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Why Switzerland Must Seize
the Fintech Challenge

September 2015



Foreword

Dear reader,

The global financial and economic crisis of 2008/09 and subsequent sovereign debt crisis of 2010 left an indelible mark on the Swiss financial center. By triggering fundamental changes to the country's banking secrecy laws and its traditional wealth management business model, the crisis shifted Switzerland's position on the global financial landscape and introduced a host of regulatory challenges which we are still grappling with today.

At the same time, the digital revolution has found its way to the financial services industry, disrupting traditional ways of doing business. Moreover, radical new technologies such as blockchain are threatening to fundamentally transform the financial sector as we know it. Financial technology has the potential to shrink the role and relevance of a whole host of traditional financial service providers - from banks to insurance companies to commodity trading firms - as well as help them create better, faster, and cheaper services.

These two megatrends point to the Swiss financial center finding itself at a historical inflection point: A tougher business and regulatory environment paired with the rapid rise of new market competitors using disruptive technologies presents a challenge for traditional financial sector players. These companies now need to radically re-think their business models and work collaboratively with a new breed of financial services entrepreneurs. In addition, the financial center's regulatory and industry bodies need to work closely to increase Switzerland's visibility and attractiveness as a destination for financial technology entrepreneurs. By embracing disruptive technologies and combining it with Switzerland's traditional financial service expertise and core values of neutrality, stability and confidentiality, the Swiss financial center can significantly enhance its core value proposition.

Nexussquared is a platform that will bring together relevant stakeholders and facilitate the development of strategies for Switzerland to grasp this unique opportunity. This whitepaper outlines the challenges Switzerland currently faces in this regard and discusses options for proactively embracing emerging opportunities.

We highly appreciate the valuable input provided to us in preparation of this document and would like to extend our special thanks to Shruti Patel for pulling our thoughts together and writing this paper.



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Disruptive Innovation is the New Norm

When it comes to technology, some innovations have the potential to disrupt the status quo, changing the way people live, spawning new products and services, and making others obsolete. Take for example, Apple's iTunes ecosystem which has almost single-handedly transformed the world's music industry with its iPod and iPhone devices. The iPhone itself has so far made over 25 inventions redundant. More broadly, the rise of the internet has radically changed the retail landscape, and social media has created an entirely new 'sharing' economy.

Inventions Being Displaced by the iPhone

Hardline telephones, mobile phones, answer machines, cameras, movie cameras, slide projectors, movie projectors, photocopiers, printers, typewriters, keyboards, word processors, television, video cassette recorders, DVD players, radio, tape recorders, gramophones, records, compact discs, CD players, fax machines, personal computers, games consoles, watches, clocks, libraries, GPS systems, calculators, maps, credit and cash cards, ATM machines, call centers, etc. etc.

Financial Times, 2015

Such disruptive innovation has gained huge momentum in recent years and whilst some gurus worry the pace of innovation has peaked,¹ technological breakthroughs are redefining every sector of the economy. Indeed, their impact is set to go far beyond the economic realm, shaping cities of the future, education systems, energy delivery, and national security.

What is driving this wind of change?

Since the 1970s, most major technological breakthroughs have stemmed from advances in computational processing power. As Gordon Moore, co-founder of Intel predicted, microprocessors have become exponentially faster and smaller, enabling the collection, exchange, and storage of ever-increasing amounts of information. But as semiconductor devices are approaching atomic scale, the laws of physics make it difficult for them to operate properly. Neither is it economically viable to keep producing smaller chips. As a result, many believe we could be entering an era of technological stagnation.

We would argue this is a narrow view. Already the anticipated limit of Moore's Law has pushed innovation in other directions. One example is cloud computing which enables processing and data storage on a super-mass scale through the Internet rather than by physical means such as a localised hard drive. Another is near field communication (NFC) which allows for two-way data communication between devices using ultra-low power chips that can harvest energy from the ambient environment. Neither of these technologies builds on shrinking chip size; rather their transformative potential lies in their countless number of use cases.

The discovery and invention of new use cases is what lies at the heart of innovation. As we've learned over the past few decades, new technology itself is rarely a source of disruption. It is savvy entrepreneurs who keep finding ways of using technology to turn traditional business models upside down that are re-writing the rules of the game. From Apple to EBay to Uber, none developed a unique technology, these companies created a new model leveraging existing technology.

¹ "...(innovation in America) is somewhere between dire straits and dead," Peter Thiel, The Economist, January 2013

The ever-increasing use of big data – a term used to describe extremely large datasets that are analysed computationally to reveal useful patterns and associations - is another example of how even small and steady improvements in computational power and data storage can become game-changing technology when applied to business. Companies are now using the vast amounts of data and analytical capacity they have at their disposal to provide better experiences for their customers, employees, and suppliers. More accurate analyses also open up a world of possibilities in terms of reducing risk and operational inefficiencies.

So whether or not the coming decade delivers any quantum leaps in technology, we believe new uses of established and maturing technologies will continue to profoundly influence business models and practices.

And Fintech is the Next Disruptor

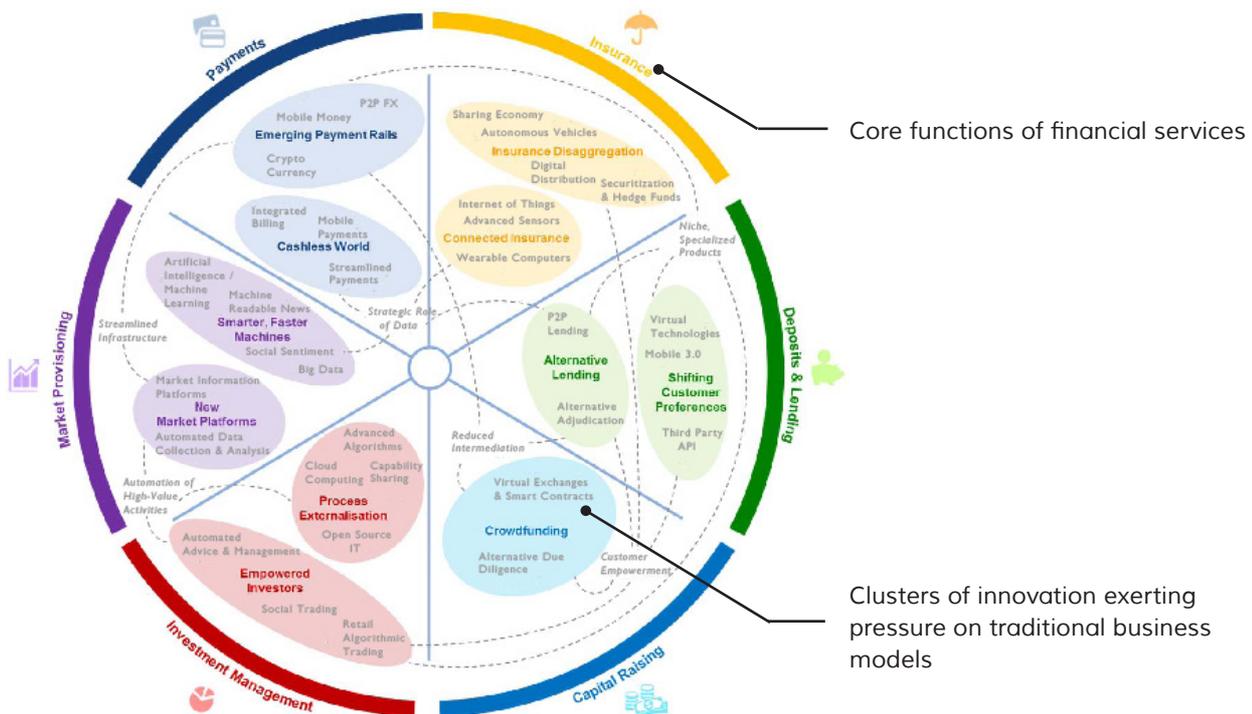
In the finance realm, the consequences of innovation will be dramatic and far-reaching. In the same way that Amazon has transformed traditional retail, a growing contingent of financial technology (fintech) firms are beginning to re-write the rules of business for the entire financial services industry. Across the globe innovative technology start-ups and established firms are not only taking on core banking activities such as payments, deposits, and lending – their lines of business cover everything from market provisioning to insurance, investment management, and raising capital.

With such sweeping change on the horizon, investment in fintech is booming. Between 2013 and

2014 global investment in fintech ventures tripled from \$4.05 billion to \$12.21 billion.² By comparison, the overall market for venture capital investing only increased by about two-thirds during that period. And, there are no signs of this trend slowing. In fact, investment could accelerate further as fintech start-ups raised nearly \$12.4 billion from venture investments in the first six months of 2015 alone.³

Over 80% of global fintech investment takes place in the United States (US). Silicon Valley and New York are by far the leaders in this space but financial centers everywhere are vying for a piece of the pie. London for example has a consolidated strategy to become the fintech capital of the world.

The Future of Financial Services



World Economic Forum, 2015

² Accenture, 2015. Figures include financing from venture capital, private equity, corporations, hedge funds, accelerators, and government-backed funds.

³ TIME, July 2015

Championed by Chancellor Osborne, London's multi-pronged approach is viewed by many as a blueprint for success. An industry trade body, Innovate Finance was established specifically to spearhead advancement of the fintech sector and is strongly supported by government, the Financial Conduct Authority (FCA) regulatory authority, and the financial industry. The government has also placed strong emphasis on appropriate skills and education. In 2014, coding was introduced to the school timetable of every child aged 5 – 16 years, making the UK the first major G20 economy to implement this at a national level. In 2015, Open University in conjunction with Innovate Finance launched a Fintech 101 course aimed at educating top executives about the booming area and addressing concerns of a skills gap in UK.

Keen to follow in the UK's footsteps are countries such as Luxembourg whose finance minister is promoting the country as a fintech destination through various initiatives supporting start-ups such as a new bill that allows entrepreneurs to set up a company in one day and with just one euro. Another example is Singapore - the country's Monetary Authority has committed over \$160 million to growing its start-up fintech sector and recently announced the formation of a dedicated FinTech & Innovation Group within its organisation.⁴ The group will be responsible for regulatory policy surrounding key financial technologies such as cloud computing, big data, and distributed ledgers.

Such forward-looking investments are not only taking place in large financial centers; smaller hubs such as Berlin and Tel Aviv are also using varying combinations of incentives including direct government funding, concessional tax structures, and favourable visa requirements to position themselves as regional fintech leaders.

Fintech companies operate across a broad spectrum of financial services but certain market segments and technologies are attracting more attention

than others. A significant number of companies are operating in the lending, payments, and personal finance spheres and these segments also boast the highest amount of investor funding.

Lending

Lending Club for example, a peer-to-peer lending platform that enables individuals and businesses to lend and borrow money online raised almost \$900 million through its initial public offering in 2014. Other companies targeting the financially under-served are also filling part of the void left by banks that have pulled back from making loans. Avant for example, makes loans to consumers whose credit is below prime but better than subprime using big data and machine-learning algorithms. In 2014, the company struck a \$400 million private equity deal - one of the largest deals of the year.

Payments

Payments is another area that has consistently attracted large amounts of funding. The segment covers a host of transactional services such as mobile card payments (SumUp), money transfer (Transfer Wise) and digital wallets (Apple Pay / Google Wallet). In the US, this segment accounted for the largest chunk of overall fintech investment (59%) and the largest number of fintech deals (29%) in 2014. Together, payments and lending accounted for almost 80% of US fintech investment and 45% of deal volumes.⁵

Personal Finance & Wealth Management

A smaller but rapidly growing fintech segment is personal finance. These companies make it easier for users to make financial decisions. Apps such as Digit and Mint for example help users track their spending and stay on budget without the assistance of a financial advisor.

Fintech companies are also challenging high value customer segments that require bespoke wealth and investment management services.

⁴ www.mas.gov.sg

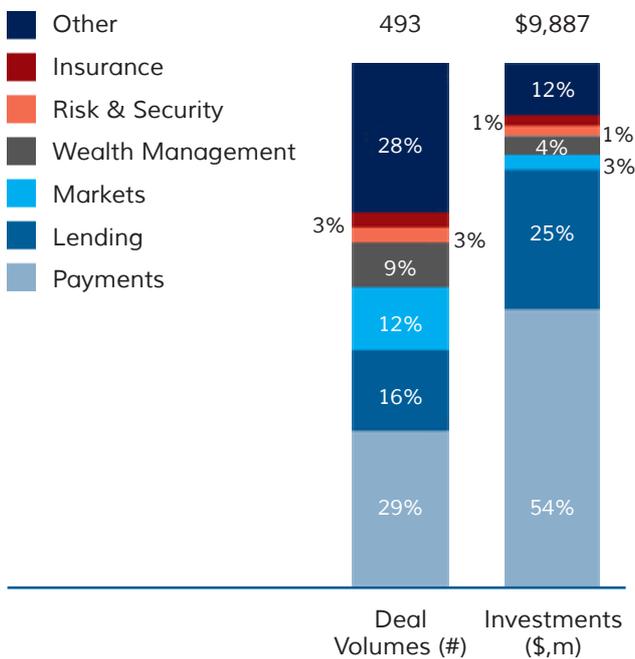
⁵ Accenture, 2015

The post-crisis era left many individuals reluctant to invest through traditional channels and this has paved the way for the expansion of non-bank platforms. Established wealthy families across the globe are handing over the reins to a new tech-savvy generation keen to explore alternative ways of managing wealth. This is where companies like Betterment and Wealthfront have stepped in. They provide automated investment and financial planning services through the use of algorithms. These so-called robo-advisors offer user-friendly interfaces and individualised risk profiling to determine an optimal asset allocation for investors' portfolios. Automation restores trust and does away with complex and often opaque systems. It also reduces costs, which

means low fees for users. Accessibility, simplicity, and transparency are making robo-advisors a popular alternative to traditional wealth managers.

Swiss-based MyPrivateBanking Research estimates that global assets under management (AuM) of robo-advisor services will reach \$20 billion by the end of 2015, and \$450 billion by 2020. Importantly, these figures do not include AuM of established wealth managers that are integrating some form of automated wealth management service into their offering.⁶

Fintech Deals and Investments in the US by Segment, 2014



Other includes Account Management, Accounting & Finance, Others
Accenture, 2015

⁶ My Private Banking Research, Robo-Advisors 2.0, How Automated Investing is Infiltrating the Wealth Management Industry, 2015

Blockchain Technology will Inspire Radical Change

Whilst the above areas have attracted the largest chunks of funding, we believe the biggest and most transformative opportunity lies in blockchain technology. Its revolutionary aspect stems from the technology's in-built system of trust and confidentiality. Trade and ownership are fundamental pillars of society and ones in which trusted third parties such as banks and lawyers play an integral role. The power of blockchain is that it could eliminate the need for such institutions altogether, allowing societies to govern themselves.

The integrity of transactions in fields as diverse as finance, communication, law, and production would be guaranteed by the technology itself. As a result, societies would not be subject to today's centralised

systems and the abuse of power that sometimes accompanies them.⁷

Andrei Matchouk of Swiss-based blockchain solutions start-up, Yacuna believes "blockchain will be the backbone of fintech", and result in a "real digital transformation" as it actually converts assets into a digital format rather than just representing them digitally.

Blockchain technology has the power to overhaul the financial world as not only does it allow users to transact with each other without knowing or trusting one another, but in contrast to today's centralised ledger systems, it eliminates the need for a central authority to clear transactions and certify ownership.

Bitcoin: An Application of the Blockchain Technology of Trust

Blockchain is the underlying distributed ledger technology that supports the exchange of digital assets. It is the foundation technology used by crypto currencies such as bitcoin.

Blockchain allows a network of computers to maintain collective bookkeeping through a electronic ledger that is distributed across a network of users via the Internet. When a transaction takes place, so-called Bitcoin Miners who maintain the ledger verify its authenticity before it can be recorded. This verification is done on the basis of complex mathematical principles, which ensure that all users automatically and continuously agree on the current state of the ledger and every transaction in it. If anyone attempts to corrupt a transaction, the mathematical equation will not solve and users will not arrive at a consensus so the transaction will not be recorded. Once verified, the transaction is permanently recorded in the blockchain. Since the ledger is public, not controlled by any one party, and each user owns a full copy of the blockchain, everyone has access to a single shared source of truth. Moreover, because personal information in the blockchain is encoded, it is kept private but activity is still transparent. This pseudonymity is key in ensuring confidentiality whilst allowing for traceability and accountability.

In summary, blockchain technology brings benefits to society because it is decentralised and removes the need to trust third parties, is highly secure and private, instantaneous, and virtually cost free.

Adapted from www.de-centralize.com/de-centralize-media-story-40587

⁷ Adapted from Johann Gevers, The Four Pillars of a Decentralised Society

More profoundly, this technology can in theory be applied to any type of contract that requires third party authentication. For example, royalty payments, insurance, certificates for authenticating art, voting, and even government budgets. Already companies such as Ethereum are using the technology for the exchange of binding smart contracts that replace standard business documents.

Smart contracts are contracts that are self-enforcing and/or self-executing. By hard-coding the transfer of ownership of assets under defined circumstances, blockchain technology can create 'unbreakable' contracts. In essence, the blockchain replaces a third party that would otherwise be required to resolve a potential legal dispute.

Smart Contracts: A Multitude of Possibilities

Smart contracts are agreements between parties posted to the blockchain for automated execution. By solving the problem of trust without the need for middlemen, smart contracts can reduce the cost of business, lower consumer prices, and give society the freedom to make up bespoke rules of transaction.

Example use cases include:

- Settling bets
- An inheritance pay-out at age 21 or death of benefactor
- A mortgage with automatic interest-rate resets
- Preventing the downloading of music or video files that are protected by copyright.
- Enforcing terms of credit. For example a car bought on credit that locks its doors if a repayment is not made.

Although such use cases are currently mostly theoretical, platforms like Ethereum are bringing smart contracts closer to reality and basic contracts like marriage have already been recorded in blockchain.

<http://www.slideshare.net/lablogga/blockchain-health-and-crypto-wellness-futures>

<http://cryptorials.io/a-beginners-guide-to-smart-contracts/>

Who Cares About Blockchain? Everyone.

ENTITY	INTEREST
Barclays	Signed proof of concept with Safello, a Swedish bitcoin exchange, to explore how blockchain technology can be used in traditional finance.
Bill & Melinda Gates Foundation	Is researching how blockchain technology can be implemented to make financial networks faster, simpler, and more secure. Recently awarded a grant of \$100,000 to Bitsoko, a Nairobi-based digital currency start-up.
Central Bank of Singapore	Blockchain technology is a key part of the Bank's five-year \$160 million investment plan.
Citigroup	Is operating three separate systems that deploy blockchain technology to run its test crypto currency, Citicoins and is exploring the use of blockchain technology for cross border payments.
IBM	In partnership with Samsung, is developing a system that uses elements of blockchain technology to build a distributed network of devices – a decentralized Internet of Things.
NASDAQ	In June 2015, announced a partnership with infrastructure provider Chain to use the blockchain to issue and transfer the shares of privately held companies.
Richard Branson	In May 2015, held a summit on Necker island to discuss the future of Bitcoin, blockchain, and digital currency.
Tunisian Ministry of Technologies of Digital Communication & Economy	Is seeking an intern to learn about Bitcoin and blockchain technology and study its impact on the country's banking infrastructure.
UBS	Opened a technology lab in London to explore how blockchain technology can be used in financial services.
US Federal Reserve	Is in discussion with IBM regarding the possibility of using blockchain technology to develop a digital cash system based on existing national currencies.

Author's compilation, various online sources including www.finanzprodukt.ch

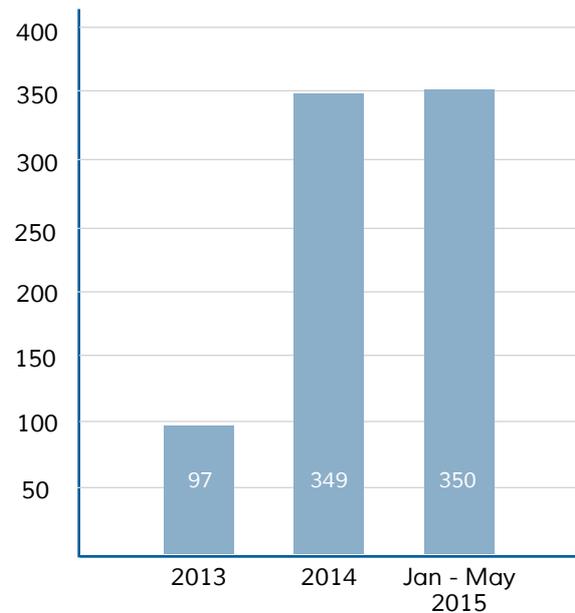
Investors are quickly catching on to the potential of blockchain technology. In 2013 there was only \$97 million invested in blockchain (mostly bitcoin companies). By 2014, this had jumped to \$349 million, and in the first five months of 2015 was already \$350 million. This amount was invested in only 32 companies for an average investment of \$10.76 million, a big increase compared to an average investment of \$3.43 million in 2014.

Blockchain and other smaller leaps in technology are changing the financial industry’s competitive landscape. Banks, insurers, and investment managers are beginning to see many of their core business functions come under threat. At the same time, they are recognising the potential of fintech to cut costs, improve efficiency, and propel growth. As a result, this traditionally conservative industry is embracing partnership and innovation.

“There are hundreds of startups with a lot of brains and money working on various alternatives to traditional banking. ...We are going to work hard to make our services as seamless and competitive as theirs. And we also are completely comfortable with partnering where it makes sense.”

JP Morgan CEO, Jamie Dimon
Annual letter to shareholders, April 2015

Global Investment in Blockchain Companies, \$ m



Coindesk, 2015 and TIME, July 2015

Switzerland Could Take Center Stage

Switzerland, and Zurich in particular has a long history and tradition in financial services. From humble beginnings as facilitators of trade more than 250 years ago, Swiss companies quickly grew into full-fledged banking houses. By the late 1700s these original trading firms had become wealth advisors and guardians of private assets. In 1856, to meet the rising demand for investment capital generated by the building and maintenance of railway lines, Alfred Escher formed the Schweizerische Kreditanstalt, (now Credit Suisse), and later Swiss Re and Zurich Insurance. These institutions together with the construction of the stock exchange in 1880 laid the foundations for a leading financial center.

During the two world wars Switzerland's political neutrality and stability coupled with its already strong and trusted reputation made it a safe haven for European funds, cementing its position as a leading wealth management centre. From the mid-1950s, internationalisation of the financial system bolstered Zurich's position as an international financial center and Swiss banks began looking for growth opportunities further afield, becoming among the first Western banks to establish correspondent banking relationships in China. The country's political agenda and economic ties go hand in hand. Switzerland was the first Western country to recognise the then newly formed People's Republic of China in 1950, and the country maintains a peaceful and politically neutral stance as evidenced by its recent diplomatic mediation efforts between the US and Iran. Underpinned by these core values of stability, universality, responsibility and excellence, Switzerland developed a well-diversified and robust financial sector. These same values along with appropriate government support also helped successfully steer the sector out of several high profile scandals throughout the 1980s and 1990s.

But in 2008, following the global financial crisis Switzerland's long-cherished banking secrecy practices came under attack. The crisis left many

western governments in a poor financial position and strengthened their resolve to fight tax evasion and money laundering. In 2009, following a US-led tax-dodging case against UBS, the G20 and OECD pressured Switzerland into signing an international agreement on exchange of information. This not only marked the beginning of the end to the country's almost 75 year old banking secrecy laws, it was a turning point in the Swiss financial center's history. Despite now being under immense pressure to redefine itself based on competitive advantages unrelated to secrecy, Switzerland remains the world's largest offshore wealth management centre, with approximately 26% of the global market.⁸

Switzerland's economic recovery following the 2007 crisis is further testament to its core stability and strength in financial services. It is the only Western economy not to experience a prolonged recession following the crisis, and although the country's largest bank UBS was hit hard, the rest of the financial sector emerged relatively unscathed.

It is this natural competitive advantage in financial services combined with a plethora of other strengths that make Switzerland a prime fintech location.

Zurich: A World Class Financial Center

Given its size, the Swiss financial sector contributes significantly to Switzerland's overall wealth, accounting for over 10% of gross domestic product in 2013, of which almost half is generated in the Canton of Zurich.⁹

Comprising global banks, insurance companies, cantonal banks, regional financial institutions, private banks, foreign banks, pension funds, sovereign wealth funds, and family offices, Zurich is home to one of the most diverse and largest financial sectors in terms of assets to GDP. It has established itself as a European hub for reinsurance companies as many small and medium-sized providers have chosen to position themselves around the market leader, Swiss Re.

⁸ Swiss Bankers Association, 2013

⁹ Canton of Zurich, Department for Economic Affairs, Cluster Report 2011 - 2013

With a gross premium volume of almost \$35 billion, Zurich is now in the same league as Tokyo, London and Bermuda – the traditional centers of the reinsurance business.¹⁰

And as mentioned above Switzerland remains the world’s largest cross-border private wealth manager with a quarter of the global market. Housing approximately 500 trading companies turning over more than \$1,000 billion every year, Switzerland is also one of the world’s most important trading hubs for physical commodities. 35% of world crude oil and crude oil products are traded via Switzerland and it is the largest trading center for grains, oils seeds, coffee, and sugar with 50% of the global market.¹¹

The entire industry benefits from an innovative and efficient financial market, a reliable legal system and robust regulatory structures. The Swiss Financial Market Supervisory Authority (FINMA) took swift and forceful action in the aftermath of the 2007 global financial crisis, making Switzerland amongst the first countries to restore trust and confidence in its financial sector.

Neutrality and stability, both from a political and macroeconomic perspective are huge pull factors for finance companies. And despite the disappearance of traditional banking secrecy laws, Switzerland retains stringent data protection laws which is one of the reasons that bitcoin services and security firm, Xapo recently relocated from Palo Alto to Zurich.

This unique combination of strengths is reflected in Zurich’s position as the world’s sixth most competitive financial center.

Apart from its position as leading financial center, Zurich is regularly at the top of quality of life surveys. The relatively high cost of living is countered by a host of unique and attractive features including spectacular natural beauty, excellent infrastructure, and a highly enviable location in the center of Europe.

World’s Top Financial Centers

	2015	2014
1	New York	New York
2	London	London
3	Hong Kong	Hong Kong
4	Singapore	Singapore
5	Tokyo	San Francisco
6	Zurich	Tokyo
7	Seoul	Zurich
8	San Francisco	Seoul
9	Chicago	Boston
10	Boston	Washington DC

The Global Financial Centers Index is a widely quoted ranking of the competitiveness of financial centres based on a range of criteria including human capital, business environment, financial sector development, infrastructure, and reputation.

Long Finance / Qatar Financial Center, 2014 and 2015

¹⁰ Canton of Zurich, Department for Economic Affairs, Cluster Report 2011 - 2013

¹¹ SSTA Swiss Commodity Trading Hub, www.stsaswiss.ch and Commodity Business in Switzerland, KPMG, 2011

A Talented Information and Communications Technology (ICT) and Start Up Scene

Zurich has a strong start-up momentum, especially in the field of ICT. According to the Swiss Start-up Monitor (2014), of the 460 high-tech companies founded across Switzerland last year 40% were based in the Canton of Zurich. Being amongst the most innovative and promising companies in the country, high-tech start-ups are increasingly on the radar screen of large corporations. The 3D specialist Procedural, for example, was taken over by ESRI, the world's largest supplier of geographic information systems, and the online scheduling tool Doodle by the media company Tamedia. Further, some of the world's leading technology companies – Google, Disney Research, and IBM have settled in Zürich, reinforcing the city's strong affinity with ICT.

An Excellent Education-Innovation Ecosystem

Zurich boasts excellent engineering know-how. The Federal Institute of Technology (ETH) is regularly ranked amongst the best in Europe and unlike many other top schools, still emphasises traditional 'hands-on' engineering skills. In 2013, federally recognised programmes alone encompassed as many as 18 vocation-specific educational courses and 21 fields of study in ICT. At the same time, technology transfer institutions affiliated to universities, such as Unitectra and ETH-Transfer are nurturing entrepreneurial talent which numerous business plan competitions, incubators, accelerators, angel groups, and foundations vie for.¹²

A Competitive Business Environment

In 2014 the World Economic Forum (WEF) ranked Switzerland the most competitive country in the world for the sixth year in a row. The index is based on a wide range of competitiveness indicators covering institutional effectiveness, education, innovation, and business environment amongst others. Switzerland is a location of choice for multinational corporations, being home to over 200 European headquarters which are attracted by the country's political and

regulatory stability, a relatively competitive corporate tax environment, and high-class infrastructure.

Looking at these competitiveness indicators in more detail, we isolated those particularly relevant for the development of fintech. As summarised in the following table, from the 144 countries ranked, Switzerland is placed in the top 20 for the majority of key fintech indicators - often being in the top five. There are however a number of areas in which Switzerland could improve its already strong position as a fintech destination, particularly in relation to the establishment of new businesses and addressing shortages in relevant skilled personnel.

¹² Canton of Zurich, Department for Economic Affairs, Cluster Report 2011 - 2013

Competitiveness Indicators Relevant to Fintech - Where Does Switzerland Stand?

	LEADING (Top 20 / 144 Ranking)		ROOM FOR IMPROVEMENT	
INNOVATION	Capacity for innovation	1	Availability of scientists and engineers	24
	Quality of scientific research institutions	1		
	PCT patents (applications / million pop.)	1		
	Company spending on R&D	1		
	University / Industry R&D collaboration	3		
FINANCIAL MARKET DEVELOPMENT	Availability of financial services	1	Venture capital availability	25
	Affordability of financial services	1		
	Financing through local equity market	16		
TECH. READINESS	Availability of latest technologies	6	FDI and technology transfer	35
	Firm-level technology absorption	6	Mobile broadband subscriptions / 100 pop	46
	Individuals using Internet (%)	11		
HIGHER EDUCATION & TRAINING	Quality of the education system	1	Tertiary education enrollment, gross %	47
	Quality of math and science	4		
	Quality of management schools	1		
	Availability of research & training services	1		
INSTITUTIONS	Intellectual property protection	4	Strength of investor protection	130
	Efficiency of legal framework in settling disputes	8		
	Transparency of government policymaking	7		
EASE OF BUSINESS & LABOUR MARKET	Effect of taxation on incentives to invest	7	Total tax rate (% of profits)	35
	Pay & productivity	5	No. procedures to start a business	57
	Country capacity to retain talent	1	No. days to start a business	84
	Country capacity to attract talent	1		

World Economic Forum, 2015

But Time is Running Out

Despite Switzerland's long history and competence in financial services as well as repeatedly topping global innovation league tables, the Swiss fintech scene remains comparatively quiet. There are about 100 fintech start-ups in the country but in 2014 the fintech sector in Switzerland, Germany and Austria together only attracted \$175 million in investment – less than 1.5% of that invested globally.¹³

As financial centers around the world become hotbeds of fintech innovation, Switzerland is grappling with several challenges. Tougher regulatory measures, mounting cost pressures, and the demise of banking secrecy are putting the financial center under increasing stress. In this context, Switzerland has an opportunity to redefine

itself as a vibrant fintech destination, building on its competitive advantages in innovation and finance. At the moment however, a number of constraints are hindering progress in this direction.

No Government-Backed Fintech Initiative

Unlike other cities striving for fintech growth, Switzerland currently has no overarching strategy or government endorsed initiative. Although the Swiss Fintech Innovation Lab and other thematically related platforms are working to establish a fintech ecosystem in Switzerland, these initiatives are not focused on promoting the country as a fintech destination. With no shared vision or prominent organisation taking the lead, the fintech industry remains fragmented, lacks

Overview of Swiss Fintech Companies, July 2014



Johannes Hoehener / Swisscom

¹³ www.fintechforum.de

direction and global visibility. As the experience of New York and London illustrate, the diffusion and commercialisation of financial technologies requires close relationships between financial services firms, start-ups, and government bodies. And here lies a window of opportunity for Zürich. It has the opportunity to position itself as the leading regional fintech hub by moving before rivals such as Berlin (which has a distinctly lacking financial industry) to promote itself internationally and aligning efforts between relevant jurisdictions such as the city, government, regulatory authority, tech firms and industry players.

Regulatory Indecisiveness

Although Switzerland already has one of the most advanced regulatory environments in the world, there is room for improvement. In particular when it comes to making regulation an advantage for fintech companies, many argue that the country's relatively tougher regulatory environment is holding back the fintech sector.

Enabling and incentivizing innovative start-ups through supportive regulation without compromising on clarity and stability is a key challenge facing fintech locations everywhere but the Swiss regulatory framework has been criticised for being far too measured and cautious with regard to fintech. Take for instance the case of ECUREX, a Swiss-based bitcoin trading platform which took 16 months of assessment before obtaining legal operating status in Switzerland.

In contrast the UK's regulatory body, the Financial Conduct Authority (FCA) has a full time dedicated Innovation Hub. The team provides direct support and guidance to innovators and continually assesses how the regulatory regime can be adapted to foster innovation.

In Switzerland there is still no proper regulatory guidance on digital currencies (except a short report in 2014 by the federal council concluding nothing needs to be done from a federal perspective).

The Swiss Federal Tax Administration has however made a welcome decision to exempt bitcoin from value-added tax, and FINMA is also moving in the right direction by taking an active role in industry events and engaging in open dialogue. In a recent speech to senior members of Zurich's finance and business community, the regulatory authority's CEO Mark Branson recognised innovation as a key factor in the competitiveness of the Swiss financial center and promised to remove regulatory hurdles to technological change. At the same time, he made clear that any regulatory framework affecting fintech companies would continue to foster fair competition between market players and protect investors.

Financial Institutions Short Sightedness

Despite Switzerland's leading position in cross-border wealth management and private banking, we believe fintech is still not fully on bank CEO radars. Financial institutions need to be driven strategically but tend to be focused on day-to day activities arising primarily from regulatory and cost pressures. This may partly explain why Switzerland fell into the 'Undecided' bucket in a study on digital banking readiness undertaken by AT Kearney.¹⁴

Skills Shortage

A recent report by the European Commission says the continent's ICT sector is facing a massive skills shortage, with up to 700,000 unfilled jobs. In this respect Switzerland is no different – the country's IT industry employs around 177,000 people - almost 7% of the working population, but SwissICT - the country's largest industry trade association predicts the industry will face a shortage of 87,000 employees by 2022.¹⁵

¹⁴ Banking in a Digital World, A.T. Kearney EFMA, 2013

¹⁵ The Swiss Financial Center 2020 - Swiss FinTech Innovation Lab, Dr. T Puschmann and Prof. Dr. T Hens, April 2015

The Swiss Financial Center at a Crossroads: Where Next?

Financial sectors the world over are undergoing massive upheaval. In Switzerland the industry is fighting on several fronts. Tougher regulatory requirements, cost pressures, a low interest rate environment, and drastic changes in banking secrecy laws are challenging traditional business models, particularly in private banking - a long established bastion of the Swiss financial center. Further, the industry is grappling with new challenges arising from fundamental shifts in international competitiveness.

Amidst this turmoil and complexity, investment and decision-making related to fintech has perhaps understandably been a low priority for both financial institutions and government. As a result, despite increasing pressure on the Swiss financial center to re-invent itself, the strategic benefits of investing in fintech have not been fully recognised. We believe this oversight represents not only a missed opportunity, but an existential threat to the Swiss financial centre. Retail banks in the US and UK are already experiencing a competitive squeeze from niche fintech companies and as growth in fintech continues to soar, we see such disruption becoming a global phenomenon.

The future of the Swiss financial center depends on how quickly and effectively it can deal with the myriad of challenges it is currently facing. Although several positive political and regulatory actions have been taken to preserve the financial center's integrity and its core values remain intact, there is still a crucial lack of consensus on the center's strategic direction. We firmly believe that any strategy for the future must embrace the potential of fintech to re-define the Swiss financial center's competitive advantages, ensuring it remains relevant and competitive on the global stage and continues to make a valuable contribution to the Swiss economy. In this context, we have considered three possible scenarios for development of Switzerland's fintech sector, each based on core Swiss strengths.

Blockchain Expertise Center

Switzerland's political independence and stringent data protection legislation are huge advantages for blockchain companies. This combined with excellence in innovation and engineering enable Switzerland to position itself as a location of choice for blockchain technology. Several bitcoin and blockchain firms, including global players such as Xapo and Ethereum have already chosen Switzerland as their base, citing favourable regulations around financial privacy, friendliness to business, political independence and stability as key pull factors.

A Next Generation Wealth Management Hub

With its deep-rooted history in private banking and as the global leader in wealth management, Switzerland could offer fintech start-ups operating in this segment an ideal ecosystem of valuable expertise, experience, and advice. This competitive advantage could also spill over into offering unparalleled opportunities for commercial partnerships and investment. Moreover, combining these traditional values with technology could represent a unique opportunity for Switzerland to develop a new niche in robo-advisory services.

A Continental European Fintech Hub

Switzerland's political neutrality, stability, diversity in languages, and favourable geographical location in the middle of Europe are significant competitive advantages. This together with its strengths in finance, technology and innovation enable Switzerland to position itself as an ideal regional fintech hub. The often-cited alternative of Berlin has no significant financial sector, whilst Paris - seen as a tech hub - is hampered by regulatory issues and has a much smaller financial industry compared to Zurich. Nevertheless, as regions across Europe eagerly compete for the top fintech spot, the need for Switzerland to act swiftly is difficult to overstate. This urgency is particularly important in the context of securing non-discriminatory market access to EU and EEA countries.

The above options represent just a small subset of paths for fintech in Switzerland, and regardless of which (if any) is taken, the Swiss fintech scene will continue to grow.

Nexussquared, a Zurich-based fintech platform was recently founded to play a key role in this growth. With a view to supporting diverse and broad-based innovation, Nexussquared will partner not just with the banking sector, but with institutions operating across the entire financial services spectrum.

Drawing on Switzerland's competitive strengths, the company also has a strong global outlook and is firmly committed to increasing Zurich's attractiveness for start-ups currently based outside of Switzerland. It will provide a range of business coaching services and consulting advice, as well as engage with public sector agencies to provide regulatory guidance and facilitate constructive dialogue between stakeholders. Nexussquared's ultimate ambition is to be a catalyst for the comprehensive development of the Swiss fintech ecosystem by helping new ventures and established players build successful fintech businesses out of Switzerland.

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