Clearstream Excellence in asset services

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Based locally, operating globally

Our pursuit of excellence in asset services encompasses the full end-to-end lifecycle of a security. And for us each step of the journey from issuer, through agent, depository, (I)CSD and finally to investor needs equal attention in order to increase efficiency and ultimately reduce risk.

At Clearstream, we believe competency in four main areas is the key to running a successful operations model:

- competence in understanding specialised product areas
- competence in market knowledge in order to deal with the individual complexities each market brings
- technological competence is needed for repetitive tasks that require swift, accurate processing
- human competence: understanding and anticipating what our diverse customer base requires and having the expertise to help them.

We continue to invest heavily in providing the instruments and services needed to meet industry challenges. Over the past years, we have developed the reach of our operations area both geographically and through award-winning innovation. Expanding our Singapore office, first into an operational centre in 2010 and again in 2014, has allowed us to give highquality service to our Asian-Pacific customers in their own time zone and language. Simultaneously, we have focused various services in our Prague centre allowing us to remain cost conscious.

Always in control

In the case of market crisis or instability, our Business Duty Managers are available 24/7/365 to deal with emergencies, such as processing issues that need solving immediately in order to keep the

markets running smoothly. To ensure full transparency we compile a daily report that highlights potential future market, settlement and asset servicing risks, while our worldwide business continuity planning enables an immediate, controlled response to an incident or crisis.

We are always on top of the situation, thus minimising business and market impact and safeguarding our customers, allowing them to operate without disruption.

Driving innovation and standardisation

For the past decade the international securities market has seen unprecedented levels of complex and consequently difficult to handle securities, especially in cases where much of the handling is not yet fully automated. Multi-currencies and multiple legislations are only a few of the challenges that need addressing if we want to bring simplicity and much-needed harmonisation to market participants.

Our expertise and neutrality within the industry provides a perfect foundation to work with regulatory and governmental bodies in shaping legislation, industry standardisation and infrastructure projects. For many years, we have proactively contributed to market harmonisation and standardisation efforts through a number of international associations and industry forums, such as ISSA and ICMA. Another example is the International Securities Market Advisory Group (ISMAG), which has led to reduced inefficiencies, costs and risks in issuing and servicing international securities.





"Smart partnership" asset servicing in a T2S world

The European post-trade industry is set to transform unquestionably, as the implementation of TARGET2-Securities (T2S) takes place. And, being uniquely positioned on the market, we are able to leverage the true potential T2S offers for the benefit of all our customers.

In short, T2S will decouple European securities settlement in central bank money from asset servicing processes, allowing us to develop advantageous opportunities in both areas. These benefits will go well beyond the Eurosystem's mandate to harmonise settlement and facilitate the crossborder management of collateral within Europe. In fact, our new asset servicing model will deliver enhanced asset servicing and will harmonise our offering across our ICSD and CSD worlds

Clearstream is investing heavily in this new "smart partnership" asset servicing model with its traditional custody partners in the various local markets, including prestigious institutions such as BNP Paribas Securities Services, Intesa Sanpaolo and Banco Bilbao Vizcaya Argentaria. The enhanced model will allow us to:

- maintain Clearstream's proximity to the local market to benefit from the expertise and the market advocacy strength of our partners
- offer the full scope of asset servicing across all T2S markets
- improve further asset servicing levels in line with local market developments (e.g. adaptations required to comply with CASG standards) by harmonising our ICSD/CSD offering in line with market standards and supported by a new state-of-the-art suite of connectivity solutions (ClearstreamXact).

Full and harmonised asset servicing offer for customers

Our asset servicing strategy will bring improved services across our ICSD and CSDs. Our model will allow our ICSD and CSD customers to enjoy the best of both worlds through Clearstream: choice of securities settlement in either commercial or central bank money (on the T2S platform) combined with the outstanding asset servicing our

ICSD already delivers, and further improvements (e.g. market claims and transformations, entitlement pre-advices).

Already underway is further enhancement of our connectivity channels providing customers with a single, integrated platform to access the full range of Clearstream's services across all entities (CBL. CBF and LuxCSD). Customers who operate across the different entities, can enjoy consolidation of their asset servicing activity and associated reporting within all their ICSD and CSD accounts thanks to our connectivity suite, ClearstreamXact. This can be done either via our new online portal or via application-to-application communications based on ISO standards

Migration to T2S started with Wave 1 in June 2015, with Clearstream's planned entry as Issuer CSD for the German and Luxembourg markets in Wave 3 in September 2016. We are adapting our links as and when participating markets adapt their settlement rules ahead of T2S migration.

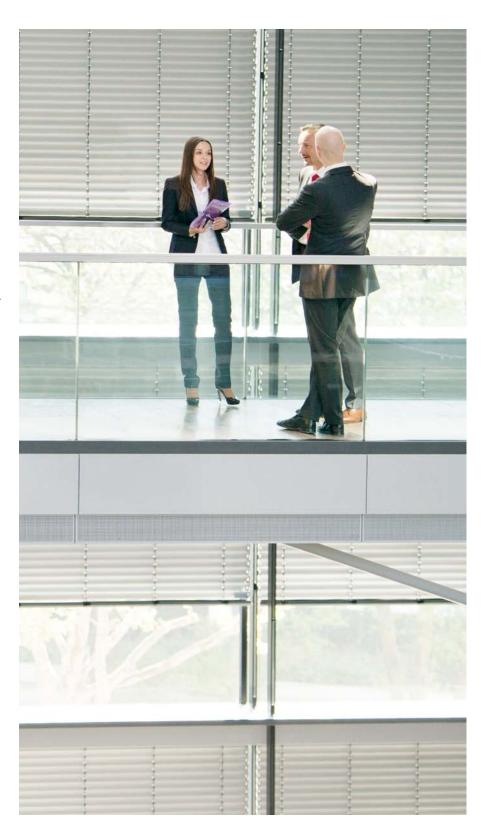
Corporate actions

With both the volume and complexity of corporate actions events increasing annually, accurate information and flexible processes are crucial in reducing risk and costs.

Processing a corporate action is a complex business. It requires proactive support from a dedicated team of experts coupled with frequent, adaptable technical advancement in order to cope with growing industry demands. We are continually investing in this area, developing appropriate tools that increase the quality of our processes as well as advancing standardisation. Investment in straightthrough processing (STP) has helped minimise customers' operational risk as well as improving the timeliness of notifications and event deadlines. Customers who correctly format their instructions now enjoy full straightthrough processing, which enables us to offer better instruction deadlines.

Partnering with the local market and industry leaders

Our strategic model, built on close partnership with key, local agent banks in more than 50 domestic markets, ensures provision of better data quality, aligned with the local market practice, which, in turn, reduces operational risk.



Minimising operational risk

Control measures, integrated into our connectivity platform, CreationOnline, ensure end-to-end efficiency and effectiveness for the management of all your corporate action reporting and instruction:

- Your instructions are fully formatted to match our notifications
- Full adherence to ISO 15022 standards
- Same-day market notifications and same-day settlement of corporate actions proceeds
- Systematic and accurate application of correct event types and available ISO fields, qualifiers and codes for more than 50 events
- Active default management, realtime monitoring of instructions
- Automatic reminder notifications for uninstructed balances on voluntary events
- Ability to route your corporate action reports to multiple final recipients
- Fully customisable reports, subscription contents and timing
- Added-value tools, such as the custody dashboard to easily identify your uninstructed balances
- Real-time instruction status and detailed information on instructed positions
- Receive as many on demand reports and confirmation messages as you want.

Other risk mitigation measures include the four-eye principle performed by our controllers, dedicated quality and risk managers in all our operational centres and systematic spot checking. As part of our standard asset servicing, we support our clients with the completion of any corporate actions participation paper forms, provided this is permitted under the terms and conditions of the issue and/or by the issuer or their agent. Our Corporate Actions Teams are on hand at all times to help and guide you through any queries you may have



Gathering full information about a corporate action

Clearstream's extensive local agent network means we can garner extensive, timely market information for each specific corporate action as well as offer expertise in events processing. We also get involved early in complex events, providing you with thorough information throughout the process.

You are notified of updates as near to real-time as market conditions allow. We produce reference material, fact sheets and procedure guidelines for all events, to help ensure you are fully aware of the details.

As part of our added-value asset servicing, you can also receive corporate action information for securities outside your portfolio, via the "Corporate Action Reference Data report" that covers all eligible securities held in our books. Once you have specified the securities of interest, you can receive all related notifications in a fully-automated and SMPGcompliant way. We are also able to offer the benefit of rights trading for specific markets that allow this

Corporate actions services at a glance

Event reporting services

- Near-time and accurate notifications as per the local market standards
- Same-day market deadlines¹
 - 1 hour before the Eurobond market deadline
- 3 hours before domestic market suppliers' deadlines
- Easy access to timely, relevant, reliable and complete information
- Full adherence to SMPG guidelines
- Ability to manage all corporate actions from CreationOnline.

Event processing services

- Customer focus, clients can reach out to our operations team directly
- Direct access to corporate actions specialists for help with voluntary
- STP processing for best deadlines close to the market
- Same-day credit of proceeds
- Proactive support for and advice on the completion of additional required documentation
- Full access to events-related documents
- Advisory assistance to issuers e.g. insolvency, bankruptcy.

¹ Targeted deadlines, may be subject to exceptions

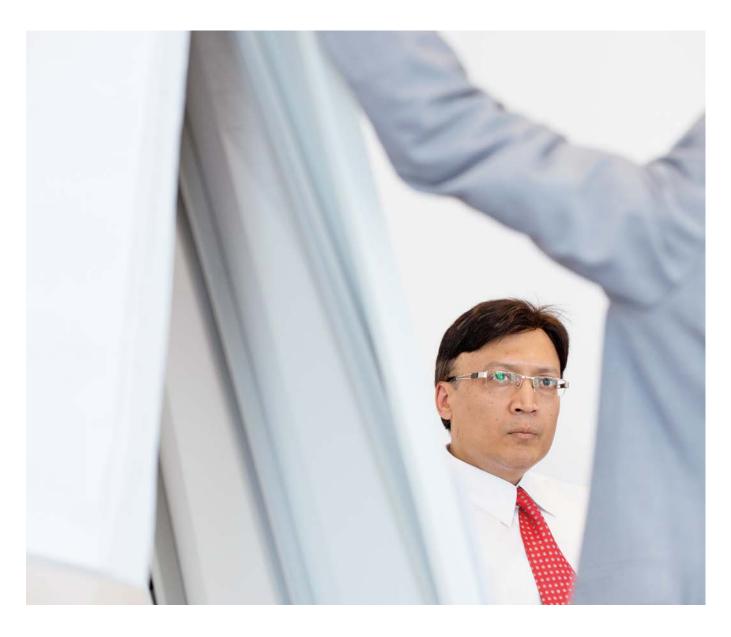
Income

Our flexible services can be adapted to your company's individual needs

You receive a reliable golden copy

We believe the quality of the entire income process stems primarily from data source accuracy. Automated data gathering and our cleansing and scrubbing tool enable us to transform comprehensive, high-quality securities reference data into an enriched, reliable golden copy.

By delivering reliable and consistent reference data we have reinforced the quality and control of the entire process chain, in particular, the notification service and event execution. Continuous investment upstream of the notification process has contributed to solid gain at the execution and control level of the chain. Our adherence to ISO standards is, unquestionably, one of the best on the market.





Streamlining your income processing

Our straight-through processing and standards-compliant reporting services mean you can enjoy automated income processing. Recently, we introduced some new ISO qualifiers in MT564 that further improved straight-through processing of income payments and facilitated reporting to the necessary authorities. Latest enhancements of the MT564 and MT566 messages link also allow for better reconciliation between notification and confirmation messages and higher compliance with ISO standards.

Customers have a choice between different reporting channels and formats. The newly introduced Excel format facilitates monitoring and analysis of the high volumes of income events.

Informing you after payment date

A week after the payment date, we proactively update our customers on the status of any outstanding payments via MT564. These payments are reported until execution or up to 30 days after the payment date and

information can be retrieved at any time via CreationOnline.

In the extremely rare case of reversal, we provide customers with the relevant information well in advance: as soon as it is collected from the upstream payment intermediaries.

You can rely on our expertise and support

The Income Operations Department

covers our complete income business. handling every stage of the process with the greatest care and ensuring the highest consistency throughout the entire income events lifecycle. Our mature, comprehensive package of income services allows our dedicated and highly professional teams to respond quickly to changing trends and, subsequently, to your needs. Listening and understanding these needs allows us to continuously improve and fine-tune our processes. In order to assess and evolve our services in line with current requirements, our income team meets regularly with numerous customers and is in regular contact with the depositories and market participants. This enables us to build a flexible value proposition that can be adapted to each individual client

Income processing at a glance

Covering the complete income lifecycle and ensuring the highest accuracy and consistency across all markets and asset classes.

Event reporting

- Near-time and accurate notifications as per the local market standards
- Flexible business rules allowing constant fine-tuning and ranking of information
- Full adherence to SMPG guidelines
- Usage of the full lifecycle of income processing message types (MT56x)
- Dedicated event types, allowing systematic and accurate application of available ISO fields, qualifiers and codes
- Ability to manage all income events from CreationConnect.

Event processing

- Income and redemption payments in the original payment currency with the possibility of converting into another currency upon customer request, covering the majority of eligible currencies
- Reconciliation of income proceeds to ensure payment finality
- Proceeds distributed at the start of the payment date for contractual payments (based on thorough internal risk assessment) and upon receipt for actual payments
- Information about amendments and reversals

Tax processing

Our tax experts continuously enrich our suite of tax services, addressing every new challenge in today's fast changing and ever-complex tax environment. With the introduction of regulations such as FATCA, tax and compliance issues become more and more intertwined and, by default, increasingly convoluted. We closely monitor these regulatory developments and are committed to helping our customers minimise compliance risk by providing comprehensive information and advice.

We provide a broad range of tax services across all markets, acting in some of them as a Withholding Tax Agent (e.g. Italy) or as a Qualified Intermediary (U.S.A.).

Dynamic relief at source service

Clearstream actively accompanies its clients throughout the relief at source procedure, optimising the tax process and minimising the need for reclaims. If a reclaim is necessary, we aim to handle the process within 48 hours. Automatic notifications for certification on upcoming events, online certification or upload of beneficial owner data are part of our electronic suite of tools, giving complete support for your successful relief at source experience.

Comprehensive withholding tax services, covering a wide variety of asset classes and taxable events

ProActTax reclaim service

Because tax reclaims remain highly complex and time-consuming, we prepare the required reclaim forms and certifications on your behalf (and the underlying beneficial owners). We also support the certification flow towards the respective tax authorities.

Comprehensive tax information at your fingertips

Finding correct and timely tax information is a real challenge. At Clearstream, we deploy our forces across multiple market places and tax working groups collecting first-rate tax information and distributing it via multiple channels: comprehensive tax guides, dynamic monitoring and reporting, email alerts, tax news flashes, tax workshops and market webinars.

Our dedicated teams of tax experts and professionals bring a strong combination of tax and legal knowledge that provides our clients with comprehensive guidance across a broad range of tax procedures in more than 30 markets worldwide.

The Tax Support Team, with their solid knowledge, multiple languages and highly flexible workforces, guarantee rapid and efficient resolution to all your questions. Meanwhile, the regular contact by our Tax Intelligence Team with the tax authorities ensures that our clients have reliable support and the most updated tax market information.

Tax services at a glance

Tax processing services

- Relief at source
- Quick refund, standard refund and reclaim
- Transparency and market information management.

Tax reporting

- Tax alerts on changes in regulation
- Tax matrix and comprehensive tax guides per market via Clearstream website
- Description of eligibility criteria
- Procedures for relief at source
- Procedures for tax reclaim
- Ongoing notifications of tax relief possibilities
- Dynamic view on reclaim status
- Ability to manage the full tax cycle from CreationOnline
- Alert for annual certificate renewal.

Tax processing

- Online tax certification tool (incl. upload of bulk data)
- Online beneficial owners data transmission.

Customer servicing provided by specialised Tax Helpdesk

- Assessing documentation needs
- Pre-filling of documentation (PoA) and tax certification forms
- End-to-end tailor-made proactive reclaim service consistent with requirements of local tax authorities
- Tax workshops organised in different locations and frequent tax webinars.

Proxy voting

Fully-comprehensive, industry-leading proxy voting service

Our enhanced proxy voting service transformed our existing offering into an industry leader and covers all meeting types across all our proxy voting markets and eligible instrument types - including domestic markets, Eurobonds and investment funds.

It supports domestic and cross-border shareholders in their governance rights and helps enable active ownership to meet corporate governance guidelines. such as the EU Shareholders Rights Directive.

Our integral partner in this initiative, Institutional Shareholder Services (ISS), has a dedicated team of global procurement professionals and governance analysts with more than 26 years of experience in the process of acquiring, analysing and processing meeting information for over 100 global markets.

In November 2014, we implemented the new ISO event qualifier BMET for bondholder meetings, which allows customers to tailor the number of notifications they receive therefore obtaining more streamlined, specific data.

State-of-the-art technology

Through standardisation and automation, we are helping you to manage your proxy voting process in an efficient, timely manner. You have a choice of media for information and voting instruction either via ISS' proven platform or SWIFT that adhere to both ISO 15022 and 20022 standards.

You benefit from real-time updates to research, meeting and account information, including the ordering of entrance cards. A fully configurable reporting with alert function notifies you of exceptions, key issues and other items requiring attention.

ISS' state-of-the-art proxy voting platform ProxyExchange provides a simple and intuitive voting interface with context-rich voting decision screens that contain all relevant content.





Market claims

You receive all details in one report

As part of our added-value asset servicing, all information on market claims for against payment instructions is automatically detected and provided to our customers in a user-friendly "Market Claims Report". The report, which is available in several formats, helps you efficiently monitor claims and facilitates risk mitigation.

Updates to the processing status of the claim occur on a daily basis and the report includes:

- Market information and financial instrument details
- Event details, including payment information and applied tax
- Underlying trade details of the internal or cross-border trade subject to market claim
- Market claim processing status.

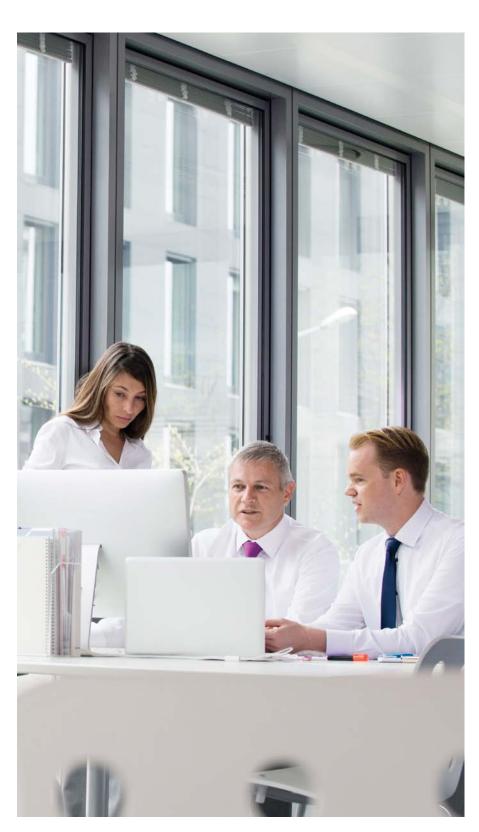
Market claims, detected on internal matched against payment instructions between our customers, are automatically processed.

Clearstream asset servicing

Over 45 years' experience complemented by local market expertise and state-of-the-art technology

- 13.2 trillion EUR assets under custody
- 5.8 trillion EUR domestic equities and fixed income instruments
- Linkage to 54 domestic markets plus Eurobond market, interacting with 80+ depositories
- Competitive deadlines close to the market
- Partnership to bring local market expertise
- Active contribution to major international working groups
- 4 asset servicing locations (Frankfurt, Luxembourg, Prague and Singapore) with more than 200 asset services specialists
- 50+ different event types. Predictable or unpredictable; voluntary, mandatory or conditional
- More than 92,000 corporate actions events announced and processed out of which 35% are voluntary corporate actions. 81,000 inbound corporate actions instructions processed
- More than 398,000 income events processed per annum. 38% of these income events are variable rate interest payments
- 100.000 tax certificates and 40.000 tax reclaims handled
- 240 tax announcements and news flashes published. More than 30,000 queries handled by the tax helpdesk from three locations.





Contact details

For more detailed information on any of our asset services, please contact your relationship manager or email productmanagement@clearstream.com.

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