FACULTY OF ECONOMICS AND BUSINESS ADMINISTRATION

ANALYSIS OF THE BELGIAN SCALE-UP GAP

THE FINANCING OF SCALING COMPANIES

Word count: 23,936

Justien Vervaeck
Student number: 01507454

Supervisor: Prof. Dr. Rudy Aernoudt

A dissertation submitted to Ghent University in partial fulfilment of the requirements for the degree of Master of Business Administration: Finance and Risk

Academic year: 2018 – 2019

GHENT UNIVERSITY

FACULTY OF ECONOMICS AND BUSINESS ADMINISTRATION

GHENT UNIVERSITY

FACULTY OF ECONOMICS AND BUSINESS ADMINISTRATION

ANALYSIS OF THE BELGIAN SCALE-UP GAP

THE FINANCING OF SCALING COMPANIES

Word count: 23,936

Justien Vervaeck
Student number: 0001507454

Supervisor: Prof. Dr. Rudy Aernoudt

A dissertation submitted to Ghent University in partial fulfilment of the requirements for the degree of Master of Business Administration: Finance and Risk

Academic year: 2018 – 2019

GHENT UNIVERSITY

CONFIDENTIALITY AGREEMENT

PERMISSION

I declare that the content of this Master's Dissertation may be consulted and/or reproduced, provided that the source is referenced.

Justien Vervaeck

SUMMARY

Analysis of the Belgian scale-up gap - The financing of scaling companies

This thesis is an attempt to investigate the financial scale-up gap Belgian companies are facing.

Previous literature shows that there is a scale-up gap in Europe compared to the United States. Part of this problem is attributed to the lack of funding available for growth enterprises. Finding access to capital is a significant challenge scale-up companies have to overcome.

This thesis starts with a detailed description of what a scale-up company is, and what financing possibilities are available to fund those companies.

At European and Belgian level, there are several policy measures aimed at facilitating financing of start-ups. Scale-ups, however, are creating a significant share of added value in terms of employment, innovation and economic development. In this respect, it can be clearly stated that policy measures to help finance scale-ups are of equal importance. To this end, cost-efficient measures must be developed, adapted to the specific needs of scale-ups.

This theoretical part is followed by an analysis of the Belgian and European landscape.
In the recent years, there has been an increase in the number of start-ups. The current EU average is 1 succesful scale up out of 100,000 inhabitants.

The empirical part of this study examines whether Belgian companies have on average more difficulties in accessing finance than European companies. This analysis was carried out on the micro data from the latest version of the Survey on the access to finance of enterprises performed by the European Central Bank. It can be said that there are no differences between the Belgian and European averages. However, Swedish and Dutch growth companies are perceiving less problems to find access to finance. In addition, the possible explanatory factors of the financing gap are examined. Some of the results are not in accordance with previous literature.

PREFACE

This thesis marks the end of my masters' degree in business and administration, Finance and Risk at the University of Ghent.

Writing this thesis has been an insightful process in which I was able to apply the knowledge and skills I gained during my studies to my thesis. By researching the scientific literature on companies, especially scale-up companies I got a broader view of the growth constraints those companies are facing. During my internship at Silverfin, a Belgian scale-up, I could actually experience the gap and the corresponding growth problems that were reported in the literature.

Writing my thesis and thus completing my studies would not have been possible without the support of friends, family and teachers. I would like to thank them for this.

My promotor, Professor Rudy Aernoudt, who guided me in the search for my subject and through the writing process. And for the feedback that helped my thinking process.

Jessie Vantieghem, assistant at UGent, who helped me with statistical problems.

Nadine Desmet, for carefully proofreading my thesis.

I wish you a pleasant time reading this thesis!

Justien Vervaeck,
Ghent, 1 July 2019

INDEX

LIST OF ABBREVIATIONS

BA	Business Angels
CRB	Centrale Raad voor het Bedrijfsleven (Central Council for Business)
EC	European Commission
ECB	European Central Bank
EFSI	European Fund for Strategic Investments
EIB	European Investment Bank
EIF	European Investment Fund
ESCALAR	European Scale-Up Action for Risk Capital
EU	European Union
FFF	Family, Friends & Fools
GDP	Gross Domestic Product
OECD	The Organisation for Economic Co-operation and Development
R&D	Research and Development
SAFE	Survey on the access to finance of enterprises
SBIC	Small Business Investment Company
SEP	Startup Europe Partnership
SME	Small and medium-sized enterprises
SRIW	Société Régionale d'Investissement de Wallonie (Regional organisation of Investment of Wallonia)
UK	United Kingdom
UNIZO	Unie van Zelfstandige Ondernemers (Union of Self-Employed Entrepreneurs)
US	United States
VC	Venture Capitalist

LIST OF FIGURES AND TABLES

CHAPTER 1

1) Introduction

'First mover advantage doesn't go to the first company that launches, it goes to the first company that scales.' Said Reid Hoffman, co-founder of LinkedIn.

In the 20th century the US was seen as the place to be for the development of technology-based start-ups, especially in the Silicon Valley, the epicenter of technological development. However, over the last 2 decades other countries around the world have successfully developed an ecosystem for start-ups, leading to a start-up revolution in Europe. Although the number of start-up companies are still rising, there remains a concern about the growth performance of these companies. (Duruflé, Hellmann, & Wilson, 2017)

The scale-up manifesto confirms that EU is no longer lagging behind in the creation of new firms compared to the US, but at the scaling-up phase there is a substantial difference. (Manifesto, 2016)

This challenge to succeed at later stages of the entrepreneurial development has led to a scale-up gap between the US and Europe. In the US, 22% of start-ups manage to scale while only 12% of Europeans firms reach the scale-up phase. (Aernoudt, 2017)

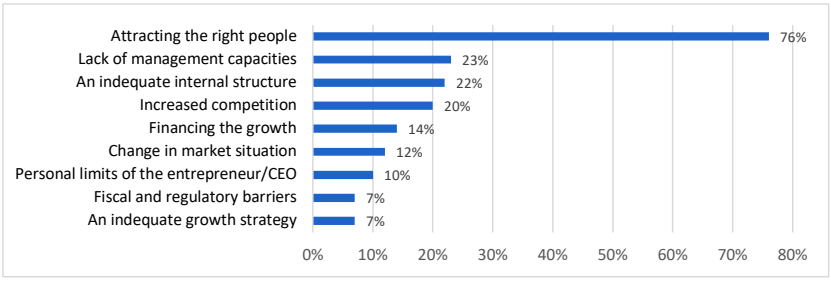
Many factors influence the growth of a company. Not all of these factors are manageable. Some of them are random factors that make it impossible to predict which companies will become a high growth company. Audretsch has identified 4 determinants of a company's growth. These determinants are: the characteristics of the entrepreneur, such as experience and training; the qualities of the employees; the embedding in networks or in a cluster and access to capital. (Audretsch, 2012)

This access to capital is a significant challenge scale-up companies have to overcome. Finding the right amount of funding is a vital component of a scale-ups' success. The Scaleup Institute indicates the

finance gap as 1 of the key gaps in the scale-up ecosystem in their latest annual scale-up review. (ScaleUp Institute, 2018)

The main problems growth companies in Belgium are facing are investigated by Dillens and Crijns, in collaboration with Vlerick Business School, by performing a survey. The number 1 problem the respondents of the survey are facing is finding staff with appropriate competencies. Internal management and structure are also frequent indicated as a barrier for growth. Financing the growth is indicated at a growth barrier for 14% of the respondents. (Dillens & Crijns, 2018)

Figure 1: Growth barriers for Belgian Companies



Source: (Dillens & Crijns, 2018)

The existence of the financial scale-up gap is already studied in previous literature. This dissertation examines if there is a difference in the financial scale-up gap Belgian companies are facing, compared the other European scale-up companies. We want to investigate whether there is a possible explanation for the financial gap Belgian companies are facing when they want go beyond the start-up phase. An analysis on the drivers of this financial gap will be researched in this master thesis.

1.1 Problem statement

Many SMEs across the European landscape have been experiencing difficulties in obtaining bank financing for years, even considerably more than large companies.

The SME Financing Survey 2014 (UNIZO, 2015) found that 16.6% of companies experienced a total or partial credit refusal in 2014. This figure shows a slight increase of 0.5 percentage point compared to the same study in 2012.

Based on the results of the European Commission Survey on Access to Finance of Entrepreneurs, it was found that 2% of Belgian bank loans were totally refused in 2018, compared to 5% at EU level. In addition, the respondents indicated that 7% of bank loans were partially refused, while for the EU this percentage is 11%.

European research also found that 16% of credit applications with banks were completely or partially refused. The situation in Belgium has improved in comparison to the EU average in 2018. In 2016, 14% of credit requests from banks in Belgium were completely or partially refused, making the situation in Belgium 3 percentage points better than in the EU. The EU average in 2016 was 17%. For Belgium, the situation deteriorated by 2 percentage points in 2017 compared to 2016. In 2017, 16% of credit applications from banks were completely or partially refused.

This is the same as the EU average in 2017, while the situation in the EU improved by 1 percentage point compared to 2016. In 2018, however, the EU percentage of credit applications from banks that were completely or partially refused increased by 2 percentage points. The EU average is now at 18%. This while Belgium has improved considerably, the percentage in Belgium amounts to 9%. This is an improvement of 7 percentage points compared to the last year result in Belgium and an improvement of 9 percentage points compared to the EU. (European Central Bank, 2019) (European Central Bank, 2018) (European Central Bank, 2017)

Table 1: Overview percentages using the SAFE results for Belgium in 2016, 2017, 2018

	Belgium			EU		
SMEs' application and outcome	**2016**	**2017**	**2018**	**2016**	**2017**	**2018**
Loan application rejected	5%	7%	2%	7%	5%	5%
received less than company applied for	7%	9%	7%	11%	11%	11%
declined the loan offer from the bank because they found the cost unacceptable	2%	0%	0%	0%	1%	2%
not manage to get the full bank loan the company had planned for	**14%**	**16%**	**9%**	**18%**	**17%**	**18%**

Source: (European Central Bank, 2017) (European Central Bank, 2018) (European Central Bank, 2019)

This restricted access to external financing[1] is often caused by the high uncertainty to which external financiers are exposed. First of all, innovative companies initially invest a proportionate amount in intangible assets, such as in R&D, but also in setting up a professional organization, including logistics and distribution channels, or in marketing and international sales. These investments are often necessary to set up a healthy and growth-oriented company, but these are all intangible investments. As the liquidation value of these intangible assets is very limited and, moreover, difficult to determine, it cannot be used as collateral for obtaining bank loans. (Manigart, Baeyens, & Verschueren, 2002)

Alternative sources of financing must often be sought. In recent years, many new forms of financing, like crowdfunding platforms, have emerged to meet entrepreneurs as much as possible in their financing needs. (Laveren, 2016)

Even though there are more financing options, the financing needs are currently not fulfilled. (European Commission, 2016)

Proper financing is a requirement for continued growth of a company. The limited access to later-stage funding is causing problems for start-ups. If a start-up wants to turn into a scale-up, research shows that problems can arise with regard to the financing. This lack of funding resources for a company is

1 Definitions and examples of financing will be covered in the second part, "theoretical background".

called ‘the equity gap’. This equity gap is larger in the company’s expansion phase than in the start-up phase. (Aernoudt, 2017)

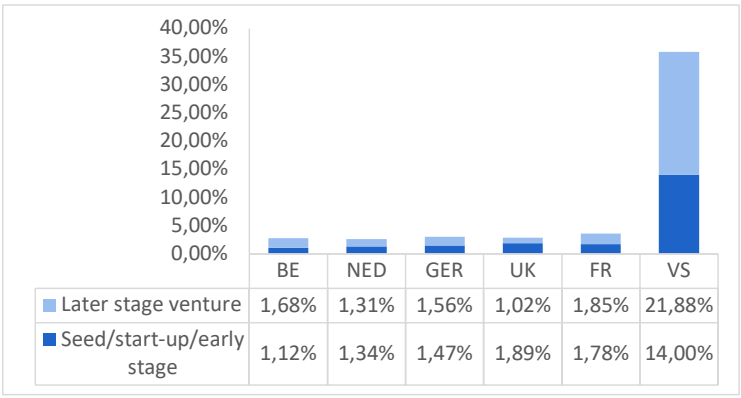
Over the years, policy’s support was mainly start-up oriented. With the introduction of the “Win-Win lening” and the “Tax Shelter” policymakers are trying to reduce the equity gap in the first financing phase. These investment stimulating measurements resulted in a reduction of the first equity gap, the lack of financing in the seed phase or early stage. In addition to the governmental actions, support for start-ups also came from an academic perspective. Universities and research centers often invest in spin-offs. (Laveren, 2016)

When in fact, it is the so-called second and third capital round that is difficult to achieve in Europe. The investment budget in the EU for later stage rounds is around € 5 billion in comparison to € 26 billion available in the US. (Aernoudt, 2017)

In the US about two thirds of all VC investment flows to later stages. In Europe less than a half of the VC invested flows to those stages. (Duruflé, Hellmann, & Wilson, 2017)

Figure 2 shows the amount of venture VC as a fraction of GDP, for the period 2007-2014. On the one hand the US VC’s is investing a higher portion relative to their GDP compared to Belgium and some neighbouring countries. And on the other hand, as mentioned before, we can see that a bigger portion of the VC capital goes to later stage venture. In the US 60% was invested in later stage compared to 40% invested in early stage.

Figure 2: VC investments as a percentage of GDP in 2016, or latest available year



	BE	NED	GER	UK	FR	VS
Later stage venture	1,68%	1,31%	1,56%	1,02%	1,85%	21,88%
Seed/start-up/early stage	1,12%	1,34%	1,47%	1,89%	1,78%	14,00%

Source: (OECD, 2017)

1.2 Scientific Relevance

Academic literature, examining scale-ups and fast-growing enterprises can already be found, but this is mainly situated at European or American level. In the UK the ScaleUp Institute investigates the evolution of the scale-up landscape every year and reports the annual scale-up review.

In Belgium the Central Council of Business (CRB) started the investigation on this subject. Professor Leo Sleuwaegen from the University of Leuven, Professor Laveren from the University of Antwerp and the FOD economy are working since 2015 together to perform research on this matter. (CRB, 2019)

The CRB aims at giving policy recommendations to solve bottlenecks in the growth of Belgian companies. (CRB, 2019)

Professor Laveren, Professor of Financial Management and Entrepreneurship at the University of Antwerp in Belgium, noted that more detailed information is available abroad, especially in EU and UK,

regarding the use of sources of funding. In particular, there is a lack in Belgium of a detailed analysis at company-level. (Laveren, 2016)

He suggests that a systematic collection of data from a wide sample of high-growth companies and an adapted survey on the financing offer and demand from these companies could yield more refined conclusions and recommendations. (Laveren, 2016)

1.3 Social Relevance

'Entrepreneurship is a vital part of a healthy economy – creating new products and businesses, generating employment, increasing national income, establishing new markets, and generating new wealth.' (Cambridge Judge Business School, Oxford Saïd Business School)

The existence of a financing gap means that companies have more valuable investment opportunities than they can finance. This is not only detrimental to the company and its shareholders, but also to the economy as a whole, since it does not execute potential value-creating projects.

Research has shown that high growth companies have a direct positive effect on employment. Besides, those companies have an indirect effect on employment growth through spillover- and network effects. (Sleuwagen, 2016)

Next to the increase in employment, high growth companies increase the productivity level of a country and introduce innovative solutions. (Sleuwagen, 2016)

1.3.1 Employment

Shortly after incorporation, companies have a strong positive effect on employment. However, these effects decrease over time. After about five years there is again an increased effect on employment, after which this fades. (Acs & Mueller, 2008)

Henrekson and Johansson state that high-growth firms tend to create many more jobs in comparison with other firms. Only 4% of firms generate 70% of new jobs. (Stangler, 2010)

It is thus interesting for policymakers to have information about the problems companies are facing, as this has possible consequences for the competitive position of the Belgian economy in general and the Belgian companies in particular. The more knowledge policymakers have on this subject, the better they can set up adequate policies to help them.

Seen the importance of start-up and scale-up businesses for the European economic growth, the European Commission communicated the Start-up and Scale-up Initiative. In this Initiative the EC states to the European parliament, the council, the European economic and social committee and the committee of the regions the following: *'High-growth firms create many more new jobs compared to other firms. Start-ups scaling up into bigger firms form a large share of these businesses. They increase EU innovation and competitiveness, strengthening the economy. Such 'scale-ups' can also provide social benefits, including offering more flexible and modern working arrangements*.' (European Commission, 2016)

However, the employment increases subsequent to the start-up phase are often temporary due to the high drop-out rate of start-ups. The real value for companies, shareholders and communities follows as start-ups become adolescents and scale. (Ottinger, 2018)

2) Research question

From previous scientific and social relevance, the following research questions arise:

1. Is the access to finance perceived as a more important problem for Belgian scale-ups compared to Europe, the Netherlands and Sweden?
2. Is access to finance perceived as a more important problem for Belgian growth companies compared to Belgian high growth companies.
3. Which factors influence the financing gap companies are facing during the scale-up phase?

3) Composing master thesis

This master thesis aims to investigate whether Belgian scale-up companies have difficulties financing their business compared to the European companies. Besides, we want to know which drivers can explain the financial gap.

The remainder of this dissertation proceeds as follows. In the second chapter, key terms and figures within the subject are displayed. The analysis performed is also element of the second chapter. This chapter contains 3 sections, theoretical background, scale-up analysis, that situates the Belgian scale-up landscape in Europe, and the empirical analysis, that deals with the description of the chosen research method for testing the hypotheses. This empirical part will be based on data from the 19th wave of the SAFE survey from the ECB and on the opinion of opinion of the interviewees. The third chapter contains the conclusion.

CHAPTER 2

1) Theoretical background

1.1. Defining scale-up

First of all, the term scale-up needs to be defined. The term scale-up is often confused with the term start-up. Both concepts are used a lot. However, there exists no official definition for those concepts like the definition used for a SME. All start-ups are SME's but not all SME's are start-ups. An SME is defined by headcount and either turnover or balance sheet total. In the case of start-ups, these characteristics may be difficult to apply. First a start-up may have a large number of employees, but not yet a significant turnover. Furthermore, for a start-up the initial capital to grow the business is commonly much higher than for an SME. This leads to difference in the financing structure. Later in this paper the financing sources will be defined. (Kollmann, Stöckmann, Hensellek, & Kensbock, 2016)

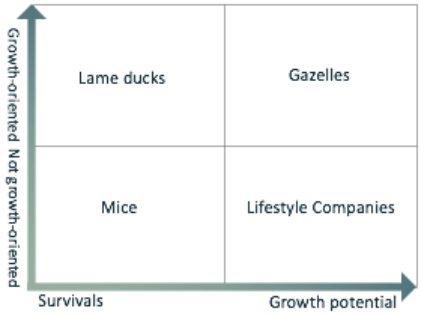
In contemporary literature there is no clear qualitative, let alone quantitative definition of what a start-up is. A commonly used definition is the following. A start-up is a young, innovative and growth-oriented company with the goal of being sustainable and scalable to become a large company. A start-up can be distinguished from a scale-up based on their growth. A start-up is actually a company that is still looking for the right market for its new product or service.

However, this definition doesn't give a complete view on what a start-up actually is. Four questions can be asked to specify a start-up. First of all: what is a young start-up? Start-ups in Europe are often seen as companies younger than 5 years old. This is based on the definition for gazelles, cited by Ahmad. Ahmad defines gazelles as companies younger than 5 years old. (Ahmad & Seymour, 2008)

Secondly, what is an innovative start-up? Innovation is a broad concept. One can be innovative in terms of marketing, organization, technology, etc. Innovation is defined by a process consisting of scientific, technological and commercial steps necessary for the successful development of a new or improved product. Product innovation refers to both physical products and services. (Acs & Audretsch, 1988) (Neely & Hii)

The next questions to be answered is: what is a growth-oriented company, and what is meant by a sustainable and scalable enterprise? These last two aspects that define a start-up go hand in hand. Being growth-focused has to deal with the intention to grow, where scalability has to deal with growth potential. In this way, start-ups can be divided into 4 groups. (1) "lame ducks", (2) "Gazelles", (3) "mice" and (4) “lifestyle companies”. (Aernoudt, Financieel management toegepast (tweede editie), 2016)

Figure 3: Breakdown of companies by growth orientation and growth ambition



Source: (Aernoudt, Financieel management toegepast (tweede editie), 2016)

There are many ways to define "gazelles”. According to the definition of Birch, the first one who used the term, gazelles are companies that saw their turnover grow by at least 20% annually starting with a turnover of at least $ 100,000 (Acs Z. , High-impact firms: gazelles revisited, 2011). If we look at other growth variables, we arrive at a definition of the The Organisation for Economic Co-operation and Development (OECD). The OECD defines fast-growing companies, or gazelles, as companies younger than 5 years with an average annual employee growth of more than 20% over a 3-year period, starting with at least 10 employees. (Ahmad & Seymour, 2008)

Scale-up is also a recent term that occurred to describe high-growth firms. The OECD defined scale-ups as follows: “scale-ups are enterprises with average annualized growth in employees (or in turnover) greater than 20 per cent a year over a three-year period, and with 10 or more employees at the beginning of the observation period.” (Ahmad & Seymour, 2008)

In the scale-up Manifesto they use following description for scale-ups : "'scale-up companies' or 'scale-ups' are entrepreneurial companies that are past their initial exploratory phase, have found their initial product/service offering and market segment, and are entering a growth phase where they seek significant market penetration." (Manifesto, 2016)

The term scale-up typifies companies that want to grow quickly. These companies seek to identify themselves with so-called "gazelles" as mentioned before. Andersen addresses following criteria to identify a scale-up: a company younger than 10 years, that has already received funding of at least 1 million. (Andersen, 2016)

VCs define a scale-up as a company who has completed the seed stage and passed series A stage. These companies are currently seeking for series B or are even in a later stadium of financing. These financing stages will be described later this chapter. (Duruflé, Hellmann, & Wilson, 2017)

To summarize, for this research a distinction is made between a start-up and a scale-up. A start-up is defined as a company younger than 5 years that has a certain turnover and did not grow on average 20% per year over a 3-year period. To fall under the term scale-up, companies must be younger than 10 years and must have seen their turnover, or their employment grow by at least 20% annually over a 3-year period.

1.1.1 Situating of scale-up in stages of venture development

The scale-up phase could be oriented after the start-up stage and during the beginning of the expansion stage, which is during the growth stage.

First stage in the development is the seed stage, which requires seed capital. This is the stage of ideas, R&D and prototyping. Founders of a company identified an opportunity in the market and are trying to develop a new product or service to fulfill this opportunity. At this stage, founders will need funding to finance this introducing process. The first financing source will be the founder's own inputs. Secondly, the entrepreneur mainly relies on financing of type FFF (Family, Friends & Fools), investors from his environment ,or crowdfunding. Research grants and public funding are other possible

financing options. Businesses with a high-growth potential could attract business angels' (BA) interest or a seed investing venture fund. (Alemany & Andreoli, 2018)

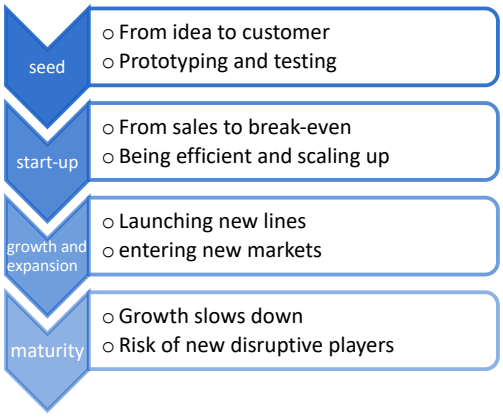
The second stage is the start-up stage. At this stage there is a business plan and the company sell its first products or services. This has as a consequence that the organization retrieves money from customers. The company stays in this phase until the company is able to cover its costs. This is when the company reaches break-even. This doesn't imply that the company's income is sufficient to cover its expenses. Once a company has achieved some characteristics of the start-up phase, venture debt and asset-based lending become available. Here the company has proven that it is able to generate some revenues and the risks of investments are perceived lower. (Aernoudt, Financieel management toegepast (tweede editie), 2016)

The most suitable source of financing in this stage is BAs or VCs. This round of venture funding is called 'series A' financing. If this is necessary, there might be successive rounds who are respectively called 'series B', 'series C'… (Alemany & Andreoli, 2018)

The next stage is the growth stage which is characterized by expansion of the company. The company is gradually increasing sales and is generating some profit. Now we see that the company is generating a consistent source of income and regularly taking on new customers. Different from previous stages, the company is no longer losing money. However, in order to grow, the generated cash isn't always sufficient. To finance its growth, the company will raise money from banks. From now on, the company is perceived as less risky which meets the credit control requirements of traditional financial institutions. (Alemany & Andreoli, 2018)

The last stage is the maturity stage. This stage begins once your company is having stable profits year-on-year. The entrepreneur could be satisfied by this stage and will try to maintain its current market share. After proving to be profitable even more forms of funding arise. Public debt, Initial public offering (IPO), private equity, issuing bonds… At this point, the private companies become public companies. The entrepreneur could possible exit the business. (Alemany & Andreoli, 2018)

Figure 4: Stages of Venture Development



Source: (Alemany & Andreoli, 2018)

1.2. Defining financing and funding

1.2.1. Sources of financing

The following description of the different sources of financing used for high-growth companies are based on the structure of the paper "*Financiering van groeiondernemingen in België: een overzicht van de geschikte financieringsbronnen en beleidsaanbevelingen*" from professor Laveren[2].

If a starter, start-up or fast-growing SME wants to exploit its activities or invest in growth, it needs financial resources.

There are 2 possible sources of financing. First, I will discuss internal financing. Internal financing is the most important source of financing for many growth companies. However, internally generated

2 "Eddy Laveren is Professor of Financial Management and Entrepreneurship at the University of Antwerp (Belgium). Since 2012 he is academic director of the Competence Center for Family Businesses at the Antwerp Management School.

resources are often insufficient to fulfill the required capital to exploit their business or grow. High growth companies are forced to attract additional funds from other sources.
In addition to internal financing, a company can also get financial resources from external sources.

How much should be financed with equity and how much with debt is called the optimal capital structure. This optimal capital structure is discussed in section 2.2.

1.2.2. Internal financing

Internal financing is usually defined as the sum of retained earnings plus non-cash costs. A non-cash cost is a cost that is reported on the income statement of the current accounting period, but there was no related cash payment during the period. A common example of a non-cash expense is depreciation. (Laveren, 2016)

1.2.3. External financing

External financing includes a wide range of financing options offered by external capital providers. A distinction must be made between equity financing, capital loan on long-term or short-term, asset-based financing and quasi-equity.

Equity financing refers to the sale of an ownership interest to acquire funds for business purposes. This dilutes the existing property. Equity financing covers a wide range of activities in size and scope, from a few thousand dollars funded by friends and family of the enterprise, up to large IPOs. Although the term is usually associated with publicly traded companies, it also includes financing from private companies such as VC funds. (Investopedia, 2019)

The first source of external financing is debt financing. Bank financing, company bonds, credit from suppliers and crowdfunding are forms of debt. The supplier of money to the company does not become an owner of the company. The receiving company has an obligation to repay the borrowed sum of money, possibly with interest. (Laveren, 2016)

The second source is equity. The company receives money from capital providers and these capital providers become co-owners of the company. Issuing ordinary or preferred shares and financing through a VC provider are forms of external equity financing. VC providers can be divided into different sub-groups. These sub-groups are private investment funds, BA and VC companies. (Laveren, 2016)

Thirdly, a company can raise external capital through quasi-equity. The following financing options are forms of quasi-equity: the subordinated loan, convertible bonds, warrant bonds and FFF. We can define quasi-equity capital as financial resources that are fundamentally foreign funds. But these resources also have some characteristics of share capital. Since quasi equity both show features of equity and debt, one often speaks of hybrid financing forms. (Laveren, 2016)

A common feature of all quasi-equity, or mezzanine, instruments and products is that the risk and return lays between traditional debt financing and traditional share financing. Mezzanine providers expect an annual total return of between 13 and 25 percent depending on market conditions. The annual total return can be achieved though interest payment, payment in kind interest or via a warrant or conversion option. (Laveren, 2016)

The last form of external equity that will be listed is asset-based financing. Leasing and factoring are asset-based financing sources. (Laveren, 2016)

1.2.3.1 Bankfinancing

The first option is to search for financing in the banking world. There are a lot of different forms of loans a company can obtain from the bank. These loans can be on long-term or short-term, for example an investment credit. An investment credit serves to finance a specific asset. Interest on the loan must be paid per trimester or per semester. Capital repayment often takes place in instalments or according to a repayment plan agreed in advance. (Laveren, 2016)

Examples of short-term financing with foreign assets are cash credit or advance payment on current account. In case of advance payment on current account a company can have a negative saldo on its current account up to a maximum amount. A cash credit is taken out within the framework of a credit opening agreement that is in principle of an indefinite duration, however the credit institution can terminate the cash credit on short term. With a cash credit you can automatically withdraw new amounts within the limits of the credit line. If the current account shows a negative balance, interest will only be charged on the actual debit balance. On the other hand, with a positive balance, interest will be received. (Laveren, 2016)

A senior debt is a debt that is covered by a security. In this case the borrower has a smaller risk of not getting his investment back. If the company has financial problems and in case of liquidation the borrower will be the first to be paid. (Laveren, 2016)

Junior debt or subordinated debt are subordinated loans that are not covered by a security. In the event of liquidation, these debts are only repaid if there is money left after the payment of secured debt. More on this in the section of quasi-equity. (Laveren, 2016)

1.2.3.2 Company bonds

Companies can also raise money through non-bank financing channels. In case that companies want to collect money directly from savers and from other companies that have a funds surplus, companies can rely on corporate bond financing. (Laveren, 2016)

Bond financing is a form of market financing, where the credit institution acts as a broker. A bond is a securitized form of loan. The buyer of a bond lends money to the issuer and the issuer returns a predetermined sequence of payments to the buyer. Interest payments on a bond are called coupons. The repayment of the bond loan is usually done through a one-off repayment on the due date. Usually, the company also does not have to provide guarantees to the capital provider. Bonds can be issued by both the government, these bonds are called government bonds, and companies, called corporate bonds. (Laveren, 2016)

1.2.3.3 Credit from suppliers

The supplier credit is a prime example of a spontaneous form of financing. (Laveren, 2016)
When purchasing goods or raw materials, you can often negotiate favourable payment terms. Deferred payment is also a form of credit, a credit received from a supplier. (UNIZO, 2019)

1.2.3.4 Crowdfunding and crowdlending

Crowdfunding is a form of financing in which a project owner or entrepreneur uses a large group of investors to gain funds. Every investor contributes a small part of the total amount that needs to be collected. This is usually organized through an online platform. (Laveren, 2016)

Depending on the return objectives of the investor, Schwienbacher and Larralde distinguish two different forms of crowdfunding: non-financial and financial crowdfunding. (Schwienbacher & Larralde, 2010)

First two examples of non-financial crowdfunding will be discussed. These examples are donation & sponsorship and reward-based & presale.

When crowdfunding takes the form of donation or sponsorship, the investor is willing to donate his money to support a project that appeals to him. Investment payoff is not a necessity. The motivation for this type of crowdfunding is primarily social.

A variant on the donation model is Reward-based and presale. The investor is still willing to donate his money, but the donor will receive a non-financial reward in exchange for this donation. These rewards are often symbolic, so that motivation is more a combination of intrinsic and social motivation with the will for a reward.

Next, some examples of financial crowdfunding will be discussed. These examples are debt financing through loans and participation via shares.

If debt is financed through loans, the investor is willing to borrow his money in exchange for a promise to repay, possibly including a pre-agreed interest. The motivation is a combination of intrinsic, social and financial motivation.

In case of participation via shares, investors are willing to invest in a company without a promise of repayment, but in return they receive a certain number of shares. This allows them to be entitled to dividends and after a certain period of time, a capital gain may be generated on the shares. In this case investors are also exposed to business risk and can therefore participate in the company's losses. The motivation for this crowdfunding variant is rather financial, but also social aspects can play a role. The financing conditions that apply to each type of crowdfunding are explained by the initiator on the crowdfunding platform. (Schwienbacher & Larralde, 2010)

1.2.3.5 Capital injection through ordinary shares

Common shares is a type of security that represents ownership of equity in a company. There are other equivalents such as common stock, ordinary share, or voting share. (Laveren, 2016)

As owners of the company, shareholders have a number of fundamental rights. First and foremost, each shareholder has voting rights that he can use at the general meeting of the shareholders. Upon liquidation, a shareholder is entitled to his share of the net asset. Shares have no maturity date and are as a consequence not repaid at a specific time such as bonds. Shares can only be realized in the event of a sale, exchange or liquidation. In the latter case, the holders of ordinary shares come in the last place, i.e. after the privileged creditors, the ordinary creditors, the subordinated creditors and the holders of preference shares. In addition to ownership, the shareholders are also entitled to a dividend. The general meeting decides whether or not a dividend is paid. Each shareholder has one vote at this general meeting. (Laveren, 2016)

1.2.3.6 Capital increase with preference shares

Preference shares have well-defined privileges over the ordinary shares. This privilege may relate to a higher participation in the profit distribution and/or the guarantee for a minimum dividend. (Laveren, 2016)

The owners of this type of shares can have liquidation rights, this guarantees a repayment of their capital contribution in the event of dissolution of the company. If the company goes bankrupt, the preference shareholders are paid out before the ordinary shareholders. (Manigart & Meuleman, 2004)

1.2.3.7 Financing through a VC provider

In addition to publicly issuing shares, a company can also turn to a risk or VC provider. The VC provider will contribute VC through a temporary shareholding, a subordinated loan or subscription to a bond loan the company issues. (Laveren, 2016)

Private equity is a type of alternative investment. The term "alternative" points out that it is not a traditional investment instrument such as a share or a bond. (Laveren, 2016)

Private equity funds do not get their profit from annual dividends but from the increase in value of the target company at the moment (usually after a few years) when the fund leaves the company, this is the exit. As the fund can only redeem its investment after a few years, these are very illiquid investments. Private equity funds tend to have a long-term strategy. (Manigart & Meuleman, 2004)

Because of their contribution, the private equity investors get participation in the target company. They can use this dominant position to influence the company's policy so that the target becomes (more) profitable. This is also called "hands-on": the private equity investor goes further than just financing. He often requests a seat on the board of directors. In this way the investor can supervise the company. The investors who take part of the general meetings get involved in important decisions. A

private equity fund is more involved in the operation of the target company, then a mere lender such as a bank. (Manigart & Meuleman, 2004)

In fact, the fund often behaves as an activist shareholder, putting pressure on management to accept its proposals. Most private equity funds apply these hands-on tactics. With hands off, on the other hand, the investor entrusts his assets to the target company and the company's leadership, without interfering with business operations. (Manigart & Meuleman, 2004)

After a few years, the private equity investor will sell his shares. In the meantime, , the company is in a much stronger financial position, so that the private equity investor realizes added value with the sale. But not all investments are of course equally successful, which means that the private equity fund sometimes will make losses on an investment. (Beuselinck, Deloof, & Manigart, 2004)

Private equity and VC are often used as synonyms although they are not entirely the same. VC, which is a form of private equity, is mainly used during the start-up phase or early stage phase of a company, while private equity has a much broader meaning and can also be used to strengthen the balance sheet of a company or, for example, to finance a management buy-out. (Beuselinck, Deloof, & Manigart, 2004)

Private equity is the collective name for investments through equity or quasi-equity in non-listed companies. Below the characteristics of private equity provided by private investment funds, BAs and VC companies will be discussed.

Private investment funds

Private investment funds are companies that specialize in private equity investment. These funds collect money through, for example, pension funds, insurers or banks, wealthy families or private investors. If these funds have sold their holdings after a number of years, they will pay back the investors' investment including the return achieved. Because it concerns equity investments, it is not known in advance how high the return will be. (Laveren, 2016)

Business Angels

Another way to attract not only money but also expertise is the use of BA. These are often wealthy people who have set up their own businesses. BA can occur both individually and in groups. They identify and invest in companies in exchange for equity. (Daniels, Herrington, & Kew, 2016)

BA are (former) entrepreneurs who are willing to invest in promising start-up or fast-growing companies. BA not only provide financial support, but also their extensive expertise and professional networks at the companies' disposal. Because of their reputation, they can be the deciding factor in negotiations with customers and suppliers, so that their support offers significant added value for starting or growing companies. BA take a temporary participation in the capital of the company or participate through a subordinated loan. After a few years of growth (5 to 7 years), the shares are sold with the hope of realizing added value. Hereby one can agree to sell the shares externally, or to sell them to the management, or to sell them to a VC company or to introduce shares on a stock market. The advantages of using BA are that they will use their existing network of relationships and contacts and that this results in a lower chance of failure. The disadvantage is the possibility that they can block certain decisions. The umbrella organization of BA in Flanders is BAN. Every year, around 1000 entrepreneurs come to BAN to get support from BA. Three quarters of the applications are submitted by start-up companies that have outgrown the "friends, family and fools" phase but are still too young to attract real VC. They are also often about to commercialize a new product or service. The companies are often in the IT, energy and environmental sectors. More and more BA are putting their shoulders under one project, with currently more than 200 active BA. The average return of the BA is 15%, with peaks of up to 30%. (Laveren, 2016)

BA and VC are often confused and compared. The BA have some similar features to VCs but the most important difference is that angels use their own capital. There are a lot of different types of angels. The range goes from wealthy individuals without business experience who invest in a friend or a relative it’s business, to groups of angels with relevant business or technical backgrounds who have banded together to provide capital and advice to companies in a specific industry. The fact that a business angel uses its own capital changes the economics of their decision. They can keep all the

return in exchange for their effort, leading to a lower cost of capital. This has as a consequence that BA can invest in deals that would not be chosen by VCs. A specificity of BA is that they tend to focus on younger companies than VCs do, and they make a larger number of smaller investments. (Metrick & Yasuda, 2011)

Venture Capital

A VC is a professional company that provides capital or quasi equity to start-up or growth companies with the intention of creating added value and that can play an active role in the management of those companies. VC is used for the financing of R&D, for the expansion of working capital, for the strengthening of the capital structure and for the financing of acquisitions and management buy-outs. The minimum file size is around 1 million euros, but preferably much higher. (Laveren, 2016)

According to Andrew Metrick and Ayako Yasuda A VC has five main characteristics. First, A VC is a financial intermediary, meaning that it takes the investors' capital and invests it directly in portfolio companies. This can be compared to a traditional form of financing such as a bank. Individuals and companies invest their savings within a bank with the purpose of collecting interest. Companies and individuals who want a loan will then receive this money with the interest as a cost. A VC fund does the same. The fund receives money from investors and invests this money in a portfolio of companies. A VC fund is often organized as a limited partnership. The VCist makes investment decisions and manages the fund. He is called the general partner. The investors are called limited partners. The second characteristic of VC is the fact that A VC invests only in private companies. This means the companies cannot be traded on a public exchange.

Thirdly a VC takes an active role in monitoring and helping the companies in its portfolio. VCs usually take a position on the board of directors of the portfolio companies. This allows them to give advice and support to the management of the company. Thanks to the VC's reputation, the company is put in contact with potential employees or strategic contacts in the industry. A VC that offers knowledge and added value to the company in addition to money has a sustainable form of competitive advantage for the company compared to other investors.

Next a VC's primary goal is to maximize its financial return by exiting investments through a sale or an initial public offering. The investment decision of the General Partner will depend on the possibility of the company to grow and become more valuable. The Limited partners are expecting a minimum return. Therefore the General Partner will try to avoid too high risks.

The last characteristic is the fact that a VC invests to fund the internal growth of companies. VCs primarily invest in young, high-technology companies that have a capacity for rapid growth. The VCs will perform 3 main tasks. First the VCs screen potential investments and decide in which companies they will invest. These investments are received as possible growth companies. Then the VCs will monitor the companies within their portfolio. By providing value-added services the VCs tend to increase the company's value. After this the VCs will exit the investment by selling their stake to public markets or to another buyer. (Metrick & Yasuda, 2011)

1.2.3.8 Subordinated loan

The subordinated loan is a loan without any guarantee. This loan will only be reimbursed in the event of liquidation after the claims of all other creditors are met. The subordinated loan does, however, has priority relative to the preference and the ordinary shares. (Laveren, 2016)

Subordinated loans are mainly used by companies who reached their borrowing capacity but who still have a stable cash flow. In this way they can increase their own capital base, making additional debt financing possible. (Laveren, 2016)

1.2.3.9 Convertible bonds

Convertible bonds display all the characteristics of ordinary bonds with the difference that its holder has the right to use them for a certain period and against certain conditions to exchange or, in particular, convert for ordinary shares of the issuing company. The convertible bond ceases to exist in the event of conversion. These bonds are advantageous for the issuing company since they have a lower interest rate compared to regular bonds. This form of financing is often used when the company

judges that additional equity capital is desirable, but the time for issuing equity capital is unfavourable. (Laveren, 2016)

In an efficient market, stock price will rise after the issuance of a convertible bond if the company is performing well. If the share price exceeds the conversion price, there will be a conversion into shares. Consequently, a dilution of the control and of the earnings per share take place. This would not have taken place if the company had issued ordinary bonds. This is a disadvantage associated with convertible bonds. The reverse case can also be disadvantageous. If the company performs poorly after the issue, and the share price subsequently falls, there will never be a conversion. Then an opportunity cost is associated to the issuance of convertible bonds since the issuer could have initially issued shares at a higher price. (Laveren, 2016)

1.2.3.10 Bonds with warrant

Just as with the convertible bond, the bond with share warrant gives the holder the right to subscribe to shares of the issuer under certain conditions. The registration right here takes the form of a coupon, which is called a warrant. When the warrant is exercised, new share capital is created against payment of the exercise price. The underlying bond keeps its existence. As a result, additional funds are made available for the issuer. (Laveren, 2016)

1.2.3.11 FFF

In the absence of sufficient own resources, you can initially try to involve people from your environment, the so-called, in your project and convince them to invest money. The first possibility is making the FFF's co-shareholders. In this way they become co-owners of your company and they need to contribute in the equity. Another possibility is that these people lend the money to the entrepreneur: these funds will be considered as quasi-equity by other creditors if the lender declares this loan "subordinated" to these creditors. (VLAIO, 2019)

1.2.3.12 Leasing

Leasing does not have a clear legal definition. Leasing agreements are financing agreements aimed at providing credit to achieve a certain good. The lessee closes a financing contract with a lessor to rent a movable or immovable property during a certain period. The lessee acquires the pleasure and use of a good during a fixed period that theoretically corresponds to the probable economic life of that good. In this fixed period, the lessee must pay for the use of this property. At the end of the period, the lessee may purchase the rented property against payment of a specific option price, the residual value. (Laveren, 2016)

There are different forms of leasing: operational and financial leasing. The classification of lease agreements into operational leasing or financial leasing is based on the extent to which the risks and benefits are more in favour of the lessor or the lessee. (Beselaere, Lenaerts, Tilleman, & Verbeke , 2007)

In a financial lease agreement, the lessee records the good on its balance sheet and books depreciation on this good. The lessor includes the rental payments in its income statement. (Beselaere, Lenaerts, Tilleman, & Verbeke , 2007)

With an operational lease agreement, the lessor will include the good on its balance sheet and write off on this. The lessee enters the payments into his income statement. (Beselaere, Lenaerts, Tilleman, & Verbeke , 2007)

1.2.3.13 Factoring

Factoring can also be mentioned as a short-term financing instrument. Factoring is an agreement between a company and a specialized institution (the factor). The company can transfer a part of its trade receivables, arising from the delivery of goods or services to a third party, to the factor. This institution is taking over the administration concerning accounts receivable from the company. For example, the factor provides the accounting processing of claims, he follows up the debtors, collects

the receivables and so on. However, the basic agreement can be extended to include the credit risk insurers and / or takes care of the immediate financing of the invoices. In this way, factoring can be used to finance short-term receivables. (Laveren, 2016)

1.2.4. Staged financing

As stated in the previous section, there exist different types of financing according to the size, timing and stage of a firm. Dependent on the development phase, different forms of funding options are suitable.

The definition of the company stage should not be confused with the definition of the financing round. An important feature of VC financing is its staged structure. Rarely, the private equity fund provides all the capital that a company requires straight away. Instead different financing rounds take place at distinct stages. The next financing round only takes place when a certain milestone, agreed in advance in the contract, is reached. (Koçkesen & Ozerturky, 2002)

Because of the termination threat from the VC side, there is an incentive for the entrepreneurs to be disciplined and this gives the company incentives to achieve those milestones. One can agree several milestones adequate to the firm's development. For example, the development of a prototype product. Each financing event is known as a round. The first time a company receives money is called the first round or Series A. The following round is called the second round or Series B and so on. After the well-defined milestone is reached, the company and VC can restart the negotiation on further investment and make arrangements on the next milestone to achieve. (Metrick & Yasuda, 2011)

On the one hand, this is detrimental to the company since it does not immediately have the required funds. On the other hand, there is a big advantage for the company. If it the company develops as foreseen, the second investment round is less risky for the VC, which means that the private equity fund will expect a lower return. (Manigart & Meuleman, 2004)

2) Scale-up Analysis

2.1. Scale-up landscape Belgium vs Europe

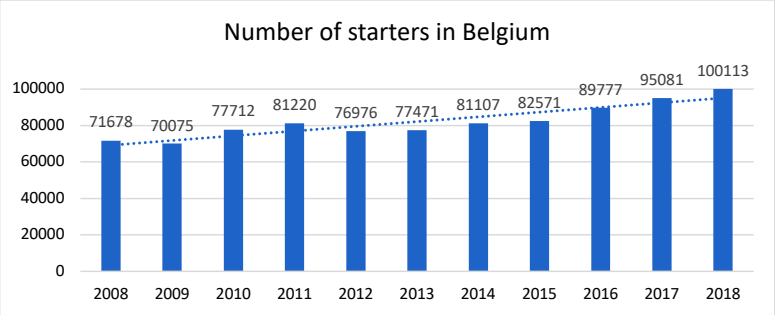
2.1.1. Belgium

Unizo Starters Atlas 2019

In 2004, UNIZO, the Union of Self-Employed Entrepreneurs, started publishing the Starter Atlas. In the Starters Atlas, statistics on Belgian Start-ups are bundled. Every year the Atlas is updated. For this year, and for the previous 5 editions too, Unizo collaborated with the 'Union des Classes Moyennes' (UCM) to make the Starters Atlas. All numbers in this master thesis subtracted from the Starter Atlas indicate the situation as measured on March 22, 2019. (Deman, Tchinda, & Kobiashvili, 2019)

According to Unizo, the year 2018 appears to be a historic year in start-up statistic terms. For the first time more than 100,000 new companies established in Belgium. Compared to 2017 there are 5.29% more starters. This relative rise is in line with the evolution between 2015 and 2017. The number of new companies rose with 8.73% from 2015 to 2016 and with 5.91% from 2016 to 2017. (Deman, Tchinda, & Kobiashvili, 2019)

Figure 5: Number of starters in Belgium,22 march 2019



Source: (Deman, Tchinda, & Kobiashvili, 2019)

Compared to 2008, the number of start-ups has grown with 39.67%, whereof 19.93% in the last three years. This significant increase is a positive element for the Belgian economy. The increasing number of starters is a good indicator for confidence in the future among entrepreneurs.

The growth is largely driven by the liberal professions. The number of these companies have increased by 9.27%. This is the biggest increase in relative numbers. However, this increase does not only reflect new starting companies. The increase also counts reorganizations of previous independently operating lawyers, doctors or physiotherapists who reorganize into one partnership. The sector on the second place in terms of percentage growth, is the transport sector. The service sector delivers in absolute numbers the largest number of growths. Relative to 2017, the number of start-ups there has grown by 7.28%. This group mainly concerns consultancy firms at the level of business management and computer consultancy. (Deman, Tchinda, & Kobiashvili, 2019)

Of all newly established companies in 2014, there are 66.71% still active at the end of 2018. These companies survived for 5 years. Statistical numbers state that once these 5 years are completed, the chance of discontinuation decreases substantially. (Deman, Tchinda, & Kobiashvili, 2019)

With this percentage, Belgian starters have the best chances of success in Europe. Sven De Cleyn, the director of Imec's iStart incubator says that this figure can be explained by the fact that Belgians are more cautious about starting their own business compared to other European countries. (Steel, 2017)

Karen Boers, the founder and CEO of the start-up community startups.be wants to nuance this percentage. She states that the success of start-ups cannot be exaggerated. Of the starters who survive for more than five years, the majority remain small and local. Only 10 of these surviving start-ups really managed to expand and become a scale-up. (Steel, 2017)

As stated in the introduction this phenomenon is called the scale-up gap. Boers confirms the Belgian scale-up gap with this statement.

Rising Star Monitor

The most important conclusions from the third edition of the Rising Star Monitor (2018), an annual survey by Vlerick Business School and Deloitte Belgium, are cited below. (Vlerick Business School, 2019)

The Rising Star Monitor 2018 is based on a survey among 253 founders of a total of 162 young Belgian companies with growth potential. The companies in question are on average 2.5 years old and active in various sectors. The study makes a distinction, where necessary, between "low-growth ventures" and "high-growth ventures"/scale-ups. The latter invest substantially more in R&D and are also more innovative in terms of promotion, sales, production, services and market approach. (Vlerick Business School, 2019)

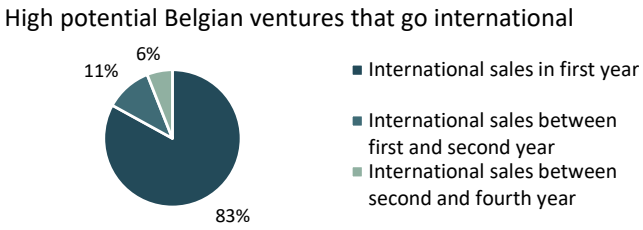
The general conclusion of the Rising Star Monitor is that ambitions for growth of young, Belgian companies are always higher. Last year, growth ambitions were estimated to have 33 employees extra within 5 years and a growth of 9 million euros in sales within the same period. This year these ambitions are a lot higher. The ambition of scale-ups is to have 55 extra employees in 5 years and to increase their total sales by 11 million euros. (Vlerick Business School, 2019)

One of these ambitions is growing internationally. Almost 30% of the total sales of Belgian scale-ups are realized abroad. Within the first 5 years after founding, 40% of all young high-potential ventures in Belgium realize their first international sales. They are considered as ‘born globals’ as they decide to go international immediately. The European average of born globals is ‘only’ 20%. The main reason for this strategic global view is because the domestic market is too small. (Vlerick Business School, 2019)

In an interview with Jurgen Ingels, he stated that investors want to invest in products who have a large market. If there is only a small market interested in the product, than this product is not an interesting investment. Tom Libbrecht, financial manager of scale-up Silverfin, he stated that Silverfin has a product that allows it to be sold on foreign markets, and in this way silverfin can also attract foreign investment. Silverfin is already active in 7 countries, whereof the UK. In the UK they found an investor to fund their growth.

From those international oriented companies, the vast majority of 83% goes international even in the first year after foundation. This compared to 11% of the international companies that have their first international sales between the first and second year after foundation, and 6% between the second and the fourth year. (Vlerick Business School, 2019)

Figure 6: High potential Belgian ventures that go international, % in 2018



Source: (Vlerick Business School, 2019)

Of the international young companies with growth potential, 63% are active in more than 1 country. On average they are active in 11 different countries. The neighbouring countries are the most popular destinations. The top 3 goes as follows: the Netherlands on 1, France on 2 and Germany on 3. In addition to neighbouring countries, exports are also made to the US and UK. The decision to internationalize to a certain country is largely based on the organic demand from that country.

Louis Jonckheere, one of the two founders of the Ghent sales software company ShowPad shared his thought about internationalisation of Belgian companies: *"In my opinion, growth ambition and internationalisation are closely connected. Entrepreneurs who want to become market leaders with their company will need to think about internationalisation from the start. It is a crucial strategy to increase economies of scale and, in particular for Belgian companies, to increase your market. In that respect, I am not surprised that many Belgian startups are 'born globals'."* (Preter, 2019)

However, increasing market potential is apparently not the only advantage of going international. The phenomenon dual companies will be explained below. In this section the fact that going international could be a necessity to close the funding gap scale-up companies are facing is explained. In my opinion,

this confirms the financial scale-up gap European countries are facing, if the internationalization takes place outside Europe.

Collibra raised money from different foreign investors like ICONIQ Dawn Capitals & Battery.
In an interview with chairman of the board of Collibra, Tony Mary said that that there are many advantages involved with foreign investors. They do have higher investment than Belgian investors, but they also have a lot of knowledge about the sector. They have a network abroad with which they help you as a company. They have a lot of companies in their portfolio so they know better how and where they can attract suitable personnel for your business abroad.

2.1.2. Europe

On average, 1 company out of 100,000 inhabitants succeeds to scale in Europe. (Start Up Europe Partnership (SEP) Monitor, 2017)

Annual Report on European SMEs 2017/2018

The 2017/2018 annual report on European SMEs dates from 20th November 2018. This report launched good news: the recovery of SMEs continues. The annual report provides information on the size, structure and importance of SMEs in Europe. This report is prepared on a yearly basis. This edition is already the tenth edition. The first release of the European SME annual report dates from 2008. (European Commision, 2018)

SMEs today account for 99.8% of European companies. These SMEs represent two thirds of the total employment. The micro SMEs are the most common business type. They represent 93.1% of all companies. (European Commission, 2018)

By definition, a micro SME has no more than 10 employees. This is therefore reflected in the employment percentage. The micro SMEs accounted for only 29.4% of total employment in the non-financial business sector, while they represent more than 90% of all companies. Small SMEs and

Medium-sized SMEs together represent 6.7% of all companies, a large contrast with micro SMEs, but they provide 7.6% more employment, namely 37% of the employment comes from these companies.

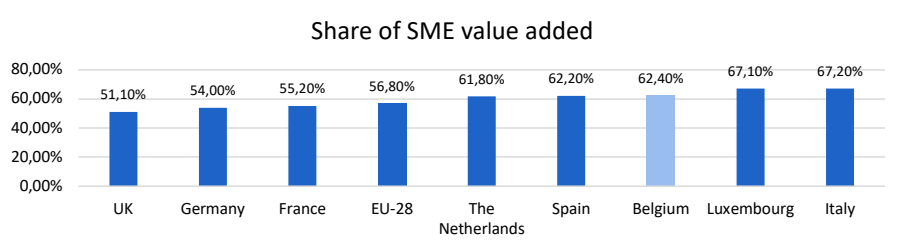
Table 2: Number of SMEs and large enterprises in the EU-28 non-financial business sector in 2017

	Micro SMEs	Small SMEs	Medium-sized SMEs	All SMEs	Large enterprises
# enterprises	22,830,944	1,420,693	231,857	24,483,496	46,547
%	93.1%	5.8%	0.9%	99.8%	0.2%
Value Added (in trillion €)	1,525.6	1,292.1	1,343.0	4,160.7	3,167.9
%	20.8%	17.6%	18.3%	56.8%	43.2%
Employment (in 1000)	41,980,528	28,582,254	24,201,840	94,764,624	47,933,208
%	29.4%	20.0%	17.0%	66.4%	33.6%

Source: (European Commision, 2018)

This table represents the EU28 average SME numbers. However, there are significant differences between the member states. The following graphs compare the contribution of SMEs in terms of value added[3] and employment number in a few selected member states.

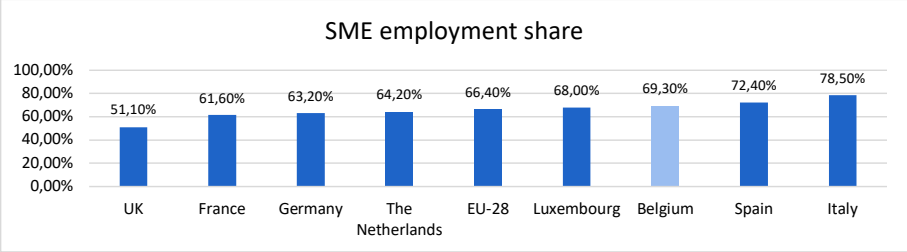
Figure 7: Contribution of SMEs to the non-financial business sector in Member States in 2017, share of SME value added



Source: (European Commision, 2018)

3 Value added = net contribution of the company to the economy (European Commision, 2018)

Figure 8: Contribution of SMEs to the non-financial business sector in Member States in 2017, SME employment number



Source: (European Commision, 2018)

The annual report states that SMEs in the 'non-financial business sector' activities have strong recovery numbers, compared to pre-crisis levels. This full recovery happened in all sectors excluding construction and manufacturing. (European Commission, 2018)

If we compare the number of value added, number of enterprises and SME employment from 2008 to the numbers of 2017, we see a growth from respectively 14,3%, or 521 billion extra value added, a growth in number of enterprises by 13.8%, or 2,9 million enterprises and a growth of 2.5% in employment meaning 2.3 million extra jobs. (European Commission, 2018)

Scale-ups also benefit from this economic upswing. The number of EU scale-ups between 2014 and 2016 have increased by 24%. (European Commission, 2018)

SEP Monitor – Scale-up Europe

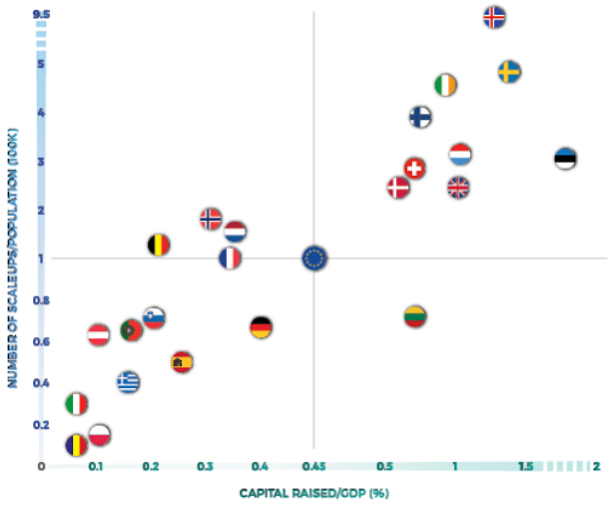
Alberto Onetti, chairman of Mind the Bridge says the following:'Scaleup Europe is growing. Finally. In 2017, more than 1,200 scaleups were born in Europe and $22B of new capital was invested into scaleups. Of which, $2.8B was raised through ICOs (Initial Coin Offerings), where Europe seems to have a competitive advantage over the United States. This growth is not enough to close the gap with other ecosystems, that remains huge. First and foremost, the United States. They have 4 times more scaleups than Europe. Beyond that, the capital raised by US scaleups is 8 times larger. We know that the innovation is not a plant that gives you harvest quickly. You have to continuously seed and work to bear fruits. And we are seeing the initial European crops.'

During 2017, the number of European scale-ups increased by 28% and the capital raised by scale-ups increased by 36%. In absolute numbers, this means that 1,200 new scale-ups were created in 2017,

while $ 22B extra capital was injected in European Scale-ups. If we relate the number of scale-ups to the size of the continent, a growing ratio can be measured. The scale- up density ratio improved 0.9 to 1 scale-up per 100 000 inhabitants. Sweden has the highest density of 4.9 scale-ups per 100 000 inhabitants, while Belgium is just above the European average with a density of 1,1 scale-up per 100 000 inhabitants. The scale-up investment ratio also increased, from 0.33% to 0.45% of GDP.

This growth numbers are steered by traditional economic powers in the European innovation scene. 70% of all now scale-ups have been established in the UK, France, Germany and Sweden. The UK counts 1668 scale-ups, France 681, Germany 530 and Sweden 489.

Figure 9: Scale-up Europe Matrix



Source: (Start Up Europe Partnership (SEP) Monitor, 2017)

SEP Monitor – European Dual Companies

'Access to capital clearly emerges as the main driver of US expansion for EU scaleups' says Alberto Onetti, Chairman of Mind The Bridge Foundation that leads Startup Europe Partnership).

This section should answer the following question: What is a dual company?

A dual company is a European based scale-up company that shows an early international expansion. They move their headquarters abroad, while keeping operations in the European home country. The US is the most common destination for dual companies. The main reason of the movement is because they want to scale-up effectively. In Europe investment is focused on seed and early stage. While scale-ups are seeking for later-stage financing and larger markets in order to grow their transaction. (Startup Europe Partnership (SEP)Monitor, 2017)

In 2017 approximately 14% of European scale-ups are dual companies according to SEP monitor. They estimate that 570 of the 4200 European scale-ups have adopted the dual model (these number are based on data from 2017).

If we look at the financial numbers SEP monitor states that 17% of the total amount of capital raised by European scale-ups flows to those dual companies. They raise approximately 30% more capital than domestic scaleup companies. (Start Up Europe Partnership (SEP) Monitor, 2017)

The SEP monitor have tracked 467 dual companies to map the destination of their headquarters. Of the 467 known destinations, 383 companies moved their headquarter to the United States. This represents 83% of the dual companies. From those companies, 40% established their headquarter in Sillicon Valley and 20% in New York. Next to the United states, the UK is another popular destination. 42 of the tracked companies moved to the UK, to London. The other 42 companies are spread around the world.

The dual companies that have moved to the Sillicon Valley received 39% of the total capital made available to these European dual companies. This compared with 26% in New York, and 17% in other destinations within the US. Dual companies moved to London received the least capital, they got 13% of the total capital made available to European dual companies.

SEP concludes with the fact that following a dual model is effective for scale-ups if they want to obtain later-stage funding and become a scaler[4]. Their data reinforces this conclusion. From the 86 European Scalers, almost a quarter among them are dual companies. 21 among them are dual companies.

During an interview with Jurgen Ingels, he stated a clear opinion on dual companies: "The fact that companies receive investment from abroad is not an issue, but when CEOs then move abroad and a few years later also move the headquarter abroad, that is a problem for Belgium. Actually, we should try to keep our companies here longer. Companies that have already grown reasonably well in Belgium, for example with 200 to 300 employees, will find it more difficult to move abroad. In this way the value that the company creates in Belgium remains in Belgium."

2.2. Financing of Scale-ups

2.2.1. Financing decision

Investment and financing decisions are essential for companies to enable growth. As different financing decisions lead to different restrictions and opportunities, this choice should be taken carefully by the management of the company. The fact that access to finance for high growth companies is limited, can influence and change managers' financing decision as they are forced to look beyond their financing preferences.

2.2.1.1 Asymmetrical information and access to finance

An important characteristic of young companies is the fact that the information they provide often has a lack of credibility and reliability. The information provided by these companies is sometimes too limited. This information is used to estimate the risk of a company by providers of capital. Berger and Udell have described this phenomenon as follows: young companies are characterized by the presence of asymmetrical information. This refers to a situation where different parties do not have the same

4 A scaler is an ICT company that have raised >$100M of funding

access to information. This information is not only restricted in access, it is also distributed asymmetrically. This can lead to a higher cost of capital and to refusal of credit. (Berger & Udell, 1998)

A distinction between two types of asymmetric information has been made. On the one hand there is "hidden information" which occurs when within a transaction one party has important information which the other party does not have. For example, an entrepreneur who is developing a new product will be much more able to estimate the chances of success of the product than the provider of capital. The entrepreneur could present only the benefits of the (invented) product/service without telling the risk associated to that product/service. Thus, incorrect information is passed on to the capital provider. This can lead to "adverse selection". This means that entrepreneurs with low-quality projects are exactly the ones that are most actively looking for financing. Potential investors know this and will refuse to provide financing. A possible implication is that potential financiers decide to no longer make funds available. In this way it is possible that good projects are refused financing. (Fazzari & Athe, 1987) In the literature this problem is referred to as the "lemons problem."

On the other hand, they speak of "hidden action". In this situation it is difficult or impossible for one party to observe the important activities of the other party. It is difficult for investors to ascertain whether the entrepreneur uses the funds for the right business purposes. In the literature this problem is referred to as the "moral hazard." This problem occurs when the entrepreneur uses the resources for activities that do not correspond to the purpose for which the funds have been made available. (Fazzari & Athe, 1987)

The problem of asymmetric information is present because of the nature of the activities and the characteristics of young, high growth companies. The "adverse selection" and "moral hazard" resulting from this asymmetric information will cause difficulties for high growth companies in obtaining financing from traditional financing channels. This idea is found within the agency theory that states that financing problems mainly arise from the presence of asymmetrical information. (Hellmann & Stiglitz , 2000) This agency theory is explained in the following section.

2.2.1.2 Optimal capital structure

The optimal capital structure is a trade-off between on the one hand the advantages of debt financing for a company and on the other hand the disadvantages of debt financing. Different theories have made a comparison of these advantages and disadvantages to define an optimal structure. The 3 most important theories are the target adjustment theory, the agency model and the pecking order theory. These are further clarified below.

2.2.1.3 Target adjustment theory

This theory states that every company has an optimal debt ratio in the long term. This is called the target. Every time a financing decision is made, management will try to reach this target. The various advantages and disadvantages must be considered to determine the ideal debt ratio. There is a trade-off between tax benefits on the one hand and the possible cost of financial difficulties on the other.

According to this theory, companies would incur more debt as a company makes more profit. The company wants to lower taxes on profit through the deduction of interest costs.

The costs of financial difficulties are higher for growth companies than for companies whose assets mainly consist of fixed assets. Financial difficulties can result in the company being unable to continue operating and this may result in the loss of valuable growth businesses. (Aernoudt, Financieel management toegepast (tweede editie), 2016)

2.2.1.4 Agency model

The agency model assumes that managers do not all act for the well-being of the shareholders. If companies have a high cash flow, the company would do well to incur debts. This ensures that managers are kept under control. Debts lead to a reduction in room for manoeuvring for the management through their disciplinary effect. If managers are not disciplined to meet debt financing obligations, agency costs may arise. These arise because managers could use the surplus of funds for

excessive self-reimbursement, investment projects with a negative net present value to increase the size of the company or for the use of funds for own purposes. (Aernoudt, Financieel management toegepast (tweede editie), 2016)

2.2.1.5 Pecking order theory

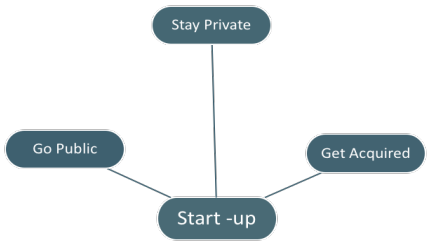
The pecking order theory of Myers starts from the theory about asymmetric information. Potential financiers are unable to estimate the value of a project so that they will underestimate it. That is why companies strive to finance these new projects primarily with internally generated financial resources. When the internally generated resources are exhausted, a company must appeal to debt financing. First and foremost, the company looks for traditional bank financing. Only when these resources are not (enough) available, the company will look for VC and BA investments. In the last instance, the company may finance itself through the issue of shares.

High growth companies will be more forced than other companies to descend the ladder of financing opportunities. (Aernoudt, Financieel management toegepast (tweede editie), 2016)

2.2.2. Strategic financing decision

To scale-up, start-up companies take one of the three fundamentally different paths: Go public, Stay private or Get acquired. (Duruflé, Hellmann, & Wilson, 2017)

Figure 10: Decision point that define companies' strategic scale-up choices



Source: (Duruflé, Hellmann, & Wilson, 2017)

At this decision point, the company faces a fundamental choice about its organizational structure. This decision has consequences for the strategy, management and financing of the company. If the company wants to remain private or wants to become public, in both cases the company will scale as an independent entity. The advantage for becoming a publicly listed company lies in the fact that these companies can get better access to inexpensive capital. However, there is a high cost of going and staying publicly-listed. When a company is public, shareholders expect distributions of profits in the form of a dividend and/or an increase in the value of the companies' share. This can cause avoiding risky investments. (Asker, Farre-Mensa, & Ljungqvist, 2015)

The third option is an acquisition by another company. This could cause fundamental changes within the company. The way in which the company will grow is now determined by the acquiring party. They can either include the start-up within the existing activities of the acquiring party, or the acquiring party leaves the operations of the start-up in its original place and let the start-up grow within the limits of the companies' structure. In some extreme cases, the acquirer 'shelves' the start-up to eliminate a competitive threat. In this scenario the acquired company doesn't really scale. These corporate acquirers are also called strategic buyers.

They should be distinguished from financial buyers. Financial buyers that acquire a company let the company run as it was a private and independent entity. This is called the 'stay-private' decision. The company could receive external financing. As long as this is efficient to remain private. After a while, the scaled-up company gets back to the same decision point. Remaining private gives no immediate prospects for liquidity, except in cases of a financial buyout or so-called secondary share purchases. Hence there could be a pressure to take another decision. If the investors decide to go public, they can sell their shares after an IPO. Investors who decide to be acquired could receive cash or stocks from the acquiring entity. (Duruflé, Hellmann, & Wilson, 2017)

If a company stays private, this company will need financing. The possible financing options are discussed in the definition section which defines financing and funding.

"The main source of funding is equity. This can be provided by a combination of new investors and old investors who invested at earlier stages. At the start-up stage the most common outside investors are

angels, (early-stage) VCists, and corporate investors. In recent years accelerators and crowdfunding platforms have also become more prominent. At the scale-up stages we again find (later-stage) VCists and corporate investors, but also growth equity funds, private equity funds, hedge funds, cross-over funds, family offices, sovereign wealth funds, and institutional investors investing directly. We collectively call all these investors 'venture equity' investors, to account for the fact that their types go beyond the traditional VC model." (Duruflé, Hellmann, & Wilson, 2017)

There are 4 important criteria that scale-up investors' need to satisfy. These criteria are 'deep pockets', 'smart money', 'networks', and 'patient money'.

2.2.2.1 Deep pockets

'Deep pockets' refers to the capacity of the scale-up investor to support large financing rounds. During the start-up phase of a company, the amounts to be financed are generally modest. Contrary when the company wants to increase and scale, this stage requires considerably larger financing rounds. These larger amounts can be obtained on the one hand by an investor with a large capital, 'a deep pocket'. On the other hand, the scaling company can appeal to several investors who jointly invest a large amount of capital.

Both of the previous options have their limitations. Firstly, seen from the investor perspective, there is a portfolio choice problem. When an investor invests a disproportionate part of the available funds in 1 company, risks arise for this investor fund. Diversification of the portfolio is a golden rule when investors want to limit their risks. As a result, standard limited partnership agreements have set a limit on how much a VC fund can invest in 1 company. This is usually maximum 10-15% of the available fund. The second limitation comes from the business perspective. For the receiving company, having too many small investors forms an unmanageable ownership structure. This imposes costs on management and limits the strategic flexibility of the company. In addition, investors are expected to be able to offer extra financing if the company needs it. This can cause problems in practice. (Duruflé, Hellmann, & Wilson, 2017)

"However, one should not forget that not all BA have deep pockets and that the best way to avoid BA quitting the investment scene is to push them to spread risks." (Aernoudt, Business Angels: The Smartest Money for Starters? Plea for a Renewed Policy Focus on Business Angels, 2005)

Smaller funds make it impossible and irresponsible to invest in a scale-up. These companies raise an average of a few million euros during an investment round. In the US, an expanding company raises an average of € 6 million. European scale-ups, on the other hand, raise € 2.6 million on average. (Aernoudt, Executive Forum: the scale-up gap: and how to address it , 2017)

2.2.2.2 Smart money

The importance of VCists' expertise is studied in prior academic literature by Bottazzi et al.

In addition to a sufficiently large fund, the investor must have "smart money". This refers to the added value that investors can bring. In addition to financial knowledge, successful investors also have specific sector knowledge, general knowledge in doing business and perhaps even experience in doing business. (Bottazzi, Rin, & Hellmann, 2008)

It requires general knowledge in several areas to make investment decisions. This is important in both the start-up and scale-up phase. During the growth phase, investors play an important role in guiding the company through their growth spurt and the challenges that come with it. In addition, they can provide important input in professionalizing management structures. (Hellmann & Puri, 2002)

2.2.2.3 Networks

The third important criteria that scale-up investors need to satisfy is having a network. Investors with large networks give access to resources and connections that are beyond the control of the entrepreneur himself. The most important networks that the entrepreneur can access through his investor are the business and financing networks. Business networks can offer a solution to various challenges related to the growth of the company. Such as access to international markets, strategic

partners, talents in industry or legislation. Financing networks can open the doors to new investment opportunities. If the scaling company wants to go public, well-networked investors can help the company identify the right investment bankers and potential management team members. Even if the company wants to remain private, a wide network can offer benefits. For example, the network can help with bringing in additional investors with complementary skills and networks. They could also identify senior executives to join the company or board. Investors with a broad network can also initiate discussions with potential acquirers if the company wants to get acquired. (Duruflé, Hellmann, & Wilson, 2017)

Matthias Browaeys, co-founder of lending platform WinWinner stated in the interview that they refer to the investors in the network of WinWinner as Smart Capital Investors. He states the following:" for the companies that ask WinWinner for financing advice, we want to find a partner that invests smart capital. These investors are either entrepreneurs themselves or managers who have held senior positions in companies. These types of people have know-how and experience. In Belgium there are many of them."

2.2.2.4 Patient money

Patient money refers to long term capital. With patient money, the investor is willing to make a financial investment in a business with no expectation of turning a quick profit. The biggest difference between companies that issue shares and private companies is the investment period. For listed companies, the emphasis is primarily on short-term returns, results and expectations to satisfy investors. Investing in start-up companies is risky and investments pay off in the long term. Scale-ups should attract VC investors with a longer-term perspective and investors without pressure for short-term performance. The investors should be willing to make illiquid long-term investments. However, these investors cannot hold on the equity indefinitely. There exists a limit to investors' patience and with investment by funds, this period is nevertheless limited, since most funds have a limited lifespan. The risk capitalist standard is usually ten years. On a certain point the investors will desire to create liquidity opportunities. (Duruflé, Hellmann, & Wilson, 2017)

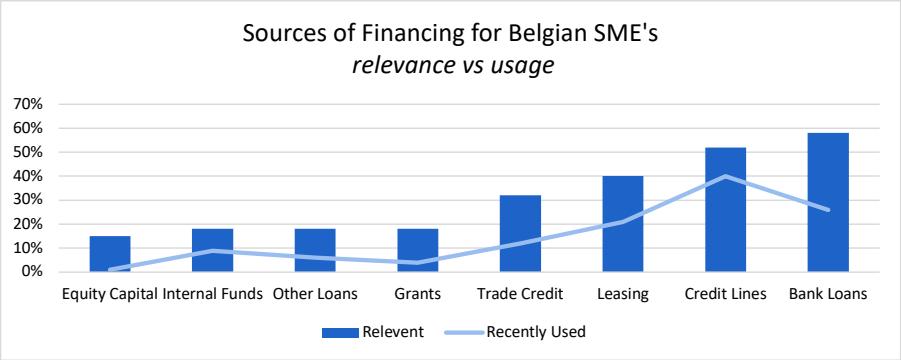
2.3. Use of different financing instruments

Previous literature concluded that there exists a heterogeneity in financing patterns for SMEs across European counties. (Moritz, Block, & Heinz, 2015)

To evaluate the use of different financing instruments, the same order of sources will be respected as in section 1.2. First internal financing will be discussed, followed by external financing. Governmental financing will be discussed in sections 2.4 and 2.5.

In the Survey on the Access of Finance Belgium indicated bank loans, credit lines and leasing as the most relevant[5] sources of financing. (European Central Bank, 2019)

Figure 11: Sources of Financing for Belgian SME's



Source: (European Central Bank, 2019)

The microdata from the SAFE survey will be used in the empirical part of this research. The survey contains 5 sections of questions. The 3th section deals with the financing of enterprises. In following tables, an overview of the relevance of different sources of financing is represented. Only enterprises with at least 10 employees are selected. On top of this selection criterion, only those enterprises that had a positive turnover growth over the past 3 years are represented. A distinction has been made

[5] *Relevant refers to "used this source of financing in the past" or were "considering the use for the future".*

between enterprises with a 3-years positive growth, called growth enterprises, and enterprises with at least a turnover growth of 20% annually.

Table 3: Relevance financing sources for growth companies, April-September 2018

financing source	relevance and usage	Europe	%	Belgium		The Netherlan		Sweden	
Retained earnings or sale of assets		1707	100%	39	100%	73	100%	231	
	used in the past 6 months	254	15%	4	10%	10	14%	47	20%
	did not use in the past 6 montl	225	13%	2	5%	3	4%	48	21%
	not relevant to the firm	1228	72%	33	85%	60	82%	136	59%
Grants or subsidised bank loans		1719	100%	40	100%	72	100%	229	100%
	used in the past 6 months	132	8%	1	3%	1	1%	14	6%
	did not use in the past 6 montl	458	27%	8	20%	12	17%	18	8%
	not relevant to the firm	1129	66%	31	78%	59	82%	197	86%
Bank overdraft, credit lines		1737	100%	41	100%	73	100%	235	100%
	used in the past 6 months	601	35%	21	51%	26	36%	97	41%
	did not use in the past 6 montl	340	20%	3	7%	15	21%	34	14%
	not relevant to the firm	796	46%	17	41%	32	44%	104	44%
Bank loans		1731	100%	40	100%	72	100%	233	100%
	used in the past 6 months	306	18%	12	30%	5	7%	68	29%
	did not use in the past 6 montl	554	32%	14	35%	29	40%	37	16%
	not relevant to the firm	871	50%	14	35%	38	53%	128	55%
Trade credit		1723	100%	40	100%	71	100%	227	100%
	used in the past 6 months	298	17%	4	10%	9	13%	28	12%
	did not use in the past 6 montl	303	18%	9	23%	9	13%	7	3%
	not relevant to the firm	1122	65%	27	68%	53	75%	192	85%
Other loans, like FFF		1724	100%	40	100%	72	100%	220	100%
	used in the past 6 months	191	11%	6	15%	9	13%	18	8%
	did not use in the past 6 montl	273	16%	2	5%	15	21%	18	8%
	not relevant to the firm	1260	73%	32	80%	48	67%	184	84%
Leasing, hire-purchase		1732	100%	40	100%	72	100%	228	100%
	used in the past 6 months	444	26%	13	33%	12	17%	8	4%
	did not use in the past 6 montl	472	27%	8	20%	24	33%	5	2%
	not relevant to the firm	816	47%	19	48%	36	50%	215	94%
Equity		1706	100%	39	100%	73	100%	233	100%
	used in the past 6 months	48	3%	1	3%	2	3%	36	15%
	did not use in the past 6 montl	295	17%	8	21%	12	16%	123	53%
	not relevant to the firm	1363	80%	30	77%	59	81%	74	32%
Debt securities issued		1697	100%	39	100%	72	100%	239	100%
	used in the past 6 months	30	2%	0	0%	0	0%	114	48%
	did not use in the past 6 montl	67	4%	1	3%	1	1%	39	16%
	not relevant to the firm	1600	94%	38	97%	71	99%	86	36%
Factoring		1711	100%	39	100%	73	100%	230	100%
	used in the past 6 months	111	6%	3	8%	3	4%	25	11%
	did not use in the past 6 montl	110	6%	4	10%	4	5%	5	2%
	not relevant to the firm	1490	87%	32	82%	66	90%	200	87%
others like peer-to-peer,		1684	100%	41	100%	73	100%	229	100%
	used in the past 6 months	23	1%	1	2%	13	18%	2	1%
	did not use in the past 6 montl	116	7%	38	93%	59	81%	2	1%
	not relevant to the firm	1545	92%	2	5%	1	1%	225	98%

Source: (European Central Bank, 2019), own calculations

Table 4: Relevance financing sources for high growth enterprises, April-September 2018

financing source	relevance and usage	Europe	%	Belgium	%	Netherlands	%	Sweden	%
Retained earnings or sale of assets		691	100%	15	100%	28	100%	46	100%
	used in the past 6 months	105	15%	2	13%	5	18%	11	24%
	did not use in the past 6 montl	102	15%	2	13%	1	4%	7	15%
	not relevant to the firm	484	70%	11	73%	22	79%	28	61%
Grants or subsidised bank loans		695	100%	15	100%	27	100%	47	100%
	used in the past 6 months	58	8%	1	7%	0	0%	3	6%
	did not use in the past 6 montl	190	27%	5	33%	7	26%	3	6%
	not relevant to the firm	447	64%	9	60%	20	74%	41	87%
Bank overdraft, credit lines		703	100%	15	100%	28	100%	46	100%
	used in the past 6 months	258	37%	8	53%	11	39%	17	37%
	did not use in the past 6 montl	134	19%	2	13%	6	21%	4	9%
	not relevant to the firm	311	44%	5	33%	11	39%	25	54%
Bank loans		698	100%	15	100%	27	100%	46	100%
	used in the past 6 months	131	19%	8	53%	3	11%	14	30%
	did not use in the past 6 montl	219	31%	3	20%	10	37%	3	7%
	not relevant to the firm	348	50%	4	27%	14	52%	29	63%
Trade credit		693	100%	15	100%	27	100%	44	100%
	used in the past 6 months	128	18%	1	7%	3	11%	7	16%
	did not use in the past 6 montl	149	22%	5	33%	6	22%	1	2%
	not relevant to the firm	416	60%	9	60%	18	67%	36	82%
Other loans, like FFF		696	100%	15	100%	27	100%	43	100%
	used in the past 6 months	88	13%	2	13%	3	11%	2	5%
	did not use in the past 6 montl	116	17%	1	7%	4	15%	0	0%
	not relevant to the firm	492	71%	12	80%	20	74%	41	95%
Leasing, hire-purchase		697	100%	15	100%	27	100%	45	100%
	used in the past 6 months	189	27%	7	47%	4	15%	1	2%
	did not use in the past 6 montl	199	29%	2	13%	12	44%	1	2%
	not relevant to the firm	309	44%	6	40%	11	41%	43	96%
Equity		690	100%	15	100%	28	100%	46	100%
	used in the past 6 months	18	3%	1	7%		0%	10	22%
	did not use in the past 6 montl	153	22%	3	20%	3	11%	20	43%
	not relevant to the firm	519	75%	11	73%	25	89%	16	35%
Debt securities issued		686	100%	15	100%	27	100%	48	100%
	used in the past 6 months	19	3%	0	0%	0	0%	23	48%
	did not use in the past 6 montl	41	6%	1	7%	1	4%	8	17%
	not relevant to the firm	626	91%	14	93%	26	96%	17	35%
Factoring		692	100%	15	100%	28	100%	47	100%
	used in the past 6 months	50	7%	1	7%	3	11%	6	13%
	did not use in the past 6 montl	63	9%	2	13%	2	7%	2	4%
	not relevant to the firm	579	84%	12	80%	23	82%	39	83%
others: crowdlending, peer-to-		684	100%	15	100%	28	100%	44	100%
	used in the past 6 months	13	2%	0	0%	6	21%	0	0%
	did not use in the past 6 montl	64	9%	0	0%	21	75%	0	0%
	not relevant to the firm	607	89%	15	100%	1	4%	44	100%

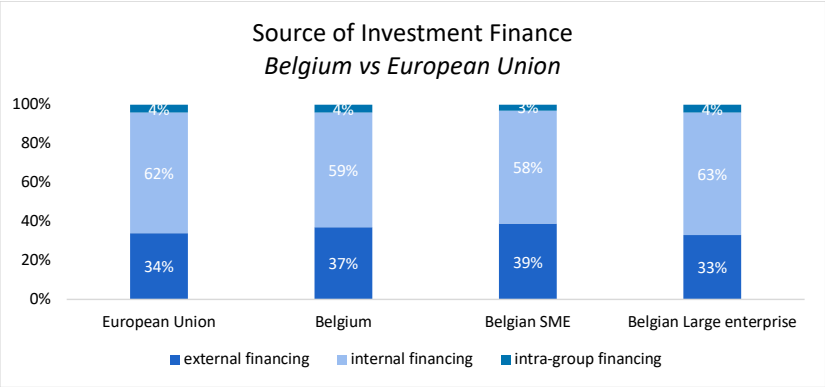
Source: (European Central Bank, 2019), own calculations

2.3.1. Internal Financing

From the SAFE survey conducted by the ECB only 18% of the Belgian interviewees indicate internal funds as relevant. The European Investment Bank has also conducted a survey. In this survey, internal financing accounts for largest part of investment finance.

According to the EIB's annual Investment Survey, internal funds represent the highest share of investment finance. The average internal funds in Belgium in 2018 account for 59% of total investment finance. In 2017 this share was 54%. In Europe, internal funds account for 62% of investment finance. (European Investment Bank, 2018)

Figure 12: Sources of investment finance, Belgium vs European Union



Source: (European Investment Bank, 2018)

Looking at the data for SME's and large enterprises, these percentages show no strong deviations. Data on high-growth companies were not separately investigated and presented within this research.

In the paper of Laveren, the internal financing of high growth companies is briefly mentioned. Laveren says that internal financing is the most important source of financing for many (high) growth companies. But he also argues that this internal financing is often not sufficient. (Laveren, 2016)

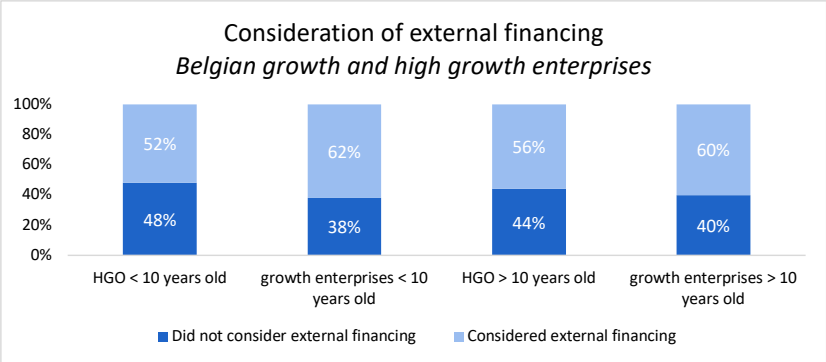
In the same paper by Laveren, Laveren mentions a study carried out in 2014 by Dillen. (Dillen , 2014) Laveren concludes from Dillens' research that all high-growth companies that were part of the research reinvest the internally generated cash flows in the growth and development of the company. (Laveren, 2016)

2.3.2. External Financing

CRB Belgium conducted a survey on the financing decisions of high growth enterprises. This study states that HGE experience more problems with financing than other growth companies. As a result, HGE is should be more likely to consider external financing.

However, less than half of these HGE have effectively considered external funding. From this number, the researchers concluded that HGE's growth ambitions are limited. Since these ambitions do not go beyond what these companies can achieve with internal financing. (CRB, 2019)

Figure 13: Consideration of external financing by enterprise type



Source: (CRB, 2019)

2.3.2.1. Bank Financing

A recent survey by German credit insurer Euler Hermes has found that Belgium is the second most difficult country for SMEs to raise bank financing in the euro zone. (Euler Hermes, 2019)

The financing gap between the demand for corporate finance and the supply of bank loans in Belgium amounts for 14% of GDP. According to this report, the financing gap is the largest in the Netherlands, namely 22 percent of GDP. France has the third largest financing gap estimated 9% of GDP.

At present, European entrepreneurs are still 70% dependent on banks. The demand for bank loans is greater than the supply at the banks. This funding gap is estimated at 3% of GDP in 2019. The gap between supply and demand is developing positively. The European funding gap has been halved in 4 years. In 2015, it still amounted to 6% of GDP. The reason for this decrease is the large availability of loans by the ECB, including through quantitative easing. But the gap is still higher than the US funding gap of 2% of GDP.

In contrast to the general decline in the Eurozone, the financing gap in Belgium increased the most. The growth in the demand for financing is higher than the growth in economic activity.

Euler Hermes calculates the difference between the demand for credit and the offer. For the demand side a calculation of the total need for bank loans was made. On the supply side, the number of new loans that will be provided in the following year has been calculated. (Biersteker & Nauta, 2019)

The Dutch bank, Rabobank, wants to nuance the result found by Hermes. The bank argues that this calculation by Hermes differs from earlier academic research into the funding gap. Here the supply side was calculated by summing the total number of outstanding SME financing. While Hermes only charges new loans.

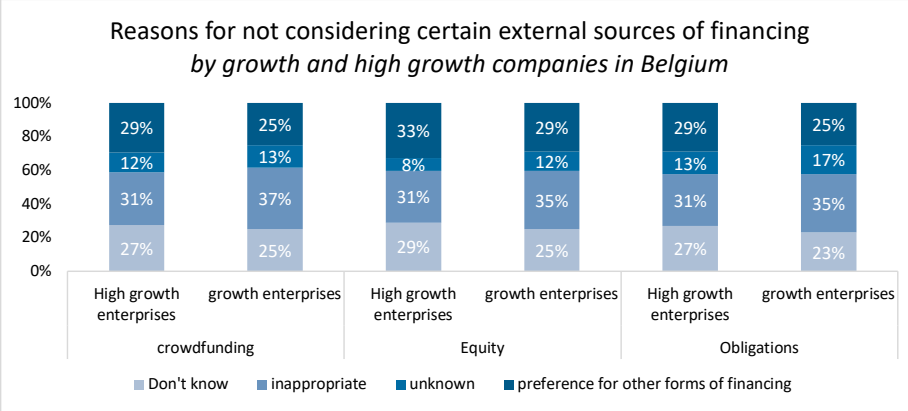
Also, the CRB Belgium argues that bank financing is sufficient for the financial needs of most companies in Belgium. However, companies with grow ambitions could face growth barriers if they are not looking beyond bank financing to fulfill their financial needs.

Banks are not always willing to provide funds to growth companies because of the higher risk associated to them. Those companies require large funding amounts, while those companies are perceived as risk full investments. They have on average fewer guarantees than the requested investment amount. Another frequent occurring problem is the fact that young entrepreneurs have a lack of track record. To manage a company's growth, those entrepreneurs need management capacities to lead this growth. This strengthens the asymmetric information problem. On this moment, there is no trust relationship between bank and entrepreneur yet. (CRB, 2019)

Kasper Vancoppenolle, Partner at WinWinner argues that there are quite a few alternatives for traditional bank loans available. However, entrepreneurs are not always aware of the alternatives. Or they do not always consider them. *"If we want Belgian SMEs to continue to grow, there is an urgent need for more awareness among entrepreneurs about the available options. Not only through the media, but also through the existing banking institutions, social secretariats, accountants ... We all bear the responsibility to stimulate Belgian economic growth."*

The survey conducted by the CRB Belgium questioned the reason why growth and high growth company do not consider different forms of financing. The results indicate that companies do not consider alternative forms of financing such as crowdfunding, equity financing and bond financing suitable for their business. The minority indicates that they are not aware of this form of financing. (CRB, 2019)

Figure 14: Reasons why Belgian growth and high growth companies do not consider alternative financing resources



Source: (CRB, 2019)

2.3.2.2. Private Equity

For companies that do not succeed in acquiring bank financing to fund their growth because of the high risk associated to the investment, those companies can search for sources of funding that are willing to accept those higher risks. Investors that accept a higher risk will require a higher interest meaning providing financing at a higher cost.

Private equity investors try to reduce the risk through acquiring equity and thereby, having control over the company. The problem of asymmetric information can be reduced. Chances of success can be better assessed if investors invest in those sectors or domains of which they have already experience and knowledge. This kind of investment is called smart money.[6]

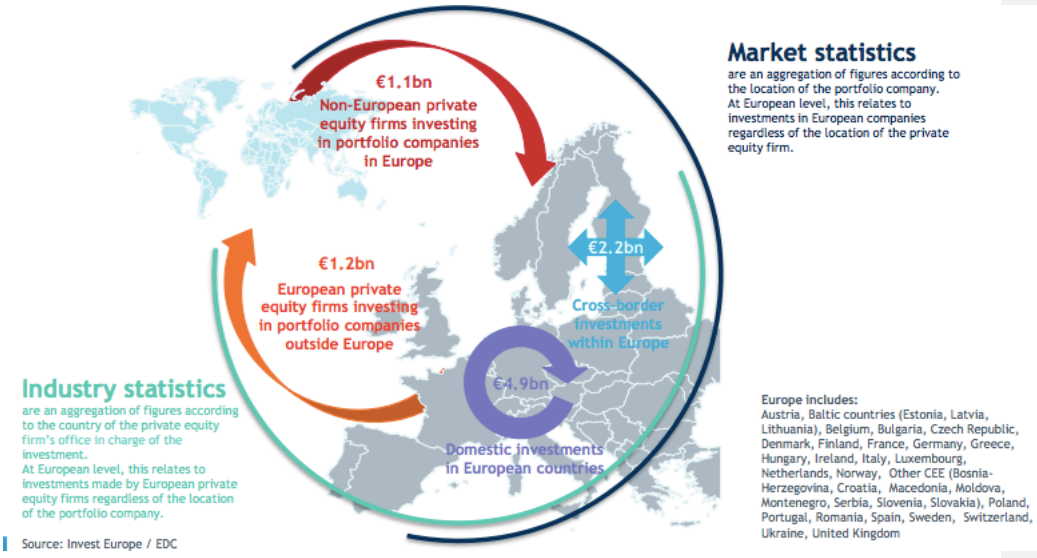
VCists focus more than banks on projects with a relatively high risk and
expected return. The main categories of VCists are private investment funds, BA and VC companies. Different forms of private equity have already been discussed in the definition section ut supra.

[6] *In literature smart money is one of the 4 important criteria that scale-up investors need to satisfy. See section 2.2.2*

To present the amounts invested in Europe and Belgium, data from Invest Europe will be used. Invest Europe is a non-profit organization based in Brussels that publishes yearly overviews of Europe's private equity and VC capital. Together with national association partners, Invest Europe developed the European Data Cooperative (EDC). The EDC collects Europe-wide industry activity on fundraising, investments and divestments. Most recent data on VC can be found in The Invest Europe Yearbook - 2018 European Private Equity Activity. The data represents two sides of private equity capital. There are Industry statistics and market statistics. Interpretation of the data can be two sided. On one hand the data represent industry statistics and on the other hand you can find market statistics.

The figure below explains the difference between both statistics.

Figure 15: VC Geographical investment flows



Source: (Invest Europe, 2019)

For this research only the VC data will be presented. The following tables represent the amount of VC-investments in Belgium. Data from the market statistics will be used.
To have a clear view on the data, the definitions used by Invest Europe for Seed VC, start-up VC and Later stage VCs are cited below.

Seed: *"Funding provided before the investee company has started mass production/distribution with the aim to complete research, product definition or product design, also including market tests and creating prototypes. This funding will not be used to start mass production/distribution."* (Invest Europe, 2019)

Start-up: *"Funding provided to companies, once the product or service is fully developed, to start mass production/distribution and to cover initial marketing. Companies may be in the process of being set up or may have been in business for a shorter time but have not sold their product commercially yet. The destination of the capital would be mostly to cover capital expenditures and initial working capital."* (Invest Europe, 2019)

Later-stage financing: *"Financing provided for an operating company, which may or may not be profitable. Late stage venture tends to be financing into companies already backed by VCs. Typically, in C or D rounds."* (Invest Europe, 2019)

Table 5: VC investments in Belgium, 2009-2017

Amounts in 1000€	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Seed	6722	4833	550	2126	2601	2780	1125	11800	21840
Start-up	86659	61639	84928	55646	54806	53141	44316	36199	54929
Later Stage	57250	9722	26689	32265	47584	56879	22579	76575	67221
Total VC	150632	76195	112167	90036	104991	112800	68020	124575	143990

Source: (Invest Europe, 2019), own calculations

Invest Europe classifies growth capita as a separate private equity funds. The definition used by invest Europe for growth capital is: *"A type of private equity investment (often a minority investment) in*

relatively mature companies that are looking for primary capital to expand and improve operations or enter new markets to accelerate the growth of the business." (Invest Europe, 2019)

The following table presents the growth capital investments in Belgian portfolio companies, compared to investments in European portfolio companies. The relative share of investment in Belgium to investment in Europe is also presented.

Table 6: Growth Capital Investment in Belgium vs Europe, 2010-2017

Amounts in 1000€	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Belgium	166990	11732	261648	180140	288825	290353	487070	206707
Europe	7737169	7924318	6516517	6847634	9679872	11376369	10890716	11512586
%	2%	0%	4%	3%	3%	3%	4%	2%

Source: (Invest Europe, 2019), own calculations

The amount of VC capital investment on European level has surpassed the amount of VC capital investment of 2017. This amount on European level is €8.2bn in 2018. This is 13% higher than the amount in 2017, which was €7.2bn. Also, the number of companies backed by VC increased to 4400 companies. Growth capital on European level remained more or less the same. In 2018 €11.9bn was invested in European portfolio firms. This amount is invested in 2106 different firms. 18% of the growth capital is invested in Venture-backed companies. This should make these VC-backed companies able to scale-up their activities. (Invest Europe, 2019)

As stated in the introduction, there is a lack of risk capital or equity financing in the EU compared to the US. The Belgian share in business angel financing and Venture Capital financing represent only a few percent of the Europen equity and VC investments. However, these forms of financing are suitable for scale-up financing.

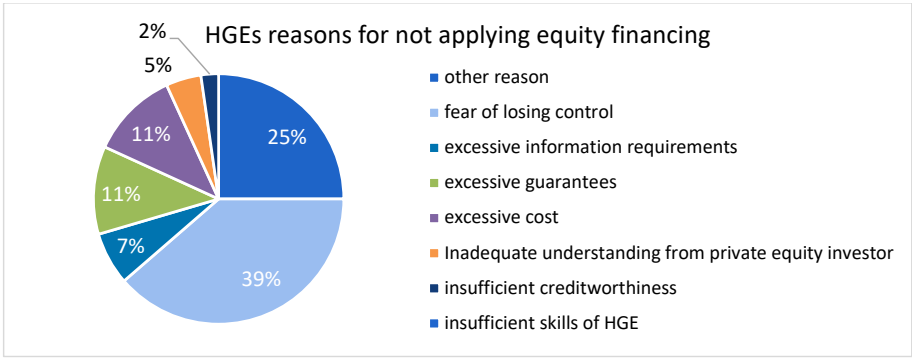
Laveren argues that the risk capital ecosystem in Belgium is too fragmented, too small and insufficiently international. (Laveren, 2016)

Jurgen Ingels argues that on the supply side Belgium needs second generation entrepreneurs, who can invest their knowledge and network in a starting company. Those entrepreneurs know the sector and can help making decisions. In this way Belgian companies can reduce time.

On the demand side, there are also a number of reasons why the use of various forms of risk capital financing is limited in Belgium.

The CRB survey asked HGE what reasons they have for not applying for equity financing. The graph below illustrates the answers from 57 respondents.

Figure 16: Reasons why Belgian HGE does not apply for equity financing



Source: (CRB, 2019)

Fear of losing control is perceived as the most important reason. Matthias Browaeys of the WinWinner Platform said in an interview that there is a solution for this: entrepreneurs and investors should make clear agreements. An entrepreneur must be strong. There must be a match between investor and entrepreneur. They must be able to work together. Mr. Mary is of the same opinion. A system must be set up to protect the founders.

2.4. Government financing

Scale-ups can count on various organizations and agencies for financial support. There are initiatives from both the private and public sector to support scale-ups and to guide them in their growth. Below only public initiatives are discussed at both European and Belgian level.

The government has an important role in creating an attractive ecosystem for entrepreneurs. From starting the company to growing up and scaling up. There is no wonder policy to make this ecosystem as optimal as possible. The challenge for governments is to identify the most important forces within the existing ecosystem and how they interact. In this way, an appropriate policy can be worked out for each country. (Duruflé, Hellmann, & Wilson, 2017)

The government can provide financial support to companies in two different ways. A distinction is made between direct financial support - loans, shareholding, subsidies, tax benefits, government guarantees - and indirect support in the form of advice, access to certain information, etc. (Laveren, 2016)

With regard to indirect support, the government can take a number of steps in addition to co-financing with other capital providers to improve the functioning of the capital market by facilitating advice and information gathering. The government can do this, for example, by entering into a private/public partnership with banks, investment funds, BA and training institutions. (Laveren, 2016)

In "Executive Forum: the scale-up gap: and how to address it" Rudy Aernoudt argues that a majority of government support for entrepreneurial companies on the supply side has been focused on the very early financing stages. In the same paper professor Aernoudt states that scale-up companies deserve more focus from policy makers. *"… policy should no longer focus on a specific stage of investment as the market failure is no longer limited to the early stage. Policy should henceforth adopt a holistic approach, whereby the equity gap as a whole is addressed. The small equity gap should not be the focus because this results in shifting the problem toward later stages*." (Aernoudt, Executive Forum: the scale-up gap: and how to address it , 2017)

There are three main ways of providing direct financial support from governments to entrepreneurial companies. A first form of direct funding can be provided through development banks, specific VC funds managed by the government or matched co-investment funds. Subsequently, governments can co-invest with other institutional partners in VC funds or become limited partners to finance high growth companies. Another type of supply -intervention is a government-backed lending mechanism. (Duruflé, Hellmann, & Wilson, 2017) (Aernoudt, Executive Forum: the scale-up gap: and how to address it , 2017)

In principle all three funding mechanisms can be used at all investment stages. However, using them at the scale-up stage poses some special challenges. Referring back to a previous section on strategic financing decisions, 4 important criteria that scale-up investors need to satisfy were listed up. These 4 criteria are: 'deep pockets', 'smart money', 'networks', and 'patient money'. (Duruflé, Hellmann, & Wilson, 2017)

The design of governmental financing programmes should be conforming these 4 criteria. However, these criteria could be contrary to the natural instincts of most governments. For example, the 'deep pockets' criteria. The government could finance a section of possible scale-ups. These possible scale-ups form a small fraction of start-ups that have extraordinary growth potential. In practice politicians will try to please not only a section of possible scale-ups. They will try to please every company. This leading to a wide spreading of the governmental funds. Governmental funding takes place at different levels. In some countries, like Belgium, there exists financial support not only on country level but also on regional level. (Duruflé, Hellmann, & Wilson, 2017)

To solve this "deep pocket problem", policy makers have decided to invest in the European VC-market with a fund-of-funds approach. (Aernoudt, Executive Forum: the scale-up gap: and how to address it , 2017) This approach will be explained below.

The criteria of smart money can also impose difficulties. This challenge is discussed in the paper From start-up to Scale-up: Examining Public Policies for the Financing of High-Growth Ventures as follows: "The expertise required at the scale-up stage concerns managing growth, which involves the establishment of efficient organizational practices as well as access to new markets, partners, and

networks that play a lesser role at the start- up stage. Different types and combinations of expertise are therefore needed at the scale-up stage." (Duruflé, Hellmann, & Wilson, 2017)

The next criteria to be discussed is whether the design of public investment is appropriate to stimulate networking. Policy makers tend to create programmes for domestic companies and domestic investors. They want to help their own economy and try to stimulate investment within their own country. In this way, the government can limit the firm's ability to build stronger international networks. This approach is not always suitable for scale-ups, as they seek to grow internationally, they require international networks. (Duruflé, Hellmann, & Wilson, 2017)

The three funding mechanisms will be explained below.

2.4.1. Direct public investment

During the 1980s and 1990s, policy makers wanted to tackle market failures, such as investment gaps left from private VC investors, by setting up public VC funds. Examples are university seed fund and regional government-controlled funds. These funds have failed to tackle the financing gap because of several reasons. These reasons are summarized in the paper "*Executive Forum: the scale-up gap: and how to address it*" and will be presented below.

First of all, picking a successful company was negatively influenced by the lack of entrepreneurial skills to select best performance companies. In addition, the possible distortions of investments strategies caused by political interest effected the choice of investments instead of adequate risk strategies.(Brander, Egan, & Hellmann, 2008)

After companies have been backed by public VC funds, they fail to attract private VC funds for following rounds. And lastly, investment through private VC funds could lead to crowding-out effects of private investments because the return demanded from public funds was lower. This discourages private investors that are more focused on generating high returns. (Armour & Cumming, 2006)

The performance of portfolio companies in government VC funds is limited. This raises doubts about the effectiveness of public VC funds. (Aernoudt, Executive Forum: the scale-up gap: and how to address it , 2017)

2.4.2. Government co-investment

The purely public approach has been replaced by co-investment forms. This is a hybrid-form of investment where public and private funding is combined. The public investor can be on different levels: European level, national level and regional level. On European level several European Institutions have participated in a VC funds-of-funds. These institutions are the European Commission, the European Investment Bank, and the European Fund for Strategic Investments. Also individual European countries have established an own co-investment scheme.(Aernoudt, Executive Forum: the scale-up gap: and how to address it , 2017)

A fund-of-funds takes participations in various funds and operates as a limited partner in these funds. No direct investments are made in a fund-of-funds companies, but interests are taken in other VC funds that, in turn, do invest in businesses. An advantage of a fund-of-funds is that the fund manager does not have to worry about each individual company but at the fund level. A disadvantage is that an extra "cost layer" is added for fund-of-fund investors. The fund manager of the fund of funds will, in addition to the fund managers of the individual funds also need to be reimbursed via management fees with or without carried interest.

Setting up fund-of-funds can reduce the financing gap of scale-ups partially as the VC funds in the portfolio are, on average, able to do higher invest amounts in companies. Historically, VC funds with one or more fund-of-funds investor have not only been able to attract more private capital. These VC funds invest, on average, larger amounts per company. (European Venture Capital Association (EVCA), 2014)

2.4.2.1. EIB Group

The European Investment Bank (EIB) and the European Investment Fund (EIF) together form the EIB group. These European financial institutions provide financing and guarantee to, among others, companies directly or through financial intermediaries. The European Fund for Strategic Investments (EFSI) was set up as a result of the "Investment Plan for Europe" (called Juncker Plan) and is important because it has released additional financial resources for projects identified as risky. (Vlaio, 2019)

The EIB is the financial institution for long-term financing of the European Union (EU). EIB services consist mainly of providing loans to companies and institutions, but it also provide guarantees, microfinance, VC, etc. (Vlaio, 2019)

The European Investment Fund (EIF) also belongs to the EIB group. The EIB is the majority shareholder of this fund. The EIF seeks to facilitate access to finance for SMEs and, for this purpose, cooperates with, among others, approved financial intermediaries. (Vlaio, 2019)

2.4.2.2. EIF

The VC sector in Europe is still largely dependent on public financing. The EIF has an important role within this European public financing. This because the EIF invests its own capital and funds from other public institutions, like for example the EIB, in a series of public investments programmes. (European Investment Fund, 2018)

One goal of the EIF is to build a strong and integrated European ecosystem for VC and private equity where international investors are encouraged to invest in European businesses. (European Investment Fund, 2018)

The EIF promotes a wide range of financing options through a holistic approach. With this approach companies are supported at any stage of their life cycle. (European Investment Fund, 2018)

2.4.2.3. EFSI

With the 'Investment Plan for Europe', Europe is releasing additional resources to stimulate the investment in the Eurozone. For this purpose, a European Fund for Strategic Investments (EFSI) was set up and housed in the EIB group. Under the EFSI initiative, € 16 billion in funds is released from the EU budget, supplemented by an allocation of € 5 billion in own capital. The EFSI is important because it frees up funding for projects with a higher risk profile. (Vlaio, 2019)

2.4.2.4. VentureEU

A new investment project was set up by the European Commission in 2018. The plans date back to 2015. The European Commission creates six so-called funds-of-funds. They will provide capital injections to existing VC funds in order to increase their financial strength. This New EU programme aims to double European VC. With the extra capital, Europe hopes to make more money flow to innovative start-ups and SMEs in sectors such as IT, pharmaceuticals and energy. The management of investments in VentureEU is entrusted to the European Investment Fund (EIF), part of the European Investment Bank (EIB). With VentureEU, the Commission hopes to attract more investors from the rest of the world. Many American and Asian investors are staying away from Europe today because they find the European VC market too small and insufficiently developed. "The average VC fund in Europe manages 65 million euros," says the trade association Invest Europe. "To attract large investors, that size must be at least 150 million." "With VentureEU, the numerous innovative entrepreneurs in Europe will soon receive the investment they need to innovate and grow into a global success story," EU Commissioner Jyrki Katainen (Jobs, Growth and Investment) said in a communication. (De Preter, 2018)

The purpose of this funds-of-funds is to use public money in a smarter way. The funds want to attract substantial amounts of private investments from investors who are not currently investing in the EU VC. The funds-of-funds will act as an intermediary. This vehicle is necessary to attract those investors who are not investing. The funds-of funds can bridge the gap between large institutional investors and smaller VC funds to provide access to larger pools of international capital. (European Commission, 2018)

Through the EIF, the European Union will act as a cornerstone equity investor in six VC fund-of-funds. These investments will concern a total amount of € 410 million. These fund-of-funds will not be managed by the EIF itself, but by professional and experienced fund managers under the supervision of the European Commission and the EIB. (European Commission, 2018)

The fund managers of these fund-of-funds are required to collect the remaining amount, leading to a total of at least € 1.6 billion extra fundraising. The fund managers of the fund-of-funds themselves aim for an amount of 2.1 billion in extra fundraising for public and private investors. According to the figures the European committee would invest an additional € 6.5 billion in innovative start-ups and scale-ups Europe. This would double the total amount of VC investments in Europe. (European Commission, 2018)

Following figures illustrates how the VentureEU will work and where the money comes from. These figures were taken from the "*Factsheet VentureEU*" provided by the European Commission. Source: (European Commission, 2018)

Figure 17: How VentureEU works

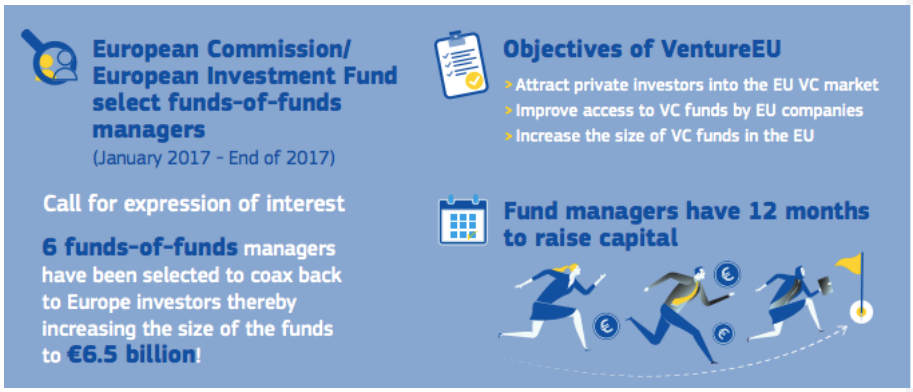
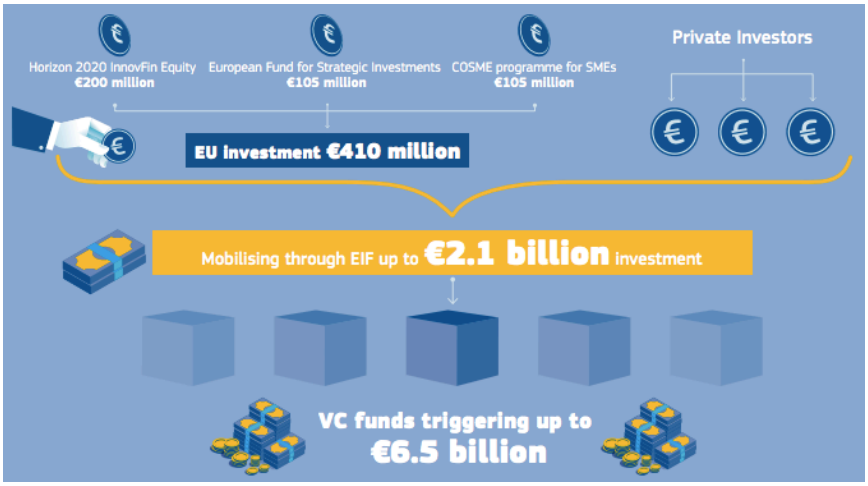


Figure 18: Funding of the VentureEU



The hybrid VC financing models are predominantly managed on a commercial base. Here the question arises regarding the terms and conditions on which the public investors invest alongside the private investors. The pari passu approach means that both parties invest on the same terms and conditions. They have equal rights and obligations. The public funding does not create a leverage on the return of the private investors. This co-investment approach can narrow the equity gap because it increases the fund size, but it cannot close the gap. (Aernoudt, Executive Forum: the scale-up gap: and how to address it , 2017)

Over reliance on the public sector together with a lack of private sector interest in investments could lead to crowding out of private markets, meaning that public interventions distort the market equilibrium instead of solving it. (Duruflé, Hellmann, & Wilson, 2017)

A possible solution to increase the leverage on the private return is a co-investment government scheme that provides some form of financial incentives.

One alternative approach could be that the parri passu is only valid on the downside of the return but not on the upside. If a loss occurs, both parties suffer the same loss. But are there profits, the private investors will receive the bigger part. (Aernoudt, Executive Forum: the scale-up gap: and how to address it , 2017)

This may deprive the governments from making a good return on an investment. Governments design of approach will depend on how willing the government is to provide financial incentives which lead to lower returns for the government. (Duruflé, Hellmann, & Wilson, 2017)

The following funding option provided by the government is designed to create a higher leverage for the private investor.

2.4.3. Government-backed lending schemes

With Government-backed lending schemes the government provides a loan to private investors as participation in the investment. This will create a leverage effect if the Internal Rate of Return of the funds is higher than interest payable on the government loan. If the interest is lower, this corresponds to a less risky investment and this will attract risk-averting investors. The reverse applies to risk-taking investors. (Aernoudt, Executive Forum: the scale-up gap: and how to address it , 2017)

2.4.3.1. The US SBIC system vs Europe

"We've got to be relentless in our efforts to support small businesses who are creating jobs and helping to grow the economy." (Barack Obama, 2015)

The American Small Business Investment Company (SBIC) programme is a successful federal support programme established in 1958 with the aim of stimulating the American SME sector through the increase of the availability of long-term loans and private equity capital. SBICs are private investment companies that provide VC to SMEs. This through debentures or through participating securities guaranteed by the Small Business Administration. (Aernoudt, From SME Policy to Entrepreneurship Policy, 2003)

The SBIC programme uses a so-called "debenture model". SBIC licenses can be assigned to a private investment company. This investment company can subsequently borrow from the SBA by issuing so-called "debentures". Debentures are loans without collateral. The repayment and periodic interest payments of the debentures are guaranteed by the SBA. The SBA sells these debentures on the public market. (The Small Business Investment Company Program, 2014)

So, a SBIC can borrow funds at favourable rates thanks to the guarantee from the SBA. Then a SBIC invest its private capital together with the raised funds in SMEs. Because the reduced capital cost the SBICs can create a leverage that significantly increases the return for private investors compared to what would be achieved without leverage. (The Small Business Investment Company Program, 2014)

2.4.4. Conclusion on the different types of governmental funding

In the paper Executive Forum: the scale-up gap: and how to address it, Rudy Aernoudt compares the 3 different forms of governmental financing. He states that the shift from the non-efficient, direct public investments to co-investment schemes is considered positive. This type of investment is neither ideal since it is not a cost-efficient way to cope with the big equity gap, hower this type of investment leads to more money in the VC market. The funds-of-funds create a dominance of public investment while crowinding out private investments. The last type of investment, government backed lending approach, creates most value for public investments. It is cost-effective and due to the leverage affect it attracts private investors. (Aernoudt, Executive Forum: the scale-up gap: and how to address it , 2017)

Because of the positive characteristics of the government-backed lending approach shown by the American example SBIC, the Europeoan Commission is exploring if they could impose a similar financing system. (Aernoudt, Executive Forum: the scale-up gap: and how to address it , 2017)

Next to VentureEU the European commission want to set up the European Scale-Up Action for Risk Capital (ESCALAR) programme. This program will be designed to enable VC funds to increase their investment capacity. (European Commission, 2018)

2.5. Public investment in Belgium

In this section a number of Belgian government measures, with the purpose to facilitate access to credit, are explained.

As already explained before, the government can on the one hand directly provide funds to companies to support their growth and, on the other, it can provide co-financing for funds provided by banks, investment funds, BA and VC companies. Government institutions active in Belgium include Flanders Participation Company, Sowalfin, SRIW, Sogepa, Brussels Guarantee Fund, Brustart, SRIB. (Laveren, 2016)

2.5.1. Federal Level

2.5.1.1. Tax shelter for starters

Individuals can receive a tax reduction in the personal income tax of 30 or 45% if they directly acquire new shares from a starting company or via a crowdfunding platform. (Agentschap Innoveren & Ondernemen, 2019)

A company can raise a maximum pick up of € 250,000. This measure was expanded with the Tax Shelter for scale-ups, aimed at growth companies of at least 4 years old. The investors can invest maximum €100,000 per year. This measure is aimed at small companies[7]. It must concern a domestic company or a company from the European Economic Area (EEA) that has a "Belgian establishment".(Agentschap Innoveren & Ondernemen, 2019)

7 Definition small company: a small company is a company that does not exceed one of the following criteria. The annual average number of employees can by maximum 50 employees; annual turnover, excluding VAT can be maximum€ 9,000,000; and the balance sheet total can be maximum € 4,500,000

2.5.1.2. Tax shelter for scale-ups

With this measure, applicable from tax year 2019, the federal government wants to support small companies that need capital to finance their growth. This small company must be between 4 and 10 years old. In this case, individual can get a tax reduction of 25% in the personal income tax. (Agentschap Innoveren & Ondernemen, 2019)

A small company can raise a maximum of € 500,000 through this tax measure. This amount must be reduced by the amount that may have collected via the Tax shelter for start-ups. Investors can still invest a maximum of € 100,000 per person and per year. (Agentschap Innoveren & Ondernemen, 2019)

2.5.2. Regional level - Flemish region

2.5.1.3. "Win-Win loan"

With the "Win-Win loan" from PMV/z, the Flemish government encourages individuals to provide a subordinate loan to SME. A private individual can borrow up to € 50,000 to a Flemish SMEs for a duration of 8 years. The lender receives an annual tax credit of 2.5% on the outstanding capital. If the borrower cannot pay back, the lender gets 30% of the amount due as a one-off tax credit. An SME can take 200 loans up to an amount of € 200,000, with a maximum of € 50,000 per lender. PMV / z is the umbrella brand for the Starter Loan, the Co-financing, Co-financing + the Win-Win loan and the Guarantee Scheme. By using these five products grouping, PMV/z emphasizes the possibility to combine these different products to come to an optimal financing solution. (Agentschap Innoveren & Ondernemen, 2019)

2.5.3. Regional level - The Brussels Region

2.5.3.1. GIMB

The GIMB offers co-financing, investments and credits for companies established in the Brussels Region. As part of its support to Brussels companies, the GIMB offers the following solutions: financing (VC, subordinated loans and traditional loans) through the Brustart branch, co-financing (together with credit institutions) through the Brucofin branch and microfinance through the Brucopart branch. (1819.Brussels, 2019)

During an interview with Tony Mary, Chairman Of The Board at Collibra, Mr Mary told that Collibra (the first Belgian techstart-up valued above 1 billion) has raised his first funding from the GIMB.

For the next funding round, Mr. Mary went to the Flemish GIMB, namely GIMV. However, the company could not obtain financing from this Flemish institution because Collibra's head office was located in Brussels. At the same time, Collibra is a Flemish spin-off company. These strict regulations resulted in a Flemish company having to look for financing outside Belgium, which was in the Netherlands.

2.5.3.2. Brussels Guarantee Fund

The Brussels guarantee fund provides easier access for entrepreneurs who are looking for bank financing. The purpose of this fund is to facilitate the granting of professional credit in the Brussels-Capital Region by granting credit institutions a substantial part of the guarantees that these credit institutions require from companies. This through payment of a one-off lump sum contribution. The Fund is aimed at small and medium-sized companies that meet the European SME definition, who want to invest in Brussels. The guarantee fund is divided into four products: guarantee on request / preliminary agreement, the classic fast guarantee, the green fast guarantee and the fast guarantee for microfinance. The differences concern maximum loan amount, duration of the guarantee and cost price. (1819.Brussels, 2019)

2.5.4. Regional level - The Walloon Region

The Walloon SME Finance Company Sowalfin offers, on the one hand, subordinated loans that are complementary to medium-term bank credits and, on the other hand, guarantees for bank credit for companies based in the Walloon Region.

The Socamut institution is active within Sowalfin, which specializes in offering of financing and securities for the self-employed and small businesses. In addition, Sowalfin obtained operational supervision over the product le prêt citoyen in 2016. Le prêt citoyon is the Walloon counterpart of the Flemish Win-Win loan. (Sowalfin, 2019)

2.5.5. Evaluation on the public instruments in Belgium by high growth companies

Every region in Belgium provides government tools to help companies grow and avoid financial barriers. This raises the following question: to what extent are these instruments effectively used by Belgian companies? This survey conducted by the CRB aims to answer this question. The conclusions will be discussed below.

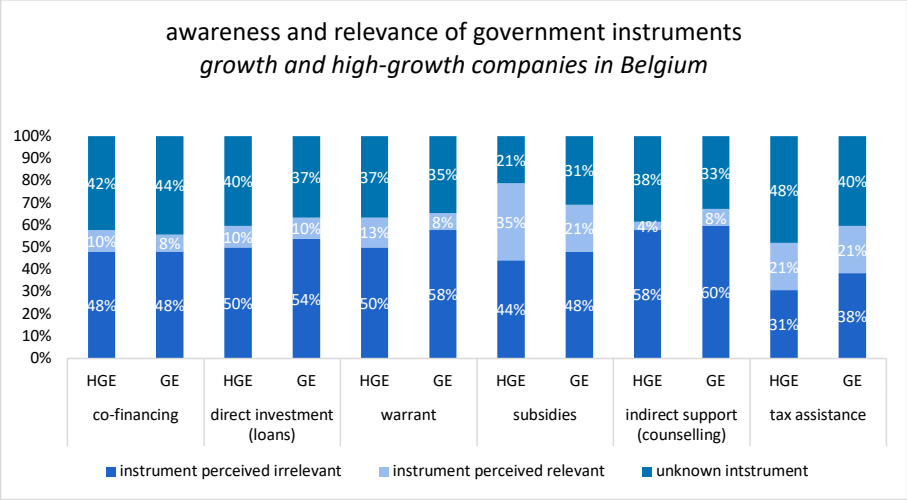
First of all, the instruments provided by the government are perceived too complex. The results of the survey concluded that too many instruments exist. And that these instruments are constantly changing.

In addition, on the part of the entrepreneurs, there is a lack of knowledge about the available instruments. (CRB, 2019)

During an interview with Matthias Browaeys, co-founder of Winwinner, the same conclusion were made. Winwinner provides weekly training for companies that are looking for funding, but do not have enough knowledge of government instruments. According to Matthias Browaeys, the government should set up simpler procedures and inform entrepreneurs in an appropriate way of the available instruments. There is a lack of entrepreneurial knowledge in this area.

These conclusions will be presented graphically below. These conclusions are presented graphically below. The data for these graphs are taken from the questionnaire on financing for growth companies in Belgium, drawn up by the CRB. The abbreviation HGE is used for high-growth companies and the abbreviation GE is used for growth companies.

Figure 19: Awareness and relevance of government instruments according to growth and high-growth companies in Belgium

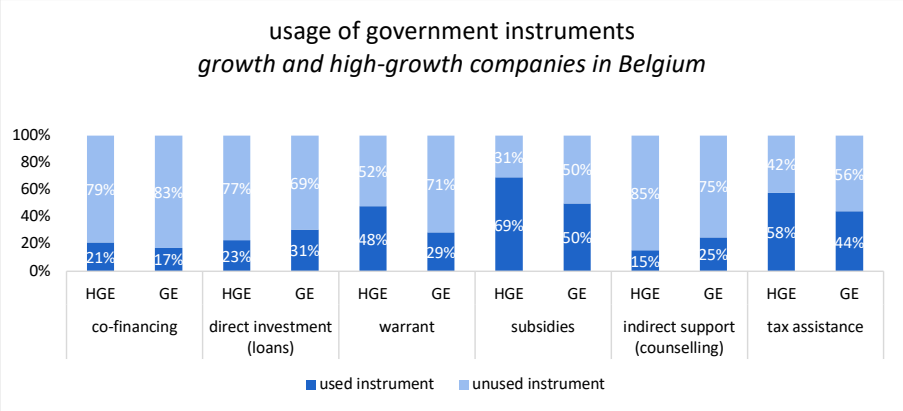


Source: (CRB, 2019)

With the exception of direct investment and indirect support through guidance, HGE considers public instruments to be more relevant compared to GE. (CRB, 2019)

In addition to finding these instruments more relevant, HGE are using the government instruments more than GE. (CRB, 2019)

Figure 20: Usage of government instruments by growth and high growth companies in Belgium



Source: (CRB, 2019)

Possible explanations for this additional use by HE are discussed in the study. Due to the fact that HGE takes more risks than GE, HGE benefits more from the support provided by the government. The support allows the companies to finance their risky projects. On top of this direct effect, there is also an indirect positive effect on the asymmetric information between companies and private investors. Private investors will perceive companies who received governmental support as more trust worthy investments. (CRB, 2019)

Even though public funding instruments are perceived less relevant by growth companies, growth companies attach importance to them. This implies that the instruments that exist today are considered to be too complex. This has already been mentioned in the conclusions above. (CRB, 2019)

3) Empirical analysis

After the general description of financing and scale up companies, this section examines the research questions.

As stated in the introduction, the financing gap has been indicated as 1 of the 5 key gaps scale-up companies are facing. (ScaleUp Institute, 2018)

This section aims at answering the following questions:

1. Is the access to finance perceived as a more important problem for Belgian scale-ups compared to Europe, the Netherlands and Sweden?
2. Is access to finance perceived as a more important problem for Belgian growth companies compared to Belgian high growth companies.
3. Which factors influence the financing gap of companies during the scale-up phase?

3.1. Data

To answer the research questions, data from the Survey on the access to finance of enterprises conducted by the European Central Bank and the European Commission will be used. This bi-annual survey focuses on the financing needs on the demand side, but also on the availability of financing and the market conditions on the supply side.

This study started for the first time in 2009 and the most recent data was published on 28 November 2018. This 19th wave of the survey was conducted between September and October 2018. The survey covers the period from April 2018 to September 2018. The dataset contains a total of 222952 observations of which 17,848 observations during the last wave. 11020 of these observations are companies who are resident in the euro area. Including the non-euro area, EU based companies there are 16776 observations. The remaining 1072 observations concerns enterprises based in Iceland, Turkey, Montenegro, Albania and Macedonia.

The aim of the survey is to map the changes in financing conditions for companies. For this purpose, the most recent financial situation is outlined first. Changes and concerns on the financial situation are explained in order to make a conclusion about the current financing conditions for European companies.

3.2. Method

To answer the first 2 research questions a *t*-test will be performed in Excel. By using the t-test, it can be verified if there is a significant difference in the means. The average answer given by Belgian, European, Dutch and Swedish respondents on the question "to what extent has access to capital been a problem for your company in the last six months" will be compared. The equality of distribution of these answers form Belgian, European, Dutch and Swedish enterprises will be tested through a Kolmogorv-Smirnov test.

To answer the third research question, a multi-regression analysis is performed trough the statistical programme Gretl. Gretl is a statistical package with a graphical interphase. Based on this programme an OLS analysis can be performed. The variables of interest are explained below.

3.3. Selection of the observations

The total dataset contains 222 952 observations. As discussed above, there is no single specific definition in the literature on scale-ups. A frequently quoted parameter is the age limit of ten years. Therefore companies older than 10 years are excluded. Having at least 10 employees is another frequently used feature to distinguish scale ups. Companies with less than 10 employees are also filtered out of the dataset.

Another important criterion for selecting scale ups is the enterprises past growth. Scale up is a recent term that occurred to describe high-growth firms. The OECD definition states that scale ups have an average annualized growth in employees or in turnover greater than 20%. (Ahmad & Seymour, 2008)

From the sample, 2 sets of population will be distinguished. A distinction is made between companies that have experienced an annual positive growth and companies who have experienced an annual growth of at least 20% in the last 3 years. The first group will be called growth enterprises and the latter group, a subgroup of the first group, will be called high growth enterprises.
In the microdata of SAFE past employee growth and past turnover growth are presented as 2 separate variables. For this dissertation, past turnover growth will be used as a criterion to identify growth and high growth companies.

Met opmerkingen [JV1]: In the last year?

In addition to the analysis of the Belgian growth companies, the Dutch and Swedish growth companies will also be analyzed. For this master dissertation, 5 interviews were conducted with scale up related businesses. In 2 interviews (with Tony Mary and with Matthias Browaeys) it was stated that the Dutch financing market is ahead of the Belgian one. For this reason, the Dutch observations are also included. During the interview with Jurgens Ingels, he stated that Belgium should evolve to the VC ecosystem of Sweden. He states that on terms of development, Belgium and Sweden are on the same level, but the Swedish second-generation entrepreneurs, with experience and capital, can help accelerate the process of the establishment of high growth enterprises.

If companies with less than 10 employees and companies older than 10 years are excluded from the latest observations, 1231 observations are left. The number of Belgian observations with at least 10 employees is 302. If the companies older than 10 years are also excluded, and if growth requirements are taken into account only 15 observations are left, of which 7 observations represent the high growth enterprises.

From a statistical point of view, this number of observations is too small to define a valid conclusion. For this reason, companies that are 10 years or older will be included in the analysis. Knowing this, the final result of the analysis needs to be nuanced.[8]

[8] *In the second section of this research, data on high growth Belgian enterprises older than 10 years are separately presented from high growth enterprises younger than 10 years. The source of this data is a survey conducted by the CRB Belgium. This survey only contains Belgian enterprises, in this way it has a higher number of respondents who answer the previous named criteria.*

If companies with less than 10 employees excluded from the latest observations, 11429 observations are left. As mentioned before, the Belgian company share within this group amounts to 302. From the 302 observations there are 204 growth companies and 31 high growth companies. The number of Dutch and Swedish observations with at least 10 employees are 522 and respectively 333 observations. From those 522 Dutch observations there are 404 growth companies and 97 high growth companies. While from the 333 Swedish observations, 245 growth companies and 49 high growth companies.

Table 7: Number of observations

	Europe	Belgium	The Netherlands	Sweden
Enterprises with more than 10 employees	11429	302	522	333
Growth enterprises	8247	204	404	245
As a % of enterprises with more than 10 employees	72%	68%	77%	74%
High Growth Enterprises	1903	31	97	49
As a % of growth enterprises	23%	15%	24%	20%

3.4. Research questions

Is the access to finance perceived as a more important problem for Belgian scale-ups compared to Europe, the Netherlands and Sweden?

Access to finance is chosen as the variable of interest. This variable answers the following question: to what extent is the access to finance a problem for your company? A multi-regression analysis can show to what extent the independent variables explain the size of the problem.

Respondents of the survey indicated on a scale from 1 to 10 how important the problem of access to finance is for the company. Where 1 stands for not at all important and 10 for extremely important.

The graph below presents the relative number of respondents who indicated different scores, from 1-10, to the variable of interest. A distinction is made between Belgian, Dutch, Swedish and European

growth or high growth companies. As explained in the section “selection of the observations”, growth companies are those companies who indicated to have a past growth in turnover >0% over the last 3 years, while high growth companies is a subgroup of growth companies who have a past growth in turnover >20% the last 3 years.

Figure 21: relative number of respondents who indicated a score from 1 to 10, to the question how important was the problem access to finance the last 6 months for your company

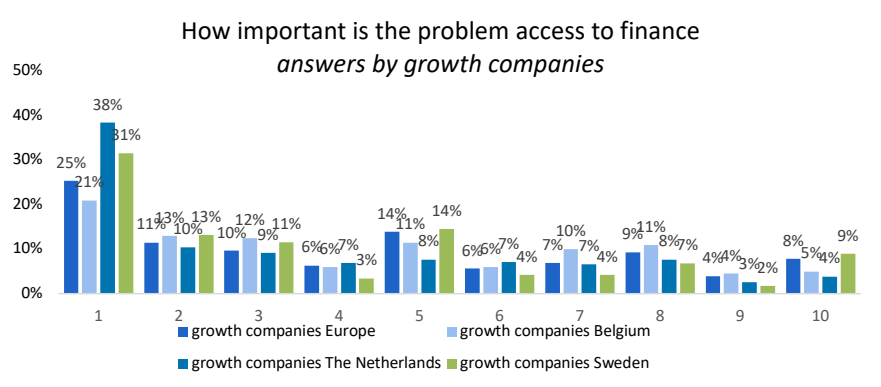
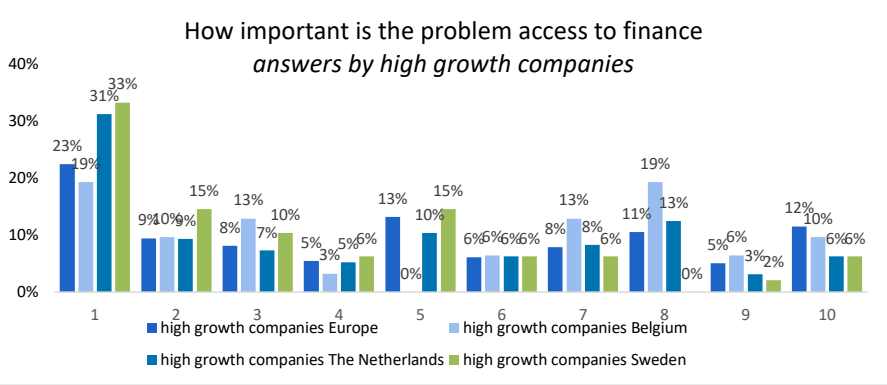


Figure 22:relative number of respondents who indicated a score from 1 to 10, to the question how important was the problem access to finance the last 6 months for your company, subgroup high growth companies



What is striking is that in both charts, Belgium has relatively least companies with a value of 1. In both charts, the Netherlands and Sweden have the highest companies with value 1. In these countries, more than 30% of companies self-assess the problem 'access to capital' not at all important.

Access to finance may be easier there than in Europe or Belgium. This is in line with the opinion of Matthias Browaeys, founder WinWinner, Tony Mary, chairman of the Board of Collibra and Jurgen Ingels, co-founder of Smartfin.

The *t*-test was performed to find out if there is a difference between the average scores on the access to finance problem. This test is performed 6 times in order to compare the average answer of Belgian respondents to average European, Dutch and Swedish respondents. A distinction between the 2 different company types described above has been made. This leads to 6 hypotheses.

Following hypotheses are tested.

- $H_{0,1}$: Access to finance is perceived as an equal important problem for Belgian growth companies compared to European growth companies.
- $H_{0,2}$: Access to finance is perceived as an equal important problem for Belgian growth compared to Dutch growth companies.
- $H_{0,3}$: Access to finance is perceived as an equal important problem for Belgian growth companies compared to Swedish growth companies.
- $H_{0,4}$: Access to finance is perceived as an equal important problem for Belgian high growth companies compared to European high growth companies.
- $H_{0,5}$: Access to finance is perceived as an equal important problem for Belgian high growth compared to Dutch high growth companies.
- $H_{0,6}$: Access to finance is perceived as an equal important problem for Belgian high growth companies compared to Swedish high growth companies.

Met opmerkingen [JV2]: Misschien die figuren bespreken? Wat meteen opvalt is dat in Belgie minst waarde 1 heeft, in nederland en zweden veel meer waarde 1 dus access to finance is daar makkelijker.

Met opmerkingen [JV3]: Verwacht je een verschil tussen belgium growth companies en belgium high growth companies?

Met opmerkingen [JV4]: Dat is je 2de onderzoeksvraag ☺

Results of the t- tests

A preliminary F-test for the equality of variances indicates that the variances of the two comparing groups were not significantly different. Therefore, a two-sample t-test was performed that assumes equal variances.

The table below lists the means, the standard variations and the number of observations for each group.

Table 8: Descriptive statistics access to finance

	Growth Enterprises				High Growth Enterprises			
Descriptive Statistics	Europe	BE	NL	SE	Europe	BE	NL	SE
Mean	4,41	4,48	3,62	3,93	4,92	5,29	4,35	3,57
Standard Deviation	8,92	8,24	8,02	8,94	9,64	10,54	9,28	7,25
N	8051	201	394	235	1903	31	96	49

What is remarkable from this table is that the average for high-growth companies is higher than for growth companies. Except for Sweden. In graph 22, we also see that Swedish high-growth companies in the last 3 categories: 8, 9 and 10 show the lowest relative figures.

The mean score for Belgian growth enterprises does not show a significant difference from the mean score for European growth enterprises. (p= 0,731)

The mean score for Belgian growth enterprises by contrast is significantly higher[9] than the mean scores for Dutch (p= 0,001) and Swedish growth enterprises (p=0,049).

In addition, the analysis was also carried out for the high growth companies, a subgroup of the group 'growth companies'. In this case, the results are different.

Met opmerkingen [JV5]: Hier test je of gemiddeldes overeenkomen, maar misschien ook interessant om na te gaan of de verdeling gelijk is? Dat is bijvoorbeeld de Kolmogorv-Smirnov test.

Met opmerkingen [JV6]: Opvallend is dat gemiddelde score voor de high growth groter is, behalve voor Zweden (een verklaring?)

[9] *When the mean is higher, this imply that the access to finance is a more important problem.*

The mean score for Belgian high growth enterprises does not show a significant difference from the mean scores for European (p=0,506) and Dutch (p=0,146) high growth enterprises.

And once again, the mean score for Belgian high growth enterprises is significantly higher than the mean score for Swedish (p=0,012) high growth enterprises.

In addition to comparing the averages, it may also be interesting to check whether the distribution is equal. This can be tested through the Kolmogorv-Smirnov test.

H_0: The respondents' self-assessment on the problem access to finance have identical distributions

Results of the Kolmogorv-Smirnov test:

There is no difference in the distribution of the answers given by Belgian and European growth enterprises (p=0,844) and by Belgian and Swedish growth enterprises(p=0,156). So, the H_0 can be accepted. If we look at figure 21, the highest difference between Belgium and Europe and Sweden is in the first category. This difference is respectively 4 and 10 percentage points. For the other categories, the relative numbers are near each other.

There is a significant difference between the distribution of answers given by Belgian growth enterprises and Dutch growth enterprises(p=0,001). In this case the H_0 is rejected. As before, the biggest difference is at value 1. Here the difference is 17 percentage points.

For the high growth enterprises, again there is no difference between the distribution of the answers given by Belgian high growth enterprises and European high growth enterprises(p=0,540). In the case of high growth enterprises there is also no difference in the distribution of the answers given by Belgian high growth enterprises and Dutch high growth enterprises(p=0,890). For these cases H_0 is accepted.

However, in the case of high growth enterprises there is a significant difference in distribution of the answers given by high growth Belgian enterprises and high growth Swedish enterprises(p=0,022). We

reject the H_0. Looking at the histogram (figure 22) we can see that 48% of the Swedish respondents indicated score 1 and 2 (no problem to get access to finance) while 19% of the Belgian companies indicated score 1 and 2. This difference amounts to 19 percentage points. 8% of the Swedish respondents indicated the last 3 categories, meaning that access to finance is an important problem. While in Belgium, 35% of the high growth enterprises indicated 8,9 or 10. The difference in respondents in the high problem section is 27 percentage points.

Is access to finance perceived as a more important problem for Belgian growth companies compared to Belgian high growth companies?

The same t-test as used in previous section will be performed to test the following hypothesis:

- H_0: Access to finance is perceived as an equal important problem for Belgian growth companies compared to Belgian high growth companies.

After performing the F-test (p=0,15) a two-sample t-test was performed that assumes equal variances.

The t-test indicates that there is no significant difference between the mean score for Belgian growth and high growth companies in the access to finance.

Which factors influence the financing gap companies are facing during the scale-up phase?

3.4.1. Selections of the variables

For the research purpose, following question is of key interest: How important was the problem access to finance for your enterprise during the past six months?

After analyzing the literature, it was concluded that little research was conducted at Belgian level concerning the causes of the financial scale up gap. However, at the European level, there is a general conclusion that the financial scale up gap exists, and it has already been established that different company-specific variables affect access to finance.

To start with, Ferrando and Mulier (2014) who found that age and profitability are company-specific variables that influence access to capital.

Met opmerkingen [JV7]: Wanneer er verwezen wordt naar een bron (jaartal tussen haakjes). Dan moet de bron niet meer op einde van de zin staan.

Secondly, Holton, Lawless and McCann (2014) concluded in their research that age and company size are positively related to access to finance.

And thirdly, Öztürk and Mrkaic (2014) found that increased bank funding costs and increased debt-to-asset ratio of borrowers are negatively related to the access of finance. While use of government subsidies are positively related to access of finance. This study also concluded that firm size and age are positively related to the access to finance.

As already stated before, banks are the dominant lenders for firms in Europe. However, additional forms of financing, such as equity financing and crowdfunding, are adequate financing sources for high-risk projects. The survey conducted CRB Belgium concluded that entrepreneurs are facing a lack of confidence to obtain additional forms of financing. In addition, companies with limited growth ambitions are less willing to use these forms of financing. On the other hand, high growth companies have more confidence to negotiate with investors and they are more willing to seek additional sources to finance their projects. (CRB, 2019)

Whether these conclusions also affect access to finance will be tested in the multiple linear regression.

This exploratory study investigates if certain company-specific characteristics influence the finance gap faced by growth companies.

3.4.2. *Independent variables*

By means of a multi-regression analysis, the following variables will be examined to see if they have a significant impact on the perceived access to finance problem by companies.

- Number of employees
- Age of the company
- Annual turnover
- Future growth perspective
- Preferred external financing
- Confidence when talking to banks / equity investors

In the tables below the number of respondents of each independent variable are presented. This without filtering for scale up characteristics. The respondents from the whole sample are included.

Number of Employees

The breakdown into different ranges used in the survey is shown in the table below. By definition, a scale up has more than 10 employees. Those respondents are excluded from the sample. As the ranges do not have the same size, this variable is transformed into a dummy variable. The names of the dummies are in the transformation for research column on the right. The dummy (0) will be used as reference category.

Table 9: Descriptive statistics number of employees

	Europe		Belgium		the Netherlands		Sweden		transformation
	N	%	N	%	N	%	N	%	for research
Number of Employees	17848	100%	502	100%	804	1	471	1	
1 - 9 employees	6419	36%	200	40%	282	35%	138	29%	not included
10 - 49 employees	5069	28%	141	28%	226	28%	131	28%	D_10to49emp (1)
50 - 249 employees	4733	27%	116	23%	226	28%	139	30%	D_50to249emp (1)
250 employees or more	1627	9%	45	9%	70	9%	63	13%	D_250emp (0)

Met opmerkingen [JV8]: Voor je 2 groepen? Want je doet aparte regressies. Dan ook per groep weergeven. Dus eigenlijk de descriptives weergeven van wat in de regressies opgenomen worden. => hier zie je nu een redelijk grote N, maar je regressies zijn veel kleiner

Met opmerkingen [JV9]: Niet duidelijk wat die 1/1/0 wil zeggen tussen haakjes.

Firm age

From the literature mentioned above, it was concluded that the age of a company has an impact on access to finance. The observations could indicate 4 different age ranges. These ranges will be converted into dummy variables to perform the regression.

According to the definition, a company must be younger than 10 years to be called a scale up. As mentioned in the section data, companies older than 10 years are included in this study. This category of companies represents more than 80% of the respondents. The other categories have been put together in dummies to compensate for this large group.

Table 10: Descriptive statistics firm age

	Europe		Belgium		the Netherlands		Sweden		Transformation
	N	%	N	%	N	%	N	%	for research
Firm Age	17825	100%	502	100%	804	100%	464	100%	
≥ 10 years	15257	86%	440	88%	708	88%	370	80%	D_olderthan10years (0)
5 to less than 10 years	1804	10%	37	7%	46	6%	80	17%	D_5to10years (1)
2 to less than 5 years	549	3%	13	3%	38	5%	10	2%	
< 2 years	215	1%	12	2%	12	1%	4	1%	D_0to5years (1)

Annual turnover

An important variable that can affect access to finance is a company's annual turnover.
The size of the company is by definition not only determined by the number of employees but also by the annual turnover. It has been described in the literature that as a company becomes larger, or financially stronger, access to finance is positively influenced. The different ranges have once again not the same size. Therefore the variable is transformed into a dummy variable and the smallest range is combined into 1 dummy variable.

Table 11: Descriptive statistics annual turnover

	Europe		Belgium		the Netherlands		Sweden		Transformation
	N	%	N	%	N	%	N	%	for research
Annual Turnover	17311	100%	481	100%	789	100%	448	100%	
≤ EUR 0,5m	4597	27%	62	13%	145	18%	40	9%	
> EUR 0,5m – EUR 1m	2186	13%	84	17%	98	12%	47	10%	D_lessthan2Mturnover (1)
> EUR 1m – EUR 2m	2133	12%	63	13%	92	12%	64	14%	
> EUR 2m – EUR 10m	4023	23%	105	22%	202	26%	112	25%	D_2Mto10Mturnover (1)
> EUR 10m – EUR 50m	2885	17%	92	19%	152	19%	109	24%	D_10Mto50Mturnover (1)
> EUR 50m	1487	9%	75	16%	100	13%	76	17%	D_morethan50Mturnover (0)

Future growth perspective

As described in the CRB study, companies with high growth ambitions need more funding to carry out their growth projects. This growth perspective in terms of revenue growth was also questioned in the survey. By including this variable, it will become clear whether there is a relationship between having high growth expectations and the perceived access to finance problem. The table below shows the answers. These answers were transformed into dummy variables.

Table 12: Descriptive statistics growth expectations

	Europe		Belgium		the Netherlands		Sweden		Transformation
	N	%	N	%	N	%	N	%	for research
Growth Expectations	17329	100%	487	100%	796	100%	449	100%	
High growth > 20%	1828	11%	36	7%	99	12%	55	12%	recoded into 1
Moderate growth < 20%	10153	59%	256	53%	510	64%	288	64%	recoded into 0
No growth	4231	24%	158	32%	160	20%	86	19%	Not present in filtered sample[10]
Got smaller	1117	6%	37	8%	27	3%	20	4%	

[10] *When the sample was filtered for those companies who had past growth in annual turnover >0% or past growth in annual turnover >20%, there were no companies left who indicated to have no or a negative growth in the future*

Preferred external finance & confidence in obtaining this external finance

On the one hand the same study by the CRB concluded that companies that had experienced high growth use other forms of financing, like VC financing, more often than growth companies. These different types of financing are considered suitable for companies with high growth ambitions. On the other hand, high growth companies who use more the different alternative financing resources, have more confidence in their ability to negotiate with various investors to obtain their required funds. In the SAFE survey respondent were asked if they feel confident talking about financing with banks and with equity investors/venture capital enterprises. The latter group is a form of alternative financing. The graph below represents the answers to 2 questions asked in the SAFE survey. The first question indicates which type of external financing respondents prefer to finance growth ambitions. And the second question indicates if they are confident talking about these financing and if they are confident that they will obtain the desired result. By including this variable, it can be explained whether or not different preferences for financing, and confidence in obtaining those financing, have an impact on access to finance.

Met opmerkingen [JV10]: Voorbeeld?

Table 13: Descriptive statistics confidence of entrepreneurs in negotiating external finance and descriptive statistics preferred external finance sources

	Europe		Belgium		the Netherlands		Sweden		transformation
	N	%	N	%	N	%	N	%	for research
Confident talking to banks	17848	100%	502	100%	804	100%	471	100%	
YES	12470	70%	403	80%	603	75%	314	67%	recoded into 1
NO	3076	17%	61	12%	127	16%	81	17%	recoded into 0
not applicable	1942	11%	34	7%	70	9%	53	11%	not included
don't know	360	2%	4	1%	4	0%	23	5%	not included
Confident talking to equity investors/ VC enterprises	17848	100%	502	100%	804	100%	471	100%	
YES	4345	24%	159	32%	341	42%	75	16%	recoded into 1
NO	5399	30%	175	35%	251	31%	139	30%	recoded into 0
not applicable	7233	41%	152	30%	201	25%	188	40%	not included
don't know	871	5%	16	3%	11	1%	69	15%	not included
Preferred external financing	11295	63%	268	53%	588	73%	320	68%	
bank financing	7639	43%	211	42%	355	44%	169	36%	D_preferbanks (1)
other sources like trade credit, public sources…	1787	10%	35	7%	110	14%	45	10%	D_prefertradecredit (1)
Equity capital	886	5%	8	2%	41	5%	83	18%	D_preferequity (1)
other	983	6%	14	3%	82	10%	23	5%	D_preferother (0)

3.4.3. Dependent variable

For the multiple regression analyses the dependent variable is the firm's self-assessment about "access to finance" as a problem. This dependent variable has already been described in detail ut supra.

3.4.4. Multiple regression analysis

After selecting European growth companies who have valid answers to all questions that are included as independent or dependent variable in the model, the final sample contains 3394 observations.

From those European companies, 863 are high growth companies. Respectively 96, 246 and 66 growth companies are located in Belgium, The Netherlands and Sweden. If only the high growth companies

are selected, there are respectively 13, 56 and 18 respondents left who are located in Belgium, The Netherlands and Sweden.

From a statistical point of view, the results from the regression analysis for Belgian and Swedish high growth enterprises cannot be generalized to the population, as the number of observations is below 30.

Results

A multiple regression was carried out to investigate whether the number of employees, age of the company, annual turnover, future growth perspective, preferred external financing and confidence of the entrepreneur could significantly predict the self-assessment of companies perceived problem to get access to finance. The results of the regression indicated that the model explained 4,14% of the variance and that the model was a significant predictor of access to finance ($F(13,3380)=12,18$, $p<0,05$). While the constant factor, D_10to49 employees, D_less than2Mturnover, D_2Mto10Mturnover, D_0to5years, D_5to10years, D_futuregrowth and 'confidencetalkingtobanks' contributed significantly to the model ($p<0,05$), D_50to249employees, D_10Mto50Mturnover, 'confidencetoequityvc' and the 3 dummys created for preferred source of external growth financing did not ($p>0,05$).

Met opmerkingen [JV11]: Misschien tabel met de resultaten (beta, standard error, pvalue?). Is duidelijker als je tabel met de pvalues ziet.

The final predictive model for European growth enterprises is:

$$
\begin{aligned}
y = 4{,}88904 \; & - 0{,}556312\left(D_{10to49emp}\right) - 0{,}223882\left(D_{50to249emp}\right) \\
& + 1{,}11554\,(D\_lessthan2Mturnover) + 0{,}592777(D\_2Mto10Mturnover) \\
& + 0{,}251102(D\_10Mto50Mturnover) + 0{,}550593(D\_0to5years) \\
& + 1{,}26853(D\_5to10years) + 0{,}791067(futuregrowth) \\
& - 0{,}795374(confidencetalkingtobanks) - 0{,}133566(confidencetoequityvc) \\
& + 0{,}233082\,(D\_preferbanks) - 0{,}301340(D\_prefertradecredit) \\
& - 0{,}0193053(D\_preferequity)
\end{aligned}
$$

From previous coefficients we can conclude following predictions for the access of finance:
If the number of employees is in the category 10-49 employees, which is the lowest range included in the model, the problem with access to finance declines with 0,56. This is against the reference

Met opmerkingen [JV12]: Tegenover de referentiecategorie. Wat is de referentiecategorie? Meer dan 250? Dus hoe minder werknemers, hoe makkelijker acces to finance. Want daling in score acces to finance is toch minder problemen? 1 is minder problemen met access to finance dan 2? Komt dit overeen met de literatuur?

category, with more than 250 employees. So, the fewer employees, the easier access to finance. This is in contradiction with the findings of Holton, Lawless and McCann
Öztürk and Mrkaic, who state that access to finance is positive related to frim size.

The dummy less than 2M turnover has a positive significant coefficient. All other categories reflect a higher turnover. If the respondent has a turnover less than 2M, the access to finance will be more difficult with 1,16. This reinforces the literature. The dummy future growth has a positive coefficient as well. Meaning that if a company has high growth expectations, the access to finance problem will be 0,79 higher than those companies with growth ambitions <20%. The variable confidence talking with banks has a negative significant coefficient. When an entrepreneur feels confident talking about financing with banks and that he will obtain the desired result, the perceived access to finance problem declines with 0,79.

Met opmerkingen [JV13]: 'access to finance will rise' is moeilijk te interpreteren. Access to finance will be more difficult

The model of the multiple regression for only high growth enterprises explains 3,44% of the variance. The model is also significant (F(13, 849), p<0,05). The coefficient of determination of this model is 0,7 percentage points lower than the model of growth firms. The constant factor, D_less than2Mturnover, D_2Mto10Mturnover, and 'confidencetalkingtobanks' contributed significantly to the model (p<0,05).

The final predictive model for European high growth enterprises is:

$$
\begin{aligned}
y = 4{,}70184 \; & - 0{,}383536\left(\mathrm{D}_{10\mathrm{to}49\mathrm{emp}}\right) - 0{,}278649\left(\mathrm{D}_{50\mathrm{to}249\mathrm{emp}}\right) + 1{,}52332\left(\mathrm{D}_{\mathrm{lessthan2Mturnover}}\right) \\
& + 1{,}00887\left(\mathrm{D}_{2\mathrm{Mto}10\mathrm{Mturnover}}\right) + 0{,}563020\left(\mathrm{D}_{10\mathrm{Mto}50\mathrm{Mturnover}}\right) \\
& + 0{,}401049\left(\mathrm{D}_{0\mathrm{to}5\mathrm{years}}\right) + 1{,}01637\left(\mathrm{D}_{5\mathrm{to}10\mathrm{years}}\right) + 0{,}263195\left(\mathrm{futuregrowth}\right) \\
& - 0{,}725543\left(\mathrm{confidencetalkingtobanks}\right) - 0{,}0537634\left(\mathrm{confidencetoequityvc}\right) \\
& + 0{,}501082\ (\mathrm{D\_preferbanks}) - 0{,}302401(\mathrm{D\_prefertradecredit}) \\
& - 0{,}403740(\mathrm{D\_preferequity})
\end{aligned}
$$

The analysis on country level

Both the models for Belgian growth and high growth companies have a negative coefficient of determination. The dependent variables are insignificant. The self-assessment of companies perceived problem to get access to finance cannot be predicted by the chosen dependent variables. The same can be said of the model of Swedish growth companies. The model of Swedish high growth enterprises has a positive coefficient of determination of 45% explanatory power, but this model explains only 18 observations.

The models explaining the self-assessment of companies perceived problem to get access to finance for Dutch companies have the highest coefficient of determination. Both for growth and high growth enterprises.

The results of the regression including Dutch growth companies indicated that the model explained 5,34% of the variance and that the model was a significant predictor of access to finance (F(13,232)= 29,65651, p<0,05). While the constant factor, D_10to49 employees, D_50to249employees, D_less than2Mturnover, D_2Mto10Mturnover, D_10Mto50Mturnover and D_5to10years contributed significantly to the model (p<0,05), D_0to5years, D_10Mto50Mturnover, D_futuregrowth and 'confidencetalkingtobanks', 'confidencetoequityvc' and the 3 dummys created for preferred source of external growth financing did not (p>0,05).

The final predictive model for Dutch growth enterprises is:

$$
\begin{aligned}
y = 4{,}29700 \; & - 1{,}96041\left(\mathrm{D}_{10\mathrm{to}49\mathrm{emp}}\right) - 1{,}92175\left(\mathrm{D}_{50\mathrm{to}249\mathrm{emp}}\right) + 1{,}61126\left(\mathrm{D}_{\mathrm{lessthan2Mturnover}}\right) \\
& + \; 1{,}15574\left(\mathrm{D}_{2\mathrm{Mto}10\mathrm{Mturnover}}\right) + \; 0{,}996054\left(\mathrm{D}_{10\mathrm{Mto}50\mathrm{Mturnover}}\right) \\
& + 0{,}301541\left(\mathrm{D}_{0\mathrm{to}5\mathrm{years}}\right) + \; 2{,}73003\left(\mathrm{D}_{5\mathrm{to}10\mathrm{years}}\right) + \; 0{,}792233\left(\mathrm{futuregrowth}\right) \\
& - 0{,}410044\left(\mathrm{confidencetalkingtobanks}\right) + 0{,}804032\left(\mathrm{confidencetoequityvc}\right) \\
& + 0{,}344984\ (\mathrm{D\_preferbanks}) \; - 0{,}676362(\mathrm{D\_prefertradecredit}) \\
& - 1{,}35697(\mathrm{D\_preferequity})
\end{aligned}
$$

In this model confidence talking to banks is not significant while confidence talking to equity/vc investors is positive significant. When an entrepreneur feels confident talking about financing with equity or VC investors, and that he will obtain the desired result, the perceived access to finance problem increases with 0,80.

The results of the regression including Dutch growth companies indicated that the model explained 9,10% of the variance and that the model was a significant predictor of access to finance (F(13,43)= 2,04, p<0,05). However not one independent variable contributes significantly to the model(p>0,05).

The final predictive model for Dutch growth enterprises is:

$$
\begin{aligned}
y = 3{,}44870 \; & - 2{,}53587\left(\mathrm{D}_{\mathrm{10to49emp}}\right) - 2{,}53148\left(\mathrm{D}_{\mathrm{50to249emp}}\right) + 3{,}57945\left(\mathrm{D}_{\mathrm{lessthan2Mturnover}}\right) \\
& + \; 2{,}82660\left(\mathrm{D}_{\mathrm{2Mto10Mturnover}}\right) + \; 1{,}34118\left(\mathrm{D}_{\mathrm{10Mto50Mturnover}}\right) \\
& + 0{,}311813\left(\mathrm{D}_{\mathrm{0to5years}}\right) + \; 1{,}59617\left(\mathrm{futuregrowth}\right) \\
& + 1{,}16497\left(\mathrm{confidencetalkingtobanks}\right) + 0{,}569576\left(\mathrm{confidencetoequityvc}\right) \\
& + 0{,}206330\left(\mathrm{D\_preferbanks}\right) \; - 1{,}42170(\mathrm{D\_prefertradecredit}) \\
& - 3{,}09592(\mathrm{D\_preferequity})
\end{aligned}
$$

Conclusion

These results obtained through the regression analysis are contrary to previous literature. In the literature, a positive significant correlation was found for firm size and firm age. Firm size consists of annual turnover and the number of employees. At European and Dutch level, a negative significant relationship was found for the number of employees. In Europe, however, a positive significant correlation was found for turnover. This is in line with the literature. From this we can conclude that the composition of the financing gap is changing. The literature in question dates from 2014. This change in the composition of the financing gap could be mapped out by performing a multiple linear regression analysis on all past waves in further research.

The effect for future growth was tested. At European level, a positive significant effect was found for growth ambitions. Companies with higher growth ambitions have more difficulties in finding capital. No significant correlation was found for the preference of external resources to finance this growth. However, the fact that the entrepreneur has confidence to negotiate funds to finance growth with banks, does have a negative significant effect on access to finance at the European level. Confidence decreases the problem of access to finance.

Table 14: Summary table results regression analysis growth companies

	Europe		***Belgium***		***The Netherlands***		***Sweden***	
variable	**β**	**p-value**	**β**	**p-value**	**β**	**p-value**	**β**	**p-value**
const	4,88904	<0,0001	5,87069	<0,0001	4,297	<0,0001	2,97139	0,1832
D_10to49emp	−0,556312	0,0063	−0,00943546	0,995	−1,96041	0,0044	0,304122	0,8681
D_50to249emp	−0,223882	0,1994	0,832751	0,5163	−1,92175	0,0017	−0,708830	0,5919
D_lessthan2Mturnover	1,11554	<0,0001	0,0871447	0,9474	1,61126	0,0243	0,534392	0,7659
D_2Mto10Mturnover	0,592777	0,0026	−0,169095	0,8928	1,15574	0,0539	0,968401	0,5221
D_10Mto50Mturnover	0,251102	0,1675	−0,814458	0,471	0,996054	0,0716	1,07208	0,4434
D_0to5years	0,550593	0,0012	1,48602	0,1886	0,301541	0,6107	−1,64484	0,0993
D_5to10years	1,26853	0,0379			2,73003	<0,0001		
futuregrowth	0,791067	<0,0001	0,452368	0,6443	0,792233	0,1646	−0,709590	0,3891
confidencetalkingtobanks	−0,795374	<0,0001	0,0499606	0,9665	−0,410044	0,6018	0,0185308	0,9851
confidencetoequityvc	−0,133566	0,2078	−1,01355	0,1259	0,804032	0,0989	−0,0764044	0,9242
D_preferbanks	0,233082	0,2443	−0,917294	0,4895	0,344984	0,6595	1,10239	0,5422
D_prefertradecredit	−0,301340	0,1993	−2,61613	0,0704	−0,676362	0,4143	0,988872	0,5678
D_preferequity	−0,0193053	0,942	−1,78393	0,3267	−1,35697	0,1578	0,797825	0,6685
N	3394		96		246		66	
adjusted R-squared	0,041397		-0,019143		0,053468		-0,135343	

Table 15: Summary table results regression analysis high growth companies

	Europe		Belgium		The Netherlands		Sweden	
variable	**β**	***p-value***	**β**	***p-value***	**β**	***p-value***	**β**	***p-value***
const	4,70184	<0,0001	−3,57143	0,2868	3,4487	0,2347	8,09981	0,0152
D_10to49emp	−0,383536	0,3693	1,78571	0,632	−2,53587	0,285	−7,03031	0,0371
D_50to249emp	−0,278649	0,4691	4,07143	0,2498	−2,53148	0,2712	−3,18190	0,0269
D_lessthan2Mturnover	1,52332	0,0011	−1,92857	0,6286	3,57945	0,1028	3,19285	0,0226
D_2Mto10Mturnover	1,00887	0,0218	−0,500000	0,5456	2,8266	0,1821	4,39762	0,0772
D_10Mto50Mturnover	0,56302	0,1848	−3,64286	0,3931	1,34118	0,5324		
D_0to5years	0,401049	0,1518	3,71429	0,4174	0,311813	0,7672	−1,44982	0,2114
D_5to10years	1,01637	0,4437						
futuregrowth	0,263195	0,241	−0,428571	0,9107	1,59617	0,1017	0,482306	0,6567
confidencetalkingtobanks	−0,725543	0,031			1,16497	0,361	−1,18251	0,4233
confidencetoequityvc	−0,0537634	0,8108	4,14286	0,3317	0,569576	0,5675	0,0817857	0,93
D_preferbanks	0,501082	0,2148	7	<0,0001	0,20633	0,9314	0,00090739	0,9995
D_prefertradecredit	−0,302401	0,5313			−1,42170	0,569	1,45109	0,4293
D_preferequity	−0,403740	0,4412			−3,09592	0,2306	−2,30561	0,1677
N	863		13		56		18	
adjusted R-squared	0,034347		-0,143592		0,090922		0,451343	

Reflection

During qualitative interviews with Matthias Browaeys, Jurgen Ingels, Simon Dewaele and Tom Libbrecht, it was mentioned that the relationship between investor and managers is crucial as decision-making criteria of the investor. They said that Their need to be a match between investor and the management of the company. In the literature this perspective on investment is called the jockey vs the horse investment perspective.

A good relationship could lead to more self-confidence for the entrepreneur, and more self-confidence could lead to a better relationship. Tom Libbrecht financial manager of Silverfin, for example, pointed out that they were quite confident when they went to their investors. This self-confidence was the result from the financial figures of Silverfin. Whether there is a relationship between higher annual turnover, which has a positive significant effect on access to finance and the confidence of entrepreneurs could be further investigated.

CHAPTER 3

Conclusion

In this research the financing possibilities of scale-ups in Belgium are analysed. The literature shows that there is a scale-up gap in Europe. Part of this problem is attributed to the lack of funding to grow in Europe.

There is a financing gap in Belgium, this gap is not in the start-up phase, but this gap is in the scale-up phase. There is too little ambition, too little know-how and too little money in Belgium that is actually invested in growing companies. Many fast-growing companies in Europe use bank loans. The reason why many Belgian entrepreneurs are reluctant to accept external investors is control. However, external financing sources are considered suitable for growth companies.

If a company wants to be successful and want to internationalise, attracting international funds can be a strategic decision. In this way, the company gains access to international networks. There is certainly a funding gap, the question is whether this gap has to be a growth barrier to scale.

In this study, we tried to identify the problem of "access to finance" in Belgium. We did this on the basis of the ECB's 'Survey on the Access to Finance of enterprises' (SAFE). The aim of the study was to find out whether access to finance is a more stringent problem in Belgium than the European average. The Belgian average was also compared with the Netherlands and Sweden. We also wanted to explain the reason for this gap on the basis of business characteristics.

We found that there is no difference between Belgian and European growth and high growth enterprises when assessing the problem access to finance. The Belgian average is higher than the Swedish average for growth and high growth companies. The Belgian average is also higher than the Dutch average for growth companies. The distribution of the scores differed between these two countries. Belgium had the lowest share in companies that do not experience problems in finding financing, while the Netherlands has the largest share. The same applies to the distribution of Belgian and Swedish high-growth companies. Sweden has significantly more companies that do not have a problem in finding finance.

The model in which business characteristics must explain the problem of access to finance has a very low coefficient of determination. The composition of the financing gap is changing, since results found in previous literature are disproved in our model. Confident entrepreneurs have fewer problems with access to finance. This confirms that the relationship between investor and entrepreneur is an important factor. Higher growth ambitions lead to more difficulties in finding financing.

However, these results must be examined with caution. In order to be able to carry out the research, companies older than 10 years were included. These companies do not meet the definition of scale ups. Only a few of the companies in the study meet the definition of a scale-up.

This exploratory research is a good starting point for more in-depth academic research. For example, a more extensive dataset can provide more insight into the financing of scale-ups. In the empirical part it was found that the different characteristics influencing access to finance have changed. An evolution in this respect could be mapped out.

BIBLIOGRAPHY

1819.Brussels. (2019, may 1). *Financiering van uw onderneming via de GIMB*. Opgehaald van 1819.Brussels: https://www.1819.brussels/nl/financiering-van-de-onderneming/kredieten/financiering-van-uw-onderneming-de-gimb

1819.Brussels. (2019, May 1). *Het Brussels Waarborgfonds*. Opgehaald van 1819.Brussels: https://www.1819.brussels/nl/financiering-van-de-onderneming/de-waarborgen/het-brussels-waarborgfonds

Acs , Z., & Mueller, P. (2008). Employment effects of business dynamics: Mice, Gazelles and Elephants. *Small Business Economics*, 85-100.

Acs, A., & Audretsch, D. (1988). Innovation in Large and Small Firms: An Empirical Analysis. *American Economic Review*, 678-90.

Acs, Z. (2011). High-impact firms: gazelles revisited. In *Handbook of Research on Entrepreneurship and Regional Development.* UK: Edward Elgar.

Aernoudt, R. (2003). From SME Policy to Entrepreneurship Policy. In R. Aernoudt, *From SME Policy to Entrepreneurship Policy* (pp. 56-68). Antwerp: Intersentia.

Aernoudt, R. (2005). Business Angels: The Smartest Money for Starters? Plea for a Renewed Policy Focus on Business Angels. *INTERNATIONAL JOURNAL OF BUSINESS*, 271-283.

Aernoudt, R. (2016). Financieel management toegepast (tweede editie). In R. Aernoudt, *Financieel management toegepast: Hoe finacier ik mijn onderneming?* (p. 444). Antwerpen: Intersentia.

Aernoudt, R. (2017). Executive Forum: the scale-up gap: and how to address it . *Venture Capital*, 361-372.

Agentschap Innoveren & Ondernemen. (2019). *Maatregelfiche WinWin lening.* Brussels: PMV/z.

Agentschap Innoveren & Ondernemen. (2019). *Tax Shelter voor scale ups (groeibedrijven).* Brussels: FOD Financiën.

Agentschap Innoveren & Ondernemen. (2019). *Tax Shelter voor startende ondernemingen.* Brussels: FOD Financiën.

Ahmad, N., & Seymour, R. G. (2008). *Defining Entrepreneurial Activity Definitions Supporting Frameworks for Data Collection.* The University of Sydnes: OECD.

Alemany, L., & Andreoli, J. (2018). Entrepreneurial Finance. In L. Alemany, & J. Andreoli, *The Art And Science Of Growing Ventures.* UK: Cambridge University Press.

Andersen, T. (2016). *Scale-up Companies- is a new policy agenda needed?* European Commision.

Armour, & Cumming. (2006). The Legislative Road to Silicon Valley. *Oxford Economic Papers 58*, 596–635.

Asker, Farre-Mensa, & Ljungqvist. (2015). Corporate Investment and Stock Market Listing: A Puzzle? *Review of Financial Studies*, 271-308.

Audretsch, D. (2012). *Determinants of High-Growth Entrepreneurship.* Copenhagen: OECD.

Berger, A. N., & Udell, G. F. (1998). The economics of small business ®nance: The roles of private equity and debt markets in the financial growth cycle. *Journal of Banking and Finance*, 613-673.

Beselaere, P., Lenaerts, O., Tilleman, B., & Verbeke , A. (2007). Handboek Leasing. In P. Beselaere, O. Lenaerts, B. Tilleman, & A. Verbeke, *Handboek Leasing.* Brugge: die Keure.

Beuselinck, C., Deloof, M., & Manigart, S. (2004). Venture capital, private equity and earnings quality. *Vlerick Leuven Gent management school*.
Biersteker, B., & Nauta, L. (2019, april 18). Weinig bewijs voor MKB-"financieringskloof". Netherlands: RaboResearch-Economisch Onderzoek.
Bottazzi, Rin, D., & Hellmann. (2008). Who are the active investors? Evidence from venture capita. *Journal of Financial Economics*, 488-512.
Brander, Egan, & Hellmann. (2008). Government Sponsored Versus Private Venture Capital: Canadian Evidence. *Cambridge: University of Chicago Press*, 1-65.
Cambridge Judge Business School, Oxford Saïd Business School. (sd). *Scale-up UK: Growing Businesses, Growing our Economy.* United Kingdom: Barclays.
CRB. (2019). *Financiering voor doorgroei van ondernemingen in België.* Brussels: CRB.
Daniels, C., Herrington, M., & Kew, P. (2016). Global Entrepreneurship Monitor Special Topics Report 2015. *Entrepreneurial Fianance*.
De Cock, F. (2018, October). *Silverfin Named one of the Fastest-Growing Fintech Startups By CB Insights*. Opgehaald van Silverfin Blog: https://www.silverfin.com/en/blog/silverfin-fastest-growing-fintech-startup
De Preter, W. (2018, april 10). Nieuw EU-programma wil Europees durfkapitaal verdubbelen. *De Tijd*.
Deman, R., Tchinda, C., & Kobiashvili, E. (2019). *Starters Atlas 2019.* Belgium: Unizo.
Dillen , Y. (2014). *High- growth firms in Flanders: an analysis of the determinants of one-shot high-growth and persistent high-growth.* Antwerpen: Universiteit Antwerpen.
Dillens, Y., & Crijns, H. (2018). *Belgian High Growth Monitor.* Belgium: Impulse Centre for 'Growth Management for Medium sized Enterprises' (iGMO).
DIW Econ. (2018). *Annual Report on European SMEs 2017 / 2018.* Berlin: The consulting company of DIW Econ.
Duruflé, G., Hellmann, T., & Wilson, K. (2017). From Start-up to Scale-up: Examining Public Policies for the Financing of High-Growth Ventures . *Saïd Business School Research Papers*.
EIB. (2018). *EIB Investment Survey - Tracking investment needs and constraints across Europe.* Europe: EIB.
Euler Hermes. (2019, April 09). European SMEs: Filling the bank financing gap. *Economic Research*.
European Banking Authority. (2016). *EBA REPORT ON SMES AND SME SUPPORTING FACTOR.* European Banking Authority.
European Central Bank. (2017). *Survey on the access to finance of enterprises 2016.*
European Central Bank. (2018). *Survey on the access to finance of enterprises 2017.*
European Central Bank. (2019). *Survey on the access to finance of enterprises 2018.*
European Commision. (2018). *Annual Report on European SMEs 2017/2018.* Brussels: European Commision.
European Commission. (2016). *COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS.* Strasbourg: European Commission.
European Commission. (2017). *Commission and EIF start selecting Pan-European Venture Capital Fund-of-Funds promoters.* Brussels: European Commission.
European Commission. (2018). *VentureEU: Pan-European Venture Capital Funds-of-Funds Programme.* Brussels: European Commission.
European Investment Bank. (2018). *EIB Investment Survey 2018 - Belgium overview.* European Investment Bank.

European Investment Fund. (2018). *Annual Report and Financial Statements for the year 2018.* European Investment Fund.
European Venture Capital Association (EVCA). (2014). *Accelerating Innovation & Delivering Growth: Using the Jobs, Growth and Investment Package to Attract Private Sector Investors to the European Venture Capital Industry* . Brussels: European Private Equity & Venture Capital Association.
Fazzari, S., & Athe, M. (1987). Asymmetric Information, Financing Constraints, and Investment. *The Review of Economics and Statistics*, 481-487.
Febelfin. (2015). *Risicokapitaal in België Hoe kan België zijn positie in risicokapitaal uitbouwen ?* België: Febelfin.
Ferrando, A., & Mulier, K. (2014). *Firms' Financing Constraints: Do Perceptions Match the Actual Situation?* ECB Working Paper.
Haeck, P. (2019, January 29). Collibra is eerste Belgische techstart-up met waardering boven 1 miljard. *De Tijd*.
Hellmann, & Puri. (2002). Venture capital and the professionalization of start-up firms: empirical evidence. *Journal of Finance* , 169-197.
Hellmann, T., & Stiglitz , J. (2000). Liberalization, Moral Hazard in Banking, and Prudential Regulation: Are Capital Requirements Enough? *American Economic Review*, 147-165.
Hoffman, R. (sd).
Holton, S., Lawless, M., & McCann, F. (2014). Firm Credit in the Euro Area: A Tale of Three Crises. *Applied Economics*, 190–211.
Invest Europe. (2019). *2018 European private equity activity.* Brussels: Invest Europe.
Investopedia. (2018, June 29). *Basel Accord*. Opgehaald van Investopedia: https://www.investopedia.com/terms/b/basel_accord.asp
Investopedia. (2019, March 17). *terms*. Opgehaald van investopedia: https://www.investopedia.com/terms/e/equityfinancing.asp
Koçkesen, L., & Ozerturky, S. (2002). Staged Financing and Endogenous Lock-In: A Model of Start-up Finance.
Kollmann, T., Stöckmann, C., Hensellek, S., & Kensbock, J. (2016). *European StartUp Monitor.* Germany: ESCP Europe.
Laveren, P. E. (2016). *Financiering van groeiondernemingen in België : een overzicht van de geschikte financieringsbronnen en beleidsaanbevelingen.* Universiteit Antwerpen/ Antwerp Management School: Onderzoeksrapport voor de Centrale Raad voor het Bedrijfsleven (CRB).
Maene, F. (2019, February 28). In een snel groeiend bedrijf zijn veel brandjes te blussen. *Knack*.
Manifesto, S.-U. (2016). *Scale Up Europe*. Opgehaald van Scale Europe Manifesto: http://scaleupeuropemanifesto.eu/
Manigart, S., & Meuleman, M. (2004). Financing entrepreneurial companies : How to raise private equity as a high-growth company. In S. MANIGART, & M. MEULEMAN, *Financing entrepreneurial companies* (p. 77). Gent: Larcier.
Manigart, S., Baeyens, K., & Verschueren, I. (2002). Financing and investment interdependencies in unquoted Belgian companies: the role of venture capital. *Vlerick Leuven Gent Working Paper Series.*
Metrick, A., & Yasuda, A. (2011). Venture Capital & the Finance of Innovation. In A. Metrick, & A. Yasuda, *Venture Capital & the Finance of Innovation 2nd ed.* John Wiley & Sons, Inc.
Michielsen, T. (2018, juli 03). Silverfin dubbel zo groot in één jaar tijd. *De Tijd*.

Moritz, A., Block, J., & Heinz, A. (2015). Financing Patterns of European SMEs: An Empirical Taxonomy. *EIF working paper*, 33.
Neely, A., & Hii, J. (sd). Innovation and Business Performance A Literature Review. *The Judge Institute of Management Studies- Cambridge*, 1998.
O'Brien, C. (2019, January 29). Belgian data governance startup Collibra raises $100 million and joins unicorn club. *Venture Beat*.
OECD. (2017). *Entrepreneurship at a Glance.* Paris: OECD Publishing.
O'hear, S. (2017). *Silverfin, a 'connected accounting platform,' raises $4.5M Series A led by Index*. Opgehaald van Techcrunch: https://techcrunch.com/2017/03/13/silverfin/?guccounter=1&guce_referrer_us=aHR0cHM6Ly93d3cuZ29vZ2xlLmNvbS8&guce_referrer_cs=tgakkDSTYtVl_TJLIk-z1Q
Ottinger, R. J. (2018, Januari 4). *Filling The "Scale-Up" Gap - Why supporting growth companies is critical for businesses and communities.* Opgehaald van innovate network: https://www.iinnovatenetwork.com/single-post/2018/01/04/Filling-The-"Scale-Up"-Gap---Why-supporting-growth-companies-is-critical-for-businesses-and-communities
Öztürk, B., & Mrkaic, M. (2014). SMEs' Access to Finance in the Euro Area: What Helps or Hampers? *IMF Working Papers*, 14-78.
Preter, W. D. (2019, June 13). Louis Jonckheere (Showpad): 'Belgische ondernemers moeten groter durven dromen'. *De Tijd*.
ScaleUp Institute. (2018). *Annual ScaleUp Review.* London : ScaleUp Institute.
Schwienbacher, & Larralde. (2010). Crowdfunding of small entrepreneurial ventures. In Schwienbacher, & Larralde, *Handbook of entrepreneurial finance* (p. 23). Oxford University Press.
Sleuwagen, L. (2016). *Hoge Groei Ondernemingen in België.* Brussels: Centrale Raad voor het Bedrijfsleven.
Sowalfin. (2019, May 1). *Socamut*. Opgehaald van Sowalfin: http://www.sowalfin.be/sowalfin/sowalfin_fr/notre-mission/nos-filiales/socamut/index.html
Stangler, D. (2010). High-Growth Firms and the Future of the American Economy. *Ewing Marion Kauffman Foundation*, 16.
Start Up Europe Partnership (SEP) Monitor. (2017). *Scale up Europe.* Brussels: Mind the Bridge.
Startup Europe Partnership (SEP)Monitor. (2017). *European Dual Companies: scaleup migration?* . Brussels: Mind The Bridge.
Steel, T. (2017, May 11). Belgische starters hebben beste slaagkansen van heel Europa. *De Tijd*.
The Small Business Investment Company Program. (2014). *Annual Report 2014.* US: The Small Business Investment Company Program.
UNIZO. (2015). *Studie over de kmo-financiering 2014.* FOD Economie, K.M.O., Middenstand en Energie.
UNIZO. (2019, Maart 13). *starters advies: wat is levernacierskrediet*. Opgehaald van unizo: https://www.unizo.be/starters/advies/wat-leverancierskrediet
Vanacker, L. (2016, November 23). Failliete Take Eat Easy | 'Hadden ego moeten opzijzetten'. *De Tijd*.
Vanbrussel, E. (2019, March 28). Techparel Newtec in Singaporese handen. *De Tijd*.
Vlaio. (2019). *EIB-EIF-EFSI: Europese financieringsmogelijkheden voor ondernemingen.* Belgium: Vlaams Agentschap Innoveren en Ondernemen.

VLAIO. (2019, 04 07). *mogelijke financieringsbronnen: family friends and fans*. Opgehaald van vlaio: (https://www.vlaio.be/nl/begeleiding-advies/financiering/mogelijke-financieringsbronnen/family-friends-and-fans

Vlerick Business School. (2019). *RISING STAR MONITOR The many faces of growth.* Ghent: Vlerick Business School and Deloitte.

ANNEX

Attachment 1.1: Interviews – confidential

Simon Dewaele - Associate of Smartfin investment fund
Jurgen Ingels – entrepreneur and co-founder of Smartfin investment fund
Tom Libbrecht – Financial Manager Scale-up Silverfin
Tony Mary- Chairman Of The Board at Collibra

Attachment 1.2: Outputs statistical analyses

T-Test

Figure 23: Output t-test between Belgian and European growth enterprises, equal variances

	Belgian GE	Europe GE
Gemiddelde	4,48258706	4,40951435
Variantie	8,24094527	8,92482375
Waarnemingen	201	8051
Gepaarde variatie	8,90824488	
Schatting van verschil tussen gemiddelden	0	
Vrijheidsgraden	8250	
T- statistische gegevens	0,34284871	
P(T<=t) eenzijdig	0,36586051	
Kritiek gebied van T-toets: eenzijdig	1,64503835	
P(T<=t) tweezijdig	0,73172101	
Kritiek gebied van T-toets: tweezijdig	1,96025157	

Figure 24: Output t-test between Belgian and Dutch growth enterprises, equal variances

	Belgian GE	Dutch GE
Gemiddelde	4,48258706	3,62690355
Variantie	8,24094527	8,01566113
Waarnemingen	201	394
Gepaarde variatie	8,09164229	
Schatting van verschil tussen gemiddelden	0	
Vrijheidsgraden	593	
T- statistische gegevens	3,47042356	

P(T<=t) eenzijdig	0,0002787
Kritiek gebied van T-toets: eenzijdig	1,64742726
P(T<=t) tweezijdig	0,0005574
Kritiek gebied van T-toets: tweezijdig	1,96397248

Figure 25: Output t-test between Belgian and Swedish growth enterprises, equal variances

	Belgian GE	Swedish GE
Gemiddelde	4,48258706	3,92765957
Variantie	8,24094527	8,93918894
Waarnemingen	201	235
Gepaarde variatie	8,61741767	
Schatting van verschil tussen gemiddelden	0	
Vrijheidsgraden	434	
T- statistische gegevens	1,96759805	
P(T<=t) eenzijdig	0,02487534	
Kritiek gebied van T-toets: eenzijdig	1,64837217	
P(T<=t) tweezijdig	0,04975067	
Kritiek gebied van T-toets: tweezijdig	1,96544506	

Figure 26: Output t-test between Belgian and European high growth enterprises, equal variances

	Belgian HGE	Europe HGE
Gemiddelde	5,29032258	4,91592223
Variantie	10,5462366	9,64171796
Waarnemingen	31	1903
Gepaarde variatie	9,65576328	
Schatting van verschil tussen gemiddelden	0	
Vrijheidsgraden	1932	
T- statistische gegevens	0,66544927	
P(T<=t) eenzijdig	0,25292131	
Kritiek gebied van T-toets: eenzijdig	1,64564271	
P(T<=t) tweezijdig	0,50584262	
Kritiek gebied van T-toets: tweezijdig	1,96119262	

Figure 27: Output t-test between Belgian and Dutch high growth enterprises, equal variances

	Belgian HGE	Dutch HGE
Gemiddelde	5,29032258	4,35416667

Variantie	10,5462366	9,28377193
Waarnemingen	31	96
Gepaarde variatie	9,58676344	
Schatting van verschil tussen gemiddelden	0	
Vrijheidsgraden	125	
T- statistische gegevens	1,46361477	
P(T<=t) eenzijdig	0,0729047	
Kritiek gebied van T-toets: eenzijdig	1,65713518	
P(T<=t) tweezijdig	0,1458094	
Kritiek gebied van T-toets: tweezijdig	1,97912411	

Figure 28: Output t-test between Belgian and Swedish high growth enterprises, equal variances

	Belgian HGE	Swedish HGE
Gemiddelde	5,29032258	3,57142857
Variantie	10,5462366	7,25
Waarnemingen	31	49
Gepaarde variatie	8,51778329	
Schatting van verschil tussen gemiddelden	0	
Vrijheidsgraden	78	
T- statistische gegevens	2,56637253	
P(T<=t) eenzijdig	0,00609578	
Kritiek gebied van T-toets: eenzijdig	1,66462464	
P(T<=t) tweezijdig	0,01219156	
Kritiek gebied van T-toets: tweezijdig	1,99084707	

Figure 29: Output t-test between Belgian growth and high growth enterprises, equal variances

	Belgian GE	Belgian HGE
Gemiddelde	4,48258706	5,29032258
Variantie	8,24094527	10,5462366
Waarnemingen	201	31
Gepaarde variatie	8,54163544	
Schatting van verschil tussen gemiddelden	0	
Vrijheidsgraden	230	
T- statistische gegevens	-1,4322985	
P(T<=t) eenzijdig	0,07670803	
Kritiek gebied van T-toets: eenzijdig	1,65150564	
P(T<=t) tweezijdig	0,15341606	
Kritiek gebied van T-toets: tweezijdig	1,97033177	

Kolmogorov-Smirnov test

Figure 30: Two-sample Kolmogorov-Smirnov test, between European growth companies and Belgian growth companies

Test Statistics[a]

		Acces to finance
Most Extreme Differences	Absolute	,044
	Positive	,044
	Negative	-,029
Kolmogorov-Smirnov Z		,615
Asymp. Sig. (2-tailed)		,844

a. Grouping Variable: growth enterprises

Figure 31: Two-sample Kolmogorov-Smirnov test, between Belgian growth companies and Dutch growth companies

Test Statistics[a]

		Access to finance
Most Extreme Differences	Absolute	,174
	Positive	,174
	Negative	,000
Kolmogorov-Smirnov Z		2,011
Asymp. Sig. (2-tailed)		,001

a. Grouping Variable: growth enterprises

Figure 32: Two-sample Kolmogorov-Smirnov test, between Belgian growth companies and Swedish growth companies

Test Statistics[a]

		Access to finance
Most Extreme Differences	Absolute	,109
	Positive	,109
	Negative	-,040
Kolmogorov-Smirnov Z		1,129
Asymp. Sig. (2-tailed)		,156

a. Grouping Variable: growth enterprises

Figure 33: Two-sample Kolmogorov-Smirnov test, between European high growth companies and Belgian high growth companies

Test Statistics[a]

		Access to finance
Most Extreme Differences	Absolute	,145
	Positive	,145
	Negative	-,027
Kolmogorov-Smirnov Z		,803
Asymp. Sig. (2-tailed)		,540

a. Grouping Variable: highgrowthenterprises

Figure 34: Two-sample Kolmogorov-Smirnov test, between Belgian high growth companies and Dutch high growth companies

Test Statistics[a]

		Access to finance
Most Extreme Differences	Absolute	,184
	Positive	,184
	Negative	,000
Kolmogorov-Smirnov Z		,890
Asymp. Sig. (2-tailed)		,407

a. Grouping Variable: highgrowthenterprises

Figure 35: Two-sample Kolmogorov-Smirnov test, between Belgian high growth companies and Swedish high growth companies

Test Statistics[a]

		Access to finance
Most Extreme Differences	Absolute	,344
	Positive	,344
	Negative	,000
Kolmogorov-Smirnov Z		1,500
Asymp. Sig. (2-tailed)		,022

a. Grouping Variable: highgrowthenterprises