

# The Future of SME Financing

A SIX White Paper in cooperation with KMU-HSG



University of St.Gallen

Swiss Institute of Small Business  
and Entrepreneurship

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By linking our four fields of activities, namely:

- executive education for entrepreneurs and managers from SMEs
- transfer services for entrepreneurial led firms
- relevant and well-founded research on SMEs, Entrepreneurship and Family Businesses
- undergraduate and post-graduate education at the University of St. Gallen

we have our finger on the pulse of time and acquire valuable findings at first hand.

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# Foreword

The Swiss corporate landscape is characterized by a large proportion of small and medium-sized enterprises (SMEs). 99% of all companies in Switzerland are SMEs and employ approximately 3 million people, representing about two thirds of all employees in Switzerland. In this context, especially in Switzerland, SMEs play a particular important role in respect to economic growth, job creation and innovation. However, in order to be able to grow and thrive, SMEs need capital, whether in the form of debt, equity or alternative capital sources.

Yet, in contrast to larger enterprises, SMEs often face size-related disadvantages that can constrain their ability to raise capital. These disadvantages may include less favorable financing terms, or in the most extreme cases not obtaining capital at all. As a result of this ongoing challenge, opportunities have been emerging and new solutions are slowly closing the gap. We expect the SME financing landscape to evolve further in the coming years.

Given the fundamental importance of SMEs, the ongoing challenge of capital access and the emerging landscape of alternative financing routes, SIX has dedicated this white paper to the topic of the *Future of SME Financing*. In order to obtain a holistic view and to open up our thinking, we have partnered with the *Swiss Research Institute of Small Business and Entrepreneurship at the University of St. Gallen* (KMU-HSG). It is the only Swiss university institute which focuses exclusively on SME research.

In the course of this white paper, we discuss important topics such as current industry pain points, the drivers of change in the SME financing landscape, the promising technological advances that may offer fruitful avenues to address some of today's shortcomings, as well as the role regulation could play in this evolution.

We believe this white paper will provide an important contribution to increasing awareness of the current state of the art and to fostering knowledge exchange within the SME ecosystem, an essential step in advancing the SME financing landscape. With that said, we hope you consider the findings of this study just as interesting and insightful as we did and wish you exciting reading.

**Christian Reuss**  
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## Executive Summary: The White Paper in Brief

# Future of SME Financing

Technology is fundamentally changing how the financial services sector works and also leads to completely new business models on the part of SMEs. How does that impact the way SMEs will obtain financing over the next few years and what will the future of SME financing look like? Will banks still play a role or will fintechs take over? How important will public equity markets be for SMEs in the future? The SIX white paper on the “Future of SME financing” provides valuable insights on these issues.

### The white paper's focus

SMEs require capital to expand their business or to launch new, innovative products onto the market. In this white paper we use the term SME in a broader sense, including all companies with up to 1,000 employees that still have the characteristics of a typical SME. In doing so, we focus on the financing situation of SMEs in the growth and maturity phases (i.e. past the initial start-up phase) and in need of external capital.

### Today's financing challenges for SMEs

There are two core reasons why it might be challenging for SMEs to convince potential investors of the financial soundness of their investment project in order to obtain financing. First, SMEs with demand for capital are typically innovative and not as established as larger businesses (e.g., they may not have sufficient tangible or intangible assets that serve as collateral or well-developed accounting and financial reporting systems to provide funding-relevant information to investors). As such, there is a high degree of uncertainty relating to their future development and whether their projects will succeed or not.

Second, linked to the first reason, entrepreneurs know a great deal more about their venture than their potential investors, leading to an imbalance of information available. This is commonly described as situations with asymmetric information. While entrepreneurs have an incentive to present their project in a positive light, at the same time they might be reluctant to share all details of a project with a potential investor for fear that the project will be imitated.

Other factors that lead to SMEs not obtaining financing may include owner and/or manager lack of awareness relating to certain financing instruments. However, on

the other hand it is also important to take their general preferences into account when analyzing the financing situation of SMEs. A large number of SMEs try to rely entirely on own funds because their owners attach a very high value on the independence of the company. Thus, if external capital is needed for further growth, they typically prefer debt over equity financing. These preferences are described in the so-called pecking order theory of capital structure.

### SME financing today

Today, debt financing from banks is the most widely used and generally the most important form of external financing for SMEs.

Equity financing can be broken down into private equity and public equity. Private equity investments have increased in recent years in Switzerland and abroad. In Europe, for instance, private equity firms are already invested in 22,000 SMEs. Thus, while still not accounting for a majority, given the fact that there are more than 20 million SMEs in Europe, private placed equity investments are gaining traction.

As for the public equity domain, worldwide stock exchanges have recognized the need of targeting SMEs more specifically and started to increasingly engage in market outreach. Accordingly, dedicated SME segments, that cater for the special features of smaller companies have gained relevance in recent years, aiming to upgrade the attraction for such enterprises to be listed.

As a relatively new, alternative form of financing, crowdfunding (including business crowdlending and business crowdinvesting) has grown remarkably in recent years but is – compared to bank financing – still a very tiny market segment.

### **SME's financing pain points**

Overall, while not necessarily facing a financing gap, SMEs frequently experience size-related disadvantages in accessing financing. In relation to the amount financed, the cost of obtaining financing tends to be higher for SMEs compared to larger enterprises, which usually have higher financing amounts and more human resources to manage the financing process. As a result, in comparison to larger enterprises, when SMEs obtain external funding it is often at less favorable financing terms and is comparatively more onerous. This constrains SMEs in their ability to raise capital and in the most extreme cases might also lead to them not obtaining the capital needed.

### **Drivers of SME financing**

Technology is currently the major driver of new or improved financing solutions on the supply side, combined with the new SME business models. The growth of data, automation, artificial intelligence, enhanced data analytics, the rise of distributed ledger technology (including blockchain) and, last but not least, the increasing level of technological development and expertise at SMEs themselves are the main technological drivers impacting the future of SME financing.

In addition, non-tech drivers will continue to impact SME financing as low interest rates may become the new normal, the pecking order of entrepreneur financing will remain important and the current generation of entrepreneurs is more tech-savvy than previous ones and so is expected to have a higher affinity to innovative digital financing solutions. Also, we expect the regulation of existing, alternative forms of financing to evolve too, along with technological advances. Going forward the challenge will be to find the right level of regulation that enables trust and investor protection in the system (to emerge), but at a level which is not too restrictive and which does not prevent the formation and unfolding of associated benefits.

Finally, sustainability-related matters will continue to be relevant and impact the SME financing landscape on an ongoing basis. Overall, we believe that SMEs with a high sustainability orientation may find it easier to access external financing in the future given that in their funding decisions investors increasingly factor in environmental, social and governance aspects.

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### **Evolutionary rather than revolutionary development**

As a result of the trends outlined, we expect the entire SME financing landscape to change over the coming years. However, we expect this change will be evolutionary rather than revolutionary. While fintechs have opened up a whole range of new options, these opportunities are only slowly unfolding, evolving, and maturing. We predict that those financing players (and SMEs) who understand how to build a value proposition by combining the best of both worlds – the digital and the physical – will have a competitive edge and succeed in the future SME financing landscape.

### **Change creates new opportunities**

Within the debt financing sphere, we expect banks to remain central players. However, even if most SMEs have their credit applications approved, there is still enormous potential to improve the digital customer journey and to onboard discouraged borrowers who are currently not well served.

With respect to equity financing, technology may help to lower the threshold for investments and potentially open up smaller investment volumes to a broader base of investors. The tokenization of assets may allow unlisted SMEs to come onto equity markets. In addition, enhanced data analytics could further assist reducing costly manual intervention in the financing process and as such assist maximizing efficiencies along the entire financing value chain.

**The challenge will be to find the right level of regulation that enables trust and investor protection in the system (to emerge), but at a level which is not too restrictive and which does not prevent the formation and unfolding of associated benefits.**

If appropriately used, technology will allow for more flexible financing terms at lower costs, a more diverse product and service offering, an accelerated financing process, and more transparency throughout. Importantly,

however, despite the benefits technological progress has unlocked, technology cannot and will not remove all SME financing challenges. There are (and will be) impediments within the SME financing process that are not necessarily technology related, even though technology may alleviate some of the experienced pain points.

**In short...**

The bottom line is that no matter whether or not technologically driven, what will be of utmost importance is a better understanding of what is needed and wanted when raising capital on both sides of the table, i.e. for SMEs and their managers/owners as well as for the capital providers. Knowledge (sharing and acquisition) will become even more relevant given that more digital forms of financing will require more (technical) expertise on how to access and benefit from them. Thus, improving the ecosystem for SME financing needs to go hand in hand with improving the respective knowledge ecosystem.



# Introduction: The White Paper Guide

## How to read this white paper?

This white paper provides a comprehensive picture of the SME financing landscape. Depending on the reader's prior knowledge and/or interests, the individual chapters may be of varying relevance.

We distinguish between three main types of possible readers of this white paper:

- **New to the topic**

This type of reader is interested in the topic of SME financing but has no extensive prior knowledge of how capital markets work. They will get familiarized with why SMEs might face difficulties when trying to attract external financing.

- **General knowledge**

This type of reader is interested in the topic of SME financing and knows the fundamentals of capital markets. They will be able to improve understanding on why SMEs might face difficulties when trying to attract external financing.

- **Experts**

This type of reader is mainly a professional, some of whom work in strategic decision-making roles. Experts are well informed about how capital markets work and will be able to expand their knowledge of SMEs, their financing needs, and their difficulties in attracting external financing.

In the following we provide a quick overview to guide you through the white paper so as to offer you the best possible reading and learning experience.

### Chapter 1: Fundamentals

This chapter provides an overview of the basics of capital markets. It further describes SME financing needs according to their stage in the company life cycle and depicts why it is difficult to assess a "SME financing gap".

### Chapter 2: Status Quo

This chapter outlines different forms of financing SMEs may deploy and shows their current statistical relevance within the SME context in Switzerland and globally.

### Chapter 3: Trends

This chapter discusses the technological as well as non-technological forces that have driven the SME financing landscape and will continue to do so.

### Chapter 4: Opportunities

This chapter reflects upon the previous chapters and discusses promising future financing paths for SMEs and their financing providers.

Of course, readers of any type can jump straight into the chapter they would like. However, the white paper has a "knowledge building" structure. In other words, it allows those with little prior knowledge to engage purposefully with content of later chapters after they have read the previous ones.

## Methodology

Our predictions of the future of SME financing do not aim to provide a map of all the foreseeable future variability – we provide insights into possible future developments we regard as particularly important and relevant. In doing so, we try to ground all our statements on empirical data, be it qualitative or quantitative. In other words, we aim for heterogeneity in the sources of data and information we use for this white paper.

On this basis, a large and diverse number of people were involved throughout this exercise in the form of interviews, reviews, workshops, and brainstorming sessions. For the interviews, we engaged with three types of professionals: (1) Entrepreneurs and owner-managers of SMEs on the demand side of financing; (2) Experts on the supply side of financing (e.g., banks, fintechs, SIX experts); and (3) Experts from academia with a comprehensive understanding of current SME financing practice and likely future developments. In the following, we refer to them as informants.

In addition, we further analyzed statistics and reports from various national and international organizations such as Swiss Federal Statistical Office, State Secretariat for Economic Affairs, OECD, International Finance Corporation, European Central Bank, and World Bank.

Taken together, the following elaborations capture our empirically informed beliefs. To help each of you make up your own mind, at all times we pay special attention to provide explicitly our assumptions, reasoning, arguments, and supporting evidence.

# 1





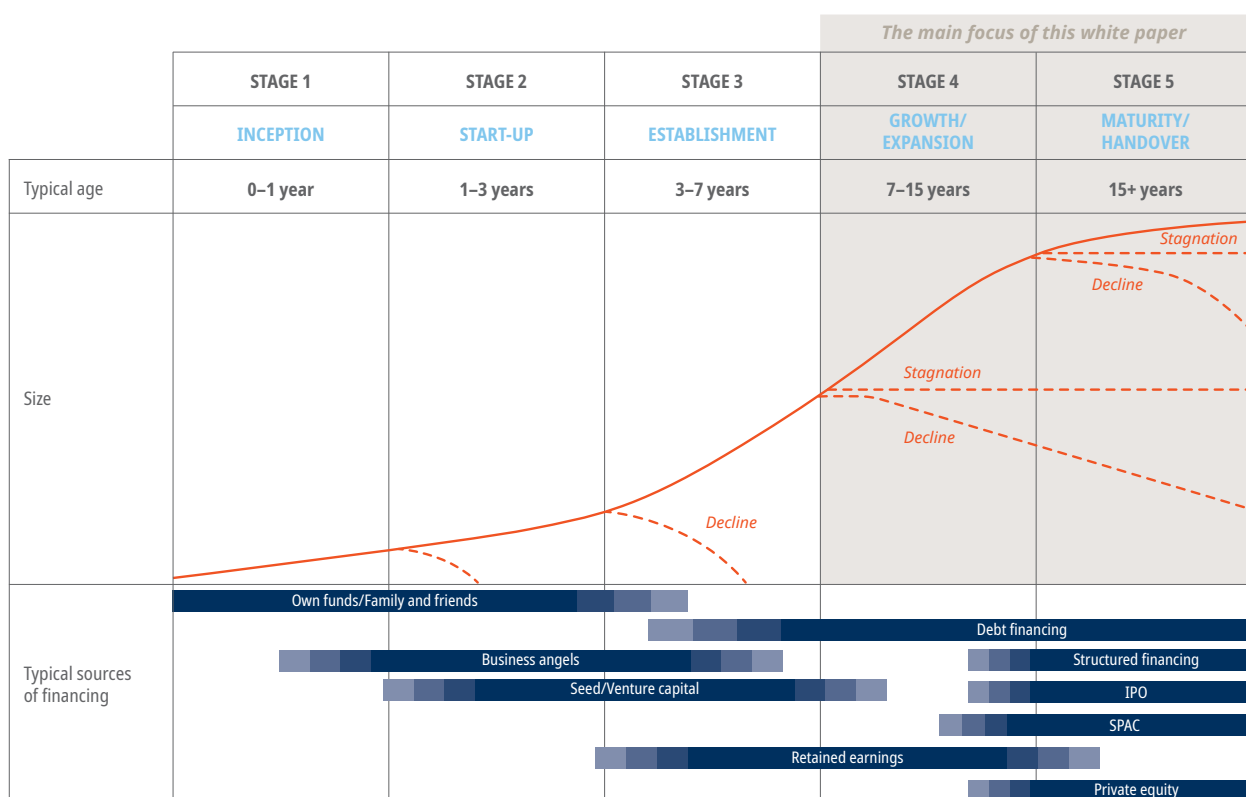
# Fundamentals of SME Financing

## 1.1 Capital requirements at different stages of the company life cycle

SMEs require capital to launch new, innovative products onto the market or to expand their business. There are considerable differences concerning capital requirements and typical forms of financing along the company life cycle.

New companies go through certain phases in their development that can be traced back to the product life cycle. Although, of course, the development of a company is not a mechanical process that always follows a certain pattern, there are numerous similarities between companies that allow the creation of a general growth model. According to the model presented here, companies go through five different phases in their process of formation and growth: Inception, Start-up, Establishment, Growth/Expansion, and Maturity/Handover. In these different phases, companies have different characteristics and strengths and face different challenges and financing needs. Not all companies go through all five phases as some might face stagnation, decline or abandonment. Frequently, founders do not even want their company to grow but prefer a small business they can manage themselves. In fact, startup statistics show that only a minority of all newly founded companies grow and reach the maturity/handover stage.<sup>1</sup>

**Figure 1:** Model of SME growth: Typical sources of financing



Source: Own representation adapted from Scott & Bruce (1987)<sup>2</sup>

<sup>1</sup> Paul D. Reynolds, 2016, Start-up Actions and Outcomes: What Entrepreneurs Do to Reach Profitability. Foundations and Trends in Entrepreneurship, Vol. 12, pp. 443–559.

<sup>2</sup> Mel Scott & Richard Bruce, 1987, Five stages of growth in small business, Long Range Planning, Vol. 20(3), pp. 45–52.

In this white paper we focus on companies that have passed the initial start-up phase and that are in the growth or maturity phase. Thus, what we are looking at is a relatively rare but still highly relevant phenomenon, as growth-oriented SMEs are important for innovation and job creation. In the growth phase, the company's product has established itself on the market and the company is typically operating profitably and is seeking money to expand its business in new markets or new products. Although companies go through the phases at different speeds and can therefore be of different ages, they are typically seven to 15 years old in this phase. In the maturity phase, companies are typically older than 15 years.

At this stage, because the company operates in a somewhat mature market, price competition increases and productivity becomes an important issue, often demanding investment in new production facilities or expansion into new markets. Some businesses are on the verge of transitioning from being an SME to becoming a large company. Finding a successor and financing the succession are also important issues at this stage.

In this white paper, while the official definition of SMEs includes only companies with less than 250 full-time employees,<sup>3</sup> we use the term SME in a broader sense, including all companies with up to 1,000 employees that still have the characteristics of a typical SME.

In the remainder of this chapter, we look at some fundamental areas of SME financing from a more theoretical perspective. We also outline why it may be more difficult for SMEs to obtain financing than for large, established enterprises.

## 1.2 Basic characteristics of capital markets

In theory, the situation is very simple. When a company presents a project where the current value of all earnings (i.e. the sum of all discounted future earnings) is higher than the current value of all expenditure, the so-called net present value of the project is positive and investors have an incentive to fund it. In this case, the company obtains

funding for its project. However, the assumption of a perfectly functioning capital market holds only under very restrictive assumptions, most importantly, perfect information about the future. Not surprisingly, this does not reflect reality – especially not in the case of SMEs – which makes it more difficult to assess the profitability of an investment project.

In the case of SME financing there are two main reasons why capital markets do not function well:

**First, there is a high degree of uncertainty.** SMEs with demand for capital are often young and innovative, tending to result in a high degree of uncertainty about their future development and whether their project will be successful or not. While generally being more flexible, on average SMEs are less well organized and have weaker control mechanisms compared to larger companies. Also, they are more dependent on single individuals such as the founder(s) or owner-manager(s) with their personal strengths and weaknesses. Overall, this makes SMEs more vulnerable to unexpected developments and leads to a relatively high degree of uncertainty concerning their future development. Last but not least, SMEs typically have lower capital reserves than larger companies. The corona pandemic has highlighted the low financial stability of many SMEs.

**Second, asymmetric information is prevalent in the SME context since the entrepreneurs know a great deal more about their venture than external stakeholders.** On the one hand, entrepreneurs have an incentive to present their project in a positive light but, on the other hand, they may also be reluctant to share all details of a project with a potential investor for fear that the project will be copied or imitated. While asymmetric information also exists in the relationship between larger businesses and their investors, it is certainly more pronounced in the SME context, where personal characteristics of the entrepreneur play a more important role. Because of the small size of these companies, it is difficult to overcome these information asymmetries. SMEs usually do not have as well-developed accounting and financial reporting systems as larger businesses. In addition, relative to their size, it may be costly for outside investors to collect all information about the business.

3 See The Federal Council, SME Portal for small and medium-sized enterprises, 2021, Figures on SMEs: Companies and jobs (11 May 2021).



The market for SME financing also depends on characteristics on the demand and the supply side which are outlined below.

### 1.3 The demand side: Why SMEs may (or may not) need external financing

The traditional explanation for why SMEs need capital is based on the company life cycle, as outlined above (see Section 1.1). When people start a new business, the uncertainty around the business idea and the aptitude of the founder for a career as an entrepreneur is high. Therefore, at the outset, founders typically have to rely on their own resources and perhaps those of friends and family. On this basis, the founders test their initial business idea, develop a marketable product, and generate initial sales. If the business becomes profitable, the profit generated can be used to finance subsequent growth. However, because of the modest size of most businesses at this stage, own funds are typically limited and may not be sufficient to purchase new machinery and employ additional staff to serve larger markets. At this point, external financing becomes important. The more established the business and the longer its track record, the easier it is for external investors to assess the future development of the company, making a variety of financing forms possible for SMEs.

However, the explanation above ignores the fact that not all entrepreneurs aim to grow their business. Frequently, people start or take over a company to achieve independence and self-fulfillment. Entrepreneurs may prefer a business they own completely – even if it grows only slowly or not at all – rather than having to deal with external capital providers who may achieve partial control over their business. This tradeoff between the ability to retain control of decision making and attracting the resources required to build company value has been vividly described as the choice between the “throne” and the “kingdom”.<sup>4</sup> Thus, while traditional corporate finance theory assumes that company owners want to maximize company value in all cases, in reality, business growth is not of primary importance for many SME owners.

Also, entrepreneurs have a preference for specific forms of financing, as described in the so-called pecking order theory of capital structure.<sup>5</sup> In essence, the theory posits that firms have a hierarchy of financing sources. Because of information asymmetries and adverse selection problems, companies expect external financing to be costly and will therefore try to avoid these costs by relying completely on internal funds as first choice. If external funds are necessary, firms prefer debt financing over equity financing.

Overall, it is important to acknowledge that there is not only one type of SME, but great heterogeneity, ranging from mom-and-pop businesses to highly innovative startups targeting global markets. While some rely completely on own funds, others have a high demand for external financing.

### 1.4 The supply side: Why investors may (or may not) offer financing to SMEs

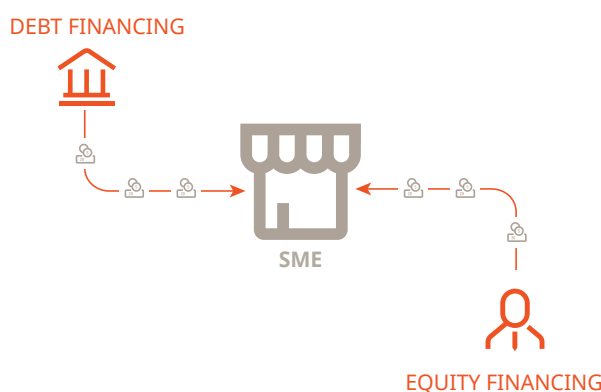
Alongside the demand side, characteristics of the capital supplier also impact if and how SMEs are able to achieve funding. It is important to distinguish between the two broad categories of debt and equity financing.

<sup>4</sup> Noam Wasserman, 2017, The throne vs. the kingdom: Founder control and value creation in startups. *Strategic Management Journal*, Vol. 38(2), pp. 255–277.

<sup>5</sup> Stewart C. Myers, 1984, The Capital Structure Puzzle, *The Journal of Finance*, Vol. 39, pp. 575–592.

For **debt financing**, often offered by banks, lending technologies play an important role. As discussed above, uncertainty and information asymmetries are important factors that impede the functioning of capital markets. Banks try to overcome problems of informational opacity using hard information from different sources, for example from a company's financial statements, the owner in person, and the industry in an attempt to predict the performance of a loan. The credit decision is then made on the basis of the resultant scoring. Improvements in these lending infrastructures may also improve SME credit availability. For example, better accounting standards may facilitate the use of financial statement lending, and greater sharing of information may improve the use of small business credit scoring.<sup>6</sup>

For **equity financing**, formal private equity capital (including venture capital – see Section 2.2.1 for the distinction made in this white paper), informal capital from investors such as business angels, and traditional public equity capital are the most important sources of financing. As with debt financing, the proficiency of how these equity providers screen and evaluate possible investment opportunities and how they value and negotiate with entrepreneurial ventures impacts the supply of capital. Valuation techniques, knowledge about the target sector, and general risk attitude represent key factors that influence whether such investors will fund a project or not. Last but not least, depending on the investment horizon, it is also important for investors to have sufficient exit options such as possibilities to sell their investment in the company.



## 1.5 Difficulty of identifying a financing gap

The observation that SMEs might find it more difficult to obtain financing than larger businesses has been recognized for quite some time. In the 1931, the term “financial gap” was coined when the Macmillan Report in the UK argued that it is more difficult for small businesses to obtain credit because investments of relatively small amounts of money were riskier and more costly for lenders. While subsequent reports in other countries confirmed this finding in some cases, others found no evidence for such a gap. Later reports have argued that growth-oriented young businesses might also face a financing gap in respect to equity financing.

However, it is important to acknowledge that SME challenges for funding their projects might result not only from factors on the supply side, for example an unwillingness of capital providers to deal with small credit applications, but also from deficiencies of the entrepreneurial project. There will always be projects which do not get funded, and it is almost impossible to determine whether the investment would have been worthwhile or not. In other words, a rejected loan application of a small business might be interpreted as market failure or represent a rational decision of the bank because of the low quality of the project.

Overall, there is widespread agreement that entrepreneurial projects in the early stage and very innovative ventures find it harder to access financing than larger, more established companies. Despite substantial debate, it is less clear whether this should be interpreted as a failure of the market to fund promising ventures or not. Also, the magnitude of a possible financing gap certainly differs between different countries. Due to the developed banking system and the variety of financing options, the problem is probably less pronounced in Switzerland than in other countries. For most SMEs in Europe, finding customers and a lack of availability of skilled labor are the most pressing problems facing their company while access to finance is less important.<sup>7</sup> Still, for some innovative firms, lack of access to finance certainly hinders their development.

<sup>6</sup> Allen N. Berger & Gregory F. Udell, 2006, A more complete conceptual framework for SME finance. *Journal of Banking & Finance*, Vol. 30, pp. 2945–2966.

<sup>7</sup> See ECB, 2021, Survey on the access to finance of enterprises (June 1, 2021).





**Overall, there is widespread agreement that entrepreneurial projects in the early stage and very innovative ventures find it harder to access financing than larger, more established companies.**

## 1.6 The Swiss financing ecosystem

Traditionally, Switzerland has been shaped by its strong banking system that has been a key driver of the economy's strong position as an international financial center. Not only UBS and Credit Suisse, but also a number of cantonal, regional, and savings banks offer highly specialized products and services. By and large, these banks serve SMEs in Switzerland well.

In a comparative international perspective, continental European countries and especially the German-speaking

countries Germany, Switzerland and Austria have well developed and accessible financial institutions. In the UK and other Anglo-Saxon countries, on the other hand, equity markets are relatively better developed than the financial institutions. As a consequence, companies in continental Europe, including Switzerland, rely more on bank lending and less on private or public equity whereas it is the other way round in Anglo-Saxon countries.<sup>8</sup>

However, it is not only banks which have been part of the Swiss financial center success story. The public market – more specifically, the Swiss stock market – is very strong domestically as well as in an international context. The SIX Swiss Exchange is one of the most important stock exchanges in Europe with excellent liquidity in Swiss securities trading, thereby building the bridge for enterprises from around the globe for domestic and international investors. In short, the Swiss public market allows listed enterprises to access experienced and well-capitalized Swiss and international investors as well as ample liquidity.<sup>9</sup> While the Swiss equity capital market has followed a one-size-fits-all concept in the past, a dedicated SME segment tailored to smaller enterprises' needs has been recently launched<sup>10</sup> (see Section 4.2.2.1 for further discussions on the opportunities dedicated SME stock exchanges offer).

<sup>8</sup> However, in the last 20 years the Nordics, for instance, have developed a good equity capital market ecosystem for SMEs. Please refer to 4.2.2.1 for a further discussion on how SMEs could be better covered in public equity markets.

<sup>9</sup> See GGBA, 2020, Financial markets and financing in Switzerland (accessed September 8, 2021).

<sup>10</sup> See SIX, 2021, Sparks the SME Stock Exchange: <https://www.six-group.com/en/products-services/the-swiss-stock-exchange/listing/equities/sme-ipo/sparks-sme-stock-exchange.html> (accessed September 8, 2021).



# 2

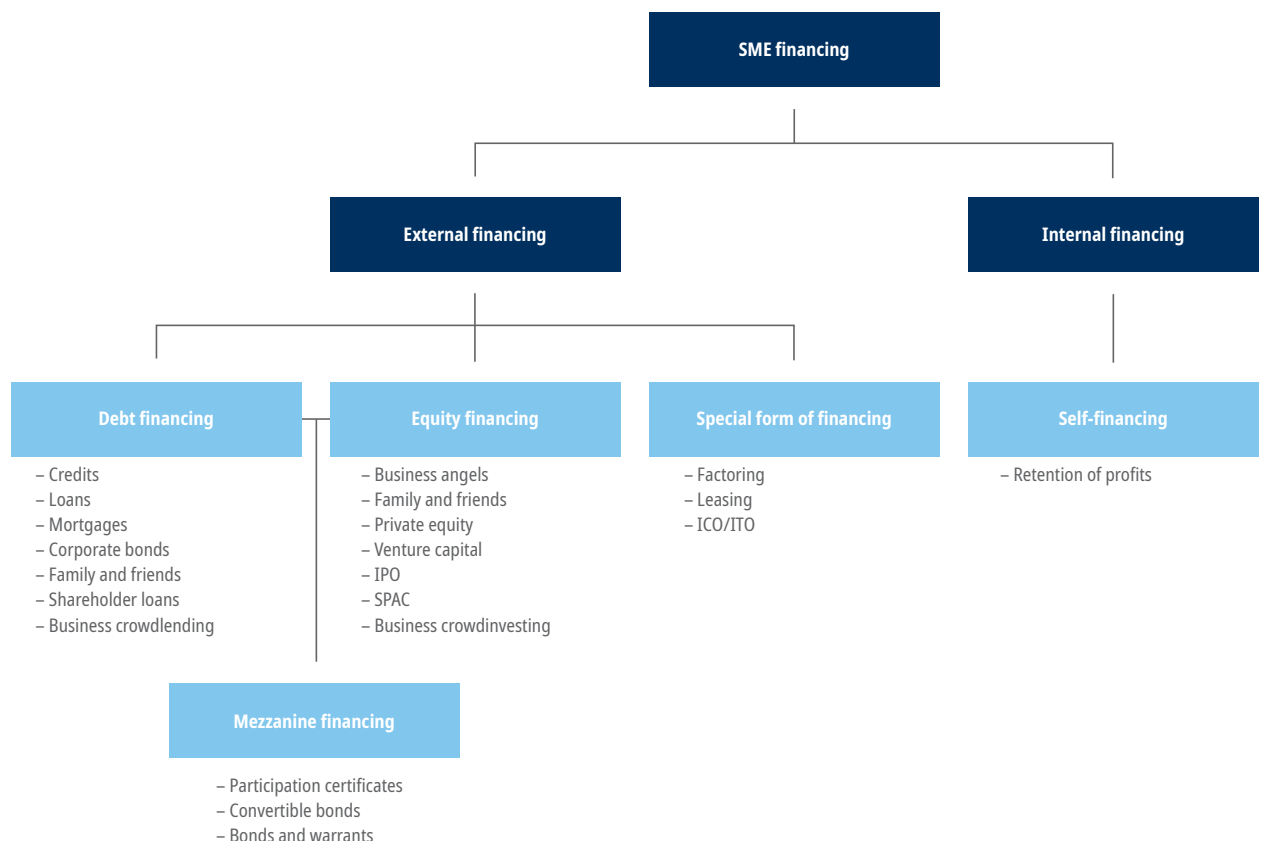


# Status Quo: The Relevance of Different Forms of SME Financing Today

While aiming to take a glimpse into the future of SME financing, it is important first to gain a non-distorted view of the status quo. This will lay the basis upon which the analyses and projections are built. Therefore, in the following sections, we describe the different forms of SME financing we focus on in this white paper<sup>11</sup> and provide an overview of their quantitative importance in Switzerland and globally.<sup>12</sup>

Figure 2 illustrates the financing instruments that SMEs may deploy (including those not discussed further in this white paper). The basic distinction can be made between internal and external financing. For financing growth and expansion, internal financing is typically no longer sufficient, which is why companies have to utilize external forms. Here, the most important distinction is to be made between debt and equity financing.

**Figure 2:** Forms of SME financing



Source: Own representation based on The Federal Council (2020)<sup>13</sup>

<sup>11</sup> Note that we focus on the forms of financing that have been mainly discussed with our informants.

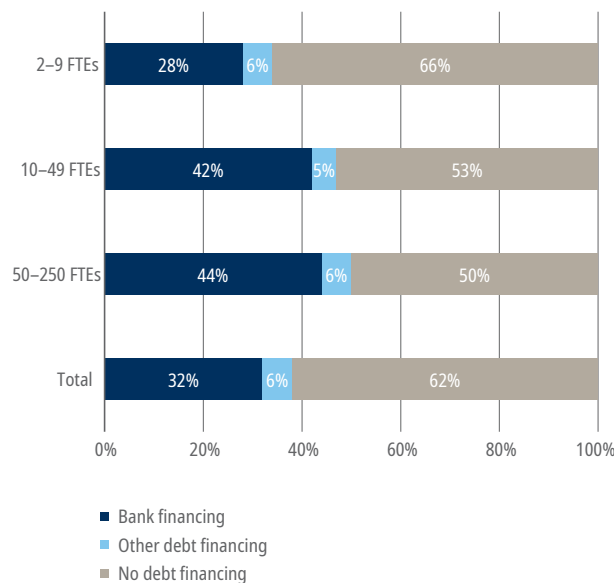
<sup>12</sup> Note that the data of interest is not always equally available for different regions or counties around the world. Also, different data sources may operationalize the parameters of interest differently. As a result, the following outline is intended to provide an overview that allows a sense of scale of the use of financing instruments discussed in the different regions of the world rather than one-on-one comparability.

<sup>13</sup> See The Federal Council, SME Portal for small and medium-sized enterprises, 2020, Financing: Overview of sources of financing (March 12, 2020).

## 2.1 Debt financing

In Switzerland,<sup>14</sup> 38% of all SMEs use debt financing. While 35% of enterprises with 2–9 FTEs rely on debt financing, the corresponding value is 47% for enterprises with 10–49 FTEs and 50% for those with 50–249 FTEs. This means that – quite surprisingly – half of all medium-sized and more than half of all small businesses have no debt financing (see Figure 3).

**Figure 3:** Share of SMEs with debt financing by company size

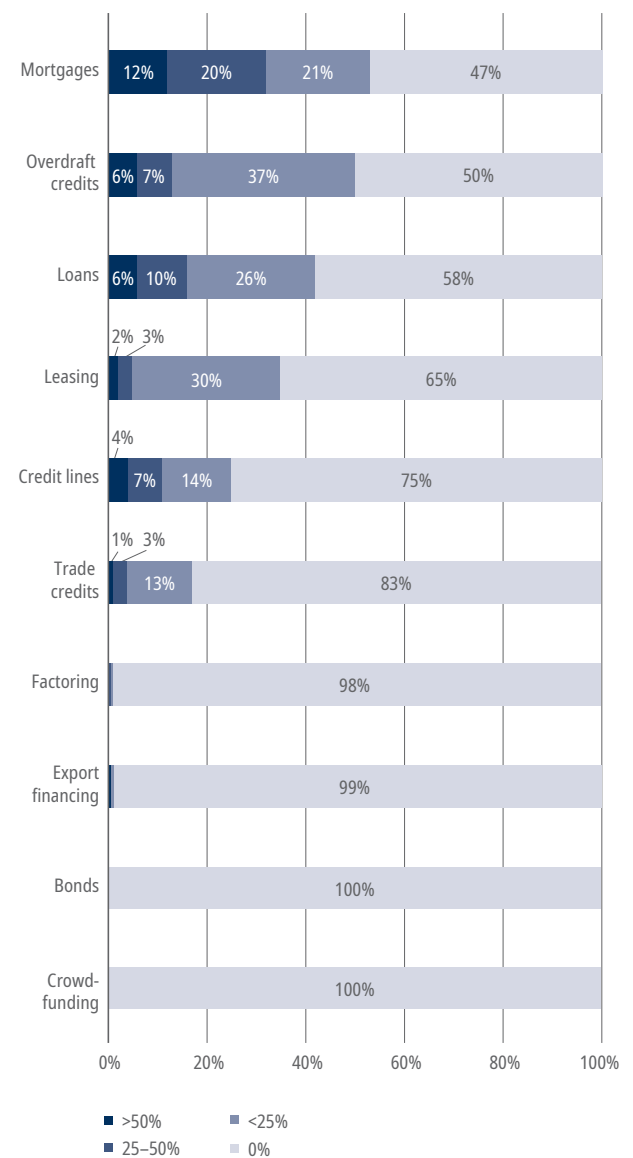


Source: Own representation based on SECO / IFZ (2017)

Roughly a third (32%) of all SMEs in Switzerland use bank financing.<sup>15</sup> Broken down by enterprise size, this translates into 28% of micro enterprises (2–9 FTEs) having bank financing, 42% of small enterprises (10–49 FTEs) and 44% medium sized enterprises (50–249 FTEs) respectively. Put differently, the larger the enterprise, the more likely it is to use bank financing.

Figure 4 depicts the relative shares of various forms of financing on the overall balance sheet of SMEs that report using debt financing.

**Figure 4:** Debt financed SME share of different financing forms as a percentage of the balance sheet total



Source: Own representation based on SECO / IFZ (2017)

Of Swiss SMEs that deploy debt financing, 12% indicated that mortgages made up more than 50% of the balance

<sup>14</sup> Unless stated otherwise, the figures presented on Swiss SME financing were obtained from: SECO / IFZ, 2017, Studie zur Finanzierung der KMU in der Schweiz 2016 (June 2017).

<sup>15</sup> As a result of the traditionally strong banking sector in Switzerland, debt financing within the Swiss SME landscape typically translates into bank financing.

sheet total, 20% that mortgages accounted for 25–50% of the balance sheet total, 21% that they represent less than 25%, while 47% do not deploy mortgages at all. Thus, with 53% (20% + 12% + 21%) of debt financed SMEs using mortgages, this is the most widely used form of financing. The respective value for SMEs with overdrafts is slightly lower (50%). However, even if overdrafts are widely used, they play only a minor role in terms of SME balance sheet totals, suggesting that overdraft volumes are typically rather small. For only 13% (6% + 7%) of SMEs that use debt financing, overdrafts make up more than 25% of the balance sheet total. By comparison, in 32% (12% + 20%) of debt financed SMEs, mortgages account for more than one quarter of the balance sheet total.

Loans and leasing are two further instruments important for SME financing: 42% of SMEs that use debt financing rely on the former instrument (in 16% accounting for more than 25% of the balance sheet total), 36% indicated using leasing (in 5% accounting for more than 25% of the balance sheet total).

According to the figures presented, bank financing seems essential for the majority of SMEs that use debt financing in Switzerland. In fact, according to the Swiss National Bank,<sup>16</sup> CHF 1,260 billion of loans were granted by banks domiciled in Switzerland in 2020. Of this total, CHF 400 billion were business loans, of which 87%, i.e. CHF 349 billion, flowed into SMEs.

Other forms of debt financing, such as factoring, trade financing, bonds, or crowdfunding<sup>17</sup> are not of broad relevance for Swiss SME financing. None of these financing

instruments was used by more than 2% of SMEs that reported debt financing.

Also from a global perspective, bank financing remains one of the most widespread forms of external financing for SMEs.<sup>18</sup> In fact, based on data from 170 cross-sectional surveys in 104 countries (including approximately 70,000 enterprises, most of which are SMEs), a World Bank Economic Review study finds a positive correlation between enterprise age and bank financing. The same relationship was identified for enterprise size and bank financing. In other words, with growing enterprise age and enterprise size, as in Switzerland, the use of bank financing increases.<sup>19</sup>

Nevertheless, access and use of different financing instruments can differ significantly between countries around the world because of variances in the characteristics of the economy, such as regulatory frameworks that define the rules for different forms of financing or the current state of technological progress.<sup>20</sup>

In general, the share of SME loans, which show the proportion of loans to SMEs relative to all business loans, have a positive correlation to country income.<sup>21</sup> This suggests that high-income countries have a better developed banking system, leading to higher SME loan shares in comparison to low-income countries. In 2018, for instance, more than half (53%) of total business loans extended in high-income countries went to SMEs. In middle-income countries, the respective value was 30%. A possible explanation for this difference could be that banks in lower-income countries may prefer to issue debt to larger enterprises that are typically better equipped to provide security. SMEs, for their

16 See [www.data.snb.ch](http://www.data.snb.ch).

17 Crowdfunding is a term that generally refers to online-based alternative forms of financing, i.e. to financing that takes place outside the banking systems and traditional capital markets. It encompasses different categories that can be distinguished based on the form of reward received by investors. Business crowdending and business crowdfunding bear monetary rewards for investors – fintechs fall into these categories (see 2.3 Crowdfunding). Other forms, such as crowdsupporting or crowddonating, do not entail any monetary rewards but are based mainly on altruistic benefits for investors/donators. For instance, in crowdsupporting, investors may obtain a product or service in return to their investment; in crowddonating, as the term suggests, capital is donated with no direct exchange of (tangible) rewards – see CCAF, 2020, The Global Alternative Finance Market Benchmarking Report (April 2020) and IFZ, 2020, Crowdfunding Monitor Switzerland 2020 (June 3, 2020).

18 See ECB, 2021, Survey on the access to finance of enterprises (June 1, 2021) and OECD, 2015, New Approaches to SME and Entrepreneurship Financing: Broadening the Range of Instruments (February 2015).

19 See Larry W. Chavis, Leora F. Klapper, & Inessa Love, 2011, The Impact of the Business Environment on Young Firm Financing, World Bank Economic Review, Vol. 25(3), pp. 486–507.

20 See OECD, 2020, Financing SMEs and Entrepreneurs 2020: An OECD Scoreboard (April 22, 2020).

21 The World Bank classifies the world's economies into different income groups, distinguishing between low, lower-middle, upper-middle, and high-income countries. The countries are classified based on the calculation of GNI per capita using a method (i.e. Atlas method) that considers exchange rate fluctuations by taking a three-year moving average, price-adjusted conversion factor into account – see World Bank, 2020, New World Bank country classifications by income level: 2020–2021 (July 1, 2021).

part, tend to hold fewer assets that may serve as collateral when applying for bank financing. In addition, in lower-income countries the financial systems tend to be less developed than higher-income countries, thereby often leaving SMEs with fewer financing alternatives.<sup>22</sup>

Regarded from the demand side, enterprises often do not apply for credit despite their need for it. A World Bank<sup>23</sup> study finds that this applies to roughly two out of ten SMEs in high-income countries, three out of ten SMEs in middle income-countries, and four out of ten SMEs in low-income countries. A reason often cited for not making credit applications in spite of requirements is that SMEs are not positive that their financing application will be approved because they feel they do not have sufficient collateral or are not able to provide the necessary information to banks.

In Europe, in addition to bank financing as the most prevalent form of financing, SMEs also consider leasing or hire purchase and trade credits as relevant forms of financing. Other forms – such as equity financing, factoring, and debt securities – are far less common financing instruments for SMEs in the euro area (with only 10%, 9%, and 2% respectively citing it as relevant for their enterprise).<sup>24</sup>

## 2.2 Equity financing

Equity financing constitutes another means to attract external sources of financing. More specifically, this form of financing depicts financing instruments in which capital is raised by bringing “external” ownership into the enterprise. Generally, it can be distinguished between private equity and public equity. Both are discussed in the following sections.

### 2.2.1 Private equity

Private equity refers to investments in enterprises that are usually not listed on a stock exchange (i.e. they are not public, thus in the hands of a limited number of “private” investors). Typically, capital for private equity investments stem from institutional investors (e.g., pension funds, insurance groups or sovereign wealth funds) as well as wealthy individuals. Because of the private nature of this form of financing, not all transactions are recorded, so that statistics are often based on estimates.

At the most fundamental level, two main distinctions are to be made, namely between venture capital and other private equity.<sup>25</sup> The first category typically refers to investments made in the earlier stages of an enterprise. The latter category describes investments typically made in later-stage businesses, for instance, in relatively mature enterprises seeking growth capital (e.g., to expand in new markets). Generally speaking, the goal is to acquire controlling stakes in an enterprise to exert influence over it. Put simply, private equity investments seek to make enterprises more valuable over a given time span, before exiting them again more profitably.<sup>26/27</sup>

Enterprises have been bought for investment purposes since the industrial revolution. However, the field of institutional private equity investment is a comparatively young market segment that started to unfold in the late 1970s and early 1980s.<sup>28</sup> Yet, growth since then has been quite substantial. The number of players in private markets<sup>29</sup> increased by 8% since 2015 to reach more than 11,000 active firms in 2020. Presumably, favorable economic conditions, including a promising interest rate environment as well as high liquidity have encouraged new players to enter the market. With 75% of the total amount in private markets globally, private equity not only

22 See OECD, 2020, Financing SMEs and Entrepreneurs 2020: An OECD Scoreboard (April 22, 2020) and Facundo Abraham & Sergio L. Schmukler, 2017, Addressing the SME Finance Problem, Research & Policy Briefs: From the World Bank Malaysia Hub, Vol. 9 (October 2017).

23 See World Bank, 2013, Global Financial Development Report 2013: rethinking the role of the state in finance (English) (September 19, 2012).

24 See ECB, 2020, Survey on the access to finance of enterprises (June 1, 2021) and OECD, 2015, New Approaches to SME and Entrepreneurship Financing: Broadening the Range of Instruments (February 2015).

25 In reality, however, this distinction cannot always be made clearly. Often, the boundaries between these two areas are blurred.

26 However, a few informants pointed out that some private equity investors also seek more long-term returns. In fact, long-hold funds have been rapidly growing – see Bain & Company, 2021, Global Private Equity Report 2021 (accessed September 8, 2021).

27 See EVCA, 2021, The little book of Private Equity (accessed September 8, 2021).

28 See LGT Capital Partners, 2015, Private Equity – eine Einführung (accessed September 8, 2021).

29 McKinsey (2021) defines private markets as closed-end funds investing in private equity, real estate, private debt, infrastructure, or natural resources, as well as related secondaries and funds of funds.



represents the largest share but is also the fastest growing segment with an annual increase of 9%.<sup>30</sup>

The trend in Switzerland points in the same direction. It is estimated that the private equity market has grown by more than 15% since 2016,<sup>31</sup> even if it can be assumed that the corona pandemic has somewhat slowed the upswing the domain has been experiencing for many years. Nevertheless, it is clear that the private equity asset class has experienced significant growth rates and inflows of funds (i.e. funds have raised more capital) over the last decade in Switzerland and more generally also globally.<sup>32</sup>

McKinsey & Company<sup>33</sup> suggest that the total assets under management in private markets continued to increase and moved up 5% between 2019 and 2020 to reach another all-time high of USD 7.4 trillion. They further report that assets under management in private markets experienced surges in most asset classes, with private equity accounting for the largest increase. In terms of net asset value there has been growth by a factor of almost ten since 2000. Private equity assets under management worldwide reached USD 4.5 trillion in the first half of 2020, representing growth of 6% from the end of 2019 and 16% since 2015.

#### INFO BOX

##### VENTURE CAPITAL

While the global economy began to slowly recover from the financial crisis around 2009, venture capital activities started to flourish again alongside technological progress.<sup>34</sup> Global venture capital volume increased substantially from around USD 52 billion invested in 2010 (as part of approximately 8,000 deals) to about USD 321 billion invested in 2020 (as part of approximately 26,000 deals).<sup>35</sup> This rise represents a plus of 20% over 2019 and growth of nearly 517% compared to 2010.

In Switzerland, venture capital has also gained considerable traction over the last decade. According to the Swiss Venture Capital Report 2021,<sup>36</sup> investments in start-ups totaled CHF 2.1 billion<sup>37</sup> across 304 financing rounds in 2020. While this is slightly less than the total amount of CHF 2.3 billion registered as part of 266 financing rounds in the record-breaking year of 2019, it represents a surge of more than 350% (CHF 462.7 million) compared with the volumes recorded in 2012.<sup>38</sup> Also, even though no large investments exceeding CHF 200 million were placed in 2020, the total amount invested declined by only 7% compared to 2019, a year in which there were three such large investments.

Accounting for a third of the total investment volume, early-stage investments increased the most year on year (31%), totaling CHF 686 million in 2020. The volume of seed financing moved up by 27% to reach CHF 117.6 million, while the volume for later-stage investments declined by 27% from CHF 1,676.1 million in 2019 to CHF 1,320.2 million in 2020. As with the overall volume drop in Switzerland, the decline for later-stage investments can be explained by the absence of large investment rounds of more than CHF 200 million in 2020.

From a global perspective, attracting more than half of global venture capital invested, the US has remained at the top ever since the birth of the venture capital industry. In 2020, around USD 164 billion were invested in more than 10,800 enterprises in the US market. However, today, venture capital is no longer exclusively dominated by the US, as Asia and Europe started to catch up.<sup>39</sup> While the US made up two thirds of global venture capital dollars in 2010,<sup>40</sup> as of 2020, the value share declined to 51%.<sup>41</sup> In other words, venture capital activities have globalized over the last decades.

30 See McKinsey & Company, 2021, A year of disruption in the private markets, McKinsey Global Private Markets Review 2021 (April 2021).

31 See IFZ, 2019, Unternehmensfinanzierung mit Private Debt in der Schweiz (June 17, 2019).

32 See McKinsey & Company, 2021, A year of disruption in the private markets, McKinsey Global Private Markets Review 2021 (April 2021) and SECA, 2021, SECA Yearbook 2021 (May 2021).

33 See McKinsey & Company, 2021, A year of disruption in the private markets, McKinsey Global Private Markets Review 2021 (April 2021).

34 See Center for American Entrepreneurship, 2018, Rise of the Global Startup City (accessed September 2021).

35 See NVCA, 2021, NVCA 2021 Yearbook (March 2021).

36 See startupticker.ch, Swiss Venture Capital Report 2021 (July 2021).

37 This accounts for less than 1% of the debt financing issued to SMEs by banks domiciled in Switzerland in 2020 – see data.snb.ch.

38 See startupticker.ch, Swiss Venture Capital Report 2012 (January 2013).

39 See Center for American Entrepreneurship, 2018, Rise of the Global Startup City (accessed September 2021).

40 See NVCA, 2020, NVCA 2020 Yearbook (March 2020).

41 See NVCA, 2021, NVCA 2021 Yearbook (March 2021).

To sum up, the private equity domain has expanded globally over the last decades. In Europe, private equity firms are already invested in around 22,000 SMEs. However, while this may seem to be a substantial number, it is only a small minority, considering that there are more than 20 million SMEs in Europe.<sup>42</sup>

Private equity investors are usually very selective: They spend a lot of time assessing the prospects and risks of potential enterprises to invest in. An investment and the possible return must therefore also be in line with the associated costs. However, with their relatively low capital requirements in comparison to larger enterprises, SMEs in the establishment as well as growth/expansion phase tend to have a cost-income ratio that is uninteresting for many traditional private equity investors. Also, in contrast to the stock market, private equity investors traditionally expect compensation for the substantial asymmetry of information that exists on private markets. Subsequently, private equity investors not only anticipate a higher cost of capital but also require access to large amounts of data to carry out thorough due diligence.<sup>43</sup> As our informants confirmed, many SMEs do not have the resources for such a procedure.

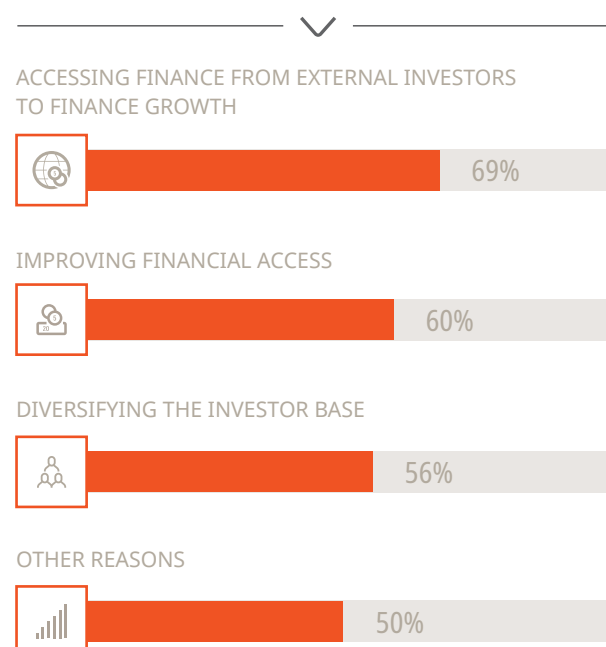
However, SME interest in this form of financing may be limited in other ways. Selling equity stakes translates into ownership dilution and external control over the enterprise which, as we described earlier (see Section 1.3), SMEs typically do not want. Also, if capital is contributed by private equity investors, all costs incurred as part of the investment process are usually re-charged to the invested enterprise. In short, private equity investments are subject to a typically long and expensive process which many SMEs cannot or do not want to afford.<sup>44</sup> On the other hand, private equity investors bring not just capital but also relevant experience, an international network, and strategic development expertise, which adds additional reasons for private companies to utilize private equity to finance further growth and expansion.

## 2.2.2 Public equity

### 2.2.2.1 Initial Public Offering (IPO)

An Initial Public Offering (IPO) refers to the transition of a privately held enterprise into a public company by issuing public shares. When enterprises are publicly listed on a stock exchange, the process is also known as “going public”.

As a study of the World Federation of Exchanges & Milken Institute<sup>45</sup> shows, accessing finance from external investors to finance growth is the most important reason for SMEs to get listed (69%). The second most important reason cited in the study was “improving financial access”, in other words, raising additional capital at lower cost (60%). The third most important reason was “diversifying the investor base” (56%). Other reasons for listing included improving the company or brand reputation and visibility (roughly 50%).



<sup>42</sup> See EVCA, 2021, The little book of Private Equity (accessed September 8, 2021).

<sup>43</sup> See Florie Mazzorana-Kremer, 2019, Blockchain-Based Equity and STOs: Towards a Liquid Market for SME Financing?, Theoretical Economics Letters, Vol. 9(5), pp. 1534-1552.

<sup>44</sup> See footnote above.

<sup>45</sup> See World Federation of Exchanges & Milken Institute, 2017, Small and Medium-Sized Enterprises and SME Exchanges: A joint report of the World Federation of Exchanges the Milken Institute (July 18, 2017).

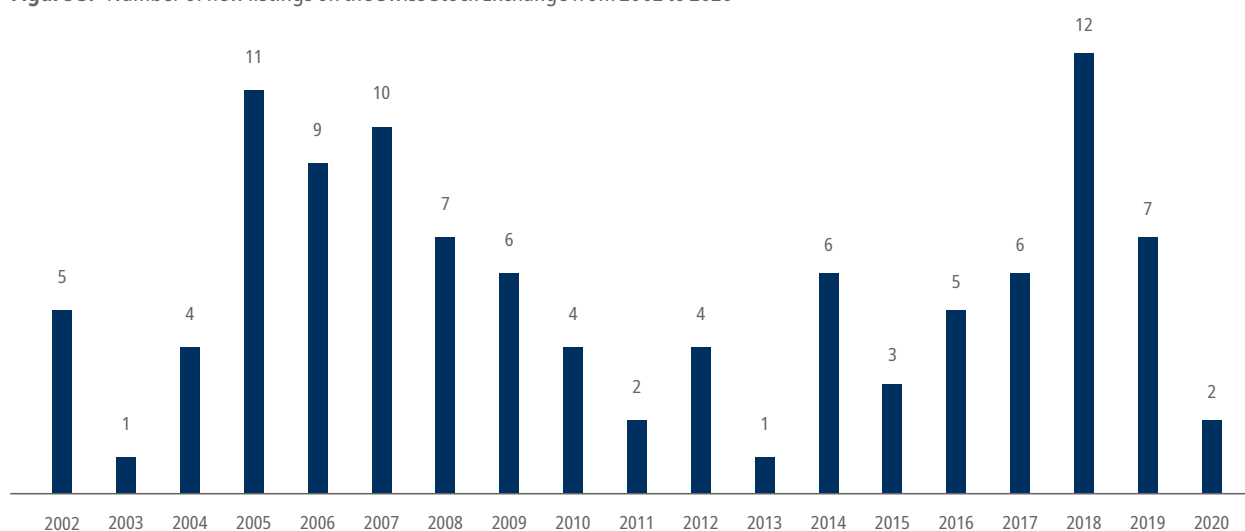
Of the 161 SMEs surveyed across various geographies, 25% of unlisted SMEs stated they qualified for a listing but opted against it, while 39% considered listing but did not meet the requirements. The tendency of SMEs not getting listed is also observed in Switzerland. As the most recent figures show, two listings took place in 2020 at the Swiss stock exchange, both of which resulted from spin-offs of enterprises that employ more than 3,000 employees.<sup>46</sup> Similarly, of the seven listings that occurred in the preceding year, only one of the enterprises can be termed an SME. Figure 5 provides an overview of new listings on the Swiss stock exchange between 2002 and 2020.

Getting listed is a process that involves a high level of resources and may therefore pose particular challenges to smaller enterprises.<sup>47</sup> Smaller companies, in particular, have therefore shown a tendency not to seriously

consider the IPO because the widespread view is that this option is unavailable to them. SMEs often seem not to have the resources to cover the financial costs and disclosure demands for getting and also remaining listed.<sup>48/49</sup> However, while three out of the five most capitalized enterprises in Europe are listed on the Swiss stock exchange, there are also around 100 listed enterprises with a relatively lower market capitalization between CHF 100 million and CHF 1 billion – some of these can be expected to be SMEs.<sup>50</sup> Nevertheless, in general, SMEs represent only a tiny fraction of all listed enterprises on the Swiss stock exchange.

Even though Switzerland is an IPO market with a relatively small number of listings per year in comparison to other main European countries, something which also tends to result in larger year-on-year fluctuations (see Figure 5),

**Figure 5:** Number of new listings on the Swiss Stock Exchange from 2002 to 2020



Source: SIX<sup>51</sup>

<sup>46</sup> See SIX, 2020, Listings on the Swiss Stock Exchange, year 2020 (accessed September 8, 2021).

<sup>47</sup> See Going Public, 2019, Special Capital Market Switzerland, Vol. 7 (September 2019).

<sup>48</sup> See World Bank, 2014, Global Financial Development Report 2014: Financial Inclusion (September 2014).

<sup>49</sup> A few informants mentioned that this is a misperception by many SMEs which ultimately leads them to not list, even if they could cope with it financially. Banking fees, for instance, are success-based fees in the form of a percentage of the issued amount.

<sup>50</sup> Even if market capitalization is not the equivalent of enterprise size, a positive correlation between the two parameters can be assumed, suggesting that smaller enterprises may have particular representation among all small- and mid-caps listed on the Swiss stock exchange.

<sup>51</sup> See SIX, 2021, Listings on the Swiss Stock Exchange, years 2002-2021 (accessed September 8, 2021).

the same tendencies are to be expected globally. A comparison of microcaps<sup>52</sup> with the total number of SMEs may provide an indication for this. In 2008, for instance, there were about 20 million SMEs in the European Union, of which approximately 1% were middle-sized enterprises (defined as enterprises with 100 to 250 employees). In 2010, however, the total number of listed microcaps in the European Union totaled less than 4,000 enterprises. Strikingly, even if all these listed companies had been SMEs, something which cannot be assumed, they would have accounted for roughly only 2% of all middle-sized enterprises, and as such an even more insignificant portion of all SMEs in the European Union.<sup>53</sup>

Overall, however, with increasing IPO activities around the globe it can be assumed that the number of listed SMEs has grown in absolute terms over the last year. According to EY,<sup>54</sup> IPOs raised as much capital as a decade ago. In 2020, about USD 377 billion were raised across 1,591 listings, a surge of more than 40% over 2019.<sup>55</sup> This noteworthy increase can be attributed mostly to the US and Chinese markets that accounted for the bulk in global growth. Mainland China hosted a total of 502 listings, raising USD 127 billion in capital in 2020. As such, Mainland China accounted for more than 90% of capital raised in IPOs in the Asia Pacific. In total, the region (including China) reported USD 139 billion capital raised (+39% over 2019) in 937 listings.<sup>56</sup> The US, for their part, reached record volume levels in 2020. In 483 IPOs the US market raised USD 174.1 billion.<sup>57</sup> The European market reached a total of USD 27 billion across 176 listings, thereby recording a moderate upturn of 9% in capital raised year on year but also indicating that the

European area represents only a fraction of overall global IPO volumes.<sup>58</sup> With USD 11.3 billion IPO proceeds, the UK generated the largest share in European IPO volume.<sup>59</sup>

#### 2.2.2.2 Special Purpose Acquisition Company (SPAC)

A Special Purpose Acquisition Company (SPAC) represents a “shell” or blank check enterprise, suggesting that it does not have commercial operations. SPACs aim at raising money through an IPO to ultimately merge with or acquire another operating enterprise (usually within 48 months); while not new to the market they recently have become a particularly popular vehicle for transitioning a company from a private company to a publicly traded one. In essence, investors invest in the management team that forms the SPAC (also called “sponsors”) rather than in an underlying operating business.<sup>60</sup>

The global rise in IPOs can also be attributed to SPAC activities that seem to have regained traction after their emergence in the 1990s. With 248 in total, SPACs accounted for more than half of all IPOs on US stock exchanges in 2020.<sup>61</sup> As such, US SPACs expanded by about 320% over the previous year, reaching a total of USD 83 billion in capital raised (see Figure 6). Despite growing interest and increasing popularity, SPACs still do not play a significant role in Europe and the Asia Pacific compared to the US: In 2020, Europe registered eight SPACs, raising EUR 1.8 billion.<sup>62</sup> In Asia Pacific there were four of them, raising USD 1.44 billion. Thus, together they account for about 5% of the total number of SPACs recorded in the US and also about the same share of the total capital raised.<sup>63</sup>

52 Defined as all listed companies with a market capitalization below USD 65 million – see WFE, 2011, 2010 Domestic market.

53 See World Bank, 2014, Global Financial Development Report 2014: Financial Inclusion (September 2014).

54 See EY, 2021, Global IPO market: 2021 expected to be a good year for new issues (January 5, 2021).

55 See Bloomberg, 2021, Markets: Lockdown Winners Drive Europe's IPO Market to Surpass 2019 (December 15, 2020) and Baker McKenzie, 2021, IPO Report 2020 & Key Trends Set to Shape 2021 (December 16, 2020).

56 See Baker McKenzie, 2021, IPO Report 2020 & Key Trends Set to Shape 2021 (December 16, 2020).

57 See Bloomberg, 2021, Markets: Lockdown Winners Drive Europe's IPO Market to Surpass 2019 (December 15, 2020).

58 See EY, 2021, Global IPO market: 2021 expected to be a good year for new issues (January 5, 2021).

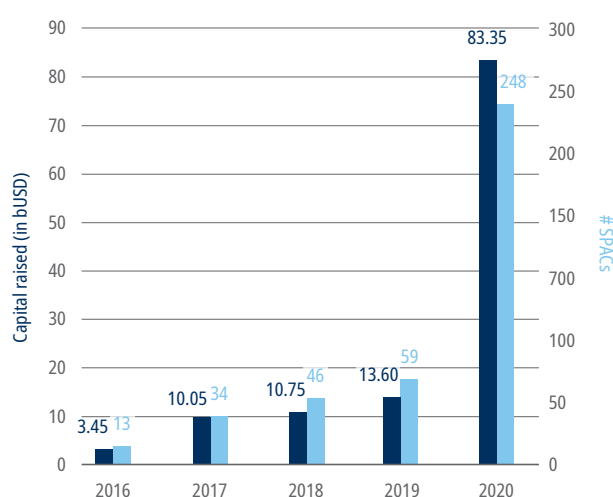
59 See Bloomberg, 2021, Markets: Lockdown Winners Drive Europe's IPO Market to Surpass 2019 (December 15, 2020).

60 See SEC, Investor Alerts and Bulletins, What You Need to Know About SPACs – Updated Investor Bulletin (May 25, 2021).

61 See Bain & Company, 2021, Global Private Equity Report 2021 (accessed September 8, 2021) and McKinsey & Company, 2021, A year of disruption in the private markets, McKinsey Global Private Markets Review 2021 (April 2021).

62 See Deloitte, 2021, Aufstieg der SPACs: Neue Finanzierungsform erreicht Europa (accessed September 8, 2021).

63 See CNBC, The SPAC frenzy may be heading to Asia — experts say clearer rules are needed (March 26, 2021).

**Figure 6:** SPACs in the US from 2016–2020

Source: Spacinsider (2021)<sup>64</sup>

Given that SMEs perceive the traditional IPO process as rather resource intensive, SPACs may represent a means by which they can get publicly listed. Theoretically, SPACs can offer SMEs a way to bypass some of the resource-intensive steps when going public, with the underlying process more similar to private equity negotiations. However, in spite of the potential upsides offered to SMEs, SPACs are no walk in the park. After going public, the target company must still have the necessary IPO readiness as subsequent to the business combination it assumes the stock market listing as new issuer. As a result, the target company must still comply with all the follow-up obligations of the respective stock exchanges, the regulations of the national supervisory authorities, as well as the national corporate governance recommendations.<sup>65</sup>

At the moment, it is still difficult to estimate how many SMEs will choose a SPAC to get listed in the future – not least because this path of going public is primarily driven by the “sponsors” of a SPAC that identify potential target SMEs rather than the other way round. In addition, the U.S. Securities and Exchange Commission (SEC) and other regulators around the world have increased scrutiny of SPACs,

thereby also keeping the question open as to what extent this vehicle for getting publicly listed will be adopted in the SME landscape.

## 2.3 Crowdfunding

Crowdfunding generally refers to online-based alternative forms of financing. It encompasses different categories that can be distinguished based on the form of reward received: Crowdlending and crowdfinancing, for instance, bear monetary rewards for investors. Other forms, such as crowdsupporting or crowddonating, do not entail any monetary rewards but are based mainly on altruistic benefits for investors/donators. For example, in crowdsupporting, investors may get a product or service in return to their investment; in crowddonating, as the term suggests, capital is donated in no direct exchange of (tangible) rewards.<sup>66</sup>

### INFO BOX

#### BUSINESS CROWDLENDING AND BUSINESS CROWDFINANCING<sup>67</sup>

Business crowdlending and business crowdfinancing are online-based forms of financing outside the traditional banking system and capital markets in which investors (“the crowd”) provide capital to enterprises. The crowd can consist of both private individuals and institutional investors. In this context, the term “**disintermediation**” is often used. In essence, it describes that these typically new forms of financing aim at circumventing previously established central instances (e.g., banks), so-called intermediaries. In other words, when intermediaries are bypassed, they are disintermediated. **Fintechs** operate in this domain, often seeking to serve the SME market more effectively. Typically, fintechs use technology-based solutions to offer SME-oriented financial services.

**Business crowdlending** refers to debt financing. It is an online-based form of financing in which investors provide capital to enterprises in exchange for interest payments.

**Business crowdfinancing** refers to equity financing. It is an online-based form of financing in which investors are granted participation rights and, if applicable, a share of the profits in return for their investment.

<sup>64</sup> See [www.spacinsider.com/stats](http://www.spacinsider.com/stats).

<sup>65</sup> See GoingPublic Magazin, 2021, White paper – Special Purpose Acquisition Companies (August 2021).

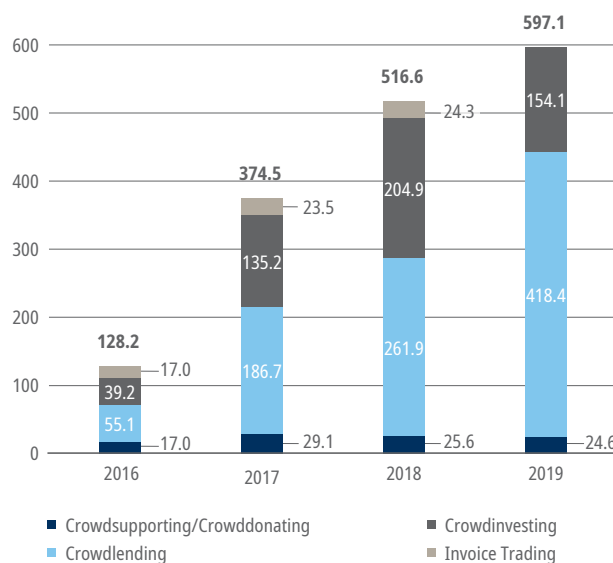
<sup>66</sup> See CCAF, 2020, The Global Alternative Finance Market Benchmarking Report (April 2020) and IFZ, 2020, Crowdfunding Monitor Switzerland 2020 (June 3, 2020).

<sup>67</sup> Definitions are based on CCAF, 2020 and IFZ, 2020 – see footnote above for references.



As previously noted (see Section 2.1), crowdfunding is rarely used among Swiss SMEs; their relative share of the balance sheet total makes up less than 1% (see Figure 4). Yet, despite the current insignificance within the context of external SME financing, the most recent crowdfunding figures show that these alternative forms of financing are rising strongly, making them worthy of note and further examination. According to the Crowdfunding Monitor Switzerland 2020,<sup>68</sup> the total transaction volume reached CHF 597.1 million in 2019, representing a plus of 16% year on year and a remarkable surge of more than 365% compared to 2016. Figure 7 shows the overall Swiss crowdfunding volumes from 2016 to 2019.

**Figure 7:** Swiss crowdfunding volumes from 2016 to 2019 (in CHF m)



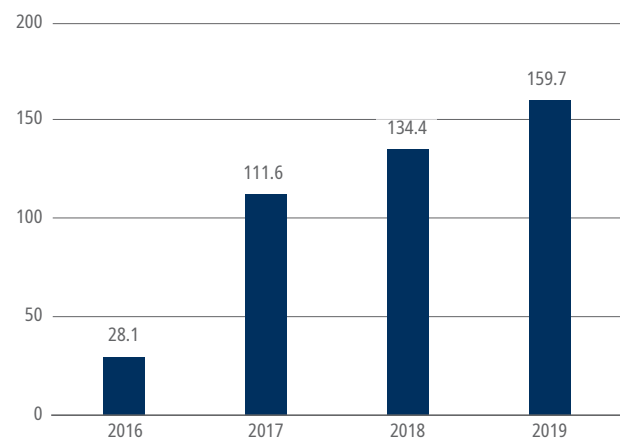
Source: Own representation based on IFZ (2020)<sup>69</sup>

Worthy of special mention is that with a total of approximately 63%, a considerable portion of the entire crowdfunding volume flowed into real estate (52%: CHF 312.4 million) and consumer-related capital raising campaigns

(11%: CHF 67.7 million; excluding crowdsupporting/crowddonating: 4% or CHF 24.4 million). Accordingly, one third of the total crowdfunding volume raised was capital that went to enterprises (CHF 192.6 million), most of which can be assumed to be SMEs.

Within crowdlending, CHF 159.7 million (27% of the total crowdfunding volume) represented capital invested in Swiss enterprises.<sup>70</sup> This amount reflects an increase of 19% over the previous year and impressive growth of roughly 468% compared to 2016 (see Figure 8).

**Figure 8:** Swiss business crowdlending volumes from 2016 to 2019 (in CHF m)



Source: Own representation based on IFZ (2020)<sup>71</sup>

Within crowdinvesting, CHF 32.7 million (6% of the total crowdfunding volume), was equity financing that benefited SMEs, most of which were start-ups.<sup>72</sup> The portion of business crowdinvesting slightly increased by 8% year on year and has witnessed remarkable growth of approximately 381% since 2016 (see Figure 9). However, looking at the total volume of business crowdinvesting recorded, most funding can be assumed to have been very low volume transactions.

<sup>68</sup> Unless stated otherwise, the figures presented on Swiss crowdfunding were obtained from IFZ, 2020, Crowdfunding Monitor Switzerland 2020 (June 3, 2020).

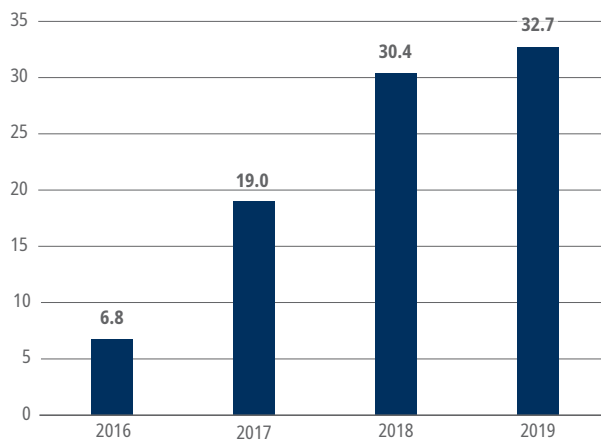
<sup>69</sup> See IFZ, 2020, Crowdfunding Monitor Switzerland 2020 (June 3, 2020).

<sup>70</sup> The individual transaction volumes of SME loans in Switzerland are around CHF 300,000 to CHF 500,000. However, the average amounts can vary depending on the platform's business model. Platforms with very short-term loans typically finance smaller volumes.

<sup>71</sup> See IFZ, 2020, Crowdfunding Monitor Switzerland 2020 (June 3, 2020).

<sup>72</sup> Investors provided capital to a total of 52 businesses with an average transaction volume of approximately CHF 640,000.

**Figure 9:** Business crowdinvesting volumes from 2016 to 2019 (in CHF m)



Source: Own representation based on IFZ (2020)<sup>73</sup>

In spite of the significant upturn crowdfunding has experienced over the past few years, overall, crowdfunding is still at a very early stage in Switzerland. Ever since the launch of the first crowdfunding platform in 2008, a total of CHF 1.68 billion have been invested (for consumers and businesses). However, this is only a tiny fraction of annual bank financing for SMEs in Switzerland (see Section 2.1). In 2020 alone, the total volume of debt extended by banks to Swiss SMEs exceeded total capital raised in crowdfunding (including all investing classes) by a factor of 207 since the start in 2008.<sup>74</sup> Thus, despite their remarkable growth rates, this comparison impressively shows how insignificant – from an overall perspective – online-based alternative forms of financing for SMEs still are today in Switzerland.

When looking at things from a global perspective, similar tendencies are evident. According to the Cambridge Institute of Alternative Finance, more than USD 304 billion

were financed via crowdfunding across the globe in 2018.<sup>75</sup> While the total amount was down 27% compared to 2017, the decline in global volume can be explained by the decrease in alternative finance activities in China. As part of the introduction of stricter regulation relating to crowdlending, the total volume of crowdfunding moved down by 40% in China. Nevertheless, with USD 215.4 billion raised, China still represented the undisputed No. 1 in terms of crowdfunding transaction volume in 2018. With USD 61 billion and USD 10.4 billion raised, it was followed by the US and UK respectively. Excluding China from global statistics, the total crowdfunding volume saw an increase of 48% from USD 60 billion in 2017 to USD 89 billion in 2018. Figure 10 provides an overview of relevant global crowdfunding volumes<sup>76</sup> for SMEs and contrasts them with Swiss figures to allow a feel for the magnitude of crowdfunding transactions in absolute terms.

**Despite their remarkable growth rates, this comparison impressively shows how insignificant – from an overall perspective – online-based alternative forms of financing for SMEs still are today in Switzerland.**

<sup>73</sup> See IFZ, 2020, Crowdfunding Monitor Switzerland 2020 (June 3, 2020).

<sup>74</sup> See IFZ, 2020, Crowdfunding Monitor Switzerland 2020 (June 3, 2020) and SNB, 2021 on data.snb.ch.

<sup>75</sup> CCAF (2020) refers to alternative finance as funds that are online-based investments outside established banking systems and capital markets, made by a network of private and/or professional investors in favor of consumers, businesses, and other types of fundraisers. We refer to these forms of financing as crowdfunding. Unless stated otherwise, the global figures presented (excluding Switzerland) were obtained from CCAF (2020) – see CCAF, 2020, The Global Alternative Finance Market Benchmarking Report (April 2020).

<sup>76</sup> CCAF (2020) include additional financing models such as balance sheet consumer / real estate / business lending. See CCAF, 2020, The Global Alternative Finance Market Benchmarking Report (April 2020) for further details.

**Figure 10:** Global vs. Swiss business-related crowdfunding volumes (in USD m<sup>77</sup>)

Region	Finance model		
	Crowdfunding total	Business crowdlending	Business crowdinvesting
APAC (incl. China)	222,000	45,000	172
APAC (excl. China)	6,200	1,800	162
Americas (incl. US)	64,000	2,400	549
Americas (excl. US)	2,800	326	39
Europe (incl. UK)	18,000	3,500	763
Europe (excl. UK)	7,600	997	278
Switzerland 2018	528	135	31
Switzerland 2019	601	161	33

Source: Own representation based on data from CCAF (2020); IFZ (2019; 2020)<sup>78</sup>

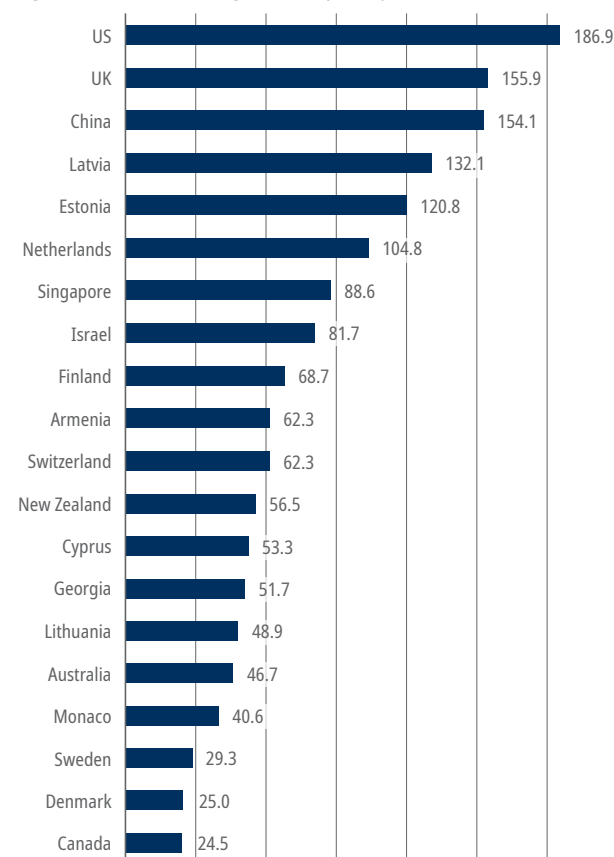
Representing 17% (USD 50.3 billion) of the overall crowdfunding volume (including China), business crowdlending was the second largest form of crowdfunding after consumer crowdlending that accounted for 64% (USD 195.3 billion) of total global crowdfunding volume. On the other hand, constituting less than 1% of the total global volume recorded in 2018 (about 5% of the total Swiss crowdfunding volume), business crowdinvesting seemed to play a minor role within the overall crowdfunding context.

While the absolute figures shown provide valuable insights, it is also useful to compare the volumes in relation to the total number of inhabitants to make them more comparable across different countries. Figure 11 provides an overview of the global crowdfunding volumes per capita.

On a per capita basis, the USA, the UK, Latvia, Estonia, and the Netherlands were the Top 5. Notably, most of the countries with high per capita volumes are European. Outside the euro area, Singapore, New Zealand, Australia, Israel, and Canada are among the countries with the highest

crowdfunding volumes per capita. These countries typically have economies driven by innovation, with liberal financial policies in place.<sup>79</sup> Although accounting for less than 1% of global volumes annually (excluding China) (see also Figure 10), Switzerland ranks 11 in the global ranking of per capita crowdfunding volumes. This shows that even countries with a lower absolute volume of crowdfunding can still display far-reaching acceptance and use of online alternative financing instruments.<sup>80</sup>

**Figure 11:** Crowdfunding volumes per capita in 2018 (in USD)



Source: Own representation based on data from CCAF (2020) and IFZ (2019; 2020)<sup>81</sup>

<sup>77</sup> Volumes have been rounded to improve legibility and comparability.

<sup>78</sup> See CCAF, 2020, The Global Alternative Finance Market Benchmarking Report (April 2020); IFZ, 2019, Crowdfunding Monitor Switzerland 2020 (15 May 2020); IFZ, 2020, Crowdfunding Monitor Switzerland 2020 (June 3, 2020).

<sup>79</sup> See CCAF, 2020, The Global Alternative Finance Market Benchmarking Report (April 2020).

<sup>80</sup> See footnote above.

<sup>81</sup> See CCAF, 2020, The Global Alternative Finance Market Benchmarking Report (April 2020); IFZ, 2019, Crowdfunding Monitor Switzerland 2020 (15 May 2020); IFZ, 2020, Crowdfunding Monitor Switzerland 2020 (June 3, 2020).

## 2.4 Initial Coin Offering (ICO)

Initial Coin Offerings (ICOs) are blockchain-based instruments to raise capital (see info box below for some definitions). In some ways, they can be compared to IPOs. During a limited period of time, an enterprise issues a predefined number of digital tokens (coins) directly to the public in exchange for cryptocurrencies or paper currencies.<sup>82</sup> The tokens in turn may give access rights to a platform to buy goods or services offered by the issuer or function as money on the platform. However, they do not carry an ownership stake in the enterprise,<sup>83</sup> which is why they are also referred to as “utility tokens”.<sup>84</sup>

As per the latest figures from PwC, Switzerland and the UK represented the top two leading European hubs for ICOs in 2018. While Switzerland raised a total of CHF 916 million, the UK reported slightly less with CHF 894 million in volume.<sup>85</sup>

Globally, as the latest figures show the US and Singapore are among the leading economies within the initial coin offering sphere. However, in 2018, ahead of Singapore and the US, the Cayman Islands as well as the British

Virgin Islands ranked in the Top 2 with a total of USD 5 billion and USD 2.3 billion raised respectively. Coming in third and fourth, Singapore reported USD 2.1 billion of total capital raised, with the US registering USD 1.5 billion. The strong position of the Cayman Islands and British Virgin Islands can be explained with single large-scale offerings, for instance, the one from EOS that accounted for USD 4.1 billion in the Cayman Islands and Telegram with a funding volume of USD 1.7 billion in the British Virgin Islands.

Considering the latest available figures (2019 year-to-date data until October 31, 2019), Hong Kong undisputedly had the most coin offering traction with a total volume of USD 1 billion recorded. In 2018, it was the second most important ICO hub in Asia after Singapore with a total volume of USD 428 million raised. In Mainland China, however, authorities imposed a ban on ICOs in late 2017, labelling them as an illegal fundraising activity given the insecurities investors may face regarding fraud or laundering because of weak/non-existent regulation relating to ICOs.<sup>86</sup> In the same year, before being banned, Chinese ICOs raised a total of about USD 394.6 million in 65 offerings.<sup>87</sup>

### INFO BOX

#### BITCOIN, BLOCKCHAIN, DLT; ALL THE SAME? SOME KEY TERMS AND THEIR (SIMPLIFIED) DEFINITIONS<sup>88</sup>

**Distributed ledger technology (DLT)** is a special form of electronic data processing and storage. A distributed ledger is a decentralized database that allows participants in a network (i.e. across multiple nodes) to share read and write access. As opposed to having a single central authoritative instance, this means that everyone can see who is using and modifying the ledger. While in **permissioned ledgers** the access to the ledger is regulated, in **non-permissioned ledgers** the ledger is openly accessible to everyone. **Blockchain** is a special type of DLT, essentially also describing digitized and decentralized books of record. Transactions are recorded with an immutable cryptographic signature called **hash**. The transactions are then grouped into blocks. Each new block includes a hash of the previous one (blockchain = chaining the blocks together). Note that blockchain is a type of DLT but not every DLT is blockchain. **Bitcoin** is a cryptocurrency that is facilitated by the blockchain technology. Thus, in essence, Bitcoin is a decentralized digital currency. **Smart contracts** are software-based contracts that automatically adapt to the fulfillment or modification of contractual services. For this purpose, they are stored in the distributed ledger and take effect when predefined conditions are met.

82 See PwC, 2020, 6th ICO / STO report: A strategic perspective (spring 2020 edition).

83 The emergence of Security Token Offerings (STOs) will be further discussed in 4.2.1.1 Tokenization: Listing directly on public blockchains.

84 See CoinDesk, 2021, ICO Mania Revisited: The Investors and Token Issuers Who Made Good (August 8, 2021).

85 The calculations from PwC (2020; see footnote above for the reference) are based on currency exchange rates on end date of ICOs. They point out that Ether and Bitcoin exchange are highly volatile rates, which is why actual and current market capitalization of the companies today may differ significantly from the suggested figures.

86 See CNBC, 2017, China bans companies from raising money through ICOs, asks local regulators to inspect 60 major platforms (September 4, 2017).

87 See Reuters, 2017, China bans initial coin offerings as illegal fundraising (September 4, 2017).

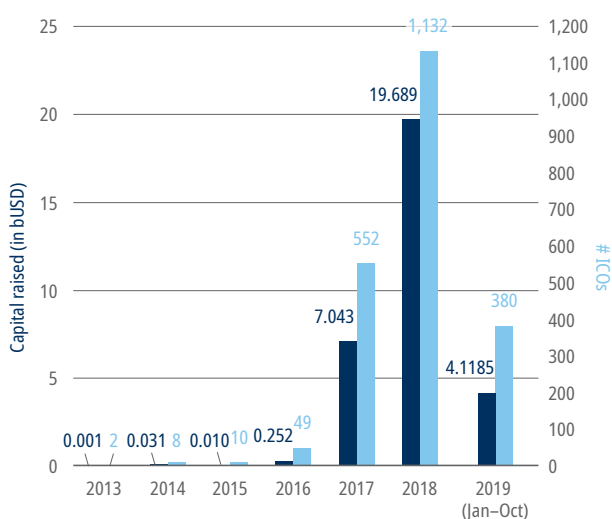
88 The definitions are based on Gabler Wirtschaftslexikon, Distributed Ledger Technologie (DLT) (accessed September 8, 2021) and r3.com, 2021 (accessed September 8, 2021).



Figure 12 shows the development of coin offerings with the corresponding number of ICOs that took place and the total volume of capital raised.

Following the record-breaking year of 2018 in which a total of USD 19.7 billion was raised globally, the volume declined drastically throughout the first ten months of 2019, reaching USD 4.1 billion. Thus, after a huge initial success fueled by a lot of enthusiasm, ICOs started to slow down in number and volume. This can be linked mainly to the lack of regulation and protection ICOs offer to investors.<sup>89</sup>

**Figure 12:** Global ICOs from 2013 to October 2019



Source: Own representation based on PwC (2020)<sup>90</sup>

In fact, weak or inexistent regulation relating to ICOs have led to a number of failures. Vague white papers and promises that could not be kept, or in the most extreme case even deliberate fraud resulted in a large number of frustrated and bruised investors. As a result, generally speaking, ICOs today have a somewhat dubious reputation.

According to PwC,<sup>91</sup> better defined regulatory oversight will be needed in relation to raising capital via ICOs because the instrument can in fact be a fruitful financing tool. In particular, it may be of value for SMEs facilitated by Distributed Ledger Technologies (DLT). The issuance of tokens enables not only a rapid adoption of the product and service provided, but also establishing a customer base before bringing the actual product or service to the market. Having said that, maximizing value creation by means of such network effects – which exist in new networks of investors that purchase tokens – is one of the most relevant advantages in comparison to other forms of financing.

However, it is important to note that ICOs are not a panacea. For SMEs not rooted in a business model making it possible to tap into the described network effects, ICOs may not represent a viable and sustainable financing solution.<sup>92</sup>

## 2.5 Internal financing

As mentioned above (see Section 2.1), the majority of Swiss SMEs operate without any external sources of financing.<sup>93</sup> In total, almost two thirds (65%) rely exclusively on internal financing. Broken down by enterprise size, a negative

<sup>89</sup> See Florie Mazzorana-Kremer, 2019, Blockchain-Based Equity and STOs: Towards a Liquid Market for SME Financing?, *Theoretical Economics Letters*, Vol. 9(5), pp. 1534-1552.

<sup>90</sup> See PwC, 2020, 6th ICO / STO report: A strategic perspective (spring 2020 edition).

<sup>91</sup> See footnote above.

<sup>92</sup> See OECD, 2019, Initial Coin Offerings (ICOs) for SME Financing (January 15, 2019).

<sup>93</sup> Figures obtained from: SECO / IFZ, 2017, Studie zur Finanzierung der KMU in der Schweiz 2016 (June 2017).

relationship between enterprise size and the use of internal financing is evident – the smaller the enterprise, the more likely it is that there is no external financing.

By year of foundation, a similar correlation is observable. Younger enterprises, in particular, tend to not deploy any form of external financing, but operate exclusively with internal financing. In 2016, 73% of companies founded in 2010 or later reported that they deployed no form of external financing (18% reported bank financing, 9% another form of external financing). By comparison, only 53% of enterprises founded before 2000 do not use any form of external financing (42% reported bank financing; 5% another form of external financing).

These figures indicate that specifically younger enterprises either work with own funds, such as saved capital, or deploy another form of external financing, such as venture capital.

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However, these observed relationships are not a particularity of the Swiss SME landscape. Globally, just as in Switzerland, younger firms and smaller enterprises tend to make more frequent use of internal financing.<sup>94</sup> Because younger and smaller enterprises have been found less likely to have established relationships with banks and generally hold fewer tangible assets (and intangible assets like an established reputation) that may serve as collateral,

they are often excluded from bank financing, and thus have to deploy internal forms of financing.<sup>95</sup>

Following this overview of different forms of financing and their statistical relevance for SMEs in Switzerland and worldwide, the next section concludes this chapter by outlining the hurdles smaller companies may be confronted with in raising capital as opposed to larger enterprises.

## 2.6 Where the shoe pinches: Today's pain points in SME financing

*In contrast to larger enterprises, SMEs are often constrained in their ability to raise capital, because...*

- ➔ *fixed costs of most financing forms are too high relative to their investment volume*
- ➔ *their availability of information relating to various types of financial support is comparatively low*
- ➔ *their human and financial resources are comparatively limited*
- ➔ *the riskiness of their investment is comparatively high for many traditional investors.*

*This often results in less favorable financing terms or in the most extreme cases no supply of capital.*

SMEs are of particular importance worldwide because they generate a substantial portion of all jobs and are important drivers of economic development in most economies.<sup>96</sup> To grow and further develop, enterprises need capital. Yet, the financing needs of SMEs are diverse and vary according to the stage in the company life cycle. The need for SME financing depends not least on the age of the enterprise and its intended growth strategy. Derived from this, both debt and equity financing can prove to be suitable forms of financing.<sup>97</sup>


<sup>94</sup> See OECD, 2020, Financing SMEs and Entrepreneurs 2020: An OECD Scoreboard (April 22, 2020).

<sup>95</sup> See Paroma Sanyal & Catherine L. Mann, 2010, The financial structure of startup firms: The role of assets, information, and entrepreneur characteristics, Working Papers, No. 10–17.

<sup>96</sup> See World Bank, 2021, Small and Medium Enterprises (SMEs) Finance: Improving SMEs' access to finance and finding innovative solutions to unlock sources of capital (accessed September 8, 2021).

<sup>97</sup> See EIB, 2020, Gap analysis of SME financing – new fi-compass report published (March 20, 2020) and Urs Fueglistaller, Alexander Fust, Christoph Müller, Susan Müller, & Thomas Zellweger, 2019, Entrepreneurship: Modelle, Umsetzung, Perspektiven, 5th Edition, Springer Gabler.





**It is noteworthy that in Switzerland every twelfth SME does not even submit a credit application to banks despite their need for it. The assumption that collateral requirements are too high, that the credit process is too cumbersome, and the expectation that the application filed is not approved are possible reasons for this.**

Generally speaking, debt financing from banks is the most important form of external financing for SMEs. However, in contrast to larger enterprises, smaller enterprises tend to have less access to bank financing. The reasons for this can be attributed especially to size-related disadvantages SME typically face. When issuing debt, the cost of financing in relation to the amount financed tends to be higher for SMEs compared with larger enterprises, which usually have larger financing amounts. Since the financing costs are relatively fixed, dealing with a smaller investment amount is of little interest to many financial institutions from an economic perspective.<sup>98</sup> If a financing offer does materialize, SMEs are often faced with less favorable financing terms, such as interest rates, maturities, repayment terms and security required. A lack of collateral and credit history often makes it difficult to obtain financing that meets the SME's needs.<sup>99</sup>

It is noteworthy that in Switzerland every twelfth SME does not even submit a credit application to banks despite their need for it. The assumption that collateral requirements are too high, that the credit process is too cumbersome, and the expectation that the application filed is not approved are possible reasons for this. These SMEs that do not apply for bank financing in spite of their need for it

are referred to as “discouraged borrowers”. They account for 27% of all SMEs with a financing need in Switzerland. Importantly, the proportion of discouraged borrowers decreases as company size increases.<sup>100</sup>

On the supply side, from the perspective of capital providers, a recent IFC study<sup>101</sup> reflects the issues described. Of a total of 114 heads of SME banking units surveyed (covering all regions of the world), over half (52%) cited credit risk as their biggest challenge in SME financing. Within this context, poor macroeconomic conditions in particular were described as problematic as they result in higher interest rates, which in turn increase the cost of borrowing for SMEs and consequently lead to more defaults and late payments. Accordingly, the study suggests that banks tend to view SME financing as risky, which is why they are inclined to be conservative in their risk assessment. Since SMEs tend to have less public information available, they are often less transparent for banks compared to larger companies with more publicly available information. This leaves banks with more difficulties in carrying out their credit assessments for SMEs, often resulting in rejected SMEs credit applications or poor financing terms. Thus, banks perceive as problematic not only the lack of collateral but also the lack of information on the part of SMEs.

98 Urs Fueglistaller et al., 2019 – see footnote above for the reference.

99 See IFC, 2017, MSME Finance Gap: Assessment of the Shortfalls and Opportunities in Financing Micro, Small and Medium Enterprises in Emerging Markets (accessed September 8, 2021) and Facundo Abraham & Sergio L. Schmukler, 2017, Addressing the SME Finance Problem, Research & Policy Briefs: From the World Bank Malaysia Hub, Vol. 9 (October 2017).

100 See SECO / IFZ, 2017, Studie zur Finanzierung der KMU in der Schweiz 2016 (June 2017).

101 See IFC, 2019, Banking on SMEs - Trends and Challenges (June 2019).

However, the financing challenges described do not relate exclusively to debt financing. Size-related disadvantages can also be observed on private and public markets. On private markets, for instance, SMEs appear to experience similar size-related issues as with bank financing. With their relatively low issue size compared to larger enterprises, SMEs tend to be economically uninteresting for many traditional private equity investors. Investors in this domain traditionally expect high compensation for the substantial asymmetry of information that exists on private markets more generally, and specifically with SMEs. As a result, private equity investors not only expect the cost of capital to be higher but also require a lot of data from SMEs to conduct their due diligence.<sup>102</sup> However, this proves to be more challenging for SMEs because of lacking human and financial resources.

Smaller enterprises are also less likely to be found on public capital markets than their larger counterparts. The reasons for this are linked not only to the intention to remain as independent as possible, but again, also to the resource-related challenges that SMEs tend to have, making access to public capital markets considerably more difficult. A study from the World Federation of Exchanges & Milken Institute<sup>103</sup> finds only a small number of SMEs which either considered listing and decided against it or which had not considered listing at all and which cited the availability of an alternative source of financing as the reason for not listing. This finding indicates that SME access to various forms of financing appears limited.

In conclusion, size-related disadvantages, including asymmetric information distribution and unfavorable transaction cost structures lead to inefficiencies. This shows that even today raising capital in the form of debt or equity financing continues to be a hurdle for the growth and expansion of many SMEs. If financing is obtained or investment offers are made, the terms and conditions are often not competitive with those of larger enterprises.

Overall, however, it can be assumed that the problems mentioned above are more pronounced in lower-income economies and in economies where financial systems and capital markets are less mature. In Switzerland, for example, SME credit supply constraints are likely to be comparatively low. According to the State Secretariat for Economic Affairs only six out of 100 Swiss SME loan applications are rejected. Insufficient financial strength and insufficient collateral can be cited as the main reasons for these rejections. Around 75% of all approved financing received the requested credit volume in full.<sup>104</sup> By comparison, the IFC<sup>105</sup> estimates that 40 out of every 100 formal SMEs in developing countries have an unmet financing gap, and points out that the figure is likely to be much higher if informal SMEs were also considered.

Taken together, regardless of the extent – depending on the economy's characteristics they operate in – SMEs tend to be constrained in their ability to raise capital. While not necessarily facing a major financing gap, SMEs frequently experience difficulties in accessing financing. For many, in comparison to larger enterprises, the process is comparatively more onerous and often results in less favorable financing terms.

Yet the existing SME financing challenges may also offer opportunities worth further exploring. Technology-based innovations in particular may play a central role for both existing, well-established financing providers as well as for disruptors in the market. For instance, even if not yet making up a significant share of SME financing in terms of total volume, the growth rates of online-based alternative forms of financing indicate that new ways of raising capital are gaining traction and may effectively address existing shortcomings in SME financing.

In the following chapter, we will therefore take a closer look at and further examine trends observed in SME financing.

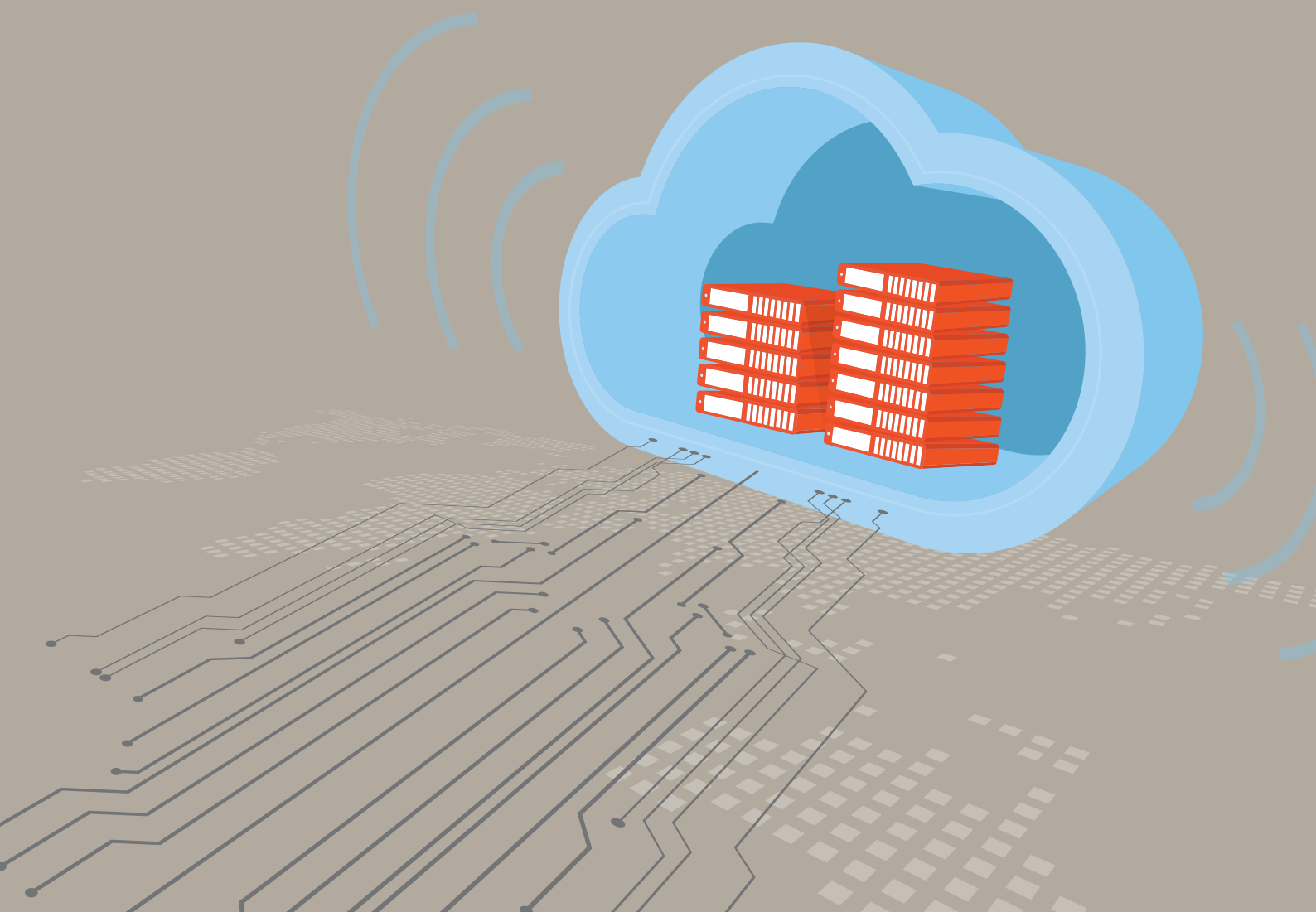
102 See Florie Mazzorana-Kremer, 2019, Blockchain-Based Equity and STOs: Towards a Liquid Market for SME Financing?, *Theoretical Economics Letters*, Vol. 9(5), pp. 1534-1552.

103 See World Federation of Exchanges & Milken Institute, 2017, Small and Medium-Sized Enterprises and SME Exchanges: A joint report of the World Federation of Exchanges the Milken Institute (July 18, 2017).

104 See SECO / IFZ, 2017, Studie zur Finanzierung der KMU in der Schweiz 2016 (June 2017).

105 See IFC, 2017, MSME Finance Gap: Assessment of the Shortfalls and Opportunities in Financing Micro, Small and Medium Enterprises in Emerging Markets (accessed September 8, 2021).

# 3



# Quo Vadis? Trends in SME Financing

Technological innovation is impacting all businesses. This is not simply a phrase but a fact and can also be derived from the massive growth rates observed with online-based alternative financing solutions. We believe that technological innovation will continue spurring progression in the future of SME financing. The potential of technology is far from exhausted. Rising computing power will further accelerate technological progression and enable change, growth, and advancement. However, not only technology but also non-technological factors, such as regulation, institutions, and entrepreneur preferences, have shaped SME financing and will continue to do so in the future.

In the following, we therefore present four technologically and five non-technologically driven developments we expect to become or remain important. In doing so, we do not claim to be complete but focus on forces we deem of particular relevance within the SME financing context.

## 3.1 Tech drivers impacting SME financing

In the following we discuss the four most important tech drivers impacting SME financing: First, growth of data; second, automation, artificial intelligence, and enhanced data analytics; third, Distributed Ledger Technology (including blockchain technology) and last but not least, the level of technological development and expertise of SMEs themselves.

### 3.1.1 Enormous growth of data

In only ten years – between 2010 and 2020 – the global amount of digital data<sup>106</sup> grew from 1.2 trillion gigabytes to an incredible 59 trillion gigabytes (or 59 zettabytes, which is a 59 followed by 21 zeros). This marks a surge of nearly 5,000%.<sup>107</sup> According to the International Data Corporation,<sup>108</sup> in the next three years more data will be created than was created in the last 30 years combined<sup>109</sup> and reach 175 zettabytes by 2025.<sup>110</sup>

While these figures are very impressive, the question for many may still be: Where is all this data coming from? Part of the answer can be found in the 4.5 billion internet users there are today.<sup>111</sup> With every Google search, with every email we send, every time we pay using a debit or

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credit card, every time a song, a podcast, or a movie is streamed, data is produced. To make this data creation a little more tangible, it is also possible to break it down into how much data is generated in every single minute of the day. For instance, in every 60 seconds...

- ...Zoom hosts 208,333 participants in meetings
- ...Twitter gains 319 new users
- ...Microsoft Teams connects 52,083 users
- ...LinkedIn users apply for 69,444 jobs
- ...Instagram business profile ads see 138,889 clicks.<sup>112</sup>

106 The International Data Corporation (IDC) refers to it as the “global datasphere” and defines it as the sum of all data created, captured, and replicated – see IDC, 2017, Data Age 2025: The Evolution of Data to Life-Critical - Don't Focus on Big Data; Focus on the Data That's Big (April 2017).

107 See Forbes, 2020, 54 Predictions About The State Of Data In 2021 (December 30, 2020).

108 See IDC, 2020, IDC's Global Data Sphere Forecast Shows Continued Steady Growth in the Creation and Consumption of Data (8 May 2020).

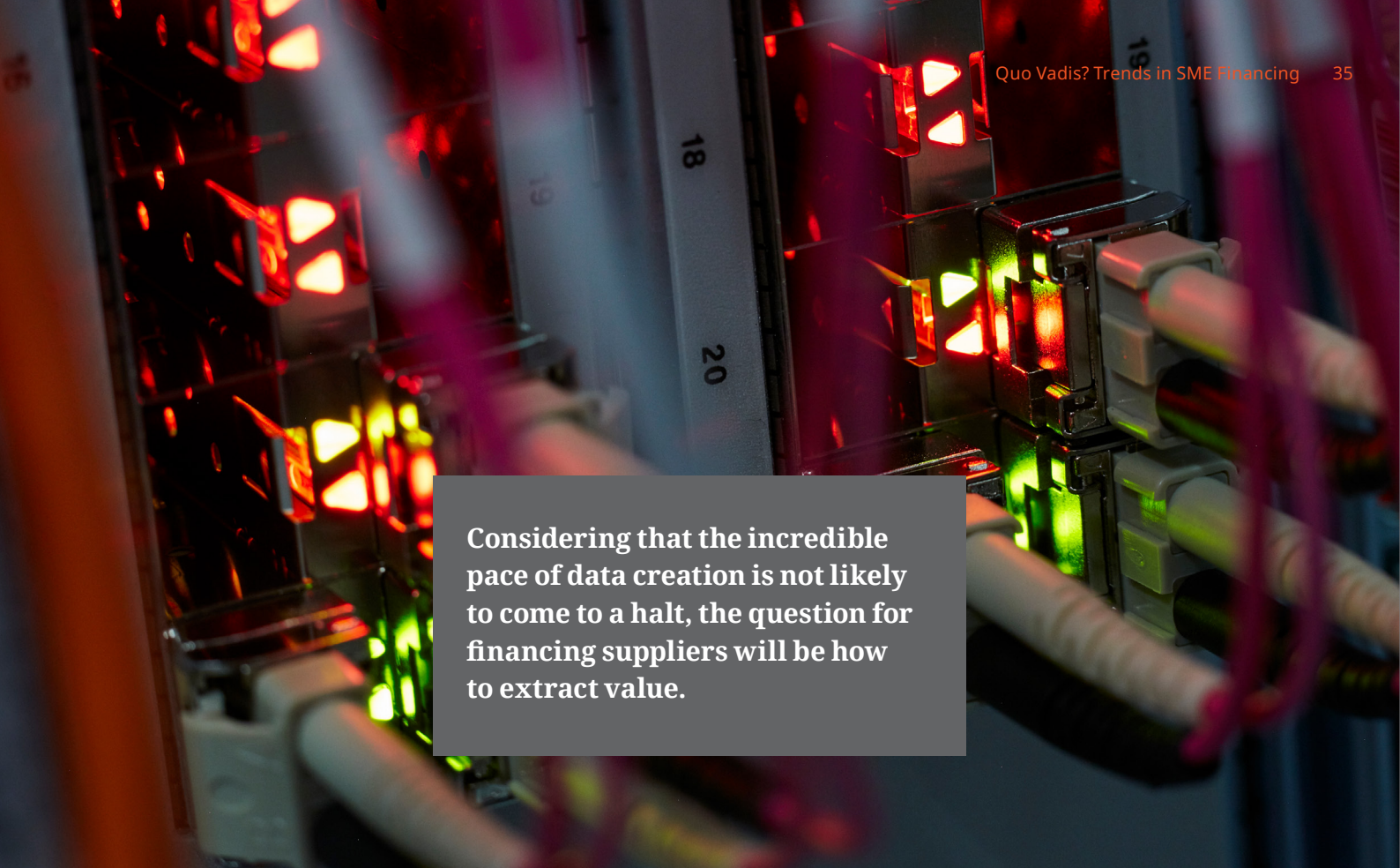
109 See The Economist Intelligence Unit, 2021, The lynchpin of competitive advantage (accessed September 8, 2021).

110 See IDC, 2017, Data Age 2025: The Evolution of Data to Life-Critical - Don't Focus on Big Data; Focus on the Data That's Big (April 2017).

111 See Visual Capitalist, 2020, Visualizing the Social Media Universe in 2020 (August 28, 2020).

112 See WEF, 2020, Here's what happens every minute on the internet in 2020 (September 21, 2020).





**Considering that the incredible pace of data creation is not likely to come to a halt, the question for financing suppliers will be how to extract value.**

Yet it is not only people who are responsible for the growth in data. Another source of the enormous rise is today's computerization of almost everything. Technology is becoming part of all sorts of objects that are not per se computers (like our laptops or smartphones), for instance, factories, homes, refrigerators, or coffee machines. Today many things have started to become "smart". These things interact with each other, and thus not only share but create even more data. The inherent connectivity and interaction implied is referred to as the Internet of Things (IoT). IoT foresees a future in which computers will be embedded into literally anything such as buildings, bridges, power grids, hospitals, public transportation, road traffic, and even entire cities.<sup>113</sup> A forecast projects that we will have a trillion connected "computers" by 2035.<sup>114</sup>

Taken together, while data once was predominantly used to run business operations, today it has become an integral part in handling all sorts of aspects of daily life for consumers, governments, and businesses alike.<sup>115</sup> Considering that the incredible pace of data creation is not likely to come to a halt, the question for financing suppliers will be how to extract value. As such, the central aspect to the seemingly unmanageable amount of data emerging from all sorts of different sources will be how financing

suppliers, and basically any other type of business, can transform data into actionable insights.<sup>116</sup>

Within this context, some informants pointed out that today SMEs may not be well covered by financial analysts and research firms compared to larger companies. Potential SME investors therefore have to produce the information relevant to the funding decision themselves. Yet, these (mainly manual) efforts are costly and may thus hold many back from investing (smaller amounts) in single SMEs. However, with the growth of data, and especially alternative data, in the future investors may obtain access to cheap and instantly available information on SMEs. This, in turn, may make it easier for them to invest in a wide range of SMEs without themselves having to dedicate extensive resources to monitor every single one.

### 3.1.2 Automation, artificial intelligence, and enhanced data analytics

With increasing computing power and advances in technology, many processes across all different kinds of industries and areas have begun to be automated, and consequently have begun to be more efficient and less costly in terms of execution. More specifically, Robotic Process Automation

<sup>113</sup> See The Economist, 2019, Drastic falls in cost are powering another computer revolution: The Internet of Things is the next big idea in computing (September 14, 2019).

<sup>114</sup> See The Economist, 2019, How the world will change as computers spread into everyday objects: The "Internet of Things" will fundamentally change the relationship between consumers and producers (September 14, 2019).

<sup>115</sup> See IDC, 2017, Data Age 2025: The Evolution of Data to Life-Critical – Don't Focus on Big Data; Focus on the Data That's Big (April 2017).

<sup>116</sup> See InsideBigData, 2017, The Exponential Growth of Data (February 16, 2017).

(RPA) has allowed the automation of simple, repetitive, and error-prone tasks. The main requirement for this is that the underlying data is available in standardized form.

In general, many steps along the financing value chain are rule-based and can therefore be easily standardized and automated. For example, entering or updating customer information or processing funding payments (i.e. when “if this, then that” rules apply). On this basis many process steps have already benefited from RPA and become less cumbersome and expensive.

However, thus far the challenge has been to standardize and automate SME financing processes where underlying data is unstructured. This applies particularly to finance analysis and funding decision processes. It has been shown that largely unharmonized balance sheets and annual financial statements in Switzerland<sup>117</sup> undermine or at least impede some of these efforts. In other words, endeavors to automate data-driven analytics within the SME financing process have so far proven to be challenging.

In spite of these challenges, it can be assumed that manual intervention in the financing process will be steadily reduced as technological possibilities expand and assist in extracting, transforming, and processing unstructured data. **We believe that in the future the question will move beyond simple standardization and automation of rule-based routine tasks within the financing process and shift towards more customization in the finance analysis and funding decision processes, thus progressing towards more individualized data-driven analytics.**

In fact, advances in Artificial Intelligence (AI) – an overarching term referring to machines capable of perception,

logic, and learning<sup>118</sup> – promise accurate predictions based on statistical models with little structure. While these models have been around for more than half a century, the enormous rise in data and computing power has changed the way AI is perceived – from rather unfruitful to extremely promising in nature.

Machine Learning (ML), a sub-program of AI that refers to the ability of machines to learn from data – i.e. to refine their responses over time based on more data input without being specifically programmed<sup>119</sup> – have experienced progress far beyond what computer scientists would have expected. Even so, artificial general intelligence – that refers to machines having human-like capacity to learn and understand intellectual tasks<sup>120</sup> – still lies in the far future and is unlikely to be achieved within the next 20 years.<sup>121</sup>

Yet, as we move forward, AI will continue to pervade many (new) fields of our daily lives as its advancements will be further spurred by increasing computing power. For the SME financing process, these developments in technologies promise maximization of efficiencies along the entire value chain – particularly in data-driven analytics. AI allows not only historical data to be put into a meaningful context but also variable conditions, such as daily shifts in data patterns to be accounted for in real time. Subsequently, with enhanced data analytics, the financing process can be expected to become increasingly forward-looking in nature.<sup>122</sup> ML will ultimately allow more sophisticated analytics. Predictive analytics, for instance, offer insights into future developments – thus, the anticipation of future scenarios – by taking data into account from any imaginable source that relates to a specific problem, including data not considered by human professionals to be relevant to the task at hand.<sup>123</sup>

117 A few informants mentioned how in Switzerland most SMEs follow OR 957ff when preparing their annual statements. This law of obligation describes that an accounting document is any written record on paper or in electronic or comparable form necessary to trace the transaction or fact on which an accounting entry is based. In the end, this leads to individual balance sheets and annual statements that can look very different from one another, thus being difficult to standardize and automate.

118 See Intel, 2018, The Many Ways to Define Artificial Intelligence (21 May 2018).

119 See HBR, 2019, The Power of Predictive IT: Improve Reliability and Prevent Outages Across Your Organization (accessed September 8, 2021).

120 See The Economist, 2020, An understanding of AI's limitations is starting to sink in: After years of hype, many people feel AI has failed to deliver, says Tim Cross (June 13, 2020).

121 See Katja Grace, John Salvatier, Allan Dafoe, Baobao Zhang, & Owain Evans, 2018, When Will AI Exceed Human Performance? Evidence from AI Experts, *Journal of Artificial Intelligence Research*, Vol. 62, pp. 729-754.

122 At the heart of both the debt and equity financing process lies the decision as to whether and on what terms capital is granted. Up to now these decisions have typically been based on historical data such as financing potential (e.g., ratio between debt and cash flow), productivity and profitability (e.g., ratio between turnover and financial commitments), financing ratio (e.g., ratio between equity and liabilities) or liquidity (The Federal Council, 2020).

123 See HBR, 2019, The Power of Predictive IT: Improve Reliability and Prevent Outages Across Your Organization (accessed September 8, 2021).



Another example that shows how costs could be reduced based on these technological advances can be seen in the legal field, **more specifically, in contract reviews. It may become possible for anyone to write a contract, with AI scanning to check for liability risks and problematic clauses or exposures, for instance, and then involving a lawyer only for finetuning and finalizing the document.** All in all, the promise of enhanced data-driven analytics is to execute processes more efficiently as well as to take more objective and better-informed decisions grounded in more facts and insights rather than based on conjectures or instinct.<sup>124/125</sup>

Taken together, we believe that boosted technological innovation and data analytics, such as enabled by AI, will advance the **finance analysis and funding decision process (e.g., creditworthiness assessment, risk scoring and risk management, contract conclusion, etc.), specifically and allow for more accurate individual real-time assessments and predictions in the future.** These tremendously promising yet far from matured technologies (in practical application) will enable better quality in data-driven decisions as they accomplish the evaluation and weighting of a greater variety of criteria and indicators than any of today's "simply" automated processes (i.e. RPA) or human brains.<sup>126</sup> When effectively harnessed, enhanced data-driven analysis will enable efficiency maximization as well as better forecasting and evaluation of different scenarios along the whole debt and equity financing value chain, thus leading to a faster funding processes with significantly lower financing and monitoring costs.

### 3.1.3 Distributed ledger technology on the rise

Distributed Ledger Technology (DLT) is on everyone's lips and frequently mentioned when there is talk of automation and process efficiency enhancement. But what actually is DLT?<sup>127</sup> In essence, DLT refers to a particular means of electronic data processing and storage and can

be compared to a network of digital notaries. In a public transaction register, all transactions are checked and verified by numerous notaries across the network. After checking and verification, the entries are stored as identical copies on different databases in a decentralized manner. The DLT enables information and associated ownership to be transferred and managed directly between different parties on the internet without the involvement of a centralized authoritative instance.<sup>128</sup>

The advantages associated with DLT are manifold but essentially boil down to the following:<sup>129</sup>

- **Transparency and immutability**

The distributed ledger allows participants in the network (unless otherwise defined) to view the entire data history. This makes the transfer of values or the exchange of information traceable throughout the entire network, thereby allowing transactions to be stored in a tamper-proof manner without requiring trust between network participants.

- **Operational efficiency**

DLT offers less complex processing of transactions with high reconciliation requirements. Especially in processes with shared responsibilities, the direct coordination between the parties involved (and their associated documentation) could automate process-intensive intermediate steps and shorten the overall processing time – and reduce costs accordingly.

- **Security and resilience**

As opposed to a centralized network, there is no single point of failure in a DLT. Put differently, there is no single critical node indispensable for the functioning of the network. The ability of other nodes to compensate for the failure of one node can be interpreted as increased resilience. If a copy of the distributed ledger is corrupted by an attacker, this can be corrected by additional copies that contain the original data. As such, the decentralized structure promises to increase the security of the values and information transferred in the network.

124 See The Economist (sponsored by SAS), Machine learning and artificial intelligence in a brave new world (accessed September 8, 2021).

125 The open question is likely whether AI will come up with its own new credit-rating models or whether it will simply try to predict already existing rating models (e.g., such as of Standard & Poor's, Moody's, etc.).

126 See BankingHub, 2017, Die Zukunft beginnt heute: die digitale Revolution im Kreditprozess: Zielbilder im Spannungsfeld technischer Möglichkeiten und rechtlicher Erfordernisse (August 9, 2017).

127 Refer to the info box in Section 2.4 Initial Coin Offering (ICO) for key terms and definitions relating to DLT and the blockchain.

128 See SwissBanking, 2021, Distributed Ledger Technology (accessed September 8, 2021).

129 See Deutsche Bundesbank, 2017, pp. 41/42, Monatsbericht: Distributed-Ledger-Technologien im Zahlungsverkehr und in der Wertpapierabwicklung: Potenziale und Risiken (September 2017).

#### – Independence from intermediaries

DLT enables transactions or information to be exchanged between participants without intermediation. Potentially, based on its peer-to-peer structure, DLT could eliminate the need for special systems operated by intermediaries. Intermediaries, who classically perform validation transactions, would no longer be necessary from a purely technical perspective.

#### – Automated contract processing

The automated fulfillment of contractual claims in DLT (through so-called “smart contracts” – see in Section 2.4) promises high potential for process optimization. The automated conclusion of contracts holds enormous potential for efficiency, particularly in transactions that require reconfirmations or guarantees from partners.

On account of these benefits, DLT also offers enormous potential for the entire financial industry. In particular, DLT is expected to bring advantages and increase efficiency wherever standard processes are still carried out manually and are dependent on central instances. They can be found in payment transactions, in the credit business, but also on global capital markets – i.e. in public markets but especially in private markets – that are often still characterized by dispersed and siloed networks with restricted interoperability, often requiring manual intervention when reconciling between different systems.<sup>130</sup>

Over the last decade and especially over the course of the past two to three years, DLT has increasingly found its way into our lives. However, the technology is still in its infancy when it comes to realizing its potential in SME financing. This has also become evident throughout the various conversations we had, as many informants reported that DLT-enabled solutions are often rather abstract and complex, thus not intuitively and easily transferable to one's own business context. We suggest that considerable efforts are still needed to throw light on the DLT-based threats and opportunities. While in general the reasons for engaging with DLT may appear to be more obvious for SMEs with more digitized business models, as of today SMEs with a rather traditional business model still need to obtain a better understanding of the advantage for



themselves. Thus, **the main task going forward will be to carve out economically feasible use cases, business models and services that can be realized with DLT and benefit both SMEs and their capital providers.**

#### 3.1.4 SME's business models will become more digital

Technology impacts not only the supply side of capital in the form of fintechs and enhanced data analytics but also SMEs themselves. It can be assumed that the likelihood of a company opting for a digital financing option also depends on the company's business model.

The value chain we have known for centuries is moving towards more intangibles and less tangible assets. There has been a trend of more tech-based businesses entering the market, aiming at leveraging the advantages attributed to the use of technology. This trend is also discernable for those SMEs that operate in more “traditional” fields. Physical products and services are increasingly being extended and supplemented by technologically driven solutions such as digital platforms and distribution channels. In short, along with accelerated technological progression, we expect that the SME landscape will also experience a shift towards more digitized business models, and thus to the adaption of more technologically driven financing solutions.

<sup>130</sup> See Bain & Company, 2020, For Digital Assets, Private Markets Offer the Greatest Opportunities (December 16, 2020).

This development might also be impacted by *digital natives* assuming responsibility in SMEs. People born after 1980 are commonly considered digital natives, as they are the first generation that has grown up with the new technologies of the digital age, thus having been in close contact with computers, the internet, and mobile phones from an early age. In the coming years, more and more “true” digital natives will transition into SME management or have recently already done so. As these people are more likely to be open to and to have a greater understanding of digital technologies, digital financing solutions might gain in importance in the coming years.

At the same time, however, it is important to note that the shift towards new business models may also result in lower average capital requirements. Today, **business models can be executed at only a fraction of the cost compared to what was needed two decades ago**. As such, given that more financing channels, such as online-based alternative forms of financing, will be able to cover the “smaller” needs of SMEs for capital, it will become increasingly important for the different financing providers to effectively communicate and establish other benefits alongside merely “capital raising” – such as **increasing awareness and visibility of as well as investor trust in a company/brand in the case of an IPO**.

## 3.2 Non-tech drivers impacting SME financing

Alongside tech drivers, there are also a number of other factors and trends that will impact SME financing. We outline the most important ones: First, low interest rates; second, pecking order of financing; third, financial skills gap; regulation; and lastly, sustainability.

### 3.2.1 Low interest rates may become the new normal

Interest rates are currently at a historically low level and there are no indications that this will change in the near future. Because inflation is low, not only nominal but also real interest rates are low. The reasons for this historically low level of interest rates can be found in both expansionary monetary policy of the recent decade, but also in changes of economic fundamentals, most importantly demographic changes. The age structure of the population is important because different age groups save different shares of their income which impacts the supply of capital and, hereby, interest rates. Specifically, the high proportion of middle-aged people (40–64 years old), who typically save more than other age groups, has negatively impacted real interest rates.<sup>131</sup>

As a result of these low interest rates, companies in Switzerland and in other countries have expanded their investment plans, as even projects with a lower return become profitable. SMEs are more prone to changes in interest rates because they are more likely to be impacted by financial constraints. In recent years, these firms profited the most from low interest rates.<sup>132</sup>

Obviously, how interest rates will develop in the future is unknown. Real interest rates have been declining for more than thirty years. While monetary policy might become more restrictive in the medium term, other factors that have contributed to the decline in interest rates, such as demographic factors, will not change much and therefore will not contribute to a renewed increase in interest rates. Some academics therefore argue that low interest rates are here to stay and represent the “new normal”.<sup>133</sup> Thus, **it is likely that debt financing will continue to be available at low cost, which will make other forms of financing comparatively less attractive**.

<sup>131</sup> See Reto Föllmi, Niklas Isaak, Philipp Jäger, Torsten Schmidt, & Pascal Seiler, 2021, Ursachen und Wirkungen der Tiefzinsphase – Eine empirische Analyse mit Mikro- und Makrodaten, Grundlagen für die Wirtschaftspolitik, Nr. 26., Staatssekretariat für Wirtschaft SECO, Bern, Switzerland.

<sup>132</sup> See Christian Eufinger, Andrej Gill, Yann Girard, Florian Hett, & Tobias Waldenmaier, 2021, The impact of an interest rate cut on corporate activities in a low interest rate environment, Grundlagen für die Wirtschaftspolitik, Nr. 27, State Secretariat for Economic Affairs SECO, Bern, Switzerland.

<sup>133</sup> See Reto Föllmi, Niklas Isaak, Philipp Jäger, Torsten Schmidt, & Pascal Seiler, 2021, Ursachen und Wirkungen der Tiefzinsphase – Eine empirische Analyse mit Mikro- und Makrodaten, Grundlagen für die Wirtschaftspolitik, Nr. 26., Staatssekretariat für Wirtschaft SECO, Bern, Switzerland.

### 3.2.2 Pecking order of financing remains important

As outlined earlier in this white paper (see Section 1.3), entrepreneurs have a preference ranking concerning different forms of financing. Because of information asymmetries and adverse selection effects, entrepreneurs expect that external investors will be willing to invest into their company only if they are able to charge a premium and obtain certain control rights. Thus, entrepreneurs perceive external financing relatively costly for them and therefore prefer internal forms of financing.

This is reflected in the prevailing bootstrapping mentality and the widespread use of own funds in most SMEs. If SMEs need external financing, they typically prefer debt financing over equity financing. The current period of low interest rates has increased the attractiveness of debt financing, as outlined above, but is unlikely to have generally changed the described pecking order of financing. Thus, we assume that the preference for remaining independent and relying on own funds will also apply in the future. If external capital is necessary, debt financing is preferred over equity financing, although the latter may offer a variety of benefits for SMEs that debt does not, e.g., alongside capital, increased visibility and awareness for a company that is publicly listed.

**However, a higher preference for equity financing would generally require a fundamental cultural and institutional change, which is not foreseeable.**

### 3.2.3 Closing the financial skills gap

In the past, when it came to SME financing and its possible shortcomings, the focus of attention has usually been on the supply side. In other words, a potential financing gap has been attributed mainly to reluctance or deficiencies on the side of banks or other investors. However, in recent years, the attention has shifted more towards the demand side. Smaller SMEs typically do not employ a finance expert which is why the financial knowledge in SMEs has always been limited in comparison to larger

enterprises. SMEs are frequently unaware of the existence of alternatives to bank lending and, even if they are, they are very often unable or unwilling to comply with the requirements of professional investors.<sup>134</sup> This lack of understanding has been termed the “financial skills gap”. In other words, a significant number of SMEs do not seek the finance instruments most suited to their needs – or do not look for external financing at all, because they expect their financing request to be rejected, as in the case of “discouraged borrowers” mentioned above (see Section 2.6). The issue related to the financial skills gap was also raised several times by our informants. They claimed that many owners/managers in SMEs are not sufficiently skilled in presenting and selling their case for financing. As they further explained, many SMEs seek capital but do not understand their counterparty needs and thus do not understand what is needed to obtain funding from capital providers.

However, there are some indications that this situation will change for the better as there seems to be a growing awareness on the part of entrepreneurs and policy makers that the financial knowledge of SMEs ought to be improved. In 2015, an OECD report argued that “an increasing concern about the lack of entrepreneurial skills and capabilities and low quality of investment projects is driving actions that target the skills of existing or would-be entrepreneurs. This is all the more important in the light of the limited awareness and understanding about alternative instruments on the part of start-ups and SMEs.”<sup>135</sup>

**SMEs are frequently unaware of the existence of alternatives to bank lending and, even if they are, they are very often unable or unwilling to comply with the requirements of professional investors.**

<sup>134</sup> See Kris Boschmans & Lora Pissareva, 2018, Fostering markets for SME finance: Matching business and investor needs (February 22, 2018).

<sup>135</sup> See OECD, 2015, p. 107, New Approaches to SME and Entrepreneurship Financing: Broadening the Range of Instruments (February 2015).

Worldwide, a number of countries have adopted measures for improving the financial education of entrepreneurs and SME owners/managers. Also, as outlined above, the current generation of entrepreneurs is more tech-savvy than previous ones and should have a higher affinity to innovative digital finance solutions.

### 3.2.4 Regulation is also evolving

The area of corporate finance is subject to a number of regulations intended to ensure not only the supply of sufficient capital to the economy but also stability. For example, following the global financial crisis, the so-called Basel III framework was introduced. With the aim of bringing more resilience to the banking system, the implementation of measures such as a risk-based capital ratio made it more costly for banks to offer credits with a higher degree of risk and tightened the conditions of SME lending after

the crisis in some countries.<sup>136</sup> In Switzerland, low interest rates seem to have mitigated some of the negative effects of this financial reform.

Other developments in the corporate operating environment, such as the Swiss Act on Tax Reform and AHV financing (TRAF – see info box below), changes in corporate laws (e.g., the possibility of entirely online general meetings) and the growing importance of sustainability aspects (see Section 3.2.5) will continue to evolve and shape the SME financing landscape.

Yet, in addition to this, importantly, with technology that has enabled new alternative financing solutions to unfold and grow, new accompanying regulatory oversight is also needed. While one might regard regulation merely as a hindrance for economic actors, it is – if sensibly designed – beneficial and even necessary for all market participants.

#### INFO BOX

##### SWISS ACT ON TAX REFORM AND AHV FINANCING (TRAF)

The Swiss Act on Tax Reform and AHV Financing (TRAF) entered into force on January 1, 2020. It covers several fiscal measures to help maintain Switzerland's competitiveness as a business location in a global context. As such, TRAF marks the end of all tax regimes not in line with international standards.<sup>137</sup>

In essence, large corporate groups and SMEs will be taxed in a way which reduces the overall tax burden for SMEs. In addition, by connecting the tax reform with financing old age and survivors insurance, the Swiss population will benefit directly. In the long term, TRAF will assist in ensuring general prosperity and provide certainty as well as predictability for companies and help secure pensions.<sup>138</sup>

##### Key Tax Policy Measures<sup>139</sup>

- Introduction of patent box and special deduction for R&D costs
- Increase of the cantonal share of the direct federal taxes which can be used to reduce cantonal profit tax rates
- Limitation of the maximum relief for all new measures at cantonal level to 70%
- Adjustments to cantonal capital tax
- Introduction of a deduction for equity financing in the canton of Zurich
- Introduction of a proportionality rule under the capital contribution principle for companies listed on a Swiss stock exchange
- Increase of the partial taxation of private dividend income to 70% for federal taxes and at least 50% for cantonal and municipal taxes
- More uniform tax treatment in the event of changes in tax status, inflows and outflows of companies
- As a social compensation measure, an additional CHF 2 billion financing of old age and survivors insurance was decided by increasing the old age and survivors insurance contribution rates of employer and employee by 0.15% each

<sup>136</sup> See OECD, 2020, Financing SMEs and Entrepreneurs 2020: An OECD Scoreboard (April 22, 2020).

<sup>137</sup> See BDO Tax News, 2020, World Wide Tax News Issue 54, The Swiss tax reform (TRAF) entered into force on January 1, 2020 (March 2020).

<sup>138</sup> See BDO Switzerland, 2021, TRAF: Tax proposal 17 (accessed October 5, 2021).

<sup>139</sup> See PwC, 2021, Federal Act on Tax Reform and AHV Financing (accessed October 5, 2021).

**For instance, without regulation or industry standards, digital assets will struggle to gain acceptance from institutional investors.** These investors want to be assured that the market infrastructures that support trading in digital assets are stable. As an example of a lack of regulation, the early development in the ICO area can be cited. Here, a lack of regulation led to corrupt companies being able to carry out an ICO without investors being adequately protected. This lack of regulation is probably the reason why investors have partly lost trust in ICOs, leading to a decline in the number of ICOs in recent years. Taken together, we expect alternative forms of financing to be regulated more extensively in future, even though it is still unclear what exactly this regulation will look like.

Overall, the challenge will be to find the right level of regulatory oversight for both existing as well as new forms of financing. On the one hand, regulation should enable trust and investor protection in the system (to emerge), while at the same time not being too restrictive and hindering its formation and the unfolding of associated benefits.

### 3.2.5 Sustainability aspects will not lose relevance

As some informants highlighted, issues related to sustainability will continue to be of importance, also in the SME financing landscape. Interest among investors and other stakeholders in their invested companies' environmental as well as social and governance strategies is growing and we believe will continue to expand in importance.<sup>140</sup> This is also supported by the fact that impact investing<sup>141</sup> has gained traction in recent years for both individual as well as institutional investors.<sup>142</sup> Impact investing encompasses a wide range of investment opportunities that span different geographic regions, asset classes and sectors.



For example, financial support may reach smaller enterprises and projects for sustainable agriculture, renewable energy, environmental protection, basic education, or health. In addition to microcredits and various other forms of loans, private equity is also increasingly being used.<sup>143</sup>

Along with the rise of impact investing, we expect that related measures such as ESG ratings and reports<sup>144</sup> will become increasingly relevant for SME financing. More specifically, because more and more investors and financial portfolios are targeting investments with a positive social and environmental impact, we believe that SMEs with a high sustainability orientation might find it easier to access external financing. In fact, credit rating agencies today already factor sustainability-related factors in their credit rating analysis that can (and do) influence the creditworthiness of a rated entity.<sup>145</sup>

<sup>140</sup> See PwC, 2021, ESG reporting (accessed October 5, 2021).

<sup>141</sup> Impact investing is the term used to describe investments in companies, organizations, and funds with the specific intention of achieving measurable, positive effects on the environment or society beside a positive financial return – see Global Impact Investing Network (GIIN), 2020, What you need to know about impact investing (accessed October 5, 2021).

<sup>142</sup> See Global Impact Investing Network (GIIN), 2019, Sizing the Impact Investing Market (April 2019).

<sup>143</sup> See Gabler Wirtschaftslexikon, Impact investing (accessed October 5, 2021).

<sup>144</sup> ESG reports refer to a company's written documentation of their environmental, social and governance (ESG) impact – see PwC, 2021, ESG reporting (accessed October 5, 2021).

<sup>145</sup> See S&P Global Ratings, 2021, Essential Intelligence: ESG in Credit Rating (accessed October 5, 2021).



As a result firms that may not be as sustainability-oriented or operate in industries that score low on ratings that consider sustainability aspects might find it increasingly difficult to access financing. In the most extreme cases, some investors may not be able (e.g., potentially because of regulatory requirements) or willing (e.g., because of investors' intrinsic motivation) to offer funding. With this said, it is also conceivable that accentuated efforts in this direction may also increasingly impact listed companies and potential IPO candidates. Requirements with respect to environmental, social, and/or governance could potentially lead to elevated costs and efforts for enterprises when being or getting listed – for instance, when securing the resources and the measures needed either to comply with potentially applicable sustainability-related requirements in force or to ensure the inclusion of the company's shares in certain indices. While this may be an opportunity for SMEs concerned with ESG-related questions, at the same time it may also present size-related challenges (see Section 2.6) when contrasting them with larger enterprises.

Overall, while we believe that sustainability matters will increasingly be factored in by investors and thus shape SME financing – specifically, the financing terms and conditions – more extensively in the years to come, it will be central for them to carefully review and ultimately understand the ratings they revert to in order to take sound funding decisions (e.g., which criteria are used and why?; how are the criteria operationalized and measured?; how are criteria weighted in the overall rating?). On the other hand, for sustainability ratings that reflect upon environmental, social and governance issues, it will be important to establish objective, transparent, and credit-relevant sector-based and entity-specific criteria so as to guard against inadequate or arbitrary scores, in which an enterprise may rank high in one rating and low in another.<sup>146</sup>

### 3.3 The future of SME financing: Evolution rather than revolution

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#### Technology ...

- ➔ *will lead to more digitized business models, and thus to more tech-driven financing solutions*
  - ➔ *will be of increasing importance for streamlining financing processes and for data-driven analytics*
  - ➔ *will not (fully) replace the human workforce but require a skills shift toward greater affinity for technology*
  - ➔ *will need to be vigorously linked to the physical environment to have the best of both worlds*
- 

Technology is currently the major driver of new financing solutions on the supply side and new business models on the SME side. Indisputably, technology is essential when the aim is to automate simple, repetitive tasks. Likewise, technology is indispensable when it comes to spotting meaningful patterns within large amounts of data and connecting the dots among seemingly unrelated pieces. Especially in the course of the IoT and other interconnected data sources, which have led to a massive increase in the volume of data availability, we believe that insights gained from data will become more important than ever.

However, we do not predict that technology will (fully) replace human professionals in the foreseeable future. Certainly, given the advances with RPA, many rule-based routine jobs in the financing process that used to be carried out manually have begun to be automated. However, within the context of data-driven analytics, the area we consider of greatest potential, the configuration and maintenance of ML, for instance, requires human understanding and guidance. More specifically, it is about the *deliberate human* selection of a fitting algorithm for the problem to be solved, setting up an algorithm for best performance, refinement of the data basis to be processed, and ultimately – and most importantly – making sense of the predictions resulting from the models.<sup>147</sup> With this in mind, one of the main issues with ML models has been the interpretability of its predictions.

<sup>146</sup> See Handelszeitung, 2021, ESG-Anlagen: Ökologie, Soziales und Governance ist nicht dasselbe (January 22, 2021).

<sup>147</sup> See The Economist (sponsored by SAS), Machine learning and artificial intelligence in a brave new world (accessed September 8, 2021).

**It is about the *deliberate human* selection of a fitting algorithm for the problem to be solved, setting up an algorithm for best performance, refinement of the data basis to be processed, and ultimately – and most importantly – making sense of the predictions resulting from the models.**

Thus, while ML may still yield highly accurate models, the logics of how the prediction comes about must be understood and explainable.<sup>148</sup>

Taken together, while in the past many routine tasks have begun to be automated, the SME financing process in its entirety is – for today's technological state of the art – still too complex. There are still decisions throughout the financing process that cannot (yet) be taken by any automated process or "intelligent" algorithm. For example, even if the data per se may recommend financing, the management team requesting funding may not convey the ability and trustworthiness its data suggests. As such, less number oriented, non-financial factors and the use of tacit knowledge that have thus far traditionally also been part of the financing process should remain in the hands of human professionals. Given the complexity around SMEs financing and the enterprise needs, we therefore believe that – in the foreseeable future – individual and tailor-made advisory will continue to be a key element of the SME financing process.

And despite its considerable progress and promising prospects, it should be mentioned that today AI still lacks any reliable concepts of morality and ethics. This has been the sole preserve of human beings, and – as we firmly believe – will remain of great importance in the financing process. As of today, technology may still be unjustifiably discriminatory given that the data used to train algorithms can be biased.

#### INFO BOX

##### **TECHNOLOGY IS NOT A NO-BRAINER – IT TAKES A CLEAR STRATEGY TO BENEFIT**

Just because technology is often associated with many positive attributes (and frequently accompanied by buzzwords with a good sound), it does not mean that technology adds value per se. Technology needs to be used wisely, thus with a clear plan in mind. Essential questions like: *What is the status quo? What challenges am I looking to tackle? What have I struggled with thus far in addressing this challenge?* should be posed on the basis of a data strategy.

In other words, to benefit to the best possible degree, it takes more than the investment into technology. Even if technology promises many positive outcomes, technology adopters – like financing providers – need to be very clear as to what problems they are trying to solve and which step along the financing value chain has the potential of being carried out more efficiently.

*"Businesses may want to jump on the AI bandwagon because it's such a hot topic, but they have to identify what they want to do with it. (...) AI requires a strategy with clearly defined tactical steps to successfully implement that larger plan. AI can provide valuable insights, but what you do with that information still requires human direction."* – Mary Beth Ainsworth, Global Product Marketing Manager of artificial intelligence and text analytics at SAS<sup>149</sup>

In conclusion, we suggest that the entire SME financing landscape is currently experiencing and will continue to undergo an evolutionary development rather than being disrupted by a revolutionary innovation of any type in the next few years. While fintechs, for example, have not (yet?) brought about the much-acclaimed disruption in the market, they have opened up a whole range of new opportunities. However, these opportunities are slowly unfolding, evolving, and maturing.

We predict that the financing players (and SMEs) who understand how to build a value proposition by combining the best of both worlds – the digital and the physical – will have a competitive edge and dominate the SME (financing) landscape. This bottom line is that the adequate

<sup>148</sup> See Xolani Dastile, Turgay Celik, & Moshe Potsane, 2020, Statistical and machine learning models in credit scoring: A systematic literature survey, *Applied Soft Computing*, Vol. 91, pp. 1–21.

<sup>149</sup> See The Economist (sponsored by SAS), Machine learning and artificial intelligence in a brave new world (accessed September 8, 2021).



and purposeful use of technology (by human beings) will allow more flexible financing terms at lower costs, more diverse product and service offerings, an accelerated financing process, and more transparency throughout it. In short, the whole process will become much more efficient.

As straightforward as this may appear to be, for financing providers – and also SMEs – the hurdle to be taken will be to unlock which technology will be relevant to them. For instance, which technology will be most supportive in better grasping current conditions, reacting to change or disruption, or forecasting future demand patterns? Which data (out of the almost infinite amount) will be of most value to them in solving a specific problem?<sup>150</sup>

Having said this, unless decision-makers can make sense of “their” data, they will not tap into the benefits of technology, one of the greatest sources of competitive advantage in the future. This is why we also believe that in the future – more than ever – securing a tech-savvy workforce that understands both the opportunities and threats technology entails will be central to any enterprise’s success. Thus, as we stated, we do not expect a complete replacement of human workforce by technology but a shift in required skills and expertise for tomorrow’s opportunities and challenges.

### 3.3.1 Debt financing: Banks will remain important, but fintechs are catching up

Overall, Switzerland has a well-established banking system which leads to debt financing generally being well covered. The large majority of SMEs (94%) that apply for bank-issued debt financing have their application approved.<sup>151</sup> However, this does not automatically imply that SMEs do not encounter difficulties in obtaining debt financing. For instance, as we have previously outlined (see Section 2.6), there is a considerable level of “discouraged borrowers” who do not apply for bank financing because they expect their application to be rejected.

Despite this, overall, most of our informants projected that banks would continue to play an important role in the future. And we also believe that this will be the case. Even if there have been observable disintermediation tendencies in the past, banks – and especially in Switzerland, where the financial landscape is greatly shaped by them – currently typically still have a major competitive advantage over competitors and incumbents, an existing customer base with long-lasting relationships.

That said, however, we also agree with what most interviewees reported, namely, that banks and other traditional financing institutions must not rest on their laurels.

<sup>150</sup> See The Economist Intelligence Unit, 2021, The lynchpin of competitive advantage (accessed September 8, 2021).

<sup>151</sup> See SECO / IFZ, 2017, Studie zur Finanzierung der KMU in der Schweiz 2016 (June 2017).

This also resonates with latest statistics: As we outlined earlier in this white paper (see Section 2.3), there has been a growing number of (alternative) financing players in the market, most of which seek to serve the SME market specifically. For instance, more and more alternative debt providers or online financing platforms that operate as intermediaries between SMEs and investors have started to enter the market. These financing providers use technology-based solutions to offer specialized and particularly SME-oriented financial services.

Thus, even if we do not expect banks to become obsolete in the near future, they will continue to be increasingly challenged by alternative financing providers, and eventually also lose market share if they choose to maintain the status quo. As such, banks – just as all the other players in the financial market – must define how they want to participate and strategically position themselves with advancing technology such as DLT or AI. In other words, just as the business environment is changing, banks must also rethink the way they want to operate in the future. Recently this has become even more of a heavily debated question with initiatives within the global financial sectors like open banking and the revised Payment Services Directive (PSD2).<sup>152</sup> Impending changes through these initiatives will lead to the availability of credit-related data, thereby enabling enhanced data analytics and a level playing field between banks and fintechs.<sup>153</sup>

Overall, as argued in a recent IFZ study,<sup>154</sup> we believe that an alternative market that continues to develop will open up opportunities and lead to shifts in both the demand and supply side of the debt financing sphere. On the supply side we expect that platforms will increasingly allow the involvement of funds and institutional investors. This will lead to more differentiation given that capital providers with diverse risk appetite and regulatory preconditions can participate in the debt financing market. On the demand side, in turn, this will result in two trends. First,

**Just as the business environment is changing, banks must also rethink the way they want to operate in the future. Recently this has become even more of a heavily debated question with initiatives within the global financial sectors like open banking and the revised Payment Services Directive (PSD2).**

funding can be sliced into different risk tranches which will ultimately lead to the availability of additional capital. Second, alternative finance providers may fill the gap for those SMEs which today struggle to obtain financing from banks.

Taken together, in the future business models could emerge combining the advantages of traditional bank financing with the benefits of alternative forms of financing. Banks may thus continue to provide advisory while the funding will originate from multiple investors and be facilitated over online platforms.

### 3.3.2 Equity financing: Equity on the rise – What's in it for SMEs?

As a result of a strong banking landscape and public equities market, in the past the private equity domain has lagged somewhat in Switzerland, compared to other economies like the UK, which have strong private markets, but a less vigorous banking system in comparison to Switzerland. However, today the situation is changing.

<sup>152</sup> In essence, open banking describes the process of using an Application Programming Interface (API) to make consumer financial data available for third parties, thus, allowing them to develop and offer their own financial products (TechCrunch, 2021). PSD2 requires banks in Europe to share financial information with third parties. The goal is to “open up payment markets to new entrants leading to more competition, greater choice and better process for consumers” (see Eur-Lex, 2019, Directive EU 2015/2366). At present, the UK, EU, and Australia are pioneers in the space, meaning that they have regulated open banking environments. In Switzerland, by contrast, the Swiss Bankers Association declined a proposal for PSD2 to be implemented (see Swisslinx, 2020, What impact will open banking have in Switzerland? (July 21, 2020)). Currently, Switzerland still has an unregulated environment, but with evolving open APIs and standards (see Open Banking Report, 2019, Insights into the Global Open Banking Landscape (September 2019)).

<sup>153</sup> See Roland Berger, 2021, The future of SME lending: The role of digital platforms and opportunities for the future (March 2021).

<sup>154</sup> See IFZ, 2019, Unternehmensfinanzierung mit Private Debt in der Schweiz (June 17, 2019).



As various informants pointed out, and as the presented figures in this white paper also showed, along with the industry's overall expansion, private equity has also been experiencing an upswing in Switzerland. Not only is there a trend towards more venture capital (in volume and financing rounds), but there are also more privately placed investments in the later stages of enterprises.

In this context, an informant also mentioned that in the private equity industry patterns have been emerging indicating that there is an increasing capital commitment over a longer period of time. In fact, non-buyout private equity classes or long-hold funds, for instance, have been rapidly growing in the past while the share of classic buyout funds in private equity have been dwindling.

While in 2010, buyout funds held 62% of global private equity assets under management, in 2020 the figure had dropped to 41%. However, it is important to note that even today buyout is still the domain's single largest category, thereby recording activities at historically high valuations.<sup>155</sup>

Nonetheless, these observable shifts and developments raise the question regarding the relevance of getting publicly listed in the future. In fact, compared to 1996, the number of listed enterprises on stock exchanges has halved, while IPOs have dropped by 85%.<sup>156/157</sup> Thus, if enterprises can obtain the capital they need on a private path (or via a SPAC), they could potentially circumvent the IPO process for attracting external capital. This may be especially beneficial for SMEs that typically refrain from listing on stock exchanges as compliance with listing requirements are often considered to be time-consuming and expensive.<sup>158</sup> However, as mentioned earlier, it is important to note that IPOs also generate other benefits in addition to attracting external capital. These include improved transparency and credibility among investors, and thus also the possibility of raising additional capital.

Also, as the private equity domain continues to grow, public markets may still represent a key exit path for private equity investors.<sup>159</sup>

The bottom line is that whether privately or publicly held, many informants concluded that capital is abundant. Thus, it is not a question of the need for more capital. What the market is looking for are new paths to identify and create value.<sup>160</sup> In the wake of this, as we also outlined within the debt financing sphere, alternative financing players have also started to gain traction in the equity space even though they are still insignificant in volume in an overall perspective. However, many of these (mostly) new financing providers understand SME challenges in attracting external capital and therefore aim at serving them specifically, usually by drawing on technology-based solutions to make many of the inefficient processes of capital markets – predominantly private markets – more productive and accessible to investors and SMEs alike.

However, the most fundamental question remains: How willing, and well-equipped are SMEs today and will they be in the future to access equity financing? Typically, SMEs prefer to run their business with internal financing, and if this is not possible, they access debt financing. Getting external ownership on board with equity financing is typically not preferred and statistically also not widespread. In the past and still today, keeping independence is regarded as a key issue to many SMEs. For example, only a small minority of entrepreneurs sees the advantage of allowing outside equity investments into the company to achieve growth. This has also been confirmed in all conversations we had. Thus, the extent to which SMEs can and will benefit from the recent developments in the equity financing space is still open.

The following chapter discusses opportunities in respect to debt and equity SME financing.

155 See Bain & Company, 2021, Global Private Equity Report 2021 (accessed September 8, 2021).

156 See spacinsider.com/stats/ and Bain & Company, 2021, Global Private Equity Report 2021 (accessed September 8, 2021).

157 A possible explanation for this decline is that the biggest (tech) companies around the world – most of which are publicly listed – have had a tendency to acquire other players in the market before they go public (e.g., Instagram or WhatsApp). Also, the rise in SPAC activities may further add to this development in the future.

158 Private equity asset value has grown four times faster than public equity market capitalization over the past two decades. In other words, private equity net asset value growth outpaced total market cap of listed companies (Bain & Company, 2020; McKinsey, 2021).

159 See PwC / The Economist Intelligence Unit, 2019, Capital Markets in 2030: The future of equity capital markets (March 2019).

160 See Bain & Company, 2021, Global Private Equity Report 2021 (accessed September 8, 2021).

# 4





# Opportunities: How to Ride the Wave of Emerging Trends

Technological advances are heavily shaping the entire SME landscape. New business models that are less capital intensive as well as market participant endeavors to streamline processes and make the production of goods and services less costly are intensifying competition and reducing margins for SMEs. Therefore in today's fast-paced and dynamic environment what SMEs need more than ever are tailor-made financing solutions. This includes access to financing in a simple, fast, and inexpensive manner.

As indicated in this study, fintech innovations have paved the way for addressing these issues and further tapping into the benefits of enhanced technology use. Alternative online financing solutions are an example of how technological innovation can be of value in the SME financing process. These solutions have made inroads into both debt and equity financing.

Despite these developments, the following questions for the future remain: How willing will SMEs be to access debt or equity financing given their general preference for internal financing? To what extent will technology cause a realignment of SME financing preferences? What are the levers that may cause such a shift?

Reflecting upon these questions, the next sections discuss potential business opportunities. In doing so, we make no claim to exhaustive coverage, but focus on avenues we deem to be most promising.

## 4.1 Debt financing: Improving SME's digital customer journey and onboarding discouraged borrowers

As previously described (see Section 3.3.1), we believe that banks will remain central players within the context of SME debt financing. Most SMEs have their credit applications(s) approved; a major financing gap does not seem to exist. However, there are also a considerable number of discouraged borrowers that are not well served today. To onboard them (and also avoid losing current borrowers), banks will need to further strengthen one of their main assets: Customer relationships.

As we have learnt from our informants, SMEs expect speed, transparency, and simplicity throughout the entire (bank) financing process. Today, however, SMEs often have to wait several days (if not weeks or months) until they obtain a credit decision from banks. **Also, in Switzerland, for instance, seven out of ten SMEs with an approved credit do not know their credit rating.**<sup>161/162</sup> This is evidence of the lack of transparency that still exists throughout the financing process. And lastly, data and documentation SMEs already have in digital form often need to be submitted physically; only part of the client's data already available at the bank is used today.<sup>163</sup> This shows that there are still media disruptions and inefficiencies along the value chain. Thus, despite digital progress, the financing process has not yet been set up seamlessly.

<sup>161</sup> See SECO / IFZ, 2017, Studie zur Finanzierung der KMU in der Schweiz 2016 (June 2017).

<sup>162</sup> The proportion of SMEs with knowledge of the rating increases with company size (see SECO / IFZ, 2017; reference above).

<sup>163</sup> IBM, 2021, Intelligent Workflows in Banking: End-to-End Digitalisierung der Kreditprozesse schafft Mehrwert für Unternehmenskunden (January 28, 2021).

## INFO BOX

**SME BANKING HAS STILL ROOM FOR IMPROVEMENT IN TECHNOLOGY ADAPTION**

A recent IFC study<sup>164</sup>, where a total of 114 heads of SME banking units from across the world were surveyed, showed that technology adoption, more specifically the digitization of bank processes, was cited as a significant challenge within the SME banking landscape (p. 10).

"Many banks noted insufficient capacity to execute on digital processes and channels, which limited process efficiency. Respondents said to fully reach the SME market they need to identify "better digitization strategies" through technology adoption. Banks are focusing on digitizing processes such as the risk assessment process, where banks can pull data from other sources to enhance their own information, as well as distribution channels, which allow financial institutions to scale their customer numbers quickly.

Banks are focused on the digitization of products and services offered to SMEs, which requires efficient implementation of technology tools. Many respondents noted the availability of experienced developers to design these platforms is limited, and banks have struggled to find the correct resources, in terms of people with the correct skills to design and build platforms. Another issue that respondents highlighted in the survey is sourcing the capital required for the upgrading of banks' infrastructure and the digitization of products.

Banks are exploring opportunities for digital partnerships and learning how to engage Fintechs. Most respondents citing technology adoption challenges indicated that they do not have the adequate IT infrastructure to digitize processes and product offerings. Many said they are exploring Fintechs to provide a platform where banks can use existing digital infrastructure to perform processes such as risk assessments more efficiently or leverage data that Fintechs already have."

On this basis, there is an opportunity for banks by taking on a holistic perspective on the financing process – from initiation to authorization and processing. **Here the key will be in streamlining processes and specifically in refining the quality of each interaction with SMEs throughout the process.** Put differently, we believe that banks' adoption of new technologies along the entire financing value chain will result in SMEs benefiting from better customer service as part of an improved customer journey.

On that note, discouraged borrowers could be picked up at the very beginning of the process by being offered a better digital customer experience. SMEs need to recognize that their individual needs and requirements are understood from the very first point of contact. However, this presupposes a standardized data repository and an optimized customer front end.<sup>165</sup>

In fact, a few informants claimed that particularly in larger banks, getting in touch with the right person for a particular issue can be somewhat difficult. Often inquiries can be sent only to generic mailboxes with no identifiable responsibilities or contact persons. For some SMEs, they explained, this even made them think that they are of no interest to banks. This can of course be daunting when thinking about applying for credit financing. **Introducing more digital channels for corporate clients will assist banks in becoming more easily approachable and accessible for SMEs.**

One opportunity we discussed with several informants could be to incentivize discouraged borrowers by setting up a quick preliminary online credit check based on a few simple key questions and metrics. The brief questionnaire could serve as entry point into the process, at the end of which the client may obtain a preliminary non-binding result, further information on the financing process and on how to proceed, including contact details.

Even though not much is known about discouraged borrowers except that they do not apply because they fear their application will not be approved, studies suggest

**SMEs need to recognize that their individual needs and requirements are understood from the very first point of contact.**

<sup>164</sup> See IFC, 2019, Banking on SMEs - Trends and Challenges (June 2019).

<sup>165</sup> See Roland Berger, 2021, The future of SME lending: The role of digital platforms and opportunities for the future (March 2021).



that many of them would in fact obtain funding if they applied.<sup>166</sup> However, a lack of understanding or a misperception of a seemingly onerous process and what is required in it, seems to hold them back from applying. Thus, we suggest that smoothing the entire process by taking away what appears to be cumbersome can help encourage new SMEs to engage with banks more actively.

Once the process is kicked off, the journey should continue to take place digitally: Processes that are predominantly paper-based, where files move from one process step to another in hard copy binders, and in which the application data are never recorded in the corresponding system are largely incompatible with effective data-driven credit process management.<sup>167</sup> Required documents and communication should therefore continue to be facilitated digitally.

Overall, we believe that setting up a technology-supported platform for communication and decisions, further information and contact details will benefit both banks as well as (discouraged) SMEs. While banks can streamline their processes and reduce costs, they may also encourage those who have previously refrained from applying for a credit in spite of their need for it. Naturally, it would also provide added value for existing corporate clients.

However, a better digital customer journey for corporate clients is only one specific piece of the entire puzzle to be solved in the future. Going forward the general question for banks will be which steps along the debt financing process will remain in their hands – and which will be moved to external service providers. As we outlined, alternative financing solutions, such as those offered by fintechs, are on the rise and provide solutions that maximize value chain efficiencies (e.g., enhanced data-driven analysis, assessment of creditworthiness or credit risk scoring). We expect that these alternatives will continue to gain traction. In view of these developments, banks clearly need to think about their own technology take-up, thus, how they want to position themselves and shape their own future. Many banks have recognized the necessity for change as well as the opportunities associated with technology-driven solutions and started to build up their own technology expertise – either by developing in-house, partnering with, or acquiring existing fintech solutions (e.g., white label solutions for client onboarding or for the credit analysis process).

Overall, we believe that the integration of more technology-enabled solutions will lead to greater transparency for capital providers and SMEs alike. Put differently, it will help tackling what many actors on both sides of the SME

<sup>166</sup> See e.g., Rebel A. Cole & Tatyana Sokolyk, 2016, Who Needs Credit and Who Gets Credit? Evidence from the Surveys of Small Business Finances, *Journal of Financial Stability*, Vol. 24, pp. 40–60.

<sup>167</sup> See Growth Cap, 2015, Conducting a SME Credit Risk Process Review (December 2015).

financing equation reported as lacking – an understanding of what is needed to get funded. Thus – in more technical terminology – we expect a considerable reduction of information asymmetries enabled by digital solutions. Focusing on technology will help make the financing process more convenient and user-friendly; it will help SMEs to understand at all the times where along the financing process they stand and why.<sup>168</sup> More specifically, the advantages will lie not only in the speed and efficiency of processing credit applications, but also in the quality and traceability of the decisions taken.<sup>169</sup>

## 4.2 Equity financing: Shifting the investment threshold to the left

What most informants agreed upon throughout the conversations we had is that liquidity is not a problem due to the fact – articulated by many – that “capital is out there”. In fact, especially during the current periods of low interest rates, investors seek yields and diversification in their portfolios and may also be on the outlook for new investing opportunities.

Within the SME financing landscape, we spot potential in one specific area, namely, to target those SMEs that:

- are too far off the start-up / establishment phase for most venture capitalists,
- are too big for alternative financing solutions over platforms,<sup>170</sup>
- do not get bank financing (in full), and
- are too small scaled for most traditional PE investors.

Several informants referred to them as “the neglected ones”. One informant explicitly called this point along the growth curve of SMEs (see Figure 1) “the Death Valley”.

In acknowledgment of this, we propose that trying to shift the investment threshold (see Figure 1) more to the left may represent an untapped source of potential for investors and SMEs alike. In the following, we present several opportunities that may help to better serve SMEs in equity financing.

### 4.2.1 Private equity: Tech to bridge the gap between venture capital and private equity?

While both venture capitalists and private equity investors invest in privately held enterprises, the former typically do so in earlier stage businesses and the latter in more mature ones. However, today, there is a group of enterprises – more specifically SMEs – along the growth curve that could be better served. These enterprises are typically too far off for many venture capitalists, yet too immature and small-scaled for many private equity investors to be of interest. However, advances in technology could bridge this gap.

#### 4.2.1.1 Tokenization: Listing directly on public blockchains

An opportunity to bring the efficiencies of public equity markets to unlisted SMEs and to give them increased access to the capital market may be so-called tokenization. Tokenization refers to the digital replication of tangible (e.g., machinery) or intangible assets (e.g., software) and is enabled by DLT. More specifically, assets of any type can be securitized by means of the blockchain technology and represented as a digital asset by a token. Each token has a fixed value, can be endowed with predefined rights and obligations, and managed through a smart contract.<sup>171</sup>

The tokenization of securities is referred to as a Security Token Offering (STO)<sup>172</sup> and offers the manifold advantages

168 See Roland Berger, 2021, The future of SME lending: The role of digital platforms and opportunities for the future (March 2021).

169 See BankingHub, 2017, Die Zukunft beginnt heute: die digitale Revolution im Kreditprozess: Zielbilder im Spannungsfeld technischer Möglichkeiten und rechtlicher Erfordernisse (August 9, 2017).

170 While there are online-based platforms that carry out significantly larger transactions, the individual transaction volumes of SME loans in Switzerland are around CHF 300,000 to CHF 500,000 – see IFZ, 2019, Unternehmensfinanzierung mit Private Debt in der Schweiz (June 17, 2019) and IFZ, 2020, Crowdfunding Monitor Switzerland 2020 (June 3, 2020).

171 See Maerki Baumann & Co., 2020, Tokenization: from material to digital (October 1, 2020).

172 We mainly focus on the tokenization of equity. However, any type of security or asset can theoretically be tokenized. As such, the tokenization of bonds, for instance, may also be conceivable and thus of interest to SMEs in the future.

that are enabled by its underlying blockchain technology. For instance, because it is based on blockchain technology, many intermediaries, such as banks or law firms that are central in more traditional forms of security issuance, become – theoretically, from a purely technological stance – obsolete (or at least less relevant). Also, because tokenization is not dependent on a single central authoritative instance, trading execution on the blockchain is not bound to any specific time frame, thereby allowing more flexibility for issuers and investors. In short, tokenization can lead to more efficiencies as both administration and transactional costs decrease significantly. Figure 13 shows an example of the tokenization process of an SME's equity.

Opportunities within the context of SME equity financing and tokenization are twofold. On the capital supply side, tokenization offers promising benefits based on the fact that tokens can be divided into small fractions. Investors that would have been previously excluded – as the asset class may have previously been the exclusive preserve of institutional investors or (ultra) high net worth individuals – could participate in trading with lower volume investments. In other words, the investor base becomes potentially larger.<sup>173</sup>

On the demand side, in turn, tokenization offers advantages based on its decentralized peer-to-peer nature. By disintermediating previously important key players such

**Figure 13:** Process of SME's tokenization of equity



Source: Own representation adapted from Portagon (2021)<sup>174</sup>

<sup>173</sup> However, it is important to note that this does not automatically translate into more liquidity – just the potential of more liquidity. Both investors and SMEs must be willing to participate in such an environment. If they do, liquidity may increase.

<sup>174</sup> See Portagon, 2021, Tokenisierung: Digitalisierung von Vermögenswerten (February 2, 2021).



as investment banks in public listings, the fees and associated costs of equity issuance could be reduced significantly. In addition, any related administration costs may be lowered by using smart contracts, for instance, for the automated payment of interest or dividends.

Taken together, tokenization of privately held equities may be a valuable method by which SMEs can raise capital. Tokenization can lower both the hurdles for investors to participate but also the associated expenses for issuers. By listing directly on public blockchains – as opposed to issuing on a centralized exchange with a single central security depository (CSD) – SMEs could potentially circumvent many costly process steps inherent to going public by conventional routes. Investors, on the other hand, could trade on multiple decentralized exchanges round the clock.

Yet even if the idea of issuing equity shares directly on a public blockchain is very promising on paper – and especially so for earlier staged growth SMEs that in the past have accessed the capital markets only to a limited extent – it remains to be seen how investor and SME demand for this form of financing will develop. In the end, we do not believe that tokenization and the direct listing on a public blockchain will establish itself as a true alternative to more conventional ways of listing in the next few years.

In order for shares to be issued directly on the blockchain, in many jurisdictions changes to securities legislation may be required. For instance, new regulatory frameworks for

disclosure and transparency may be necessary as interested investors are potentially confronted with a new class of cyber risks. As such, the described endeavors will not simply eliminate cost drivers that are also known to be part of traditional ways of getting public, such as the regulatory requirements (e.g., need for a prospectus or certain reporting requirements). All in all, given the regulatory uncertainty around tokenization on public blockchains, it can be assumed that the final enforcement and implementation will still take a considerable amount of time and will not come without any cost. Also, even if the regulatory questions are resolved at some point in the future, the big question remains as to whether more traditional trading venues like stock exchanges will become obsolete or whether the boundary between public and private shares will ultimately simply dissolve.<sup>175</sup>

Overall the tokenization of assets per se is not a panacea that will make SMEs easy or more desirable to invest in. Likewise, they will not make retail investor protection less relevant by allowing literally anyone to trade any private asset directly online.<sup>176</sup>

Lastly, we believe that even if DLT offers advantages to automate workflows and data as well as bypass intermediaries, bridging the gap between the real and the virtual world will always require connecting instances. In our view, the question then is not so much whether the intermediary will be eliminated altogether, but rather how the currently assigned roles in this space will change and what new roles will emerge.

#### INFO BOX

##### FROM INITIAL COIN OFFERINGS (ICOs) TO SECURITY TOKEN OFFERING (STOs)<sup>177</sup>

ICOs were the first blockchain-based forms of financing. However, ICOs are not securities, thus do not entail any equity shares, interest, or dividends. Instead, in return for the capital supplied, investors receive cryptocurrencies (e.g., Bitcoin or Ethereum). In essence, coin buyers bet on a value increase associated with the cryptocurrency. However, ICOs have thus far remained largely unregulated, thereby leaving investors with little to no rights or protection and consequently also having led to abusive use of ICOs.

As a result of these insufficiencies, ICOs were followed by STOs which do entail contractual rights and obligations. A security token represents “real” and existing assets (linked to a monetary value) and associated entitlements. To this end, smart contracts are stored in the blockchain. They automatically come into effect when predefined conditions are met (e.g., execution of a payment order for dividends). Unlike an ICO, an STO is not considered a means of payment (e.g., cryptocurrency) and is thus not subject to price fluctuations.

<sup>175</sup> See WEF, 2021, Digital Assets, Distributed Ledger Technology and the Future of Capital Markets (May 2021).

<sup>176</sup> See Bain & Company, 2020, For Digital Assets, Private Markets Offer the Greatest Opportunities (December 16, 2020).

<sup>177</sup> See Portagon, 2021, Tokenisierung: Digitalisierung von Vermögenswerten (February 2, 2021).





#### 4.2.1.2 Automation and data analytics-driven enhancements

However, beside this completely new and disruptive way of raising capital, we believe – just as for the debt financing space – that technology can and will bring value to the more traditional private equity financing space by making the overall financing process more efficient using automation and, specifically, deploying data-driven analytics more extensively. According to EY,<sup>178</sup> 46% of private equity executives report that access to fine-grained data is the most important element throughout the financing process. In addition 44% suggest that a lack of confidence in information is the most important cause for the reduction of an offer or even a complete withdrawal from a deal.

However, in this respect private equity investors will need to embrace the opportunities technologies offer and refrain from a “it has worked in the past” mentality – something that this rather conservative field of business may be especially prone to. In fact, even if a large portion of private equity investors acknowledge the importance of new technologies, the reality is that many of them are still behind the curve in adopting them.<sup>179</sup>

Thus, the question for the private equity business is the same as for the debt financing sphere: How could technology, or more specifically AI, be of use to gain additional and more granular insights that allows for added value?

How can data and enhanced analytics be of relevance in identifying and evaluating potential targets? Enhanced data-processing capabilities may, for example, be of value in ultimately coming down to bringing real-time insights into the process for more accurate predictions, thus achieving more objective and less costly decisions.


However, opportunities are to be found not only as part of enhanced data analytics in the investment process. Given that the private equity domain today is still largely fragmented and thus still involves many manual processes, opportunities lie more generally in maximizing value chain efficiencies by standardizing and automating tasks. As such, the use of technology can benefit the fund administration and reporting, for instance, which still involve many manual processes. DLT, for example, could integrate directly and securely capital calls, fee settlements and reporting updates between the private equity funds and their investors. This in turn can help achieve enhanced transactional efficiency, reduced reconciliations, shortened settlement cycles and easier management of liquidity requirements. Also, it may lower the fund total expense ratios and improve investor net returns.<sup>180</sup>

In conclusion, the opportunities related to tokenization, automation, and enhanced data analytics are not ready-baked solutions but may offer fruitful avenues worth further exploring and exploiting for both SMEs and investors.

<sup>178</sup> See EY, 2019, How transaction analytics makes dealmaking better (April 29, 2019).

<sup>179</sup> See London Business School, 2019, How private equity firms are creating value through digital transformation (August 7, 2019).

<sup>180</sup> See footnote above.



**We work with a lot of firms where they have two or three analysts working on just getting reports from every portfolio. They have 40 tabs in an Excel spreadsheet with at least 10 to 15 metrics that they want to track. Yes, you can spend \$150,000 on an analyst to create that report and it will go out every Friday, every month end, every quarter, and at year-end. But by the time the data comes to me, is it real time and totally accurate? The technology and systems are now there and easily available to make this happen in real time with no errors. Now it is becoming cheaper, quicker, faster to deploy and I think that's what is driving a lot more adoption."**

**– Rahul Puri**

Global Head – M&A, Private Equity & VC Practice  
NetSuite | Oracle<sup>181</sup>

While smaller volumes have typically been economically uninteresting for traditional private equity investors in the past because of the relatively high fixed costs involved (e.g., due diligence), the adaption of technology can help reduce associated costs of investments, thus making growth/expansion SMEs more attractive targets. Likewise, a more extensive use of technology in private equity may help investors obtain improved forecasting capabilities, which in turn can reduce risks accordingly, and enable investors to place their capital in longer-term investment vehicles. This may offer advantages for investors and SMEs alike. While the former group may benefit from an opportunity to generate a higher return on the capital committed over the long run, the latter group may have access to “patient” capital whose aim is not to be divested within three to five years.<sup>182</sup> The issue of bringing external ownership may therefore become less pronounced for SMEs as the common goal is not to exit the enterprise profitably as soon as possible but to develop a sustainable business over the long haul.

Moreover, if the private equity industry becomes more open to smaller volume investments as technology-enabled solutions help opening the asset class to a larger investor base, SMEs may also face less issues regarding their quest for remaining independent. Unlike traditional private equity investments, the capital provided may not always entail decisive voting rights as the investment will typically not be about acquiring majority stakes. In other words, SMEs may potentially receive increasing access to capital from a broader investor base with allocated minority stakes, which in turn will allow them to continue being in the driving seat with their business.

Taken together, technology can help make private equity investment processes more efficient and less costly, thereby serving as a key supporting tool when bridging the gap between venture capital and private equity, and thus bringing “the Death Valley” back to life.

<sup>181</sup> See Netsuite, 2018, Roundtable: The role of technology in the evolution of the private equity industry (accessed September 8, 2021).

<sup>182</sup> See Bain & Company, 2018, Spotlight on Long-Hold Funds: Opening Up New Horizons (accessed September 8, 2021).



#### 4.2.2 Public equity: Too big for SMEs? Getting smaller enterprises on board

Listings on public stock exchanges represent another way of attracting external sources of financing. However, as we have learnt in this white paper, SMEs have been largely absent from public markets. Especially size-related disadvantages can be mentioned as a factor holding back SMEs from listing on stock exchanges. Overall, not only getting but also remaining listed is considered time-consuming and expensive by many SMEs.

##### 4.2.2.1 Dedicated SME Stock Exchanges

While accessing finance from outside investors represents the prime reason for SMEs becoming listed, other factors also often play a role. Improved creditworthiness and the possibility of opening up other sources of finance, such as straight debt, in addition to non-monetary factors such as brand recognition and more visibility are considered key benefits for enterprises going public.<sup>183</sup>

However, SMEs often baulk at the cost and burden of an IPO: For many SMEs the path to going public is considered too resource intensive. Generally, as some informants also explained, compliance with listing requirements is frequently regarded as laborious and costly even though, as we mentioned earlier (see Section 2.2.2.1), this may also be a misperception given that (ongoing) costs are often lower than generally believed.<sup>184</sup> Yet, research from PwC and The Economist Intelligence Unit<sup>185</sup> also points out that the regulatory burden and the cost of going and being public is a major concern, with 36% of 370 surveyed executives across the globe citing it as a cause for public equity markets declining in popularity.

In acknowledgment of this, an opportunity to give SMEs more exposure to public markets may be dedicated SME markets that cater for the special features of these enterprises. The term “SME markets” is to be understood broadly to mean a specifically designed platform, trading segment or exchange with requirements tailored to smaller, sometimes younger, firms.

<sup>183</sup> See World Federation of Exchanges & Milken Institute, 2017, Small and Medium-Sized Enterprises and SME Exchanges: A joint report of the World Federation of Exchanges the Milken Institute (July 18, 2017).

<sup>184</sup> As of 2022, for instance, purely online general meetings will be legally allowed, and as such also reduce costs of being public (i.e. the costs of having a broad set of shareholders).

<sup>185</sup> See PwC / The Economist Intelligence Unit, 2019, Capital Markets in 2030: The future of equity capital markets (March 2019).

This said, going forward, the key balancing act for such dedicated segments will be to serve the needs of SMEs, while at the same time providing transparency and rigor in investor protection. Figure 14 shows the main corner-

stones of the SME segment called “Sparks” (compared to the main market) that was recently launched in Switzerland by SIX Swiss Exchange. It also outlines the benefits of the segment for both SMEs and investors.

**Figure 14:** Example of the potential advantages of dedicated segments for SMEs

Requirement	SIX main market	Sparks (SME segment)	Benefits of Sparks for SMEs and their investors
<b>Track record</b>	>3 years (possibility of exemption)	>2 years (possibility of exemption)	– Facilitates access for younger companies
<b>Equity-capital requirement</b>	>CHF 25m	>CHF 12m	
<b>Capital-increase requirement</b>	–	>CHF 8m (none if equity capital >CHF 25m)	– Enhances the quality of peers for smaller companies
<b>Max. market capitalization at listing</b>	–	<CHF 500m	– Enhances visibility for smaller companies
<b>Max. market capitalization post listing</b>	–	<CHF 1 bn (transfer to SIX main market if average over 12-month period is higher)	– Establishes more relevant peer groups for smaller companies
<b>Freely tradable shares</b> (out of the outstanding shares)	>20%	>15%	– Increases flexibility to optimize ownership structure for younger companies
<b>Market capitalization of freely tradable shares</b>	>CHF 25m	>CHF 15m	
<b>Min. number of investors</b>	–	>50 investors	– Increases effectiveness of price formation and trade execution in shares of companies with smaller market capitalization
<b>Trading hours</b>	Opening auction at 9 am Continuous trading until 5.20 pm Closing auction and TAL until 5.40 pm	Opening auction at 3 pm Continuous trading until 5.20 pm Closing auction and TAL until 5.40 pm	
– <b>Same prospectus requirements</b> (incl. same content) – <b>Same regulatory oversight</b> – <b>Same reporting requirements:</b> Annual (audited) and semi-annual (Unaudited) financial reporting; Corporate governance reporting (for Sparks issuers, possibility of reporting via a special Corporate Governance reporting template); Disclosure of shareholdings, management transactions and events that could affect the share price (ad hoc publicity).			– Fast and efficient access to capital thanks to listing status and to high investor protection, transparency and scrutiny – Funding flexibility thanks to follow-on capital raises and access to debt capital markets

All listing requirements must be fulfilled upon listing (on the first day of trading)

Source: SIX (2021)<sup>186</sup>

186 See SIX, 2021, Sparks the SME Stock Exchange (accessed September 8, 2021).



Apart from this example, more generally, stock exchanges worldwide have recognized the need of targeting SMEs more specifically and started to increasingly engage in market outreach over the last few years with dedicated support to raise the attractiveness of being listed. Figure 15 provides the latest statistics on key European SME markets.

**Figure 15:** Statistics on key European SME markets

Exchange	Market	# of companies listed	Market capitalization (EUR m)
<b>Athens Stock Exchange</b>	Alternative Market (EN.A)	9	154.3
<b>BME</b>	BME Growth	117	16,520.0
<b>Deutsche Börse</b>	Scale	47	10,784.5
<b>Euronext</b>	Euronext Growth	356	42,149.0
<b>Luxembourg Stock Exchange</b>	Euro MTF	105	2,007.1
<b>Nasdaq Nordics &amp; Baltics</b>	First North Alternative Market	408	52,688.0
<b>Prague Stock Exchange</b>	START	8	266.9
<b>Vienna Stock Exchange</b>	Dritter Markt (MTF)	17	6,717.1
<b>Warsaw Stock Exchange</b>	NewConnect	366	4,619.3
<b>London Stock Exchange Group</b>	AIM	957	156,546.6

Source: FESE / WFE Statistics (2021)<sup>187</sup>

Even though the market capitalization of most of these markets represents only a very small fraction of the capitalization of the overall stock exchange, SME markets are key to strengthening raising capital in an economy. Thus, the overall objective of these dedicated segments is to support SME growth and development.

However, beside these non-tech efforts tailored to the distinctive characteristics of SMEs, advances in technology can



also prove beneficial. More specifically, the introduction of (even) more automation and data-driven analytics on conventional exchanges could be an opportunity to make them less costly and more accessible for SMEs (e.g., promise to produce legal documentation or financial statements at lower costs) – even though we acknowledge that overall conventional public markets today are already very efficient with many well-functioning standardized processes.

#### 4.2.2.2 Digital Stock Exchanges

Another opportunity that may help lower the barriers to greater SMEs participation in the public markets may be the creation of a DLT-based end-to-end platform that allows the issuance, trading, clearing and settlement, as well as custody and asset servicing of digital securities. This can streamline many processes involved and significantly reduce associated costs.

In contrast to the opportunities outlined regarding the direct listing of securities on a public blockchain (see Section 4.2.1.1), a digital platform that covers the full securities life cycle and is provided by a central instance may allow for trading tokenized shares in a regulated environment where responsibilities and roles are more clearly defined. Specifically, the DLT may be the technology upon which the central securities depository (CSD) is maintained. Thus, while some of the current roles may still become less relevant

<sup>187</sup> See [www.fese.eu/statistics](http://www.fese.eu/statistics).



in the future, an end-to-end platform based on DLT does not automatically disintermediate all instances that today are important in conventional stock exchanges. In the SIX Digital Exchange, for example, a listing application must be submitted by a recognized representative (e.g., banks, lawyers, auditing firms, advisors and consultants).<sup>188</sup>

Overall, the advantages of digital stock exchanges lie in

- **enhanced transparency** for all players involved,
- **the potential to reduce complexity** in operations and/or operational burdens associated with reconciliation activity,
- **the potential for streamlining/automating all processes** associated with servicing security, clearing and settling and/or maintaining compliance,
- **the potential for enabling better balance sheet management** (e.g., reduced funding requirements for risk capital, clearing fund and/or settlement liquidity)
- as well as **the potential to list directly or at least have greater transparency of ownership**, without relying on additional intermediaries.<sup>189</sup>

In short, SMEs could experience a considerable reduction in the cost of capital, while still allowing them investor's reach in a regulated environment.

In spite of its promising prospects, it is worth mentioning that in consideration of the amount of remodeling involved to accomplish the promised benefits of these DLT-based solutions in public markets, the advances in this area are still in the starting blocks.<sup>190</sup> Also, a great deal of development and educational work is still necessary in order to reap the rewards of these efforts.

Along these lines it should also be mentioned that technology can help streamlining processes but – per se – will not eliminate all steps involved when going public. Regulatory and legal aspects, for instance, will continue to play a central role (e.g., for the purpose of protecting investors) which is why companies that opt for a listing on such

a path will still have to comply with certain listing rules and requirements that may involve costs of some sort.

Taken together, we believe that the path forward will be characterized by the co-existence conventional trading venues and of digital stock exchanges. Overall, the former is generally a very efficient market with systems that have been developed and continuously improved over many years (e.g., in the area of cash equity, where the execution process is already highly efficient).<sup>191</sup> As such, we expect conventional stock exchanges to continue to function well in the future and be key within public equities markets. DLT-based end-to-end platforms, on the other hand, will allow trading digitized shares and may therefore benefit particularly those that have thus far been widely excluded from the public equities markets – SME private equity shares.<sup>192</sup>

## 4.3 The long and the short: It all boils down to knowledge

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*Technology can...*

- *make financing processes more efficient (i.e. faster, more transparent and accurate, less costly)*
  - *help reduce information asymmetries on the demand and supply side; thus,*
  - *reduce SME's size-related disadvantages; however, it is*
  - *not a cure for all SME pain points.*
- 

In conclusion, if appropriately used, technology will allow more flexible financing terms at lower costs, a more diverse product and service offering, an accelerated financing process, and more transparency throughout. Yet, despite the benefits technological progress have unlocked, technology cannot and will not cure all challenges SMEs currently face in their financing.

<sup>188</sup> See SIX Exchange Regulation, 2021, Recognized Representatives (accessed October 27, 2021).

<sup>189</sup> See WEF, 2021, Digital Assets, Distributed Ledger Technology and the Future of Capital Markets (May 2021).

<sup>190</sup> See footnote above.

<sup>191</sup> Blockchain/Goldman-Sachs-report-Blockchain-Putting-Theory-into-Practice.pdf

<sup>192</sup> See Bain & Company, 2021, Global Private Equity Report 2021 (accessed September 8, 2021) and WEF, 2021, Digital Assets, Distributed Ledger Technology and the Future of Capital Markets (May 2021).

Overall, the hurdle to overcome will be to find ways in which manual, human-managed as well as technologically-driven steps along the financing process can be combined into an overarching and logical workflow to create mutual benefits for the demand as well as the supply side.

Today, from the perspective of more traditional SMEs, newly introduced finance products and services often seem to be relevant and accessible to members of an exclusive club of often larger enterprises which typically have more human and financial resources. Yet, this does not have to be the case. As we learnt in this white paper, this is often a misperception because of the lack of understanding or insufficient expertise.

However, for some the question may be how an open exchange relationship between the many actors in such an environment can unfold. We believe, for instance, based on research that is freely accessible like this white paper, that it targets forming the basis for constructive

Knowledge sharing will enhance trust and the understanding of what is needed and wanted when raising capital on both sides of the table – no matter whether it concerns more established financing instruments or newly introduced ones. Likewise, in this context, it will be important for financing providers to work closely with regulators in order to find the right balance of allowing confidence in the system (to emerge) and ensuring investor protection on one hand, while also leaving sufficient scope for the development of different financing instruments and allowing the unfolding of their associated benefits on the other.

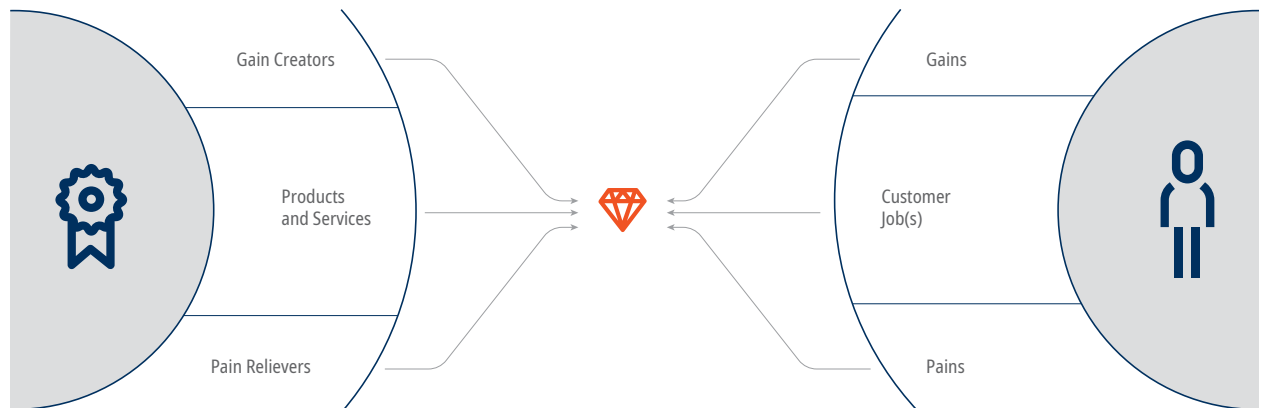
Finally, it should be mentioned that tapping into the benefits of technology comes at a price. Technological innovation and finding “digital truth” are not free of costs. Not every player in the SME financing sphere will have the resources to invest in its own technological systems or staff. However, having said this, it is all the more important to promote an SME knowledge ecosystem that allows for the different players in it to get in touch, partner up and collaborate.

# Appendix

## Interview guide

Our interview guide was built on the basis of the Value Proposition Canvas (see Figure 16) as introduced by Osterwalder, Pigneur, Bernarda, & Smith.<sup>193</sup> It enabled us to capture the different perspectives around SME financing from our three key groups of informants: (1) Entrepreneurs and owner-managers of SMEs on the demand side of financing; (2) Experts on the supply side of financing (e.g., banks, fintechs, SIX experts); and (3) Experts from academia.

**Figure 16:** The Value Proposition Canvas



Source: Strategyzer (2020) based on Osterwalder et al. (2014)<sup>194</sup>

The Value Proposition Canvas consists of two parts: (1) The customer profile (right part) and (2) The value map (left part). On the right part, the jobs/needs customers try to get done/satisfy are described, customer pains while trying to get their jobs done/needs satisfied highlighted (e.g., obstacles), and customer gains (e.g., benefits) outlined. On the left part of the model, the products and services the value proposition builds upon are listed, how the products and services represent pain relievers (e.g., reducing/eliminating obstacles) depicted, and in which ways the products and services are gain creators (e.g., how they increase customer benefits) illustrated. A fit between the two parts is accomplished by creating a clear connection between what matters to customers and how products and services relieve pains and create gains.<sup>195</sup> By analyzing both the demand side and the supply side, we aimed at achieving a comprehensive understanding of the market for SME financing and its future development, thereby also taking into account new offerings such as introduced by fintechs or others.

Given the three different types of informants interviewed, we use slightly different versions of interview protocols (i.e. designed in accordance with our informants' field of expertise). For the first group of interviewees (i.e. SMEs), we covered the model's customer profile, for the second group of interviewees (i.e. experts on the supplier side) we covered the value map, for the third group (i.e. experts from academia) we covered the model as a whole. These efforts assisted us in obtaining rich and trustworthy data.

<sup>193</sup> Alexander Osterwalder, Yves Pigneur, Gregory Bernarda, Alan Smith, 2014, *Value Proposition Design: How to Create Products and Services Customers Want*, John Wiley and Sons.

<sup>194</sup> See Strategyzer, 2020, *The Value Proposition Canvas* (accessed September 8, 2021) and Alexander Osterwalder, Yves Pigneur, Gregory Bernarda, Alan Smith, 2014, *Value Proposition Design: How to Create Products and Services Customers Want*, John Wiley and Sons.

<sup>195</sup> See footnote above.



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## Acknowledgments

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