



# Capital Creation Reimagined in Financial Markets

A SIX White Paper



# Foreword

For the Swiss Stock Exchange, 2020 has been a true test of its ability to perform its core functions – and it passed with flying colours. Despite unprecedented market turmoil, it has enabled companies to raise capital and investors to adjust their portfolios by ensuring continuous, transparent and efficient trading throughout the year. It is an outstanding achievement – or, as we like to call it: a good start.

The COVID-19 pandemic has not only caused turmoil in financial markets, but it has already reshaped the economy and society as a whole and will increasingly do so over the coming months and years. Since both are closely interlinked, it is important to observe these changes and to seek out fresh thinking on capital creation at national, organizational and individual levels.

That's why SIX has once again partnered with the University of St. Gallen, tasking a group of students to research the drivers of coming transformation and to identify the future needs of financial institutes and corporates, with a special focus on small and medium enterprises (SMEs) as the backbone of any local economy, and to come up with their insights solution for long-term sustainable growth.

We hope you are intrigued by their interesting findings presented in this white paper and we wish you a pleasant read.

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# Introduction

The COVID-19 pandemic impacted the economy and society alike. Demand was disrupted, working hours declined, firms reorganized spending and loans, to name some examples. While financial institutions were affected by COVID-19, they also faced industry-specific challenges. In their credit businesses, banks struggled with delays or even defaults on loan payments and a devaluation of collateral. At the same time, the demand for loans, especially from SMEs, surged. Insurance companies were confronted with an increased number of claims, whereas their funds' value decreased and premium revenues from interest shrank. Nevertheless, these impacts were only examples of the broader effect of COVID-19 on financial ecosystems. Elsewhere, market volatility, price fluctuations and liquidity squeezes caused widespread challenges. All of this raises the question about what the financial industry will look like after COVID-19.

To answer these questions, students from a Business Innovation master's course at the University of St. Gallen joined efforts with SIX. In a project spanning several months, the students focused on a new approach called "Capital Creation". The capital creation system from Richard Watson analyses the ability of a business to enhance and create six forms of capital, on the national, organizational and individual level. Taking COVID-19 and general mega- and technology trends as a basis, the students asked industry participants about what they expect companies to look like in the future – and the role financial institutions will play in providing financing towards them. This white paper will provide the readership with important insights on the future state of the financial services industry together with its role in supporting capital raising.

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# 1 Methodology

## Trend Prioritization

The self-developed methodology was created to prioritize trends, derive a roadmap for the company partner, and apply to generic trends and influencing factors. Conceptually it fits the corporate foresight process, especially in the phase for “prioritization, interpretation, anticipation, and development of strategies” (Gattringer, 2018) and belongs to the semi-quantitative methods (Popper, 2008). It draws on well-established methodologies such as SWOT, PESTLE, and systemic thinking (Leimer, 1991). However, it contains self-identified criteria based on the thinking experiment of how an entrepreneur would assess trends and influencing factors. These 18 criteria are summarized into five categories and flow into a later scoring and ranking. An overview of the methodology categories can be found below.



Figure 1: Categories of trend prioritization criteria

## Capital Creation

Besides the self-developed methodology, the project was guided by Watson's capital creation framework, which can also be found in the appendix (Watson, 2021). The idea of this framework is to first look beyond the capital (i.e., value) that organizations such as firms create economically (e.g., profit) but to extend the view with five more types of capital: the human, natural, organizational, social, and symbolic ones. Second, it looks beyond the organizational level to capital created on the national and individual level. This holistic view was necessary after so much economic value has been destroyed by COVID-19. Applied to the example of Swiss financial institutions, these, for instance, create human capital by contributing

to financial literacy. On the natural front, they provide financing for environmentally-friendly investments. Through offering access to payments, banks connect individuals with society and each other (e.g., TWINT). Symbolically, they strongly contribute to the diverse and efficient image of the Swiss banking sector. From an economic perspective, they generate profits through engaging in diverse forms of financial transactions. From an organizational one, they build up the competencies required for that. Before giving an outlook on what capital creation could look like in the future, the general findings need to be elaborated on.



Figure 2: Six types of capital creation – own representation based on Watson (2021)

## 2 The Future of the Financial Industry

The financial industry consists of companies and institutions that provide banking, investment, payment, insurance, and real estate services to private, business, and commercial customers. The financial industry is significant in Switzerland, as the banking and insurance sector alone has over 200,000 full-time employees. The financial sector accounts for approximately 9% of Switzerland's nominal gross value added and is only slightly behind public administration and wholesale (BAK Economics, 2019). To better understand what the financial industry will look like in the future, it is essential to know the different types of banks, as banking expects the greatest changes. The Swiss banking market can be divided into cantonal, large (UBS and Credit Suisse), regional (Raiffeisen), and other banks (BAK Economics, 2019).

The financial industry is currently confronted with several trends that could have a major impact on future services. Technological trends that will affect the financial industry in the coming years include digitalization, new banking services, new payment methods, Big Data, Open Ecosystems, Blockchain/distributed ledger technology (DLT), and artificial intelligence (Gartner, 2020; Zukunftsinstitut, 2020). Megatrends such as collaboration, sustainability, and low-cost services must not be neglected (Zukunftsinstitut, 2020).

The financial services industry is also facing growing investor and regulatory pressure to become more sustainable. This is prompting more financial institutions to consider the ESG impact on their lending and investment decisions. These are all areas in which SIX is focusing heavily on as it continues with its innovation and change journey to enhance its position as a leading financial institution.

Using the methodology developed, over 50 different trends have been evaluated and prioritized. The most important trends were then validated in interviews with experts from the financial sector and with a survey (n=96). These results were used to create a roadmap of the 10 most important trends that will shape the coming years' financial industry.



Figure 3: Ranking of the most important trends in the financial industry

## Relevant Players

In the financial industry's future ecosystem, FinTech companies will increasingly play an important role, as their solutions will challenge the existing solutions of traditional banks (Breidbach, Keating & Lim, 2020). Most of these solutions are digital, easy to use, and scalable. In Europe, it can be seen that more and more digital banks are competing with traditional banks and are winning market share. In the future, more and more new payment methods will be introduced to the market by agile FinTechs. Especially because of COVID-19, cashless payment methods are important to avoid contact with other people (Auer, Cornelli & Frost, 2020).

In addition to the emergence of FinTechs, big tech giants will also play a more important role in the financial world. Apple, Google, and Alibaba already offer their own payment services (e.g., Apple Pay, Google Pay, and Alipay) through smart phones. For example, Alibaba's subsidiary Ant Financial has applied for a digital banking license in Singapore (Reuters, 2020).

However, not all of the current financial institutions will remain. In Switzerland, cantonal banks and big banks will remain part of the future ecosystem, as they have a number of value propositions. For regional banks and savings banks, the future looks somewhat bleaker. With the core services of a bank, they may not survive the digital change and could disappear. It is increasingly important for the small players to differentiate themselves and offer new services (e.g., Hypothekarbank Lenzburg with the Finstar platform). The delivery of new and exciting solutions and products for clients is something that the Swiss Stock Exchange is committed to, and has been for many years. By constantly innovating and adding new products to its existing suite of services, the exchange as part of SIX will be able to grow its market share further moving forward, thereby retaining its position as a leading Financial Market Infrastructure (FMI) provider.

Another important development is blockchain, DLT, and tokenization. This will enable a common database to be created in the future, eliminating the need for specialized

intermediaries or third-party infrastructure. Through tokenization, assets whose values are difficult to quantify can also be traded commercially (Chiu & Koepl, 2019). Technologies such as DLT and digital assets could play a crucial role in facilitating capital raising and investment. Through DLT-enabled FMIs, previously illiquid assets could be tokenized, allowing them to be more easily traded and settled. This will facilitate greater liquidity and help drive capital inflows into less liquid securities such as SMEs or tangible assets such as art. This is something the Swiss Stock Exchange is hoping to facilitate through its SIX Digital Exchange (SDX).

The needs of the end consumer must be taken into account. These consumers want to make greater use of simple and quick solutions. Sustainability will become more important in the future and represent a decisive selection criterion for customers. As a result, the social, environmental, and symbolic dimensions of capital creation will become increasingly relevant. The survey also revealed a demand for sustainable investment opportunities (impact investments) in small and medium-sized enterprises.

The survey revealed a demand for sustainable investment opportunities in small and medium-sized enterprises which are the backbone for local economies.

## Vision

**“It is proposed to create the Impulse Marketplace – the leading platform provider for responsible finance by connecting really sustainable SMEs and startups with investors around the world.”**

This is how the vision of what a new business model going beyond economic capital creation could look like. It acknowledges that environmental problems and the climate crisis do not stop at national borders. Today’s financial industry might not yet leverage its full potential to promote sustainability on a global scale. There are environment, social, and governance (ESG) criteria to assess companies in the financial markets in order to support investors in their (sustainable) investment decisions.

However, the current ESG rating criteria is flawed. Data underpinning ESG ratings is often subjective, meaning that different ratings agencies frequently take contrasting views when scoring companies. The lack of a taxonomy has compounded this problem further. As a result, there are serious deficiencies in the ESG rating process making it difficult for investors to integrate ESG metrics into their decision-making processes.

Furthermore, the current sustainability ratings are based on historical data and are often only requesting reports on certain topics. As a result, companies in every industry (except, e.g., tobacco and weapons) can receive a good rating. Another weakness of today’s ESG ratings is the disadvantage for SMEs and startups, as they cannot afford or do not want to invest the time and effort to obtain the various reports.

The Impulse Marketplace not only helps fostering monetary capital, but also generates natural, social and organizational capital.

Simultaneously, it could be promising to identify and financially support innovative and sustainable SMEs and startups. SMEs represent the global economy’s backbone as they are responsible for over 70% of global employment and 50% of GDP (International Labour Organization, 2020). Thus, SMEs represent an important lever to promote capital creation. The Impulse Marketplace’s vision is to connect the sustainable and innovative SMEs and startups with investors who want to support real sustainability. From a geographical perspective, SMEs worldwide are in scope, ranging from the producer of sustainable fashion in Europe to organic farmers in developing countries.

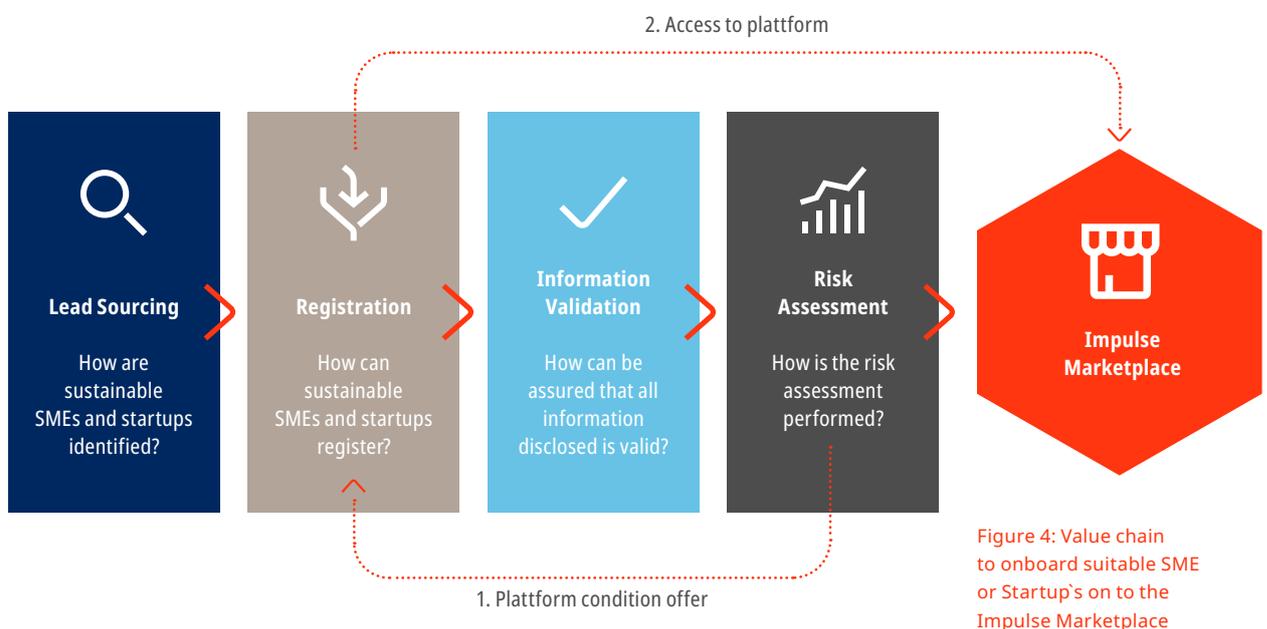


Figure 4 shows the value chain process for onboarding suitable SMEs or Startups on to the Impulse Marketplace. First, the suitable companies for the platform are to be identified through intermediate lead sourcing, e.g., by cooperating with non-governmental organizations (NGOs), or through active lead sourcing with the aid of technologies like scraping tools and web crawlers (i.e. alternative data). The aim is to ensure that the companies have a clear, forward-looking focus on sustainability. On the one hand, their business model should contribute to at least one of the 17 UN development goals (United Nations, 2021). Second, a holistic approach is to be used while registration of companies must be contingent on these businesses operating sustainably and being financially stable. Third, partnerships for the technologies,

the identification, and evaluation are central for the process of information validation. In this case, deep-learning technology that enables the extraction of valuable information from unstructured documents could be used. For credit risk assessments, it will be important to work with capable fin-techs. e.g. There is an on-going trend towards offering cost effective, real-time credit scoring platforms which utilize advanced machine learning algorithms to comb through historical data combined with real-time information. The SMEs and startups are initially evaluated and continuously monitored for their sustainability after being accepted on the platform.

Figure 5: Possible criteria to identify sustainable SMEs oriented at the UN development goals – own representation based on United Nations (2021)



While such an investment platform could be a key to facilitating capital creation beyond the economic one, regulators and a possible future platform provider would need to address several challenges. First, there is the question of how to govern and regulate such a unique, international platform that serves capital seekers and providers worldwide and establishes the necessary standards without real competition. Related to that, there actually needs to be an institution that determines the ESG requirements the platform enforces. Existing exchange providers worldwide might have or can set up the technology- and process-related capabilities necessary for the platform's selection, registration, and marketplace functions. However, they may not be able to or do not want to act as the opinion-makers regarding which companies are sustainable and which are not. Instead, government(s), NGOs, or even the investors themselves

(e.g., allowing individual configurations of sustainability requirements) could take that role. Another challenge lies in the quick provisioning of financing needed for making timely investments. Technology and processes need to be designed to satisfy legal and risk management aspects, i.e., to really identify both economically and ESG sustainable companies. However, if these challenges could be solved, there would be an opportunity to overcome the international political disagreement regarding appropriate sustainability measures and replace it with a business-orientated approach, creating capital for and through SMEs, investors, stakeholders, and the platform provider.

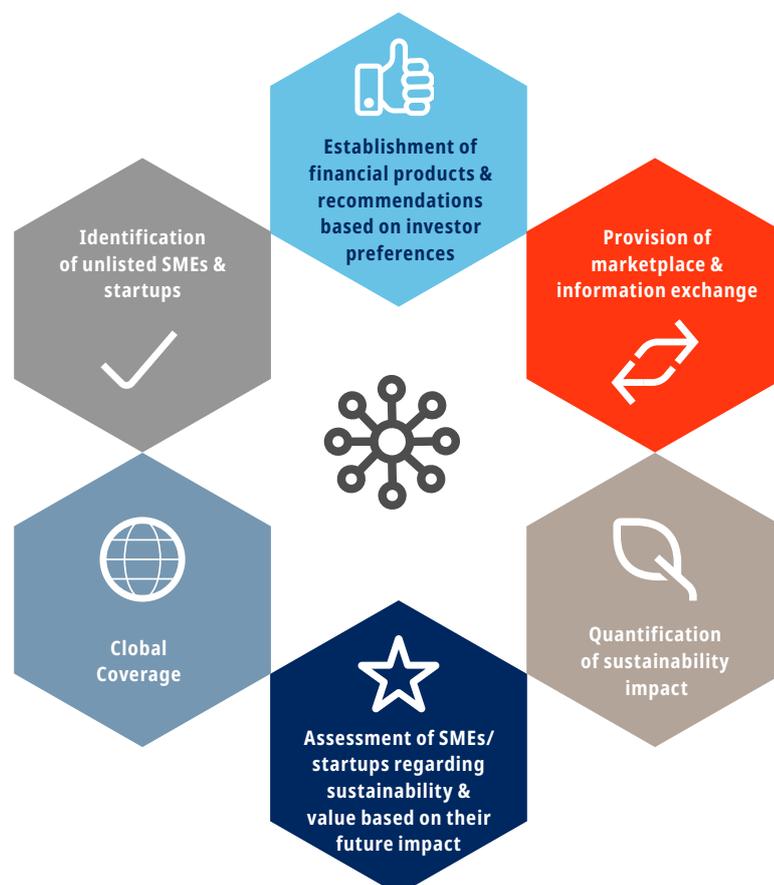


Figure 6: Core features of Impulse Marketplace – own representation

## 3 Conclusion

The financial industry is an important pillar in Switzerland, although it lags behind the other sectors in terms of trends. That is why in 2021, the trend of digitization and the impact of COVID-19, in combination with other technology and megatrends, will play an important role in the banking and insurance sector. The financial industry's future will be shaped primarily by ecosystems and by players such as FinTechs and the major technology giants. The new services will be provided through collaboration and made available to customers from a single source. Sustainability is central, as social, environmental, and symbolic capital creation will gain in importance. New business models are required in the future to react to these trends. One example of those could be the Impulse Marketplace, which exploits emerging technologies and collaborations with NGOs and technology partners to enable customers to easily invest in sustainable, unlisted SMEs worldwide via a single platform.



# Acknowledgements

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# Appendix

## Capital creation framework

Capital	National	Organizational	Individual
<b>Economic</b>	Public infrastructure, both physical and informational	Financial, physical, and manufactured resources	Personal investments
<b>Human</b>	The general health, skills, knowledge, and abilities of the population	Skills, knowledge, and abilities of a workforce	Personal skills, knowledge, and abilities
<b>Natural</b>	Natural resources, living systems, and ecosystem services	Rights to use or extract natural resources, such as farming and mining	Public parks and gardens
<b>Organizational</b>	The political, economic, and legal systems, and national culture	Institutionalized knowledge and codified experience (software and databases), routines, patents, manuals, and structures	Personal planning, management, and leadership skills
<b>Social</b>	Structures for integrating and assimilating citizens within society to create broad and diverse social networks	The ability of an organization to benefit from its social connections	The ability to benefit from personal social connections
<b>Symbolic</b>	National reputation and image  Respect and admiration for a nation's institutions and culture	Organizational reputation, image, brands, and ranking within its industry	The personal honor, status, reputation, or prestige possessed within a given social structure

Capital typology  
(Watson, 2021)

# Bibliography

Auer, R., Cornelli, G. & Frost, J. (2020). Covid-19, cash, and the future of payments. *BIS Bulletins*, (3), 1–7.  
[www.bis.org/publ/bisbull03.pdf](http://www.bis.org/publ/bisbull03.pdf)

BAK Economics. (2019). Volkswirtschaftliche Bedeutung des Schweizer Finanzsektors.  
[www.bak-economics.com/fileadmin/documents/reports/BAK\\_Economics\\_Bedeutungsstudie\\_Finanzsektor\\_2019\\_DE.pdf](http://www.bak-economics.com/fileadmin/documents/reports/BAK_Economics_Bedeutungsstudie_Finanzsektor_2019_DE.pdf)

Breidbach, C. F., Keating, B. W. & Lim, C. (2020). Fintech: research directions to explore the digital transformation of financial service systems. *Journal of Service Theory and Practice*, 30(1), 79–102.  
[dx.doi.org/10.1108/JSTP-08-2018-0185](https://doi.org/10.1108/JSTP-08-2018-0185)

Chiu, J. & Koepl, T. V. (2019). Blockchain-Based Settlement for Asset Trading. *The Review of Financial Studies*, 32(5), 1716–1753. Retrieved from  
[academic.oup.com/rfs/article-abstract/32/5/1716/5427772?redirectedFrom=fulltext](http://academic.oup.com/rfs/article-abstract/32/5/1716/5427772?redirectedFrom=fulltext)

Gartner. (2020). Top 10 Strategic Technology Trends for 2020 [Special Report]. Stamford: Author.

Gattringer, R. (2018). Open Foresight-Prozesse. Eine Action Research Studie zur Identifikation von Schlüsselaktivitäten und -faktoren. Wiesbaden: Springer.

International Labour Organization. (2020, June 26). MSME Day 2020: the COVID -19 pandemic and its impact on small business. ILO. [www.ilo.org/empent/whatsnew/WCMS\\_749275/lang--en/index.htm](http://www.ilo.org/empent/whatsnew/WCMS_749275/lang--en/index.htm)

Leimer, H. W. (1991). Vernetzes Denken im Schweizerischen Bankverein. In G. J. B. Probst & P. Gomez (Eds.), *Vernetztes Denken. Unternehmen ganzheitlich führen* (pp. 63–87). Wiesbaden: Gabler.

Popper, R. (2008). How are foresight methods selected? *Foresight*, 10(6), 62–89.  
[dx.doi.org/10.1108/14636680810918586](https://doi.org/10.1108/14636680810918586)

Reuters. (2020, January 2). China's Ant Financial applies for Singapore digital banking license. Reuters. <https://www.reuters.com/article/us-ant-financial-digital-banking-singapo-idUSKBN1Z10LS>

United Nations. (2021). THE 17 GOALS. [sdgs.un.org/goals](https://sdgs.un.org/goals)

Watson, R. T. (2021). *Capital, Systems and Objects. The Foundation and Future of Organizations*. Singapore: Springer Nature. [dx.doi.org/10.1007/978-981-15-9418-2](https://doi.org/10.1007/978-981-15-9418-2)

Zukunftsinstitut. (2020). Die Megatrend-Map. [www.zukunftsinstitut.de/artikel/die-megatrend-map/](http://www.zukunftsinstitut.de/artikel/die-megatrend-map/)

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