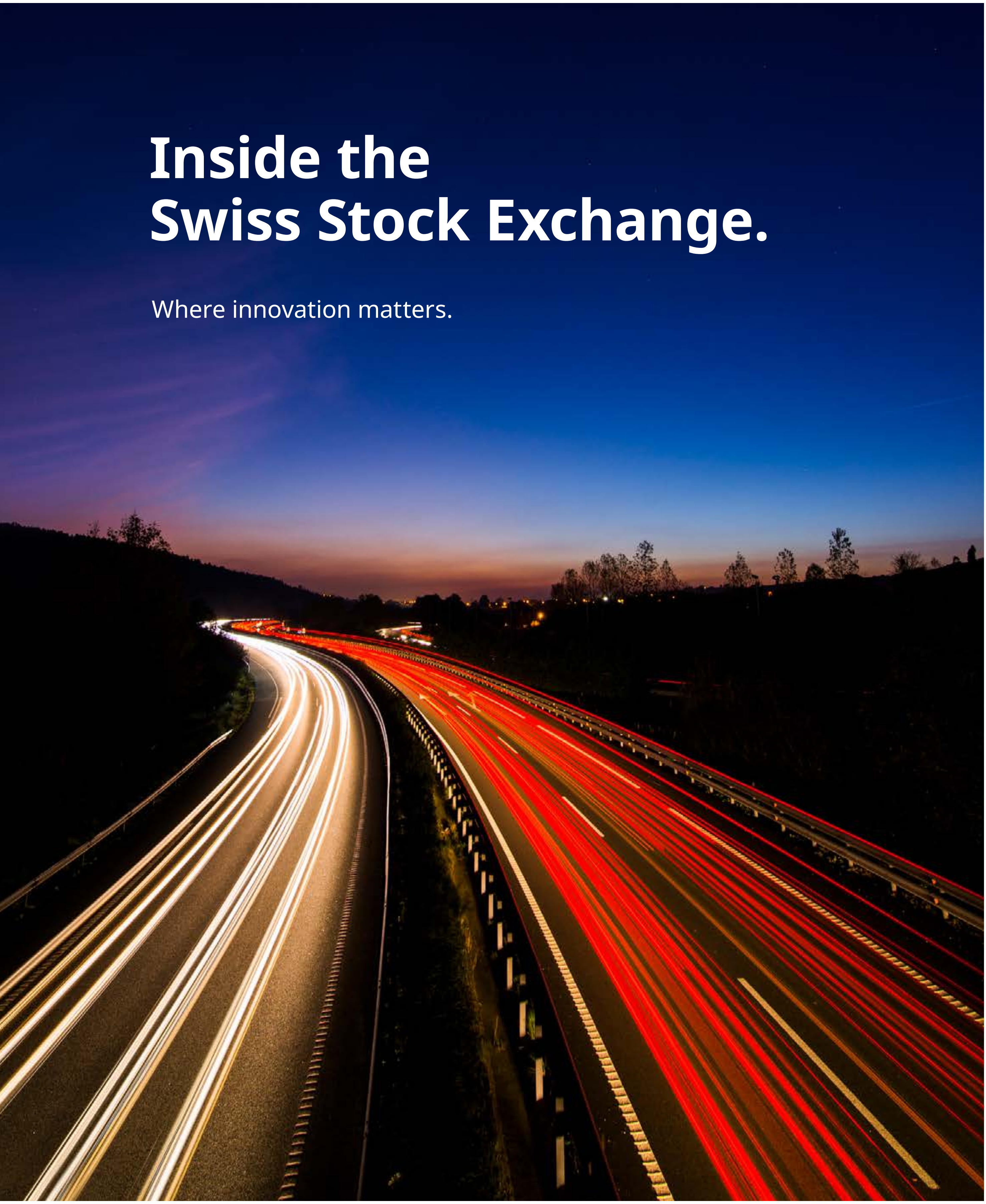


Inside the Swiss Stock Exchange.

Where innovation matters.

EXCHANGE SERVICES

Our Essential Paradox.

Physics has taught us that equal and opposite forces, acting on an object, will result in stasis. Or something to that effect. Being somewhat liberal with the interpretation of what this means when applied to modern business, it's pretty simple to see that one force or the other must be stronger for progress to prevail.

In these times of post-crisis disruption, technology disconnect, digitization (or this decade's version of it) and ecosystems, the question hangs in the air as to what all of this means for market infrastructure.

By definition, infrastructure is meant to stand still. It is designed for stability. For strength. For reliability. And for trust. Any rapid moves risk jeopardizing its credibility, and sometimes, the very essence of the value it brings.

This is where we at the Swiss stock exchange challenge the 'stasis quo' so to speak. And we do it rather well.

The Swiss stock exchange is, today, the 4th biggest in Europe in both free-float market-cap and trading volume terms. It is one – of only 16 – trillion dollar exchanges worldwide. And it plays host to 3 of the 5 most capitalized companies in Europe as well as some of the biggest European IPOs for 2019.

And that's just the day-to-day.

When it comes to breaking new ground, we're taking the industry lead. We already have fully functioning AI-based client interfaces for our post-trade operations and we're well on our way to creating AI-data-analytics capabilities for more accurate macro-economic forecasting.

Not to mention, of course, SIX Digital Exchange (SDX) – the world's first regulated, end-to-end digital asset exchange.

All of which means that – though seemingly contradictory – stability and disruption can go hand in hand.

A paradox that is essential if we are to grow as an industry.

Avi Ghosh
Head Marketing
Exchange Services & SDX
SIX

At-a-Glance

CHF 89.4 billion
raised by SIX-listed issuers in 2018.

12 companies
listed in 2018 – the highest number since 2001.

→ six-group.com/primarymarkets

The Swiss stock exchange is the world's leading regulated exchange for crypto-products: as of 31 August 2019, nearly 14,000 trades have been carried out, generating a turnover of over **CHF 340 million.**

No. 1
SIX is building the SIX Digital Exchange: the world's first fully integrated end-to-end digital stock exchange.

→ sdx.com

SIX invests
CHF 1 million
in new projects and innovations – every working day.

The Swiss stock exchange is the
4th biggest
European exchange by free-float market-cap and trading volume.

The average latency time on the Swiss stock exchange is
14 microseconds.

CHF 7.8 million
in price improvements were saved by investors through the non-displayed liquidity pool SwissAtMid in 2019 (as of 31 August 2019).

→ six-group.com/exchanges/swissatmid

SIX Deal Pool modernized bond issuance in Switzerland. Today over **720 institutional investors and banks** benefit from its efficient workflow (as of 31 August 2019).

→ six-group.com/deal-pool

The Swiss stock exchange boasts one of the fastest, most modern, and most stable trading platforms worldwide. It experienced
0 downtime throughout all official trading hours in 2019 (as of 31 August 2019).

With 1,500 ETFs, the Swiss stock exchange ranks among the
Top 3
ETF venues in Europe.

→ six-group.com/exchanges/etf

24 x 7 x 52
The Security Operations Center of SIX operates round the clock every day of the year to protect the financial center from cyberattacks.

→ six-group.com/cybersecurity

Gianna, the chatbot launched by SIX in November 2018 answered in the first six months of activity
1,350 client inquiries.

WORLD-CLASS SERVICES

Direct Access to International Capital and Liquidity

SIX Owns and Manages the Swiss Stock Exchange – Making Switzerland One of Europe's Leading Capital Markets.
With a free-float market capitalization of EUR 1,076 billion, the Swiss stock exchange is the fourth biggest stock exchange in Europe. Measured against the comparatively small Swiss economy, the Swiss stock exchange is thus superior in size. The around 260 companies listed here include global corporations such as Nestlé, Novartis and Roche, which rank among the top European companies by market capitalization.

To boost the visibility of small and medium-sized enterprises (SMEs) on the Swiss stock exchange, SIX offers the Stage program. Stage is designed to help SMEs to increase their visibility among essential stakeholders in the capital market in a targeted way. Upon request, SMEs benefit from research coverage provided by experienced banks.

In 2018, the Swiss stock exchange captured numerous listings: twelve companies went public, the highest number reached since 2001. Additionally, 270 ETFs, 345 bonds and 39,358 derivatives were listed for the first time. SIX is able to cope with this enormous amount thanks to higher than average levels of automation.

The Swiss Stock Exchange Offers the World's Highest Liquidity for Trading in Swiss Securities.
The Swiss stock exchange is the largest trading venue for Swiss securities. A buy or sell order for Swiss equities is more likely to be executed faster here – also for large volumes – than anywhere else in the world.

The Swiss stock exchange's trading platform offers proven reliability and security, even in periods of high volatility. It uses the highly efficient X-stream INET technology, which is one of the fastest and most up-to-date trading technologies in the world. SIX is also constantly investing in ways to improve liquidity on the platform. This means that the difference between bid and ask prices is lower than at other European trading venues. For the 20 most liquid Swiss Large Caps, SIX offers the best price for 90 % of the trading day.

Market Share

70.80%

of trading in Swiss Large Caps (SLI stocks) was conducted through SIX in 2018.

"A listed company can efficiently raise additional capital to continue developing and expanding its business."

Valeria Ceccarelli
Head Primary Markets, SIX

"Our order book quality and new functionalities led to noticeable price improvements in trading with Swiss equities."

Christian Reuss
Head Sales Securities & Exchanges, SIX

The Securities Value Change

SIX is the only fully integrated financial market infrastructure in Europe. Nowhere else in the world is the stock exchange combined with the entire post-trading chain and with real-time payment processing under one roof.

Listing	
Trading	SIX enables the automatic end-to-end data processing of securities transactions from order entry in the trading system of the Swiss stock exchange.
Clearing	SIX acts as a contractual party between trading partners throughout Europe, functioning as the central counterparty in order to reduce the risks for both buyer and seller.
Settlement	SIX settles domestic and cross-border transactions electronically across all possible asset classes.
Custody	SIX offers securities custody and comprehensive services for the Swiss market and 50 others.
Securities Finance	SIX maintains the multicurrency repo trading platform for more than 160 participants, including the Swiss National Bank (SNB). *
Payments	SIX operates the Swiss Interbank Clearing system (SIC) for payments in Swiss francs and euroSIC for payments in euros.

* More than 160 banks and insurance companies, including the Swiss National Bank (SNB), take part in the Swiss repo market to supply themselves and Switzerland's economy with liquidity by depositing securities as collateral. They pledge to buy back those securities at a later date and pay interest. The SARON (Swiss Average Rate Overnight) calculated by SIX is a reference interest rate for the Swiss repo market based on actual concluded transactions and quotes from the SIX repo trading platform. The SARON has established itself as a transaction-based alternative to the consensus-based LIBOR standard. ■

WHITE PAPER

The Future of the Securities Value Chain

What will the stock exchange of the future look like in a rapidly changing financial world? What role will the Swiss financial center play? SIX has drawn up a white paper summarizing eight possible scenarios for the future of the securities value chain.

Authors **Dr. Maneesh Wadhwa, Dr. Tobias Lehmann, Sunil Shikhare**

An analysis of the factors indicates that value creation in the securities industry will be subject to significant change in the next five to ten years, perhaps more than in the last 20 years. At first glance, the most likely and second-most likely scenarios appear to merely describe the status quo. But this is deceptive. More careful scrutiny reveals that these scenarios involve really major changes below the surface. For example, the shift of the primary markets to easily accessible digital platforms (that enable a direct link to be forged between issuers and investors) is far removed from the status quo with its many intermediaries and lack of transparency/comparability. The explosion in the number and diversity of digitized assets is also in stark contrast to the current status quo, as is the presence of big technology companies in the value chain. Even if the white paper's authors are not very optimistic about the domination of distributed ledgers, they will leave a noticeable impact on the value chain. This is because technology is raising people's expectations about the scope and price of automation, for example, and fuelling their imaginations about what can be digitized (digitized assets).

The most likely scenario and the second most likely scenario are outlined briefly following. You can find more information and the other scenarios at: six-group.com/whitepaper.

The Most Likely Scenario

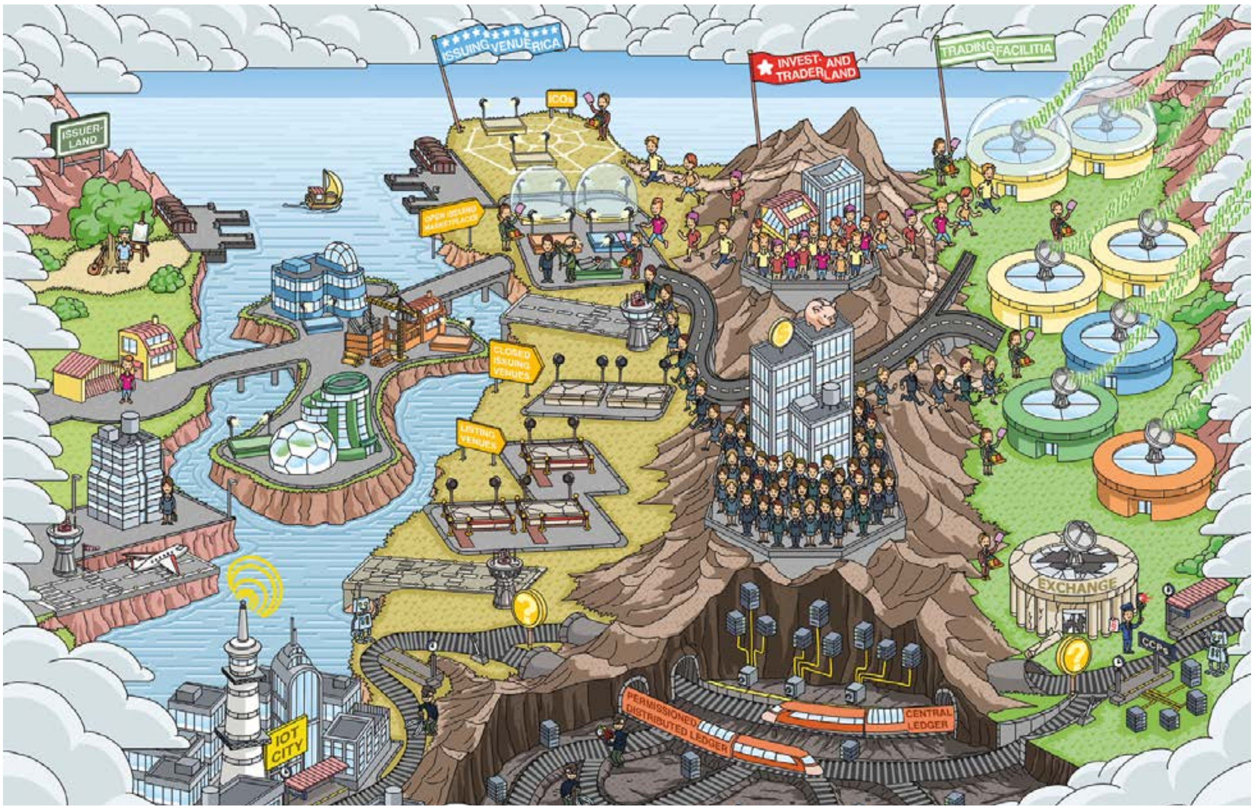
Factors: Catalysts, Drivers, Developments, Trends

The following table depicts factors that were considered for the development of the future scenarios – factors with the greatest impact ("key factors") are marked in bold.

Social/Cultural	Technological	Economic	Environmental	Political*
– Demographics (aging population) – Do-it-yourself mentality – Entrepreneurship – **Digital natives** – **Immediacy** – Instant gratification – 24/7 availability – UX expectations – Peer validation – **One-stop shops** – Mobility – Omni channel – Social media – Social sharing – One percent movement (occupy movement) – **Transparency** – **Sustainability**	– **Software** – **Internetization** – Ubiquitous connectivity – Sensors/Big Data – **Advanced analytics** – Machine learning/deep learning – **Artificial intelligence** – **Automation and robotics** – Cloud technology – Additive manufacturing (3D printing) – Energy storage – Quantum computing – **(Permissioned and permissionless) distributed ledger technologies (DLTs)** – **(Industrial) Internet of Things (IoTs)**	– E-business – **Digital marketplaces** – **Platform-based ecosystems** – **Disintermediation** – Gig economy (contractors) – Externalization/ outsourcing – **Intangible economy (dematerialization/ virtualization)** – Data-based economy – Digital business model – Economic growth – Unemployment – Borderless industries – Unbundling – **Digital representation of rights** – **Big tech companies** – Fintech companies – **Financial crises** – **South-east shift of economic center of gravity** – Digital talent scarcity (war for talent) – **Cyber-criminality**	– Global warming – Post-oil electricity – Renewable energy – Decentralized energy production/smart grid	– **Unlevelled laws/ regulations** – **Big-tech criticism ("tech-lash")** – Data ownership/ protection – **Fear of too powerful companies** – Anti-competition concerns – Systemic relevance (too big to fail) – National security concerns – **Anti-globalization (protectionism/trade war)** – **Openness** – Global stability – Global power struggle/ redistribution – Digital warfare – **Government trust** – Surveillance – Censorship – Universal basic income

* Includes legal and regulatory factors and international relations.

The Second Most Likely Scenario



The Most Likely Scenario: Listing Survives, Intermediaries Come under Massive Pressure, Digitized Assets Boom

- Listed asset classes remain dominant, as investors continue to believe that a listing on an exchange and admission to trading are a sign of quality.
- Thanks to automation and digitization, the direct costs of the listing have fallen sharply. For example, accounting standards are fulfilled by machines; legal documents are generated automatically, and most due diligence is also done without human intervention.
- Traditional brokers and other intermediaries come under heavy pressure, as primary markets, where the securities are issued, have become directly accessible to issuers and investors – the intermediary is no longer necessary. Services such as assessments of issuers, underwriting, book-building, consulting or market-making are offered by third parties.
- The number and variety of digitized assets (digital representation of rights to real assets) literally explode. For example, investors with just two clicks can buy and trade shares in a luxury car or in a holiday home, including the usage rights. The same applies to the usage rights themselves, for example, for a specific time slot, for a private parking space or for an advertising space.
- The big technology companies operate their own issuing entities in order to boost activity in their ecosystems. A seller, for example, may issue and market shares or bonds on Amazon.
- New technologies play a major role in the securities value chain, including artificial intelligence, advanced analytics, big data, and cloud computing. In general, the level of automation has increased dramatically throughout the value chain; for example, the documents required to issue securities to the public are generated automatically.
- It is not yet clear where the IT infrastructure is heading. The big question remains whether distributed ledger technology (DLT) can replace central ledgers. What is certain is that both models can be successful only in a regulated environment with registered (permissioned) users. In all cases, however, the different ledgers communicate with each other and are therefore fully synchronized and up-to-date at all times. In addition, the ledgers do more than just record transactions, they can also contain lines of code that represent voting rights, for example.
- Permissionless distributed ledgers, such as those used to trade the crypto-currency Bitcoin, cannot prevail on a broad scale because these ledgers are based on the assumption that no trusted entities exist that are accepted as a supervisory authority. That, however, is not the case.
- Permissionless distributed ledgers and the corresponding crypto-assets are nonetheless somewhat important because they provide good opportunities to diversify a portfolio.

The Second Most Likely Scenario: The End of the Listing, Open Issuing Platforms Take Over

- The majority of investors no longer perceive a listing as a crucial feature of a security's quality. As a result, unlisted asset classes are booming.
- For issuers with digital business models, a listing involves significant costs and risks: although the listing itself is not as costly as before, indirect costs have risen significantly. This increase has resulted because digital corporations have primarily intangible assets, such as intellectual property (software), good qualified employees and R&D activities. The disclosure requirements governing the use of capital are problematic for these companies, as they must therefore reveal details about their business idea, their business model and their research.
- Open issuing platforms, on which all types of financial products can be issued, are replacing traditional listing entities.

Method

The white paper is based on an evaluation of more than 70 factors such as sustainability, the cloud, the sharing economy, unbundling, protectionism and data protection. We consider potential future trends for each of these factors and combine them to develop scenarios with varying probabilities of occurrence. The authors sum up their probabilities of occurrence after holding interviews and conferences and referring to written sources.

Authors

Dr. Tobias Lehmann, SIX – Innovation & Digital
Sunil Shikhare, SIX – Securities & Exchanges
Dr. Maneesh Wadhwa, SIX – Innovation & Digital

White Paper Series: Pictures Of The Future

Our world is changing. The new white paper series of SIX aims to assess the potential impact of the many complex and concurrent developments that are affecting the industry today. "Pictures of The Future" describe the future in terms of possible scenarios.

The series kicked-off with the future of the securities value chain. ■

For in depth information please visit:
six-group.com/whitepaper

Listing.

The ideal listing venue for companies of every origin, size and sector.

Swiss-made. World-class.

EXCHANGE SERVICES

Listing on The Swiss Stock Exchange – Your Gateway to the International Capital Market

The Swiss stock exchange is one of the most important exchanges in Europe. We connect companies from around the world with international investors and traders, and create particularly market-oriented framework conditions for listing and trading in our highly liquid product segments. The Swiss stock exchange is an ideal listing venue for companies and products of any origin, size and sector. We maintain a close dialog with both our domestic and foreign customers, working intensively with them to create optimal conditions for their success. We also help them access a strong global network.

The Swiss stock exchange is part of SIX and offers world-class services in the fields of securities listing, trading, clearing and processing, as well as financial information and payments. ■

PRIMARY MARKETS

Raising Capital Efficiently for a Successful IPO

As one of the leading exchanges in Europe, the Swiss stock exchange offers an attractive international listing venue as well as comprehensive services both prior to and after listing. Companies benefit from an efficient IPO process and gain access to Swiss and international investors with sizeable amounts of capital as well as a high level of visibility.

Author **Valeria Ceccarelli, Head Primary Markets, SIX**

Big Business

- The most capitalized company in Europe (Nestlé, Jan 2019) is on the Swiss stock exchange, alongside industry giants like Roche, Novartis, Credit Suisse, UBS and many more.
- The Swiss stock exchange represents 40% of life science market cap across Europe's major stock exchanges.
- The exchange is home to some of 2019's biggest european listings to date – Stadler and Alcon.

Switzerland is viewed around the world as being politically, economically and socially stable. According to the World Economic Forum it has been one of the world's most competitive economies for several years and is known globally for exceptionally high living standards. Switzerland's financial center is also very appealing for domestic and foreign companies seeking capital. It occupies a leading position in the world, stands out on account of its innovation, stability and security, and its banks offer substantial placement resources.

The Swiss Stock Exchange – a Strong Network

As one of the most important European exchanges, the Swiss stock exchange offers an attractive international listing venue, a highly modern market infrastructure and comprehensive services both prior to and after listing.

We are one of Europe's biggest exchanges in terms of the market capitalization (free float) of our listed companies. These include Nestlé, Novartis and Roche, three of the five European stocks with the biggest market capitalization.

Our customer base comprises a wide range of listed companies, issuers of financial products and trading members.

Added Value of Listing on the Swiss Stock Exchange

In addition to the benefits of Switzerland as a location and the reputation and importance of the financial center, the Swiss stock exchange offers a number of specific advantages.

Access to Substantial Pools of Capital
Switzerland has around 480 banks and insurance providers, as well as more than 1,800 pension funds. With a market share of 24% in 2017, Switzerland plays a leading role in the international private wealth business. A listing on the Swiss stock exchange provides access to experienced Swiss and international investors with sizeable amounts of capital. Listing on the Swiss stock exchange also provides companies access to a broad range of institutional investors, whose investment policies often only allow them to hold equity securities in listed companies.

High Visibility
By going public on a market with a high level of visibility like the Swiss stock exchange, a company can make a clear stand for transparency. Like being included in internationally recognized indexes, which inspires confidence and raises the company's profile among investors. Another strength of Switzerland's financial center is the presence of a large number of international financial institutions with expert analysis departments. This ensures good coverage by various research studies and attracts constant attention from investors and the media.

International Standards, Strict yet Market-Oriented
The regulatory requirements of the Swiss stock exchange meet the strictest international standards. Thanks to tight regulation enshrined in Switzerland's financial market legislation, they are also market-oriented and enable an efficient listing process and therefore the easy raising of capital by means of an IPO.

Admission Process: Fast and Uncomplicated
Time-to-market is an important criterion for a successful IPO. In order to account for this requirement in the best possible way, SIX Exchange Regulation has a team that checks listing applications and is open to providing support to consultants (recognized representatives). They can also be consulted at any time for assistance with interpreting the Listing Rules or other matters.

Support Through Personal Assistance and First-Class Services
The SIX Primary Markets team also offers issuers comprehensive services on the day of and after the IPO. We will assist you with the marketing of the IPO and, should you wish, with the organization of a press conference in the premises of the Swiss stock exchange immediately after the IPO. Traditionally, the conclusion of the transaction and the IPO are celebrated by the company's management ringing in the trading of the new issuer's shares, followed by brunch.

Our various platforms for issuers are aimed to help making your being public simple and focused. These include workshops for listed companies, as well as information and networking events like the annual SIX Investor Relations Conference. You can also use these events to establish new contacts or maintain existing business relationships.

In 2016, SIX launched the Stage Program; a service aimed at helping small and medium-sized enterprises raise their profile on the capital market. The service includes research by one or more established banks.

IPOs on the Swiss Stock Exchange – Varied and Successful

More than 140 companies have opted to list on the Swiss stock exchange since 2000, thanks in no small part to this wide range of benefits. The average market capitalization of these companies based on the closing price on the first day of trading was around CHF 1.5 billion, with the average transaction volume (including the greenshoe option) amounting to almost CHF 300 million.

These figures cover a wide range of companies, varying in size and sector. The smallest IPO since 2000 had a transaction volume of CHF 18 million for a market capitalization just under CHF 40 million. The biggest had a volume of around CHF 3.3 billion.

Companies from a wide range of sectors have opted to list on the Swiss stock exchange. The exchange's sector clusters such as Life Sciences, Financial Securities, Real Estate or High Technology are a key factor in the choice of a listing venue. ■

Your Benefits at a Glance

- A leading global financial center
- International investors with a sizeable amount of capital
- Strong placement resources of local banks
- Efficient raising of capital thanks to extensive professional network and personal support
- First-class services and fast listing process
- Targeted information packages
- Strong presence among investors, analysts and media
- Access to an extensive network of stakeholders

For more information on the Primary Markets of the Swiss stock exchange contact Valeria Ceccarelli at valeria.ceccarelli@six-group.com or Tel. +41 58 399 2539

From top left clockwise: Christian Geiger, Senior Relationship Manager; Valeria Ceccarelli, Head Primary Markets; Krishna Tewari, Analyst; Christian Fehr, Relationship Manager; Andrea von Bartenwerffer, Head Issuer Relations; Patrick Förg, Head Origination

ETFs/ETPs

Switzerland Has Room to Grow

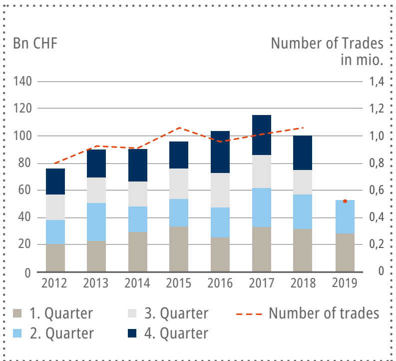
Danielle Reischuk, senior sales manager for ETFs (exchange traded funds) and ETPs (exchange traded products), associate director, at the Swiss stock exchange, shares her expert insights into the current state of the market, and its overall direction.

What is your view of the ETF market, as it stands today?

Capital is rapidly piling into ETFs with the asset class now looking after more than $5 trillion globally, of which EUR 633.1 billion is managed inside Europe.[1] This growth is being driven by investors, a number of whom are withdrawing capital out of actively managed products, and reallocating it into lower cost, passively traded funds that follow benchmarks. We are confident that these positive flows into ETFs will continue. For instance, Moody's is forecasting that the share of passive assets in Europe could total 25% by 2025, up from 14.5% in 2018.[2]

What is happening in the ETF market in Switzerland?

The Swiss stock exchange, a part of SIX, continues to cement itself as a leading global ETF destination, with 1,500 ETFs now listed on the exchange, a milestone representing a massive increase in market share since 2015, when there were 1,000 ETFs listed on the Swiss stock exchange. As a result, Switzerland is currently home to one of the broadest ranges of ETF listings in Europe, an accomplishment that was facilitated by SIX's decision to enter the market much earlier than many of its peers, having listed its first ETF in 2000. ETF trading volumes also rose exponentially during the last few years and for three years in a row have exceeded CHF 100 billion, accounting for more than 7% of the exchange's total turnover. Since 2015, there have been one million ETF trades executed each year, a level that has remained consistently high.



Why is Switzerland enjoying such positive ETF growth?

ETFs have exploded in the local market for several reasons. Firstly, there is an extremely deep pool of affluent investors inside Switzerland, which makes the country very attractive to ETF issuers looking to list their products. For example, a recent report by Boston Consulting Group found that Switzerland has the fourth largest concentration of millionaires in the world[3], making it an ideal destination for global asset managers. In addition, the country is also ideally placed for ETF listings given its proximity to EU capital markets. Whereas the US ETF market is saturated, Europe still has room for growth, especially as more retail and institutional investors look to portfolio diversification through passive exposure. Beyond Europe, Switzerland's FINMA allows cross-border listings of funds in Hong Kong, providing managers with seamless access to Asian distribution channels and better liquidity.

What innovations are we seeing in the ETF market?

As the number of ETFs begins to swell, managers are having to become increasingly innovative in terms of the underlying securities they are tracking. Switzerland has created a regulatory environment that allows managers to launch dynamic and pioneering ETFs and ETPs. Whereas European ETFs are subject to UCITS' concentration risk limits, Swiss ETFs are allowed to give exposure to a single underlying asset under the country's existing regulations. In the product structure of an ETP, a collateralized debt bearer security, it's even possible to list ETPs tracking some of the most liquid crypto-currencies such as Bitcoin and Ethereum. ■

For more information on the ETF/ETP and Funds segment of the Swiss stock exchange contact Danielle Reischuk at danielle.reischuk@six-group.com or Tel. +41 58 399 2539

[1] Investment Europe (February 11, 2019) Review of the European ETF market – 2018
[2] Pensions & Investments (March 18, 2019) Index funds to overtake active in US by 2021 – Moody's
[3] Boston Consulting Group (June 30, 2019) Global Wealth 2019: Reigniting radical growth

CONNEXOR

Unique. Just like Our Reference Data Platform

Author **Markus Gutzwiller, Head Connexor**

Historically, the dissemination by issuers of financial products' reference data to various third party market participants (i.e. exchanges, data vendors, clients, newspapers, banks, trading platforms, CSDs) has been a highly complex undertaking synonymous with manual processing. Aside from this being inefficient and costly, it can also increase the likelihood of error, especially as many data recipients use their own bespoke formatting when consolidating the information, forcing financial product issuers to send over multiple data sets. The fragmented nature of this approach to data sharing is a long-standing industry problem which the Swiss stock exchange – through its highly scalable Connexor platform – is able to address.

Advantages for all Market Participants

At its heart, Connexor facilitates the efficient management of financial products' (at the moment primarily structured products) reference data along the full lifecycle, connecting issuers seamlessly with third party market participants.

Around **14 Mio.** product updates per year (approximately 50,000 fully automated **lifecycle events** processed on a daily basis)

It does this by centralising and standardising the collection and maintenance of product data, simplifying the overall workflow and reducing the number of interfaces involved in the whole exercise. Through enhanced automation and STP (straight through processing) of data, efficiencies and cost savings can be realised for all parties. Moreover, the platform fully supports regulatory requirements such as PRIIPs/KIDs, MiFID II, IRS 871m along with Switzerland's incoming Financial Services Act.

The platform has seen tremendous growth since inception, with more than one million newly issued structured products flowing into Connexor each year, corresponding to around 5,000 new product submissions on a daily basis. In 2018 Connexor supported the sourcing and distribution of around 14 million product updates, representing approximately 50,000 fully automated lifecycle events every day.

A lot of international participants

- 30 plus issuers
- Major data vendors
  Bloomberg, Thompson Reuters, SIX Financial Information, Refinitive
- Financial enablers
  Fintech companies specialising in portfolio management, analytics and suitability checks

Moreover, the platform has global ambitions, having entered into a strategic partnership with Contineo in 2017, a leading trading platform for structured products based in Hong Kong. As a result of this arrangement, Connexor will soon deliver automation and efficiency benefits to the wider Asia-Pacific market.

Glimpse into the Future

Moving forward, Connexor is targeting further international growth and is currently in dialogue with many more market participants including a number of different stock exchanges. Furthermore, Connexor has also expanded on the types of financial instruments it supports to encompass fixed income, exchange traded products (ETPs) and even Life-Insurance policies. By rationalising the data dissemination process and paving the way for greater connectivity, Connexor plays an instrumental role in facilitating improvements to the reference data management lifecycle. ■

To discover how CONNEXOR can be your solution contact Markus Gutzwiller at markus.gutzwiller@six-group.com or Tel. +41 58 399 2961.

THOUGHT LEADERSHIP

Deal Pool: A New Way to Issue Bonds

For decades it has required a lot of manual labor to issue bonds, involving tasks ranging from phoning through a list of contacts to typing in the orders. SIX is now ready to automate the bond issuing process with its innovative centralized electronic platform called Deal Pool. It's Time to Hang Up.

One person says "fifteen" and the other hears "fifty." That can happen in bond issuance today. When banks inform their clients about new bond issues, take their orders, or allocate bonds, their employees reach for the telephone the way they did decades ago. One of the few alternatives is Bloomberg Chat. There is no risk of hearing incorrectly with that communication tool, but mistakes occur nonetheless. There are risks wherever data has to be entered into a system manually, and those risks don't get smaller when the workload per employee is increasing due to cost cutting.

Banks and Investors Benefit

With Deal Pool, SIX automates the issuing of new bonds in Switzerland across a centralized electronic platform. Deal Pool makes misunderstandings a thing of the past and enables banks to benefit from greater efficiency and traceability. Banks can retrace the entire interaction with investors, and this way can more easily ensure compliance with regulations and internal guidelines. But Deal Pool also benefits investors because not even the fastest bank employee is capable of simultaneously informing all of his or her contacts of a new bond issue. Smaller-scale investors in particular are disadvantaged by this today because they don't learn about new bond issues simultaneously with large investors. With Deal Pool, all potential investors receive the information at the same time and in the same format via e-mail or Bloomberg Message. This is because with Deal Pool, SIX has created a standardized source for all financial data (issuer, term to maturity, etc.). This not only reduces the load for banks of having to make multiple data entries, but also lays the groundwork for listings on the exchange.

Deal Pool is endorsed by all of the major syndicate banks in Switzerland. Institutional investors can now sign up for free to use this service from SIX.

How Deal Pool modernizes bond issuance in Switzerland:

Efficient
Automated workflow

Standardized
Structured format from a single source

Secure
Fewer communication errors and better traceability

Simple
Centralized electronic service for banks and investors

Fair
The same information for everyone at the same time

Free of Charge
Free access for investors

Innovation at SIX: Start Up and Back

Deal Pool arose out of an unmet need on the part of banks that prompted three employees at SIX to spend six months developing the service as a startup in the F10 FinTech Incubator & Accelerator. Deal Pool has since been integrated into the structure of SIX and is being used by banks as a turnkey service. SIX is the originator and co-founder of www.f10.ch.

What Does Best Execution Mean?

Compared with the next best competitor, the bid/ask spreads on the Swiss stock exchange are narrower by

0.4

basis points.

The Swiss stock exchange provides the tightest bid/ask spreads for all SMI shares as well as the best prices during more than 90% of official trading hours.

In the securities trading business, the customer is king. The revamped version of the Markets in Financial Instruments Directive (MiFID II) has further tightened regulatory requirements in Europe. Barring a specific instruction from a customer, financial institutions now must not only take "all reasonable steps," but "all sufficient steps" to obtain the best possible result for that customer when executing an order (best execution policy). MiFID II specifies a number of criteria that financial institutions must observe when executing client orders. The introduction of the Swiss Financial Services Act (FinSA) has further increased the importance of those criteria also in Switzerland.

4.2 mn

francs investors saved through the non-displayed liquidity pool SwissAtMid in 2018.

"As the operator of the Swiss stock exchange, we supply a multitude of relevant building blocks that investors can use to construct their own best execution policies."

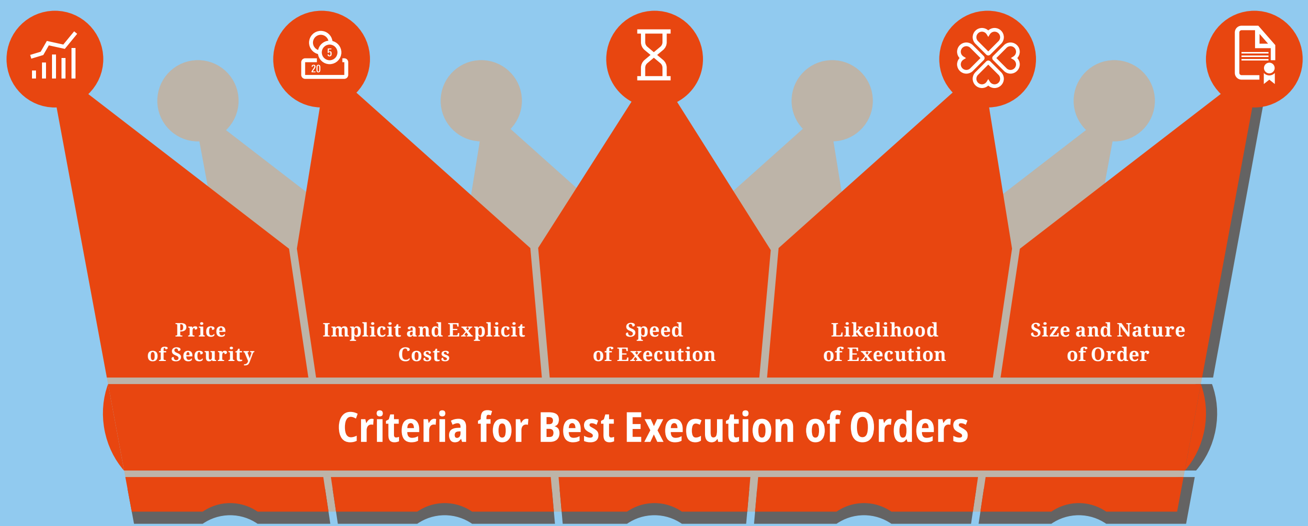
Christian Reuss, Head Sales, Securities & Exchanges, SIX

The average latency time on the Swiss stock exchange is **14 microseconds.**

The Swiss stock exchange boasts one of the fastest, most modern, and most stable trading platforms worldwide. It experienced zero downtime throughout all official trading hours in 2018.

In 2018, the Swiss stock exchange increased its market share in SMI shares to **around 70%.**

The average size of transactions in SMI shares is more than twice as large as on alternative trading platforms.



In addition to explicit costs (e.g. brokerage fees), factors such as inadequate liquidity can cause implicit costs. On the Swiss stock exchange, a unique mix of private banks, brokers and proprietary trading firms provides natural liquidity. SIX is additionally helping to lower implicit costs with SwissAtMid, Europe's largest non-displayed liquidity pool for Swiss equities.

Compared to the largest competing trading venue, the market depth for SMI blue chips on the Swiss stock exchange is **5× greater.**

Over 80% of the time the Swiss stock exchange offers the largest tradable volume of SMI shares at the best price. This large order book (the deep market depth) increases the likelihood of order execution, and fosters price stability.

NEW PRODUCT

Bringing Traders an Educational Edge

A trader's job is fraught with risk and is often highly complex. With its new, modern and remarkably realistic Trading Simulation tool the Swiss stock exchange helps them to develop and sharpen their skills, ensuring they are well prepared for trading on one of Europe's leading marketplaces.

Efficient trading on a vibrant world-class stock exchange depends on various factors. Its technology has to be cutting-edge – and thanks to continuous improvement, the Swiss stock exchange exemplifies the trading platform trinity of speed, capacity and stability. It allows participants and subsequently investors of any type to make maximum use of the attractive and highly liquid investment universe of over 43,000 securities.

Regulation is another key factor that contributes to efficient trading. With clear rules and an active market surveillance, the Swiss stock exchange ensures transparency and equal treatment. In this context, it is paramount that all the actors – traders and reporting agents – have the necessary expertise. That's why the trainings and examinations carried out by the dedicated Member Education team of the Swiss stock exchange set a high benchmark in terms of quality and are continuously updated and adapted to developments in the trading landscape and introductions of new features and services.

Replicating Reality, Powered by Artificial Intelligence

The most recent example in a long line of improvements of trader training is the introduction of an innovative Trading Simulation tool. Developed by the company Traderion with and for the Swiss stock exchange, it combines technology and gamification to create a realistic environment where candidates learn and test their knowledge. The Trading Simulation enables participants to experience a similar trading platform as the one of the Swiss stock exchange.

The resulting high degree of realism and congruence with the trading environment and functionalities of the Swiss stock exchange has several benefits. Not only does the Trading Simulation help traders with their training in general, but it's particularly useful to familiarize themselves with both the main order types such as normal and iceberg orders, and with innovations such as Sweep and Plus orders in the different order books – both in the lit book and the successfully growing non-displayed pool, SwissAtMid. The faster the existing and future traders grasp their benefits and start using them, the more efficiently they will trade on the Swiss stock exchange, improving liquidity and reducing the number of mistrades.

An Innovative Solution With Many Learning Benefits

At the end of each training session, the participants receive a detailed performance report. The report is divided in four key competency areas:

1. Performance – the degree of achievement;
2. Trading Profile – through which means performance was achieved;
3. Positioning – what was the players' position strategy;
4. Risk Profile – how the players coped with risk and compliance. Taking all these factors into consideration, the report offers a concise description of the players' activity and their trading competencies.

The training is not only for traders, but for everyone who wants to gain insights into trading on the Swiss stock exchange. It is carried out on our premises in Zurich in German and English. ■

More information and the opportunity to register is provided on our website:
www.six-group.com/tradingsim

Post-Trading.

Comprehensive post-trade services for real and sustainable added value.

Swiss-made. World-class.

EXCHANGE SERVICES

AWARDS

SIX Wins the "Best Innovation in Market Infrastructure" Award

The Swiss stock exchange scooped up the pinnacle Editor's Choice Award for "Best innovation in market infrastructure" at the Global Custodian Leaders in Custody Awards event, which took place at the London Dorchester Hotel on March 28. This award comes as the Swiss stock exchange continues to cement its reputation as a leading innovator and disruptor in the securities services industry following the introduction of its ground-breaking SIX Digital Exchange (SDX).

SIX is the first market infrastructure to offer a blockchain enabled and fully integrated end to end trading, settlement and custody service for digital assets – SDX. The service provides a safe environment supporting the issuance and trading of digital assets. In addition, SDX can facilitate the tokenization of existing or non-bankable securities, turning once untradeable instruments into tradeable assets. SDX is expected to be rolled out in 2019.

Under SDX's model, there will also be a transition to T+0 settlement supplanting the market norm of T+2. As instant settlement will negate the need to post margin; liquidity – which has been trapped at CCPs or financial counterparties – will be freed up. "SDX is transforming securities markets and we are very proud to be at the forefront of technological change. This Global Custodian award is testament to our commitment to innovation," said Valerio Roncone, head of product management and development at SIX.

In addition to winning the coveted "best innovation in market infrastructure" accolade, SIX Exchange Services was also recognized in the "best ICSD network" and "best asset servicing – major markets for Western Europe" categories at the prestigious Global Custodian Leaders in Custody Awards event. The awards were based on SIX's consistently excellent scoring in Global Custodian surveys over the years. "In a rapidly changing and volatile market, clients need dynamic and agile counterparties to deliver. This is what drives SIX as an organization," continued Roncone.

"SIX has become a pioneer within the securities services industry by building the first fully integrated trading, custody and settlement framework for digital assets and we are delighted to recognize this achievement with our Best Innovation in Market Infrastructure award," said Jonathan Watkins, managing editor at Global Custodian. "While the new digital asset phenomenon was trying to find its place in the capital markets, SIX stepped up and created the first ecosystem from an incumbent market infrastructure provider to add a much-needed element of trust and security to an emerging asset class. We at Global Custodian are excited to see what the future holds for this exciting new project," he added. ■

From left to right: Brendon Bambury, Head of Post Trade Sales – UK & Nordics; Sandro Heim, Head Client Executive Management and Valerio Roncone, Head Future Business share their delight at winning 3 prizes at the Global Custodian Leaders in Custody Awards event in London.

SECURITIES FINANCE

The Single Window to All of Your Collateral

SIX is now revolutionizing its decades-old, traditional Tri-Party Agent model – by opening up its infrastructure. As a first step, SIX will launch by the end of 2019 the Collateral Cockpit. This revolutionary solution enables securities traders to manage their assets in one place, in one system – CSD agnostic. SIX is the first company to offer such a solution in the European market, thus providing efficiency gains and cost reductions for its clients. ■

CUSTODY SERVICES

Direct and Indirect Access to Your Key Markets Worldwide

The Swiss stock exchange 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 (ICSD) across markets worldwide, SIX delivers comprehensive custody services for the most demanding clients. ■

THOUGHTS

EU Raises Regulatory Standards for CCPs

Author **Roger Storm, Head Regulation, Risk & Committees, SIX x-clear**

The centralized clearing model continues to evolve around the world. The push for change is currently being driven overwhelmingly by policymakers and new regulations. Moving forward, developments and innovations in various technologies are likely to create both threats and opportunities for clearing systems as well. Roger Storm, Head of Regulation, Risk and Committees at SIX, shared his insights at this year's AFME (Association for Financial Markets in Europe) European Post-Trade Conference in London, whereby he outlined some of the changes and pressures facing the securities ecosystem.

Fragmentation and Extraterritoriality in Europe

Even though a number of attendees at the AFME Conference were not entirely convinced that Brexit will actually transpire, CCPs (central counterparty clearing houses) cannot ignore the potential consequences that a disorderly UK departure from the EU may bring. Aside from the obvious disruption risk, Brexit has also forced European policymakers to revisit their attitudes towards granting third-country firms access to the EU, which means non-EU CCPs have now found themselves in the middle of this messy cross-fire owing to their systemic importance. Fortunately, both the UK and EU spotted this problem and have granted each other temporary recognition, in the case of no withdrawal agreement.

However, regulations in the EU continue to evolve. The revisions to the European Market Infrastructure Regulation (EMIR) – also referred to as the EMIR Review or EMIR 2.2 – not only provide some relief around existing clearing obligations, but also strengthen the EU's supervisory regime over CCPs in general. It will do this by establishing a multi-tiered supervisory approach towards EU and recognized third country CCPs.[1] The amendments introduce a classification system for third country CCPs, dividing them into two camps, namely CCPs which are seen to be an "ordinary" risk to EU financial stability (Tier 1) versus those deemed to be substantially systemically important (Tier 2).[2]

Storm says the proposals are – in effect – extraterritorial, pointing out the new European CCP regulatory bodies will likely have a significant say over non-EU, tier 2 CCPs' operating models. If such a CCP were to reject EU demands, it could lose its recognition and may even be forced to relocate. Given the global nature of financial markets, it is understandable that CCPs active in multiple jurisdictions will be of interest to a number of financial market regulators. An alternative – and the historic – regulatory approach has been facilitated through cooperation agreements, and deferral of supervision, but it appears the EU is now taking a new strategic direction towards monitoring and oversight of third country CCPs.

Leveraging new technologies for a more efficient market
While Brexit may force change onto the EU's financial markets, the Capital Markets Union initiative (along with other select government projects) and emerging new technologies will also prompt major reforms within the industry. The ability to seamlessly obtain and move high-quality collateral and post it as margin and default fund contributions at CCPs (or to their counterparties in bilateral OTC derivatives trades) is still an area of concern for many market players. The EPTF (European Post-Trade Forum) report (following up on the earlier Giovannini report) in 2017 underlined many of the barriers that are still hampering the evolution of a truly harmonized single EU-market for financial instruments.

"Maybe some of the emerging technologies, such as tokenisation, will help remove these barriers as well", says Storm. "Tokenisation, possibly combined with Distributed Ledger Technology (DLT), could allow a reset of some legacy rules, and thereby make it easier and more efficient to mobilise and pledge collateral across the EU," he adds. Even in scenarios where new technologies could pave the way for true real-time processing, Storm is not concerned about the impact such breakthroughs will have on the current CCP landscape.

[1] Deloitte (May 2, 2019) What lies in store for third-country firm access to the EU in a post-Brexit world?
[2] EY (November 2018) EMIR, changes on the horizon

SIX x-clear operates a real-time system today, and wherever the underlying instruments (e.g. derivatives) have a time lag between the trade's conclusion and the final legal settlement of the claims, the safety net provided by a CCP sitting in between a transaction will continue to be demanded of by the market and regulators. Storm adds there are also significant liquidity and financing costs attached to real-time gross settlement (RTGS), pointing out a number of ancillary business activities (securities lending and borrowing, collateral transformation for clearing members) often make use of these time gaps.

Watch-out

Unless the EU and UK find agreement on Brexit, allowing for the continued provision of cross-border financial services, the industry – be it investors, investment firms, trading venues, CCPs, Central Securities Depositories and custodians, will all have to implement meaningful changes to their business frameworks. The EU is forging ahead with its reform agenda, and supporting emerging new technologies for the benefit of the Union's financial markets. The former deferral oversight regime, however, is likely to change, so third country firms will either have to dance to the EU's tune or step out entirely. ■

CLEARING SERVICES

Your Leading Choice for Pan-European Multi-Asset Clearing

SIX operates one of Europe's most qualified, stable, and capitalized central counterparty (CCP) clearing houses.

The SIX clearing entity is recognized and certified by the European Securities Markets Authority (ESMA) for pan-European clients. It is licensed by the FINMA and is deemed a systemically important financial institution under the supervision of the Swiss National Bank (SNB). The SIX clearing entity also complies with the requirements of Basel III and CPSS-IOSCO standards, as well as with the risk framework of EMIR/FinfraG.

SIX operates a highly diversified CCP with access to multiple trading platforms across Europe. Comprehensive clearing services and risk are managed in real-time. SIX delivers multi-asset clearing in a highly regulated environment. ■

About the Author

Roger Storm
Head Regulation, Risk & Committees, SIX x-clear

Roger Storm is Head Regulation, Risk & Committees of SIX x-clear Ltd, one of Europe's leading providers of Clearing services. Beside of acting as Deputy Head SIX x-clear, Roger is mainly responsible for regulatory matters, stakeholder management, business development as well as risk management, which also includes default process oversight.

In a career spanning 27 years in international banking and financial market infrastructures, Roger Storm has acquired a wealth of senior management experience in markets as diverse as Germany, France, the UK, Japan and Scandinavia, and has held a number of distinguished positions in SEB, SWIFT, Bankgirot, banking associations, and EBA Clearing (where he was Executive Director, Chief Risk Officer and Head of European Bank Relationship Management).

Roger Storm has exceptional academic credentials, having earned an MBA from Stockholm School of Economics and a Bachelor's degree in Law, Business Administration and Economics from the University of Stockholm. He is also a Certified Financial Analyst.

DIGITAL EXCHANGE

Switzerland – Where, If Not Here, Can We Break New Ground?

A Globally Leading Marketplace

Switzerland is one of the worlds leading Financial Market Places and home to significant Global Wealth Management Funds, globally leading Banks and Insurance Companies. The financial industry is a key pillar of the Swiss economy, accounting for 9% of the Swiss GDP, which is the third highest percentage globally.

Big Business

Switzerland is ranked the N°1 innovative country in the world for the 8^{th} year in a row and we have a track record to back it up. Like in 1996, SIX introduced electronic trading, profoundly disrupting the stock exchange industry for good.

The Gateway to Europe

Switzerland is located at the heart of Europe. Our stock exchange is N° 3 in Europe by IPO transaction volume and N° 4 in market capitalisation, with 96% of all CCP transactions coming from outside of Switzerland. 27 countries have their retail payment systems run by SIX. And Switzerland is renowned for its highly skilled, international workforce.

Tightly Regulated

FINMA, the Swiss regulator, has set extremely high benchmarks. Switzerland has only one CCP, one CSD, and one company running payments for its national bank. All of that is SIX. FINMA has only issued 7 FMI licenses. SIX holds 6 of them.

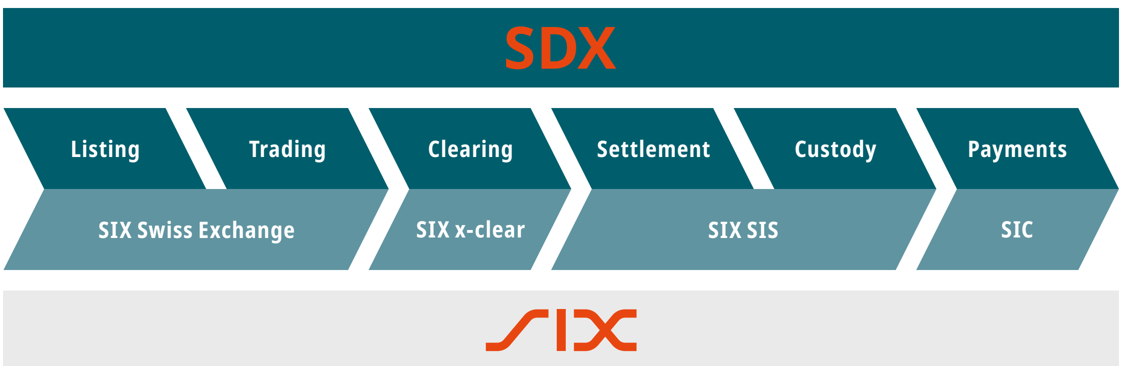
Strong, Stable and Solid

Switzerland is stable, socially and politically, as well as financially. The Swiss Franc is the global go-to currency in times of crisis. And – as an aside – SIX owns and operates one of the most advanced vaults in the world, known as “Switzerland’s Fort Knox”. ■

Contact
reception@sdx.com
+41 58 508 30 00
Lerchenstrasse 16 CH-8045 Zürich
Telegram: https://t.me/SIXDigitalExchange

The Entire Value Chain

The Swiss like to have things under control. SIX is one of the only companies in the world that handles every step of the value chain of its country’s financial marketplace, end to end. This, combined with managing payments for the Swiss National Bank puts SIX in a globally unique position.



WORTH KNOWING

Decrypting Cryptocurrency

Author **Avi Ghosh, Head Marketing Exchange Services & SDX, SIX***

It has been ten years since the first ever cryptocurrency (Bitcoin) was unleashed. Since its inception, Bitcoin has spawned a number of different digital currencies and variant subfields, principally initial coin offerings (ICOs). The technology – Distributed Ledger or more commonly Blockchain – which is used to facilitate Bitcoin transactions – is also being beta-tested across securities markets by established infrastructures and custodian banks, a number of which believe its immutability and real-time record-keeping will help rationalize their operating costs by removing inefficiencies and duplication. Digital assets have come a long way over the past decade and are now on the verge of wholesale institutionalization, thanks in part to the work at SIX Digital Exchange (SDX).

Cryptocurrencies: The Early Risers

Among digital assets, cryptocurrencies – comprising virtual currencies such as Bitcoin, Ripple, Ethereum and Litecoin – are perhaps the most prolific, boasting a market cap of around USD 126 billion[1], although this represents a massive drop from January 2018 when that number stood at USD 830 billion.[2] Through the use of private or public keys, cryptocurrencies can be exchanged between counterparties via a Blockchain without intermediation from banks, brokers or infrastructures, thereby reducing transactional costs. Most cryptocurrency trading activity is dominated by retail investors, although small pockets of institutional investors – primarily hedge funds, High Net Worth Individuals (HNWIs) and family offices – also participate in the market.

Large institutions (i.e. major pension schemes, asset managers) have generally kept away from cryptocurrencies. Firstly, cryptocurrencies are outside the safety net of securities laws meaning investors are unlikely to receive compensation if they lose money. The (almost) asset class is also excessively volatile and incompatible with many of their investment risk mandates, particularly as transactions are anonymous, meaning they are vulnerable to running afoul of money laundering and/or terror financing rules. There are also serious counterparty risks. This is because cryptocurrencies are traded on crypto-exchanges, a handful of which have been hacked, resulting in customers' online private keys being stolen, and with it their cryptocurrencies.

Next Came the ICOs

ICOs are an evolution of the original cryptocurrency phenomenon. They work as follows. A small company with an idea is looking for seed funding to get off the ground but may not have the time, contacts or resources to attract private investment or venture capital. Instead, the company might try considering an ICO, whereby they publicize their business strategy on social media platforms, and crowdfund via a Blockchain – raising working capital (usually in digital token form) from investors by issuing cryptocurrencies. In theory, ICOs offer quicker access to capital for companies, but they too have serious weaknesses.

Similar to cryptocurrencies, ICOs are not regulated which means they offer scant or no investor protection if assets go missing. As issuers are not required to disclose much – if any – information about their businesses – unlike in a traditional public listing – the capacity for fraud and/or failure is very high. Quantifying ICO fail rates is contentious, but most experts estimate it to be above 70%. Likewise, 80% of ICOs in 2017 were identified as scams.[3] Unsurprisingly, this has dented investor zeal for ICOs. The UK Financial Conduct Authority (FCA) conceded there had been a huge decline in capital raising, highlighting global ICO funding totaled USD 65 million in November 2018 versus USD 823 million in November 2017.[4]

SDX

In the context of the limited protections given to investors purchasing cryptocurrencies or ICOs , it was clear the market needed to institutionalize. Consequentially, mature and forward-thinking infrastructures such as SIX set out to create a fully regulated digital asset ecosystem in close collaboration with FINMA and the Swiss National Bank. SDX – which is a separate company to SIX– provides fully integrated trading, settlement and custody of digital assets. Not only will the service offer a safe environment for the issuance and trading of digital assets, but it aims to tokenize existing securities and non-bankable assets, making once untradeable instruments tradeable.

[1] CoinMarketCap (17 April 2019)
[2] CNBC
[3] Cointelegraph
[4] FCA

Step 1: IDOs

Unlike an ICO, which usually takes the form of payment or utility tokens, and whose underlying assets might not even exist, initial digital offerings (IDOs) will be underpinned by actual assets and actual equity of companies, while transactions take place utilizing traditional (i.e. central bank-backed, so-called FIAT) currencies. In fact, IDOs will have a lot in common with traditional IPOs insofar as they are subject to existing securities law.

However, the transactions will be entirely digital and will take place within a Distributed Ledger Technology (DLT) environment. In essence, IDOs are designed to make public listings more accessible to a wider range of companies thanks to added ecosystem efficiencies, for example thanks to the use of smart contracts and not necessarily lower scrutiny. Whereas IPOs will typically have a minimum valuation threshold of around USD 25 million, IDOs can also target smaller enterprises.

Everything Is IDO-able

SDX plans to make IDOs linked to liquid financial instruments and assets available from early 2020. In addition to digitalizing equity securities, SDX also intends to widen IDO listings to incorporate structured products and, in the future, alternative assets like real estate, works of art, jewelry. Not only will this help attract stable funding, enabling firms to grow, but it will expand the investment universe and deepen market liquidity. The next step in the process will be to facilitate digital trading in illiquid or untradeable assets. Through an IDO, an illiquid asset can be transformed into a digital, tradeable security, in what SDX believes will democratize and diversify the entire investment process.

In effect, this makes nearly every tangible asset in the world IDO-able or securitize-able. So how will the concept work?

Imagine this scenario. An art gallery has had its government funding withdrawn and is now urgently looking to make renovations. In today's market, it has several options. It could try and obtain corporate sponsorship or acquire private charitable funding, but this can be a slow and cumbersome exercise. Through an IDO, the art gallery could list its collection of art digitally, seamlessly and cost-effectively, raising funds for its renovation plans from a much deeper pool of investors, negating the need to reach out to sponsors.

The Future

The words "cryptocurrency" and "ICO" often make investors uneasy, mainly because they are assumed to be high-risk instruments entirely lacking in accountability, regulation and protection. IDOs will transform the market. As these instruments will be listed, traded and custodied on regulated exchanges, investors can be assured that the market is safe. IDOs have the power to reshape the IPO market, primarily by opening up funding channels to organizations which might otherwise have never received any or at a reasonable cost of capital. In a market where sub-zero interest rates have become normalized and returns difficult to come by, SDX will broaden the investment landscape, giving institutions access to once inaccessible securities. ■

* The article was published in the "Schweizer Personalvorsorge" Magazine, 7/2019, VPS Verlag, Lucerne.

About the Author

Avi Ghosh
Head Marketing Exchange Services & SDX, SIX

Avi Ghosh has worked for SIX since 2010 and has over twenty years' experience in journalism, advertising, marketing, design and communications.

Prior to joining SIX, Avi founded and ran his own brand strategy and consulting firm. In this capacity he played a key role in helping to position the organization as a provider of integrated end-to-end post-trade services.

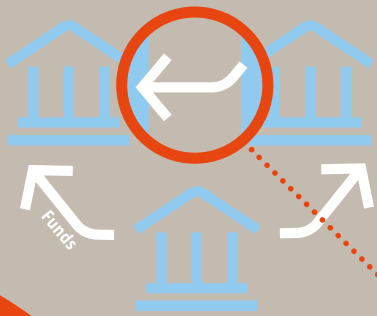
Before starting his own company and working for SIX, Avi spent almost 15 years working in Brussels for SWIFT where he was responsible for Marketing & Communications for the securities processing industry segment. One of Avi's key responsibilities while at SWIFT was the running of Sibos – the financial operations industry's premier event. In this role he was responsible for defining all content, session frameworks (plenaries, panel discussions and information sessions), speakers and content for the event.

INDICES

Reference Interest Rates: SARON, the Swiss Alternative

Reference interest rates are important, and not just for monetary policy. Financial contracts for loans, savings deposits, and mortgages also make use of them, as do many derivatives and exchange-traded funds. However, the controversial standard – LIBOR – will be discontinued in 2021. An alternative to that standard has already existed in Switzerland since 2009. It is called SARON, is calculated by SIX, and offers many advantages.

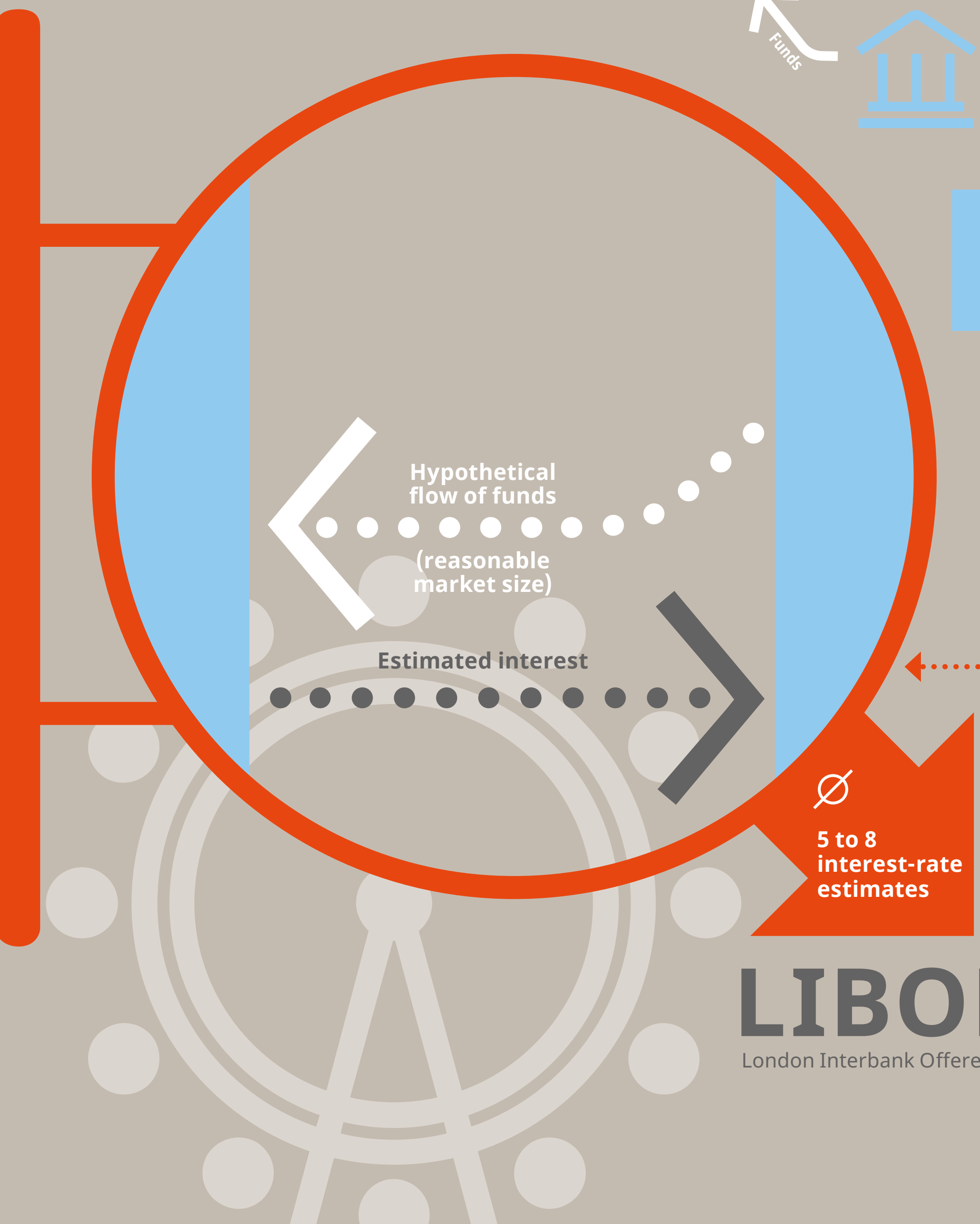
Unsecured Money Market in London



The LIBOR reference rate reflects the **unsecured money market** (short-term credit funding) in London. "Funding against credit-worthiness" is the rule here (no collateral required).

A group of **11 to 16 panel banks** is involved in setting LIBOR.

The panel banks answer the question of what interest rate they could borrow funds at if they ask for an interbank **offer** in a reasonable market size. Illicit collusion between some of those panel banks caused the LIBOR scandal in 2011.

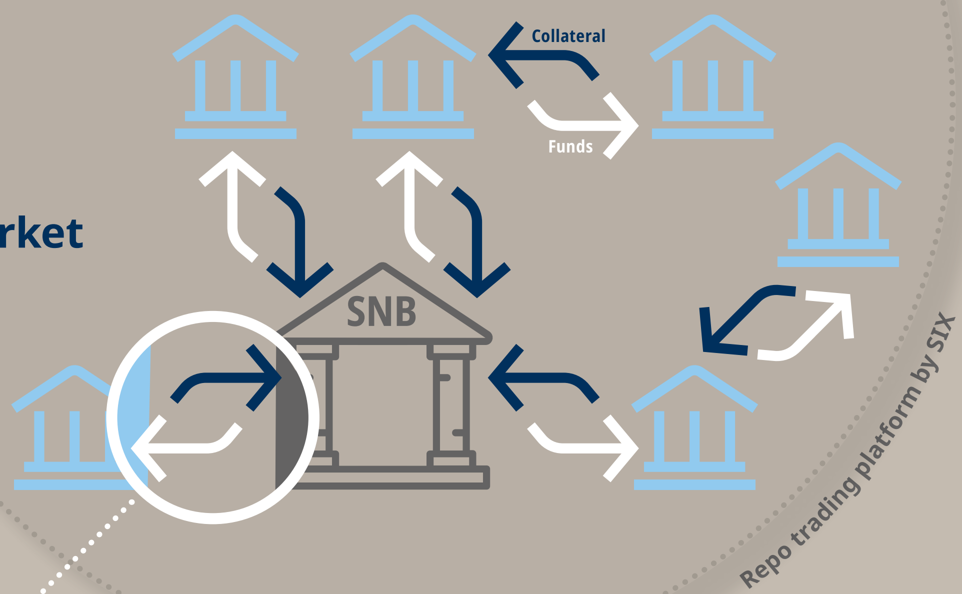


The **estimates** submitted by the panel banks flow into the calculation of LIBOR. **Between 5 and 8** interest rates are used, depending on the number of banks involved. The 3 to 4 highest and lowest interest rates are discarded.

LIBOR
London Interbank Offered Rate

- **Calculated once a day**
- **Published once a day**
- **Available in five currencies (CHF, EUR, GBP, JPY, USD)**

Secured Money Market in Switzerland

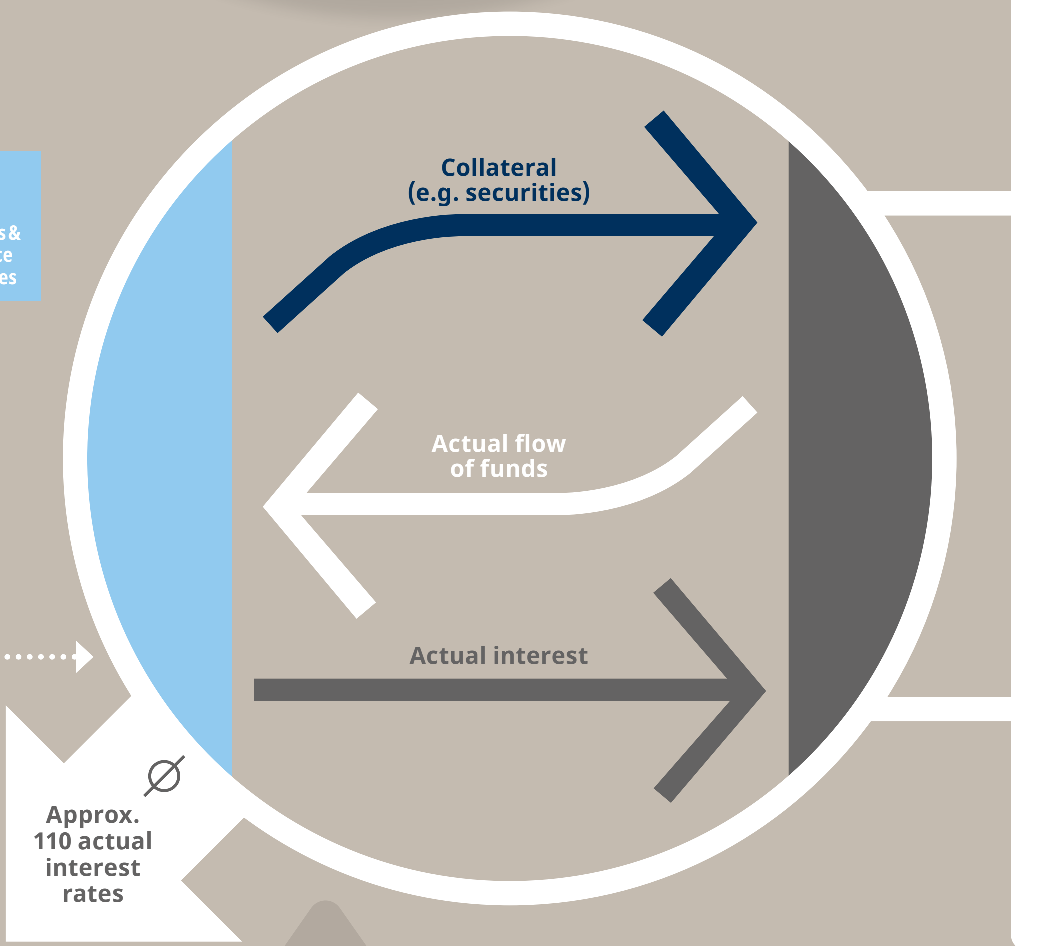


SIX operates the fully automated trading platform for the **secured money market** (short-term credit funding) in Switzerland. The SARON reference rate reflects this repo market. “Funding against collateral” is the rule here.

Some **160 banks and insurance companies** take part in the Swiss repo market, including the Swiss National Bank (SNB), which uses it to supply Switzerland’s economy with liquidity.

160 banks & insurance companies

Banks receive funds from the SNB by depositing securities as collateral. They pledge to buy back those securities at a later date and **pay interest**. Banks also borrow money from each other using this principle (secured interbank market).



Actual **concluded transactions and quotes** flow into the calculation of SARON. That’s **approximately 110 interest rates** per day on an annual average.

SARON

Swiss Average Rate Overnight

- Calculated/published every ten minutes
- Fixing conducted three times a day (closing rate: 6:00 pm)
- Available in one currency (CHF)

THOUGHT LEADERSHIP

Disruption? Been there. Done that.

The challenge with disruption is not in how you resist it. But in how you manage it. A look back on some of the many firsts of the Swiss stock exchange in its business areas of listing, trading and post-trading.

The Swiss stock exchange has set the gold standard for innovation and dynamism in the financial services industry for a long time. Its disruptive journey which includes trailblazing initiatives such as establishing Switzerland's first ever CSD and opening the world's first fully electronic exchange is set to reach the next level. Cementing its forward-thinking credentials, SIX – the operator of the Swiss stock exchange – is looking to completely transform existing securities markets by facilitating the issuance and trading of digital assets, along with the tokenisation of existing securities and non-bankable instruments through SDX, the new Digital Exchange.

A Revolution in Trading

As its history illustrates, the Swiss stock exchange has led where others have followed. It has a long track record of being a pioneer in electronic trading and automation. Beginning in the mid-1990s, the then SWX started to support electronic trading in foreign and domestic equities, along with Swiss options. In 1996, SWX made another leap by launching a fully automated trading, clearing and settlement system as the transition away from manual processes started to acquire greater momentum. It then followed up this milestone by launching SWX Repo, the world's first electronic repo trading platform.

Forging the Path for ETFs

The Swiss stock exchange was one of the first European exchanges to spot the potential of ETFs (exchange traded funds) almost two decades ago. The listing of the first ETF in 2000 marked the start of an exceptional success story. Ever since, it has strengthened its position as a leading ETF destination with one of Europe's largest product offerings of over 1,500 ETFs. Its annual trading volumes have continued to rise and established themselves above CHF 100 billion. A decade after the first ETF was traded, the Swiss stock exchange launched a segment for ETPs (exchange traded products); today, it is the world's leading exchange for ETPs on crypto-currencies, both in terms of listed products and trading volumes.

Automated Value

As a leading CSD, the Swiss stock exchange has played an instrumental role in tackling a number of industry issues, including developing solutions to enrich clients' trades with SSIs to automate settlement instructions. Elsewhere, its xChain is an online, transparent and collaborative information platform dedicated exclusively to corporate actions, which has proven exceptionally useful for end customers. Conscious of the rapidly evolving risks facing clients, SIX also launched its Security Operations Centre which leverages cognitive computing to help manage cyber- threats.

The Beginning of a New Era

With SDX, SIX is looking to once again reshape securities markets by providing the infrastructure to support the issuance and trading of digital assets, along with the tokenisation of existing securities and non-bankable instruments. SDX is expected to generate a huge liquidity boost for financial markets as initial digital offerings (IDOs) – namely digital listings that take place on a distributed ledger – will provide more companies with easier access to public markets, in what could prove to be yet another industry game changer initiated by the operator of the Swiss stock exchange. ■

WORLD-CLASS SERVICES BY SIX

SIX Around the World

With its globally networked infrastructure, worldwide presence and international partners, SIX ensures the connectivity and attractiveness of the Swiss financial center.

SIX Is Present in 20 Countries Worldwide

Switzerland
Zurich
Olten
Biel
Geneva

Belgium
Brussels

Germany
Frankfurt

Denmark
Copenhagen

France
Paris

Ireland
Dublin

Italy
Milan

Luxembourg

Morocco
Casablanca

Monaco

Netherlands
Amsterdam

Norway
Oslo

Austria
Vienna

Poland
Warsaw

Singapore

Japan
Tokyo

Spain
Madrid

Sweden
Stockholm

UK
London
Edinburgh

USA
New York
Stamford CT
Boston
San Francisco

The Swiss stock exchange. Swiss-made. World-class.

Listing, trading, post-trading: the entire capital market value chain under one reliable roof. The Swiss stock exchange provides direct access to international capital and liquidity. Our world-class services are the driving force behind our customers' performance – in Switzerland and internationally.

The Swiss stock exchange – owned and managed by SIX – is the ideal listing venue for companies of any origin, size and industry, and we offer outstanding liquidity for trading Swiss securities. We bring companies from all over the world together with experienced, highly capitalized Swiss and international investors. This is how we play a key role in financing growth and safeguarding the long-term prosperity of the Swiss economy.

The Swiss stock exchange is the reference market for over 43,000 securities and the home market for some of Europe's most important blue chip stocks such as Novartis, Roche or Nestlé. You can trade across all of our attractive segments ranging from Equities, Bonds, Exchange Traded Funds, Sponsored Funds, Sponsored Foreign Shares, Exchange Traded Products, traditional Investment Funds, through to Structured Products.

A major feature of and key success factor underpinning our stock exchange is the efficient, secure and, above all, independent post-trade infrastructure that we have in place.

SIX is the only fully integrated financial market infrastructure in Europe. Nowhere else is the stock exchange combined with the entire post-trading chain and with real-time payment processing under one roof. SIX operates the infrastructure for the Swiss financial center, thus ensuring the flow of information and money between financial market players. SIX offers exchange services, financial information and banking services – and is building a digital infrastructure for the new millennium.

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

T +41 58 399 5454
www.six-group.com/exchange-services

09.2019