPS) and other retail payment systems (ORPS), identifying the sub-set of PFMIs applicable to each of them. As explained in box 5, to qualify as a PIRPS, the payment system's market share should at least be 25 % of total euro-denominated payments by volume at the level of a Member State whose currency is the euro. On the basis of this threshold, the CEC has qualified as a PIRPS. Although its market share even exceeds the threshold of 75 % that is required to qualify as a SIPS, the CEC does not meet any of the other mandatory criteria for SIPS and can consequently not be included in that category.

(1) ECB (2016), Revised oversight framework for retail payment systems (http://www.ecb.europa.eu/pub/pdf/other/revisedoversightframeworkretailpaymentsystems201602.en.pdf).

Box 5 – Payment systems oversight

In the Eurosystem, the oversight of systemically important payment systems (SIPS) is ruled by the ECB Regulation 795/2014 of 3 July 2014 on oversight requirements for SIPS (1). It covers both large-value payment systems (LVPS) and retail payment systems (RPS) of systemic importance. According to this Regulation, a payment system is identified as SIPS if:

(a) it is eligible to be notified in the framework of the Settlement Finality Directive (2) and;
(b) at least two of the following occur over a calendar year:

- Total daily average value of euro-denominated payments processed is at least € 10 billion;
- Market share is at least 15 % of total volume of euro-denominated payments or 5 % of total volume of euro-denominated cross-border payments or 75 % of total volume of euro-denominated payments at the level of a Member State whose currency is the euro;
- Cross-border activity involves at least 5 countries and generates a minimum of 33 % of the total volume of euro-denominated payments processed by that SIPS;
- The system is used for the settlement of other FMIs.

The four SIPS identified in the euro area are TARGET2 operated by the Eurosystem, the pan-European LVPS and RPS set up by the private sector and operated by EBA Clearing (resp. EURO1 and STEP2), as well as the French RPS system CORE(FR). The Regulation states that the SIPS must comply with all the 2012 CPMI-IOSCO Principles for Financial Markets Infrastructures (PFMIs) applicable to payment systems (17 PFMIs out of 24 as shown in the Table below; other PFMIs are applicable to other types of FMIs, such as securities settlement systems, CSDs, CCPs or trade repositories).

In addition to the Regulation, the Eurosystem reviewed the oversight standards for euro RPS dating from June 2003 and published the Revised Oversight Framework for RPS in February 2016 (3). As well as the SIPS (qualified as SIRPS in the context of RPS), the framework further categorises RPS by introducing the prominently important retail payment systems (PIRPS) and other retail payment systems (ORPS). A non-systemically important RPS is a PIRPS if

(1) Regulation of the European Central Bank (EU) No 795/2014 of 3 July 2014 on oversight requirements for systemically important payment systems (ECB/2014/28), OJ. 23 July 2014, L.217/16, 1-15. (https://www.ecb.europa.eu/ecb/legal/pdf/oj_jol_2014_217_r_0006_en_txt.pdf).

(2) Directive 98/26/EC of the European Parliament and of the Council of 19 May 1998 on settlement finality in payment and securities settlement systems, *OJ*. 11 June 1998, L. 166, 45-50 (http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:31998L0026&from=EN).

(3) ECB (2016), *Revised oversight framework for retail payment systems* (http://www.ecb.europa.eu/pub/pdf/other/revisedoversightframeworkretailpaymentsystems201602.en.pdf).

its market share is 25 % or higher of total euro-denominated payments by volume at the level of a Member State whose currency is the euro. Below that threshold, it will be considered as an ORPS.

The table below identifies the set of PFMIs applicable to each category of payment system. Whereas SIPS and SIRPS need to comply with all PFMIs relevant for payment systems, a subset thereof is applicable to PIRPS and ORPS.

OVERSIGHT FRAMEWORK FOR PAYMENT SYSTEMS : APPLICABLE CPMI – IOSCO PRINCIPLE BY CATEGORY

CPMI-IOSCO Principles for financial market infrastructures (PFMIs)	SIPS / SIRPS (1)	PIRPS (2)	ORPS (3)
Principle 1 : Legal basis	X	X	X
Principle 2 : Governance	X	X	X
Principle 3 : Framework for the comprehensive management of risks	X	X	X
Principle 4 : Credit risk	X		
Principle 5 : Collateral	X		
Principle 6 : Margin	n.	n.	n.
Principle 7 : Liquidity risk	X		
Principle 8 : Settlement finality	X	X	X
Principle 9 : Money settlements	X	X	
Principle 10 : Physical deliveries	n.	n.	n.
Principle 11 : Central securities depositories	n.	n.	n.
Principle 12 : Exchange-of-value settlement system	n. (4)	n.	n.
Principle 13 : Participant-default rules and procedures	X	X	X
Principle 14 : Segregation and portability	n.	n.	n.
Principle 15 : General business risk	X		
Principle 16 : Custody and investment risks	X		
Principle 17 : Operational risk	X	X	X
Principle 18 : Access and participation requirements	X	X	X
Principle 19 : Tiered participation arrangements	X		
Principle 20 : FMI links	n.	n.	n.
Principle 21 : Efficiency and effectiveness	X	X	X
Principle 22 : Communication procedures and standards	X	X	
Principle 23 : Disclosure of rules, key procedures, and market data	X	X	X
Principle 24 : Disclosure of market data by trade repositories	n.	n.	n.

Sources : ECB, NBB.
(1) SIPS / SIRPS : Systemically Important Payment Systems / Systemically Important Retail Payment Systems.
(2) PIRPS : Prominently Important Retail Payment Systems.
(3) ORPS : Other Retail Payment Systems.
(4) Art. 11 of the Regulation of the European Central Bank (EU) No 795 / 2014 of 3 July 2014 refers to payment versus payment. Current SIPS / SIRPS operators do not use a payment versus payment mechanism.

BUSINESS ACTIVITY

TARGET2

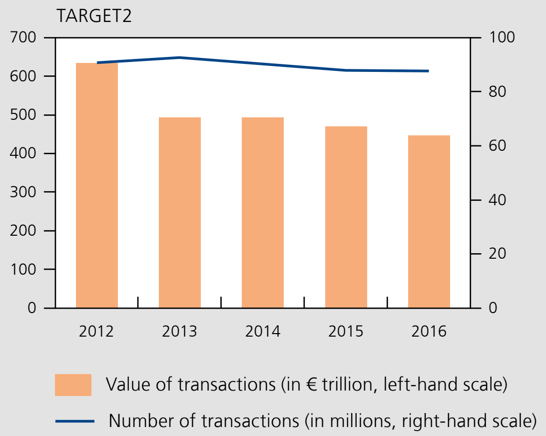
TARGET2, the large-value central bank payment system, is the largest payment system in the euro area in value terms, processing more than 90 % of the total value settled by LVPS in euro. As a SIPS, it serves as the backbone for other FMIs as it settles in central bank money the cash positions in euros of 74 so-called ancillary systems i.e. systems in which payments or securities are exchanged and/or cleared whereas the ensuing monetary obligations are settled in TARGET2 (e.g. domestic RPS as the CEC, pan-European systems operated by EBA Clearing which is the private sector-owned provider of the RPS STEP2 and the LVPS EURO1, as well as (I)CSDs and CCPs).

As illustrated in chart 13 (left-hand side), the total value of transactions processed by TARGET2 in 2016 amounted to almost € 445 trillion (€ 1.735 trillion per day on average). The observed decline of 5 % on 2015 can be attributed to a lower volume of ancillary system transactions resulting from the migration of additional CSDs to the TARGET2-Securities platform. The total volume of payments processed was close to 88 million transactions (about 341 000 payments per day on average) and remained unchanged compared to the previous year.

At the end of 2016, 21 participants out of 1 067 direct participants of TARGET2 were Belgian financial institutions. Chart 13 (right-hand side) shows that about 2.13 million transactions related to TARGET2-BE, the Belgian component of TARGET2 [1], representing a value of € 19.3 trillion. TARGET2-BE represents 4.34 % of the total value processed by the TARGET2 system and 2.43 % of the total volume.

CHART 13 NUMBER AND VALUE OF TRANSACTIONS PROCESSED BY CEC AND TOP-10 EURO AREA DOMESTIC RETAIL PAYMENT SYSTEMS BY VALUE

(yearly total)



Sources: ECB and NBB.

Centre for Exchange and Clearing (CEC)

Although the CEC is not a systemically important infrastructure, it plays a crucial role in the Belgian economy as the central point for the clearing and settlement of retail payments, which mostly involve card payments, credit transfers and direct debit payments.

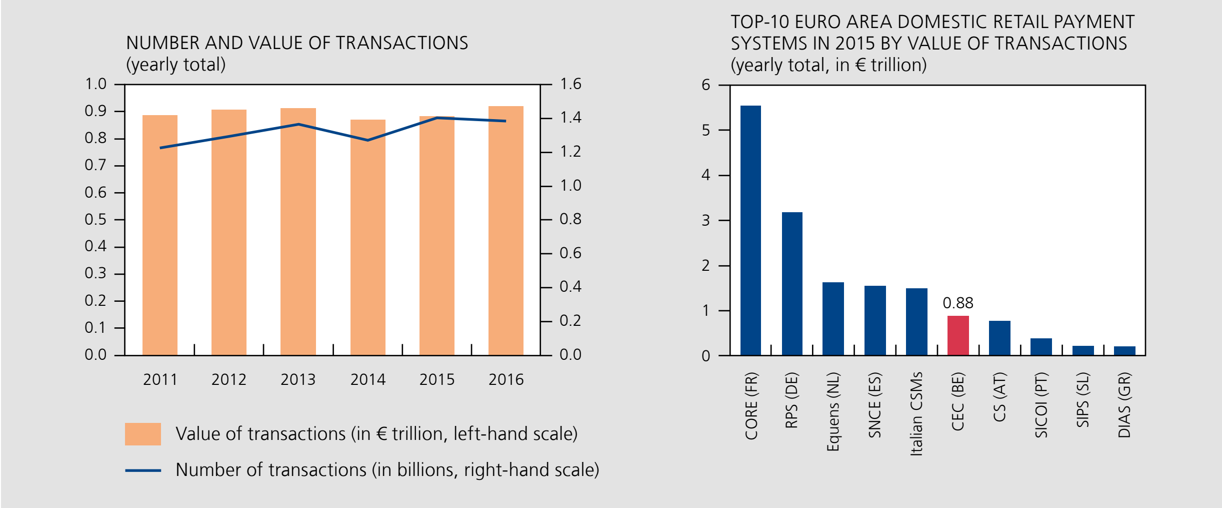
As shown in chart 14 below (left-hand panel), the CEC processed about 1.38 billion transactions in 2016 which is 1 % less than in 2015. The total value of the transactions processed by the CEC in 2016 amounted to € 0.92 trillion which is an increase of about 4 % compared to the € 0.88 trillion handled in 2015. Based on 2015 data, the CEC is the sixth largest domestic euro-denominated RPS in terms of value of transactions processed (chart 14, right-hand panel).

The main development concerning the CEC in 2016 is the ongoing instant payments [2] project. Regarding the operation of the future system, a Letter of Intent has been signed with STET, the French company to which the CEC

(1) TARGET2 is legally structured as a multiplicity of RTGS systems (TARGET2 component systems) where national central banks maintain their business relationships with domestic credit institutions.
(2) "Instant (or faster) payments" is the initiative towards payment systems settling retail payments in a real-time (or near real-time) on a 24-hour and 7-day basis as possible.

has outsourced its operations since 2013. The detailed features of this new payment mechanism will be clarified in the course of 2017.

CHART 14 NUMBER AND VALUE OF TRANSACTIONS PROCESSED BY CEC AND TOP-10 EURO AREA DOMESTIC RETAIL PAYMENT SYSTEMS BY VALUE



Sources: CEC and ECB.

OVERSIGHT APPROACH

The ECB is the lead overseer of TARGET2. The oversight is conducted on a cooperative basis with all the national central banks connected to TARGET2 [1].

In 2016, in addition to the regular oversight, a comprehensive assessment of TARGET2 has been conducted on the basis of the ECB Regulation on oversight requirements for SIPS [2]. A disclosure report with the main findings of this assessment has been published in June 2016 on the ECB's website [3].

The Bank is responsible for the oversight of the CEC. In 2016, it started the assessment of the system against the 2016 Revised Oversight Framework for RPS as part of a Eurosystem-wide exercise. This assessment will be finalised in the course of 2017 after a peer review by the Eurosystem.

The French contractor STET relies on its infrastructure called CORE which is also used by the French RPS CORE(FR) overseen by Banque de France. In the context of this outsourcing, a cooperation framework has been agreed with Banque de France. The cooperation agreement is formalised in a Memorandum of Understanding (MoU) describing the exchange of information and oversight arrangements regarding aspects of common interest. The objective is to avoid any duplication of tasks for both overseers and market infrastructures.

OVERSIGHT PRIORITIES IN 2017

The work plan for the oversight of TARGET2 and other SIPS are defined at the level of the ESCB. In addition to the standard monitoring of the system (including new developments and risks), the 2017 continuous oversight annual cycle of TARGET2 will focus on the follow-up of the assessment. The Eurosystem is currently examining how the 2016

(1) The 20 euro area central banks (including the ECB) and five central banks from non-euro area countries: Bulgaria, Croatia, Denmark, Poland and Romania.
(2) During 2016, the Eurosystem conducted an oversight assessment of the four SIPS: TARGET2, EURO1, STEP2 and CORE(FR).
(3) ECB (2016), *Disclosure report – TARGET2 assessment against the principles for financial market infrastructures* (http://www.ecb.europa.eu/pub/pdf/other/t2disclosurereport201606.en.pdf).

CPMI-IOSCO Guidance on cyber resilience for FMIs, which clarifies how cyber risk should be assessed in the context of the PFMI, will be integrated into its oversight of payment systems.

In 2017, specific focus will be put on the CEC's cyber resilience. In particular, as for the other FMIs under its oversight responsibility, the Bank should assess inter alia the CEC's compliance with the customer security controls issued by SWIFT for better securing customers' connectivity to the SWIFT network. The Bank also intends to follow up on the development of the instant payments project more specifically from a risk perspective.

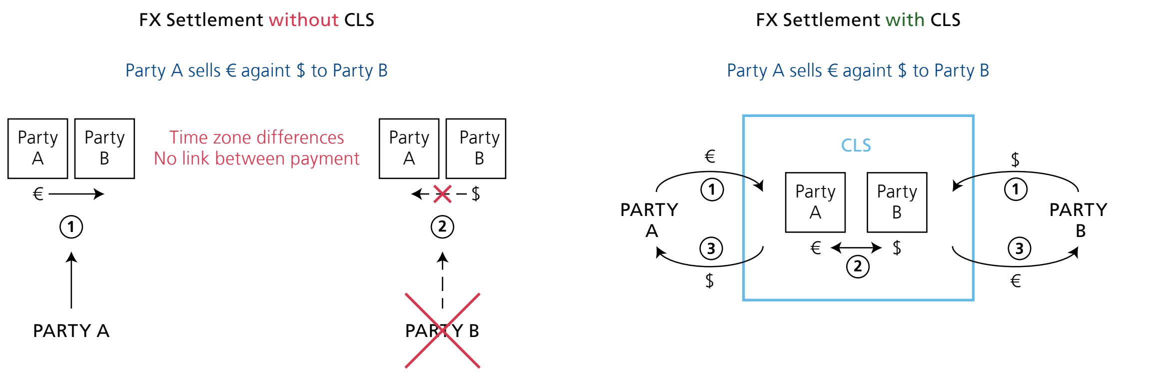
Implementation of the action plan resulting from the CEC assessment started in 2016 will also be covered.

Box 6 – CLS Bank

CLS Bank (CLS) is a US-based payment-versus-payment (PvP) settlement system for foreign exchange (FX) transactions in 18 currencies (1). Without CLS (see chart below, left-hand side of top panel), FX transactions induce the risk that – due to time zone differences – one party wires the currency it sold but does not receive the currency

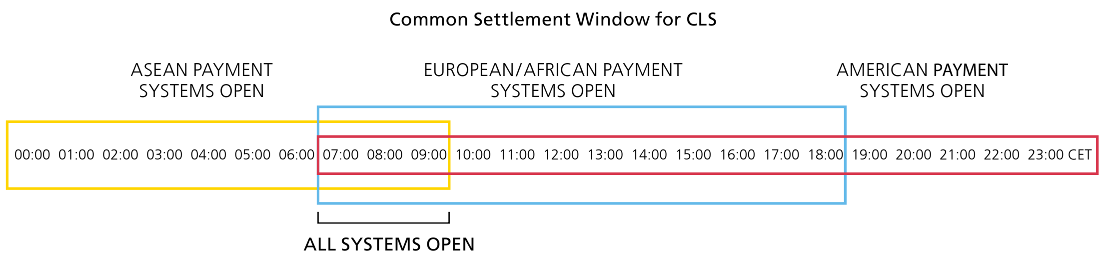
FUNCTIONING OF CLS

Elimination of FX settlement risk



1. Party A wires € to Party B, before receiving $ later on.
2. When Party B defaults before wiring $, Party A suffers total loss (= principal risk → FX Settlement risk or "Herstatt risk") (after default Bankhaus Herstatt in 1974).

1. Party A and B wire € resp. $ to CLS.
2. If both Party A and B have funded their CLS accounts, CLS will settle the transaction (simultaneous exchange = payment versus payment).
3. A and B receive their $ resp. € from CLS.



(1) Australian dollar, Canadian dollar, Danish krone, euro, Hong Kong dollar, Hungarian forint, Israeli shekel, Japanese yen, Korean won, Mexican peso, New Zealand dollar, Norwegian krone, Singapore dollar, South African rand, Swedish krona, Swiss franc, UK pound and US dollar.

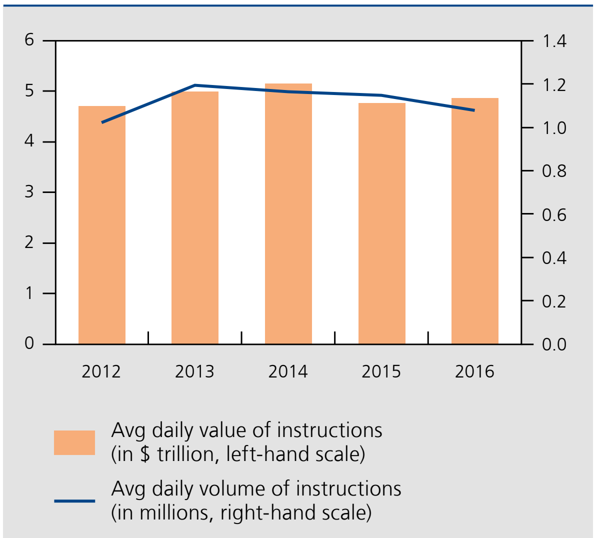
it bought from its counterparty. By settling transactions through linking the payments (PvP), CLS eliminates this FX settlement risk: i.e. if one party defaults and does not wire its currency to CLS, settlement will not take place and its counterparty will not lose its own currency (see chart above, right-hand side of top panel).

CLS has cash accounts at all central banks of the 18 CLS currencies (and thereby eliminates credit risk on commercial banks). The payment systems of these 18 currencies have a 2 hour overlap in their operating hours, i.e. a common settlement window from 07:00 AM to 09:00 AM CET (see chart above, bottom panel) during which CLS members can transfer to the CLS account the currencies they have sold (pay-ins by CLS member) and receive the currencies they have bought (pay-outs to CLS member). Pay-ins and pay-outs occur on a multilaterally netted basis, meaning that if Party A sold € for $ to Party B and bought € against £ from Party C, Party A only needs to pay/receive the net amount of its sales and purchases in €. Such netting reduces liquidity risk (as Party A does not need to transfer the gross amount of € to Party B) and operational risk (as netting reduces the number of transfers that need to be made).

BUSINESS ACTIVITY

CLS has more than 60 direct members among which many large international banks. There is currently one Belgian member in CLS (KBC). As shown in the chart below, average daily volume and value of instructions submitted to CLS have been rather stable. The average daily volume is slightly above 1 million, whereas the average daily value of instructions is close to $ 5 trillion equivalent.

AVERAGE DAILY VOLUME AND VALUE OF INSTRUCTIONS SUBMITTED TO CLS



Source: CLS.

According to calculations by CLS, 50.8% of global turnover in spot, outright forwards and FX swaps is settled through CLS. Reasons why FX transactions are not settled through CLS could be threefold:

– One or both of the currencies in the deal is not eligible for CLS. CLS is gradually expanding the list of currencies that can be settled in CLS. The Hungarian forint was the most recent addition (2015).

– One or both counterparties are not a member of CLS. While retaining strict risk-based criteria for accepting members, CLS has developed a non-shareholder membership which may make it easier for some banks to become a CLS member as the upfront investment in CLS shares is no longer required.
– As settlement in CLS happens when the opening hours of the payment systems of the 18 CLS currencies are overlapping, certain same-day FX transactions need to be settled outside CLS. CLS has already developed a Same-Day Session for US and Canadian dollar transactions.

OVERSIGHT AND PRUDENTIAL APPROACH

In 2012, CLS was designated as a systemically important financial market utility by the US Financial Stability Oversight Council with the US Federal Reserve Board as the Supervisory Agency. CLS is subject to the Federal Reserve Board's regulation, based on the CPMI-IOSCO Principles for Financial Market Infrastructures (PFMIs), establishing risk-management standards governing the operations related to the payment, clearing, and settlement activities of designated financial market utilities (1). The Federal Reserve Bank of New York supervises CLS under delegated authority from the Federal Reserve Board.

In addition, CLS is overseen by the Oversight Committee (OC), an international cooperative oversight arrangement comprised of the central banks whose currencies are settled in CLS and 5 central banks from the euro area (including the Bank), with the US Federal Reserve acting as lead overseer and performing the secretariat function for the OC. The OC assesses the CLS system and any changes to it based on the relevant PFMIs.

OVERSIGHT PRIORITIES IN 2017

Besides the ongoing oversight by the OC, specific attention will be given to the follow-up of new CLS services. One of the new services that will be launched as of 2017 will be the CCP Settlement Service, a special platform for CCPs that clear FX transactions.

In addition, CLS is also taking measures with the aim of facilitating recovery and resolution of a member when needed. The "affiliate membership", for example, will allow entities that are part of the same corporate group as an existing CLS member to become members as well. This could make recovery and resolution of a complex group easier (as individual entities have direct access to CLS and are not dependent on another entity of the group) and allows members to comply with ring-fencing requirements where applicable.

(1) See https://www.federalreserve.gov/paymentsystems/reghh-about.htm.

(1) Electronic money (e-money) is electronically stored monetary value as a claim on the issuer which is issued on receipt of funds from the holder and which is accepted by a natural or legal person other than the electronic money issuer.
(2) As a rule, PIs have to maintain a capital of at least EUR 125,000. This is reduced to EUR 20,000 when the only payment service offered is money remittance and to EUR 50,000 when only the payment service provided by telecommunications service providers is offered or this latter is combined with money remittance. On top of that, PIs must calculate their "own funds" requirement as defined in the regulation and at all times maintain "own funds" sufficient to meet this requirement. ELMIs have to maintain, as a rule, a capital of at least EUR 350,000 and maintain 'own funds' equal (or higher) to 2 % of the outstanding issued e-money.