

# ANNUAL REPORT 2018

Practitioners Creating  
Pan-European  
Payment Infrastructures

Main River walkway with Frankfurt skyline in the back  
Cover: View of La Défense in Paris from Arc de Triomphe



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Payment Infrastructures

Infrastructure systems like plumbing, electrical wiring, gas pipelines or the metro are often invisible to those using them. But all visible architecture relies on this invisible fabric to serve the people it has been built for. It is the underlying infrastructure that turns our buildings and cities into places where we can live and work.

This report gives visibility to some of the people behind our infrastructure. Our thanks go to the members of the Board, the EURO1 Business Committee and the Operations and Technical Group – for contributing to this report, but most importantly for ensuring our infrastructure is user-driven and fit for purpose.



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## E-U-R-O-P-A

**E**xcellence  
**U**ser-driven  
**R**obustness  
**O**penness to stakeholders' needs  
**P**an-European  
**A**gility

# The Company's Mission and Strategic Aims

## Our mission

EBA CLEARING's mission is to deliver market infrastructure solutions for the pan-European payments industry, to support its users' needs in line with user requirements.

The strategic aims of the Company are to ensure a **pan-European** and country-neutral approach for the development and delivery of infrastructure solutions, thereby ensuring **excellence** and **robustness** in delivering our services. EBA CLEARING will maintain its track record of timely delivery of **user-driven** solutions responding to evolving and new demands for infrastructure solutions, thereby demonstrating its **openness** to stakeholders' **needs** and agility in its role as market infrastructure solutions provider.

## Our objectives

EBA CLEARING aims to allow cost optimisation for its users, and is not seeking profit or shareholder value maximisation. In pursuing its mission, EBA CLEARING is guided by the objective to offer its users solutions that are fit for purpose and efficient, with a special focus on safety and ensuring compliance with regulatory and oversight requirements. EBA CLEARING recognises its role in supporting financial stability and promoting fair and efficient markets; it is committed to discharging these responsibilities.



**Banks and other market players embracing digital transformation are facing a twofold challenge: the need for fit-for-purpose digital payment instruments as well as the need for instant and intraday liquidity.**

**As a provider of pan-European payment infrastructure systems, EBA CLEARING supplies the backbone supporting its large user community in meeting both these needs in a very reliable manner.**

# Chairman's Statement

In 2018, the transformation of the European banking industry through digitalisation made great progress. At the same time, the use of new technology moved beyond the proof-of-concept phase and, in many cases, also spread beyond the payments area. These developments were fuelled by industry-wide efforts to deliver improved customer experience, increased transparency and 24/7 real-time availability to meet evolving corporate business models and expectations.

In trade and supply chain finance, for example, recent industry initiatives have led to the set-up of fully digitalised platforms or networks to support international trade. And in the capital market space, different players have been pioneering solutions enabling end-to-end digital issuance of debt financing instruments, thereby broadening the access to capital for institutional but also private investors.

These market trends are further boosted by regulatory changes, such as the new AML5 Directive. In force since July 2018, it recognises electronic identification based on the eIDAS Regulation as a valid way to identify customers, which contributes to the digitalisation of KYC and other processes in the financial sector.

In the European payments space, the take-off of mobile payment solutions driven by global players has demonstrated that merchants are eager to onboard 'digital native' payment instruments with a potential for wide acceptance. Consumers and corporates alike are embracing digitalisation as the new normal and are expecting convenient, tailor-made and safe solutions from all their service providers, including their banks.

As European banks and other market players are embracing this digital transformation and developing new business models for the emerging ecosystem shaped by PSD2 and Open Banking, they are facing a twofold challenge: the need for fit-for-purpose digital payment instruments as well as the need for instant and intraday liquidity. And more often than not, these needs have to be addressed not only for one national market but across Europe.

As a provider of pan-European payment infrastructure systems, EBA CLEARING supplies the backbone supporting its large user community in meeting both these needs in a very reliable manner. In the past year, the Company has taken a number of steps to ensure that it will also continue to do so in the future.

**A major focus over the past year was put on making the established systems of EBA CLEARING future-proof while maintaining and, where possible, further strengthening their value propositions.**

With the timely launch of RT1 in 2017, EBA CLEARING put at the disposal of the European payments industry a highly agile real-time infrastructure platform. RT1 has been very successful at building up pan-European reach, thanks to its different access and participation options. An additional success factor is that the Company keeps evolving the system to satisfy the needs of its growing user community – RT1 has just gone through its fourth iteration and there is more to come.

Another major focus over the past year was put on making the established systems of EBA CLEARING future-proof while maintaining and, where possible, further strengthening their value propositions. In particular, this means evolving their robust settlement function while providing new rails for rich data transfer through new formats, such as ISO 20022. The roadmaps and timelines for the EURO1 ISO migration and the introduction of continuous gross settlement for STEP2 have been agreed in close consultation with the respective user communities to minimise user impact and related risks.

In order to optimally support users in leveraging the benefits of these changeovers, such as convergence of messaging standards, the Company has placed cross-service alignment at the top of its strategic agenda for the next few years. A central aim of this strategy is to provide users with tools enabling cross-service views and activities, so they can further improve their intra-day liquidity management.

2018 also saw important changes kick in at governance level following the decision at the Shareholders Meeting (SHM) 2017 to introduce identical governance and user say arrangements for EURO1 and STEP2 to better reflect the balance between the SIPS operated by EBA CLEARING. The newly created EURO1 and STEP2 Business Committees took up their activities in Q1 2018 and have helped to effectively conduct the user consultation processes around the future evolution of these systems.

In line with the approach agreed at the SHM 2018 for establishing compliance with the new requirement of the Revised SIPS Regulation regarding the Board composition of a SIPS operator, the Nomination and Governance Committee (NGC) has paved the way for the recruitment of one Outside Director to complement the skills of the 15 independent directors serving on the Board. The Board has endorsed the resulting proposal of the NGC for submission to the SHM 2019.

**PSPs may require additional infrastructure solutions, for instance a use case-agnostic Request to Pay infrastructure solution, to leverage instant payments and other account-based payment instruments. At EBA CLEARING, we are eager to look into this.**

As part of its responsibilities as a SIPS operator, EBA CLEARING has in the period under report continued to attach prime importance to the resilience of its systems and their underlying IT architecture, has stayed on top of its risk environments, and maintained a continuous dialogue with the Overseers of its systems in the context of assessments of compliance with oversight requirements.

Since the constant evolution of state-of-the-art security and cyber security standards in line with best industry practices is of particular importance for payment infrastructures and their users, the topic of cyber security is part of the standing items on the agenda of the Board. This is also in accordance with EBA CLEARING's first and foremost objective to maintain a stable and compliant processing environment for the reliable, efficient and cost-effective day-to-day operation of its payment systems.

Looking forward, the combination of real-time payments and open banking are expected to further open up the innovation space in the European and global market, including new opportunities to explore more deeply the services layer linked to payment and accounts. In order to unlock these opportunities for their customers, payment service providers will need to rely on seamless end-to-end real-time processes. They may also require additional infrastructure solutions, for instance a use case-agnostic infrastructure layer for Request to Pay, in order to enable the pan-European implementation of this 'missing link' for leveraging instant payments and other account-based payment instruments.

At EBA CLEARING, we are eager to look into this and other opportunities as part of the Company's ongoing development and based on the continued fruitful exchange with our user community.

I take this opportunity to thank all our shareholders and users, my colleagues on the Board and all the professionals who have participated in our committees, expert groups and task forces over the past year for their commitment and support. I would also like to thank the management and staff of this Company and our technology partners for their dedication and efforts as well as our Overseers for the continued constructive dialogue. We look forward to continuing this successful journey with all of you in 2019 and beyond.

Petia Niederländer

# CEO's Statement

For EBA CLEARING, the year 2018 was marked both by great stability in the daily operations of our pan-European payment systems and by major reorientation and consultation work to chart the future course of the Company's services in the light of significant industry change.

In the infrastructure arena, this change has translated into an overall push for more granular data, (near) real-time liquidity settlement and a further reinforcement of (cyber) security and resilience.

For our concrete context, this means that we have been coordinating the ramp-up of RT1 together with the development of new functionality for the service. We have also been exploring potential supporting elements for instant payments, such as a pan-European Request to Pay solution. And, last but not least, we have been heavily engaged in assessing – in co-operation with our users and, in some cases, our critical service providers – how to adapt our systemically important payment systems and the underlying arrangements, so that they optimally support our users in enhancing their value propositions for the new, digital, real-time reality and continue to meet evolving oversight requirements.

As in previous years, our prime focus for 2018 was put on resilient and efficient day-to-day service delivery. I am pleased to report that all our services were operating reliably and smoothly during the period under report. Altogether, they routinely processed well over 50 million payments per day.

The new kid on the block and leading pan-European infrastructure for instant payments, RT1, ramped up nicely in its first year of operations, passing the 10-million-transaction milestone in early January 2019 and reaching a total of 20 million transactions in April 2019. Over 60% of the Single Euro Payments Area are already addressable via the system and this reach should increase to over 90% in 2019 and 2020. RT1 has operated without any interruption, 24 x 7 x 365, since its launch. It is in its fourth iteration after only 18 months, having added, among other features, SWIFTNet connectivity, TIPS routing and value-added functionality on a closed user group basis.

Reaching all corners of SEPA for retail payments, STEP2 continues to be the pre-eminent platform for processing SEPA transactions. We have seen continued volume growth as well as a solid and robust performance of the platform, which hit a record peak of 156 million transactions in April 2018.



**In an industry that is going through substantial transformation, EBA CLEARING has been successfully navigating through headwinds over the past year, thanks to the strong tailwinds that have supported our course: our highly committed Shareholders and users, our long-standing technology partners and our dedicated staff members.**

**As in previous years, our prime focus for 2018 was put on resilient and efficient day-to-day service delivery. I am pleased to report that all our services were operating reliably and smoothly during the period under report.**

Last year was spent in intense design discussions and user consultations to determine how best to adapt the system to the requirements of the Revised SIPS Regulation. The future settlement model will meet the requirements of our large user community with minimal impact on liquidity and introduce new perspectives for the use of the system. It will undoubtedly take some time to complete the roll-out, given the size of the community as well as the overall implementation workload the industry is facing over the next few years.

EURO1, providing liquidity savings, resilience and choice in euro large-value payments, continues to perform well and volumes are relatively stable at around 200,000 per day. In 2018, the Company ran a series of workshops with the EURO1 Future Positioning Working Group, hashing out the key principles for EURO1 as it readies itself for the ISO 20022 migration, together with TARGET2, which is scheduled for 2021.

The future value proposition was strongly supported by the EURO1 community during the subsequent user consultation. This includes aligning the service to the maximum extent possible with both TARGET2 and other EBA CLEARING Services to allow easy switching between systems and a centralised liquidity management. There was consensus among the participants to keep the core liquidity-saving features, which differentiate the system. The chosen design approach will minimise development costs and also allow rationalisation of system components.

The Company's financials remain robust. Cash levels were increased in 2018 to meet the liquidity requirements set for SIPS operators by the SIPS Regulation. EBA CLEARING is in a position where the Company can choose to finance some continuing investments itself, without recourse to shareholders or bank credit lines.

EBA CLEARING continues to evolve its internal IT systems and corporate processes in line with best industry practices. The oversight compliance and risk management functions have been further strengthened and the Company has intensified its activities as well as its co-operation with critical service providers on cyber resilience in particular.

Our self-assessment against the relevant requirements of the ECB's Cyber Resilience Oversight Expectations (CROE) for financial market infrastructures was completed in the first quarter of this year. As in previous years,

**We have been heavily engaged in assessing how to adapt our SIPS and the underlying arrangements, so that they optimally support our users in enhancing their value propositions for the new, digital, real-time reality and continue to meet evolving oversight requirements.**

numerous resilience and crisis management exercises were conducted throughout the period under report. Preparations are ongoing for testing exercises in the context of TIBER-EU, the new Europe-wide framework for tests against cyber-attacks in the financial industry.

In an industry that is going through substantial transformation, EBA CLEARING has been successfully navigating through headwinds over the past year, thanks to the strong tailwinds that have supported our course. I want to take this opportunity to thank the key sources of these tailwinds: our highly committed Shareholders and users, our long-standing technology partners and our dedicated staff members. Like our Board, Business Committee, Expert and Working Group members, the EBA CLEARING staff consists of practitioners from all corners of Europe and beyond, who have come together to ensure the timely and reliable delivery of efficient and cost-effective pan-European payment infrastructure services.

Thanks to these tailwinds, the EBA CLEARING Company has managed to cover a lot of ground in 2018 and early 2019 while it has, at the same time, remained firmly positioned at the heart of European payments.

We look forward to continuing this successful journey and track record with the support and for the benefit of our users and the wider payments ecosystem.

Hays Littlejohn

The Kunsträdgården in downtown Stockholm is one of the oldest parks in the Swedish capital.



# The Company's Activities in 2018 and Outlook for 2019

The period under report is 1 January 2018 – 31 December 2018.

The outlook for 2019 is included for information.



# Our Services Introduction

Throughout the period under report, EBA CLEARING delivered, on a daily basis and in accordance with highest levels of resilience, best-of-breed payment infrastructure services to a large European user community.

## EBA CLEARING Payment Services: Evolution of annual volumes and values in 2017/2018

EBA CLEARING Service	2017		2018		Evolution	
	Volume*	Value*	Volume*	Value*	Volume	Value
EURO1	50.54m	50,699bn	50.08m	51,579bn	-0.92%	+1.74%
STEP1	2.52m	317bn	2.46m	357bn	-2.15%	+12.60%
STEP2 SCT	4.43bn	12,507bn	4.66bn	13,524bn	+5.28%	+8.14%
STEP2 SDD Core	6.57bn	1,252bn	6.81bn	1,318bn	+3.71%	+5.21%
STEP2 SDD B2B	85.21m	723bn	86.39m	759bn	+1.39%	+5.04%
STEP2 CC	1.74bn	107bn	2.13bn	122bn	+22.09%	+14.60%
RT1	0.144m	90m	9.73m	6bn	N/A**	N/A**
<b>Total</b>	<b>12.88bn</b>	<b>65,605bn</b>	<b>13.74bn</b>	<b>67,665bn</b>	<b>+6.68%</b>	<b>+3.14%</b>

\* Rounded figures, all values in EUR

\*\* No year-on-year comparison provided since RT1 only went live in November 2017

The Company witnessed a notable increase of transaction volumes in its retail payment system in the period under report, resulting in an overall volume growth of 6.68% compared to 2017. The total transaction value increased by 3.14% during the same period. Throughout 2018, EBA CLEARING managed the settlement of 13.74 billion transactions across all services. This represents an average daily volume of nearly 54 million transactions.

While 2017 had been marked by the launch of a new infrastructure platform, 2018 was shaped by extensive exchanges with the user communities on future changes to be brought to the EURO1/STEP1, STEP2 and RT1 Services. The common objective was to further strengthen the value proposition of each service and, at the same time, facilitate cross-service views and activities at user level.



To this effect, the Company further intensified the dialogue with its service users in 2018. In addition to the consultations with the two newly established Business Committees and the different expert groups and working groups, more than 30 user community meetings took place in 15 countries.

During the consultations held in the first half of the year, EBA CLEARING further multiplied these touchpoints. The aim for EURO1 was to gather user input and agree on a way forward for the future positioning against the background of the industry-wide ISO 20022 migration of large-value payment systems. For STEP2, the user community was consulted on the different options for the evolution of the STEP2-T settlement model in light of the revised SIPS Regulation. And for RT1, the focus was put on the development of the system to optimally support the pan-European instant payment ramp-up.



# EURO1 Service

## 1 Overview

In 2018, EURO1 continued to serve its participants reliably, offering a resilient and cost-effective RTGS-equivalent system for single euro payment transactions that allows participants to optimise liquidity efficiency.

Based on the outcome of a comprehensive user consultation on the future positioning of EURO1 conducted in the spring of 2018, EBA CLEARING charted the future course for the service for 2020 and beyond. A key focus of the resulting work programme was ensuring maximal alignment with the evolution of TARGET2 in the context of the migration of large-value payment systems to the ISO 20022 standard. The work programme is also aimed at optimally supporting the EURO1 users in their integration of management and monitoring tasks across different services.

## 2 Evolution of EURO1 volumes, values and participation

During the period under report, the transaction volumes processed in EURO1 witnessed a slight decrease of 1%, but at the same time, the average daily transaction value increased by 1.7%. The EURO1 market share remained close to 40%.

Service participation went from 51 in 2017 to 48 in 2018 and currently stands at 47 as one bank left the service in April 2019.

Throughout 2018 and early 2019, EBA CLEARING maintained a close dialogue with service participants located in the United Kingdom (UK) on their EURO1-related planning in connection with the UK's preparations to leave the European Union. By the end of March 2019, all EURO1 Participants from the UK had transferred their participation to other EU locations in order to ensure their continued participation in the system.

## 3 Work programme for EURO1 future positioning and ISO 20022 migration

In the spring of 2018, the EURO1 user community was consulted on a Blueprint for EURO1's Future Proposition for 2020 and Beyond. The feedback provided by the EURO1 Participants indicated a high level of satisfaction with the key benefits of the service and a broad support for maintaining the core characteristics and components of the EURO1 System. At the same time, the participants expressed a strong interest in more cross-service support tools and in evolving the service in close alignment with TARGET2 as well as with the STEP2 and RT1 Services.

The outcome of the user consultation resulted in the start of a work programme in October 2018 to respond to these requirements. The programme is designed to migrate EURO1 from the current FIN-based messaging to the ISO 20022 standard and to align EURO1 with TARGET2 for full intra-day switchability between the two payment systems.

It further foresees alignment with TARGET2 both in terms of interface specifications as well as on implementation timelines. The migration date is scheduled for November 2021. A first version of the documentation for the ISO 20022 migration project was shared with the EURO1 Participants for feedback in April 2019.

In parallel with the migration to the ISO 20022 standard, the Company plans to adapt the network topology for the EURO1 System, from the current Y-copy to the more generic V-shape, which will be used by TARGET2 as well and will make EURO1 network agnostic.



In line with participant requirements, EBA CLEARING further started preparations in 2018 for the roll-out of cross-service support tools as part of its work programme. In June 2018, the Company presented a liquidity dashboard demo providing an overview of the liquidity and position of participants both in EURO1 and in RT1. The aim of such tools is to make it easier for users to get an integrated view across all their EBA CLEARING service activities and related intra-day liquidity positions.

The core functionality of the system, however, will not be affected by the ongoing work programme, so that EURO1 will continue to provide the key benefits as identified by its users: processing payments with immediate finality in a highly liquidity-efficient, cost-effective and resilient way.

#### 4 System developments in 2018 and 2019

A combined functional and technical annual release was implemented in October 2018. As no functional changes had been proposed by the service users, the release was limited in terms of scope and user impact.

For 2019, a release is planned for November 2019, which will involve changes at the level of the participant work station. The release will have a limited impact on service users.

The 2019 release will further include the introduction of a liquidity dashboard, which will provide additional intra-day liquidity monitoring facilities for the banks. The dashboard will initially comprise information related to EURO1 and is planned to integrate cross-service views covering RT1 and STEP2 in subsequent releases.

# EURO1 Service

The private-sector LVPS for Euro payments providing liquidity savings, resilience and choice

**KEY FACTS AND FIGURES**  
**STATUS: MARCH 2019**

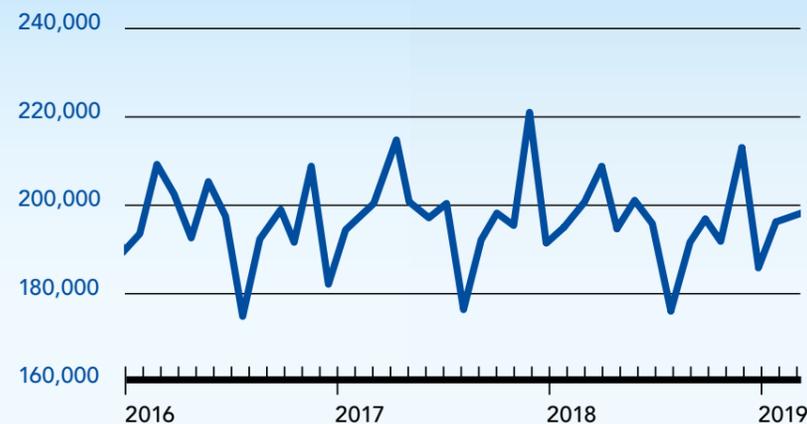
## AVERAGE DAILY VOLUME

**198,054** transactions

## AVERAGE DAILY VALUE

**€ 221.1** billion

## EVOLUTION OF AVERAGE DAILY VOLUME OF PAYMENTS PROCESSED



## LIVE DATE

4 January 1999

## TECHNICAL OPERATOR

## SWIFT

## SETTLEMENT AT PROCESSING CUT-OFF TIME

in TARGET2 via the Ancillary System Interface ASI-4

## LEGAL BASIS

- Identified by the ECB as **Systemically Important Payment System (SIPS)**
- ECB SIPS Regulation fully applicable

## FUNCTION

- **Large-value payment system**
- RTGS-equivalent net system
- Providing immediate finality for each individual payment transaction in real time
- Combined with the liquidity-saving benefits of a multilateral system

## REACH

Close to

**7,400**

participant BICs and close to

**12,000**

additional BICs reachable via EURO1/STEP1 Participants

## SPECIAL FACTS AND FEATURES IN 2018/2019

- **User consultation on EURO1 service proposition for 2020 and beyond**  
conducted in spring 2018
- **Work programme for future positioning and ISO 20022 migration kicked off**  
in October 2018

## PARTICIPATION

**47**

Participants

**46**

Sub-Participants



# STEP1 Service

A turn-key solution for single euro payment processing

**KEY FACTS AND FIGURES**  
STATUS: MARCH 2019

**LIVE DATE**

21 November 2000

**TECHNICAL OPERATOR**

SWIFT

**SETTLEMENT**

EURO1 Banks act as Settlement Banks for STEP1 Participants

**FUNCTION**

Single euro payment service for commercial transactions, mainly used by medium-sized and smaller banks

**REACH**

Close to

**7,400**

participant BICs and close to

**12,000**

additional BICs reachable via EURO1/STEP1 Participants

**AVERAGE DAILY VOLUME**

**9,676**

transactions

**AVERAGE DAILY VALUE**

**€1.4** billion

**PARTICIPATION**

**40**

Participants

**4**

Sub-Participants

**EVOLUTION OF AVERAGE DAILY VOLUME OF PAYMENTS PROCESSED**



# STEP1 Service

## A turn-key solution for single euro payment processing

The STEP1 Service offers a direct and cost-effective access to a highly resilient single euro payment processing platform. With its limited joining and running costs as well as its wide reach, STEP1 provides a low-investment solution for the exchange of non-SEPA euro transactions with all key payment banks operating in Europe.

There was a decrease in the number of STEP1 Participants during the period under report, industry consolidation in Europe is the main reason. Conversely, the service attracted a new participant in 2018.

The STEP1 transaction volume remained stable and the transaction values continued to increase, despite decrease in the number of participants, which illustrates the continued value of STEP1 for smaller and medium-sized banks in particular.



# STEP2 Services

## 1 Overview

A cornerstone of euro retail payment processing, the STEP2 System provided full reach to the European banking community for its SEPA Credit Transfers and Direct Debits and handled very high volumes of domestic and cross-border euro retail payments in a reliable and disruption-free manner during the period under report. Its position as a strategically important infrastructure for a number of communities and individual banks across Europe was further strengthened through the continued growth in volumes and participant numbers in 2018 and early 2019.

## 2 Evolution of STEP2 volumes and participation

Daily average volumes in the STEP2 SEPA Services witnessed a stable increase in 2018 compared to 2017, going up from 43.6 million to 45.4 million transactions processed per day on average. Furthermore, a new all-time peak of volumes processed in the STEP2 SEPA Services was reached on 3 April 2018 with over 156 million transactions.

The number of direct participants in the STEP2 SEPA Services kept seeing a positive evolution throughout 2018 and early 2019, with 11 banks joining the STEP2 SEPA Credit Transfer (SCT) Service, nine banks joining the STEP2 SDD Core Service and six banks connecting to the STEP2 SDD Business-to-Business (B2B) Service. The STEP2 SEPA Services continued to extend full reachability to over 4,900 financial institutions across the Single Euro Payments Area.

## 3 System developments in 2018 and beyond

The continued volume growth further increased the economies of scale in STEP2 and allowed EBA CLEARING to pass on these benefits to the STEP2 users in terms of cost savings. As a result, the trend of declining average transaction prices continued in 2018.

In line with the results of the annual STEP2 user consultation, EBA CLEARING implemented new optional reports through a technical release in April 2018 in order to further support participants in their liquidity management. A functional release put in place in November 2018 mostly focussed on EPC SCT Scheme Rulebook-related updates as well as on the introduction of an additional debit notification file window for SDD Core at 7:00 CET.

As detailed in the new EPC SEPA Scheme Rulebooks, the STEP2 release for 2019 will include a new set of inquiries and investigations for SCT and the implementation of extended remittance information in replacement of the related Additional Optional Service (AOS2). The release will also introduce a number of improvements to the direct participant work station and the routing tables, in accordance with user needs as expressed in the respective user consultation on these changes.

In light of new requirements stipulated by the revised SIPS Regulation, EBA CLEARING conducted a comprehensive user consultation on the future evolution of the STEP2 settlement in the second quarter of 2018. The results indicated a preference for the introduction of a continuous gross settlement model for the STEP2 SEPA Services.

Taking into account the participants' ongoing engagement in other substantial mandatory payments industry projects, the EBA CLEARING Board opted for a phased migration of the user community to the new settlement model, starting in November 2020. A user consultation on the blueprint setting out the details of the proposed solution was kicked off in April 2019.

# STEP2 Services

Reaching all corners of SEPA for retail payments

**KEY FACTS AND FIGURES**  
STATUS: MARCH 2019

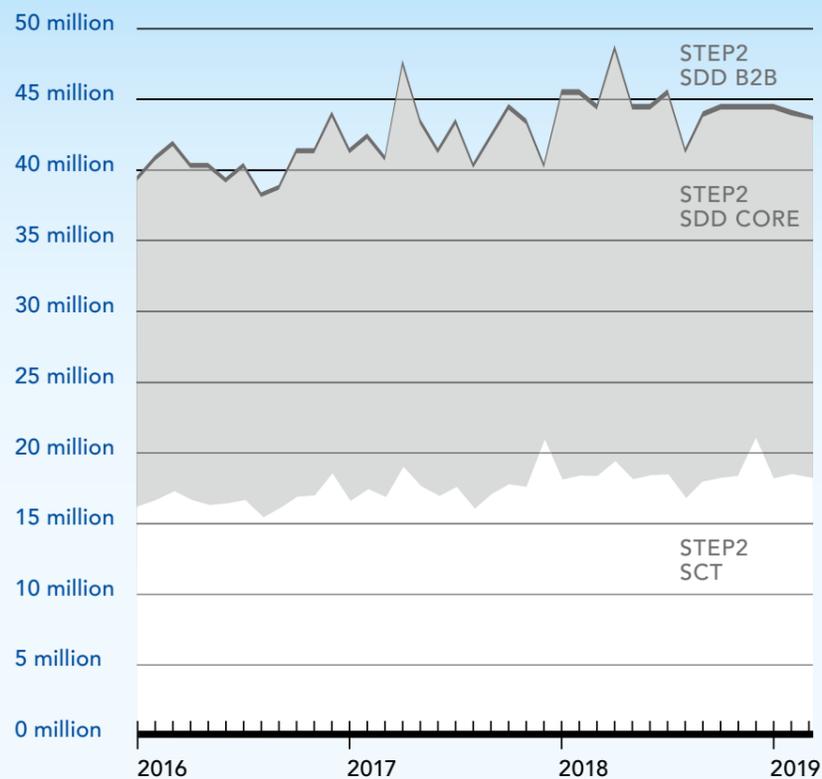
## AVERAGE DAILY VALUE

SCT  
€54.4 billion

SDD CORE  
€5 billion

SDD B2B  
€2.9 billion

## EVOLUTION OF AVERAGE DAILY VOLUME OF PAYMENTS PROCESSED



## LIVE DATES

SCT  
28 January 2008

SDD Core and SDD B2B  
2 November 2009

## TECHNICAL OPERATOR

SIA

## SETTLEMENT

STEP2-T's design for settlement is based on simultaneous settlement on a gross basis of all payments included in a settlement window. Positions are settled on Direct Participants' TARGET2 RTGS accounts via the TARGET2 Ancillary System Interface (ASI)

## AVERAGE DAILY VOLUME

SCT  
18 million transactions

SDD CORE  
25.4 million transactions

SDD B2B  
340,915 transactions

## LEGAL BASIS

- Identified as a SIPS under the ECB SIPS Regulation
- Compliant with the respective Scheme Rulebooks and Implementation Guidelines of the European Payments Council (EPC)

## FUNCTION

ACH Services processing SEPA Credit Transfers and SEPA Core and Business-to-Business Direct Debits offering full pan-European reach to all financial institutions that have adhered to the respective EPC Scheme Rulebooks

## SPECIAL FACTS AND FEATURES IN 2018/2019

New volume peaks:

- STEP2 SEPA platform: > 156 million transactions settled on 3 April 2018
- SCT: 41.7 million transactions  
SDD B2B: > 1 million transactions settled on 3 April 2018, respectively
- SDD Core: 118.8 million direct debits settled on 2 January 2018

## REACH

SCT  
Over 4,900 Reachable BICs

SDD Core  
Over 3,900 Reachable BICs

SDD B2B  
Over 3,300 Reachable BICs

The STEP2 platform is fully interoperable with 15 other CSMs

## PARTICIPATION

SCT  
153 Direct Participants

SDD CORE  
113 Direct Participants

SDD B2B  
98 Direct Participants



# RT1 Service

## 1 Overview

Following its go-live on 21 November 2017, the launch date of the SEPA Instant Card Transfer (SCT Inst) Scheme of the European Payments Council, RT1 saw a successful first year of operations with a substantial ramp-up in terms of participants and volumes. EBA CLEARING put a key focus on orchestrating the major onboarding exercise to the RT1 platform during the period under report as well as on further developing system functionality and support tools in line with evolving user needs. In addition, the Company continued to contribute to industry initiatives geared at building a well-functioning instant payment ecosystem.

## 2 Evolution of RT1 volumes and participation

RT1 witnessed a significant volume ramp-up throughout 2018, moving from an initial 5,000 transactions per day shortly after the launch to over 100,000 transactions per day on average and a daily average value of EUR 50 million in the last quarter of 2018. The system passed the 500,000-transaction mark on 19 February 2018 and the 1-million-transaction milestone on 13 April 2018 with a total transaction value of around EUR 635 million.

On 3 January 2019, RT1 hit the 10-million-transaction mark with a EUR 6 billion total value since the launch of the system. Over 99% of these transactions were processed in less than 3 seconds. By the second quarter of 2019, average processing volumes had increased to around 1 million transactions per week.

In its first year of operations, RT1 also made considerable progress in building up pan-European reach: by March 2018, a total of 576 addressable PSPs from 11 countries were reachable through the system, while by July 2018 this figure had nearly doubled to over 1,000 addressable payment service providers.

By the end of 2018, RT1 had expanded reach to over 2,300 payment service providers from 12 European countries, which were addressable through the 35 participants connected to the platform. Throughout the year, the evolving RT1 reach corresponded to a coverage of close to 100% of the account-servicing PSPs adhering to the EPC SCT Inst Scheme.

Efforts have continued in 2019 to further support the onboarding of new participants.

### 3 System developments in 2018 and 2019

RT1 system functionality was further enriched in 2018 in close consultation with the RT1 users to optimally and quickly meet their evolving needs during the ramp-up phase. The June 2018 release focussed on providing participants with more flexibility and ease in managing and monitoring liquidity.

The November 2018 release introduced changes related to the EPC SCT Inst Scheme Rulebook updates as well as SWIFTNet Instant connectivity, in addition to the existing SIANet and EBICS based connectivity options, and functionality enabling participants to use RT1 as their 'Instructing Party' in the TARGET Instant Payment Settlement (TIPS) Service. The latter functionality allows participants to have a single interface for sending and receiving transactions settling in RT1 or in TIPS.

To ensure the necessary agility for the further development of the system during the instant payment ramp-up, EBA CLEARING has again scheduled two RT1 releases for implementation in 2019. The release to be put in place in the second quarter of 2019 will further improve the tools supporting the day-to-day operations and support processes. The November 2019 release will include changes stemming from the SCT Inst Scheme Rulebook and cover enhancements to the controlled go-live procedure, several participant workstation improvements and a new mechanism to exchange information on participants' unavailability.



### 4 Contribution to industry debates

EBA CLEARING has been fostering an open exchange on real-time payment matters with other industry players and stakeholders, participating in the TIPS Contact Group and, as an observer, in the AMI-Pay, the ECB's advisory group on market infrastructures for payments. The Company also contributed to other industry bodies and fora, such as the RTPG (the group under the ISO 20022 standardisation body focussing on ISO messages for real-time payments) and the Global Real Time / Instant Payment Group.

# RT1 Service

The leading pan-European infrastructure for instant payments

**KEY FACTS AND FIGURES**  
**STATUS: MARCH 2019**

## AVERAGE DAILY VOLUME

**116,822** transactions

## AVERAGE DAILY VALUE

**€60.8** million

## LIVE DATE

**21 November 2017**

## TECHNICAL OPERATOR

SIA

## FINALITY

Transactions are processed in real time and settled with instant finality in the system. Participants maintain a position in the system, which is adjusted upon release of each payment transaction. The position of each participant is funded in central bank funds.

## LEGAL BASIS

- Full compliance with the SEPA Instant Credit Transfer (SCT Inst) Rulebook and Implementation Guidelines of the European Payments Council (EPC), including validation
- Fully protected by the Settlement Finality Directive

## FUNCTION

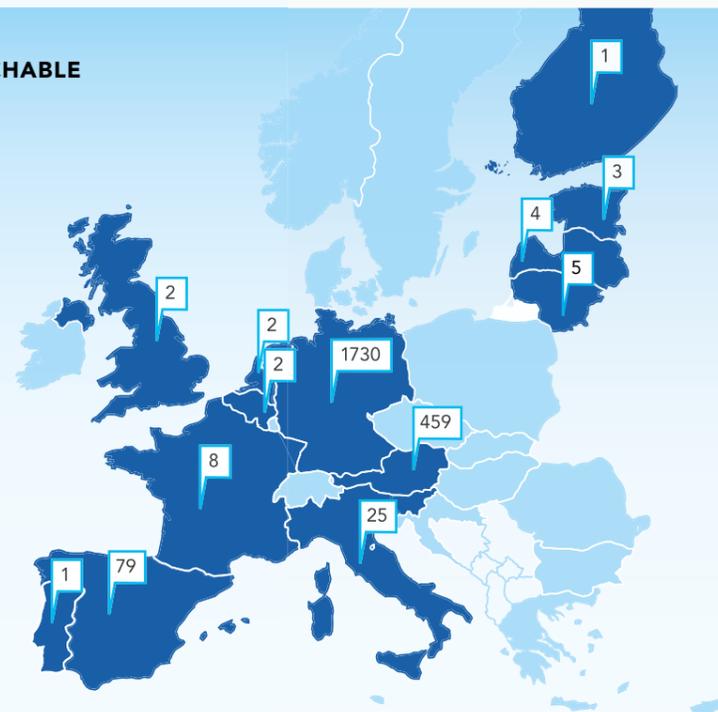
**Pan-European 24/7/365 real-time payment system**

open to any account-servicing payment service provider (AS-PSP) adhering to the EPC SCT Inst Scheme

## SPECIAL FACTS AND FEATURES IN 2018/2019

- SWIFTNet instant introduced as third connectivity option in Q4 2018
- TIPS instructing party functionality for RT1 launched in November 2018
- New daily average record: 133,634 transactions processed in April 2019
- Over 99% of transactions processed within less than 3 seconds

## OVERVIEW OF REACHABLE PSPS BY COUNTRY



## REACH

RT1 extends reach to **over 2,300 payment service providers from 13 EU countries**, which are addressable via the 37 participants connected to the service

## PARTICIPATION

**37**  
Participants



## STEP2 Card Clearing Service

Throughout the period under report, the STEP2 Card Clearing (STEP2 CC) Service provided a reliable service for the clearing and settlement of pre-authorised card-based transactions based on the SEPA Card Clearing Framework defined by the Berlin Group. The Berlin Group is a group of 25 major players in the card industry from 20 countries in and beyond the Eurozone, whose aim is to standardise card clearing across Europe by leveraging SEPA infrastructure.

The service handled on average over 8.36 million transactions per day during 2018. STEP2 CC is currently used by seven participants for debit card transactions under the German girocard scheme. In December 2018, the daily average even reached 11.01 million transactions, representing a growth of 28.86% compared to December 2017.

Its pan-European design, and the fact that it enables users to reap synergies from the reuse of the interbank infrastructure and bank-internal interfaces they put in place for SEPA, make STEP2 CC well-suited for the onboarding of card-initiated payments from other communities in Europe.

### System developments in 2018 and 2019

In 2018, as requested by the STEP2 CC user community and in order to align the service with the STEP2 SEPA Services, EBA CLEARING introduced the possibility for participants to use multiple network channels and perform intraday connectivity switches in STEP2 CC.

The 2019 release consists of improvements to the direct participant work station and the routing tables, in line with the changes planned for the STEP2 SEPA Services.

# STEP2 Card Clearing Service

An ISO 2022-compliant system for settling card-initiated payments

**KEY FACTS AND FIGURES**  
STATUS: MARCH 2019

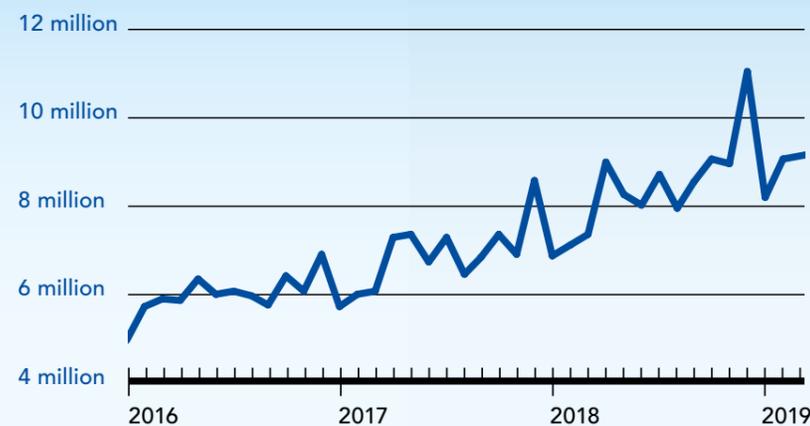
## AVERAGE DAILY VALUE

€486.1 million

## AVERAGE DAILY VOLUME

9 million transactions

## EVOLUTION OF AVERAGE DAILY VOLUME OF PAYMENTS PROCESSED



## LIVE DATE

14 April 2015

## TECHNICAL OPERATOR

SIA

## SETTLEMENT

Positions provided by the Multilateral Netting Module are settled in TARGET2 via the Ancillary System Interface (ASI)

## LEGAL BASIS

Compliant with the SEPA Card Clearing Framework as developed by the Berlin Group, a group of major players in the cards industry from 20 European countries

## FUNCTION

High volume, commercial and retail euro clearing service

for pre-authorised card messages based on a direct debit collection mechanism

capable of routing card clearing messages between Direct Participants

## SPECIAL FACTS AND FEATURES IN 2018/2019

New volume record:  
27.5 million payments

settled on 23 April 2019

## PARTICIPATION

7

Participants

## REACH

Over 2,000 Reachable BICs.

Full reach for the clearing of pre-authorised girocard transactions in Germany

through interoperability with the SCC Service offered by Deutsche Bundesbank.

# SEDA – SEPA-compliant Electronic Database Alignment

EBA CLEARING's SEPA-compliant Electronic Database Alignment (SEDA) Service allows financial institutions to exchange, process and route mandate-related information according to business rules specified by the Italian Banking Association (ABI). It is currently mainly used by Italian banks to exchange mandate-related information connected to SEPA Direct Debits.

## Continued volume increase for SEDA Service

SEDA saw a continued volume growth throughout 2018 with a monthly average of 8.8 million mandate-related information messages. A new all-time record was reached in November 2018 with 14 million messages processed during that month.

# SEDA

A mandate information exchange service for SEPA Direct Debits

**KEY FACTS AND FIGURES**  
**STATUS: MARCH 2019**

## LIVE DATE

14 October 2013

## TECHNICAL OPERATOR

SIA

## LEGAL BASIS

Compliant with rules and guidelines developed by the Italian Banking Association (ABI)

## FUNCTION

The purpose of SEDA is to exchange, process and route mandate-related information between two financial institutions according to the business rules specified by the Italian Banking Association (ABI).

## SPECIAL FACTS AND FEATURES IN 2018/2019

**New all-time record:  
over 14 million messages**

processed in November 2018

## REACH

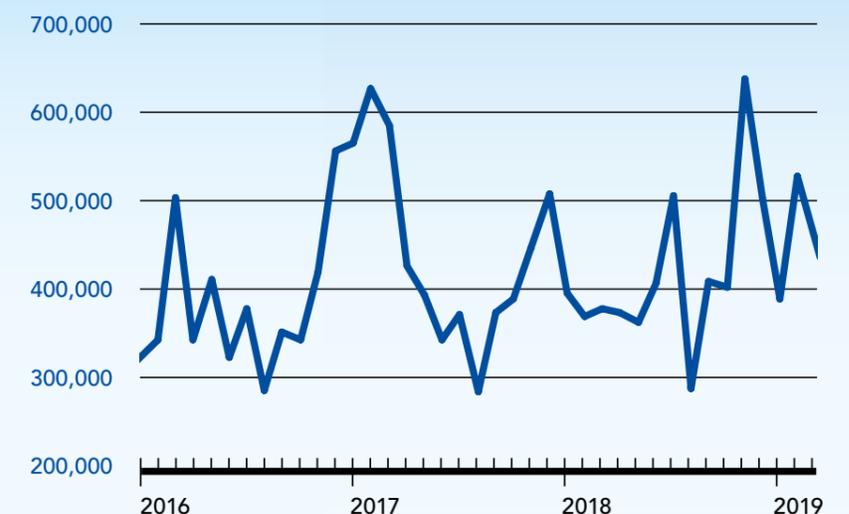
Full reach of all banks that offer SEDA

## PARTICIPATION

**33**

Participants

## EVOLUTION OF AVERAGE DAILY VOLUME OF MESSAGES PROCESSED





# Operations

EBA CLEARING's Operations are spread across several sites located in different countries. They focus on the business administration and monitoring of the EURO1, STEP1, STEP2 SEPA, RT1, STEP2 CC and SEDA Services.

Core activities include clearing and settlement, service monitoring, customer support, crisis and incident management, data and statistical reporting, operational IT management, integration services for new products and functionalities, integration of new participants as well as release and resilience testing activities.

## 1 Clearing and settlement

The systems operated by EBA CLEARING performed in line with the highest resilience and security standards during the period under report.

The service availability of all EBA CLEARING's payment services was uninterrupted from January to December 2018. Furthermore, the validation and settlement of payment instructions were carried out smoothly on a daily basis, including peak volume days.

## 2 Incident management

The Company's incident management processes allowed the accurate and timely handling of the few incidents that occurred in 2018. The incident reporting processes for the EURO1, STEP2 SEPA, RT1 and STEP2 CC Services are in line with oversight requirements. Similar high standards and adapted escalation processes are in place for all other EBA CLEARING payment services.

Since 1 January 2019, EBA CLEARING's incident reporting processes have been aligned with the new major incident reporting framework for operational and security incidents in retail payment systems, which is part of the Eurosystem's oversight framework for payment systems and applies to the STEP2 SEPA, STEP2 CC and RT1 Services.

The incident management arrangements of EBA CLEARING are reviewed and tested regularly to maintain best-of-breed services and processes.

### 3 Business continuity and resilience exercises

EBA CLEARING conducts a significant number of business continuity exercises on an annual basis in co-operation with service participants and key providers to strengthen the business resilience and preparedness of all parties involved. A total of 54 testing exercises were successfully completed in 2018. For 2019, the business continuity and resilience testing programme also consists of 54 exercises in total.

### 4 Customer support

EBA CLEARING's customer support service provides a fully secured first point of contact for user queries. Via an emergency helpdesk available 24/7/365, the service gives practical support and assists users with inquiries related to their service participation and their operations.

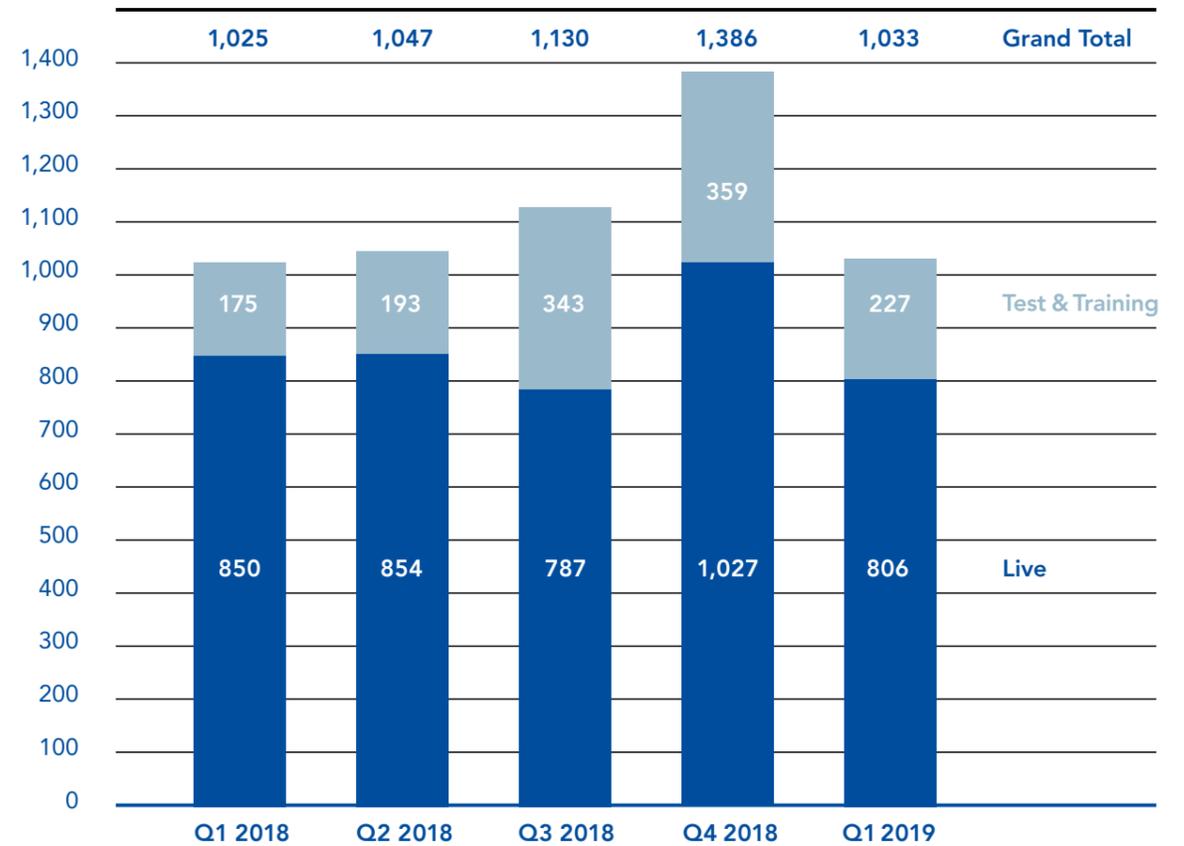
The Company's interaction with its participants is supported by the EBA CLEARING customer portal, which enables user representatives to access online support tools as well as service-specific documentation and information.

To assess user satisfaction with the services provided by the Company, EBA CLEARING conducts an annual quality survey. For 2018, the results revealed a very positive average user satisfaction rate of 4.0 (out of 5) and additional scores confirming a strong customer relationship. According to the 2018 survey, users were most satisfied with the Company's performance regarding service communication, testing as well as release management and participant provisioning.

### 5 Statistics & data reporting

EBA CLEARING's statistics and data reporting services respond to a wide range of needs, including regulatory and oversight requirements and user requests for customised information.

Customer support cases raised in 2018 and Q1 2019



# EBA CLEARING's Request to Pay Initiative

On 12 November 2018, EBA CLEARING announced the launch of a Request to Pay (R2P) initiative with the set-up of an R2P Task force, involving representatives from 30 user institutions from 14 European countries. Together with this task force, EBA CLEARING delivered a blueprint for a pan-European R2P infrastructure solution.

The blueprint sets forth the idea of developing an infrastructure solution that would allow a harmonised and managed exchange of request to pay messages at a pan-European level. This infrastructure layer should be able to support different solutions and services as required for various use cases.

The blueprint was made available to the EBA CLEARING user community for user consultation in April 2019. Based on this consultation and interest expressed by users, the EBA CLEARING Board will decide on the development of the R2P infrastructure solution, which could be implemented by the end of 2020.

## Outline of the proposed R2P infrastructure solution

The proposed R2P infrastructure solution is planned to be a real-time thin messaging infrastructure solution, separated from both the services solutions and payments layer, with the following characteristics:

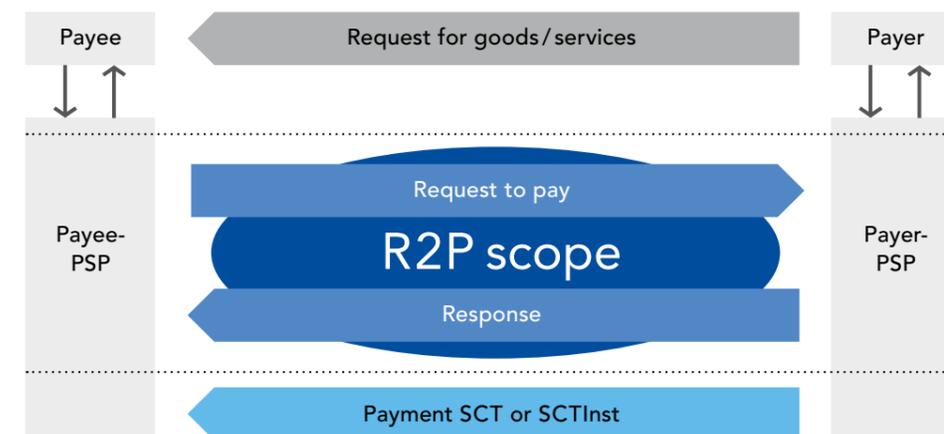
- leveraging RT1 components / set-up for real-time messaging
- allowing both real-time ('Approve Now') and deferred ('Approve Later') responses from the payer
- allowing payments in any (SCT or SCT Inst) payment system
- supporting different solutions and use cases, including e-invoicing presentment and payment (EIPP), person-to-person (P2P), point of interaction (POI) and e-commerce payment interactions

## Contribution to scheme developments

An EPC Request-to-Pay Multi-Stakeholder Group (RTP MSG) is in the process of defining a framework for a request to pay scheme. EBA CLEARING contributes to the developments at scheme level as a member of the RTP MSG and would ensure that an EBA CLEARING R2P infrastructure solution would stay aligned with any scheme developments.

## Scope of a pan-European R2P infrastructure solution

Supporting different use cases and solutions





# Legal, Regulatory and Compliance

## 1 Oversight of the SIPS operated by EBA CLEARING

In August 2014, the Governing Council of the ECB identified the EURO1 and STEP2-T Systems as Systemically Important Payment Systems (SIPS) under the ECB Regulation on Oversight Requirements for Systemically Important Payment Systems (the SIPS Regulation).

During 2016 and 2017, comprehensive oversight assessments of the EURO1 System and of the STEP2-T System against the oversight requirements stemming from the SIPS Regulation were conducted by the ECB as lead Overseer with the involvement of Eurosystem national central banks.

During 2018, the following dedicated oversight assessments were conducted:

- a change assessment of the Q2 and Q4 2018 STEP2-T releases
- a change assessment of the EURO1 2018 functional and technical release

During the period under report, the Company maintained the annual calendar and plan for regular review processes in line with the requirements of the SIPS Regulation. The progress of the required reviews is tracked closely by the Legal and Regulatory Affairs Department.

With respect to the continuous oversight cycle for EURO1 and STEP2-T in 2018, the Company was advised of planned oversight activities for 2018 at the beginning of the year.

The Revised SIPS Regulation of 3 November 2017 was published in the Official Journal (OJ) of the EU on 16 November 2017 and entered into force on 6 December 2017 (20 days after publication in the OJ). The Revised SIPS Regulation foresaw a one-year transition period for compliance by SIPS Operators with the changed or new requirements (i.e. 6 December 2018), save that for compliance with the new requirements regarding liquidity risk and credit risk an 18-month transition period was foreseen (i.e. 6 June 2019).

The main areas of focus for EBA CLEARING as SIPS Operator of the EURO1 and STEP2-T Systems in view of compliance with the Revised SIPS Regulation relate to governance, liquidity and credit risk and tiering risk (i.e. identification and monitoring of material dependencies between participants and entities that are not bound by the rules of the SIPS). In addition, the new Cyber Resilience Oversight Expectations (CROE) issued by the ECB in December 2018 have become part of the requirements on cyber resilience of the SIPS Regulation. A separate oversight assessment was carried out in relation to those (see also below section on cyber resilience).

In the context of these revised SIPS requirements, notably for the credit and liquidity risks, EBA CLEARING conducted an assessment of the new obligations in 2018 and took the opportunity to also assess the evolution of the STEP2-T design, in particular with regard to the settlement model. The Company thus carried out a user consultation on this topic in the first half of the year. In parallel to this consultation process, exchanges with the Overseer took place on the proposed way forward.

Furthermore, EBA CLEARING carried out an assessment of its governance structure in 2018. This assessment concluded that all members of the EBA CLEARING Board are independent directors. Nevertheless, and in line with the mandate by the Shareholders Meeting of 11 June 2018, EBA CLEARING has also taken the opportunity to further strengthen its Board profile by including an 'Outside Director'. The Outside Director will bring a complementary skillset to the Board.

Finally, regarding tiering risks, EBA CLEARING has carried out a tiering analysis for participants in both the EURO1 and STEP2-T Systems. The assessment of material dependencies and the evaluation of risks arising from tiered participation in these systems have revealed no relevant risk for EBA CLEARING operations. These analyses are properly documented and have been shared with the Overseer.

## 2 Oversight of the STEP2 CC system operated by EBA CLEARING

During the reporting period, periodic formal oversight meetings took place between Deutsche Bundesbank, the ECB and EBA CLEARING.

Upcoming changes in relation to the STEP2 CC system are advised to Deutsche Bundesbank in view of a classification to determine whether changes would attract a dedicated oversight assessment. As no changes to the STEP2 CC System were scheduled or carried out during the reporting period, no change assessments were necessary.

## 3 Oversight of the RT1 system operated by EBA CLEARING

In May 2017, the ECB notified EBA CLEARING of the decision of the Governing Council of the ECB to assign oversight competence for EBA CLEARING's new instant payment system, RT1, to the ECB. The ECB cooperates with the Eurosystem central banks on these activities.

RT1 has been classified as Other Retail Payment System (ORPS) as per the revised Eurosystem Oversight Framework for Retail Payment Systems (RPSs). Since 2018, regular formal oversight meetings have taken place between the ECB and EBA CLEARING in relation to RT1 oversight.

In June 2018, the ECB completed the oversight assessment of RT1 against the CPMI-IOSCO Principles for Financial Market Infrastructures (PFMIs) of the Committee on Payments and Market Infrastructures (CPMI) and the Board of the International Organisation of Securities Commissions (IOSCO) applicable to ORPS, as outlined in the revised Eurosystem oversight framework for RPSs. During 2018, actions were taken and discussions with the Overseer were held by EBA CLEARING to address recommendations from the ECB. The approach to the recommendations is being followed up in the context of the continuous oversight activities during 2019.

During 2018, the following dedicated oversight assessments were completed:

- a comprehensive oversight assessment of RT1 against compliance with the applicable Principles for Other Retail Payment Systems (ORPS)
- an ex post facto review of the RT1 Q2 2018 release
- a major change assessment of the RT1 November 2018 release

## 4 Cyber resilience

The global Guidance on cyber resilience for financial market infrastructures was published by the CPMI-IOSCO in June 2016. The Guidance has been developed to supplement the PFMI, which the ECB Governing Council adopted on 3 June 2013 for the conduct of Eurosystem oversight in relation to all types of FMIs.

Overseers developed an oversight approach to assess their FMIs against the Guidance in the form of the CROE, which were issued by the ECB in December 2018.

EBA CLEARING as an operator of SIPS and ORPS falls under the scope of the CROE for EURO1 and STEP2-T at the Advancing level and for STEP2 CC and RT1 at the Evolving level.

In parallel, on 2 May 2018, the ECB published the European framework for Threat Intelligence-based Ethical Red Teaming (TIBER-EU), which is the first Europe-wide framework for controlled and bespoke tests against cyber-attacks in the financial industry. The TIBER-EU framework has been designed for national and European authorities and entities that form the core financial infrastructure, including entities with cross-border activities that fall within the regulatory remit of several authorities.

EBA CLEARING's SIPS fall under the scope of the TIBER-EU framework, which is why the Company has been in dialogue with the Competent Authority to plan the related exercises for EURO1 and STEP2-T.

## 5 Legal advisory group activities

On the occasion of the RT1 June 2018 release, the Legal Advisory Group (LAG) met by conference call on 16 May 2018 to discuss and review the changes proposed to the RT1 Rules and Regulations to introduce i.a. more options for liquidity-serviced participants to choose from for managing their liquidity.

The LAG was further informed of the changes made to the legal documentation of STEP2 and RT1 made in view of the November 2018 releases to the effect of introducing clarifications in relation to the EPC SEPA Credit Transfer and SEPA Instant Credit Transfer Scheme Rulebook updates, as well as optional RT1 closed-user groups and an RT1 TIPS instructing party optional functionality.

As mentioned in the annual report for 2017, a meeting of the LAG took place by conference call on 10 April 2018, where its members discussed the impact of the General Data Protection Regulation (GDPR) on the current roles of EBA CLEARING as a System Operator of the EURO1, STEP2-T, STEP2 CC and RT1 systems. The LAG further accompanied the workstream to document changes desirable for the systems operating on the SIA platform to clarify roles, taking into account the entry into force of the GDPR. In this context, a meeting of the LAG was held by conference call on 15 January 2019 and to review amendments proposed to the system documentation to clarify such roles.

During its 15 January 2019 meeting, the LAG also discussed and reviewed the technical clarifications brought to the EURO1 Rules to allow the continuation of participation in the EURO1 System in the case of a transfer of participation by a participant to a "reorganisation entity".

## 6 Public consultations

On 10 April 2018, the ECB launched a public consultation on the draft CROE. The reply by EBA CLEARING to the public consultation was submitted on 5 June 2018.

Responses made by EBA CLEARING to public consultations are typically available on the website of EBA CLEARING.

# Risk Management, Business Continuity and Information Security

## 1 Internal developments

Throughout the period under report, the Risk Management function was duly sustained, as part of the 'second line of defence'. It was assured that all tools and methodologies were maintained in line with best industry practice and oversight requirements. In addition, efforts continued to keep the level of risk awareness and understanding high among the Company's executives and staff.

Simultaneously, the Enterprise Risk Management Framework was well maintained and subject to further enhancements of the reporting tools.

A regular dialogue took place with the Board Risk Committee (BRC) with a view to assessing and mitigating the Company's top and newly emerging risks.

### Dedicated cyber security-related activities

Throughout 2018, cyber risk mitigation remained a prominent focus of the Risk Management function. In line with its rapid evolution, actionable threat intelligence was collected from multiple highly reputable sources supporting the Company's Cyber Security Operations Centre (C-SOC) activities, which aim to provide both first- and second-line support in cyber-related matters. In addition, new cyber security-related initiatives were coordinated with the Company's critical service providers.



The work strands conducted to comply with the Guidance on Cyber Resilience for Financial Market Infrastructures by the Committee on Payments and Market Infrastructures (CPMI), initially published in June 2016, were finalised in 2018 with the delivery of a Cyber Resilience Framework based on the National Institute of Standards and Technology (NIST) standard.

Following the publication in 2018 of the Cyber Resilience Oversight Expectations (CROE) for financial market infrastructures by the European Central Bank, EBA CLEARING undertook a comprehensive analysis of the requirements as applicable to its systems. As the operator of two Systemically Important Payment Systems (SIPS), EBA CLEARING is expected to demonstrate compliance with two of the levels of expectations (Evolving and Advancing). The Company's self-assessment against the relevant requirements was completed in the first quarter of 2019.

## 2 External developments

Throughout 2018, EBA CLEARING continued to monitor the risk factors around the economic and financial sector in Europe and to assess their potential impact on the Company's services. This work was pursued under the guidance of the BRC and in a dialogue with the Company's critical service providers.

## 3 Risk information sessions

As in previous years, the broader topic of enterprise risk management was a key item on the agenda of multiple bilateral user and country group visits throughout 2018, with a focus on EBA CLEARING's mission, vision, and strategy towards risk. Special attention was given to the evolution of cyber risk management. For 2019, the Company continues to organise dedicated risk sessions for its user communities.

## 4 Business continuity management system

In order to assure continued service to its users, EBA CLEARING continued the maintenance of its Business Continuity Management System (BCMS), which is aligned with the international ISO 22301 standard. The BCMS covers all of the Company's capabilities, i.e. policies, plans, procedures, processes, structures, tools and people necessary to maintain and evolve the business continuity and resilience of the Company's services and activities. In line with industry best practice, a strong focus is put on the organisation and timely execution of business continuity tests.

## 5 Information security

Towards the end of 2018, EBA CLEARING's Information Security Management System was re-certified against the ISO/IEC 27001:2013 standard for another three-year period, until 2022. The re-certification confirmed the Company's continued compliance with the requirements of the standard, which is designed to ensure the selection of adequate and proportionate security controls that protect information assets of the Company and give the necessary confidence to all interested parties.

Throughout the period under report, the Company's Information Security Coordination Group, which is composed of information security coordinators of each unit, continued to meet frequently to discuss any new developments and to stay focussed on further strengthening the Company's information and cyber security risk awareness, culture, and controls.



# Internal Audit

EBA CLEARING's Internal Audit function was maintained in line with best practice and continued its mission as the 'third line of defence' within the Company during the period under report.

The Company's audit strategy and planning for 2018 was established under the guidance of the Audit and Finance Committee (AFC), with which an open dialogue on all audit-related matters was maintained throughout the year. In line with the annual audit plan, various internal and external audits were completed in 2018 as scheduled.

Audit assessments of the Company's most critical service providers took place during the period under report. The results can be classified as assuring.



# Corporate Governance

## 1 Board of directors

### a Board composition

The Company's by-laws, as amended with effect as of 30 November 2018, provide that the Company is managed by a Board composed of not more than seventeen (17) members including the Chairman, the Deputy Chairman and up to two (2) but not less than one (1) Outside Director who are appointed *intuitu personae* by the Shareholders Meeting for a renewable three-year term.

Since the Shareholders Meeting on 11 June 2018, during which Petia Niederländer was elected as Chairman in replacement of Erkki Poutiainen for the remainder of his term of office, and five Board members were elected for a three-year term of office, the changes to the membership of the Board have been the following:

- Effective 18 September 2018, the Board, upon proposal by the Nomination and Governance Committee, co-opted Niklas Lemberg as Board member to fill the vacancy following the appointment of Petia Niederländer as EBA CLEARING Chairman.
- Effective 18 December 2018, the Board, upon proposal by the Nomination and Governance Committee, co-opted Christof Hofmann as Board member to fill the vacancy following the resignation of Christian Westershaus.
- Effective 24 December 2018, the Board, upon proposal by the Nomination and Governance Committee, co-opted Michele Olin as Board member to fill the vacancy following the resignation of Peter Vance.

The appointment of the Board members co-opted by the Board will be submitted for ratification to this Annual Ordinary Shareholders Meeting.

EBA CLEARING has currently 49 shareholders, each holding one share of EBA CLEARING and having one vote at the Shareholders Meeting. All the current members of the Board are employees or officers of EBA CLEARING shareholders, and are considered to be independent since none of the shareholders have a controlling stake in EBA CLEARING.

Board members, other than the Outside Director(s), shall be elected from among employees or officers of the shareholders. The policy for the nomination of candidates to the EBA CLEARING Board of Directors (the Board Nomination Policy) sets the framework for the Board members' nomination process. The Nomination and Governance Committee of the Board maintains a Board target profile to track the desirable collective attributes for ensuring an appropriate mix of technical skills, knowledge and experience on the Board, and assists the Board in ensuring that the Board's composition allows the Board to fulfil its respective roles and responsibilities.

In 2018, the Board undertook a fourth review of its effectiveness. In accordance with EBA CLEARING's Board Evaluation Policy and Methodology, a review of the Board's overall performance and the performance of its individual Board members is conducted on an annual basis.

The members of the Board, other than the Outside Director(s), do not receive any director's fees, but are reimbursed for the travel expenses incurred in the discharge of their duties for the Company.

This Annual Ordinary Shareholders Meeting will be asked to proceed with the election of the Chairman, Deputy Chairman, one Outside Director and three other Board members.

### b Board role and responsibilities

The Board is responsible for setting the strategic direction, overseeing management and adequately controlling the Company, with the ultimate aim of directing the Company towards the fulfilment of its strategic aims and long-term objectives.

### c Board meetings

The following Board meetings took place in 2018 and in 2019 to the date of this report:

- 6 and 7 February 2018
- 3 May 2018
- 18 May 2018
- 4 July 2018
- 27 September 2018
- 14 November 2018
- 26 and 27 February 2019
- 25 April 2019
- 10 May 2019
- 24 May 2019

### Overview of Board members who held office in 2018–2019



**Chairman of the Board**  
**Erkki Poutiainen**  
**Nordea Bank Abp**

Strategy Manager, SVP  
CM Customer Solutions,  
Transaction Banking

Appointed on 06.06.2016  
End of term of office:  
11.06.2018

Chair of the Nomination  
and Governance Committee  
until 11.06.2018  
Chair of the Remuneration  
Committee until 11.06.2018

**Chairman of the Board**  
**Petia Niederländer**  
**ERSTE Group Bank AG**

Head of Group Retail &  
Corporate Operations

Appointed as Board member  
on 06.06.2016  
Appointed as Chairman  
of the Board on 11.06.2018  
End of term of office:  
SHM 2019

Chair of the Nomination and  
Governance Committee  
since 11.06.2018  
Chair of the Remuneration  
Committee since 11.06.2018  
Chair of the STEP2 Business  
Committee until 31.12.2018



**Deputy Chairman of the Board**  
**Robert Heisterborg**  
**ING Wholesale Bank**

CEO Bank Mendes Gans

Appointed on 06.06.2016  
End of term of office:  
SHM 2019

Chair of the Strategy  
and Policy Committee

**Overview of Board members  
who held office in 2018–2019**



**James Barclay**  
JP Morgan Chase Bank N.A.

Executive Director, Global  
Market Infrastructures  
Appointed on 19.06.2017  
End of term of office: SHM 2020



**Jutta Cammaer**  
KBC Bank N.V.

General Manager Payments  
for Corporates  
Appointed on 19.06.2017  
End of term of office: SHM 2020



**Daniela Dell'Arciprete**  
Intesa Sanpaolo S.p.A.

Head of Corporate and Financial  
Institutions Sales and Network  
Management  
Appointed on 11.06.2018  
End of term of office: SHM 2021  
Chair of the Board Risk  
Committee since 24.12.2018



**Petia Niederländer**  
ERSTE Group Bank AG

Head of Group Retail &  
Corporate Operations  
Appointed on 06.06.2016  
End of term of office: SHM 2019  
Chair of the STEP2 Business  
Committee

**Niklas Lemberg**  
Nordea Bank Abp

Head of Payment Industry  
Appointed on 18.09.2018  
End of term of office: SHM 2019  
Chair of the STEP2 Business  
Committee since 01.01.2019



**Kirstine Nilsson Edström**  
Swedbank AB (publ)

Head of Business Infrastructure  
GCP & GCM  
Appointed on 11.06.2018  
End of term of office: SHM 2021



**Christian Rhino**  
Commerzbank AG

Divisional Board Member  
Group Banking Operations  
Appointed on 06.06.2016  
End of term of office:  
SHM 2019



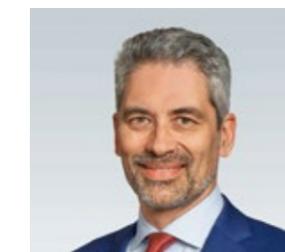
**Luis Pedro Simões**  
Novo Banco S.A.

Co-Head of Payment Operations  
Appointed on 11.06.2018  
End of term of office: SHM 2021



**Raouf Soussi Laghmich**  
BBVA S.A.

Head of Global Product for  
Treasury Solutions  
Appointed on 11.06.2018  
End of term of office: SHM 2021



**Fabio Stragiotto**  
UniCredit S.p.A.

Vice President – Client Access  
Italy and Payment Products  
Global Transaction Banking  
Appointed on 19.06.2017  
End of term of office: SHM 2020



**Frantz Teissèdre**  
Société Générale S.A.

Head of Interbank Relationships  
Appointed on 06.06.2016  
End of term of office: SHM 2019  
Chair of the EURO1 Business  
Committee since 01.01.2019



**Peter Vance**  
Allied Irish Banks, p.l.c.

Head of Banking Operations &  
Customer Services  
Appointed on 11.06.2018  
End of term of office: 14.11.2018  
Chair of the EURO1 Business  
Committee until 14.11.2018

**Michele Olin**  
Allied Irish Banks, p.l.c.

Head of Payments  
RCB Digital Products and  
Payments  
Appointed on 24.12.2018  
End of term of office: SHM 2021

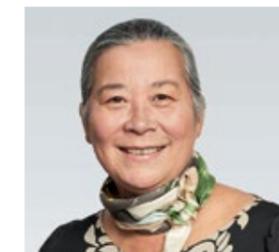


**Christian Westerhaus**  
Deutsche Bank AG

Head of Cash Clearing Products  
GTB Cash Management  
End of term of office: 18.12.2018  
Chair of the Board Risk  
Committee until 18.12.2018

**Christof Hofmann**  
Deutsche Bank AG

Global Head of Payments and  
Collection Products,  
Corporate Cash Management  
Appointed on 18.12.2018  
End of term of office: SHM 2020



**Narinda You**  
Crédit Agricole S.A.

Payment Services  
Head of Strategy and  
Interbank Relations  
Appointed on 19.06.2017  
End of term of office: SHM 2020

## EBA CLEARING Board committee membership in 2018

	Audit and Finance Committee	Board Risk Committee	Strategy and Policy Committee	Nomination and Governance Committee	Remuneration Committee
<b>Number of meetings in 2018</b>	<b>6</b>	<b>4</b>	<b>5</b>	<b>7</b>	<b>4</b>
Petia Niederländer		Observer (since 11.06.2018)	Observer (since 11.06.2018)	Chair (since 11.06.2018)	Chair (since 11.06.2018)
Erkki Poutiainen		Observer (until 11.06.2018)	Observer (until 11.06.2018)	Chair (until 11.06.2018)	Chair (until 11.06.2018)
Robert Heisterborg		Member	Chair		Member
James Barclay			Member (since 24.12.2018)	Member	
Jutta Cammaer		Member (since 24.12.2018)			
Daniela Dell'Arciprete		Chair (since 24.12.2018)			
Christof Hofmann			Member (since 01.04.2019)		
Niklas Lemberg					
Kirstine Nilsson Edström	Member				
Michele Olin					
Christian Rhino		Member			
Luis Pedro Simões	Chair			Member	
Raouf Soussi Laghmich					
Fabio Stragiotto	Member			Member	
Frantz Teissèdre					
Peter Vance			Member (until 14.11.2018)		
Christian Westerhaus		Chair (until 18.12.2018)	Member (until 18.12.2018)		Member (until 18.12.2018)
Narinda You	Member		Member		

## 2 Board Committees

### a Introduction

In 2018, the Board was supported by five Board Committees, composed of Board members, in carrying out its functions: the Audit and Finance Committee, the Risk Committee, the Strategy and Policy Committee, the Nomination and Governance Committee, and the Remuneration Committee.

### b Audit and Finance Committee

The Audit and Finance Committee (AFC) assists the Board in fulfilling its oversight responsibilities for setting out the policy and the guidelines for the internal and external audit of the Company, for defining and monitoring the internal audit requirements and the tasks entrusted to the external auditors, and for reviewing and monitoring the financial situation of the Company.

To this end, the AFC regularly reports on its activities to the Board and

- examines the annual and interim statutory and consolidated financial statements of EBA CLEARING submitted by the Company's management, prior to their examination by the Board. As part of these tasks, the committee reviews and analyses the budget variance, forecast and financial statements;
- gives its opinion on the development of the internal audit function, determines the internal audit plan and receives a summary of the internal audit reports on a regular basis;
- reviews the audit findings of the Company's statutory auditors and the report from the statutory auditors on key audit findings.

The AFC met six times in 2018. Its work particularly focussed on the following items:

- continued improvement and standardisation of financial reporting to assist regulatory compliance and to ensure predictability of overall business performance to gain deeper financial insight and maintain tight control of finances;
- regular review of the predefined key performance indicators for finance and for audit, including analysis against budget to adapt the 2018 forecast, cashflow projections and outlook;
- examination of the statutory and consolidated financial statements for 2018 in view of their closing in 2019 and review of the 2019 budget and capital investment plan;
- review of the internal audit 2018 activity report and approval of the internal audit plan for 2019;

- review of AFC Terms of Reference for subsequent endorsement by the Board;
- examination and approval of a project to upgrade, standardise and improve the Company's financial toolset and processes;
- ensuring that the Highly Liquid Assets (HLA) reserve was at the appropriate level at all times in line with SIPS requirements.

### c Board Risk Committee

The Board Risk Committee (BRC) assists the Board in fulfilling its oversight responsibilities with regards to the risk tolerance of the Company and the risk management and compliance frameworks.

The BRC is composed of Board members designated by the Board; meetings of the BRC are attended by the Company's Chief Executive Officer, the Chief Risk Officer and the General Counsel.

Four regular BRC meetings took place in 2018. One additional meeting was dedicated to the financial market infrastructure cyber threat landscape, its evolution and the state of the Company's Cyber Resilience Framework. The session was attended by the full Board.

In line with its mission, the BRC also monitored the maintenance of the Risk Management Framework and the follow-up of outstanding risks in accordance with the Company's Risk Treatment Plan. The BRC received reports on the top actual and emerging risks and monitored the follow-up actions relating thereto.

Cyber-related risks and oversight expectations remained prominently on the agenda of the Committee throughout 2018.

### d Strategy and Policy Committee

The Strategy and Policy Committee (SPC) addresses the longer-term planning for the positioning and the development of the Company, its payment infrastructure systems and solutions as well as potential new service offerings. In 2018, the Committee met five times.

In 2018 and early 2019, the SPC provided guidance on three focal areas:

- transformation of the services in light of new oversight requirements and evolving user needs;
- development of RT1 in line with growing user needs, in particular to foster RT1 adoption;
- launch and progress of an initiative to work on a pan-European Request to Pay solution.

In detail, the SPC closely accompanied the evolution of RT1 functionality, which was implemented through four releases between November 2017 and May 2019. The Committee also gave input to and guidance on the user consultation process for STEP2 and related considerations on changes to the STEP2 settlement model in light of revised requirements of the SIPS Regulation. The SPC further provided direction on the way forward regarding the ISO migration and the future positioning of EURO1.

Other relevant strategic topics on which the SPC provided guidance included considerations around cross-service alignment as well as the launch and development of a pan-European Request to Pay (R2P) initiative.

The SPC also closely followed and was consulted on oversight developments of strategic relevance. The Committee further engaged in considerations around the general future positioning of the Company's services based on a close monitoring of relevant developments in the European and global payments ecosystem.

### e Nomination and Governance Committee

The Nomination and Governance Committee (NGC) assists the Board in implementing and reviewing the nomination policy and process for Board members and the policy and methodology for Board and individual Board member evaluation. The NGC further monitors the effectiveness of the Company's governance framework. During 2018, seven meetings of the NGC were held.

The major topics addressed by the NGC in 2018 included (i) changes to the composition of the Board and its Committees in relation to the replacement of the Chairman and of some Board members, (ii) a change to the by-laws of EBA CLEARING in line with the approach agreed at the Shareholders Meeting on 11 June 2018 for establishing compliance with the new requirement of the Revised SIPS Regulation regarding the Board composition of a SIPS operator, and (iii) the search for an Outside Director.

In relation to these high-level topics, the NGC dealt with the following tasks in 2018:

- nomination process for a replacing Chairman;
- nomination process for the co-optation of replacing Board members;
- changes in the composition of the EURO1 Business Committee and the STEP2 Business Committee and preparation for the nomination of new Chairs for both Business Committees;
- changes in the composition of the Board Risk Committee and Strategy and Policy Committee;
- assessment of options and preparations of changes to corporate governance documents including the Board nomination policy and the

Company by-laws to establish compliance with the requirement of the Revised SIPS Regulation to include an 'independent director' within the meaning as defined in the Revised SIPS Regulation;

- assessment of options and proposal for a Remuneration Policy for the Board of Directors in preparation of the appointment of an Outside Director;
- assessment of options for selecting candidates to the position of Outside Director

The NGC carried out a significant number of other tasks in 2018, including:

- review of the outcome and guidance on follow-ups of the annual Board performance evaluation for 2017;
- nomination process for the election of Board members at the Shareholders Meeting of 11 June 2018;
- changes in the composition of the Operations and Technical Group (OTG) and Treasury and Liquidity Group (TLG);
- preparation of changes to the Code of Ethics and Business Conduct to update the section on "confidentiality";
- scoping and launch of the annual Board performance evaluation for 2018; and
- review of the Terms of Reference of the AFC.

From January to May 2019, the activities of the NGC were devoted to

- the review of the outcome of the Board performance evaluation for 2018
- the screening of the candidacies for the position of Outside Director
- accompanying the nomination process for the Outside Director as well as for the candidates to fill one third of the seats on the Board, including the positions of Chairman and Deputy Chairman, which will become vacant at the end of the Shareholders Meeting on 17 June 2019.

#### **f Remuneration Committee**

The Board is further assisted by the Remuneration Committee in establishing a sound remuneration framework, which fosters high performance and motivation of staff members in line with the resourcing strategy and the interests of the Company. The Remuneration Committee has delegated powers from the Board in these matters. During 2018, four meetings of the Remuneration Committee were held.

### **3 User say governance**

#### **a Relations with users**

In order to ensure that all types of users are considered in the design and evolution of its systems and offerings, the Company maintains a broad range of communication channels with its (current and potential) users and other stakeholders. There are regular country or regional user meetings with the participation of all respective users and attended by EBA CLEARING executives, where ongoing activities and projects are discussed and feedback is registered. In the context of specific projects, steering groups or task forces may be created to ensure efficient liaison throughout the project or initiative.

Furthermore, the Company organises individual user visits, and when appropriate or desired, roadshows and information campaigns.

#### **b Identical user consultation processes for the SIPS operated by the Company**

On 2 January 2018, an identical structure was adopted for user consultation for the two SIPS operated by the Company. The user consultation processes for the EURO1 System and the STEP2-T System are handled via a dedicated Business Committee for each service; the Business Committees are consultative bodies providing recommendations to the Board.

All decisions affecting a system for which a Business Committee has been established are made by the Board upon consultation with the relevant Business Committee.

Business Committees are chaired by a Board member.

#### **c User consultations for systems and services other than EURO1 and STEP2-T**

The Company consults its users, communities of users and other stakeholders (as required) in the event of changes that affect the Company's services and/or service platforms. The consultation process on changes is, in principle, composed of the following steps: submission of proposals by or to the relevant stakeholders; evaluation of the proposals by the Company, including technical feasibility and cost analysis; and submission of a proposal to the Board for decision on implementation of all or part of the recommended changes.

The adaptations to the governance arrangements for the SIPS operated by EBA CLEARING do not impair the flexibility required to accommodate specificities in relation to given services or initiatives as well as evolving scopes of activity, which may warrant different models for consultation and decision-making. The user say governance for the different systems and services is designed to effectively respond to the stakeholders' needs for efficient organisation of the different groups and their remit.

To allow the Board and management to take account of the interests of the users in its decision-making in relation to the design, rules, overall strategy and major changes to the various systems and services, the Company has, apart from the Business Committees established for the SIPS operated by the Company, established the following user groups:

#### **i RT1 Working Group**

Its objective is to serve as a forum in which direct participants in the RT1 System can discuss and provide feedback on the development, change management and evolution of the RT1 Service, as well as related initiatives.

#### **ii STEP2 CC Group**

Its objective is to serve as a forum in which direct participants in the STEP2 CC Service can discuss and provide feedback on the development, change management and evolution of the service.

#### **iii STEP1 User Advisory Group**

Its objective is to serve as a forum for the STEP1 user community and as a channel to express requirements or proposals to the Company's Board.

### **d Expert Groups and other expert fora**

The following Expert Groups have been established:

#### **i Operations & Technical Group (OTG)**

Its mission is to analyse and review proposals and to formulate recommendations relating to operational, procedural, functional and technical aspects of the systems of EBA CLEARING.

#### **ii Legal Advisory Group (LAG)**

Its mission is to analyse and review proposals from a legal point of view and to formulate legal recommendations regarding the same. The LAG also assists in the monitoring of legal projects and formulates recommendations regarding the resourcing for given projects.

#### **iii Treasury and Liquidity Group (TLG)**

Its mission is to act as an advisory expert group relating to the management and use of liquidity within the systems operated by EBA CLEARING.

Expert Groups provide expert advice for all systems for which a Business Committee is established and can be solicited for input in relation to other systems or services when required or appropriate.

The Company establishes other expert fora in accordance with identified needs. For example, a EURO1 Future Positioning Group was created in 2017 to assist in the analysis and review of options and the formulation of recommendations regarding the EURO1 System and its positioning and value proposition in the medium to long term.

## **4 Other stakeholders**

### **Potential users and other stakeholders**

Apart from the consultation and coordination with user and expert groups mentioned above, the Company organises roadshows and information sessions for wider stakeholder groups when and where relevant. Consultations may also take place on an ad-hoc basis.

### **Overseer and policy stakeholders**

The Company's mission underpins its resolve to contribute to industry initiatives and to engage with industry and policy stakeholders, including regulators, overseers, the European Payments Council, standardisation bodies, and the constituencies entrusted with policy setting.

## **5 Management**

Hays Littlejohn has been serving as CEO of EBA CLEARING since 1 May 2015.

The CEO is responsible for the day-to-day management of the Company, and delegates authorities to the Heads of Unit and staff of the Company. As per best practice and in line with the requirements of the SIPS Regulation, the Company has in place a set of codes and policies including a code of ethics, a remuneration policy and a policy on selection, monitoring and removal of members of management.

Prior to his role as CEO of EBA CLEARING, Hays Littlejohn held managerial and executive positions in global transaction banking at UBS AG. Having joined the Swiss bank in 1991, Hays covered a wide range of areas during his international career at UBS, including information technology, operations, trade finance, product management, relationship management, sales, business development and market infrastructures. Hays also served on the Board of CLS and, for more than 10 years, on the Board of EBA CLEARING.

## 6 Country representatives



**Janina Grönholm**

Baltic Countries,  
Finland and Poland



**Eva Herskovicova**

Czech Republic, Hungary,  
Slovakia and Slovenia



**Katja Heyder**

Austria, Bulgaria, Croatia, Cyprus,  
Germany, Greece, Liechtenstein,  
Luxembourg, Malta, Romania,  
Spain and Switzerland



**Erwin Kulk**

Portugal



**Petra Plompen**

Belgium



**David Renault**

France



**Jette Simson**

Scandinavian Countries



**Alan Taylor**

United Kingdom and Ireland



**Daniela Vinci**

Italy



**André Vink**

The Netherlands

## 7 Transfer of shares and changes in share capital of EBA CLEARING

The following changes occurred in 2018 and in the first few months of 2019 as far as EBA CLEARING share capital and EBA CLEARING Shareholders are concerned:

- With effect as of 1 April 2018, The Bank of Tokyo-Mitsubishi UFG, Ltd (EURO1 Participant and EBA CLEARING Shareholder) changed its name to MUFG Bank, Ltd.
- With effect as of 9 April 2018, Citibank Europe Plc became EURO1 Participant and EBA CLEARING Shareholder in replacement of Citibank NA.
- With effect as of 1 October 2018, Nordea Bank Abp replaced Nordea Bank AB (publ), Finnish Branch, as EURO1 Participant and as EBA CLEARING Shareholder.
- With effect as of 13 March 2019, Standard Chartered Bank AG became EURO1 Participant and EBA CLEARING Shareholder in replacement of Standard Chartered Bank.
- With effect as of 1 April 2019, Wells Fargo Bank NA withdrew as EURO1 Participant and as EBA CLEARING Shareholder.
- With effect as of 1 April 2019, Lloyds Bank Plc withdrew as EBA CLEARING Shareholder.

As of 31 December 2018, the share capital of EBA CLEARING amounted to EUR 51,000.



# Oversight of the Payment Systems of EBA CLEARING

## 1 Oversight of EURO1 and STEP2-T

The ECB Regulation (EU 795/2014) on Oversight Requirements for Systemically Important Payment Systems (the SIPS Regulation) amended in 2017 by EU Regulation 2017/2094 (the revised SIPS Regulation), covers both large-value and retail payment systems of systemic importance, whether operated by Eurosystem national central banks or private entities.

The SIPS Regulation implements the Principles for Financial Market Infrastructures (PFMIs), issued by CPMI and IOSCO in 2012, and applies to Systemically Important Payment Systems (SIPS) in the Eurozone. The system's importance is determined by an appraisal of financial impact, degree of market penetration, a system's cross-border activity and whether the system provides settlement for other financial market infrastructures. No distinction is made for the application of the Regulation between large-value and retail payment systems.

In 2014, STEP2-T and EURO1 were identified by decision of the Governing Council of the European Central Bank (ECB) as Systemically Important Payment Systems under the SIPS Regulation.

The EURO1 System is overseen by the ECB as Competent Authority, with voluntary participation by national central banks of the Eurosystem. EURO1 has been under oversight of the ECB since its launch. The STEP2-T System is also under the oversight of the ECB as Competent Authority with the participation by national central banks of the Eurosystem. Therefore, EBA CLEARING is in the unique position of being the SIPS Operator of two SIPS.



The ECB publishes on its website the list of systems that fall under the SIPS Regulation and of other classified systems. In line with the Revised Oversight Framework for Retail Payment Systems of the Eurosystem and with reference to the most current published list of payment systems according to the Eurosystem's payment system classification, a distinction is made in relation to retail payment systems between:

- Systemically Important Retail Payment Systems (SIRPS)
- Prominently Important Retail Payment Systems (PIRPS) and
- Other Retail Payment Systems (ORPS)

STEP2-T also classifies as a European Systemically Important Retail Payment System (ESIRPS).

## 2 Dialogue with the Overseer and oversight assessments for SIPS

Formal oversight meetings between the ECB/Eurosystem and EBA CLEARING are scheduled to take place on a semi-annual basis with the participation of the CEO of the Company. Regular exchanges take place on any plans and upcoming changes in relation to topics within the scope of the SIPS Regulation.

Any change to the SIPS and ORPS that EBA CLEARING operates are subject to classification. In accordance to this classification, the Overseer determines whether changes to the systems require an ex ante or an ex post facto oversight assessment. The result of these change assessments is formally advised to EBA CLEARING by the Overseer. The Overseer further conducts comprehensive oversight assessments of the systems it oversees with a regular frequency.

The above is done in parallel to the continuous oversight activities by the Overseer on EBA CLEARING's SIPS. An annual plan for these oversight activities is established by the ECB and notified to EBA CLEARING at the beginning of each year.

## 3 Oversight of STEP2 Card Clearing

The primary oversight responsibility for STEP2 CC is entrusted to the Deutsche Bundesbank as lead Overseer, with the participation of the ECB.

In accordance with the Revised Oversight Framework for Retail Payment Systems of the Eurosystem, the PFMI and the Oversight expectations for links between retail payment systems (OELRPS) form the core of the standards to be applied to retail payment systems other than SIRPS by the Eurosystem national central banks. Nine principles of the PFMI apply to both PIRPS and ORPS, of which six with the same level of strictness and three with a slight differentiation (namely Governance, Participant Default Rules and Procedures, and Access and Participation Requirements).

Formal classification of STEP2 CC as Other Retail Payment System is based on the market share of the system at euro area country level.

Regular formal oversight meetings take place between Deutsche Bundesbank/ECB and EBA CLEARING. Upcoming changes in relation to the STEP2 CC system are advised to Deutsche Bundesbank in view of a classification to determine whether changes would attract a dedicated oversight assessment.

#### 4 Oversight of RT1

The primary oversight responsibility for RT1 has been assigned to the ECB, with participation by Eurosystem central banks.

Prior to the go-live in November 2017, the RT1 System was classified as Other Retail Payment System and to date, this classification remains applicable. Therefore, the oversight standards for ORPS are applicable to RT1.

Since 2018, regular formal oversight meetings take place between the ECB and EBA CLEARING. Upcoming changes in relation to the RT1 System are advised to the ECB in view of a classification to determine whether the changes would attract an ex ante or ex post facto assessment from the Overseer.

A comprehensive oversight assessment against compliance with the applicable Principles for Other Retail Payment Systems was completed during 2018 for RT1.

#### 5 Eurosystem cyber resilience strategy

The global Guidance on Cyber Resilience for Financial Market Infrastructures was published by the CPMI-IOSCO in June 2016. The Guidance has been developed to supplement the PFMI adopted by the ECB Governing Council on 3 June 2013 for the conduct of Eurosystem oversight in relation to all types of FMIs. FMIs were required from an oversight perspective to apply the Guidance immediately, and overseers developed an oversight approach for assessing the FMIs within their jurisdiction against the Guidance.

To this effect, the ECB issued the Cyber Resilience Oversight Expectations (CROE) in December 2018. The CROE provides:

- FMIs with detailed steps on how to operationalise the Guidance;
- Overseers with clear expectations to assess the FMIs for which they are responsible; and
- a basis for a meaningful discussion between the FMIs and their respective overseers.



## EBA CLEARING's Subsidiary PRETA

During the period under report, EBA CLEARING took note of the positive evolution of its fully-owned subsidiary, PRETA S.A.S., which for the fiscal year 2018 showed for the first time a profit. PRETA witnessed a steady growth in its MyBank Services throughout 2018 and early 2019 and has been seeing a positive engagement in its Open Banking Europe (OBE) initiative. MyBank kept increasing its market penetration throughout the period under report, particularly in Italy and Greece.

In April 2019, PRETA launched the onboarding process for its OBE directory, a pan-European, centralised and machine-readable repository for entities that are authorised to perform access-to-account services across Europe. The directory is aimed at supporting account-servicing payment service providers and their service providers in meeting access-to-account requirements of the revised Payment Services Directive (PSD2). PRETA delivered the repository in January 2019 with the support of over 40 financial institutions and industry service providers.

# Financial Situation: Statutory Accounts\*

EBA CLEARING completed the fiscal year 2018 with a positive net result before consolidation of EUR 3.2 M.

The Company further improved its cash position in 2018 to EUR 16.1 M (compared to EUR 14.2 M in 2017) and continues to fulfil its obligations to cover General Business Risk, as foreseen under the SIPS Regulation. The 2018 results testify to EBA CLEARING's continuing solid business performance, which involved a further decrease of the Company's average costs per unit.

## Overview of revenues

The revenues increased by EUR 2 M (+2.9% vs 2017), totalling EUR 69.4 M.

Profit & Loss Statement	2017	2018	2018 vs 2017
Fixed fees	18,327	18,805	478
Transaction fees	46,696	47,903	1,207
Other fees	2,406	2,678	272
<b>Revenues</b>	<b>67,430</b>	<b>69,387</b>	<b>1,957</b>

\* All tables in this section are in euro (EUR) thousand, based on rounded figures; in the text, abbreviations are used for thousands (K) and millions (M).



The revenues continued to develop positively in 2018, due to increased service participation and volume growth.

The fixed fee revenues amounted to EUR 18.8 M, which is an increase of EUR 478 K compared to 2017. This growth was mostly caused by the ramp-up of RT1 participation and a further increase in participants joining the STEP2 SEPA Services. The fixed revenues for EURO1 remained stable.

The transaction fee revenues amounted to EUR 47.9 M, which is an increase of EUR 1,207 K compared to 2017 (+2.5%). This increase came from a solid traffic growth in the STEP2 SEPA and CC Services (+6.6%), which was slightly offset by a small reduction of traffic in EURO1 (-1%).

The other fee revenues amounted to EUR 2.7 M, which corresponds to an increase of EUR 272 K compared to 2017. Other fees are one-off administrative fees related to provisioning, joining and exit fees.

## Overview of direct costs

The direct costs increased by EUR 3 M (+6.9% vs 2017), totalling EUR 46.8 M.

Profit & Loss Statement	2017	2018	2018 vs 2017
Operating charges	40,183	42,963	2,780
Other charges	3,594	3,847	253
<b>Direct costs</b>	<b>43,777</b>	<b>46,810</b>	<b>3,033</b>

The services-related charges from providers amounted to EUR 43 M, which represents an increase of EUR 2.8 M compared to 2017. Transaction costs increased in line with the 2018 STEP2 traffic growth. Fixed costs mainly increased due to the expected costs for the first full year of operating RT1.

The other charges amounted to EUR 3.8 M, which corresponds to an increase by EUR 253 K, mainly due to the start of depreciation of the RT1 platform.

## Gross margin

The gross margin decreased by EUR 1.1 M (-4.6% vs 2017), totalling EUR 22.6 M.

Profit & Loss Statement	2017	2018	2018 vs 2017
Revenues	67,430	69,387	1,957
- Direct costs	43,777	46,810	3,033
<b>Gross margin</b>	<b>23,653</b>	<b>22,576</b>	<b>(1,077)</b>

The evolution of the gross margin is in line with expectations, considering the first full year of operations of the RT1 Service as well as the above-mentioned traffic and participation growth in the respective STEP2 Services.

## Overview of operating costs

The operating costs increased by EUR 1.1 M (+6.8 % vs 2017), totalling EUR 17.1 M.

Profit & Loss Statement	2017	2018	2018 vs 2017
Human resources	10,956	11,176	220
External relations	841	845	4
Consultancies	835	1,603	768
Equipment, services	731	755	24
Rent, premises, maint. & cleaning	2,194	2,187	(7)
Other expenses, revenues	423	506	83
<b>Operating costs</b>	<b>15,980</b>	<b>17,072</b>	<b>1,092</b>

In accordance with its continuing efforts to keep the development of its operating costs in line with business growth, the Company, where possible, covered specialised resourcing needs in support areas through consultancies. This led to a slower growth in full-time staff than expected.

## Overview of EBA CLEARING resources

Evolution of Full-Time Equivalents (FTEs)	2017	2018	2018 vs 2017
<b>Average annual FTEs</b>	<b>77.3</b>	<b>81.0</b>	<b>4</b>
<b>FTEs at year-end</b>	<b>82</b>	<b>82</b>	<b>0</b>

## Overview from gross margin to net result

Profit & Loss Statement	2017	2018	2018 vs 2017
<b>Gross margin</b>	<b>23,653</b>	<b>22,576</b>	<b>(1,077)</b>
– Operating costs	15,980	17,072	1,092
<b>Earnings before taxes</b>	<b>7,673</b>	<b>5,505</b>	<b>(2,168)</b>
– Exceptional revenue, expense	562	0	(562)
– Income taxes and participation	2,791	2,311	(480)
<b>Net result before consolidation</b>	<b>4,320</b>	<b>3,194</b>	<b>(1,126)</b>

The earnings before taxes (EBT) amounted to EUR 5.5 M, which represents a decrease of EUR 2.2 M compared to 2017, resulting from gross margin decrease and operating costs increase.

The estimated income tax and participation item stands at EUR 2.3 M for 2018, resulting in a net income before consolidation of EUR 3.2 M.

## Cash flow

The cash flow generated by the Company's activities in 2018 was healthy at EUR 5.9 M (vs EUR 6.5 M in 2017).

Cash Flow Statement	2017	2018	2018 vs 2017
<b>Result before consolidation</b>	<b>4,320</b>	<b>3,194</b>	<b>(1,126)</b>
Amortisation / Depr. / Provision reversal (+/-)	2,174	2,758	584
<b>Cash flow from operating activities</b>	<b>6,494</b>	<b>5,951</b>	<b>(543)</b>

The net cash position of EBA CLEARING continued to strengthen, rising from EUR 14.2 M in 2017 to EUR 16.1 M at the end of 2018 thanks to a continuous growth of cash from operating activities, a limited increase of investments and ongoing efforts with regard to improving the Company's quick liquidity ratio (Cash & Receivables / Payables & Provisions) from 1.52 to 1.67.

## Statutory balance sheet

without consolidated assets and liabilities

Assets	2017	2018	2018 vs 2017
<b>Current assets</b>	<b>Net value</b>	<b>Net value</b>	<b>Net value</b>
Cash position	14,180	16,083	1,903
Receivables	16,296	18,054	1,758
<b>Total current assets</b>	<b>30,476</b>	<b>34,137</b>	<b>3,661</b>
<b>Fixed assets</b>			
Intangible fixed assets	7,541	7,790	249
Tangible fixed assets	485	411	(74)
Intangible fixed assets – under construction	509	302	(207)
Tangible fixed assets – under construction	92	23	(69)
Financial fixed assets	5,679	5,688	9
<b>Total fixed assets</b>	<b>14,306</b>	<b>14,214</b>	<b>(92)</b>
<b>Total assets</b>	<b>44,782</b>	<b>48,351</b>	<b>3,569</b>
<b>Liabilities</b>	<b>2017</b>	<b>2018</b>	<b>2018 vs 2017</b>
Payables	19,117	19,701	584
Provision for risk and liabilities	943	735	(208)
Equity	24,722	27,916	3,194
Retained earnings & shareholders' equity	20,402	24,722	4,320
Result of the year	4,320	3,194	(1,126)
<b>Total liabilities</b>	<b>44,782</b>	<b>48,351</b>	<b>3,569</b>

## Receivables

Accounts receivable as of 31 December 2018, amounting to EUR 18 M, may be split by due date as follows:

	Due in January 2019	Due in December 2018	Due in November 2018	Due in October 2018	Due before October 2018	Total
<b>Number of invoices</b>	301	8	2	15	3	329
<b>Customers</b>						
in K EUR	15,819	76	1	407	7	16,310
<b>Other receivables</b>						
in K EUR	1,744	–	–	–	–	1,744
	97%	0%	0%	2%	0%	100%
<b>Receivables / Revenues</b>	25%	0%	0%	1%	0%	26%
						<b>Total Receivables 18,054</b>

## Payables

Accounts payable as of 31 December 2018 amounted to EUR 19.7 M, including EUR 4.9 M linked to the remaining liability at the end of the year collected in 2016 and 2017 related to the instant payment project, which is to be consumed by the funding institutions in the coming years as usage rights in the RT1 Service.

	Due now	Due in January 2019	Due in February 2019	Due in March 2019	Due after March 2019	Total
<b>Number of invoices</b>	54	76	6	3	1	140
<b>Suppliers / Providers</b>						
in K EUR	1,103	1,227	1,706	7,195	100	11,331
<b>Other payables</b>						
in K EUR	3,470	–	–	–	4,900	8,370
	23%	6%	9%	37%	25%	100%
<b>Payables / Other purchases and external expenses</b>	9%	2%	3%	14%	10%	39%
						<b>Total Payables 19,701</b>

## Allocation of result of the year

The equity position of EBA CLEARING before consolidation with PRETA reached EUR 27.9 M with a net result of EUR 3.2 M.

Since the creation of the Company, no dividends have been paid to Shareholders. It is proposed to maintain this policy and allocate the result of the period under report to retained earnings.



# Appendices

**Appendix 1**  
**List of EBA CLEARING Shareholders**  
**Status: 31 May 2019 (49 Shareholders)**

ABN AMRO Bank N.V.	ERSTE Group Bank AG
Allied Irish Banks Plc	Eurobank Ergasias S.A.
Alpha Bank A.E.	HSBC France
Banca Monte dei Paschi di Siena S.p.A.	ING Bank N.V.
Banco Bilbao Vizcaya Argentaria S.A.	Intesa Sanpaolo S.p.A.
Banco BPM S.p.A.	JPMorgan Chase Bank N.A.
Banco Comercial Português S.A.	KBC Bank N.V.
Banco de Sabadell S.A.	Landesbank Baden-Württemberg
Banco Santander S.A.	Landesbank Hessen-Thüringen
Bank of America N.A.	Girozentrale
Banque et Caisse d'Épargne de l'État, Luxembourg	MUFG Bank, Ltd.
Banque Fédérative du Crédit Mutuel	National Bank of Greece S.A.
Banque Internationale à Luxembourg S.A.	National Westminster Bank Plc
Barclays Bank Plc	Nordea Bank Abp
BNP Paribas S.A.	Novo Banco, S.A.
BPCE	OP Corporate Bank Plc
CaixaBank S.A.	OTP Bank Plc.
Citibank Europe Plc	Rabobank Nederland
Commerzbank AG	Raiffeisen Bank International AG
Crédit Agricole S.A.	Skandinaviska Enskilda Banken AB
Danske Bank A/S	Société Générale
Deutsche Bank AG	Standard Chartered Bank AG
DNB Bank ASA	Svenska Handelsbanken AB
DZ BANK AG	Swedbank AB
	UBS AG
	UniCredit S.p.A.

**Appendix 2**  
**List of Participants in EURO1/STEP1**  
**Status: 31 May 2019**

ABANCA Corporación Bancaria S.A.	STEP1 Bank
ABN AMRO Bank N.V.	EURO1 Participant
Allied Irish Banks, p.l.c.	EURO1 Participant
Allied Irish Bank Plc (GB)	EURO1 Sub-Participant
First Trust Bank	EURO1 Sub-Participant
Aktia Bank PLC	STEP1 Bank
Allgemeine Sparkasse Oberösterreich Bank AG	STEP1 Bank
Alpha Bank AE	EURO1 Participant
Banca del Fucino	STEP1 Bank
Banca di Imola S.p.A.	STEP1 Bank
Banca Monte dei Paschi di Siena S.p.A.	EURO1 Participant
Banca Widiba SpA	EURO1 Sub-Participant
MPS Leasing & Factoring S.p.A.	EURO1 Sub-Participant
Banca Popolare del Lazio	STEP1 Bank
Banca Popolare di Sondrio	STEP1 Bank
Banca Sella S.p.A.	STEP1 Bank
Banco BAI Europa SA	STEP1 Bank
Banco Bilbao Vizcaya Argentaria S.A.	EURO1 Participant
Banco BPM S.p.A.	EURO1 Participant
Banca Popolare di Milano S.p.A.	EURO1 Sub-Participant
Banco Comercial Português S.A.	EURO1 Participant
Banco de Sabadell S.A.	EURO1 Participant
Banco Santander S.A.	EURO1 Participant
Banco Santander Totta, SA	EURO1 Sub-Participant
Santander Consumer Bank AG	EURO1 Sub-Participant
Santander UK Plc	EURO1 Sub-Participant
Bank für Tirol und Vorarlberg AG	STEP1 Bank
Bank GPB International S.A.	STEP1 Bank
Bank of Åland PLC	STEP1 Bank
Bank of America N.A., Frankfurt branch	EURO1 Participant
The Bank of New York Mellon, Frankfurt Branch	STEP1 Bank
Bankinter SA	STEP1 Bank
Banque d'Escompte	STEP1 Bank

Banque et Caisse d'Épargne de l'État	EURO1 Participant
Banque Internationale à Luxembourg S.A.	EURO1 Participant
Banque Michel Inchauspé – BAMI	STEP1 Bank
Banque Palatine	STEP1 Bank
Barclays Bank Ireland Plc, Frankfurt branch	EURO1 Participant
Berliner Sparkasse – Landesbank Berlin AG	STEP1 Bank
BKS Bank AG	STEP1 Bank
BNP Paribas S.A.	EURO1 Participant
Banca Nazionale del Lavoro S.p.A.	EURO1 Sub-Participant
BGL BNP Paribas	EURO1 Sub-Participant
BNP Paribas Fortis	EURO1 Sub-Participant
BPCE	EURO1 Participant
BRED Banque Populaire	EURO1 Sub-Participant
NATIXIS	EURO1 Sub-Participant
BPER Banca S.p.A.	STEP1 Bank
CaixaBank S.A.	EURO1 Participant
Caixa Central de Crédito Agrícola Mútuo	STEP1 Bank
Cassa di Risparmio di Fermo S.p.A.	STEP1 Bank
Cassa di Risparmio di Ravenna S.p.A.	STEP1 Bank
CECABANK, S.A.	STEP1 Bank
Caja de Ahorros y Monte de Piedad de Ontinyent	STEP1 Sub-Participant
Colonya Caixa Pollença	STEP1 Sub-Participant
Liberbank, S.A.	STEP1 Sub-Participant
Unicaja Banco, S.A.	STEP1 Sub-Participant
Citibank Europe Plc	EURO1 Participant
Commerzbank AG	EURO1 Participant
Crédit Agricole S.A.	EURO1 Participant
CA-CIB – Crédit Agricole Corporate and Investment Bank	EURO1 Sub-Participant
Crédit Agricole CariParma SpA	EURO1 Sub-Participant
Crédit Agricole CariSpezia SpA	EURO1 Sub-Participant
Crédit Agricole Friuladria SpA	EURO1 Sub-Participant
Crédit Lyonnais	EURO1 Sub-Participant
Crédit Mutuel – CIC Banques	EURO1 Participant
Crédit Industriel et Commercial	EURO1 Sub-Participant
Crédit Mutuel Arkéa	STEP1 Bank
Credito Valtellinese	STEP1 Bank
Danske Bank A/S	EURO1 Participant
Northern Bank Ltd (trading as Danske Bank)	EURO1 Sub-Participant
Deutsche Bank AG	EURO1 Participant
DB Privat- und Firmenkundenbank AG	EURO1 Sub-Participant
DNB Bank ASA, Filial Finland	EURO1 Participant
DNB Bank ASA, Norway	EURO1 Sub-Participant
DZ BANK AG	EURO1 Participant

Emirates NBD PJSC	STEP1 Bank
ERSTE Group Bank AG	EURO1 Participant
Eurobank Ergasias S.A.	EURO1 Participant
Hellenic Bank Public Company Ltd.	STEP1 Bank
HSBC France	EURO1 Participant
ICCREA Banca	STEP1 Bank
ING Bank NV	EURO1 Participant
Bank Mendes Gans N.V.	EURO1 Sub-Participant
ING Bank NV, France	EURO1 Sub-Participant
ING Bank Śląski S.A.	EURO1 Sub-Participant
ING Belgium N.V./S.A.	EURO1 Sub-Participant
ING Luxembourg S.A.	EURO1 Sub-Participant
Intesa Sanpaolo S.p.A.	EURO1 Participant
Intesa Sanpaolo Bank Luxembourg S.A.	EURO1 Sub-Participant
Joh. Berenberg, Gossler und Co. KG	STEP1 Bank
J.P. Morgan AG	EURO1 Participant
J.P. Morgan Bank (Ireland) Plc	EURO1 Sub-Participant
J.P. Morgan Bank Luxembourg S.A.	EURO1 Sub-Participant
KBC Bank N.V.	EURO1 Participant
Kookmin Bank London Branch	STEP1 Bank
La Banque Postale	STEP1 Bank
Caja Laboral Popular, Coop. de Crédito	STEP1 Bank
Landesbank Hessen-Thüringen	EURO1 Participant
Mashreq Bank psc	STEP1 Bank
MUFG Bank, Ltd., Paris branch	EURO1 Participant
National Bank of Greece S.A.	EURO1 Participant
National Westminster Bank Plc	EURO1 Participant
National Westminster Bank Plc	EURO1 Sub-Participant
Royal Bank of Scotland Plc	EURO1 Sub-Participant
Nordea Bank Abp	EURO1 Participant
Oberbank AG	STEP1 Bank
OP Corporate Bank Plc	EURO1 Participant
OTP Bank Plc.	EURO1 Participant
Rabobank Nederland	EURO1 Participant
Raiffeisen Bank International AG	EURO1 Participant
Raiffeisenlandesbank Oberösterreich AG	STEP1 Bank
Raiffeisen-Landesbank Tirol AG	STEP1 Bank
SECB Swiss Euro Clearing Bank GmbH	STEP1 Bank

Skandinaviska Enskilda Banken	EURO1 Participant
AS SEB Pank, Estonia	EURO1 Sub-Participant
SEB Banka, Latvia	EURO1 Sub-Participant
Skandinaviska Enskilda Banken S.A., Luxembourg	EURO1 Sub-Participant
Skandinaviska Enskilda Banken, Denmark	EURO1 Sub-Participant
<b>Société Générale</b>	<b>EURO1 Participant</b>
Crédit du Nord	EURO1 Sub-Participant
Sparekassen Sjælland	STEP1 Bank
Standard Chartered Bank AG	EURO1 Participant
<b>Svenska Handelsbanken</b>	<b>EURO1 Participant</b>
Handelsbanken, Denmark	EURO1 Sub-Participant
Handelsbanken, Norway	EURO1 Sub-Participant
<b>Swedbank AB (publ.)</b>	<b>EURO1 Participant</b>
Swedbank AB, Lithuania	EURO1 Sub-Participant
Swedbank AS, Estonia	EURO1 Sub-Participant
Swedbank AS, Latvia	EURO1 Sub-Participant
<b>UBS Europe SE, Germany</b>	<b>EURO1 Participant</b>
<b>UniCredit S.p.A.</b>	<b>EURO1 Participant</b>
UniCredit Bank AG (Hypovereinsbank)	EURO1 Sub-Participant
UniCredit Bank Austria AG	EURO1 Sub-Participant

### Appendix 3 List of Direct Participants in STEP2-T Status: 31 May 2019

#### STEP2 SCT

ABN AMRO Bank N.V.	Banque de Luxembourg	DB Privat- und Firmenkundenbank AG (Postbank)
Adyen B.V.	Banque Eni S.A.	De Nederlandsche Bank N.V.
Aktia Bank Plc	Banque et Caisse d'Epargne de l'Etat	DEPObank – Banca Depositaria Italiana SpA
Allied Irish Banks, Plc	Banque Internationale à Luxembourg S.A.	Deutsche Bank AG
Alpha Bank Cyprus Ltd	Barclays Bank Ireland Plc	Deutsche Bundesbank
Arbejdernes Landsbank A/S	Barclays Bank Plc	DNB Bank ASA
AS LHV Pank	Barclays Bank UK Plc	DZ BANK AG
AS SEB Pank	Belfius Bank SA/NV	Elavon Financial Services Limited
Banca Carige SpA	BGL BNP Paribas	ERSTE Group Bank AG
Banca d'Italia	BNP Paribas Fortis SA/NV	First Investment Bank AD
Banca Monte dei Paschi di Siena SpA	BNP Paribas S.A.	Hellenic Bank Public Company Ltd
Banca Popolare di Sondrio SCPA	Bonum Bank Plc	HSBC Bank Plc
Banca Sella Holding SpA	BPCE	HSBC France
Banco Bilbao Vizcaya Argentaria S.A.	bpost SA de droit public	HSBC UK Bank Plc
Banco BPI S.A.	bpost Bank N.V.-S.A.	ICCREA Banca SpA – Istituto Centrale del Credito Coop.
Banco BPM SpA	BRED Banque Populaire	ING Bank NV
Banco Comercial Português S.A.	Bunq B.V.	ING Belgium NV-SA
Banco Cooperativo	Caixa Central de Crédito Agrícola Mútuo	ING Luxembourg SA
Banco de España	Caixa Geral de Depósitos S.A.	Intesa Sanpaolo SpA
Banco de Sabadell S.A.	CaixaBank S.A.	J.P. Morgan AG
Banco Popular Español S.A.	Cassa Centrale Banca – Credito Cooperativo Italiano SpA	Jyske Bank AS
Banco Santander S.A.	Cassa Depositi e Prestiti SpA	KBC Bank N.V.
Banco Santander Totta S.A.	CECABANK S.A.	Klarna Bank AB (publ)
Bank of Aland Plc	Central Bank of Savings Banks Finland Plc	Københavns Andelskasse
Bank of America, NA, Frankfurt Branch	Citibank Europe Plc	La Banque Postale
Bank of Cyprus Public Company Ltd	Clydesdale Bank Plc	Lån & Spar Bank A/S
Bank of Greece S.A.	Commerzbank AG	Landesbank Baden-Württemberg
Bank of Ireland	Crédit Agricole S.A.	Landesbank Hessen-Thüringen (HELABA)
Bank of Slovenia – Banka Slovenije	Crédit Agricole Italia SpA	Latvijas Banka
Bankia S.A.	Crédit Mutuel Arkéa	Lietuvos Bankas – Bank of Lithuania
Bankinter S.A.	Crédit Mutuel – CIC Banques	Lloyds Bank Plc
Banque de France	Credit Suisse (Schweiz) AG	Medirect Bank (Malta) plc
	Credito Emiliano SpA	
	Danske Bank A/S	

MUFG Bank, Ltd., Paris Branch  
 Narodowy Bank Polski – National Bank of Poland  
 National Bank of Slovakia – Národná Banka Slovenska  
 National Westminster Bank Plc  
 Nordea Bank Abp  
 Novo Banco S.A.  
 Oesterreichische Nationalbank  
 OP Corporate Bank Plc.  
 OTP Bank Plc.  
 Rabobank Nederland Utrecht  
 Raiffeisen Bank International AG  
 Raiffeisen Landesbank Südtirol AG  
 RCB Bank Ltd  
 S-Bank Ltd  
 Santander Consumer Bank AG  
 SECB Swiss Euro Clearing Bank GmbH  
 Skandinaviska Enskilda Banken AB (publ)  
 Skandinaviska Enskilda Banken S.A., Luxembourg  
 Société Générale  
 Société Générale Bank and Trust S.A.  
 Spar Nord Bank AS  
 Sparekassen Kronjylland  
 Sparkasse Bank Malta Plc  
 Standard Chartered Bank AG  
 Svenska Handelsbanken AB  
 Swedbank AB (publ)  
 Sydbank A/S  
 The Royal Bank of Scotland Plc  
 UBS AG  
 UBS Europe SE  
 UBS Switzerland AG  
 UniCredit Bank AG (HypoVereinsbank)  
 UniCredit Bank Austria AG  
 UniCredit SpA

## STEP2 SDD CORE

ABN AMRO Bank N.V.  
 Aktia Bank Plc  
 Allied Irish Banks, Plc  
 Banca Carige SpA  
 Banca d'Italia  
 Banca Generali SpA  
 Banca Monte dei Paschi di Siena SpA  
 Banca Popolare di Sondrio SCPA  
 Banco Bilbao Vizcaya Argentaria S.A.  
 Banco BPI S.A.  
 Banco BPM SpA  
 Banco Comercial Português SA  
 Banco Cooperativo  
 Banco de Sabadell S.A.  
 Banco Popular Español S.A.  
 Banco Santander S.A.  
 Banco Santander Totta S.A.  
 Bank of America, NA, Frankfurt Branch  
 Bank of Greece S.A.  
 Bank of Ireland  
 Bank of Slovenia – Banka Slovenije  
 Bankia S.A.  
 Banque de France  
 Banque de Luxembourg  
 Banque Eni S.A.  
 Banque et Caisse d'Épargne de l'Etat  
 Banque Internationale à Luxembourg S.A.  
 Barclays Bank Ireland Plc  
 Barclays Bank Plc  
 Belfius Bank SA/NV  
 BGL BNP Paribas  
 BNP Paribas Fortis SA/NV  
 BNP Paribas S.A.  
 Bonum Bank Plc  
 BPCE  
 BPER Banca SpA  
 bpost SA de droit public  
 bpost Bank N.V.-S.A.  
 BRED Banque Populaire  
 Bunq B.V.  
 Caixa Central de Crédito Agrícola Mútuo

Caixa Geral de Depósitos S.A.  
 CaixaBank S.A.  
 Cassa Centrale Banca – Credito Cooperativo Italiano SpA  
 Cassa Depositi e Prestiti SpA  
 CECABANK S.A.  
 Central Bank of Savings Banks  
 Finland Plc  
 Citibank Europe Plc  
 Commerzbank AG  
 Crédit Agricole S.A.  
 Crédit Agricole Italia SpA  
 Crédit Mutuel – CIC Banques  
 Crédit Mutuel Arkéa  
 Credit Suisse (Schweiz) AG  
 Credito Emiliano SpA  
 Danske Bank A/S  
 DB Privat- und Firmenkundenbank AG (Postbank)  
 De Nederlandsche Bank N.V.  
 DEPObank – Banca Depositaria Italiana SpA  
 Deutsche Bank AG  
 Deutsche Bundesbank  
 DZ BANK AG  
 Elavon Financial Services Limited  
 ERSTE Group Bank AG  
 HSBC Bank Plc  
 HSBC France  
 HSBC UK Bank Plc  
 ICCREA Banca SpA- Istituto Centrale del Credito Coop.  
 ING Bank NV  
 ING Belgium NV-SA  
 ING LUXEMBOURG S.A.  
 Intesa Sanpaolo SpA  
 J.P. Morgan AG  
 KBC Bank N.V.  
 Klarna Bank AB (publ)  
 La Banque Postale  
 Landesbank Baden-Württemberg  
 Landesbank Hessen-Thüringen (HELABA)  
 Lietuvos Bankas – Bank of Lithuania  
 Lloyds Bank Plc

MUFG Bank, Ltd, Paris Branch  
 National Bank of Slovakia – Národná Banka Slovenska  
 National Westminster Bank Plc  
 Nordea Bank Abp  
 Novo Banco S.A.  
 Oesterreichische Nationalbank  
 OP Corporate Bank Plc.  
 Rabobank Nederland Utrecht  
 Raiffeisen Bank International AG  
 Raiffeisen Landesbank Südtirol AG  
 Santander Consumer Bank AG  
 S-Bank Ltd.  
 SECB Swiss Euro Clearing Bank GmbH  
 Skandinaviska Enskilda Banken AB (publ)  
 Société Générale  
 Spar Nord Bank A/S  
 Standard Chartered Bank AG  
 Svenska Handelsbanken AB  
 UBS Europe SE  
 UniCredit Bank AG (HypoVereinsbank)  
 UniCredit Bank Austria AG  
 UniCredit SpA  
 Unione di Banche Italiane SpA

## STEP2 SDD B2B

ABN AMRO Bank N.V.  
 Banca 5 SpA  
 Banca Carige SpA  
 Banca d'Italia  
 Banca Generali SpA  
 Banca Monte dei Paschi di Siena SpA  
 Banca Popolare di Sondrio SCPA  
 Banco Bilbao Vizcaya Argentaria S.A.  
 Banco BPI S.A.  
 Banco BPM SpA  
 Banco Comercial Português SA  
 Banco Cooperativo  
 Banco de Sabadell S.A.  
 Banco Popular Español S.A.  
 Banco Santander S.A.

Banco Santander Totta S.A.  
 Bank of America, NA, Frankfurt Branch  
 Bank of Greece S.A.  
 Bank of Slovenia – Banka Slovenije  
 Bankia S.A.  
 Banque de France  
 Banque de Luxembourg  
 Banque Eni S.A.  
 Banque et Caisse d'Épargne de l'Etat  
 Banque Internationale à Luxembourg S.A.  
 Barclays Bank Ireland Plc  
 Barclays Bank Plc  
 Barclays Bank UK Plc  
 Belfius Bank SA/NV  
 BGL BNP Paribas  
 BNP Paribas Fortis SA/NV  
 BNP Paribas S.A.  
 BPCE  
 BPER Banca SpA  
 bpost SA de droit public  
 BRED Banque Populaire  
 Bunq B.V.  
 Caixa Central de Crédito Agrícola Mútuo  
 Caixa Geral de Depósitos S.A.  
 CaixaBank S.A.  
 Cassa Centrale Banca – Credito Cooperativo Italiano SpA  
 Cassa Depositi e Prestiti SpA  
 CECABANK S.A.  
 Citibank Europe Plc  
 Commerzbank AG  
 Crédit Agricole S.A.  
 Crédit Agricole Italia SpA  
 Crédit Mutuel – CIC Banques  
 Crédit Mutuel Arkéa  
 Credit Suisse (Schweiz) AG  
 Credito Emiliano SpA  
 Danske Bank A/S  
 DB Privat- und Firmenkundenbank AG (Postbank)  
 De Nederlandsche Bank N.V.  
 DEPObank – Banca Depositaria Italiana SpA  
 Deutsche Bank AG  
 Deutsche Bundesbank  
 DZ BANK AG  
 ERSTE Group Bank AG

HSBC France  
 ICCREA Banca SpA – Istituto Centrale del Credito Coop.  
 ING Bank NV  
 ING Belgium NV-SA  
 ING LUXEMBOURG S.A.  
 Intesa Sanpaolo SpA  
 J.P. Morgan AG  
 KBC Bank N.V.  
 La Banque Postale  
 Landesbank Baden-Württemberg  
 Landesbank Hessen-Thüringen (HELABA)  
 Lloyds Bank Plc  
 MUFG Bank, Ltd, Paris Branch  
 National Bank of Slovakia – Národná Banka Slovenska  
 National Westminster Bank Plc  
 Nordea Bank Abp  
 Novo Banco S.A.  
 Oesterreichische Nationalbank  
 Rabobank Nederland Utrecht  
 Raiffeisen Bank International AG  
 Raiffeisen Landesbank Südtirol AG  
 Santander Consumer Bank AG  
 SECB Swiss Euro Clearing Bank GmbH  
 Skandinaviska Enskilda Banken AB (publ)  
 Société Générale  
 Spar Nord Bank A/S  
 Svenska Handelsbanken AB  
 UBS Europe SE  
 UniCredit Bank AG (HypoVereinsbank)  
 UniCredit Bank Austria AG  
 UniCredit SpA  
 Unione di Banche Italiane SpA

**Appendix 4**  
**List of Direct Participants**  
**in STEP2 CC**  
**Status: 31 May 2019**

**STEP2 CC**

Citibank Europe Plc  
Commerzbank AG  
DB Privat- und Firmenkunden-  
bank AG (Postbank)  
Deutsche Bank AG  
Landesbank Hessen-Thüringen  
(HELABA)  
Santander Consumer Bank AG  
UniCredit Bank AG  
(HypoVereinsbank)

**Appendix 5**  
**List of Direct Participants**  
**in RT1**  
**Status: 31 May 2019**

**RT1**

ABN AMRO Bank N.V.  
AS LHV Pank  
AS SEB Pank  
BANCO BPM S.p.A.  
Banca Patrimoni Sella & C. S.p.A.  
Banca Popolare di Sondrio  
Banca Sella Holding S.p.A.  
Banca Sella S.p.A.  
Banco Bilbao Vizcaya Argentaria  
S.A.  
Banco Sabadell S.A.  
Banco Santander S.A.  
Bankia S.A.  
Banca Nazionale del Lavoro S.p.A.  
Bonum Bank Plc  
BRED Banque Populaire  
Bunq B.V.  
Caixabank S.A.  
Central Bank of Savings Banks  
Finland Plc  
Commerzbank AG  
Coop Pank aktsiaselts  
Credit Agricole Cariparma S.p.A.  
Crédit Mutuel Arkéa  
Danske Bank A/S, Finland Branch  
DEPObank – Banca Depositaria  
Italiana SpA  
Deutsche Bank AG  
DZ BANK AG

ERSTE Group Bank AG  
FinecoBank Spa  
Hanseatic Bank GmbH & Co KG  
Intesa Sanpaolo S.P.A.  
J.P. Morgan AG  
Landesbank Baden-Wuerttemberg  
Landesbank Hessen-Thüringen  
Latvijas Banka  
Lietuvos bankas  
Nordea Bank Abp  
OP Corporate Bank Plc  
Raiffeisenbank International AG  
Raiffeisenlandesbank Ober-  
oesterreich AG  
Santander Consumer Bank AG  
Svenska Handelsbanken AB (publ)  
Swedbank AB  
Swedbank AS  
TeamBank AG  
UniCredit Bank AG  
(HypoVereinsbank)  
UniCredit S.p.A.

**Appendix 6**  
**Annual Accounts for 2018**

The annual accounts for 2018  
(and for 2017)  
are attached separately.



Panorama view of Madrid

#### IMPRINT

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Concept and text  
EBA CLEARING  
40 rue de Courcelles  
F-75008 Paris

Graphic design  
formfellows  
Kommunikations-Design,  
Frankfurt am Main

Photographs  
Mirène Schmitz, Bonn  
Norbert Miguletz, Frankfurt am Main  
Johannes Haas Fotografie, Rösrath

Adobe Stock  
iStock by Getty Images  
Shutterstock

Reproductions  
ORT GmbH, Frankfurt am Main

Printing  
Druck- und Verlagshaus Zarbock  
GmbH & Co. KG, Frankfurt am Main

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