CHAPTER 1

Finanzplatz Schweiz

INTRODUCTION

There is no parallel in Swiss history to the financial reforms that have taken place during the past quarter century. These reforms have created a financial landscape called Finanzplatz Schweiz,[1] which boasts a completely integrated, fully automated electronic securities trading and post-trading infrastructure under the organizational umbrella of SIX Group. It is the result of an ongoing international competition for financial depth, breadth, and sophistication in a high-stakes world where financial transactions are executed at the blink of an eye and massive amounts of financial information flow in fractions of seconds. Electronic trading systems increase transaction speeds, but equally important are the benefits they bring in terms of efficiency, liquidity, transparency, and fairness, with respect to equal opportunity.

Competing for financial market leadership in the twenty-first century would be futile without state-of-the-art technology applied to all four major security groups: equities, bonds, exchange-traded funds and funds, and exchange-traded products. Organizationally, SIX Group manages and operates the Swiss value chain in four major business fields using the integrated services of 10 major subsidiaries. Together, these entities provide straight-through processing of transaction execution, clearing, and settlement, as well as high-quality reporting of financial information.[2]

SWISS VALUE CHAIN

Exhibit 1.1 provides an overview of the trading processes and institutions connected to the Swiss value chain. Customer orders move automatically through four layers of financial processing, from trading to clearing to settlement to payment. From the start, the electronic platform for this automated process, SWXess, was developed to integrate all of the Swiss capital markets' needs.

Eligible securities are sent with automated settlement instructions to clearing agents, SIX x-clear or LCH.Clearnet Ltd (a U.K.-regulated, independent clearinghouse); then, they are settled through SIX SIS, Euroclear Bank, or Clearstream Banking and, finally, purchased via the SIX Interbank Clearing system, which is connected to the Swiss National Bank (SNB) and Swiss Euro Clearing Bank

[1]The literal English translation is Finance Place Switzerland, but many native English speakers use the German expression.
[2]See Appendix 1B: SIX Group Affiliates for contact information on these subsidiaries.

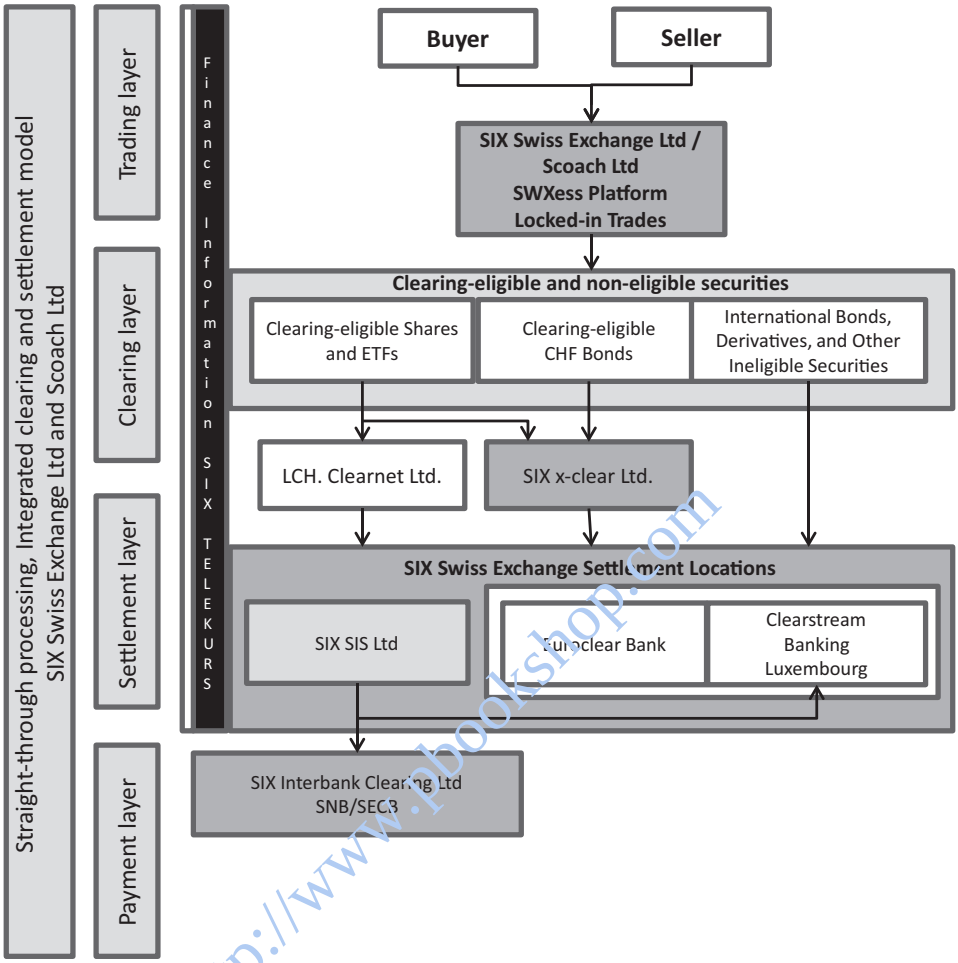


Exhibit 1.1 The Swiss Value Chain

Source: SIX Swiss Exchange, *Infrastructure*, www.six-swiss-exchange.com/participants/clearing/clearing_settlement/infrastructure_en.html (accessed June 10, 2012).

(SECB).[3] Trades are locked in, which means direct computer linkages eliminate the need to enter data more than once, thereby, reducing the likelihood of errors.

SIX Group

SIX Group is the result of a 2008 merger of the former SWX Group (securities trading), SIS Group (securities services), and Telekurs Group (financial information and payment services), which are combinations of previously bank-owned businesses.

[3]LCH.Clearnet is a U.K.-regulated independent clearinghouse. Euroclear Bank and Clearstream Banking Luxembourg provide international central securities depository services.

Since its founding, SIX Group has covered the entire value chain associated with Switzerland's financial center substructure and has offered comprehensive services in the fields of admission procedures, securities trading, clearing, settlement, custody, security administration, and payment transactions (including card services), as well as the procurement and distribution of financial information. For this reason, it is a vital pillar of Finanzplatz Schweiz.

The purpose of bundling together SWX Group, SIS Group, and Telekurs Group was to guarantee optimal and sustainable service to customers by[4]:

- Fortifying Switzerland's financial market infrastructure and enhancing both efficiency and innovation across the entire value chain.
- Strengthening Switzerland's international competitive position by concentrating capital, encouraging innovation, enhancing governance, and increasing transaction volumes (economies of scale).
- Collaborating with international partners.
- Building architecture that guarantees open access to trading (i.e., digital, online, and free-of-charge), settlement, and clearing.

  and
- Creating a shareholder structure geared toward long-term stability, by employing the user-owned, user-governed principle.

Exhibit 1.2 shows the multiple business areas in which SIX Group is involved. As a manager, operator, and overseer of Swiss financial transactions, it is in charge of all stock exchange transactions and post-trading services. In addition, it provides financial information, processes card-based payment transactions and interbank payments in Swiss francs and euros, and offers services for retail payments, such as debit advice procedures and electronic bill presentment and payment.

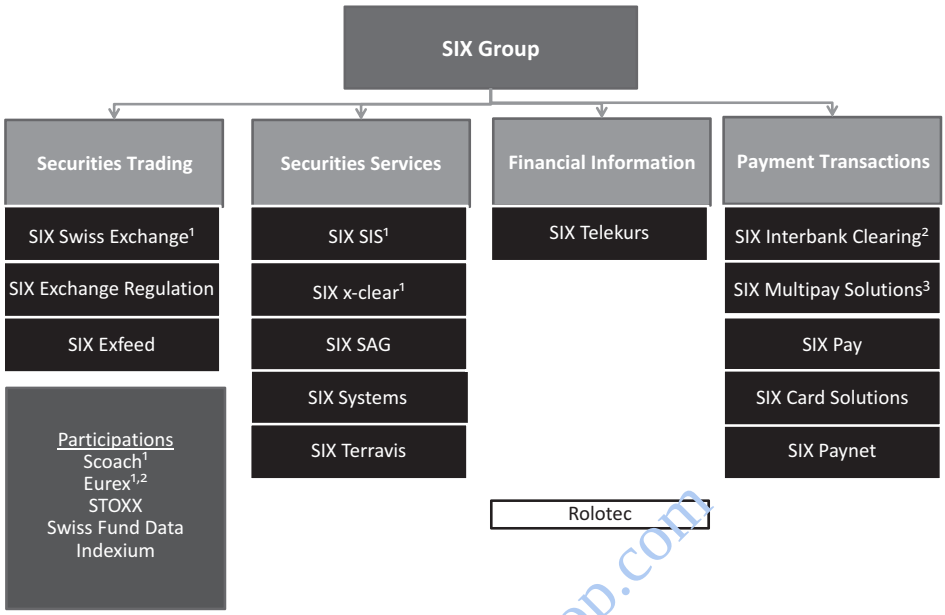
SIX Group's 3,700-strong team conducts business in 24 countries with one-third of its total staff working outside Switzerland. This unlisted, public, limited company is domiciled in Zurich and owned by more than 150 national and international financial institutions.[5] While it is user-governed, most of SIX Group's activities are supervised by the Swiss Federal Finance Market Supervisory Authority (FINMA). To promote sustainability and stability, its shares can only be transferred with the approval of the Board of Directors,[6] and no shareholder or shareholder group owns an absolute majority. In 2012, Switzerland's "Big banks," UBS and Credit Suisse, were the largest shareholders (30.1 percent), followed by Foreign Banks (21.6 percent), Commercial and Investment Banks (14.9 percent), Cantonal Banks (13.9 percent), Private Banks (9.0 percent), Regional- and Raiffeisen-Banks (6.1 percent), Treasury Shares (3.1 percent), and Others (1.2 percent). See Exhibit 1.3.

Exhibit 1.2 shows that SIX Group separates its business segments into four major areas: Securities Trading, Securities Services, Financial Information, and Payment Transactions.

[4]SIX Securities Services, *Homepage*, www.six-securities-services.com/dss/ (accessed June 10, 2012).

[5]As of May 1, 2011, of the 153 shareholders, 143 were banks.

[6]SIX, *Ownership Structure of SIX*, www.six-group.com/about_sixgroup/corporate_governance/shareholders_en.html (accessed June 10, 2012).



[1]FINMA-regulated
[2]SNB oversight
[3]Former divisions called SIX Multipay, Card Solutions, & SIX Multi Solutions were fused retroactively on January 1, 2012 into SIX Multi solutions.

Exhibit 1.2 SIX Group AG's Business Areas (Activity-Based View—Not Organizational)
Source: SIX, *Organization: Business Areas*, www.six-group.com/who_we_are/corporate_governance/ (accessed June 11, 2012).

Securities Trading

Three subsidiaries (SIX Swiss Exchange, SIX Exchange Regulation, and SIX Exfeed) and five participations (Eurex, Scoach, Stoxx, Swiss Fund Data, and Indexium) manage Switzerland's securities trading and some information activities.

SIX Swiss Exchange SIX Swiss Exchange is Europe's fifth largest stock exchange in market value and the continent's leader in Life Sciences.[7] Charged with organizing and running the exchange, as well as trading shares, bonds, funds, and derivatives, it also prepares and distributes price and volume information and calculates performance indices. Switzerland's Federal Law on Stock Exchange and Securities Trading governs SIX Swiss Exchange and FINMA supervises it.[8]

SIX Exchange Regulation SIX Exchange Regulation is responsible for the self-regulatory tasks associated with monitoring and enforcing rules and regulations that govern issuer and participant behavior on SIX Swiss Exchange, Scoach

[7]Ahead of Switzerland are Euronext, London Stock Exchange, Frankfurt Stock Exchange, and Madrid Stock Exchange.
[8]SIX Swiss Exchange, *Regulation*, www.six-swiss-exchange.com/participants/regulation_en.html (accessed June 10, 2012).

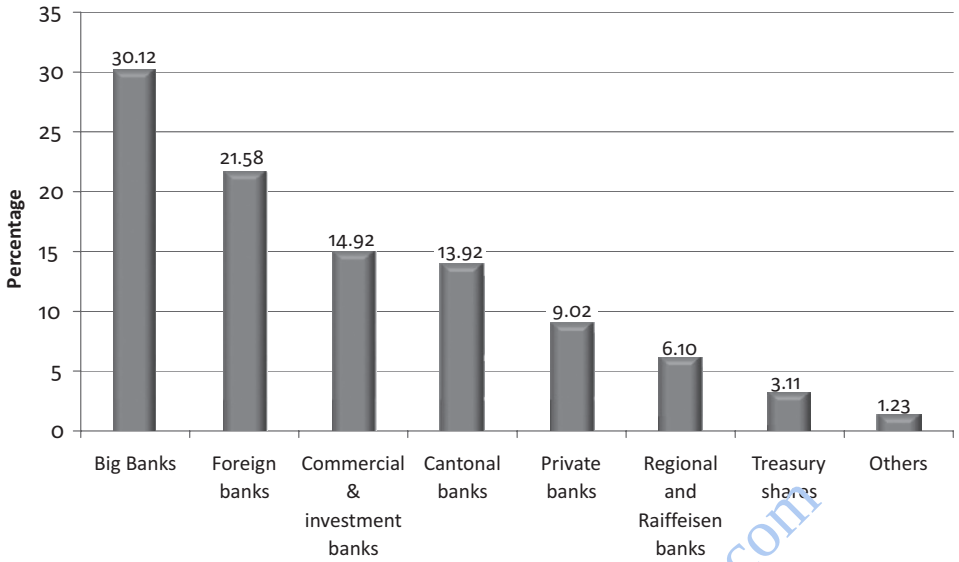


Exhibit 1.3 SIX Group Shareholder Structure in 2012
Source: SIX Group, *Ownership Structure of SIX Group*, www.six-group.com/about_sixgroup/corporate_governance/shareholders_en.html (accessed June 10, 2012).

Switzerland, and Eurex Zurich.[9] To maintain its strong oversight profile (both in terms of practice and appearance), SIX Exchange Regulation is organized as an autonomous entity within SIX Group, but, at the same time, it is subject to Swiss law and supervised by FINMA.

SIX Exfeed SIX Exfeed delivers electronic transaction data from SIX Swiss Exchange to its participants, as well as financial information to providers, such as SIX Telekurs.

Scoach Scoach is a successful joint venture of SIX Swiss Exchange and Deutsche Börse AG. Since January 2007, it has been responsible for trading Switzerland's structured products. As such, it operates two exchanges, one in Zurich for Switzerland and one in Frankfurt for the European Union (EU) countries.

Eurex Eurex is one of the world's largest electronic derivative exchanges and the result of a 1998 merger of the Swiss Options and Financial Futures Exchange (SOFFEX) and Deutsche Terminbörse AG (DTB), the German futures exchange. Until 2011, it was jointly operated by Deutsche Börse AG, SIX Group AG, and SIX Swiss Exchange AG, but in June 2011, a change of ownership was set in motion. Deutsche Börse AG agreed to merge with NYSE Euronext. To enable this deal, SIX Swiss Exchange AG agreed to sell its equity interest in Eurex to Deutsche Börse AG for

[9]SIX Securities Services, *Homepage*, www.six-securities-services.com/dss/ (accessed June 13, 2012).

€590 million. The agreement called for €295 million in cash and an equivalent amount in shares of the newly created Deutsche Börse AG-NYSE Euronext holding company (i.e., Alpha Beta Netherlands Holding N.V), if the deal was successful, or the equivalent in shares of Deutsche Börse AG, if it was not successful. Completion of this US$10.3 billion deal was anticipated by March 31, 2012, but it required approval from the U.S. and EU antitrust authorities.

The U.S. Department of Justice gave its antitrust approval to the deal in December 2011, and the Securities and Exchange Commission (SEC) endorsed it the following month, but official EU permission was not granted because the merger would have created a new exchange that controlled more than 90 percent of Europe's exchange-traded derivative activity. In October 2011, the EU's antitrust authorities in Brussels issued a "statement of objections," asserting reasons the merger should not go forward. Deutsche Börse and NYSE Euronext appealed in November on the grounds that the relevant geographic market was the global arena and not just Europe, and the relevant product market included both exchange traded and OTC-traded derivative products. In February, 2012, the EU officially rejected the deal.

Eurex operates a worldwide trading platform for standardized derivatives, such as options and futures, many of which have become international benchmarks. Its electronic platform is accessible from 800 locations worldwide, and, in 2011, it traded approximately 2.8 billion contracts.[10] To guarantee full automation and integrated clearing, Eurex Clearing AG acts as the central counterparty to the participants' trades, thereby reducing potential credit risks. In addition to its basic operating business (i.e., derivative trading), Eurex manages bonds, off-exchange wholesale trading in fixed income securities, and treasury discount papers, thereby serving as a direct link between the cash and futures/options markets.

In light of the global misuses of customer margin deposits, such as at MF Global in 2011 and other investment banks during the 2007-to-2009 financial crisis, Eurex Clearing planned to offer its customers (dealers and clients) in 2012 three alternate ways to protect their margin deposits from counterparty risk. In March, Eurex became the first clearinghouse, worldwide, to offer customers full physical segregation of their collateral (i.e., in separate accounts and apart from Eurex) on over-the-counter interest rate swaps.[11] This approach has the distinct advantage of ensuring timely portability because a customer can transfer margin funds without hindrances from any defaulting clearing members or bureaucratic delays.

The second method, called central counterparty (CCP), offers clients a net omnibus margin-deposit alternative, which is similar in approach to the way it handles existing futures transactions. Under the net omnibus approach, each member posts net margin to Eurex in amounts reflecting the total pool of all their clients' collateral deposits. The major downside of this commingled approach is that it

[10]This compares to the 2.64 billion contracts traded in 2010. Of the 2.8 billion contracts, 2.04 were traded on the Eurex Exchange and 778.1 million were traded on the International Securities Exchange. See Eurex, *Press: Total Trading Volume at Eurex Group at 2.8 Billion Contracts in 2011*, www.eurexchange.com/about/press/press_774_en.html (accessed June 10, 2012).

[11]Ramya Jaidev, "Eurex to Offer Full Segregation in March Launch of OTC Clearing," *Risk,* February 6, 2012. www.risk.net/risk-magazine/new/2143100/eurex-offer-segregation-march-launch-otc-clearing (accessed June 10, 2012).

requires customers to mutually bear counterparty risk if any large customer(s) experiences severe financial problems.

Finally, Eurex also hopes to introduce during 2012 a third margin-deposit alternative, known as the gross omnibus segregation method, which is similar to the legally segregated, operationally commingled (LSOC) approach, under which each CCP member deposits customer margin directly in CCP, thereby reducing counterparty risk but, at the same time, increasing costs and inefficiencies. This approach is supported by the U.S. Commodity Futures Trading Commission and is estimated by the International Swaps and Derivatives Association to be about one-tenth the cost of full physical separation of each customer's margin deposit.[12]

Eurex Repo, which was sold to SIX Swiss Exchange and Deutsche Börse AG joint venture, is the leading pan-European platform for trading, clearing, and settling repurchase agreements denominated in Swiss francs and euros. About 35 percent of its business originates from SNB, which uses the Eurex Repo platform to manage Switzerland's money supply. The remaining repo transactions are based on interbank business.

STOXX STOXX was founded in 1998 as a joint venture of SIX Swiss Exchange, Deutsche Terminbörse AG (DTB), and Dow Jones & Company. Its main function is to develop and distribute a broad range of market performance indices, which are generally used as benchmarks and underliers for derivative transactions. STOXX has expanded its portfolio of indices and now operates on a global level in all asset classes. Since early 2010, SIX Swiss Exchange and Deutsche Börse AG have solely owned STOXX.

Swiss Fund Data and Indexium The final two entities under the Securities Trading heading are Swiss Fund Data AG, which is owned by the Swiss Fund Association and SIX Swiss Exchange, and Indexium, which is a joint venture of SIX Group Ltd. and Deutsche Börse AG. As its name indicates, Swiss Fund Data provides investors with access to financial information, notices, documents, and other information on authorized investment funds. Delivery is efficient, uncomplicated, cost-free, and beneficial because it increases market transparency. The Swiss investment fund industry uses this information source as a cost-effective, official publication channel to enhance competitiveness. Indexium calculates and maintains indices and index-based products, as well as the operation and maintenance of index services for SIX Group, Deutsche Börse, and STOXX.

Securities Services

Under the Securities Services segment of its business areas, SIX Group offers an extensive array of services related to the clearing, settlement, custody, and security administration, including shareholder registers and the organization of general assemblies.

SIX SIS SIX SIS is Switzerland's central securities depository (CSD) and international central securities depository (ICSD), as well as a licensed bank. It is

[12]Ibid.

responsible for the settlement and custody of securities and, as a global agent, offers client banks tailor-made global custody services in 61 markets based on a network of CSDs and affiliated custodians.[13] Security settlement on SIX SIS is provided on a simultaneous and irrevocable final delivery versus payment basis. Dependability and safety are hallmarks of SIX SIS because, without them, client confidence and trust would be lost and success impossible.

SIX fees are internationally competitive, and the financial institution has developed expertise in settling repo transactions, which are handled by the Swiss value chain (i.e., Eurex Repo—SIX SIS—SIC) on a guaranteed, irrevocable trade-by-trade basis.[14] SIX SIS competes directly and effectively with Euroclear and Clearstream. Based on an international survey conducted by the *Global Custodian Magazine* in 2009:

> *SIX SIS was awarded the status "Top rated ICSD" in the "Cross border" category. In all areas of activity covered by the company, SIX SIS was rated "Best in Class." With an overall assessment of 5.74 points (average 5.49), SIX SIS clearly achieved the best result, well ahead of Clearstream with 5.57 points and Euroclear with 5.24 points.*[15]

In addition to being an intense competitor, SIX SIS is also an intense collaborator, with strong ties to European CSDs and ICSDs. In this regard, SIX SIS has launched the joint venture, "Link Up Markets," with several other European CSDs (including Clearstream). The key objective of the partnership is to improve efficiency and reduce post-trade processing costs of cross-border security transactions.[16]

SIX SIS x-clear SIX SIS x-clear acts as the CCP for the SIX Swiss Exchange. As a Recognized Overseas Clearing House (ROCH) in the United Kingdom, it also offers clearing services to the London Stock Exchange, with the intention of becoming one of Europe's leading clearinghouses. In its role as a central counterparty, SIX x-clear reduces systemic risks and cuts the costs of the settlement by netting transactions, hence reducing the settlement volume.

SIX x-clear is responsible for managing major risks (i.e., counterparty, market, operational, and liquidity risks) for the entire SIX Securities Services Division. Because SIX x-clear (like SIX SIS) is a licensed bank, it is subject to supervision by

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[13]SIX Securities Services, *Annual Report 2010*, April 29, 2011, 6. www.six-group.com/download/publications/annual_reports/2010/six_group_annual_report_2010_en.pdf (accessed June 10, 2012).

[14]SIX Securities Services, *Repo*, www.six-securities-services.com/dss/index/scu-swiss-custody/scu-repo.htm (accessed June 10, 2012).

[15]SIX Securities Services, *Comprehensive Settlement and Custody Services—SIX SIS Ltd.*, www.six-sis.com/sec/cm/pdf/index/about/facts-figures/commendations.htm (accessed June 6, 2012).

[16]Link Up Markets, *Link Up Markets: Direct Cross-Border Access*, www.linkupmarkets.com (accessed June 10, 2012).

FINMA, and due to its key position in Switzerland's financial market infrastructure, SIX x-clear is also supervised by SNB.[17]

SIX x-clear offers its customers a fully automated clearing and settlement process that links all trading steps (i.e., from order entry to settlement) by straight-through processing (STP). Multicurrency compatibility and a choice of partners for national and international clearing and settlement add to its flexibility and reach. Finally, SIX x-clear offers post-trade anonymity, and, as counterparty to numerous transactions, it is able to net transactions and, thereby, reduce credit risk.

SIX SIS Ltd and SIX x-clear Ltd. have earned high rankings from leading credit ratings companies, such as Moody's (Prime-1 for short-term deposits and Aa1 for long-term deposits) and Standard and Poor's (AA). These healthy ratings are based on the companies' advanced clearing and settlement infrastructure, solid financial viability, good technical record, strong capital base, and strict operational controls.

SIX SAG SIX SAG primarily manages share registers for third-party companies, organizes general shareholder meetings, and assists companies with special share registers.

SIX Systems The SIX Securities Services Division provides information technology and logistics support to clients of the SIX Securities Group. This support is usually provided via outsourced partnerships that have expertise in using SIX Systems' technologically advanced computer infrastructure.

SIX Terravis In January 2012, the Canton of Thurgau began a year-long pilot program called SIX Terravis, which introduced a new electronic business transaction service to the Swiss markets. Terravis provides a single-interface service for real estate transactions between land registries, notary offices, and banks. The goal of Terravis is to provide a safe, standardized, high-speed, low-cost, and error-free electronic communication network for notarial registrations and registered mortgage notes, as well as for the repayment of mortgage loans among banks. Terravis is part of the eGRIS project, which is supervised by the Federal Office of Justice, the Cantons of Thurgau and Uri, and the Swiss National Bank.

Financial Information

The Financial Information segment of SIX group's Swiss operations is managed by SIX Telekurs, which had a presence in 24 countries in 2012 and was the third largest provider of financial data in Europe. Today, SIX Telekurs is one of Europe's leading providers of procurement, processing, and international distribution of financial information, and its 2007 acquisition of Fininfo, a French financial information business, has reinforced this strong market position.

SIX Telekurs acts to procure, structure, integrate, standardize, and distribute international financial data from 850 sources, including stock exchanges, alternative trading venues, and other contributors. In addition to stock exchange and

[17]SIX, *Supervision and Regulation*, www.six-group.com/about_sixgroup/corporate_governance/regulation_en.html (accessed June 10, 2012).

currency data, it provides analytical information and evaluates prices, background information, and financial news regarding securities of various forms.

The business operations of SIX Telekurs are responsible for financial information. Its market data feeds offer continuous, real-time market data, as well as statistical information and economic news from international agencies. SIX Telekurs' reference data-feed delivers company statistics and events, in a structured and codified form, to the databanks of clients. It is considered, worldwide, to be one of the best sources of reference material. In addition, SIX Telekurs' suite of display solutions provides users with the full spectrum of international financial data in a user-friendly, yet sophisticated, format. Finally, SIX Telekurs provides financial institutions with data relating to compliance rules and regulations, such as the EU's Markets in Financial Instruments Directive.

The financial services activities of SIX Telekurs are divided into four product and services categories: Solutions, Reference Data and Pricing, Market Data, and Display. They were created to address client demands for specialized data requirements and information needs. SIX Telekurs began by offering customized solutions (e.g., in the areas of display, real-time calculations, reference data-based solutions, trading and portfolio management, compliance and risk, operations, and hosting). From modest beginnings, it has expanded to provide services to customers around the world. In 2012, SIX Telekurs' solution hubs existed in Switzerland, France, and Sweden.[18] Rolotec, a majority-owned subsidiary of SIX Telekurs (and SIX Group Company), was acquired in 2008 to create and develop software solutions for customers. Prior to its acquisition, Rolotec worked closely with SIX Telekurs and, after its acquisition, became the prime coordinator within the service category called SIX Telekurs Solutions.

Payment Transactions

The Payments Transactions segment of the SIX Group is responsible for the acceptance, recording, and smooth processing of cashless payments (e.g., credit, debit, value, and customer cards). It also operates the interbank clearing system for payments in Swiss francs and euros and provides services for retail payments, such as debit advice procedures, as well as electronic bill presentment and payment.

SIX Interbank Clearing SIX Interbank Clearing operates SIC and EuroSIC payment systems for transactions conducted between financial institutions. In 2011, the system processed approximately 400 million transactions with yearly turnover valued at more than CHF 60 trillion.[19] Because SIC operates on behalf of SNB, it is subject to the central bank's supervision.[20] Payments made by SIC are by means of deposits at SNB, which makes it highly integrated with Switzerland's monetary policy.

[18]Rolotec: A SIX Group Company, *Homepage*, www.rolotec.ch/blog/archives/2011/03/six_telekurs_so.html (accessed June 10, 2012).
[19]SIX Interbank Clearing, *SIC Statistics*, www.currency-iso.org/tkicch_index/tkicch_home/tkicch_news/tkicch_news_statistics/tkicch_news_statistics_sic.htm (accessed June 11, 2012).
[20]SIX, *Facts and Figures SIX Group*, www.six-group.com/who_we_are_en.html (accessed June 10, 2012).

SIX Multipay Solutions SIX Multipay Solutions provides merchants with card-based payment solutions for all major international credit and debit cards. It also offers customers value-added services, such as mobile vouchers for prepaid mobile phones and dynamic currency conversion, which allows cardholders to choose the settlement currency of a transaction.

SIX Pay SIX Pay is Switzerland's provider of secure, cashless-payment solutions. Founded in 2008, it develops and markets services for business and consumer users of credit cards (e.g., Visa, MasterCard, Diners/Discover, UnionPay, and Japan Credit Bureau's JCB card) and debit cards (e.g., European-based, V PAY and Maestro). With its headquarters in Luxembourg and branches in several European countries (approximately 28), SIX Pay's network has been designed to be as close to its customers as possible.

SIX Card Solutions SIX Card Solutions provides customers with the payment infrastructure needed for point-of-sale and Internet transactions, and it processes transactions for acquirers (e.g., SIX Multipay) and card issuers (e.g., banks), where the processor also provides claim handling, risk management, and other related functions.

SIX Paynet Finally, SIX Paynet is the leading Swiss network for electronic bill presentment and payment, with more than 90 participating Swiss banks. It also manages the business of direct debits and direct debiting systems for banks.

STOCK EXCHANGE LAWS AND REGULATIONS

In June 2007, the Swiss parliament approved the Federal Act on the Swiss Financial Market Supervisory Authority (FINMASA), which entered into full force on January 1, 2009. Under FINMASA, government supervision of banks, insurance companies, stock exchanges, and other financial intermediaries was merged into one authority called the Swiss Financial Market Supervisory Authority (FINMA), whose primary objective is to protect creditors, investors, and insured individuals. In addition, this Act aimed to guarantee the efficient functioning of financial markets, thereby, reinforcing Switzerland's competitiveness and reputation as an important financial center.

Supervision of Swiss stock exchanges is based on the principle of self-regulation. Enforcement of executive regulations is handled by SIX Exchange Regulation; legislative regulations are managed by the Regulatory Board, and judicial responsibilities are the responsibility of the Sanction Committee, Appeal Board, and Board of Arbitration.[21] FINMA has ultimate supervisory powers, but it is limited to granting operating licenses, approving stock exchange rulebooks, and conducting ongoing audits.[22] This setting has given the Swiss stock exchange a high degree of flexibility and considerable powers to self-monitor, self-enforce, and self-approve market actions.

[21]SIX, *Supervision and Regulation*, www.six-group.com/about_sixgroup/corporate_governance/regulation_en.html (accessed June 10, 2012).
[22]Ibid.

During the past two decades, Swiss regulatory authorities have gone from Switzerland's traditional, principle-based system to one that relies much more on detailed rules and regulations with respect to reporting, transparency, and shareholder rights. Prior to 1990, listed companies were not required to publish audited, consolidated reports. There were no reporting requirements regarding shareholdings, and takeover defense tactics were, for the most part, unrestrained. Minority shareholders' rights hardly existed, and there were virtually no limitations on a corporation's right to purchase its own shares.

Times have changed, and recent trends in Switzerland favor inundating shareholders with corporate information, such as quarterly financial statements and daily news reports of corporate events. Many Swiss managers err on the side of disclosure, releasing far more information than seems necessary because they fear regulators might later interpret a piece of missing information as essential to a stock price's evolution.

Today, Switzerland requires disclosure of shareholder identities when an individual's ownership level reaches or exceeds (separately) 3, 5, 10, and 33 percent of all outstanding shares. Moreover, a listed corporation's ability to refuse share registration is constrained to percentage limits that are incorporated in its articles of association. A minority shareholder's request for business information, if supported by a majority of shareholders, cannot be refused.

SIX Group and the Future

Despite its diminutive geographic size relative to many other international competitors, Switzerland has built an excellent financial infrastructure that is focused on the needs of its customers, especially in the private banking area. Swiss capital and money markets offer high levels of efficiency and user-friendly orientation that can be traced, in large part, to private ownership and the self-regulatory structure of SIX Group. Switzerland's capital-intensive financial infrastructure and harmonized regulatory environment have enhanced the competitiveness of its financial intermediaries and reinforced an already-existing drift toward consolidation through mergers, acquisitions, and affiliations, but this trend is not special to Switzerland. Since the beginning of the twenty-first century, numerous European and Asian stock exchanges have merged and plan to continue doing so in the future.

Moving forward, SIX Group, like all of its competitors, will have to weigh the cost-saving advantages of consolidation against the specialized care and tailor-made solutions that customers increasingly demand. While the future is not predictable, it is conceivable, and Switzerland has moored its financial ship to the private banking industry, which is one of the most rewarding, but also demanding, sectors of the market. Fortunately, Swiss financial institutions have centuries of first-hand experience in this area, along with an embedded client base and a financial system based on delivering high-quality services at competitive prices.

CONCLUSION

Finanzplatz Schweiz is not a destination but rather a journey, which Switzerland began more than a quarter century ago and continues today—but at an accelerated pace. The results of these efforts are impressive and made even more so because

they are the constructive byproduct of numerous decisions, decisive actions, and enormous capital expenditures on the finance sector's infrastructure.

APPENDIX 1A: THE ROAD TO FINANZPLATZ SCHWEIZ

Introduction

The path Switzerland took to reach its current status in the competitive financial community required preparation, reform, and follow-through. Preparation started in the 1970s and grew in intensity during the 1980s, thereby, laying the basis for Switzerland's financial restructuring in the 1990s. Reform was gradual—not with the thunderous "bang" that occurred in the United Kingdom in October 1985—and implementation is still in progress, but considerably advanced from where it began. The follow-through stage has gone hand-in-hand with financial system reforms because changing times have brought novel financial instruments and new sources of competition that require evolving laws, products, systems, and regulations. From the beginning, it was clear that the key to Switzerland's success would be in the follow-through stage because it required an ability and willingness to prune dead wood and plant healthy financial seedlings. In a way, Switzerland had little choice but to change because international competition was beating at its door from nearby nations, such as Germany (IBIS and DTB), France (Super CAC), and Sweden (SAX).[23]

Preparation Stage

The preparatory stage occurred mainly during the decade 1986 to 1996, when Switzerland's financial institutions were modernized, infrastructure and technology were improved, and outmoded traditions were abandoned. With this groundwork laid, Switzerland was able, in 1996, to create the world's first fully integrated, nationwide, electronic security trading network. The new landscape integrated all of the most important aspects of Swiss security markets, which included equities, bonds, derivatives, mutual fund units, fund transfers, trading, clearing, market information, and settling.

These changes substantially increased the efficiency of Swiss security markets, making them internationally cost competitive, and adding a new dimension to traditional sources of Swiss competitive advantage, such as banking secrecy, high-quality personal services, and a strong currency. The improvements also were significant because they supported a subtle shift of emphasis in Switzerland from private banking customers to institutional clients (e.g., insurance funds, pension funds, and mutual funds). While Swiss financial institutions still catered to a large private-customer base, efficiencies of the new system were intended (and able) to attract large customers, who are more interested in low costs, rapid transaction

[23]IBIS is the abbreviation for Inter-Banken-Informations-System (i.e., Germany's electronic securities trading system), DTB stands for Deutsche Terminbörse, CAC stands for France's early automation system called Cotation Assistée en Continu (Continuous Assisted Quotation), and SAX stands for the Stockholm Automated Exchange in Sweden.

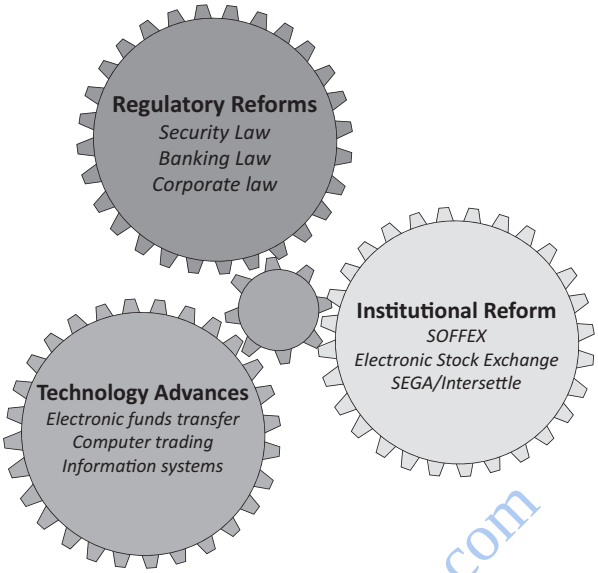

Exhibit 1A.1 Components of Swiss Financial Reform

execution, and quality reporting than access to investment advice, market research, and customized banking services.

The Swatch Effect is an apt simile to describe the impact of the new financial reforms. The Swiss watch industry was reborn in 1983 after Swiss-based SMH[24] broke tradition by producing a colorful and popular plastic watch called the Swatch. There are compelling similarities between the two. Like the Swatch, the Swiss financial community did not develop any new technologies but rather combined existing ones in a state-of-the-art fashion. Their innovation came from masterful integration, which created a system that was worth more than the sum of its parts.

Despite their similarities, one area where the Swatch simile falls short is the price/quality comparison. The Swatch is a well-built plastic timepiece with a competitive price aimed at the low-price end of the watch industry. By contrast, Swiss financial services aim to satisfy the most sophisticated needs of market players at extremely competitive prices compared to other markets. If SMH were able to produce Rolex watches at the cost of a Swatch, the simile would be complete.

Reform and Follow-Through Stages

The new Swiss financial system was constructed with the firm understanding that success depends on efficient technologies, modern financial institutions, and meaningful regulatory reforms. These three major components had to be fashioned into sturdy gears that function in synchronized, effective, and efficient ways (see Exhibit 1A.1). The development of any one of these gears would have been

[24]SMH is the acronym for Swiss Corporation for Microelectronics and Watchmaking Industries Ltd, which is the French-English translation of Société de Microélectronique et d'Horlogerie.

useful by itself, but the only way Switzerland's finance sector could unleash its true potential was by the construction and coordinated interaction of all three.

Efficient Technology and Modern Financial Institutions

Switzerland's financial system was rebuilt by focusing first on the financial institutions that cleared and settled security trades and also the marketplace for derivatives and cash products. Trading needed to be electronic, and the institutions that supported it had to attain top-level competitive performance.

Schweizerische Effekten Giro AG (SEGA) and Intersettle[25]

Since the early 1960s, Swiss banks have co-operated to reduce the cost of handling securities traded on both the stock exchange and the over-the-counter markets. Schweizerische Effekten Giro AG (SEGA) was created in 1970 to handle domestic (i.e., intra-Switzerland) security transactions. In 1988, Intersettle was started as SEGA's counterpart to handle international (i.e., cross-border) transactions.[26]

SEGA

SEGA was founded by 175 banks to settle domestic security trades. It cleared, settled, and collectively stored securities involving transactions between residents within Swiss borders. Settlement was on a book-entry basis with an almost completely dematerialized security depot.[27] In 1982, SEGA began settling transactions on a delivery-versus-payment basis,[28] but starting in 1995, funds were transferred on a transaction-by-transaction basis via SIC through bank accounts with SNB. Simultaneous settlement eliminated many of the risks associated with clearing delays and slow clearing time, in part, because counterparties typically include ownership transfer and payment instructions with their transaction details.

SEGA's settlement system requires instructions by the seller and buyer, as well as proof of security and cash availability. Daily statements from SEGA provide the basis for immediate control by the banks involved. New issues can also be handled through the same system.

By 1995, daily payments on SEGA amounted to approximately CHF 4 billion, and in 2008, annual settled trades rose to 64.7 million. The U.S. subprime crisis put a substantial dent in SEGA transactions, causing trades to fall to 50.9 million in 2009.

[25]SEGA and Intersettle were merged in 1999 to form SegaInterSettle (now known as SIS Swiss Financial Services Group), which today is part of SIX Group (SIX SIS).

[26]Intersettle was founded in 1988 and put into operation in 1989.

[27]There was serious discussion in Switzerland over abolishing all paper securities—just as France had done. With transaction costs at US$1.95 per transaction, the pressure has not been too great, and, as of 2012, physical delivery was still offered.

[28]"Delivery-versus-payment" transactions are effective when payment is made rather than waiting for a specified contract period. These types of transactions reduce the risk put on custody institutions because they diminish the need for security lending and, therefore, moderate exposure to default risk.

Intersettle

Intersettle was founded 18 years after SEGA to handle cross-border transactions. To increase efficiency, it was linked directly to SEGA and SIC, so transfers of securities and payments for them were seamless. Switzerland's electronic stock exchange system sent all transaction details through the SECOM (short for SEGA Communication System), the electronic data processing system that linked SEGA, Intersettle, and SIC. Payment and title transfer took only one day and also provided security settlement and management services.

Intersettle's initial capitalization was CHF 10 million, and it had more than 130 shareholders. Among these shareholders were Switzerland's "Big banks,"[29] brokerage firms, almost all the regional banks, and a large number of Swiss-based foreign banks. It took six years to establish this clearing system at a cost of approximately CHF 100 million. With Intersettle's competitive (i.e., relatively low) transaction fees, the developers realized that the only way to pay for itself would be through large trade volumes.

Banks and other financial institutions wishing to sell Swiss or foreign securities (denominated in either Swiss francs or foreign currencies) managed their transactions through Intersettle. As a result, Intersettle had both Swiss franc–denominated and foreign currency-denominated security holdings and bank accounts.[30] Due to the dominance of Switzerland in the private investment area, Intersettle positioned itself to take considerable market share in clearing and settling international equities and bonds.

Intersettle acted as the bargaining agent for its members. In the beginning, it established affiliations with 16 major international custodians, but its intention was to increase the number of users and, thereby, extract economies of scale for its members by negotiating discounts on international custodial service fees.

In addition to offering its members relatively low custodial fees, Intersettle allowed them to streamline their international clearing, settlement, and custody networks. Without it, Swiss banks would have needed dozens or even hundreds of foreign correspondents as local custodians, at a considerable cost in terms of redundant overhead. Rather than establish computer or communication links with an assortment of foreign custodians, Swiss members needed only to connect to Intersettle for their information flows.

The network established by Intersettle was positioned to gradually take over the basic international custody services (i.e., safekeeping, settlement, and clearing) of its affiliated members. It was clear that, with the financial institution's enormous pool of securities, Intersettle had significant potential to offer automatic lending and borrowing services that could help dealers and investors avoid settlement failures.

Intersettle never dealt directly with private customers (see Exhibit 1A.2) but rather with banks and brokers. In 1994, it was linked to SEGA through the electronic data processing network, SECOM.

[29]In 1988, Swiss Bank Corporation, Union Bank of Switzerland, and Crédit Suisse owned nearly 60 percent of Intersettle.

[30]Foreigners wishing to purchase or sell non-Swiss securities may transact business through Intersettle, but most likely at a competitive disadvantage relative to more direct channels.

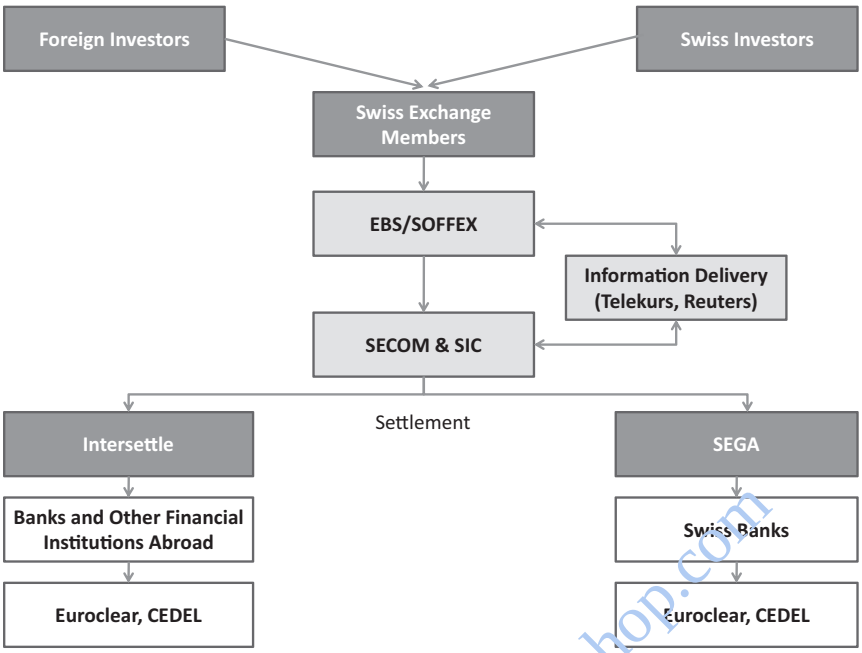

Exhibit 1A.2 Clearing and Settlement

In 2003, the Swiss stock exchange (SWX Swiss Exchange)[31] introduced Eurobond trades denominated in four additional currencies (Australian dollars, Canadian dollars, Norwegian krone, and New Zealand dollars), thereby expanding its existing Eurobond trading operations. Until then, it had offered Eurobonds only in euros, U.S. dollars, and British pounds. In 2012, Eurobond offerings were made in 16 different currencies.[32] All Swiss-based Eurobond transactions can be processed either directly through SIX SIS or forwarded to competitor settlement institutions (e.g., Euroclear or Clearstream), highlighting the SIX SIS's intention to compete directly in all international segments of the Eurobond market.

In 1996, Schweizerische Aktienregister AG (SAG) was founded as a subsidiary of SEGA, offering share register maintenance services to public limited companies and assuming responsibility for activities relating to General Meetings. Three years later (in May 1999), SEGA merged with Intersettle to form SegaInterSettle AG. With the merger, the domestic custody and settlement services of SEGA were

[31] In 1995 the stock exchanges of Zurich, Geneva, and Basel merged and operated under the name SWX Swiss Exchange.

[32] Australian dollar (AUD), Canadian dollar (CAD), Czech Republic koruna (CZK), Danish krone (DKK), euro (EUR), British pound (GBP), Hungarian forint (HUF), Iceland krona (ISK), Japanese yen (JPY), Mexican peso (MXN), Norwegian krone (NOK), New Zealand dollar (NZD), Polish zloty (PLN), Swedish krona (SEK), U.S. dollar (USD), and South African rand (ZAR). See Swiss Exchange, *International bonds*, www.six-swiss-exchange.com/bonds/explorer/international/AUD/closings_en.html (accessed June 10, 2012).

brought under one roof with the cross-border service offerings of Intersettle. In 2003, SIS x-clear commenced operations as a central counterparty (CCP) for clearing virt-x[33] stock transactions. SIS x-clear was founded as part of SIS Group and also included SegaInterSettle AG. Today, SIX x-clear provides clearing and risk-management services to SIX Swiss Exchange and the London Stock Exchange. Another major milestone within the consolidation process of the major Swiss financial market infrastructure providers was reached in 2006 when SIS Group and Telekurs Group (operator of the SIC Interbank Clearing system) merged their computing centers.[34]

In 2006, European clearinghouses and central securities depositories, together with industry associations (Federation of European Securities Exchanges, European Association of Central Counterparty Clearing Houses, and European Central Securities Depositories Association), developed a voluntary code of conduct for clearing and settlement; SIX Swiss Exchange signed the code in the same year. Members pledged to promote capital market development by means of improved efficiency, accuracy, price transparency, access, and interoperability. They also pledged to work toward improving the unbundling transactions and separation of accounting standards.

SIX SIS

SIX SIS is the successor to SEGA/Intersettle. Due to its importance in the Swiss financial markets, this organization is subject to supervision by both FINMA and SNB.[35] Its direct, online connection to SNB gives SIX SIS the power to quickly change positions and clear transactions. SIX SIS also gives SNB equally direct access to all of its online accounts, which enhances SNB's power (and interest) to ensure that transactions are efficiently executed. Swiss-franc denominated transactions are settled using SIC. For payments in euros, EuroSIC is used, and transactions in other currencies can be settled using the special foreign exchange service.

Switzerland's forceful move into the clearing and custodial business coincided with an on-going legal battle in Europe to prevent large investors from dealing directly with clearing organizations. If large customers (e.g., institutional investors) won the right to settle their transactions directly through clearing agents and custodial organizations, Switzerland would have benefited because of its large wealth management presence. In 1994, Swiss institutions had approximately CHF 600 billion under management, of which CHF 250 billion were from pension funds. In 2009, this figure had increased to CHF 5,400 billion worth of assets under management. Institutional investors accounted for about 60 percent (CHF 3,240 billion), private clients 30 percent, and corporate clients 10 percent. Moreover,

[33]At that time, virt-x was a pan-European exchange for trading blue-chip stocks. Unfortunately, it was not successful and eventually closed down.

[34]SIX, *History—Former SIS Group*, www.six-group.com/about_sixgroup/profile/history/sis_group_en.html (accessed June 10, 2012).

[35]SIX, *Supervision and Regulation*, www.six-group.com/about_sixgroup/corporate_governance/regulation_en.html (accessed June 10, 2012).

domestic clients accounted for 44 percent of the total assets under management (CHF 2,376 billion).[36]

SIX SIS is also committed to TARGET2-Securities, a European Central Bank initiative, with the goals of creating a standard settlement process and a platform to simplify cross-border securities settlement by 2014. SIX SIS Ltd is working closely with ECB, SNB, and its client-base to develop potential alternatives for participation in this initiative. It also signed the European Code of Conduct on Clearing and Settlement as well as the Access and Interoperability Guidelines, which aim to increase price and service transparency and enhance interoperability between European platforms.

These initiatives have been driven mainly by the consolidation efforts of Europe's post-trade processing industry. SIX SIS seeks to take advantage of this trend and significantly increase both its international customer base and network. For this reason, SIX SIS International[37] was founded to provide more flexibility to client requests for cross-border security settlements, although regulatory changes in foreign countries have hindered this process and limit SIX SIS from quickly expanding its international clearing operations.

Swiss Electronic Stock Exchange (EBS)[38]

In 1996, EBS became Switzerland's centralized, electronic, order-driven, nonprofit system for trading both domestic and foreign securities.[39] The new exchange permitted continuous trading of all listed securities, thereby, improving compatibility with leading international exchanges and adding an important dimension to the nation's position in the international capital markets. At an estimated cost of more than CHF 120 million, the new exchange was the culmination of many Swiss legislative and institutional changes.[40]

EBS added substantial liquidity to the markets by merging all of Switzerland's former exchanges into one and increased the attractiveness of the Swiss financial system relative to its international competitors. Having broad and deep markets was considered to be a key to EBS' success because many investors had lost substantial sums during the Crash of 1987, due to an inability to sell their shares quickly on the Swiss exchanges.[41]

Serious efforts to reform Switzerland's antiquated stock exchanges began in 1988, when trading rules were modified. Daily trading sessions were lengthened, the number of continuously traded stocks was expanded, handling of

[36]Swiss Bankers Association, *Compendium 2010—The Swiss Banking Sector*, Basel, April 2010, 8. www.swissbanking.org/en/kompendium-2010.pdf (accessed June 10, 2012).

[37]Six Security Services, *Settlement, and Custody*, www.six-sis.com/sec/cm/pdf/index/index/custody-settlement.htm (accessed June 10, 2012).

[38]EBS is an abbreviation for Electronic Bourse Switzerland (in German: Elektronische Börse Schweiz).

[39]EBS had responsibilities related to clearing and custody, but SECOM and SIC were also important for these functions.

[40]The Swiss Stock Exchange charges its members an annual fee to cover this cost.

[41]Wendy Cooper, "Can Zurich Keep Up Its Zip?" *Institutional Investor* Vol. 23 (12) (October 1989), 338. (Interview with Pierre Mirabaud, partner in Geneva's Mirabaud & Co.)

non-continuously traded stocks was improved, and the trading practices of Switzerland's major stock exchanges were coordinated.

Two years later, a reporting system was initiated to monitor daily trading volumes on both stock exchanges and over-the-counter (OTC) markets. At that time, Switzerland had seven stock exchanges (Zurich, Basel, Geneva, St. Gallen, Lausanne, Neuchâtel, and Bern)—clearly suboptimal in terms of efficiency and liquidity. The need for consolidation was clear and in 1991 the seven exchanges were reduced to three, leaving only the Zurich, Basel and Geneva exchanges functioning.[42]

The consolidation efforts that reduced Swiss exchanges from seven to three were only interim measures because three exchanges were still too many for a nation of slightly more than seven million people. The ultimate goal was to create a unified national exchange. Toward this end, in May 1993, the Swiss Stock Exchange Association (SSE) was established as the unitary authority for the three remaining exchanges. Transactions in foreign shares began in December 1995, and by July/August, trading expanded to Swiss shares. Finally, one year later (August 1996), electronic bond trading began, which resulted in closing the three remaining Swiss stock exchanges on August 15, 1996.

SSE ended centuries of fragmentation in the administration of Swiss security trading. Moreover, it was significant for moving the focus of supervision from a regional to a centralized level (as of January 1, 1994), thereby, creating a need for a national (federal) stock exchange law.

With SSE to oversee the three exchanges, attention turned toward one of the most obvious impediments blocking stock exchange reform, namely, the open outcry system of trading. Abolishing it meant changing the way stock exchange business was done in Switzerland. The complete introduction of EBS in 1996 meant that traders no longer shouted their buy and sell orders from trading pits on the exchange floor. Now, they sit behind electronically linked computers that could be anywhere in the country (for that matter, almost anywhere in the world).

The EBS computer system automatically matched buy and sell orders and, in so doing, fixed transaction prices. The electronic trading system was linked with SECOM and SIC. By directly connecting all three systems, the Swiss exchange was able to introduce electronic trading with integrated settlement and safekeeping.[43]

Once orders were matched, post-trade services (settlement, clearing, registration, and safeguarding) were electronically channeled through automated facilities. For domestic securities, these functions were handled by SEGA; international securities and foreign purchases (and sales) of domestic securities were handled by Intersettle. Transferring, safekeeping, and managing Swiss securities were simplified significantly because most of them were in dematerialized form (i.e., book entries in a computer rather than physical pieces of paper), making the settlement virtually instantaneous.

[42]Floor trading at the Bern exchange was stopped and replaced by telephone trading. The Lausanne exchange was merged with Geneva, and both the Neuchâtel and St. Gallen exchanges were closed.

[43]SIX, *History—Former SWX Group*, www.six-group.com/about_sixgroup/profile/history/swx_group_en.html (accessed June 10, 2012).

New automated systems handled the fund transfers associated with security transactions. Both SEGA and Intersettle were linked to SIC, so clearing was as easy as debiting and crediting bank balances. International transfers were almost as simple, requiring the single, additional step of clearing transactions with foreign correspondent banks of Intersettle.

EBS was run on the principles of transparency and nondiscrimination. Members had a duty to report spot trades, both on and off the exchange,[44] as well as futures trades[45] that were executed based on arrival time, giving small members access to the market on terms equal to any large bank. In a similar sense, all members received the same information, at virtually the same time.[46] As a result of EBS, the quality, completeness, and fairness of security information took a quantum leap forward.

Swiss Options and Financial Futures Exchange (SOFFEX)[47]

The Swiss Options and Financial Futures Exchange (SOFFEX) was formally established in 1986, but trading did not begin until June 1988. As the world's first, totally electronic, nationwide exchange for trading, clearing, and settling option contracts, SOFFEX provided Switzerland with a key building block in a rapidly expanding financial area. In 1993, SOFFEX became a wholly owned subsidiary of SSE, allowing for a common organizational structure with EBS.

Creating SOFFEX as a completely electronic platform to trade derivatives was, in part, the solution to a sensitive issue. At the time there were multiple, competitive exchanges in Switzerland, causing serious discussions about whether derivative trading should be centralized or distributed. Knowing there were economies of scale in trading financial derivatives and not wanting to balkanize its trading platform, Swiss financial leaders decided to create a completely electronic trading system, which would be beyond the bounds of any one exchange.

The rush to create SOFFEX during the 1980s was stimulated, in part, by the rapid increase in written options. As this market grew, it became apparent that strong potential demand existed for derivative instruments, and it was equally clear that any significant delays could seriously jeopardize the chances for SOFFEX's success.

Demand for SOFFEX-related financial instruments created a derived demand for transparent, broad-based Swiss performance indices. As a result, the Swiss Performance Index (SPI) and many of its subindices were created in 1987. Since then, growth of these performance indices has expanded rapidly.

Although trading volumes on SOFFEX were disappointingly low in its initial years, they increased quickly, making the exchange one of the largest derivative

[44]Off-exchange transactions must be reported within 30 minutes of completion. There is an exemption from reporting shares traded on foreign exchanges for which Switzerland is not the home exchange.

[45]Futures trades for individual shares are done off the exchange and are limited to 12-month maturities.

[46]Because it is technologically impossible to contact everyone at exactly the same time, the order of notification is randomized.

[47]A more complete overview of the development and state of Switzerland's derivatives can be found in Chapter 9: Swiss Derivative Markets.

markets on the continent. In part, this derivative activity was spawned by a new fee schedule, which was introduced in 1993 and revised in 1995. Not only were charges reduced by an estimated 66 percent, they were simplified, as well.

In 1998, SOFFEX was merged with Deutsche Terminbörse (DTB) to form Eurex, which was operated jointly by DTB and SIX Swiss Exchange, offering electronic access to market participants from about 700 global locations. In 2010, annual trading volume exceeded 1.5 billion contracts. The derivatives landscape changed in 2011 when Deutsche Börse and NYSE Euronext agreed to a merger deal valued at US$10.3 billion. Under the agreement, the SIX Group arranged to sell to Deutsche Börse its 50 percent stake in Eurex, thereby giving the German exchange complete control.[48]

U.S. approval came relatively quickly, with the Committee on Foreign Direct Investment agreeing in August 2011 and the U.S. Department of Justice consenting the following December.[49] The U.S. Securities and Exchange Commission supported these approvals in January 2012, but in February 2012, the European Union rejected the proposed merger. The EU's opinion rested on grounds that the combination might create monopoly-like conditions in the exchange-traded, European futures and options markets. Combined, the two companies accounted for 93 percent of Europe's exchange-traded derivatives business.[50]

Swiss Interbank Clearing (SIC)

Swiss Interbank Clearing (SIC) began in 1987 to enable the creation of a nationwide electronic payment network that could efficiently and accurately clear domestic transactions (i.e., fund transfers, security payments, cash management services, and borrowed/lent securities).

SIC sped the clearing of financial transactions among Swiss banks with immediate and substantial effects. In June 1987, eight banks were connected to the system, and 13,300 payments were made in the month of June. By 1996, SIC's yearly transactions broke the 100 million mark, and from there, growth continued to expand. In 2005 and 2006, yearly transactions rose to 200 million and 300 million, respectively. As might be expected, daily transaction figures (valued in Swiss francs) also rose precipitously. Peak daily transactions exceeded 3 million on December 29, 2006, 4 million on December 28, 2007, and 5 million on February 26, 2010. During this period, the price per transaction plummeted. Costing more than 20 centimes per trade in 1987, it fell to 10 centimes by 2005, and to fewer than 5 centimes in 2009.[51]

With speedier payments, banks were better able to optimize their reserve positions and, consequently, excess reserves in the Swiss banking system fell. Therefore, the new system had the additional advantage of materially enhancing

[48]Although SIX Group owned 50 percent of Eurex, it received only 15 percent of the profits.
[49]U.S. Department of Justice approval was contingent on NYSE Euronext and Deutsche Börse divesting Direct Edge, a stock-trading platform that competed directly with NYSE.
[50]Jacob Bunge, "SEC Approves NYSE Deal," *Wall Street Journal Online*, online.wsj.com/article/SB10001424052970204555904577169013011373888.html (accessed June 10, 2012).
[51]Swiss Interbank Clearing (SIC), *SIC Milestones*, www.snb.ch/en/iabout/paytrans/sic/id/paytrans_SIC_Hauptmerkmale/4, (accessed June 11, 2012).

SNB's ability to both control and manage bank reserves and the nation's monetary base.

SIC is a real-time gross settlement system (RTGS), which means it settles each irrevocable and final transaction by individually adding or deducting the amount to/from a participant's central bank account.[52] In effect, this means debiting and crediting banks' reserve accounts that are already on deposit at SNB. SIC also offers net clearing systems to reduce counterparty risk. By netting payments from and to other counterparties, default risks and systemic risks (e.g., for other nonpayment reasons) can be minimized. SNB accomplishes this by posting a bank's net position to its reserve/settlement account only at the end of the settlement period, which occurs at a predetermined time or when a threshold value or quantity of payment orders has been reached. Only at this point are the netted transactions considered to be both irrevocable and final.[53]

SWX Repo, Eurex, Virt-x, Exfeed, and Scoach

As an extension of SWX's business operations, SWX Repo was launched in 1999 as the first fully integrated, electronic repo-trading platform. One year later, it was integrated into Eurex. After the turn of the millennium, SWX Swiss Exchange further expanded internationally with the launch of virt-x in London in 2001. Virt-x was conceived as a pan-European blue chip exchange, but the venture never met its initial expectations and was closed in 2008 due to changes in market conditions and the regulatory environment. In 2009, blue chip trading was relocated from London back to Zurich (to the SWX Swiss Exchange).

In December 1998, the Swiss Federal Tax Administration (FTA) announced that repos would not be subject to a turnover tax (stamp duty) because they are, primarily, financing transactions. This was a landmark decision that led to the introduction of repurchase agreements by SNB. Since then, repos have evolved to become the most important instrument for implementing SNB's monetary policies.

Another business extension was made in 2001 with the launch of EXFEED, a company focusing on supplying raw financial data to third-party financial information providers from SWX Swiss Exchange and virt-x. In the same year, SWX Swiss Exchange's participation in Eurex, virt-x, and EXFEED were reorganized and put under a holding structure called the SWX Group.[54]

In 2007, SIX Group entered a joint venture with Deutsche Börse AG to establish Scoach, an exchange for structured products. Today, Scoach operates two trading platforms, one in Zurich, and the other in Frankfurt.

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[52]If, for any reason, payments exceed a counterparty's reserve balance, the system utilizes a bilateral settlement system (i.e., circles processing) that automatically searches for pending transactions, if there are others that can be covered by the existing balance.

[53]Swiss National Bank, *Swiss Interbank Clearing (SIC)*, www.snb.ch/en/iabout/paytrans/sic/id/paytrans_SIC_Hauptmerkmale/2 (accessed June 11, 2012). For technical reasons, each SIC participant's account at SNB is divided into two subaccounts. The *master account* is used for settling cash transactions and bilateral business done exclusively with SNB, and it is managed by SNB's internal accounting system. By contrast, the SIC *settlement account* is used for interbank clearing transactions, which means it must utilize SIX Interbank Clearing Ltd.

[54]SIX, *History—Former SWX Group*, www.six-group.com/about_sixgroup/profile/history/swx_group_en.html (accessed June 11, 2012).

Regulatory Reforms to Create Finanzplatz Schweiz

Having a technologically advanced financial infrastructure without a modernized tax and regulatory system is a bit like driving a sports car with the emergency brake engaged. Switzerland made critical changes in its financial system during the 1980s and 1990s, but many of them never would have had a chance to realize their full potential unless a host of supporting legislation was passed.

For most of the twentieth century, Switzerland's exchanges and banks fought against national legislation that would create a federal stock market act that was similar to the banking act passed in 1934. A small but significant step was taken when Swiss exchanges were required to join together to form a Swiss Admissions Board. The SNB and Federal Finance Department were also granted loose oversight authority over the Swiss exchanges.

By the 1980s, the handwriting was on the wall that Switzerland's federalist approach to security trading was archaic. Automation (especially electronic trading in the United States and Canada), global deregulation, and the rise of derivative instruments rendered Switzerland's system anachronistic. At the start of the 1980s, Switzerland was the third largest financial center, after the United States (New York), and Japan (Tokyo),[55] but competition increased the need for better and less expensive services. As a result, trading sessions were lengthened and made continuous, and financial instruments were standardized. The Swiss exchanges' Admission Board was made the responsibility of SWX and fixed commissions were abolished in 1990.

Federal laws were needed to regulate transactions on the newly created national stock exchange. To enhance Switzerland's attractiveness to international investors (especially institutional investors), regulatory changes had to be made in areas such as shareholder rights, permissible anti-takeover defense tactics, and stock exchange admission rules. To bring the nation into closer alignment with other highly developed financial markets, attention also had to be paid to the growing problems associated with white-collar crimes in the form of insider trading, money laundering, and membership in organized crime groups. Finally, tax reforms were (and still are) among the most important changes needed to globalize Switzerland's financial system. Even with one of the most technologically advanced and judiciously regulated financial systems in the world, Switzerland's efforts to modernize its financial system would be fruitless if its tax system removed the incentives from dealing on it.

Swiss Company Law

Reform of Swiss company law took more than 30 years to accomplish, but, in the minds of many analysts, it was one of the most significant legislative changes in this particular field since St. Gallen enacted the first Swiss trading regulations in 1639. The Swiss Code of Obligations was revised,[56] which aligned Switzerland's policies

[55]SWX Swiss Exchange, *Switzerland's Big Bang: History of the SWX Swiss Exchange (condensed version)*, www.six-swiss-exchange.com/download/about/summary_helvetic_bigbang_en.pdf (accessed June 11, 2012).

[56]Schweizerischen Eidgenossenschaft, *Bundesgesetz betreffend die Ergänzung des Schweizerischen Zivilgesetzbuches: Fünfter Teil: Obligationenrecht*, Articles 620–761, www.admin.ch/ch/d/sr/2/220.de.pdf (accessed June 11, 2012).

more closely with those of the European Community.[57] Formerly, Swiss company law was written mainly to protect the rights of creditors (especially banks). The new law was more balanced, focusing on shareholder (especially minority shareholder) rights.

The revised Company Law materially improved Swiss companies' operational transparency. For the first time in the nation's history, listed companies were required to publish audited and consolidated financial reports. Furthermore, the law strengthened shareholder protection, reduced the chances of corporate trading abuses, simplified the means of securing capital, and limited takeover defense tactics.

These changes broadened Switzerland's appeal and increased its attractiveness to international investors. The new law permitted companies to issue shares with minimum nominal values as low as CHF 10 per share (from the previous threshold of CHF 100 per share). In May 2001, this requirement was further reduced to CHF 0.01 (i.e., one centime) per share.[58] The change in law spirited numerous companies to split their shares, thereby, reducing share prices with the intention of making them more appealing to small investors.

To address the criticism that Switzerland was unappealing because of its wide variety of stock instruments (especially for small companies),[59] many companies reduced their share categories to accommodate the investment community.[60] Although investors had already turned against participation certificates (PC), these financial instruments were more stringently regulated, causing many public companies to abandon them. Prior to the new Swiss Equities Law, corporations could freely choose the total nominal value of shares relative to the total nominal value of their other securities (e.g., PCs). The new rules limited the amount of PC-sourced equity a company could issue to a maximum of 200 percent of its share capital (i.e., in the form of bearer or registered shares).[61] Moreover, they permitted new voting shares (i.e., shares that have the same voting rights but a lower par value) to be issued only if the nominal value of these common shares did not surpass ten times the nominal value of the voting shares.[62]

The legislation made shareholder disclosure more transparent. Unless a company's articles of incorporation stipulated a lower reporting level, corporations were required, under Article 663c of the new Law, to publish in their annual reports the identity of shareholders (individuals or groups) who own more than 3 percent

[57]Though its reporting provisions were enacted on July 1, 1992, companies were granted a grace period until 1994 to comply with its requirements.

[58]Schweizerische Eidgenossenschaft, *Bundesgesetz betreffend die Ergänzung des Schweizerischen Zivilgesetzbuches: Fünfter Teil: Obligationenrecht*, Article 622[4], www.admin.ch/ch/d/sr/2/220.de.pdf (accessed June 11, 2012).

[59]Wendy Cooper, "Can Zurich Keep Up Its Zip?" *Institutional Investor* Vol. 23 (12) October 1989, 337–338. (Interview with Pierre Mirabaud, partner in Geneva's Mirabaud & Co.)

[60]The share categories remained the same by law.

[61]Prior this Act, PCs were a virtual no man's land in the Swiss capital markets, varying from company to company. They had no standard nominal value relative to the voting shares and, at some companies, holders had no right to attend annual shareholder meetings.

[62]Peter Kurer, Heinz Schärer, and Eveline Oechslin. 1993. "Switzerland" *International Financial Law Review*, *Supplement Building for Strength.* Vol. 32, September 1993, 57–62.

of their shares. In practice, this company obligation was complemented by an investor obligation to report at the same threshold of holdings.

Switzerland's new Company Law also enhanced the rights of minority shareholders, who complained of being refused pertinent business information by companies' boards of directors. Under the new rules, if a board of directors refused a shareholder's request for information and the General Meeting supported the minority position, a majority vote of the shareholders could trigger a court-appointed special auditor to collect the information.

Even if a General Meeting does not support the minority shareholder's petition, shareholders controlling at least 10 percent of the share capital, or owning shares with a nominal value of at least CHF 2 million, were given the right to ask a competent judge to appoint an independent special auditor. In these cases, the minority shareholders were required to substantiate their allegations that the company had violated either a law or its articles of incorporation. Information obtained through these means could be used only for the specific purposes petitioned, which is consistent with Switzerland's banking secrecy laws (i.e., the rule of specificity).

For years, Swiss companies with registered shares have been able to prevent takeovers by making the transfer of stock subject to the approval of their boards of directors. Under Switzerland's old laws, no justification was required when such transfers were refused.[63] By contrast, the new laws constrained corporations' ability to refuse share registration. In the case of a listed company, such refusal was permitted by law only when:

1. Its articles of association provide for a percentage limit.
2. The acquirer does not expressly declare that he or she bought the shares in his or her own name and for his or her own account.
3. The stock is acquired under false pretenses.

   or
4. There are special circumstances in which registration would violate another Swiss federal law (e.g., Lex Koller[64] or Swiss banking laws).

The new laws allow corporate restrictions on voting if a company's articles of association provide that no shareholder is allowed to vote more than a certain percentage of total votes (regardless of whether she or he owns them or acts as a proxy).[65] As a result, companies were given the de jure ability to restrict takeovers by writing restrictive articles of association, which may have affected their share prices.

Similarly, Article 659 of the Swiss Company Law addressed a company's ability to purchase its own shares. The new rules permit such purchases, but limit them,

[63]In these cases, the ownership was vested in the buyer, and voting rights remained with the seller. See Carlo Lombardini, "Swiss Stock Exchanges: What Does the Future Hold?," *International Financial Law Review* Vol. 8 (8) August 1989, 33–36.

[64]*Lex Koller* is a property ownership law, which establishes guidelines for foreigners buying real estate in Switzerland. It primary purpose is to mitigate speculation that might destabilize property prices.

[65]Peter Kurer, Heinz Schärer, and Eveline Oechslin, "Switzerland," *International Financial Law Review*, *Supplement Building for Strength.* Vol. 32 September 1993, 57–62.

under normal conditions, to 10 percent of the total outstanding shares and to 20 percent in connection with a takeover defense. It was mandated that such restrictive rules must be disclosed in the company's Annual Report.[66] Another area of weighty concern has to do with the quality of figures reported by Swiss companies. Under the new law, figures must meet the test of reliability rather than the more stringent true and fair criterion.

Securities Trading Law (Also Known as Stock Exchange Law)

In 1995, both houses of the Swiss Parliament passed the Federal Stock Exchange and Securities Trading Act (SESTA) in order to regulate the Swiss stock exchange and securities trading. The Act brought Switzerland closer to the trading practices of the United States and well ahead of most other nations with highly developed capital markets. The final version of the law was passed by the Swiss legislature in March 1995 and was enacted between 1997 and 1998. Switzerland's Commission for Regulatory Issues of SWX became the Swiss Takeover Board; the Swiss Federal Banking Commission was charged with supervising the stock exchange, and the new laws reinforced self-regulation as the primary means for control over all aspects of securities trading.

The purpose of the law was to regulate:

1. The national Swiss stock exchange.
2. Brokers and security dealers.
3. Public takeovers and the rights of minority shareholders.
   and
4. The disclosure of investor information.

It is interesting that the codification of these rules followed (rather than led) a general Swiss trend during the preceding decade toward greater disclosure and stronger shareholder rights.[67] Passage of the law was intended to ensure more equal treatment among all holders of the same shares in a takeover bid.[68]

The new Swiss laws replaced the separate cantonal regulations that previously existed and created national standards of protection for investors.[69] With no federal security-trading regulations until 1995, there was no federal authority to oversee the exchanges. In addition to the cantonal supervisors, the Swiss Banking Commission (SBC) exercised some limited control, but its jurisdiction extended

[66]The extra 10 percent, which is allowed in a takeover defense, must be resold within two years, or be declared void.

[67]In 1988, Nestlé dropped restrictions on foreign ownership of its shares, after which other large multinationals followed. In 1990, Roche Holding AG, which had no restrictions, introduced International Accounting Standards where it listed its shares, participation certificates (Genussscheine), and nonvoting equity shares (NES).

[68]The Act was stimulated, in part, by Klaus Jacob's private sale of Jacobs Suchard Corporation shares to Phillip Morris. Jacob received CHF 6,645 per share while minority shareholders received only CHF 1,660 per share. Interestingly, a company had the possibility to avoid the new law's appliance if its company's articles of incorporation excluded them.

[69]Zurich, Basel, and Geneva had laws regulating their stock exchanges, but in Bern, Lausanne, Neuchâtel, and St. Gallen the exchanges were self-regulating.

only to banks. The provisions of the SESTA did not provide for a large national regulatory body equivalent to the U.S. SEC. Rather, a lean oversight body within the SBC took on these responsibilities.[70] Matters dealing with the admission of new stocks, as well as surveillance of transactions, and the organization of trading, were to be handled by the Admission Board.

The old securities trading laws had clear and visible shortcomings. Among them were a lack of capital requirements for security-trading firms, an absence of information disclosure when individual shareholders controlled a significant portion of the stock, and a paucity of rules governing tender offers. SESTA was a milestone in a series of regulatory efforts that began in Switzerland during the late 1980s. The new rules defined the amount of share capital needed and established disclosure requirements.

In 1989, the Swiss Stock Exchanges initiated the Swiss Takeover Code. The Code is a private and voluntary agreement among stock exchange members with respect to handling public takeovers. It mandates disclosure requirements, as well as minimum and maximum offer durations. The Code imposes restrictions, after an unsuccessful bid, on withdrawing and altering bids, counter offers, and waiting periods. In 1991, the Code was extended to include PCs. Furthermore, it tried to impose a requirement that all shareholders receive equal treatment. Included are rules that stipulate pro rata allocations for tender offers and the obligation to purchase all tendered shares if a takeover offer becomes unconditional and the purchase increases the acquirer's control to over 50 percent of the target company's voting rights. [71]

Disclosure was another major issue addressed by the new law. In the past, Swiss companies had to abide by the Swiss Code of Obligations (old Article 631) requirement that only a prospectus needed to be filed before a new stock issue. Because foreign companies were not subject to these rules, they fell under harsher restrictions imposed by their stock exchange(s). The new law provided equal treatment of domestic and foreign companies.

Two other dimensions of the SESTA deal with shareholder disclosure rules and stock price manipulation. Under the new law, a declaration of shareholder identity must be made when his or her voting rights reach 3 percent. In addition, it explicitly outlaws price manipulations by means of false information on trades and authorizes regulatory cooperation with foreign supervisory authorities.

[70]The Swiss Banking Commission was replaced in 2009 by Financial Market Supervisory Authority (FINMA).

[71]Under Article 30 of SESTA, anyone acquiring stocks is now required to make a public tender offer if their participation exceeds the threshold level of 33.3 percent of the voting rights. There is an exception to this rule when organized groups of shareholders are acting contractually. Under Article 52, shareholders owning more than a third of a company's stock, but less than half, are required to make a public offer to all shareholders if they acquire enough shares to take them above the 50 percent threshold. Moreover, the price offered for such shares may not be more than 25 percent below the highest price paid by the offering party during the preceding 12-month period. Article 52 does not apply to companies that opt out of these provisions by incorporating exclusionary language in their articles of association within two years after this law became effective. See Jan Atteslander. 1994. "Changing the Rules," *swissBusiness* (July/August 1994), 10 (3), 10–13.

APPENDIX 1B: LISTING AND ABBREVIATIONS FOR GROUP BUSINESSES, PARTICIPATIONS, DIVISIONS, FIELDS, CORPORATE SERVICES, EXTERNAL SERVICES, AND GROUP SITES[72]

Group Businesses (Legal View)

SIX Group
SIX Swiss Exchange
SIX Exfeed
SIX Exchange Regulation
SIX Securities Services
SIX SIS
SIX SIS International
SIX x-clear
SIX SAG
SIX Systems
SIX Terravis
SIX Telekurs
SIX Multipay
SIX Multi Solutions
SIX Card Solutions
SIX Interbank Clearing
SIX Paynet
SIX Pay
SIX Management
SIX Group Services

Participations

Eurex Zurich
Euro Performance
Indexium
Scoach Schweiz
STOXX
Swiss Fund Data

Divisions (Organizational)

Cash Markets
Securities Services
Financial Information
Multipay
Cards and Payments
IT and Logistics
Finance and Risk
Division Holdings

[72]SIX Group, Corporate Communications, April 2011.

Business Fields

Securities Trading
Securities Services
Finance Information
Payment Transactions

Corporate Services

Corporate Communications
Human Resources
Legal and Compliance
Auditing

External Services

ConventionPoint

Group Sites

S SIX Group Selnaustrasse, Zurich
O SIX Group Olten
SIX Group Hardturmstrasse, Zurich
SIX Group Brandschenkestrasse, Zurich