



Securities Services

Your one-stop shop for post-trade services



SIX Securities Services

SIX Securities Services is one of Europe's best performing post-trade service providers. SIX Securities Services offers comprehensive clearing, settlement, custody, collateral management and repo trading services for Switzerland and for clients in over 50 markets around the world. In addition, as a key part of the Swiss Financial Market infrastructure, SIX Securities Services operates the platform for the electronic processing of land registration and mortgage transactions, the trading platform for the money market transactions of the Swiss National Bank and the platform for the settlement of interbank payments. Furthermore, SIX Securities Services offers fiduciary management of registered mortgage notes, as well as e bills and direct debits.

www.six-securities-services.com

AWARD-WINNING POST-TRADE SERVICES FOR SWITZERLAND AND THE WORLD

Once a trade has been agreed on an exchange, SIX Securities Services steps in. Providing services from clearing (where it acts as a Central Counterparty, CCP) to settlement, custody, securities finance, tax reporting, fund services and payments.

FACTS AND FIGURES

International central securities depository (ICSD)

in 55 markets



2 million times

How often SIX acts as the central counterparty (CCP) in clearing each day

CHF 15 billion a day

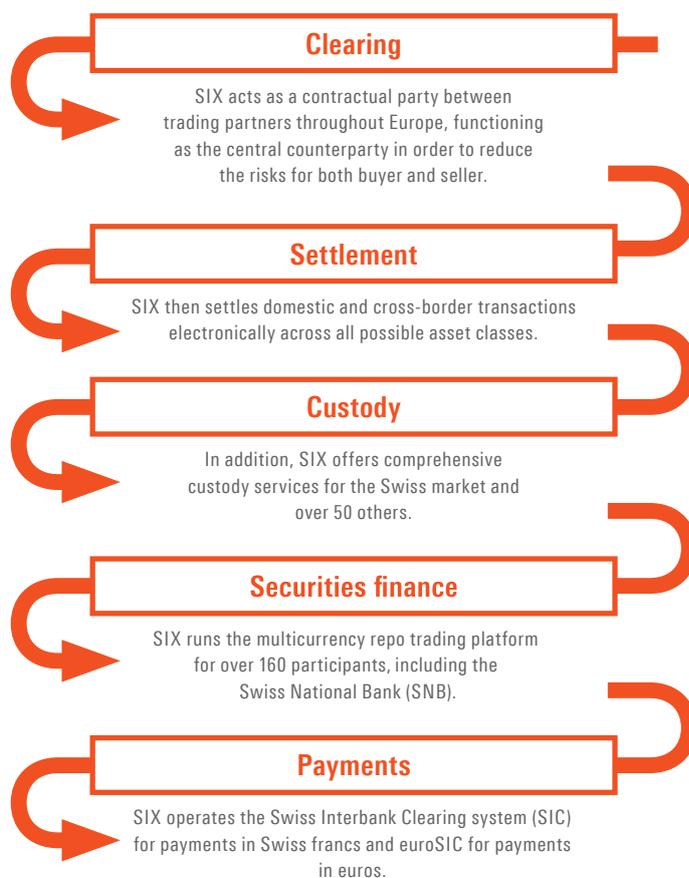
flows back and forth in interbank payments via euroSIC (Swiss Interbank Clearing)



CHF 3,150 billion

was managed in custody accounts by SIX as the central depository (CSD) for Swiss securities at the end of 2016

THE POST-TRADE VALUE CHAIN



WORTH TO KNOW

→ Excellence

In 2015, 2016 and 2017 SIX Securities Services topped the Global Custodian Magazine's survey of "Agent Banks in Major Markets" for Switzerland and as an International Central Securities Depository (ICSD).

→ Supervision

SIX has a banking license in Switzerland and is deemed systemically important. It is overseen by the Swiss Financial Market Supervisory Authority (FINMA) and the Swiss National Bank (SNB).

→ Land registry data

SIX Terravis is the electronic information portal for land registry data and official cadastral survey data in Switzerland.

→ Payments & e-bill solutions

SIX operates real-time payments between banks, as well as platforms for direct debits and e-bills.

→ High-security safekeeping

SIX maintains one of the world's most up-to-date systems for the safekeeping and administration of securities.

→ Allocation and administration of currency codes worldwide

SIX is responsible for the allocation and administration of standardized currency codes (e.g. CHF, GBP, EUR) worldwide.





Our Advanced Services

- Advanced Settlement
- Tax Reclaim

Transformation and innovation are the key to our long-term success



The fundamental ongoing changes in the banking sector are continuing to be reflected in the business forecasts of banks – our clients. They are trying to increasingly automate their standard processes, with one of the results being a reduction in complexity and costs. Our clients are increasingly willing to make use of third-party technical applications from external providers in order to drastically reduce their massive costs over the long term.

This is where SIX Securities Services comes in, with its Advanced Services – a package of value-adding solutions.

Our most urgent primary goal is to move from a more transaction-based approach to a process- and service-oriented approach. Our Advanced Services help cut back on operational complexity, which results in our clients being able to reduce their operational risks and costs. This will allow them to concentrate fully on their core business activities and strengths.

I am convinced that together with our committed people, we will be able to successfully navigate this path of transformation and consolidate SIX Securities Services' position as an innovative, pioneering and sustainable provider of post-trade services.

Kind regards
Valerio Roncone
Head Markets & Clients
Member of the Management Committee
SIX Securities Services

Imagine reducing your settlement costs by up to 30%.



Advanced Settlement®.
From SIX Securities Services.

- Reduce risk
- Reduce costs
- Increase performance

Growing pressure from your customers to reduce your margins, coupled with the increasing costs of compliance, make this the perfect time to review your business strategies and free up resources to focus on core revenue and growth. One area with excellent cost-saving potential is settlement.

As your leading partner in Swiss and International securities settlement, SIX Securities Services is proud to offer you the latest in value-added post-trade solutions:

Advanced Settlement®.

By taking over your entire settlement work-flow from execution to settlement, we maximize your efficiency and profitability while reducing your risks and costs – with no compromise on quality. By choosing SIX Securities Services – the backbone of the Swiss financial market place – you guarantee yourself not just the highest levels of performance but also an experienced and trusted partner.

ASCS Post-Trade Workflow

| Counter-party | Bank | SIX SIS | SECOM | CSD | Process Steps | Process description |
|---------------|------|---------|-------|-----|--|--|
| 1 | 1 | | | | – Trade Execution | 1 Bank executes a trade with its counterparty via corresponding trading venue and receives basic trade information from the trading venue after its execution. |
| | 2 | 2 | | | – Transmission of Instruction | 2 Bank transmits basic trade information to SIX SIS using SWIFT message format via corresponding gateway/network. SIX SIS stores the message details. |
| | | 3 | | | – Generation of Settlement Instruction | 3 The basic trade information from the bank is enriched with corresponding SSI information at SIX SIS. Further, SIX SIS determines the relevant market requirements based on the trade information from the bank and amends the instruction accordingly. |
| | | 4 | | | – Netting of Settlement Transactions | 4 Following the generation of enriched settlement instructions, SIX SIS undertakes netting for transactions that require netting. For settlement transactions that do not require netting, this step is skipped. |
| | | 5 | 5 | 5 | – Processing of Settlement Instruction | 5 SIX SIS sends the enriched settlement instruction via SECOM to the CSD for processing. The CSD validates the instruction in regards to market requirements in place and subsequently matches both instructions from buyer/seller. Following the successful matching, the exchange of funds between the parties is finalized via CSD. |
| | 6 | 6 | 6 | 6 | – Monitor Settlement Transactions | 6 The bank is informed about the finalization of settlement and the status is updated at SIX SIS. |

Reduce your risks through our specialized information services.

We generate and enrich your settlement instructions for you.

Through our Advanced Settlement offering we take out the operational risk for you by generating and enriching your settlement instructions. This minimizes the risk of settlement failure and increases your STP rates for all transactions (exchange traded, OTC and many others).

We enter and maintain your Standing Settlement Instructions for you.

As a trusted partner we take over the entire responsibility of all your Standing Settlement Instructions (SSIs), reducing your operational complexity and risk exposure even further.

We manage your SSIs centrally and proactively. There is only one record for each counterparty that needs to be maintained – and it's done efficiently and effectively by SIX Securities Services.

We update and maintain the guides to market rules.

This service is fully provided by SIX Securities Services and saves you valuable operations resources. No further market rulings or specifics are needed. We take care of everything.

We monitor, clarify and resolve your settlements.

Your settlements are monitored closely and – if applicable – we get in contact with the counterparty in due time to ensure timely settlement. In the rare event that action should be required from you, you will be presented with all pertinent information to ensure you can act swiftly without any further clarification to be made.

Reduce your costs through our specialized technology and value-added services.

Powerful Netting

Through its Advanced Settlement offering, SIX Securities Services gives you the power to net your settlements and eliminate unnecessary and excessive costs.

Exception Handling

As an international client, you benefit from a full range of exception-handling processes that we carry out on your behalf.

Your operational risk and responsibility is fully managed by SIX Securities Services and could reduce your settlement operational costs by up to 30% while reducing risks across your organization.

Advanced Settlement Services.

Your benefits at a glance:

SIX Securities Services, as a specialist settlement service provider and client-driven organization, is able to understand your needs, create specific solutions for you, and deliver them in a way that is quick, cost-effective and adds real value to your bottom-line.

- Reduce operational complexity
- Reduce operational costs by up to 30%
- Reduce operational risk
- Increase your client focus and revenues for core businesses
- Engage with a trusted partner

For more information, please contact our Relationship Management.

SIX Securities Services
Pfingstweidstrasse 110
P.O. Box
CH-8021 Zurich

T +41 58 399 3111
www.six-securities-services.com

All gain. No pain. For banks and investors. Introducing Advanced Tax Services – Reclaim

Tax Reclaim

Tax Reclaim. From SIX Securities Services.

- End-to-end tax reclaim chain
- Greater efficiency through reduced complexity
- Higher returns for investors
- Business opportunities for banks
- Custody independent

SIX Securities Services now offers an end-to-end service for the reclaim of withholding taxes – a market first. The ‘Tax Reclaim’ service creates significant opportunities for banks and investors to optimize revenues and returns that – due to cost considerations – were only available to large scale investors in the past.

Reclaiming withholding taxes used to be a complex, country-specific and opaque process for banks and investors. The new Tax Reclaim service from SIX Securities Services changes the way tax reclaims will be processed possibly forever. With this new offering, SIX Securities Services takes over the entire process chain from market-specific tax form creation, through coordinating with relevant tax authorities right up until

tax refunds. This approach streamlines and optimizes the complete value-chain – banks gain efficiency through reduced complexity and new clients. And investors profit from higher returns on their investments.

Rely on advanced technology and long-term tax expertise

This new service is not a pure software solution nor solely dependent on tax expertise. It combines an innovative technology with the profound know-how of our tax experts and our experience in setting up efficient and cost-effective processes. The new Tax Reclaim service satisfies the demands for easy and smooth handling of tax reclaims and can also be used for assets deposited outside SIX Securities Services (custody independent)!

Broaden your service offering and generate additional revenue for your banks and your clients

Double taxation leads to significantly lower returns for investors, estimated to be worth billions per year. Tax Reclaim from SIX Securities Services generates economies of scale across all stakeholders resulting in significant cost savings for banks. At the same time, investors can optimize their after tax portfolio performance significantly. All gain. No pain.

Benefit from seamless processing and our strong relationships with tax authorities

As part of this service, SIX Securities Services generates and prepares all required tax forms and certifications in cooperation with the relevant tax authorities on behalf of the corresponding beneficial owner.

Ensure that your data is well protected

Being systemically important and regulated by the Swiss Financial Market Supervisory Authority (FINMA) and the Swiss National Bank (SNB), SIX Securities Services is subject to rigorous data protection obligations. Therefore, client data security is assured at all times.

Advanced Tax Service – Tax Reclaim

All gain

- **Enhanced quality:** automated data enrichment, ongoing regulatory compliance
- **Modularity:** adapts industry/regulatory changes; market specific client tax reports
- Greater **savings** for banks
- Better **returns** for investors

No pain

- **Reduced risk:** full audit trail and consistent processes
- **Improved compliance:** complies with current tax regulation/associated reporting requirements

For more information, please contact our Relationship Management.

SIX Securities Services
Pfingstweidstrasse 110
P.O. Box
CH-8021 Zurich

T +41 58 399 3111
www.six-securities-services.com





Our Core Services

- Clearing Services
- Custody Services
- Vault Services
- Asset Servicing
- Securities Finance
- Issuer Services
- Global Fund Services
- Trade Repository

SIX x-clear: Your choice for pan-European multi-asset clearing.



Multi-asset Clearing Services. From SIX Securities Services.

- Real-time risk management
- Minimized counterparty risk
- Competitive fee structure
- Cross-margining and enhanced settlement netting

SIX Securities Services – through SIX x-clear Ltd – is one of Europe’s foremost qualified central counterparty (CCP) clearing houses for a range of instruments and trade venues.

SIX x-clear is recognized and certified by the European Securities Markets Authority for pan-European clients. Operating as a bank and under the supervision of Swiss regulators, the SNB and FINMA, SIX x-clear complies with the requirements of Basel III and CPSS-IOSCO standards. SIX x-clear is a highly diversified central counterparty with access to multiple trading venues and matching platforms across Europe. Comprehensive clearing services and risk are managed in real time. SIX x-clear delivers multi-product clearing in a highly regulated environment and operates as a bank with a stable long-term AA- credit rating.

Product offerings and distribution

SIX x-clear provides a comprehensive pan-European reach with a diversified portfolio of products delivering significant clearing consolidation opportunities. With a strong pan-European reach that covers over 15 markets, SIX x-clear is ideally positioned to optimize your post-trade processing and mitigate counterparty risk.

- Comprehensive pan-European reach
- Multi-product
 - Cash equities
 - Fixed income
 - Listed derivatives
 - Securities lending & borrowing
 - ETF’s
- A diversified international client base
- Multi venue
 - Regulated exchanges
 - Multilateral trading venues
 - Matching platforms
- Multi-currency
- Extensive securities universe
- Choice of collateral locations

Attractive and competitive pricing models

SIX x-clear offers an attractive tariff structure, providing a compelling value proposition for clients to consolidate their central counterparty clearing functions. The tariff incentivizes clients to consolidate their activities and is combined with a cap which guarantees a maximum monthly amount in terms of clearing costs.

- A capped tariff for high volume clients
- An incentive for clients who consolidate additional business with SIX x-clear
- A cross-rebate for clients who use additional Swiss custody services provided by SIX Securities Services
- Highly competitive settlement pricing based on integrated an integrated service using SIX Securities Services

Multi-asset Clearing Services. Your benefits at a glance:

Clearing trades with SIX x-clear reduces counterparty risk and provides a reduction in capital adequacy requirements under Basel III. Clients benefit from a number of functions delivered professionally and efficiently, with the reassurance of risk models that operate on a real-time basis.

- Reduction in capital adequacy requirements
- A flexible collateral structure
- Risk & Pan-European settlement across venues
- Portfolio based margining
- Risk segregation options for General Clearing Members (GCMs) in compliance with MiFID
- Risk monitoring functionality for GCM's at Non-Clearing Member level
- A choice of communication mediums & reporting options

For more information, please contact our Relationship Management.

SIX Securities Services
Pfingstweidstrasse 110
P.O. Box
CH-8021 Zurich

T +41 58 399 3111
www.six-securities-services.com

Direct & indirect access to your key markets worldwide.



**Custody Services.
From SIX Securities Services.**

- Cost optimization and operational efficiency
 - Global connectivity to key markets
 - Strong client service focus
 - Flexible and comprehensive solutions and Asset Safety
-

SIX Securities Services supports you to meet your complex operational, regulatory and risk mitigation challenges. As a recognized leader in post-trade services, we offer fully integrated and flexible solutions. Operating as the Central Securities Depository (CSD) for Switzerland and as an international custodian across markets worldwide, SIX Securities Services delivers comprehensive custody services for the most demanding clients.

SIX Securities Services offers you best-in-class services for transactions covering bonds, equities, derivatives and investment funds worldwide. Our comprehensive service portfolio includes real-time settlement, asset servicing, value-added tax services, cash management and fund services.

Among other benefits, you can count on streamlined onboarding and integrated collateral management services, which enable you to reduce your refinancing costs and to extend your middle-office functionality and consolidate reporting and reconciliation.

Cost optimization and operational efficiency

With margins squeezed across all major business lines, financial institutions need to now look at new and diversified ways to reduce costs. Our solution-based approach to custody services supports our clients to maximize their processing efficiency within a robust, controlled, automated and information-rich environment. This gives you the opportunity to optimize your administration costs, while bringing essential costs down to a sustainable minimum.

Global connectivity to key markets

With a broad network of sub-custodians throughout the world, we offer our clients direct and indirect access to their key investment markets. This hybrid (or Virtual CSD) model significantly reduces the challenges you could face in doing business across borders. Each of the sub-custodians we select has to go through a rigorous due diligence exercise and are continually monitored for service quality, security and integrity.

Strong client service focus

As a SIX Securities Services client, you benefit from the experience and expertise of our custody professionals as well as a quality of service that has been consistently rated as amongst the best in class. This is why we can better analyze trends, manage inquiries and recommend services to enhance your performance. Further proof is that SIX Securities Services is consistently amongst the highest rated institutions in the annual "Major Market Agent Bank Survey" carried out by Global Custodian. As a market infrastructure SIX SIS ensures the highest standards of safety for customer assets, including asset segregation and DVP settlement (Asset Safety).

Flexible and comprehensive solutions – for Switzerland and the world!

SIX Securities Services provides you with complete custody services for Swiss and international securities.

Swiss Custody

- Real-time Online Settlement
- Asset Servicing
- Cash Management
- Issuer Services
- Tax Services
- Repo
- Swiss Funds
- Query & Reporting
- Vault Services

International Custody

- Cross-Border Settlement
- Asset Servicing
- Cash Management
- Integrated Exchange and Settlement (INSET)
- Tax Services

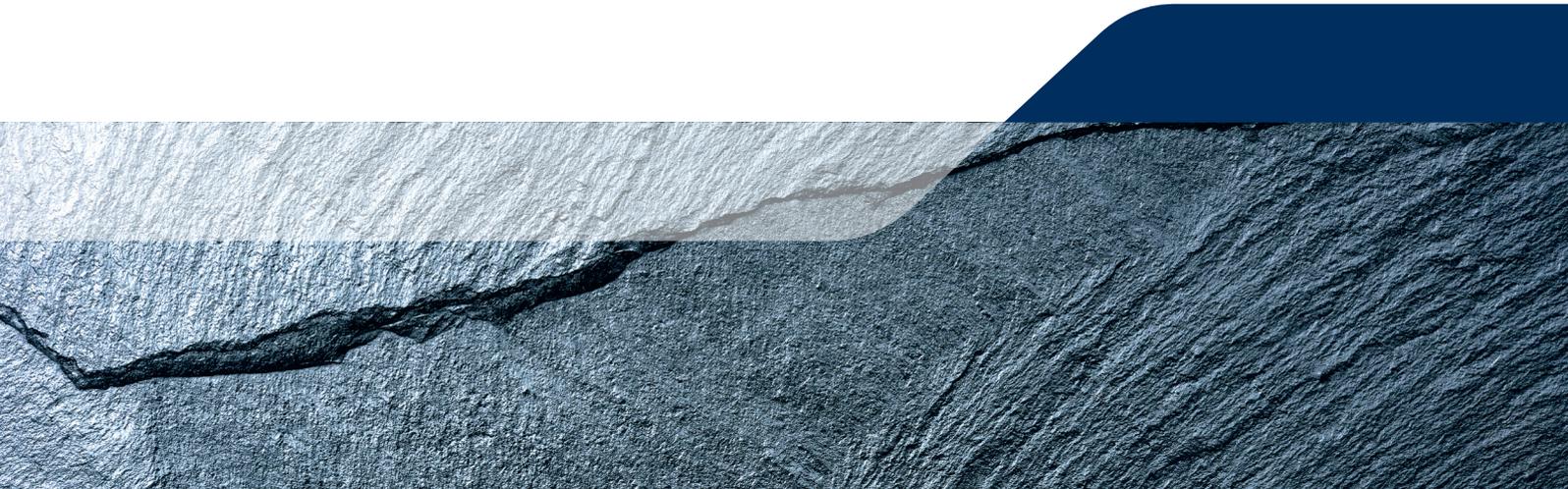


For more information, please contact our Relationship Management.

SIX Securities Services
Pfungstweidstrasse 110
P.O. Box
CH-8021 Zurich

T +41 58 399 3111
www.six-securities-services.com

The “Fort Knox of Switzerland”.



Vault Services. From SIX Securities Services.

- Highest level of security
 - Tailored and discreet services
 - Fast handling of physical assets
-

SIX Securities Services provides you with tailored safekeeping services. Covering your need to house valuable documents and objects in a safe and secure environment. Alongside collective safe custody, we also offer the separate safekeeping of securities and valuable items.

Our high technical and security standards are clear for all our clients – especially when it comes to safekeeping and administering your securities. Our vault houses one of the most modern systems for safekeeping and administering securities in the world.

Highest levels of security

At SIX Securities Services, our highest priorities are data protection and security. Our vault meets the highest security requirements. All working processes in our vault are fully automated. This ensures the highest levels of efficiency and security. All clients for whom we settle transactions in securities eligible for collective safekeeping (physical securities custody) can benefit

from this state-of-the-art solution. In addition, clients can hold individual assets in separate safekeeping (EVA) with us.

Separate Safekeeping (EVA): Tailored and discreet services in line with your requirements

SIX Securities Services’ separate safekeeping (EVA) is a tailor-made service enabling securities, valuable documents and any type of valuable object that needs to be held externally, due to a lack of space, for commercial reasons or for security reasons, for example, to be stored safely in our vault. Discretion and a thoroughly professional approach are crucial to us in all aspects of business, not least when it comes to the safekeeping and administration of your confidential items, such as:

- All types of securities
- Precious metals
- Insurance policies
- Data carriers
- Historical documents
- Mortgage notes and certificates of liens on property
- Contracts
- Other valuable objects and documents

In addition to all the usual services provided by SIX Securities Services, such as remittances and withdrawals for your own account or for third parties and all types of corporate actions, we also carry out securities transfers with share registers and land registries.

Physical Securities Custody

Our physical securities custody service comprises all services in connection with physical securities that are processed in the Swiss Value Chain. These range from services related to new issues of physical securities and global securities, right the way through to the physical repayment and destruction of securities. All securities that are available in physical and fungible form and can be traded via our SECOM system are stored safely in our vault. The fully-automated vault provides a wide range of services in connection with physical securities:

- Physical remittance/withdrawal in collective custody (physical securities custody)
- Physical processing of corporate actions
- Repositioning of physical securities in the vault
- Checking stolen and invalid certificates
- Destruction of securities
- Physical handling of new issues
- Settlement of collection transactions from presenting banks in CHF
- Declaration of non-US beneficial ownership (TEFRA D)



For more information, please contact our Relationship Management.

SIX Securities Services
Pfungstweidstrasse 110
P.O. Box
CH-8021 Zurich

T +41 58 399 3111
www.six-securities-services.com

Make the right decision. Every time.



Comprehensive Asset Servicing. From SIX Securities Services.

- Proactive and reliable market information
 - Minimized settlement risk
 - Improved cashflow
 - Every deadline met
-

As a leading provider of asset servicing solutions, SIX Securities Services offers you the operational capability you need to stay flexible and adaptable to continuous market changes. Through our full range of services, our global market reach and specialist expertise, we ensure that you as an institutional investor achieve your ambitious goals.

With our ability to provide CSD services remotely for most European markets – what we call our Virtual CSD approach – you benefit from a full range of corporate actions processing services wherever you do business. For all assets under custody within SIX Securities Services, you benefit from a holistic set of corporate actions processing. This includes dividends, distributions, repurchase offers, capital increases, liquidations and tenders. We are also able to manage entitlements on your behalf.

Through dedicated teams we cover traditional/mutual fund holdings as well as non-traditional/hedge fund holdings. In addition, through our Global Fund Services we offer you extended corporate action services for all funds held with us.

Corporate Actions



The added value for you from SIX Securities Services is:

- Comprehensive database containing verified and enriched information covering complete event documentation.
- Matching, enrichment and refinement of the information collected for your corporate actions to minimize settlement risk.
- High-quality corporate action information, selected from multiple data providers 22 hours a day.
- You can send instructions directly and in time through our user-friendly Corporate Actions Enhanced Services (CAES) application.
- Enhanced search and filter functions for finding executed, pending or forthcoming corporate actions through our Web Service application.
- Highly automated processing and lowest level of manual intervention to improve your efficiency.

Market information: Pro-active and reliable.

As a client of SIX Securities Services, you are pro-actively informed of all market changes where you hold the respective securities positions with us. All this information can be found at any time through our SIX SIS Private Web Services. Asset servicing is explained in detail within the related Operational MarketGuide. You will also discover that our database provides you with vital added value in gathering well-founded corporate action information.

Information management: Enriched Corporate Actions.

Companies inform SIX Securities Services of any upcoming corporate actions. When additional information is available, this basic information is aligned with multiple sources and enhanced with vital market information. All holders of the respective financial instrument promptly receive the related SWIFT notification.

Value date booking: For improved cashflow.

SIX Securities Services books entitlements from corporate actions on the value date and provides confirmation electronically using Corporate Action Confirmations. You benefit immediately from the timely availability of funds, supporting your cash projection and management processes.

Market claims: Automated and reduced compensation payments.

Switzerland is a record date market, which results in

a significant reduction in compensation costs. SIX Securities Services makes automatic compensation payments within 20 days of the pay date.

Market deadlines: Never miss one.

You can select from four service levels, which offer market deadlines graduated between 0 and 5 business hours before the market deadline. In addition, we offer a reminder service, which significantly reduces your risk of missing instruction deadlines.

Instruction processing: Simple.

SIX SIS Ltd processes your MT565 instructions automatically and promptly confirms your instruction using a Corporate Action Status and Processing Advice (MT567). You are then immediately able to check if your instruction has been issued correctly. You can release instructions simply and with a minimum of risk by using our CAES web tool.

Rights trading: Processed instantly.

We offer you the option to place trading orders. The related confirmation that they have been executed is made via Corporate Action Confirmations.

Proxy voting (bearer shares): Vote at general meetings – even outside Switzerland

As a client of SIX Securities Services, you have the unique advantage of being able to access all of the information related to general meetings through our dedicated CAES Proxy Service portal. This is made possible by the fact that companies outside Switzerland and Liechtenstein notify our CSD – SIX SIS Ltd – of upcoming corporate actions, including agenda, financial data, or resolutions proposed by the board of directors. Your voting instructions can be entered directly into the portal and forwarded immediately by SIX SIS to the relevant company. In addition, you have the option to order admission cards for proxies directly through SIX SIS and view the specific rules governing proxy voting. After the general meeting, all available results are published in the CAES Proxy Service Portal.

Corporate Actions Enhanced Services (CAES)

This web-based service contains a suite of services for centralized and process-oriented services. CAES automates the collection, verification and completion of data, which is traditionally a labor-intensive and paper-based activity. The system is designed to be used as your primary platform for corporate action processing.

For more information, please contact our Relationship Management.

SIX Securities Services
Pfingstweidstrasse 110
P.O. Box
CH-8021 Zurich

T +41 58 399 3111
www.six-securities-services.com

Solid as a rock.
Adaptable as mercury.



**CO:RE – Integrated Securities Finance Solutions.
From SIX Securities Services.**

- Fast and secured access to liquidity
 - Risk mitigation and regulatory compliance
 - Integrated service model
-

CO:RE (Collateral & Repo) is the real-time integrated securities finance offering powered and operated by SIX Securities Services. It brings together trading and collateral management capabilities in a fully integrated value chain starting from trading through settlement and finally to collateralization at the CSD or custodian level. The need to drive

efficiency, reduce risk and control costs has resulted in an efficient collateral management offering for all market players. Banks, broker-dealers, insurance firms, commercial banks and asset managers alike profit from this service.

Through our CO:RE offering, collateral pools for different exposures are mobilized to ensure collateral is where it is needed, when it is needed. Highly sophisticated segregation capabilities allow maximum client and ‘client of client’ protection to the n(th) segregation level. This ensures a high level of protection in any market scenario, removes the administrative burden for clients and provides a single collateral view across different transactions.

Access to liquidity

SIX Securities Services provides a multi-faceted electronic trading facility providing single-point access to over 160 counterparties trading repo contracts across 14 currencies. Central bank money and commercial bank money are both available as well as access to the SNB's primary market for the issuance of money market instruments. The accuracy of exposure coverage and the solid legal framework embedded in the Swiss Value Chain enable an efficient and secure market place.

The Swiss repo and OTC market serve as a fundamental liquidity source tailored to your needs:

- Real-time repo trading capabilities
- Fully automated front to back process
- Single trading layer and collateral layer view
- Wide range of security types (incl. US equities and fixed-income)
- HQLA level 1 and level 2 baskets available
- No haircut on standard baskets
- Single contract and single point of access to over 160 counterparties
- Access to central bank and commercial bank money
- Access to primary SNB money market auctions
- "Repo on demand" service for equity driven repo

Risk mitigation and regulatory compliance

The Swiss National Bank provides baskets according to the required collateral quality. It is easy for participants to up- or downgrade their collateral in a convenient and compliant manner. Operational risks are mitigated through the proven Swiss Value Chain which remained solid and stable even during the financial crisis. A team of subject matter experts continuously monitors upcoming changes in the regulatory environment and makes sure you are provided with products that suit your requirements.

CO:RE collateral management provides a link to custodians, agent banks, CCPs, market infrastructure and institutional clients requiring collateral management access to:

- Bilateral OTC derivatives transaction cover
- Collateral posting for centrally cleared transactions including OTC derivatives etc.
- Exposure cover arising from an array of transactions ranging from fails-lending, repo, SLB, ETDs etc.
- Exposure arising from other transactions that require collateralization through tailor-made solutions
- Automated collateralization of exposures arising from different transaction types
- Multiple mark to markets daily to ensure no over or under collateralization of exposures
- Flexible collateral schedule processing

Real-time exposure is covered with collateral schedules managing a complex set of requirements from concentration limits to ratings, while ensuring the absolute safety of the collateralized assets by technically and legally blocking collateral to allow instant access if/when required.

Integrated services

SIX Securities Services provides a high performance response to the trend of back- and mid-office activities moving to the front-office. Our new trading platform comes with a position view feature, providing direct access to the underlying collateral pool for traders. The collateral and liquidity management is fine-tuned by the sophisticated exposure management that our triparty collateral management facility provides for regular and irregular pledges. Supplementary to the margin coverage for derivative exposures via a CCP, the collateralization of derivatives can be certified within the COSI value chain. CO:RE fails-driven securities lending provides a cost-effective way to cover settlement fails in most European equities and bond markets. Furthermore, this facility supports the coverage of intraday collateral shortages. This also provides clients with a low-risk opportunity to add to their bottom lines by generating incremental revenues. Our boutique enables to run processes fully automated from front to back.

For more information, please contact our Relationship Management.

SIX Securities Services
Pfingstweidstrasse 110
P.O. Box
CH-8021 Zurich

T +41 58 399 3111
www.six-securities-services.com

More efficiency. More quality. More transparency.



Issuer Services.
From SIX Securities Services.

- Efficient management of the product life cycle
 - Quick distribution of data
 - Reduced costs
 - High data quality and no misinterpretations
-

SIX Securities Services, as the Swiss CSD, is in the perfect position to provide you with automated Issuer Services of the highest quality. These services cover all dematerialized issues as well as global certificates.

Our Issuer Services address the increasing needs of our clients for innovative and efficient securities services. These services are tailored to specific requirements and powered by state-of-the-art technology. During the entire life cycle of a financial instrument, SIX Securities Services offers the ideal service, ensuring more efficiency, quality and compatibility.

From a straightforward placement on the stock exchange to the problem-free distribution of reference data in real time, you can count on us to maintain reference data and help in fulfilling reporting obligations. Thanks to the automated issuing of messages for corporate disclosures and financial instrument events,

both issuers and main paying agents benefit from considerable efficiency gains.

SIX Securities Services provides issuers, such as investment banks or listed and non-listed companies, with a fully automated, cost-efficient way to manage the product life cycle – from its launch, through to placement, trading and maintenance, right up to the maturity of the financial instrument.

Processing a new issue

As the Swiss CSD and a leading international custodian across the world, our clients benefit from this unique expertise and knowledge. SIX Securities Services supports issuers and main paying agents with the ideal setup and processing for securities.

Types of securities supported:

- Bearer shares, registered shares
- Bonus options, subscription rights
- Derivatives, structured products, warrants
- Bonds, medium-term notes, asset-backed securities
- Money market book claims
- Funds, ETFs, etc.

Intermediated securities created with:

- Deposits of physical certificates
- Global certificates
- Uncertified securities

CONNEXOR –

As part of our SIX Issuer Service offering:

CONNEXOR, allows the fully automated, cost-efficient management of reference data throughout a financial instrument's life cycle. As the central link between all market participants, CONNEXOR enables greater efficiency and quality globally thanks to its unique data standard. CONNEXOR provides just the right service for a financial product, from its launch, placement (including OTC), trading and maintenance right through to maturity.

For product maintenance while trading, SIX Securities Services supports issuers with the following CONNEXOR services:

CONNEXOR Reporting enables the transmission of corporate and financial instrument events affecting listed shares. A central reporting platform regulates the electronic reporting flow across the various stakeholders. The issuer has reporting obligations to SIX Exchange Regulation, which it is required to fulfill according to the 'Directive on Regular Reporting Obligations'. The issuer or issuer's agent can also provide additional information to the market.

CONNEXOR Events enables the central capture of financial instrument events affecting structured products. The event management platform allows an issuer to easily initiate payment flows for repayments and interest payments electronically for structured products.

For more information on CONNEXOR services:

www.connexor.ch

For more information, please contact our Relationship Management.

SIX Securities Services
Pfingstweidstrasse 110
P.O. Box
CH-8021 Zurich

T +41 58 399 3111
www.six-securities-services.com

Your cost-effective solution for global fund processing.



**Global Fund Services.
From SIX Securities Services.**

- Full one-stop-shop approach
 - Minimized counterparty risk
 - Expert client support
-

By offering you a centralized execution, settlement and custody service for all global funds – mutual funds and alternative investments – SIX Securities Services provides you with a single source for all your fund processing needs. You can count on our long standing experience in transfer, subscription and redemption, corporate action and trailer fee activities, freeing you up to focus on performance and revenue.

The investment fund business is a significant part of both global and local financial markets. Participants in the sector are facing substantial ongoing regulatory and operational changes which demand specialized and experienced staff. SIX Securities Services provides a complete one-stop-shop solution for mutual funds and alternative investments. Our Global Fund Services (GFS) offering enables highly efficient connectivity with experienced staff to allow participants to focus on their core activities.

Issues with fund processing?

You can count on our experienced specialists to cover your execution, settlement and asset servicing activities, freeing you up to focus on performance and revenue.

We give you access

The web-based GFS platform provides you with access 22 hours a day, 7 days a week, to execute fund transactions worldwide (with the exception of funds from Switzerland and Liechtenstein) and settlement services as well as additional services, such as fund master data.

Partner with us to reduce your operational risk

Direct access, high automation, real time processing and a suite of information services turns your fund operations into a smooth process, ably supported by our subject experts.

1 + 1 = 3

Through our partnership with Euroclear/FundSettle we are in a position to combine in-depth expertise with a counterparty and platform which is the gateway to 100,000 funds and gives us the possibility to exchange information on regulatory requirements relating to the European market. The whole is greater than the sum of its parts and for you a big plus.

The enhancement of value for you from SIX Securities Services is:

High quality

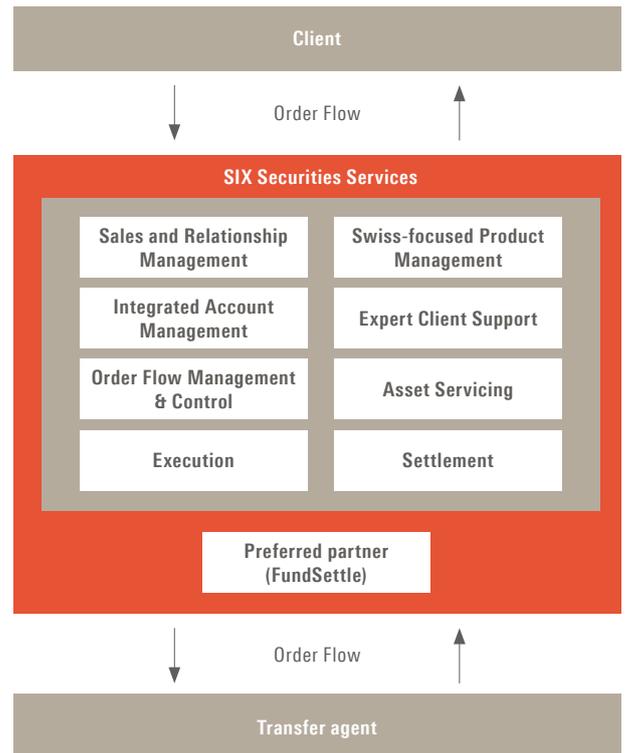
- Single platform for all fund investments
- Full integration and compatibility with other custody and related services from SIX Securities Services
- Access to an integrated database with over 100,000 mutual and hedge funds

Client & market proximity

- Local staff based in Switzerland with experience in understanding and responding to the unique needs of the Swiss financial sector
- Due to its unique position as a mid-office within our organization, we can ensure the proximity to all parties involved
- Intraday first-level responses

Efficiency

- Multiple communication channels to integrate into existing system
- Strong push for cost-effectiveness through automation and standardization
- One central counterparty



For more information, please contact our Relationship Management.

SIX Securities Services
 Pfingstweidstrasse 110
 P.O. Box
 CH-8021 Zurich

T +41 58 399 3111
www.six-securities-services.com

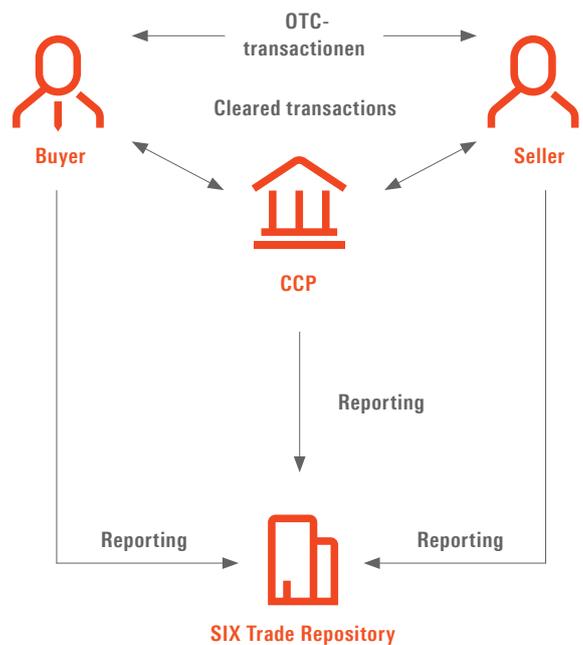
The only FINMA-authorized trade repository for Switzerland.



**Trade Repository.
From SIX Securities Services.**

- The only Swiss trade repository
- Best-in-class application with Swiss finish (UnaVista)
- Data storage and support in Switzerland
- Full price transparency

In response to concerns over systemic risks in over-the-counter (OTC) derivatives markets, the Group of Twenty (G20) in 2009 launched a reform program that led to the new Swiss 'Financial Market Infrastructure Act' (FMIA) regulation. Based on this regulation, Swiss market participants are obliged to report OTC and exchange-traded derivatives (ETDs) to an authorized trade repository. Our new SIX Trade Repository provides you with the most efficient, compliant and FINMA-authorized solution to fulfil your FMIA reporting obligations across multiple jurisdictions.



The only trade repository fully based in Switzerland.

SIX Trade Repository is the only FINMA-approved Swiss trade repository that supports market participants in fulfilling their derivative reporting obligations. This status goes along with enhanced security standards and full data storage in Switzerland, which is completely compliant with the typically high Swiss regulatory standards to guarantee data protection at all times.

Leading cross-functional ecosystem.

SIX Trade Repository is based on an award-winning, best-in-class trade repository application. In addition, a strategic partnership with UnaVista, a 100% subsidiary of the London Stock Exchange Group, provides a powerful, tried-and-tested OTC derivative and ETD trade reporting solution for global financial institutions across multiple jurisdictions. Existing clients of UnaVista will also benefit from interoperability between the UnaVista EMIR Trade Repository and SIX Trade Repository, which makes onboarding easier.

Reporting with a 'Swiss Finish'.

SIX Trade Repository offers Swiss-domiciled users a comprehensive, high-quality solution with full price transparency to address their specific needs. To achieve this, SIX has refined UnaVista's best-in-class application, supplementing the regulatory binding dataset with the relevant Swiss-specific business information and complete workflow support. This includes several file and date validations, daily reporting reconciliation, functionally rich compliance, operational monitoring, and reporting management.

The Swiss Value Chain.

As part of SIX and the Swiss Value Chain, SIX Trade Repository complements the existing comprehensive post-trade offering of SIX Securities Services. In addition, as part of SIX, which operates the Swiss financial market infrastructure, users benefit from a stable, reliable business partner, high quality, data security, and regulatory compliance at all times.

Enhanced quality

- High quality from automated processing
- Multiple jurisdiction compliance
- Experienced specialists and support team in Switzerland
- Standardized data formats and delivery

Reduced risk

- Enhanced data security with data storage in Switzerland
- Complete workflow support
- Guaranteed data protection at all times

Complete workflow support

- Functionally rich compliance
- Operational monitoring and reporting management

Scalability

- Effectively scaled to meet changing volumes
- Centralized and consolidated scalable processes
- Fully transparent pricing with no hidden costs

Modularity

- Flexible file input and data upload
- Country-specific reporting to meet obligations across multiple jurisdictions
- Fully flexible architecture



Client Connectivity

- File formats: XML, CSV, Excel
- Protocols: MQSeries, sFTP, secure WEB Portal



Core Services

- FMIA file and data validation
- Swiss Trade Repository status with data storage in Switzerland
- Complete workflow support

Additional Services

- Enhanced security
- EOD reporting reconciliations (daily ACK/NACK, current state, alleged reporting)



Trade Repository

- Core platform adopted from Unavista's state-of-the-art EMIR trade repository
- Fully flexible and modular architecture
- Functionally rich compliance and operational monitoring and reporting management
- Platform futureproofed for further jurisdictions and continuous regulatory change
- Flexibility of input files
- Intuitive user interface

For more information, please contact our Relationship Management team.

SIX Securities Services

Pfingstweidstrasse 110
P.O. Box
CH-8021 Zurich

T +41 58 399 3111
www.six-securities-services.com





Research from SIX Securities Services

About the research

The study surveyed 60 professionals in the UK, Germany, France, the Nordics and Switzerland. 30 respondents were IT decision makers and 30 collateral experts from buy-side and sell-side financial services institutions. The number of respondents from buy-side and sell-side organisations was evenly split with 30 respondents from each. The average value of respondents' organisations' assets under management is \$323 billion USD. For more information, contact us.

Real-time settlement is critical for collateral optimisation

83% of financial organisations say real-time settlement is the most important factor when choosing a collateral management provider.

Research from SIX Securities Services reveals the importance of real-time settlement when it comes to choosing a new collateral management provider. Four in ten (40%) respondents report that their organisation has replaced or added a new collateral management provider in the last 18 months with a further 18% in the process of doing so. Real-time settlement was viewed as the most important factor during the selection process (83%), followed closely by CCP collateral acceptance (75%), Real-time reporting (63%), flexibility to meet regulatory changes (54%) and transparency of collateral pools regardless of whether collateral pools are published (25%). Only 21% of respondents cite cost as an extremely important factor when deciding to choose a new provider.

The views between IT decision makers and collateral respondents differ slightly. All collateral respondents cited real-time settlement as the most desired feature while only 73% of IT decision makers agree. The biggest gap between IT decision makers and collateral respondents shows in the question on collateral pools: 7% versus 56% respectively of respondents consider it extremely important when moving to a new collateral management provider.

Those who retained their current collateral management provider say their reasons for doing so come down to IT interfacing problems (61%), closely followed by the complication element (55%) and the length of the on-boarding process (55%).

Marcus Harreus, Head Clearing, SIX Securities Services (SIX x-clear), commented on the findings:

“Mobility of cash and securities is key in collateral management, especially in today’s economic environment. SIX Securities Services offers its clients an efficient and coherent market for securities clearing and settlement in Switzerland and the euro area.

With regulations such as Basel III (in particular LCR) requiring banks to hold higher amounts of high-quality collateral (or cash), financial institutions are trying to cope with the reduced profitability of these positions by increase operational efficiency and by optimizing their cash and collateral management capabilities.”

For more information, please contact our Relationship Management.

Gap between collateral managers and IT decision makers

Findings from a pan-European research study indicates that the two groups fail to see eye-to-eye on issues such as the price of collateral, HQLA-shortfall and future challenges for the collateral management industry.

An industry wide European study from SIX Securities Services today revealed the differing opinions between IT decision makers and collateral experts on a range of key issues. This split is most evident when it comes to views on the availability of high-quality liquid assets (HQLA).

The vast majority (83%) of collateral respondents think that there is a shortfall while only 47% of IT decision makers agreed. 63% of collateral respondents went as far as to say that there is a significant shortfall, while only 17% of IT respondents hold this view. The discrepancy between the two is more apparent within sell-side organisations where there is a 47% difference on the issue compared to a 17% difference in buy-side organisations.

Differing opinions between the two areas of specialisation also extend to views on the quality of collateral. 53% of IT decision makers believe that it is acceptable for collateral to be low quality, complex and opaque so long as it is cheap, whereas only 30% of collateral respondents have this view.

In reverse, almost two thirds (60%) of collateral heads believe that collateral must be simple, high quality, liquid and easy to value. Only 13% of IT respondents agree that it needs to be simple while 33% believe that the cost of collateral is "the only thing that matters". While

collateral specialists are likely to have a deeper understanding as to the requirements of collateral, the level of disparity between the two is cause for industry concern, particularly in terms of future challenges.

Despite over half (53%) saying it is acceptable for collateral to be low quality, IT decision makers think that the biggest collateral optimisation challenge for the future is in fact low quality collateral (57%). The biggest concern for collateral heads (70%), however, is that with the cost of lending and borrowing increasing, it will make the cost of collateralising OTC trades too expensive to make the trading activity viable.

Raphael Heuberger, Head Products & Operation SIX Repo, SIX Securities Services, commented on the findings:

"People specialised in the collateral industry face scarcity of good quality collateral and an increase in complexity. Internal IT development units within financial organisations are challenged to keep pace. As this capability-gap widens, financial institutions tend to increasingly cooperate with external providers capable of covering their needs. It's highly probable that IT people now find themselves more pre-occupied with the release timelines of their providers than with establishing their own in-house development capabilities. This may actually be a good thing as it allows collateral management experts to create new solutions more rapidly as they can, effectively, outsource the problem. This can only be to the common good of the industry."

For more information, please contact our Relationship Management.

Brexit will accelerate evolution of Capital Markets Union (CMU)

According to the latest survey conducted by SIX Securities Services, over half of organisations (53%) questioned believe plans for a Capital Markets Union (“CMU”) will speed up in the wake of Brexit.

The question as to whether euro-clearing will remain in London after Brexit has been at the centre of Brexit negotiations since the vote to leave Europe was cast in 2016. Aside from the question mark hovering over this issue, research from SIX Securities Services reveals that financial organisations appear to have broader concerns.

Over half of financial organisations across Europe (53%) believe that CMU will evolve faster due to Brexit, and 4 in 10 organisations think that it will provide a solution to collateral availability within two years. Buy-side organisations are more optimistic than the sell-side – 53% of buy-side respondents believe this development will solve the problem of limited available high-quality collateral “fairly soon”, while 70% of sell-side respondents think that such a solution will not present itself in the short term. One reason as to why the CMU is being viewed as a possible solution to this problem is that it will enable the European Commission to distribute corporate debt into the markets, much like the US model, thereby alleviating collateral demand pressure.

Respondents were also questioned as to whether they are preparing to shift a portion of their trading, clearing and collateral back into their respective currency zones post Brexit. Of the 45% of organisations that said they are, they envisage moving over half of their activities (53%). Larger organisations, with assets of over \$100 billion under management, are most likely to move activity (61%), whereas only 38% of organisations with assets of under \$50 billion are planning to move some trading activity.

According to Thomas Zeeb, Division CEO, SIX Securities Services:

“I believe the principles and intent behind CMU make good economic and commercial sense longer term for the EU. As to whether Brexit will actually accelerate CMU, on this point I’m less convinced. Capital will move to a location where the market can best make use of it quickly and efficiently. In this regard, I don’t see the EU as the only option.

“Global firms will also evaluate other locations based on their specific business models, including potentially New York, Singapore or even Switzerland. There appear to be increasing strains on EU unity, and I think that both the UK and EU should be deeply concerned about this. The movement of specific functions such as trading out of the UK is to my mind potentially misleading. Financial services is now such a global business that I think the location of the delivery of services will be based on where the best and most qualified people can be found. This know-how and these resources cannot be replicated that easily elsewhere.”

For more information, please contact our Relationship Management.

SIX Securities Services
Pfingstweidstrasse 110
P.O. Box
CH-8021 Zurich

T +41 58 399 3111
www.six-securities-services.com

The majority of the financial industry believe that up to 40% of OTC derivative transactions are un-collateralised

Research reveals that 85% of financial institutions believe that up to 40% of all over-the-counter derivative transactions are not collateralised.

Industry wide European research from SIX Securities Services today reveals the statistic that more than 8 in 10 (85%) financial institutions believe that up to 40% of all OTC derivative transactions are not collateralised. In fact, 14% would go as far as to say between 40 and 60% of these kinds of transactions are completely un-collateralised.

Respondents were also asked their views on whether this could change before 2019. Three quarters of respondents (75%) believe that 60-100% of all OTC derivative transactions will become collateralised within the next two years, but just 23% of all respondents think that 80% and above will be covered with collateral by then.

Over the past few years, the European Market Infrastructure Regulation (EMIR) has introduced a set of obligations for financial market participants to centrally clear certain classes of OTC derivative contracts through CCPs and apply new risk mitigation measures. The reform is set to be implemented by September 2020.

These results come as no surprise as the OTC derivative markets are currently subject to significant change. However, it's expected that even after all reform elements are implemented, some portion of the OTC derivatives market (especially non-standardised derivatives such as commodities) will remain non-centrally cleared.

According to Tomas Kindler, Head Financial Center Services and Member of the Management Committee:

"Derivatives trading is, among other transactions, subject to growing cost pressure. It is clear that trading becomes more expensive and costs of collateral will increase as a result of extended regulatory requirements and a stronger demand."

"In order to optimise the use of balance sheet, more automated and cost-efficient triparty services will be required, especially for firms using manual posting processes. They might have to switch from posting on a monthly to posting on a daily basis. Our contribution to this trend is to provide fully integrated front-to-back solutions creating scale effects across the industry."

Further results of the research reinforce the need for a greater mobilisation of marketable collateral. 42% of respondents state that it is acceptable for collateral to be low quality, complex, and opaque, as long as it is cheap. Compared to SIX Securities Services last Collateral research, the number of financial institutions that are willing to accept collateral simply because it is cheap has increased by over 10%.

For more information, please contact our Relationship Management.

SIX Securities Services

Pfingstweidstrasse 110

P.O. Box

CH-8021 Zurich

www.six-securities-services.com