

Effectiveness of venture capital investments into start-up companies within the ICT industry

Diploma thesis

Supervisor:

Ing. Jan Vavřina, Ph.D.

Bc. Lucie Chlebiková

Brno 2016

I would like to thank the supervisor of my diploma thesis, Ing. Jan Vavřina, Ph.D. for his professional mentoring and advice, with which he contributed to complete this thesis. I would also like to thank to all the employees of Y Soft Corporation, Ltd. who provided me with exceptional advice concerning the financial analysis of the company.

Statutory Declaration

Herewith I declare that I have written my final thesis: **Effectiveness of venture capital investment in start-up companies within the ICT field** by myself and all sources and data used are quoted in the list of references. I agree that my work will be published in accordance with Section 47b of Act No. 111/1998 Sb. On Higher Education as amended thereafter and in accordance with the *Guidelines on the Publishing of University Student Theses*.

I am aware of the fact that my thesis is subject to Act. No. 121/2000 Sb., the Copyright Act and that the Mendel University in Brno is entitled to close a licence agreement and use the results of my thesis as the "School Work" under the terms of Section 60 para. 1 of the Copyright Act.

Before closing a licence agreement on the use of my thesis with another person (subject) I undertake to request for a written statement of the university that the licence agreement in question is not in conflict with the legitimate interests of the university, and undertake to pay any contribution, if eligible, to the costs associated with the creation of the thesis, up to their actual amount.

In Brno on:

Abstract

Bc. Chlebiková L., Effectiveness of venture capital investments into start-up companies within the ICT industry. Diploma Thesis. Brno: Mendel University, 2016.

The main objective of this thesis is to identify the economic benefits and key factors for effective investments of ICT companies into start-ups in the Czech Republic involving financial support resources from the European Union. The company Y Soft Corporation, Ltd. was selected as the venture capital investor providing funding to selected sample of start-up companies.

Keywords

Start-up, venture capital, private equity, business angels, mergers and acquisitions, managerial buyout, EUROSTARS, ALFA, seed fund, financial analysis, EVA analysis, INFA methodology, profitability ratios, Fisher exact test, European Union

Abstrakt

Bc. Chlebiková L., Efektivita venture kapitálových investic do start-up společností v rámci ICT odvětví. Diplomová práce. Brno: Mendelova univerzita, 2016.

Cílem této práce je identifikovat ekonomické přínosy a klíčové faktory potřebné k dosažení efektivních investic společností fungujících na trhu ICT do start-upových společností v České republice s dopomocí finančních podpor z Evropské unie. Společnost Y Soft Corporation, s.r.o. byla vybrána jako venture kapitálový investor, který investoval do vybraného vzorku start-upových společností.

Klíčová slova

Start-up, rizikový kapitál, soukromé kapitálové fondy, andělští investoři, fúze a akvizice, manažerské odkupy, EUROSTARS, ALFA, zárodečný fond, finanční analýza, EVA analýza, INFA metodika, ukazatele rentability, Fisherův exaktní test, Evropská unie.

Table of Content

1	Introduction	13
1.1	Objective	13
2	Literature Review	15
2.1	Definition of a Start-up.....	15
2.2	How Companies Raise Capital	16
2.2.1	Crowdfunding.....	17
2.2.2	Business Angels	18
2.2.3	Venture Capital	18
2.2.4	Private Equity	22
2.3	Exit Strategies	24
2.3.1	Initial Public Offering	24
2.4	Mergers and Acquisitions.....	25
2.4.1	Managerial Buyouts	26
2.5	European Support for Starting Businesses.....	26
2.5.1	The EUROSTARS Program.....	27
2.5.2	Horizon 2020	27
2.5.3	Seed Fund.....	27
2.5.4	National Innovative Fund	28
2.6	Fundraising for the CEE region.....	28
2.7	Methods of Financial Analysis	30
2.7.1	Absolute Indicators	30
2.7.2	Differential Indicators (Net Working Capital)	30
2.7.3	Relative Indicators.....	31
2.7.4	Horizontal Analysis	31
2.7.5	Vertical Analysis	31
2.7.6	Ratio Analysis	32
2.7.7	Economic Value Added	33
2.7.8	Pyramid Decomposition of Profitability Indicators.....	35

2.7.9	Contingency Tables 2x2.....	37
3	Methods	38
4	Practical Part	41
4.1	Y Soft Corporation, Ltd.	41
4.2	Financial Analysis of Y Soft Corporation, Ltd.....	43
4.3	Horizontal Analysis.....	43
4.3.1	Vertical Analysis	46
4.3.2	Analysis of Profit and Loss Statement.....	48
4.3.3	Ratio Analysis of Y Soft Corporation, Ltd.....	50
4.3.4	Economic Value Added (EVA)	53
4.4	Y Soft Ventures	54
4.4.1	Y Soft Ventures' Investment Strategy.....	55
4.4.2	Y Soft Ventures' Investment Portfolio.....	58
4.5	Financial Analysis of Start-up A, Ltd.	59
4.5.1	Structure of Start-up A's Assets and Liabilities	59
4.5.2	Evaluation of Investment Rounds.....	60
4.5.3	Net Working Capital.....	61
4.5.4	Financial Plan.....	62
4.5.5	Decomposition of ROE indicator	63
4.6	Financial Analysis of Start-up B, Ltd.	65
4.6.1	Structure of Start-up B's Assets and Liabilities	66
4.6.2	Evaluation of Investment Rounds.....	66
4.6.3	Net Working Capital.....	68
4.6.4	Financial Plan.....	68
4.6.5	Decomposition of ROE Indicator.....	69
4.7	Financial Analysis of Start-up C, Ltd.....	70
4.7.1	Structure of Start-up C's Assets and Liabilities	70
4.7.2	Evaluation of Investment Rounds.....	71
4.7.3	Net Working Capital.....	72
4.7.4	Financial Plan.....	72
4.7.5	Decomposition of ROE Indicator.....	73

4.8	Identification of Dependencies within Qualitative Factors of Effectiveness	74
4.9	Evaluation of Current Funding Opportunities for SMEs	76
5	Discussion	78
6	Conclusion	83
7	Literature	85
8	List of Figures	92
9	List of Tables	94
A	Y Soft Corporation's Balance Sheet	97
B	Pyramid decomposition of ROE (Start-up B)	99
C	Pyramid decomposition of ROE (Start-up C)	100

1 Introduction

Start-up is a very broad term, in which it is possible to include almost any project in its early stages. Start-up companies are emerging in all segments with a dominance of new business ideas and projects based on the development of information technologies and creation of innovative solutions for this market area. This term, however, does not have any exact definition and many authors and entrepreneurs define it in their own manner.

The market with start-up companies is still less developed in Europe compared to United States concerning opportunities provided to start-up companies. United States are considered to be more spontaneous with positive thinking toward starting projects and more willing to provide them with necessary funding. However, the social atmosphere is something that cannot be changed from day to day, it is the result of long-standing experience, both negative and positive. It is commonly known that the European population is more conservative, and may need precise business plans from start-ups, unlike United States, where start-up companies have numerous opportunities to grow. Nevertheless, more difficult conditions in Europe can result in better and more thorough projects, and subsequently, in successful companies. In certain aspects, the Czech Republic is still behind a start-up development facilitation abroad. Establishing start-ups there is yet not easy, especially in obtaining the initial investment amount. In addition, starting entrepreneurs in the Czech Republic still has limited possibilities for funding in early-stages of company's life cycle.

Every starting entrepreneur needs to raise funding from investors, either from friends and family, or venture capitalists and business angels. The understanding of how early-stage companies raise their capital is crucial for their owners and founders, because a properly-made business plan and clear business idea can attract essential investors. Thus, a business plan is not something one can do over night - it takes a lot of entrepreneurs' time.

The company Y Soft Corporation, Ltd. was chosen as a subject providing start-up companies in the Czech Republic with initial investments. This company is globally operating in the ICT field and is focusing on business-to-business segment with providing scalable print system solutions and help other companies to control their costs.

1.1 Objective

The main objective of this thesis is to identify the economic benefits and key factors for effective investments of ICT companies into start-ups in the Czech Republic involving financial support resources from the European Union.

The first partial objective is to process data from Y Soft Corporation's balance sheet and profit and loss statement and to compare them with financial analysis of the ICT field. Based on these data from Y Soft Corporation's financial statements, the horizontal and vertical analysis will be constructed to determine the structure

of company's assets and liabilities. Another output from financial statements' data will be an analysis of profitability ratios and economic value added.

The second partial objective is to describe Y Soft Corporation's daughter company - Y Soft Ventures, which was established to provide financial support to starting entrepreneurs, and to describe its investment strategy and portfolio.

The third partial objective is to evaluate each selected start-up based on the following methods: graphical illustration of companies' assets and liabilities, evaluation of investments' rounds, calculations of net working capital, construction of financial plan and decomposition of profitability indicator. Part of this last partial objective is also to choose a relevant method for hypothesis testing.

The following research questions are set-up in accordance with the respective partial objectives of the diploma thesis.

- What are the selection criteria and processes in order to identify the start-up company for venture capital investment?
- What is the effect of the venture capital investment on the economic performance of the companies' sample?
- What are the limitations of venture capital investment in comparison with other means of financing the start-up companies?
- What are the key areas of start-up's due diligence process?

2 Literature Review

The literature review serves as a groundwork for understanding start-up companies in their early-stages of business and possibilities of how these companies raise capital. This chapter contains six sections - the first section defines the term “start-up” from different points of view, from textbook definition to definitions established by entrepreneurs.

The second section is focused on different possibilities of how start-up companies raise capital using individual investors, venture capital or private equity companies. Each financing possibility is supplemented by advantages and disadvantages.

The third section explains possible exit strategies and is followed by a section describing the European support for starting businesses, and fundraising in Central and Eastern Europe, the region in which the company Y Soft Corporation operates.

Finally, the last section completes the literature review with an overview of financial analyses relevant to the practical part of this thesis.

2.1 Definition of a Start-up

Start-up is a broad term which is not frequently described in the literature. For comparison, definitions of websites were included in this section accompanied by explanations provided by Eric Ries, in his 2011 book “The Lean Startup” and by statements from individual entrepreneurs.

BusinessDictionary.com defines a start-up as *“early stage in the life cycle of an enterprise where the entrepreneur moves from the idea stage to securing financing, laying down the basis structure of the business, and initiating operations or trading.”* (BusinessDictionary, ©2016).

Furthermore, the website Investopedia defines the term start-up as *“A company that is in the first stage of its operations. These companies are often initially bank rolled by their entrepreneurial founders as they attempt to capitalize on developing a product or service for which they believe there is a demand. Due to limited revenue or high costs, most of these small scale operations are not sustainable in the long-term without additional funding from venture capitalists.”* (Investopedia, ©2016).

Another possible explanation is by the website Business Insider, which provides a more unrestricted definition: *“A startup is an emotional roller coaster that can either result in massive failure or success, after which one’s bank account total may either drastically increase or decrease.”* (BusinessInsider, ©2016).

One of the textbook definitions of a start-up can be found in Eric Ries’ book “The Lean Startup”: *“startup is a human institution designed to create new product or service under conditions of extreme uncertainty”*. Eric Ries is also an introducer of the term the Lean Startup, which he describes as: *“the Lean Startup is a set of*

practices for helping entrepreneurs increase their odds of building a successful startup” (Eric Ries, 2011, p.27).

Start-up is a term difficult to precisely define as there is no clear line where a startup begins and where it ends. For instance, Neil Blumenthal, cofounder and co-CEO of designer eyewear company, says *“A startup is a company working to solve a problem where the solution is not obvious and success is not guaranteed.”* Another, explanation of start-up is provided by Adory Cheung, CEO of Homejoy, *“startup is a state of mind. It’s when people join your company and are still making the explicit decision to forgot stability in exchange for the promise of tremendous growth and the excitement of making immediate impact.”* (BusinessInsider, ©2016).

Currently, there are approximately 939 startups in the Czech Republic, with the highest number based in Prague. The rest of the main cities are summarized in Table 1.

Table 1 Number of start-up companies in the Czech Republic

City	No. of startups
Prague	605
Brno	158
Ostrava	27
Plzeň	11
Hradec Králové	10
Total	939

Source: Startupmap., ©2016

2.2 How Companies Raise Capital

When starting a business it is important to support the business by funding. The important step is to identify the amount of funding that is needed and from where it can be found. The Start-up Guide defines the following steps that are necessary to define the amount of funding:

- *„time to market (that is, how long before initial sales)*
- *employee salaries and benefits*
- *space*
- *travel*
- *legal fees” (Startup Guide, ©2011).*

Due to large business risk, financing of start-up companies is a less attractive to traditional sources, such as shareholder’s contributions of their own capital or bank loans for long-term liabilities. Therefore, such companies often use the founders’ own resources or resources from persons related to them, which are often called as FFF – “families, friends and fools”. Other possibilities that Slavík describes in his 2013 book “Finanční průvodce nefinančního manažera” are:

Business Angels, Venture Capital and Private Equity. However, there is also another possibility how to raise capital, which authors usually do not describe; this is called “crowdfunding”. This method will be described further in the next section.

Figure 1 demonstrates the investment cycle according to a company's development stage, starting with FFF funding and ending with the company's maturity and its acquisition.

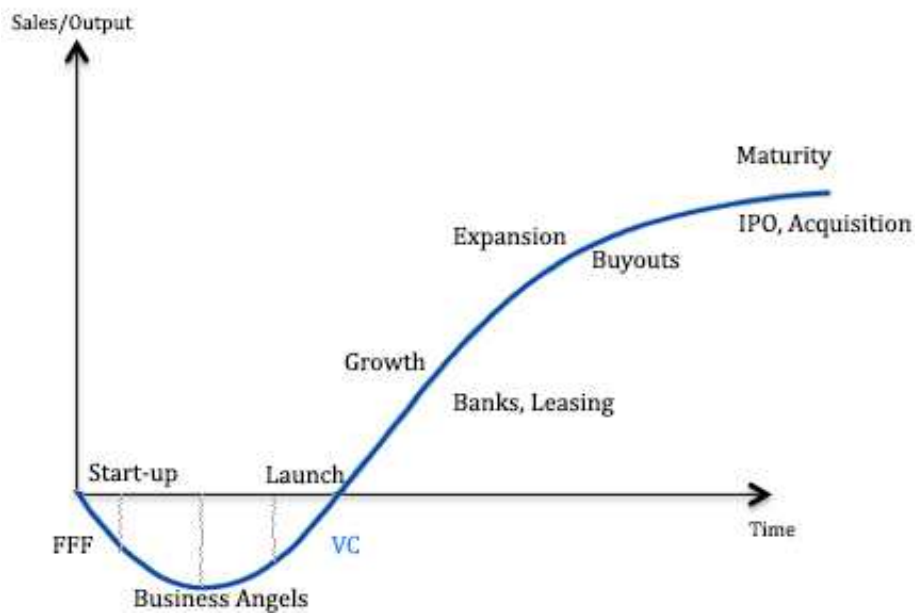


Figure 1 Investment cycles in relation to a company's development stage
Source: Reworked according to Czech Private Equity and Venture Capital Association, ©2010

2.2.1 Crowdfunding

Crowdfunding is defined as the process of seeking the funds necessary to start a project or business from public. Crowdfunding is a better possibility for entrepreneurs who do not wish to acquire or rely on funding by FFF or taking bank loans. This method is also less demanding: entrepreneurs do not have to create broad concepts that are required by venture capitalists or business angels. Another advantage of crowdfunding is seen in the validation of a business idea or project. The general public, providing the actual money, provides the entrepreneur with many valuable inputs and feedbacks. Additionally, entrepreneurs are not obliged to give up part of their ownership (equity). However, it is a time-demanding activity, requiring constant interaction with the crowd of backers. There is also a lack of guidance, as it is relatively new concept. Moreover, this type of funding is not considered to be professional, because the start-up do not need to get involved with any institution (Young, 2013).

It is an innovative way of financing, designed especially for Small and Medium Sized Enterprises (hereinafter referred to as SMEs) and start-up projects through the Internet. Globally, over 2.7bil USD has been raised, 1.6mil USD in North

America, 945mil USD in Europe, 76mil USD in Oceania; other, relatively negligible amounts have been raised in the rest of the world. The only type of crowdfunding in which an investor gains a direct business share or other securities is called "Equity Crowdfunding". Equity crowdfunding allows an investor to participate in a company's development and its future profits. In the Czech Republic, crowdfunding is regulated by the Czech National Bank and the company Rockaway is currently preparing the first Czech equity crowdfunding website (Fundlift, ©2015).

2.2.2 Business Angels

Business angels play an important role in the early stage of businesses. Usually, business angels are mostly successful entrepreneurs with large amounts of funds at their disposition, and their primary desire is to invest these funds (CVCA, ©2010).

Business angels' investments are in practice similar to venture capital investments, however, their implementation is carried out in smaller volumes through single investors. This single investor, the business angel, is an individual investor using their own capital to fund promising SMEs with strong growth potential (generally companies in seed stages, start-ups or companies in the expansion stage of their life cycle), with the objective of capital appreciation. Unlike venture capital funds, a business angel brings to a company certain know-how in form of expert knowledge, orientation in the field or contacts with strategic partners. Investment input is, as in the case of venture capital, limited to a predetermined period, at the end of which an investor implements the sale of their share. Furthermore, business angels are looking not only for the highest rates of returns with a certain amount of risk, but mostly for a market area in which they can actively engage and use their expertise and contacts to support the growth of the company in which they invested. Business angels are usually grouped in so-called "business angels networks" to have a more effective approach towards information and to perform more rational investment of capital (CzechInvest, ©2016).

The advantage of raising money through a business angel is no repayment or interest and the company's access to the business angel's expert knowledge. However, the amount of investment is low, usually not suitable for investments below 15,000 USD or above 1mil USD (Myscot.gov, ©2015).

2.2.3 Venture Capital

The Oxford Handbook of Venture Capital defines venture capital as: "*investments provided to early-stage, innovative and high-growth startup companies. Typically VC investments are seed-stage investments whereby financing is provided to research, assess, and develop an initial concept before a business has reached the start-up phase.*" (Cumming, 2012, p.1)

CzechInvest defines venture capital as a source of financing for small and medium sized enterprises. It is typical, for a Venture Capital fund, to purchase part of a company. After entering the company's fund, fund managers collaborate with the company's owners and managers; in particular, they monitor the company's growth. Usually after three to five years, the fund, together with company's owners, is looking for an opportunity to sell its share to other funds, to a larger company from the same field, or to the company's owners and managers. While in Western Europe and the USA some funds invest in start-up companies, in the Czech Republic it is more typical to invest in a company that is already established on the market and which has a business history (CzechInvest, ©2016).

BusinessInfo, an official portal for business and export, describes venture capital as a form of financing of a growing private enterprise by increasing its registered capital. It is a partnership between an entrepreneur and an investor and a mean of financing of a start-up company, its development, expansion, or the purchase of the whole company, when a venture capital investor receives an agreed share of the company's capital (equity capital or ordinary shares) in return for providing the necessary capital. The venture capital investor's aim is to allow prospective companies to become future large corporations, and can benefit small and medium size enterprises which still have minimal chances to finance their development with bank loans. The investment period is usually three years, but can be longer. A condition for the entry of venture capital is the company's transformation into a joint-stock company (if it is not already). The basic cognitive feature of this source of financing is a synergic effect, which is brought to the initiator of a business plan. Venture capital investment is not only one-time provision of finance, but typically the beginning of a many-year process of coexistence between an entrepreneur and a venture capital investor. The investor usually brings expert knowledge, which is very important to the company's development and sometimes even more essential than the actual investment itself (BusinessInfo, ©2016).

Synek (2011) in his book "Manažerská ekonomika" defines venture capital as a synonym for private equity. Moreover, he states that venture capital represents an investment exclusively into companies which are not traded on public markets. In the world, it is a completely separate business area, labeled as the venture capital industry.

There are other sources that substitute the term "venture capital" with "private equity", as Synek (2011) does in his book. However, the Czech Private Equity & Venture Association integrates venture capital under private equity. According to this association, private equity and venture capital are alternative sources of financing of innovative projects and companies with a high potential for rapid growth. It invests in companies that have potential for creating value and growing market share and whose business plan's aim is to offer highly innovative products, processes or technologies. Both private equity and venture capital are investments in companies, which are not traded on public markets, for which an investor acquires capital share. The term "private equity" is the name for the whole

group of these investments, including corporate buy-out or buy-in by external management and venture capital (Czech Private Equity & Venture Association, ©2010).

The book “Venture Capital and Finance Innovation” completes these definitions with five main characteristics of venture capital. This book calls venture capital a financial intermediary because of its capability to take investors’ capital and invest it only in private companies. Moreover, venture capital has a very important role as it monitors companies and helps them with their portfolio and its main target is to terminate the investment with the company’s exit through sale or initial public offering (hereinafter “IPO”). In addition, venture capital supports the internal growth of companies with an investment (Metrick, Yasuda, 2011).

There are several advantages as well as disadvantages of venture capital funding that are demonstrated in Table 2.

Table 2 Advantages and disadvantages of venture capital investments

Advantages	Disadvantages
Managers provide non-monetary help to a company in a form of consulting in the field of strategy, human resources, financing etc.	The start-up company gives up a share in its business.
VC funding is a long-term investment.	Raising VC can be very demanding, costly (high transaction costs) and even timely.
Company keeps management control of the business, thus investors are not in charge of running the business.	VC is usually not suitable for small investments.
There is no need for collateral (personal assets).	It can take time to find a suitable investor.
There are no repayments or interest.	Owners are usually not capable of writing a business plan that will attract an investor.
Venture capitalist shares the risks and brings innovation.	Required rate of return is in CEE around 30%.

Source: Reworked according to Nývltová, Režňáková, 2007; Finance Scotland ©2015

Types of Venture Capital

“Every company is different – that is why the different investment-stages vary in each start-up and can only be roughly divided.” The investment stages can be simply divided into two general stages: The Early Stage and the Expansion Stage. Furthermore, we can divide these two stages into smaller stages (VC-BW, ©2012).

- **Seed capital** - seed capital is the financing of a company in its early stages, often even before the company’s establishment. It is focused on research and development projects, e.g. a prototype of a new product and its patent

protection, testing of a new product, market research funding for a new product, etc. This type of capital accounts for relatively small amounts, approximately from 200,000 to 4mil CZK, and the investment period is 7 to 12 years. Seed capital represents the most risky investment, in which the rate of return is expected to be 100% or more (Nývtová, Režňáková, 2007). Its source can be the founders of start-up companies themselves, their friends, business angels or venture capital investors (Slavík, 2013).

- **Start-up capital** – start-up capital is provided to already-established companies, whose product is on its way from the development stage to market launch. In this stage, the company starts to advertise and look for potential customers and faces an increase of capital requirements (VC-BW, ©2012).
- **Early stage development capital** - a company in its early stage of development, is one that has been functioning on the market for less than three years and had not yet turned a profit. This stage, together with the previous two stages, is the most risky one. An investor sees no previous success of a company and his decision must be based primarily on his intuition and experience (Marinič, 2006, p.146). In this stage, the investors are expecting rate of return 30% and investment period is approximately four years (Nývtová, Režňáková, 2007).
- **Later stage development** – is another type of investment, which is used by already established company with a potential for significant expansion. Usually this stage is all about expanding production capacity for the territory, eventually building a sales network in new territories. These companies already have some history, so it is easier to anticipate their development, thus they are considered as less risky. For this reason, the most significant European venture capital companies are engaged in providing the necessary funding. The average investment is in the range from 20mil to 80mil CZK and investment period is in average three years. The minimum rate of return is 30% (Nývtová, Režňáková, 2007).

In Central and Eastern Europe (hereinafter CEE), venture capital investments significantly grew in 2014. Figure 2 shows an increase in all three stages compared to 2013. The seed stage received only a small portion of investment (EUR 8,000) compared to start-up (EUR 48,000) and later-stage (EUR 42,000). In the seed stage, 45 companies were receiving funding, in the start-up stage were 106 companies and in the later-stage development 62 companies (EVCA statistics, ©2015).

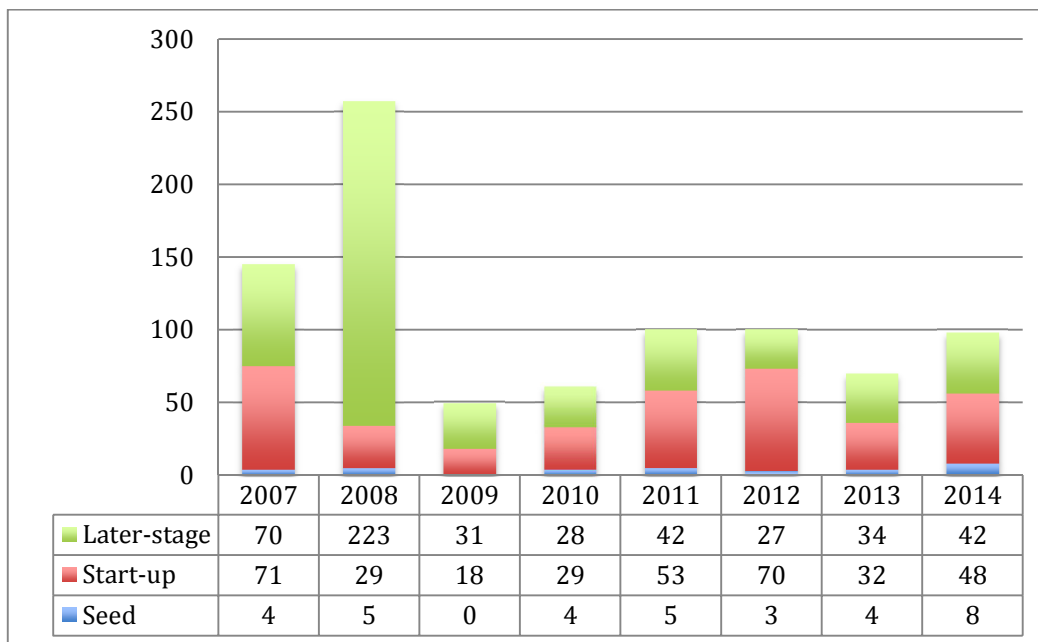


Figure 2 CEE venture capital investments by stage (in mil €)

Source: Reworked according to EVCA statistics 2014

2.2.4 Private Equity

“Private equity refers, typically, to the asset class of equity securities in companies that are not publicly traded on a stock exchange. The term “private equity” typically includes investments in venture capital or growth investment, as well as late-stage, mezzanine, turnaround (distressed), and buyout investments.” (Cumming, 2012, p.1).

The Guide on Private Equity and Venture Capital (2007, p.6) defines private equity as *“a provision of equity capital by financial investors – over the medium or long term – to non-quoted companies with high growth potential”*. Moreover, it talks about venture capital as a subset of private equity, mostly suitable for launching companies, their early development or expansion. On the contrary, private equity not only provides the initial financing, it also supports the company in its further development stages. There is also a requirement for the management team to perform a buyout of the company.

Figure 3 demonstrates the division of private equity in the world. Venture capital is understood as a subset of private equity.

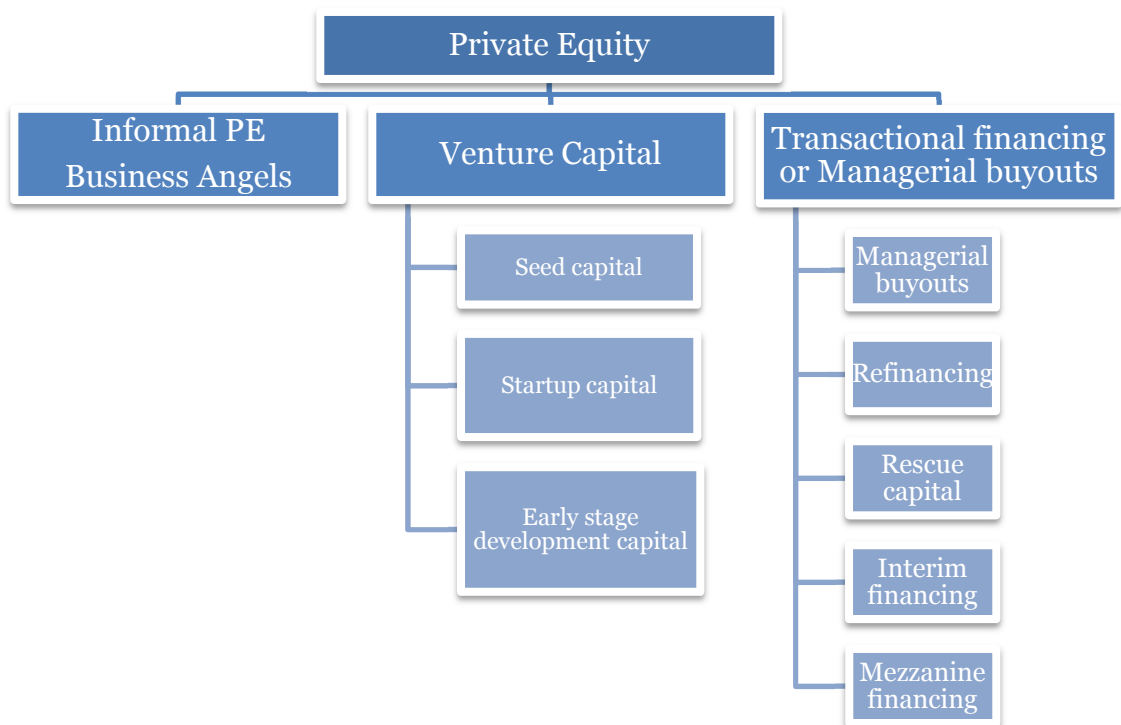


Figure 3 Division of private equity in the world
Source: Reworked according to Šmejkal, 2009

Private equity investments are very suitable for companies looking for a larger amount of money, however, the owners, who put a lot of effort into the company, lose a large share of the business. The summary of pros and cons of private equity are summarized in Table 3.

Table 3 Pros and cons in Private Equity financing

Advantages	Disadvantages
Investors become co-owners of the company.	Company has to give up large share of the business.
Investment flows directly into company's assets.	Company also loses management control (i.e. hiring/firing people, setting strategy, choosing management team etc.)
Private equity firms invest in companies to make them more valuable and suitable for future sale.	Very large sums of money are required from investors.
Involves the largest amounts of funding.	High costs of due diligence.
Active involvement of investors.	Private companies are considered illiquid in their nature. They expect an investment to flow for several years.

Source: Reworked according to Listed Private Equity, ©2016; Roman Šebl, ©2015; Envato, ©2015

2.3 Exit Strategies

A successful exit from a company requires careful planning. Basically, there are three exit options: Initial Public Offering (hereinafter IPO), strategic acquisition and management buyout (Inc., ©2016).

2.3.1 Initial Public Offering

IPO is the first option of selling private company to the public. Usually smaller companies wanting to expand their capital issue IPOs and seek help from underwriting companies, which can help to determine the best offering time and price at the market. IPO is considered as a risky investment due to unpredictable changes in stock and very little amount of historic information for analysis of the company (Investopedia, ©2016).

The basic success of an IPO is in attracting investors, who purchase the securities issued. If these securities are offered publicly in advance to unlimited number of investors, it is called a "public offer of securities". Before starting a public offering of securities, the company is required to publish a prospectus approved by the Securities Commission. This prospect is a summary of information which should provide potential investors with a sufficient basis for qualified assessment of the securities that are being offered and to make a decision, whether these securities will be purchased for the given price (Penize.cz, ©2016).

2.4 Mergers and Acquisitions

The terms mergers and acquisition are sometimes interchangeable, but there is a difference between them.

According to Brian Coyle (2000, p.2) "*mergers and acquisitions occur when two or more organizations join together all or part of their operations. The difference between mergers and acquisitions relate mainly to:*

- *the relative size of the individual companies in the business combination,*
- *ownership of the combined business,*
- *management control of the combined business."*

Synek (2007) provides a more in-depth definition. As stated in his book "Manažerská ekonomika", mergers and acquisitions are organizational tools. A merger is an agreement of entrepreneurs to merge their existing enterprises into a single entity. As a result, the individual companies cease to exist and a new company is established, or one company still exists and the others are included into it. A merger is usually the fusion of two joint stock companies and is subject to the consent of both shareholders. An acquisition (or takeover) represents the undertaking of one company to buy another, and of the second to sell itself to the first. Acquisitions can have the characteristics of both friendly and hostile takeovers. There is one condition for mergers and acquisitions: both companies must have existed separately before the merger or acquisition was done.

Types of company mergers are:

- **Horizontal** – a horizontal merger may occur between companies in the same industry, operating in the same space and even between companies offering the same products or services. It is less common in industries with larger number of companies, as there is very high competition
- **Vertical** – a vertical merger differs from a horizontal one in that the different products or services are destined to form one specific final product. In vertical mergers, two or more companies that are operating at different industrial levels merge their operations. The main goal behind this type of merger is to ensure an increase in synergies that are created by this process.
- **Conglomerate** – a conglomerate merger is totally different. as it happens between companies that are involved in absolutely unrelated business activities. It can have two forms: Pure conglomerate mergers involve companies that have nothing in common; contrarily, mixed conglomerate mergers involves companies looking for product or market extensions (Minority Business Development Agency, ©2016).

There are several reasons for mergers to happen. The main reasons are, for example, the previously mentioned synergistic effect, the existence of free cash flow, the possibility to shift a loss of the company into new business and thus gain

a tax advantage, diversification, risk reduction or market expansion (Synek, Kislingerová, 2010).

Synek (2007) states that the motives for the emergence of horizontal mergers are mainly to obtain economies of scale. In contrast, the goal of vertical mergers is gaining control and to achieve savings from vertical integration.

2.4.1 Managerial Buyouts

There are four types of managerial buyouts distinguished among authors: Management buy-out, Management buy-in, Buy-in Management buyout and Leverage buyout.

MBO (Management buy-out) is conducted by a private equity company or by a strategic partner, so that they will buy part of company's shares from its owner. The founder receives cash and the second party receives a share in the company connected to the defined share in its management (Srpová and col., 2011).

MBI (Management buy-in) is defined by BusinessDictionary as *"purchase of a firm by the outside investors who often retain the existing management team and nominate their representatives to the board of directors. Management buy-ins generally occur where the outside investors believe the firm's products can generate greater than current yields with change in strategy and/or infusion of capital."* (BusinessDictionary, ©2016).

BIMBO (Buy-in Management Buyout) is another form of buy-out that has characteristics of both MBI and MBO. This type of buy-out appears in situations when existing management, together with outside managers, decides to buyout a company. The existing management is then on the buyout side and outside managers represent the buy-in side (Investopedia, ©2016).

LBO (Leveraged Buyout) exists when a company bought another company while using sufficiently large amount of debt. The debt, which was used to buy the company, is secured by target's assets. This means that the potential buyer of the company does not necessarily needs to acquire the financial resources necessary for company's purchase, but instead, it is important that the target company has enough collateral available (in the form of assets). Thus, it will allow the buyer to obtain debt financing, so they can pay the costs of transaction (Pilger, 2012).

2.5 European Support for Starting Businesses

This chapter describes funding opportunities for innovative companies in its early-stages of business or with a business history. The European Commission presents every year funding opportunities, in which SMEs can sign for a current "call" according to their field of business (European Commission, ©2015). According to

the European Commission, there exist the following programs for start-up companies.

2.5.1 The EUROSTARS Program

EUROSTARS is a program that supports international and innovative projects related to research and development for SMEs. EUROSTARS is based on a bottom-up approach and was specifically developed to meet the needs of SMEs. It can be the first step for entrepreneurs to start international cooperation and benefit from shared expertise and working beyond the state. This program was established using the budgets of 34 participating states, the Czech Republic being one of them. It has a budget of EUR 1.14 billion prepared for the period 2014 to 2020. Moreover, the most important aim of this program is to bring new job opportunities, to increase value of the economy and support its growth (Eurostars, ©2015).

It is proved that this program help businesses to attract private investors and to build strong teams. To access such a program, each applicant must pass through a selection process and is thoroughly examined to ensure that only the most suitable candidates with the best business ideas are selected and supported. EUROSTARS receives applications at least twice a year with the Eurostars High Level Group deciding on its frequency (European Commission, ©2015).

A typical EUROSTARS project has three to four participants from two to three countries, a duration of 31 months and costs approximately EUR 1.4 billion. To start a EUROSTARS project, the applicant must fulfill five basic rules: to be an R&D-performing SME, to want to gain access to new markets, to want to cooperate internationally, to plan to develop an innovative new product, process or service, and last but not least, to want their product to be rapidly commercialized (Eurostars, ©2015).

2.5.2 Horizon 2020

Horizon 2020 is considered to be the biggest European Union's Research and Innovation program. It has approximately EUR 80 billion of available funding for the period 2014 to 2020. This program is suitable also for the ICT industry for which there exist a work programme, designed by the European Commission, starting in 2016 to 2017. Horizon 2020 is the financial instrument with the aim to secure global competitiveness within the Europe. (European Commission, ©2015).

2.5.3 Seed Fund

Seed Fund may only invest in small and medium sized enterprises. Investments from a financial instrument SEED will be typically provided to companies requiring seed or start-up financing, thus to companies younger than five years. There are two types of seed fund investments – investment to equity and investment to quasi-equity.

Investment in equity – the fund will invest in the registered capital of the target company, for which it receives an ownership stake in the company. The investment can be carried out at the time of company's establishment or later, based on an increase of its registered capital. Investment cannot be done in a form of managerial buyouts.

Investment in quasi-equity – the fund will be authorized to provide target companies with loans, whose returns will be linked to company's performance (Cyrrus advisory, ©2012)

2.5.4 National Innovative Fund

In 2015, the government approved the proposal for creation of a new fund supporting starting entrepreneurs. The National Innovative fund (hereinafter NIF) will be the successor of the Seed Fund and will dispose of EUR 50mil. The expected implementation of this project should be in 2017 (The Ministry of Industry and Trade, ©2005).

2.6 Fundraising for the CEE region

The Invest Europe association represents investors in private equity and venture capital. Members of this association focus on investments in Europe and construct research on development trends in the industry (Invest Europe, ©2015). In 2014, they constructed a report with deep research and analysis about investments in the Central and Eastern Europe (hereinafter "CEE") connected to the table below.

Table 4 Types of investments in the CEE region in 2013-2014

AMOUNTS IN € THOUSANDS	TOTAL CEE	% OF TOTAL	TOTAL EUROPE	% OF TOTAL
STAGE FOCUS				
Seed	8,314	0.6	97,995	0.2
Start-up	47,762	3.6	1,890,926	4.6
Later-stage venture	41,863	3.2	1,624,427	3.9
TOTAL VENTURE	97,939	7.5	3,613,348	8.7
Growth	232,385	17.7	5,570,378	13.4
Rescue/Turnaround	23,696	1.8	209,265	0.5
Replacement capital	22,107	1.7	849,606	2.0
Buyout	934,787	71.3	31,264,722	75.3
TOTAL 2014	1,310,914	100.0	41,507,319	100.0
TOTAL 2013	788,702		36,321,664	

Source: Reworked according to EVCA statistics 2014

In 2014, the market was dominated by buyouts, which experienced an increase 17% compared to the previous year. Besides buyouts, growth investment became the second most important type of investment, and is more prominent in the CEE region than in the whole of Europe, where the percentage is smaller. From total venture investments, start-up stage received the highest portion of money both in CEE as well as in the Europe as a whole.

Compared to other countries, the Czech Republic had a larger share of investments in later-stage companies (6.1mil EUR) than in start-ups (2.9mil EUR). Start-up investments mostly prevailed in Hungary (22mil EUR), Lithuania (4,952 EUR) and Slovenia (1,250 EUR) (Invest Europe, ©2015). The development of total investments during 2003 to 2014 is visible on Figure 4 with the strongest years 2008 and 2009.

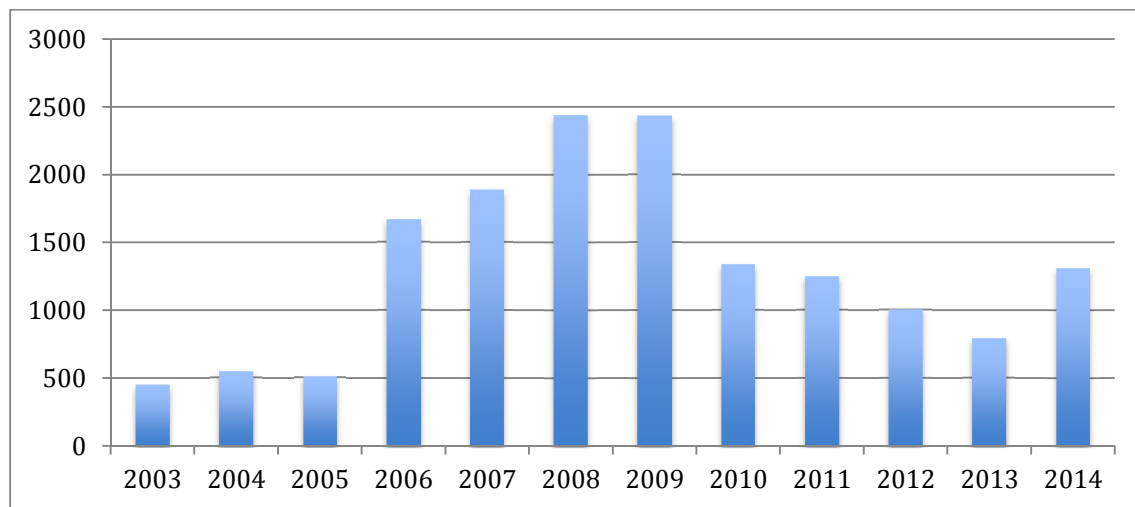


Figure 4 Annual investment value in the CEE region in 2003-2014 (in million EUR)
Source: Reworked according to EVCA statistics 2014

2.7 Methods of Financial Analysis

Financial analysis works with indicators that are either items of financial statements, or numbers that are derived from them. In financial analysis, time aspect plays a very important role. It is always necessary to distinguish between moments of time (for Balance Sheet statements) and time intervals (for Profit and Loss statements). Moreover, it is convenient to create a larger time period to avoid inaccurate results. A standard division of indicators is a division into absolute, differential and relative indicators (Růčková, 2011).

2.7.1 Absolute Indicators

Absolute indicators are mostly used to analyze trends (comparison of development in time series – horizontal analysis) and for percentage component analysis (individual items of statements are expressed as percentages of these components - vertical analysis) (Knápková, Pavelková, Šteker, 2013). According to Růčková (2011) this approach is relatively limited because it does not process any mathematical method.

2.7.2 Differential Indicators (Net Working Capital)

Differential indicators are used to analyze and control the financial situation of a company with focus on its liquidity. The most important differential indicator is **Net Working Capital** (hereinafter NWC) (Knápková, Pavelková, 2010).

NWC belongs to liquidity ratios and is calculated as a difference between current assets and current liabilities. NWC is a part of current assets, which is financed by long-term financial resources and a company can dispose of the capital when implementing its decisions. NWC can also be referred to as a part of resources, which would allow the company, in a limited extent, to continue doing

its business. Thus, NWC can be called as a “financial pillow” needed in case of an emergency (Růčková, 2011).

$$NWC = \text{Current Assets} - \text{Current Liabilities} \quad (1)$$

In case the NWC has negative value, i.e. $NWC \leq 0$, it causes so-called uncovered debt and the company is unable to repay its liabilities in its due date. Company's management must implement corrective measures with aim to change the structure of financing in terms of maturity, eventually to consider a sale of unnecessary assets (Režňáková, 2010).

2.7.3 Relative Indicators

Relative indicators are the most frequently used indicators as they are based exclusively on data from basic accounting statements. Thus, these use publically-available information. A relative indicator is calculated as a ratio of one or several accounting items, from the basic accounting statements, in relation to other items or groups of items (Růčková, 2011).

Relative indicators, in ratio analysis, are mostly summarized into several groups of indicators, because a company is a complex organism, which cannot be characterized by a single indicator. Thus, in order to have a functioning company, it has to be not only profitable, i.e. to bring benefits to the company's owners, but it also has to be liquid and reasonably indebted (Kislingerová, Hnilica, 2008).

2.7.4 Horizontal Analysis

Horizontal analysis focuses on comparing changes in items of individual financial statements in chronological order. It is calculated as an absolute amount of change and its percentage relative to the initial year (Knápková, Pavelková, 2010).

$$\text{Absolute change} = \text{Indicator}_i - \text{Indicator}_{i-1} \quad (2)$$

$$\% \text{ change} = (\text{Absolute change} \times 100) / \text{Indicator}_{i-1} \quad (3)$$

2.7.5 Vertical Analysis

Vertical analysis deals with the internal structure of absolute indicators and is also called component analysis. Application of this method facilitates the comparability of financial statements with those from the previous period. Moreover, it facilitates the comparison of the analyzed company with other companies in the same field of business. We assess the structure of assets as well as the structure of liabilities. The structure of assets is design to inform, in what the company has invested the entrusted capital, and to what extent the profitability is taken into account in the investment process (long-term items are generally more profitable than short-term items). On the contrary, the structure of liabilities shows us from which source the assets were acquired (Růčková, 2011).

2.7.6 Ratio Analysis

In order to analyze the interactions and connections between indicators, they have to be put in absolute values in mutual relations. For the needs of financial analysis we usually come across the sorting of indicators into groups that measure specific side of company's financial health. The following are the groups of indicators:

- profitability ratios,
- liquidity ratios,
- activity ratios,
- indebtedness ratios,
- capital market ratios (Scholleová, 2012)

Profitability ratios

Profitability ratios measure the success in achieving corporate goals by comparing income with other variables. The most widely used method of evaluating business activity is to measure the total amount of profit on capital invested (Hrdý, 2013).

- **Return on Assets (hereinafter ROA)** - ROA is a key measure of profitability. It measures company's profit with its total resources regardless of whether it was financed by own or by borrowed capital (Scholleová, 2012). The EBIT indicator states for earnings before taxation, which can be found in Profit and Loss statement.

$$ROA = \frac{EBIT}{assets} \quad (4)$$

- **Return on Equity (hereinafter ROE)** - ROE is an indicator evaluating the profitability of equity which was implemented into a company by its owners (directly or indirectly through undistributed profit). It is defined as the ratio of net income and owner's equity. Using this indicator, investors can assess whether their equity is sufficiently profitable comparing to investment's risk. The value of ROE should be higher than the return on alternative investment, which has similar risk (Hrdý, 2013).

$$ROE = \frac{EAT}{Owner's Equity} \quad (5)$$

- **Return on Sales (hereinafter ROS)** - According to Sholleová (2012), this indicator shows how many crowns of profit a company creates with 1 CZK of revenues. If the indicator shows unfavorable results, we can assume that neither the other indicators will have better values.

$$ROS = \frac{EAT}{Sales} \quad (6)$$

2.7.7 Economic Value Added

Economic value added (hereinafter EVA) was firstly presented by an American, J. Stern, founder of the company Steward & Co. The original idea of this model is based on microeconomic theory, which as a basic goal of a company introduces only profit maximization (BusinessVize, ©2011).

EVA is nowadays a popular criterion for assessing a company's performance. Unlike profitability ratios, EVA is based on so-called economic profit. The difference between economic and accounting profit lies in fact that economic profit respects all costs on invested capital, i.e. costs of foreign capital and costs of equity. (Fotr, Souček, 2005). The basic formula for calculation is written as:

$$EVA = NOPAT - WACC \times C \quad (7)$$

NOPAT (Net Operating Profit After Taxation) can easily be found in Profit and Loss statement. It is calculated only from a company's operating activities, which serves as a fundamental business purpose. Non-operating activities are not included due to different size of business risk, which requires the use of different discount rates. It is therefore necessary to remove all income and expenses that are not related to company's main operating activity.

C (Capital) is long-term chargeable capital, which is used to finance company's operating activities (Mulačová, Mulač, 2013).

WACC (Weighted Average Cost of Capital) depends on capital structure and the costs of different types of capital. Thus, if a company wants to create value for its owners, it must try to minimize the costs of capital, i.e. to use the financial resources with minimum costs (Čižinská, Režnáková, 2007). WACC has the following equation:

$$WACC = r_d \times \frac{D}{(D+E)} + r_e \times \frac{E}{(D+E)} \quad (8)$$

where:

r_d	is cost on external capital
D	is value of external capital (debt)
E	is value of own capital (equity)
r_e	is costs on own capital

The EVA indicator should have a positive value, so it can create a "new" value added, which increases the original value of a company. Thus in reality EVA is a difference between NOPAT and payment of dividends to shareholders and interest payments to creditors. If the difference has a positive value, the company's internal value is increasing. However, from Microeconomics we are aware of law of

diminishing returns. Companies operating for a longer period of time on the market are facing the same rate of returns. Ultimately this means that EVA indicator, under the same conditions, will be equal to 0. Everything is caused due to an impact of competition and balancing conditions in the related business field (Vochozka, 2011).

It may occur that a company appears to be profitable, even though it does not create any added value. This is a case when the company has positive earnings, but at the same time smaller than the profitability required by owners. If the value added should grow, the return on equity (ROE) must exceed the cost of equity (r_e) (Sedláček, 2011). This condition is demonstrated in the following equation:

$$EVA = (ROE - r_e) \times \text{owner's equity} \quad (9)$$

It is very difficult to identify the cost of equity, thus Ivan and Inka Neumaer constructed in cooperation with Ministry of Trade and Industry the INFA benchmarking diagnostic system for financial indicators. This system allows businesses to verify their financial health and to compare their results with the best companies in the same field of business or with the average of the related sector. It is used to identify a company's major strengths problems, which can be revealed by this diagnostic system, and thus, it represents the first step towards a solution. It is a basis for shaping and determining corporate strategy. The source of data is a statistical survey of Czech Statistical Office (Ministry of Trade and Industry ©2005).

According to INFA methodology, the cost of equity is calculated as:

$$r_e = r_f + r_{LS} + r_{ER} + r_{FI} + r_{FS} \quad (10)$$

where:

- r_{LS} is premium on Liquidity Shares
equity > 3 billion CZK -> $r_{LS} = 0\%$
equity < 100 million CZK -> $r_{LS} = 5\%$
- r_{ER} is premium on Entrepreneurial Risk (according to ROA)
ROA > ROA_0 -> $r_{ER} = 0\%$
ROA < 0 -> $r_{ER} = 10\%$
- r_{FI} is premium on Financial Instability Risk (according to Current Ratio)
CR > 150% -> $r_{FI} = 0\%$
CR < 100% -> $r_{FI} = 10\%$
- r_{FS} is premium on Financial Structure Risk (according to Time Interest Earned Ratio)
TIE > 3 -> $r_{FS} = 0\%$
TIE < 1 -> $r_{FS} = 10\%$ (Ministry of Trade and Industry ©2005).

Moreover, Benchmarking diagnostic system divides companies into groups according to EVA indicator:

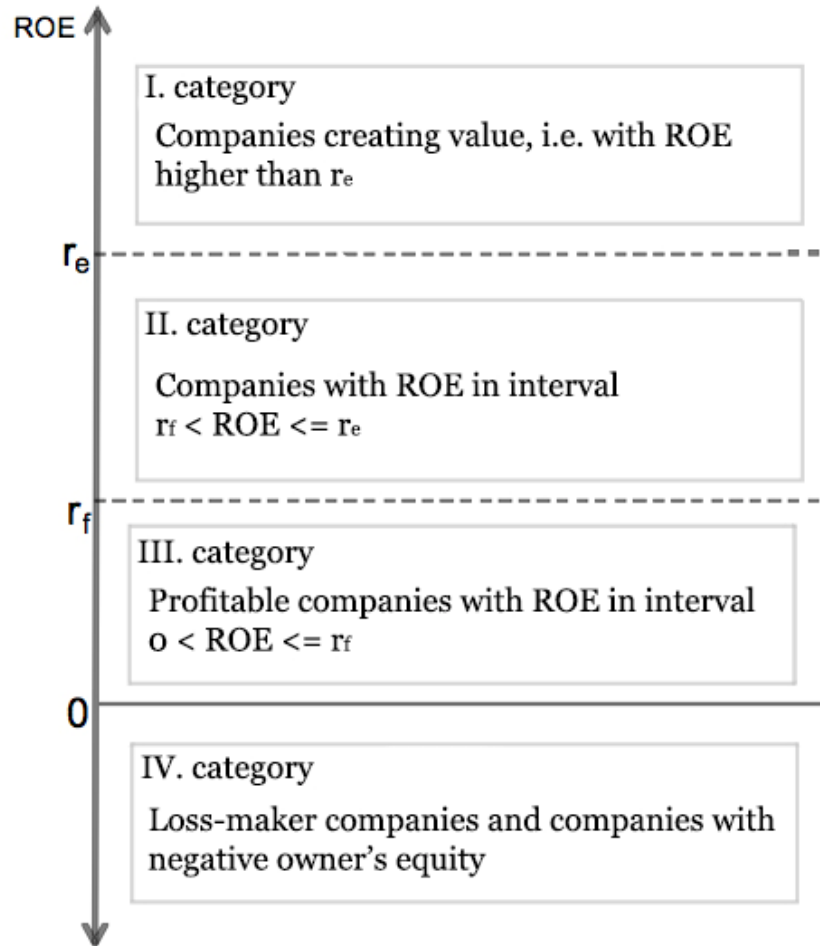


Figure 5 Classification of companies according to EVA indicator

Source: Reworked according to the Ministry of Industry and Trade, ©2005

The EVA indicator is nowadays one of the key indicators. Its main objective is to analyze factors that are contributing to value creation and to ensure decisions that will bring maximum value for shareholders and for everybody with whom the existence of a company is linked (Synek, Kislingerová, 2010).

2.7.8 Pyramid Decomposition of Profitability Indicators

The pyramid decomposition of profitability indicators is a traditional and widespread analytical approach to performance measurement. Its main characteristics are:

- it is based on decomposition of factors influencing company's performance and helps to answer the question in what extent the individual factors influenced the value of the top indicator of performance,
- the top indicator is expressed using the indicators of return on assets or equity,
- the pyramid decomposition combines additive and multiplicative method of analysis.

There are a number of possibilities how to create a pyramid decomposition of profitability indicators. The first hierarchical level of decomposition is usually expressed in so-called Du Pont decomposition (Wagner, 2009). Du Pont decomposition was firstly used in the Du Pont du Nomeurs chemical company and nowadays is the most typically used pyramid decomposition method (Růčková, 2011).

Nevertheless, the pyramid decomposition will be used in the practical part according to the Ministry of Industry and Trade.

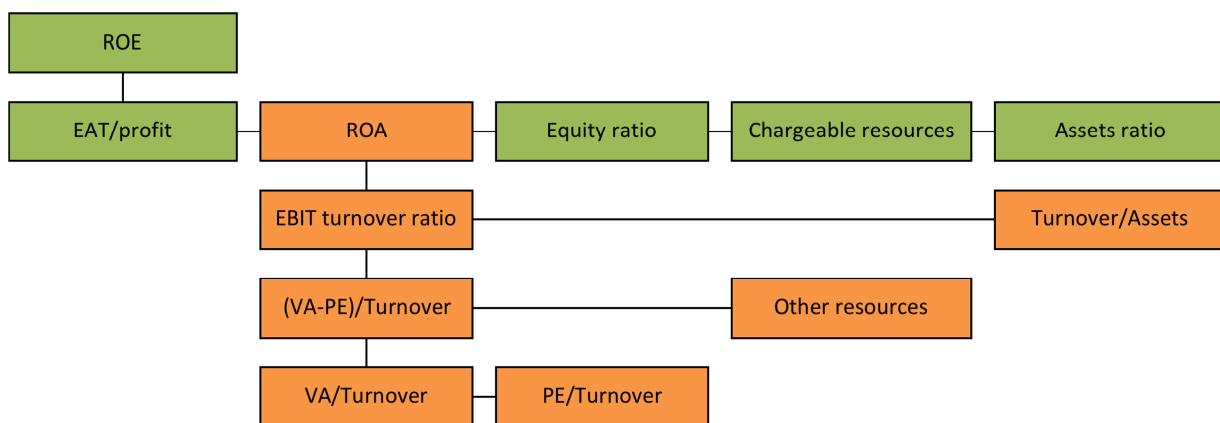


Figure 6 INFA methodology (Pyramid decomposition of ROE)

Source: Reworked according to the Ministry of Industry and Trade, ©2005

2.7.9 Contingency Tables 2x2

The contingency table 2x2 is constructed if both random variables X, Y have only two variants. In this case, the following indicators are used: $n_{11} = a$, $n_{12} = b$, $n_{21} = c$, $n_{22} = d$.

Table 5 Contingency table 2x2

X	Y		$n_{j.}$
	$y_{[1]}$	$y_{[2]}$	
$x_{[1]}$	a	b	a + b
$x_{[2]}$	c	d	c + d
$n_{.k}$	a + c	b + d	n

Source: Reworked according to Budíková, Králová, Maroš, 2010

R. A. Fisher constructed for the contingency table 2x2 exact test known as Fisher's exact test. The principle of this test consists in the fact that by using combinatorial considerations is calculated the likelihood for given marginal frequencies, for which tables are constructed that deviate from the null hypothesis at least as much as the given table (Budíková and coll., 2010). The Fisher's exact test will be performed in the practical part of this thesis using the statistical software "Statistica 12", which is available for students of Mendel University.

3 Methods

The theoretical part of the thesis is based on the start-up literature, its definition, available sources of funding and methods of financial analysis. The individual financial analyses, previously described in the theoretical part, will be described in this section with relevant formulas. From the obtained information will be defined general conclusions based on the method of induction. The literature review is based on resources defined in the section Literature.

The first partial goal of this thesis will be based on identification of financial status of observed companies using horizontal and vertical analysis, profitability ratio analysis and economic value added. In addition, the results will be compared to the ICT field. The data for horizontal and vertical analysis are directly available in financial statements Balance Sheet and Profit and Loss Statement. Horizontal analysis focuses on comparing changes in items of individual financial statements in chronological order. It is calculated as an absolute amount of change and its percentage relative to the initial year (Knápková, Pavelková, 2010).

$$\text{Absolute change} = \text{Indicator}_i - \text{Indicator}_{i-1} \quad (11)$$

$$\% \text{ change} = (\text{Absolute change} \times 100) / \text{Indicator}_{i-1} \quad (12)$$

Vertical analysis is dealing with internal structure of absolute indicators and compares items from financial statement with the previous period (Růčková, 2008).

Profitability ratios measure the success in achieving corporate goals by comparing company's income with other variables (Hrdý, 2013). The following profitability ratios will be calculated

- **ROA indicator** is a key measure of profitability and measures company's profit with total resources (Scholleová, 2012) and is calculated by the following equation:

$$ROA = \frac{EBIT}{assets} \quad (13)$$

- **ROE indicator** evaluates the profitability of equity implemented into a company by its owners (Hrdý, 2013). ROE indicator has the following equation:

$$ROE = \frac{EAT}{Owner's Equity} \quad (14)$$

- **ROS indicator** defines how many crowns of profit a company creates with 1 CZK of revenues (Scholleová, 2012). It is calculated as follows:

$$ROS = \frac{EAT}{Sales} \quad (15)$$

Economic value added is an indicator based on economic profit, which respects all costs on invested capital (i.e. foreign capital and costs of equity) (Fotr, Souček, 2006). The economic value should be positive to increase company's original value. According to benchmark INFA methodology, the EVA is calculated as follows:

$$EVA = (ROE - r_e) \times \text{owner's equity} \quad (16)$$

The results obtained from the financial analysis will be compared with the relevant ICT field based on the financial analysis conducted every year by the Ministry of Industry and Trade. The data can be compared only to the year 2014 as the financial analysis for the year 2015 is incomplete.

The second partial objective will be accomplished by conducting interviews with Y Soft Ventures' employees to determine their investing strategy and to describe their investment portfolio, which includes start-up companies.

The third partial objective will be done based on identification of financial status of each start-up using the following steps:

1. **Graphical illustration of companies' assets and liabilities** - based on data obtained from companies' Balance Sheet
2. **Evaluation of investment rounds** - this step will be done using data from the Public Register of the Ministry of Justice and information about investment amounts received from start-ups owners
3. **Analysis of Net Working Capital** - indicator belongs to liquidity ratios and is calculated as a difference between current assets and current liabilities.

$$NWC = \text{Current Assets} - \text{Current Liabilities} \quad (17)$$

4. **Construction of financial plan** - based on data obtained from companies' Profit and Loss Statement and based on information from interviews.
5. **Decomposition of ROE indicator** - it is a traditional analytic approach to performance measurement. This approach is based on decomposition of factors influencing company's performance and helps to determine, which individual factors have the highest influence on the top indicator (Wagner, 2009).

Finally, the following null hypothesis will be testing using Fisher exact test, which identifies dependency between relevant quantitative and qualitative data.

1. H_0 : ROA values higher than the industry average does not depend on the amount of start-up's revenues

2. H_0 : ROA values higher than the industry average does not depend on the number of start-up owners
3. H_0 : ROA values higher than the industry average does not depend on the EBIT indicator

4 Practical Part

The practical part of this thesis is focused on the selected investor, Y Soft Corporation, and the sample of start-ups, Start-up A, Start-up B and Start-up C, in which the selected subject invested. The names of the selected sample of start-up companies will remain secret due to protection of internal information. The company Y Soft Corporation will be evaluated using financial analysis according to company's Balance Sheet statement, Profit and Loss statement and Cash Flow statement. These results will be further compared to the relevant ICT field.

Moreover, this chapter will include information about Y Soft Corporation's daughter company Y Soft Ventures, which manages the company's cash flow necessary for future investments. Y Soft Ventures' due diligence will be described and followed by information about the company's investment strategy and portfolio.

Finally, each start-up will be evaluated based on the following methods: graphical illustration of companies' assets and liabilities, evaluation of investments' rounds, analysis of net working capital, construction of financial plan and decomposition of profitability indicator. The practical part of this thesis will be concluded by hypothesis testing using Fisher's exact test and evaluation of current funding possibilities from the European Union.

4.1 Y Soft Corporation, Ltd.

The company Y Soft Corporation is a joint-stock company and was established in 2000 as a start-up with no external capital and its founders are still running the company. It started locally with its headquarters in Brno, the Czech Republic and it is a globally operating company with offices throughout the world – in Asia, Australia, USA and many other locations are based in Europe.

Commercial name:	Y Soft Corporation, Ltd.
Seat of the company:	Praha 3, U Kněžské louky 2151/18, 130 00
Registration number:	26197740
Date of registration:	31.9.2000
Legal form:	joint-stock company
Registered capital:	192,000,000 CZK (100% paid off)

The company Y Soft Corporation is providing all the necessary capital and resources to top start-up companies in Central and Eastern Europe and helps them to accelerate into global markets. *“Y Soft provides intelligent enterprise office solutions that build smart business by improving office productivity and enabling employees to be more productive and creative.”* Y Soft Group employs more than 285 experienced workers and about 90% of its revenues are generated abroad. Moreover, the company includes Y Soft Ventures, which is a daughter company of Y Soft Corporation providing start-ups with “Genuinely Smarter

Money”, thus the necessary capital, resources and expertise to accelerate their path to the global markets. (YSoft, ©2015). Y Soft Corporation’s milestone

Table 6 Y Soft Corporation’s milestone

Year	New projects, activities and subsidies
2000-2002	Company's establishment. Development of identification cards and readers for printing.
2003	SmartQ - software for printing and copying control.
2004-2005	Revolutionary hardware terminal Y Soft SafeQ Terminal Professional with a large touchscreen and integrated contactless card reader.
2006	Purchase of own production line. First integrated terminal for multi-functional printers.
2007	Launch of remote server (RS) - useful tool for efficient transmission of print tasks, centralized print management and reporting.
2008	Development of USB card reader. Establishment of subsidiary in Israel and Japan.
2009	Offline remote spooler (ORS) designed for companies with a larger volume of annual printing of more than 100 million pages. Development of integrated terminal Xerox, which for the first time integrated web interface of Y Soft SafeQ directly to multifunctional printer.
2010	Y Soft SafeQ Terminal UltraLight and Y Soft SafeQ Terminal Professional with colorful displays.
2011	Establishment of subsidiary in Miami.
2012	New version of Y Soft SafeQ 4 with several revolutionary functionalities such as Print Roaming, Private Cloud or mobile printing.
2013	Establishment of subsidiary in Dubaj. The company Equitrac Systems of Australia has been bought.
2014	New version of Y Soft SafeQ 5. Majority share of the company Be3D have been bought. Thus the portfolio has extended for 3D printing. Y Soft Ventures has been established.

Source: Y Soft Corporation, Ltd., ©2015

4.2 Financial Analysis of Y Soft Corporation, Ltd.

Financial analysis of the company Y Soft Corporation, Ltd. was conducted during the period 2009 to 2015. This period was chosen to demonstrate company's financial health and stability. Using the following analysis, I was able to prove that this company is financially stable, even compared to the relevant ICT field, and has sufficient resources to finance start-up companies. Firstly, horizontal and vertical analyses of company's Balance Sheet statements were conducted to show, how the company operates with its assets and liabilities. Secondly, an analysis of profitability ratios was carried out to assess company's ability to generate earnings and was compared to the industry average. Lastly, the analysis of economic value added was done.

The following financial statements were the source of corporate data: Balance Sheet statement, Profit and Loss statement and Cash-Flow statement.

4.3 Horizontal Analysis

Horizontal analysis was used during the period 2009 to 2015 as a tool to demonstrate the development of financial statement items over the time period and to evaluate company's stability and development. Complete data for this analysis can be found in the appendix. The following two graphs show, how company's assets and liabilities change over the examined period. It is clear from the graphs that the balance sheet shows an increasing trend every year, which indicates a stable growth of the company.

The development of total assets is constantly increasing and it can be observed that during 2009 to 2012, fixed assets were prevailing over current assets. On the contrary, since 2013, current assets are slightly above. In general, total assets are increasing approximately about 30% per year. A high value of company's fixed assets, such as buildings and constructions, reflects Y Soft Corporation's perceptions of prospective development by its owners and also reflects its credibility toward creditors (i.e. suppliers, banks). In 2015, Figure 7 demonstrates an increasing trend of long-term intangible assets due to an ongoing development of new products (in balance sheet long-term investment in progress) and due to provided long-term loans for a purpose of prepared acquisition of a daughter company.

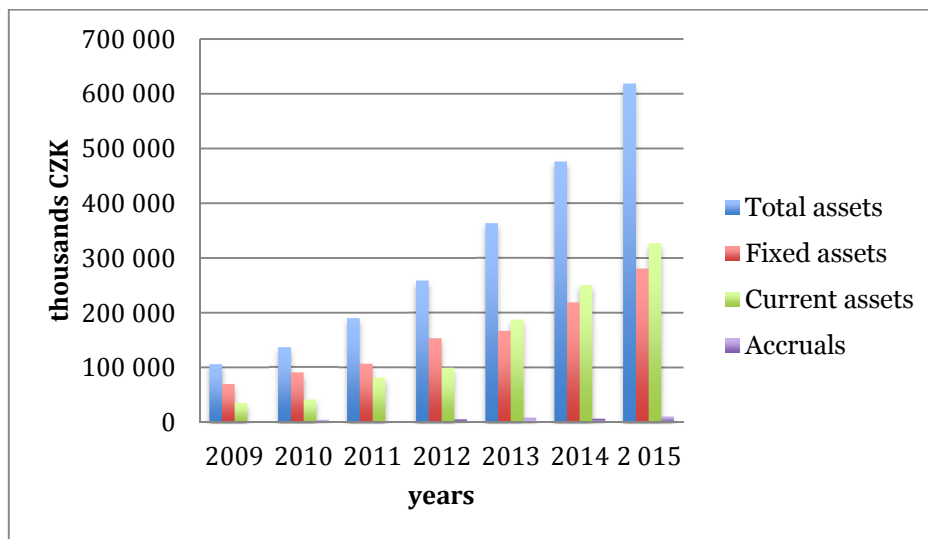


Figure 7 Development of Y Soft Corporation's assets during 2009-2015
 Source: Balance Sheet Statements of Y Soft Corporation, Ltd. in 2009-2015

The development of total assets is similar to the development of total equity and liabilities. This is a result of a basic balance principle, in which total assets equals total liabilities. Thus, as it can be seen on Figure 8, total liabilities are increasing as well. Total liabilities are increasing over the period due to an increase in three main components of Y Soft Corporation's liabilities – registered capital, accruals (i.e. deferred revenues from services covering a period in excess of one year) and liabilities in form of bank loans.

In 2015, owner's equity increased up to 41% due to a large increase in registered capital and capital funds. Funds from net profit remains the same at zero value and economic result from previous period dropped by 99%, due to redistribution of resources. Company's liabilities slightly increased up to 30%, from which company decreased its long-term liabilities to zero value and increased its short-term liabilities and bank credits.

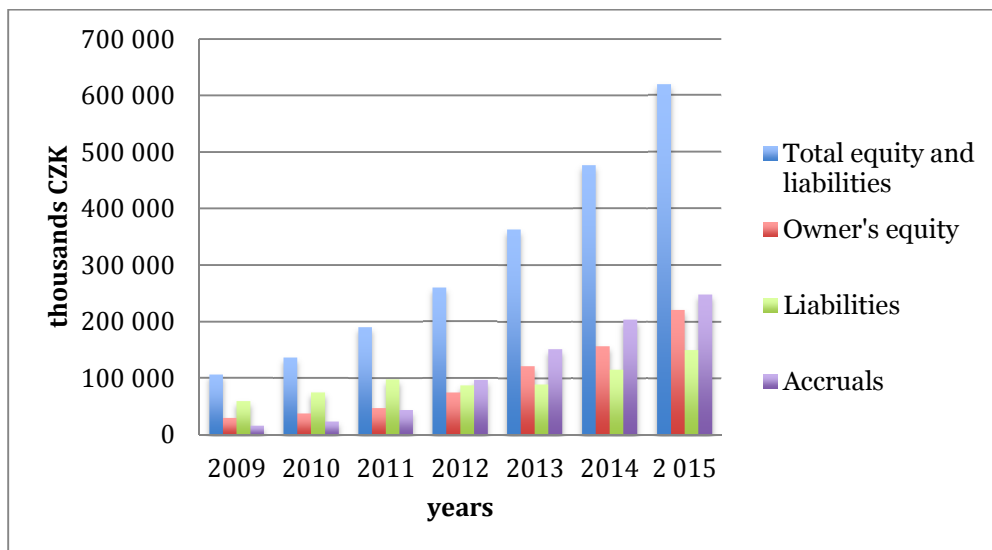


Figure 8 Development of Y Soft Corporation's liabilities during 2009-2015
 Source: Balance Sheet Statements of Y Soft Corporation, Ltd. in 2009-2015

To compare the basic elements from company's balance sheet with the relevant ICT field, I used the financial analysis conducted by the Ministry of Industry and Trade for the year 2014. It is not possible to make the comparison for the year 2015 as there are data only for the first half of the year.

Figure 9 shows that the company Y Soft Corporation is highly above the industry average in all examined items of balance sheet except of registered capital. In 2014, Y Soft Corporation's had registered capital in amount of 44mil CZK and average company in ICT field had its registered capital in amount of 45mil CZK.

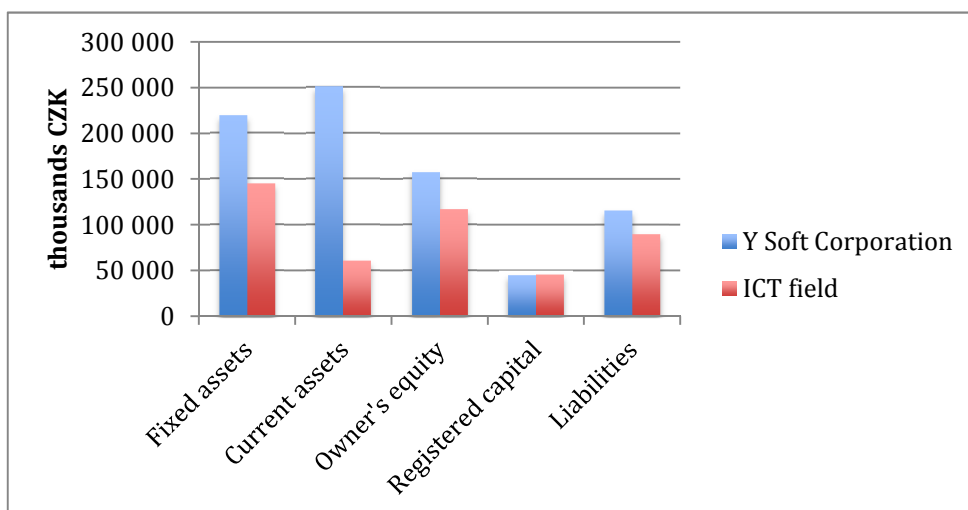


Figure 9 Y Soft Corporation's Balance Sheet compared to the ICT field in 2014
 Source: Y Soft Corporation's balance sheet in 2015; Financial analysis from Ministry of Industry and Trade 2014

4.3.1 Vertical Analysis

Vertical analysis was conducted based on company's balance sheet's data for the period 2009 to 2015 to determine the composition of company's assets and liabilities.

The structure of fixed and current assets is changing, but not so significantly. Current assets took over fixed assets in 2013 and since then it is prevailing and maintaining the value slightly above 50%. The biggest difference in proportion of assets is between 2009 and 2010. In the last year, the distribution of assets is almost balanced, 53% of current assets, 45% of fixed assets, and accruals account only for a very small and obscure group of assets (mostly prepaid expenses such as office rent). Since 2009, current assets increased by 19.68% and fixed assets decreased by 20.32%.

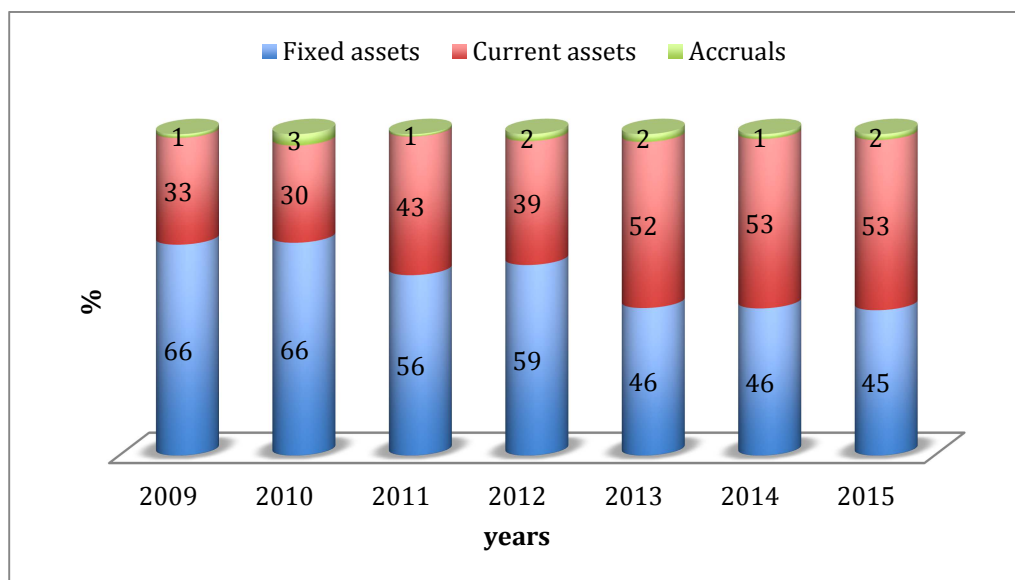


Figure 10 Structure of assets in 2009-2016 (in %)

Source: Balance Sheet Statements of Y Soft Corporation, Ltd. in 2009-2015

Figure 11 demonstrates the vertical analysis of company's equity and liabilities. At the beginning, in 2009 to 2011, liabilities were around 51% to 56%, mostly represented by high bank credits (i.e. 30mil CZK in 2010) and short-term liabilities (i.e. 28mil CZK in 2010). Next year, liabilities dropped to 34%, as short-term liabilities dropped from 23% to 16%. However, in 2012, liabilities still had higher percentage than owner's equity and also accruals were high (37%). Since then, the proportionality between owner's equity, liabilities and accruals remains almost the same.

Owner's equity increased mostly because of positive increase in economic result, which changed from 8mil CZK (in 2009) to 56mil CZK (in 2015). Moreover, there has been an increase in company's registered capital. Unlike in company's assets, where accruals were insignificant, in company's liabilities accruals reached

40% in 2015. This is a result of 26% increase of yet unearned income from service contracts.

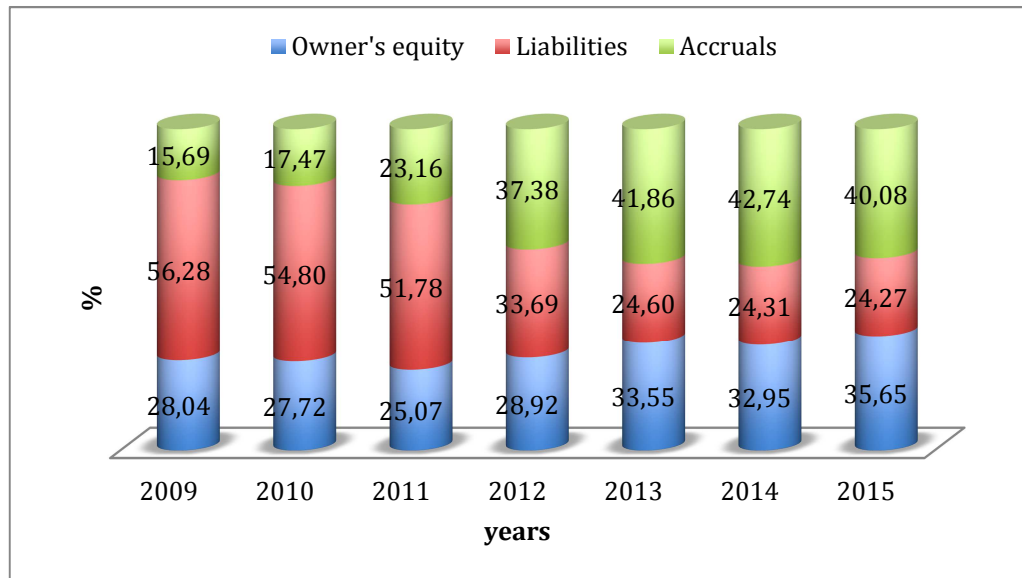


Figure 11 Structure of owner's equity and liabilities in 2009-2015 (in %)
 Source: Balance Sheet Statement of Y Soft Corporation, Ltd. in 2009-2016

4.3.2 Analysis of Profit and Loss Statement

Financial situation of Y Soft Corporation is demonstrated in Table 7, which is based on data from company's Profit and Loss statement in the period 2009 to 2015.

Table 7 Selected indicators of profit and loss statement (in thousands CZK)

	2009	2010	2011	2012	2013	2014	2015
Revenues from sale of goods	467	1,160	0	0	0	0	255
Gross margin	202	609	0	0	0	0	-84
Production	137,805	150,624	221,659	260,539	378,732	442,835	478,061
Revenues from sale of finished goods and services	120,889	137,580	206,260	246,465	359,670	415,809	439,578
Value Added	69,509	83,982	115,851	140,421	232,672	278,367	282,636
Personnel expenses	43,594	49,268	67,441	104,197	145,572	184,921	210,898
Wages and salaries	31,384	27,387	43,740	65,133	93,938	126,996	144,908
P/L on operating activities	13,046	21,801	33,015	19,044	66,882	52,384	38,837
P/L on financial activities	2,562	243	8,642	4,123	2,931	4,717	26,752
P/L for accounting period	8,046	18,908	19,153	19,770	53,225	50,241	56,138
P/L before taxation	10,454	21,558	24,373	23,167	63,951	57,647	65,589

Source: Own data processing using profit and loss statement of Y Soft Corporation, Ltd. in 2009-2015

As it is seen from the Table 5, the company Y Soft Corporation does not have any loss for the accounting period during the seven years. On the contrary, the company's profit is increasing every year and the biggest change can be seen in 2013, where the profit increased by 169% (53mil CZK) compared to the previous year. During this year, personnel costs increased by 40% (146mil CZK) because of a large increase in number of employees and due to payroll re-assessment on higher market average. Moreover, company's total production increased by 45%, due to development and increase in production volume of existing business partners and new business partnership in new territories were accomplished. During this year, an increase was observed in operating profit by 251% (67mil CZK) because of an increase in sales, while maintaining reasonable increase in costs. Additionally, there was an increase in company's accountancy value added by 66%.

In 2014, the company exceeded last year's turnover by almost 17% and ended the period of ten years of continuous growth. In this year, subsidiaries in Asia (i.e.

Singapore, Japan) had a share on company's development. Nevertheless, there was a decrease in company's EBIT indicator, which was mostly caused by last year's decision to support research and development (costs connected to OPEX) and new job openings in this division. The total production increased by 17% (443mil CZK) due to an increase of sales through the strongest partners in Europe (Konica Minolta, Xerox, Ricoh, etc.) and performance increase of foreign subsidiary in France. The value added increased by 20% (278mil CZK) and personal costs by 27%, again due to an increase in number of employees, mostly in the department of Research and Development. On the other hand, the operating profit decreased by 7% (62mil CZK) as a result of 35% wage increase. The financial loss was mostly affected by an exchange loss after currency intervention by Czech National Bank at the end of 2013.

In 2015, there was a slower growth than the previous years. Nevertheless, the turnover increased by 8%. The total production increased by 8%, which indicates a smaller increase than in previous year. The number of employees expanded again (in total 199 employees) together with personal costs by 14% (211mil CZK). The operating profit repeatedly decreased by 38% (39mil CZK) by cause of an increase in wages by 14%, whose increase was larger than an increase in revenues. Compared to the year 2014, the company experienced financial profit on the grounds of exchange rate gains from significant appreciation of the US dollars in 2015. The development of company's profit is compared to the ICT field and expressed on Figure 12 as a relative indicator of company's EAT and value added, describing how much of company's profit accounts for 1 CZK of value added.

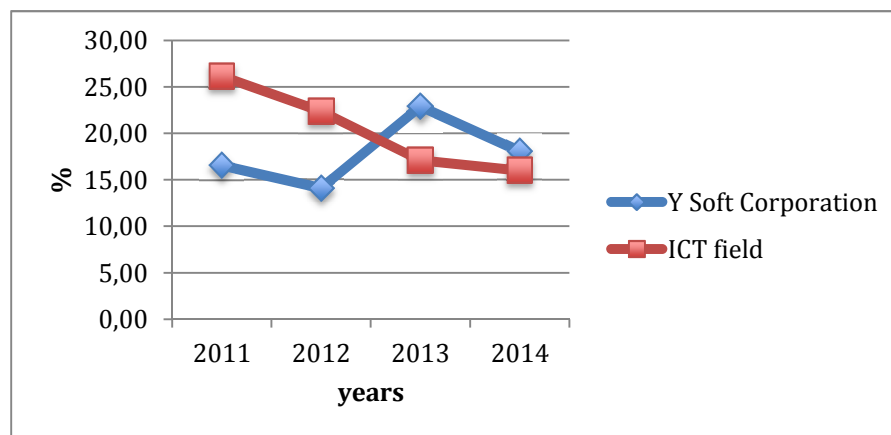


Figure 12 Comparison of Y Soft Corporation's profit for accounting period with the ICT field (in %) Source: Y Soft Corporation's Profit and Loss statement in 2012-2014; Financial analysis from Ministry of Industry and Trade

During the first two years, the industry average showed higher percentage values than the company Y Soft Corporation. The difference could be caused by company's focus on maximal usage of its resources in its further development. The company has the highest number of employees in R&D department, which requires constant

investments. Nevertheless, in 2013 and 2014, Y Soft Corporation has again higher values than the industry average, 22.88% in 2013 and 18.05% in 2014.

On the next Figure 13 is graphically demonstrated the development of wages and salaries over the last four years. In every company, the increase of wage and salary is an important indicator of company's ability to share its success with its employees, who are responsible for company's positive development. The steady increase in wage brings stability to the workplace and helps to motivate employees. In case of the company Y Soft Corporation, wages rapidly increased in 2013 by 44%, 93mil CZK per year, and the average wage increased by 27% (62,000 CZK). In the last two years, the company expanded the department Research and Development and created many job opportunities, which increased their annual personnel expenses by 27% in 2014 and by 14% in 2015. The average salary per month is in the company high and reflects employees' efforts toward company's development.

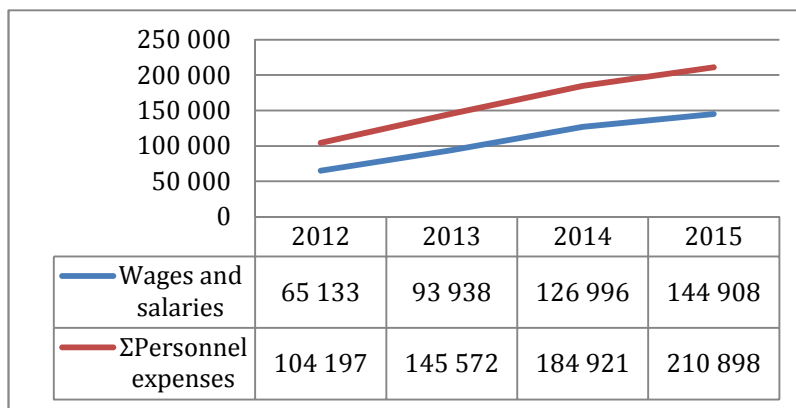


Figure 13 Wages & salaries and personnel expenses (in thousands CZK)
Source: Y Soft Corporation's Profit and Loss statement in 2012-2015

Y Soft Corporation can be classified as a medium sized enterprise having 199 employees in 2015 compared to an average ICT company with approximately 1,000 employees.

4.3.3 Ratio Analysis of Y Soft Corporation, Ltd.

Ratio analysis was conducted based on the information obtained from company's Balance Sheet and Profit and Loss statement during the period 2009 to 2015. Three indicators were calculated, showing how the company is efficient in managing their assets (ROA) and equity capital (ROE), respectively its operational efficiency (ROS). The results are demonstrated in Table 8.

Table 8 Profitability ratios in 2009-2015

Year	Indicator %		
	ROA	ROE	ROS
2009	9,88	27,04	6,63
2010	15,85	18,41	5,00
2011	12,86	40,29	9,29
2012	8,95	26,40	8,02
2013	17,60	43,68	14,80
2014	12,10	32,01	12,08
2015	10,60	25,44	12,76

Source: Own calculations based on financial statements of Y Soft Corporation, Ltd.

Return on assets measures company's profit against overall invested resources regardless of whether it was financed by own capital or not. To measure the profitability of assets the EBIT indicator was used, because it is clear from an influence of financing method and tax. Company's EBIT indicator rapidly increased in 2013, which is also reflected in higher ROA value in this year. The increase in ROA value is also reflected in percentage increase of profit margins by 6.78%. Moreover, the result shows that the company is capable of using efficiently its assets to generate profit. The best values are measured in the year 2013, where the ROA value was almost 18% and the weakest year is 2012 with the value 8.95%. The biggest difference between the year 2012 and 2013 is in company's EBIT indicator, which increased from 24mil CZK to 64mil CZK, thus by 167%. On the Figure 14 is demonstrated the comparison of Y Soft Corporation's ROA values with the relevant ICT field. ROA indicator of the ICT field dominated in 2009 with the value of 14.99% and in 2012 with the value of 14.04%. During the remaining years, Y Soft Corporation's ROA values were higher. In 2015, the company's ROA value corresponded to the value of 10.6%, same as in the ICT field.

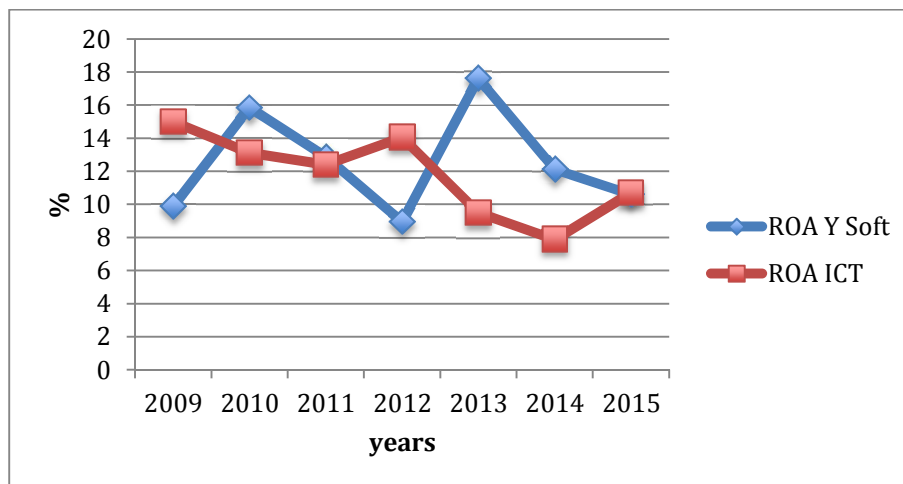


Figure 14 Comparison of Y Soft Corporation's ROA values with the ICT field

Source: Reworked according to financial analysis of Ministry of Industry and Trade in 2009-2015, ©2005

Even higher values can be seen in the indicator of return on equity. The calculated ROE value shows how much profit the firm generated with money invested by its owners. In this case the most effective year was again the year 2013 with the value 43.68%, meaning that on 1 CZK invested by owners accounts approximately 0.44 CZK of net profit. During the next year the value inconsiderably dropped to 32.01%, however, the company exceeds the average values of the ICT field in every year. The ROE values of the ICT field are between 10% to 16% during the observed period.

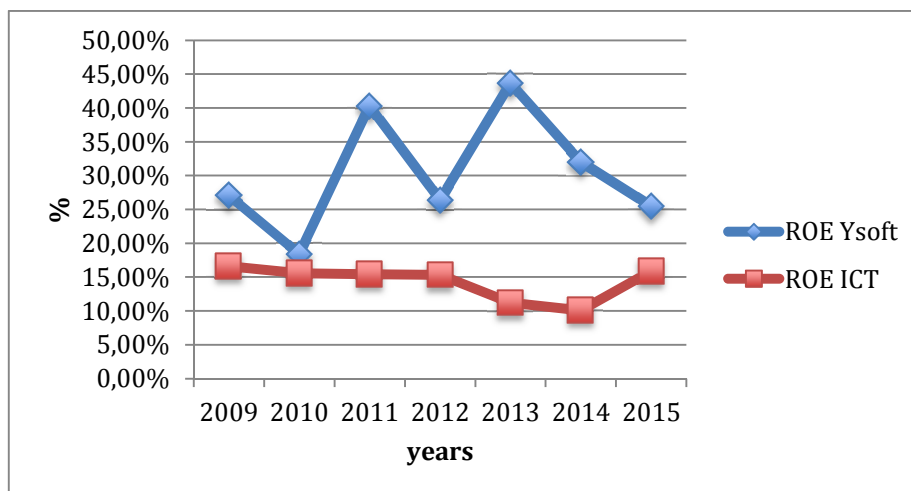


Figure 15 Comparison of Y Soft Corporation's ROE values with the ICT field

Source: Reworked according to financial analysis of Ministry of Industry and Trade in 2009-2015, ©2005

Company's ROS indicator revealed an increasing trend. In 2013, which is the most prosperous year, Figure 16 shows the highest number of 14.80%, meaning that on every 1 CZK of sales accounts approximately 0.15 CZK of net profit. The ICT field displays a decreasing trend of ROS values with the highest value of 20.46% in 2009 and the lowest value of 10.25% in 2014.

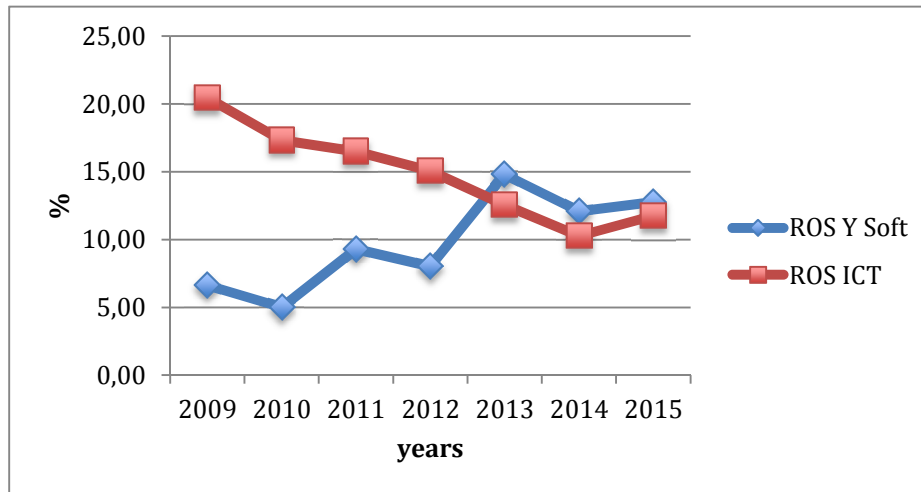


Figure 16 Comparison of Y Soft Corporation's ROS values with the ICT field

Source: Reworked according to financial analysis of Ministry of Industry and Trade in 2009-2015, ©2005

4.3.4 Economic Value Added (EVA)

Table 9 indicates results obtained from Benchmarking diagnostic system, which is working with data in the period 2009 to 2014. The ROE values are constantly changing, reaching the highest value in 2013 (43.68%) and the lowest value in 2010 (18.41%). The highest value of ROE is affected by a dynamic increase in economic performance for accounting period compared to previous years. In the first two years, cost of equity exceeds ROE, causing EVA value to be negative. In this case, the company Y Soft Corporation does not create an economic profit and destroys its value. However, since 2011, EVA value is positive due to a change in cost of equity, which decreased, and ROE indicator, which exceeded the costs. During the last four years, the company is creating an economic profit.

Table 9 EVA analysis

	2009	2010	2011	2012	2013	2014
ROE (%)	27.04	18.41	40.29	26.40	43.68	32.01
r_e (%)	31.72	30.84	12.27	13.68	10.20	10.76
Spread (%)	4.68	12.43	28.02	12.70	33.48	21.25
Owner's equity (thousands CZK)	29,759	37,707	47,542	74,888	121,866	156,946
EVA (thousands CZK)	1,393	4,687	13,321	9,526	40,801	33,351

Source: Reworked according to Benchmarking diagnostic system – Ministry of Industry and Trade, ©2005

The development of ROE values compared to the ICT field was demonstrated on Figure 15. The comparison of costs of equity (r_e) with the relevant field is visible on Figure 17, showing a decreasing trend of company's costs of equity, which are higher than average costs of the ICT field in every year. The lower costs of equity for the ICT field result in positive economic value added.

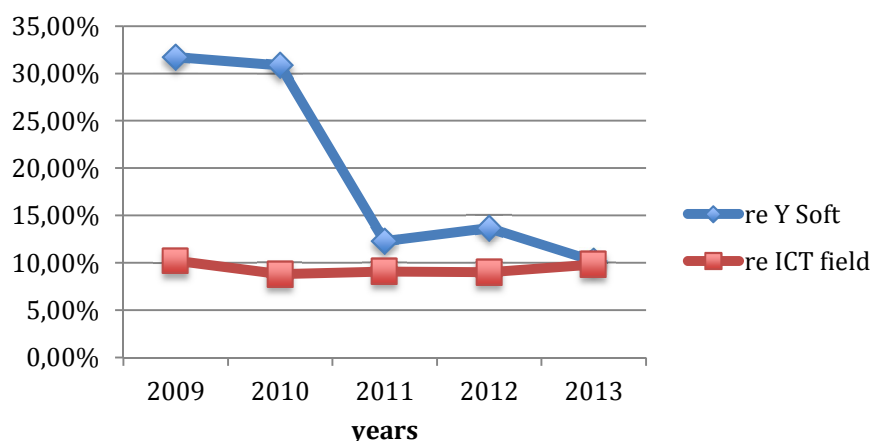


Figure 17 Comparison of Y Soft Corporation's r_e with the ICT field

Source: Reworked according to Benchmarking diagnostic system – Ministry of Industry and Trade, ©2005

4.4 Y Soft Ventures

Previously conducted analysis demonstrated the ability of the company Y Soft Corporation to handle their assets as well as liabilities and to generate profit. The company is considered to be financially stable and credible due to its constant increase. In 2012, the company had almost 7mil CZK of cash flow and decided to establish a daughter company called Y Soft Ventures. Y Soft Ventures was established with 3mil CZK of capital, which was increased in 2016 by 7mil CZK (in

total 10mil CZK). The company Y Soft Corporation expects to strengthen Y Soft Venture's capital about 10% to 20% of its profits in every year.

The daughter company Y Soft Ventures combines financing with counseling and provides a business know-how to newly established companies. Furthermore, Y Soft Ventures guarantee effective securing of other key processes such as directing orders, purchase or logistic, in order to allow start-ups to focus mostly on innovative solutions. The resulting savings of financial and time resources represents an important added value for start-ups, which helps them to accelerate the entry into new markets. Besides, Y Soft Ventures focuses on a cooperation with young companies from Central and Eastern Europe, whose products and services are based on innovative linkage between hardware and software. Its special interest is in rapidly growing companies operating in the ICT field, business solutions and smart technologies. Y Soft Ventures differs from most European and internal venture capital projects such as Google Ventures, Microsoft Ventures or Intel Capital not only with its investment strategy, which is based on sharing manufacturing and procedural capacities, but also with the possibility to involve other external investors. Activities provided by Y Soft Ventures are:

- sale and support
- marketing
- R&D
- financing
- global presence
- management (Y Soft Ventures, ©2015).

Their **mission** is to make clever investments in promising start-ups by providing them all the necessary resources and expertise to build on their strong market validation and to accelerate their global growth. Their **vision** is to become the preferred venture capital investor in Central and Eastern Europe and always be able to find local solutions to today's global problems and their **goal** is to have an Internet of Thing (hereinafter, IoT) portfolio of well-managed, globally operating companies. The future goal, based on assumptions resulting from the interview with CEO and co-founder of the company Václav Muchna, is to dispose of 70% of capital from external investors.

4.4.1 Y Soft Ventures' Investment Strategy

Y Soft Ventures invests in potential start-up companies from Central and Eastern Europe, which are developing in hardware and software field. The company always sets some pre-defined amount of budget that is willing to provide a start-up in case of its growth. At the beginning, the selected startup receives an initial funding, whose amount depends on expectations about the future success of the company. The company is then expecting a rate of return 300% to 400%. Moreover, they are focusing on guidance of start-ups to help them to be profitable on global markets

as well as they focus on building efficient management and processes. Their investment strategy is following:

Category	Alternative investment/International/Early Stage VC
Primary interest	IoT (Hardware & Software)
Secondary interest	Enterprise Solutions, Smart Technologies
Portfolio	\$100,000 to \$1,000,000
Geography	Czech Republic or Central and Eastern Europe
Investment structure	Minority stake, 2-3 years to break-even or sustainability
Investment period	7-10 years
Carried interest	30%
No. of investors	Maximum 5-10
Exit	Management Buy-Out, sale of the company, individual set-up

Y Soft Corporation and Y Soft Ventures initiate partnerships with fellow investors, incubators, accelerators, technology parks, universities and business professionals around the world. Each candidate has to fill out their Executive Summary before the first meeting. This document includes necessary information about the company and should demonstrate how the company's founders are able to organize their thoughts while presenting the company, its product and the main value proposition. Their primary requirement for the potential company is to have a product or service with global potential, to have a capable and well-managed team. Afterwards, the relevant company is subjected to due diligence process. In the first step the company's product or service is assessed in detail as well as its owners should be able to describe the industry and its projections, where the product or service belongs. The company should add some references to any recent news or articles related to them and provide some information about users of the product/service. Moreover, the company should be able to explain their comparative advantage and its unique features. The report ends with their exit strategy and some relevant summary.

The second due diligence stage is based on assumption that either a CEO interview has been performed and/or an executive summary is available. During this process the company has to answer to pre-defined and thorough set of questions about:

- **a product/service** (e.g. What customer problem is being solved? What unique technology does the company have? Does the product exhibit scalability? etc.)
- **a relevant market** (e.g. Has there been a market study before? Is there any competitor and what is their market share? How is the company situated against competitive threats? etc.)

- **a business model** (e.g. What is company's business model? How will the company sell its products or services? What are the financial requirements? What are the anticipated margins? etc.)
- **team organization** (e.g. What is the company's vision? Do they have any relevant experience? Who are the founders and what are their backgrounds? etc.)
- **company governance** (e.g. Which round of VC funding are they in and how much is being raised? Did they file any term sheet to any other VC? Does the company have a detailed summary of prior financing transactions? etc.)
- **co-investors** (e.g. Who are the other investors that want to invest in the company? What is company's current capitalization table? etc.)
- **financial data** (e.g. Does the company perform five year financial projections? Does the company have last month's and last year's balance sheet, P/L statement and cash flow statement? etc.)
- **exit strategy** (e.g. What is company's exit strategy? Is it feasible? Does the leadership plan to grow into market leader or plan to be bought out? etc.)
- **intellectual property** (e.g. Does the company have copies of patents and patent applications? Are there any agreements regarding inventions and intellectual property? etc.)
- **litigation** (e.g. Is there any litigation including potential damages?).

The second stage covers in total 90 questions, which provide Y Soft Corporation with very detailed information about the possible investment opportunity.

The third and last stage of due diligence is based on assumption that an interview with CEO, other employees, customers and competitors has been performed. At this stage, the company Y Soft Corporation and Y Soft Ventures expect to receive a set of documents from the candidate company for examination. This stage covers topic such as process section (physical location and existence verification), checking the existing team, customer's evaluation, competitive analysis, exit check (discussed with an expert), document collection, business plan, material agreements and relevant information for the potential candidate (such as employees benefits, etc.).

Each company, in which Y Soft Ventures plans to invest, has to report its progress on a regular basis through an organized meeting with key stakeholders (Board of Directors) from the company and possibly other external members (advisors) where applicable.

4.4.2 Y Soft Ventures' Investment Portfolio

Y Soft Ventures investments include the following three start-ups: Start-up A, Start-up B and Start-up C. In this chapter, each startup will be described in detail.

Start-up A

Start-up A is a joint-stock and Czech based company offering unique solutions of jpeg2000 encoding and decoding. Start-up A is a software company enabling to encode and decode UHD video into jpeg2000. This process is done at very high performance. Unlike other encoding companies, Start-up A uses the power of graphic cards NVIDIA and speeds up the workflow (Start-up A, ©2015).

It first started as an university project by Jiří X. and it successfully turned into a start-up. During 2013, South Moravian Innovation Center, which is the most successful Czech tech based business incubator, offered the company a place. In 2013, it received a seed funding of ca. 5mil CZK from a venture capital firm Credo Ventures and Y Soft Corporation, a global provider of print system management solutions (Start-up A, ©2015). One year later, in the second investment round, Start-up A was ready to accept another investment in total 26.5mil CZK from Credo Ventures (10.8mil CZK), RSJ Private Equity (6.7mil CZK), Y Soft Ventures (5mil CZK), and Eduard Kučera, co-founder of the company Avast (4mil CZK).

Start-up B

Start-up B is a very successful Czech start-up established in 2014, which makes it the youngest start-up in Y Soft Ventures portfolio. The company's vision is to help to find, protect, optimize and control people, equipment and assets using precise location data and wireless sensors. They use special ultra-wide radio technology and real-time location, through which they try to protect employees' safety. Moreover, via their technology, they improve processes and find efficiencies in production. Start-up B's products can be used in several industries such as retail, entertainment, automotive, warehousing, logistics, mining and healthcare.

Start-up B was founded by Milan X., CEO of the company, and Lubomír Y., company's CTO. They are both professional engineers and absolvents of Brno University of Technology with many years of experience in developing indoor positioning technologies, wireless devices and sensors. Moreover, they both have lots of experience in IoT sector.

The system developed by Start-up B is known as RTLS (Real Time Locating System) and enables very precise localization of objects and people inside and outside of buildings without using GPS. This system is unique and its main advantage is its accuracy with a maximum deviation approximately 30 cm. Another advantage is its easy installation, remote monitoring and sophisticated software solutions. To compare it with similar software products, the current systems allows the allocation of people and objects with deviation up to few meters. In addition, they provide a complex training and tutorials for wireless sensor networking (Start-up B, ©2015).

Start-up C

Start-up C is a start-up project founded in 2012 by two friends during their university studies. This project, nowadays an unique application, allows its users to save videos from many different servers all at once and create their personal playlists. Ever since, Start-up C is the only application allowing to create branded playlists from the world's largest video sites: YouTube, DailyMotion and Vimea. (Start-up C, ©2015).

4.5 Financial Analysis of Start-up A, Ltd.

The company Start-up A is in its early stage of business trying to break through and succeed on the market. At this point it is very difficult to assess whether the investment in the company was effective or ineffective due to the early stage of start-up with uncertain future. Nevertheless, the company Y Soft Corporation does not expect from all of its investments to become profitable for the reason that only few start-ups usually succeed on the market. Hence, the evaluation of such investment is mostly based on investor's expectations and company's financial plans.

4.5.1 Structure of Start-up A's Assets and Liabilities

The structure of company's assets and liabilities was analyzed and is demonstrated on Figure 18. The structure of company's assets was small at the beginning, 2.2mil CZK in total. The proportion of total assets was 4.8% of fixed assets in value of 108,000 CZK, 70.4% of current assets in amount of 1.6mil CZK (mostly short-term financial assets), leaving the rest in accruals. In this year, the company did not own any long-term tangible assets such as buildings, constructions or other properties. In company's liabilities was the highest percentage created by owner's equity (81.4%), respectively by capital funds in amount of 3mil CZK and basic capital in amount of 200,000 CZK. At the end of this fiscal year, the loss was small, 1mil CZK, as the company was at the beginning of its operations.

In 2014, after the company received its first funding from Y Soft Ventures and Credo Ventures, Start-up A increased its assets and liabilities up to 18mil CZK. Both current and fixed assets increased, current assets by 12mil CZK due to an increase in short-term financial assets and fixed assets increased by 3,600 CZK, with financial investment remaining at zero value. Furthermore, there was an increase in liabilities, respectively in current liabilities as the company did not have any bank loans. Current liabilities accounted for almost 1.5mil CZK representing mostly unpaid invoices to suppliers.

The year 2015 did not record any significant changes in the structure, the highest item in current assets was still represented by short-term financial assets, in this case 10mil CZK of cash. Even though the basic capital (206,000 CZK) and capital funds (32.8mil CZK) increased during this year, owner's equity decreased due to larger loss for accounting period (-19mil CZK). However, because of the investment, the value of owner's equity remained positive.

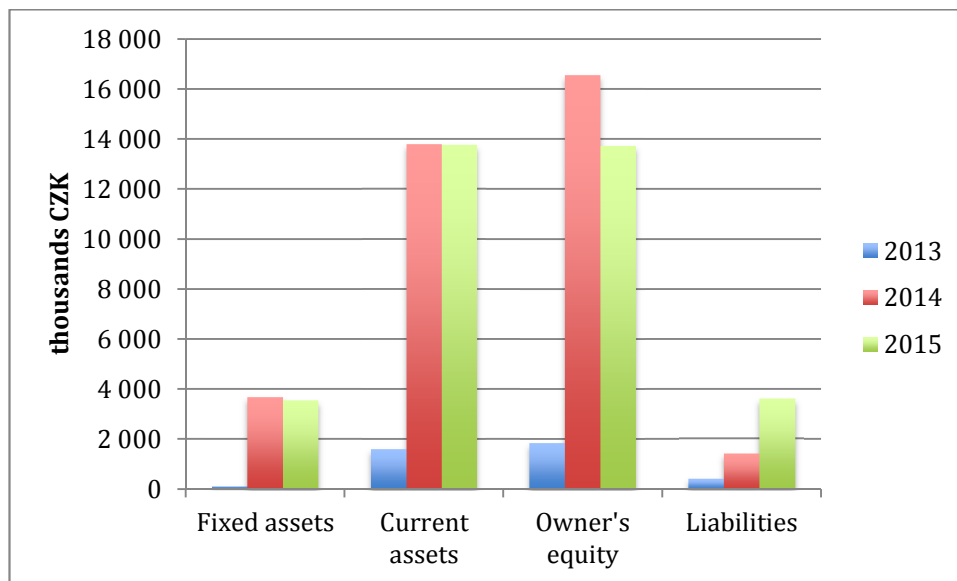


Figure 18 Start-up A's structure of assets and liabilities in 2013-2015
 Source: Start-up A's Balance Sheet statements 2013-2015

4.5.2 Evaluation of Investment Rounds

Figure 19 displays individual shares of investors in the company Start-up A. The company has two co-owners, Jiří X. and Martin Y., and six other investors that contributed with their funds into the company during the last three years. In the first half of the year 2013 (in the graph H1 2013), the co-owners had 70% shares of the company. Since they needed investors to start the business and to increase revenues and sales, their share decreased in the following half of the year to 56%. At the end of 2013, Credo Stage and Y Soft Ventures entered the company with an investment of approximately 2.5mil CZK each, having the same share. During the next year, Y Soft Ventures increased their share to almost 14% and invested another 5mil CZK into the company. Even though the investment was in higher volume than the previous year, their share did not increase much because of the current valuation, which increased due to another four investors entering the company. The company Credo Ventures currently has the largest share of 22%. The smallest share has the company RSJ Private Equity and Eduard Kučera, co-founder of the company Avast, which contributed to Start-up A in 2014.

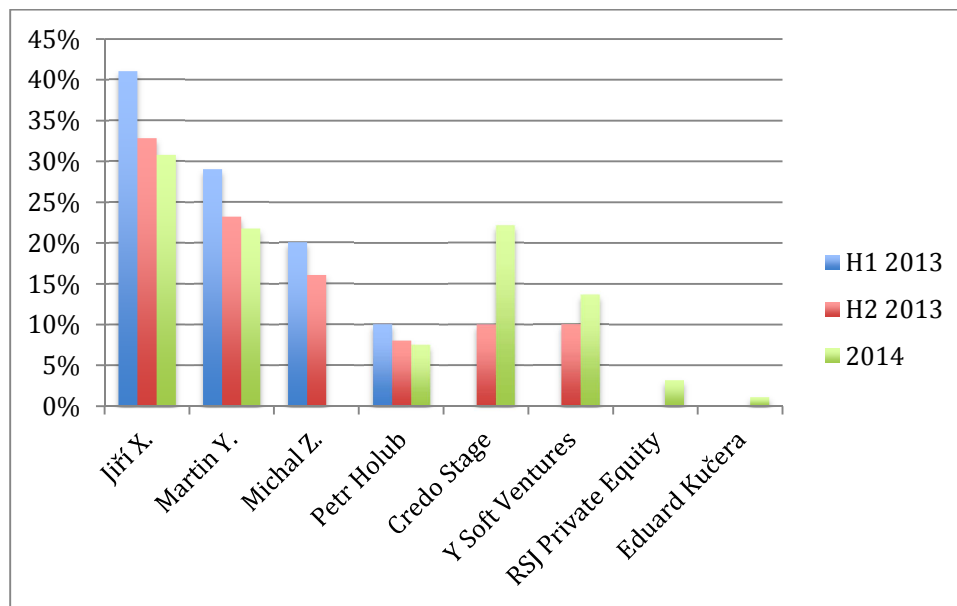


Figure 19 Start-up A's investors and their shares

Source: Reworked according to the Public Register of the Ministry of Justice

After the company Y Soft Ventures makes an investment in a start-up company, it is interested in valuation of their share. This allows the company to compare the investment rounds based on an increasing valuation and also indicates how other investors value the start-up.

In 2013, the company invested in total 2.5mil CZK and obtained 10% share of Start-up A's equity. Thus, the valuation was 25mil CZK. In the next year, they decided to invest twice the amount, they received 13.63% shares and the valuation increased up to 36mil CZK. The difference, 11 mil CZK, shows the effectiveness of investment decision and an increase in value of the company. However, the post-investment valuation shows the company's value only to the current date and cannot guarantee a benefit in the future. Furthermore, at the end of the year 2014, Start-up A's co-owners decreased their majority share to 52.5% due to an increase of number of investors. Y Soft Ventures invested in total 7.5mil CZK.

4.5.3 Net Working Capital

Working capital ratio was calculated to measure company's short-term financial health. The ratio was calculated for two years and the results are demonstrated in Table 10 together with a comparison with an average company in the ICT field.

In 2014, the NWC accounted for 12mil CZK, while NWC for an average ICT company was 24mil CZK. In this case, Start-up A's current assets are prevailing over current liabilities and the company will dispose of 12mil CZK of resources after repaying its debt.

In 2015, the NWC is lower for Start-up A (10mil CZK) as well as for the ICT field (18mil CZK). During this year, the Start-up A is able to cover its short-term

debt and the lower value, compared to the previous year, indicates better sources of financing. The company is now using less own resources to cover its debt.

Table 10 Start-up A's Net Working Capital (in thousands CZK)

	2014	2014 (ICT)	2015	2015 (ICT)
+ Current assets	13,783	60,649	13,768	58,613
- Current liabilities	1,406	35,743	3,591	40,509
= NWC	12,377	24,906	10,177	18,104
Working capital ratio	9.80	1.70	3.83	1.45

Source: Reworked according to company's balance sheet in 2014-2015 and financial analysis of Ministry of Industry and Trade, ©2005

4.5.4 Financial Plan

The company Start-up A has finished the year 2015 strong with signing new deals with two large software companies, one focusing on optimizing media and the other focusing on compression solutions for image and video. The company is expecting to increase their revenues and to support it by expanding sales and R&D team. Moreover, they are expecting to raise some additional funds from new investors.

Table 11 demonstrates numbers obtained from company's Profit and Loss statement. The company Start-up A has increased its operational expenses in 2015 as its owners decided to increase salaries and wages by 47,000 CZK to motivate employees due to an expansion of sales and revenues. Moreover, the costs on marketing and advertising also increased by 704,000 CZK per fiscal year. Furthermore in 2015, Start-up A disposed of 7.7mil CZK from its business activities. Company's EBIT indicator was negative, however, it does not necessarily mean an issue in case of such a young company. It is expected that start-up companies have high costs, which do not turn into profit in the first few years. The problem would appear if the net loss became a trend, or if the company could not find enough resources to fund its expenses in the long-run.

Moreover, in 2015, the company increased its R&D expenses by 114%, due to finalization of development of a new product. Also G&A expenses increased by 92% because of partial integration with the company Y Soft Corporation and connected administrative expenses.

Table 11 Data from start-up A's Profit and Loss statement in 2014 and 2015 (in thousands CZK)

	2014	2015
Revenues	7,966	7,732
Gross Margin	7,867	7,515
OPEX	10,104	18,189
Sales	2,912	3,657
R&D	3,112	6,686
G&A	4,081	7,846
EBIT	2,139	10,458

Source: Reworked according to Start-up A's profit and loss statement in 2014 and 2015

Financial plan constructed for the period 2016 to 2019 is demonstrated in Table 12. As it was already mentioned, the company Start-up A signed new deals with two companies and is expecting to increase its sales by 80% in 2016 and 45% during the next years. Since the company has a goal to achieve positive EBIT indicator in four years, it will have to make some adjustments and decrease expenses for product development and G&A costs.

Furthermore, the company plans to increase its revenues and to reach 42mil CZK in 2019. Company's OPEX expenses will also increase every year with an 5% increase in G&A expenses and 10% increase in R&D. In 2019, the company Start-up A should achieve the break-even point with positive EBIT indicator and should have enough resources to finance itself.

Table 12 Start-up A's financial plan (in thousands CZK)

	2016	2017	2018	2019
Revenues	13,917	20,179	29,260	42,427
Gross Margin	12,024	17,435	25,281	36,657
OPEX	23,513	27,757	33,441	41,175
Sales	6,583	9,545	13,841	20,069
R&D	8,692	9,561	10,517	11,569
G&A	8,238	8,650	9,083	9,537
EBIT	9,597	7,578	4,181	1,252

Source: Reworked according to company's financial plan

4.5.5 Decomposition of ROE Indicator

After an interview with Start-up A owners, the financial plan was constructed, based on which decomposition method of ROE indicator was done using INFA methodology. ROE indicator is expected to be negative during the period 2016 to 2018 and is supposed to reach positive value in 2019. An annual increase of ROE indicator was 17% in 2016/2017, 20% in 2017/2018 and in the year 2018/2019

the value increased by 21%. Thus, there was a yearly increase in the indicator, turning its negative value into positive.

The highest impact on ROE indicator had return on assets in every year. It's negative value was influenced by EBIT turnover ratio, which increased by 31% in 2016/2017, by 24% in 2017/2018 and turned positive by an increase of 11% in 2018/2019. The asset turnover ratio increased by 19% in 2016/2017, by 24% in 2017/2018 and again increased by 48% in 2018/2019.

In this case, chargeable resources had no effect on the top-lever indicator because of the venture capital financing. The ROE indicator was further influenced by equity and assets ratio. The equity ratio affected the ROE indicator by 0.87 in average and assets ratio by the average value 1.1.

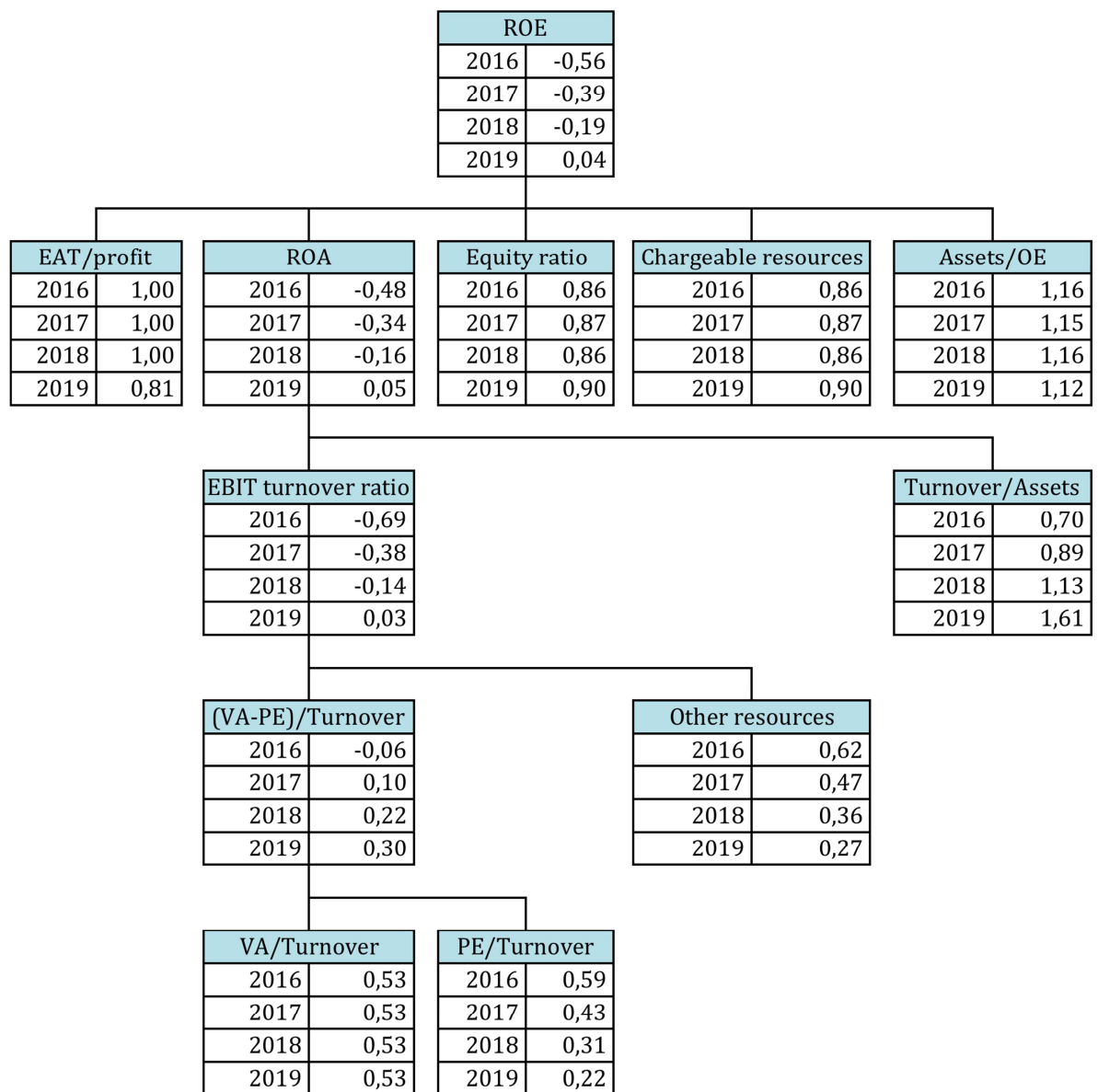


Figure 20 Decomposition of Start-up A's ROE indicator for the period 2016-2019
 Source: Own calculations based on Start-up A's financial plan

4.6 Financial Analysis of Start-up B, Ltd.

Start-up B is Y Soft Ventures' newest investment and the main focus is on expanding the company globally. It is considered to be Y Soft Ventures' the most efficient investment. As in the case of the previous start-up, the same methodology was conducted.

4.6.1 Structure of Start-up B's Assets and Liabilities

The company Start-up B does not dispose of large amounts of fixed assets, which is typical for companies in early-stages of business. In 2015, Start-up B disposed of 3.7mil CZK of total assets and liabilities. Fixed assets accounted for 7.6%, current assets for 92.4%, owner's equity for 79.8% and liabilities for 20.2%.

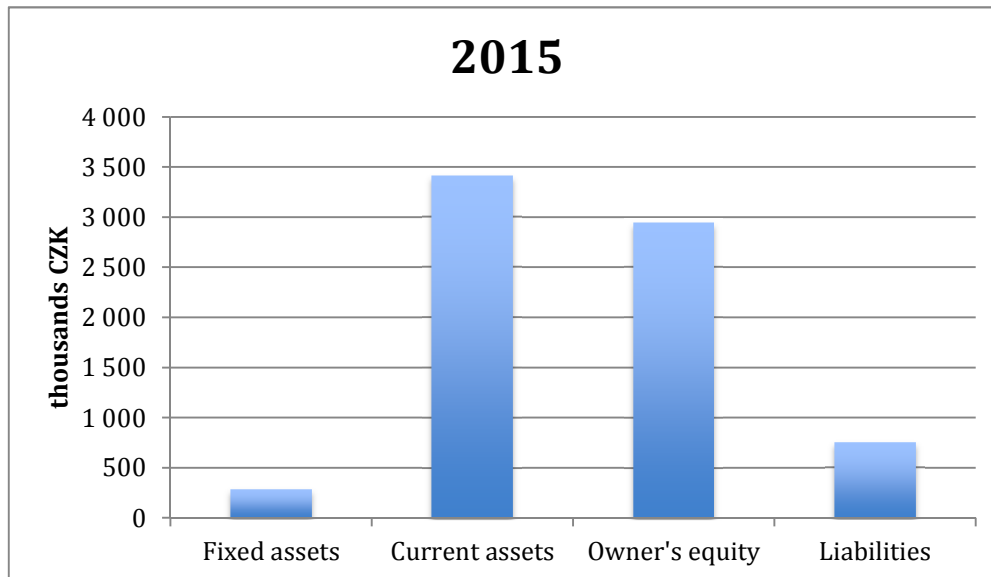


Figure 21 Structure of Start-up B's assets and liabilities
Source: Start-up B's Balance Sheet statement in 2015

4.6.2 Evaluation of Investment Rounds

Figure 22 displays individual shares of investors of the company Start-up B. Unlike the company Start-up A, Start-up B started with two co-founders, each having 50% shares. In 2015, they made a deal with Y Soft Ventures and sold them 25% of shares. As a result, co-founders' shares decreased. Currently, Milan X. owns 30% of the company and Lubomír Y. owns 45%. Together co-founders share 75% of the company, which provides them the opportunity to sell part of their equity to another investor if necessary. This is an advantage for Start-up B, which still keeps very large shares in owners' hands.

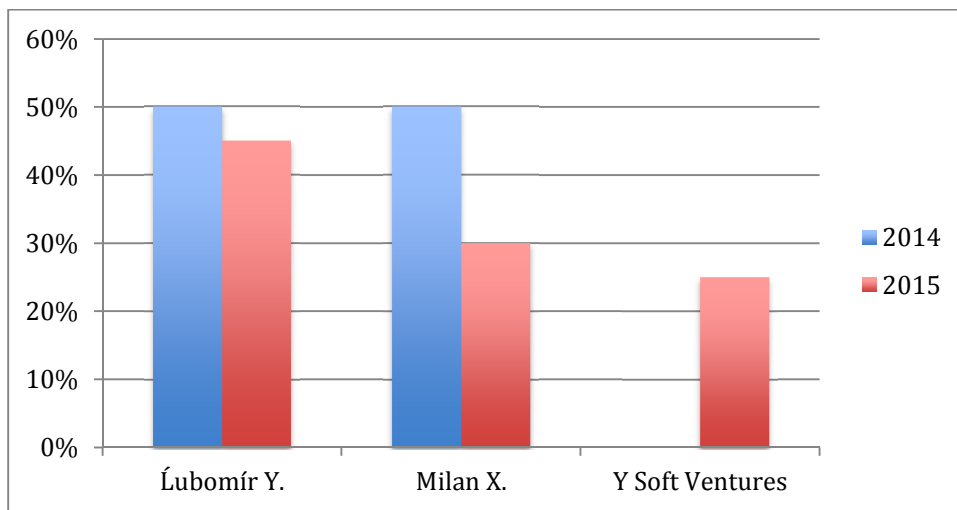


Figure 22 Start-up B’s investors and their shares
 Source: Reworked according to the Public Register of the Ministry of Justice

Since there was only one investment round, it is easy to determine the valuation. Y Soft Ventures invested in Start-up B the amount of 23.7mil CZK, which was paid in quarterly installments, based on Start-up B’s performance, and obtained 25%. The post-investment valuation is then 95mil CZK, which is higher valuation of the company than in case of Start-up A. If necessary, Start-up B still can sell at least 10% of their equity and keep the majority share of 60%, which is one of Y Soft Ventures’ plan to obtain another 10% of Start-up B’s equity during 2016 and 2017. If Start-up B will sell 10% of their equity, the structure can look similarly as it is demonstrated on Figure 23.

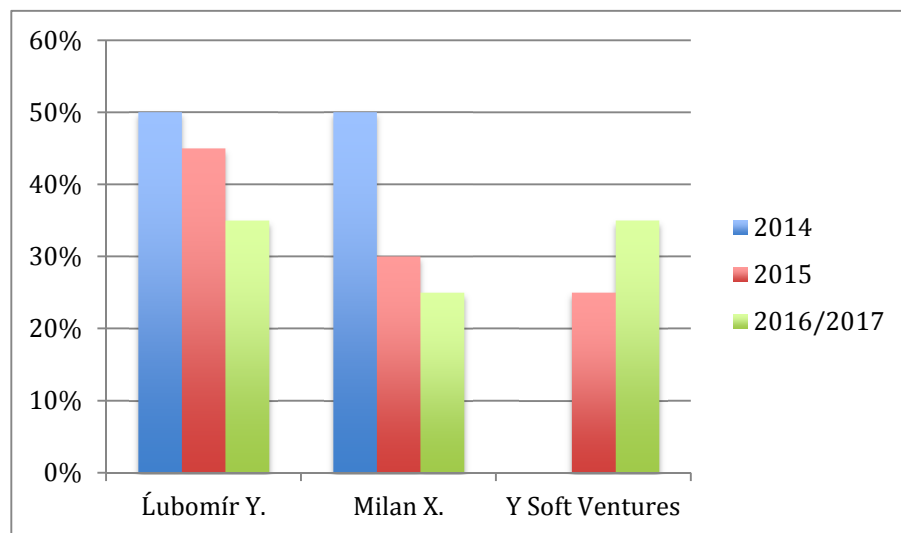


Figure 23 Planned structure of Start-up B’s equity
 Source: Reworked according to the interview

The equity structure by all means depends on co-founders' decision on how they split their 60% shares of the company. One possible structure can be 35% for Lubomír Y., 25% for Milan X. and 35% for Y Soft Ventures.

4.6.3 Net Working Capital

Working capital ratio was calculated for the year 2015 to measure company's short-term financial health. The results are demonstrated in Table 13 together with a comparison with the company Start-up A and the ICT field.

Start-up B's both current assets and current liabilities were in lower amounts than the company Start-up A had in 2015. Nevertheless, the net working capital is a positive number, 2.6mil CZK, resulting in company's ability to repay its short-term debt. The company should not have problems with liquidity.

Start-up B's net working capital ratio is equaled to 4.57, which is a higher result compared to Start-up A and the relevant ICT field. A company with a lower ratio 1.45 would have to sell almost all of its current assets in order to pay off its current liabilities.

Table 13 Start-up B's Net Working Capital (in thousands CZK)

	2015	2015 (Start-up A)	2015 (ICT)
+ Current assets	3,411	13,768	58,613
- Current liabilities	747	3,591	40,509
= NWC	2,664	10,177	18,104
Working capital ratio	4.57	3.83	1.45

Source: Reworked according to company's balance sheet in 2014-2015 and financial analysis of Ministry of Industry and Trade, ©2005

4.6.4 Financial Plan

After the investment agreement with Y Soft Ventures had been signed, the company Start-up B increased its sales significantly. In Q4 2015 the revenues exceeded the revenues for the first three quarters combined. Since September 2015, the company has 11 employees and wants to increase this number in the next year. In addition, Start-up B started its production in the Y Soft production facility and the first tags and anchors have been produced during the trial runs. In 2016, Start-up B is expecting a significant increase in revenues and related increase of headcount throughout the whole company. In 2016, they expect to sign a significant deal with automotive pipeline. Moreover, it is expected that the number of R&D employees will increase and hence support the development of products as the company is currently not able to fulfill the demand on the market. In addition, the company presumes to fully outsource ordering and production into the company Y Soft Corporation.

Unlike the Start-up A, Start-up B accomplished a profit in its first year of business, respectively in its last quarter. Company's development was fast and it

achieved revenues in amount of 2.7mil CZK and 27,000 CZK of profit at the end of its first fiscal year. The relevant data are visible in Table 14.

Table 14 Data from start-up B's Profit and Loss statement in 2015 (in thousands CZK)

	Q1-Q3 2015	Q4 2015	Σ 2015
Revenues	1,243	1,486	2,729
Gross Margin	1,081	1,108	2,189
OPEX	1,540	1,162	2,702
Sales	135	216	351
R&D	865	676	1,540
G&A	540	243	784
EBIT	297	324	27

Source: Start-up B's Profit and Loss statement in 2015

Table 15 demonstrates company's financial plan for the period 2016 to 2019. The company expects to increase its revenues in 2016 by 275% because of the newly signed deals and Y Soft Ventures' financial help. In the following years, they plan to further increase revenues by 85% in 2017 and 60% in 2018 and in 2019. Furthermore, they plan to increase sales by 150% in 2016 and by 45% in the next three years. In addition, as the company plans to hire new employees in R&D team and focus on developing their products, the expenses will increase approximately by 60% during this year and 45% in the following years. Moreover, G&A expenses are forecasted to fluctuate around 10%. Company's EBIT indicator is expected to increase every year and reach 37mil CZK in 2019.

Table 15 Start-up B's financial plan (in thousands CZK)

	2016	2017	2018	2019
Revenues	10,234	18,932	30,292	48,467
Gross Margin	8,209	15,186	24,298	38,877
OPEX	4,204	5,795	8,071	11,338
Sales	878	1,272	1,845	2,675
R&D	2,466	3,575	5,184	7,517
G&A	861	947	1,042	1,146
EBIT	6,029	13,138	22,221	37,129

Source: Reworked according to Start-up B's financial plan

4.6.5 Decomposition of ROE Indicator

Interview was conducted with one of Start-up B's owners, based on which a financial plan was prepared to conduct a decomposition method of ROE indicator using INFA methodology.

Unlike in the case of the company Start-up A, Start-up B's ROE indicator expects to be positive during the following four years. ROE indicator will not

change significantly during the observed period, an annual increase is expected to be 1.3% in 2016/2017, 5% in 2017/2018 and in the year 2018/2019 ROE is expected to increase by 0.9%.

The top-level indicator is influenced by positive ROA values, which increases 4% during the first year, followed by 7% and 4% increase in the next years. Another important item influencing the ROE indicator is equity and assets ratio (i.e. assets divided by owner's equity). Assets ratio is fluctuating around the value 1.1 and the equity ratio is fluctuating approximately around the value 0.9. Chargeable resources have no effect due to venture capital financing. The EAT profit ratio has also no effect on the top-level indicator as the value remains the same in all years.

ROA indicator is influenced mainly by an amount of company's turnover, which is a part of turnover assets ratio and EBIT turnover ratio. The average value of turnover assets ratio is during the four years 81% and 70% of EBIT turnover ratio. EBIT turnover ratio is then influenced by the ratio value added minus personal expenses divided by company's turnover. The ratio has also high percentage value, approximately 88%. A detailed decomposition is in appendix.

4.7 Financial Analysis of Start-up C, Ltd.

The company Start-up C was established in 2012 by two university colleagues. The company is in the same early stage of business as Start-up A and Start-up B, trying to break through and succeed on the market as well.

4.7.1 Structure of Start-up C's Assets and Liabilities

The company started with no fixed assets and with current assets, respectively short-term financial assets, in the amount of 200,000 CZK. During the years 2013 and 2014, Start-up C did not record any activity as it was focusing on developing its product. In 2015, after raising money, Start-up C increased its fixed assets. The largest increase is visible in long-term intangible assets, 2.2mil CZK, i.e. software. In this case, current assets created only a small portion of total assets due to small amounts of short-term financial assets, in amount of 44,000 CZK, and short-term receivables, in amount of 55,000 CZK. This structure of fixed and current assets differs from Start-up A, which disposed of larger amounts of cash, i.e. 10mil CZK, and current assets in total 13.7mil CZK.

In 2015, there was a loss in owner's equity, i.e. -294,000 CZK, which has to be managed for instance by increasing registered capital by new deposits from owners or new individuals. It can be done by monetary or non-monetary contributions, under the condition that existing capital has been 100% paid-off. Company's liabilities in the value of 2.6mil CZK are short-term in nature and needs to be paid-out within 12 months

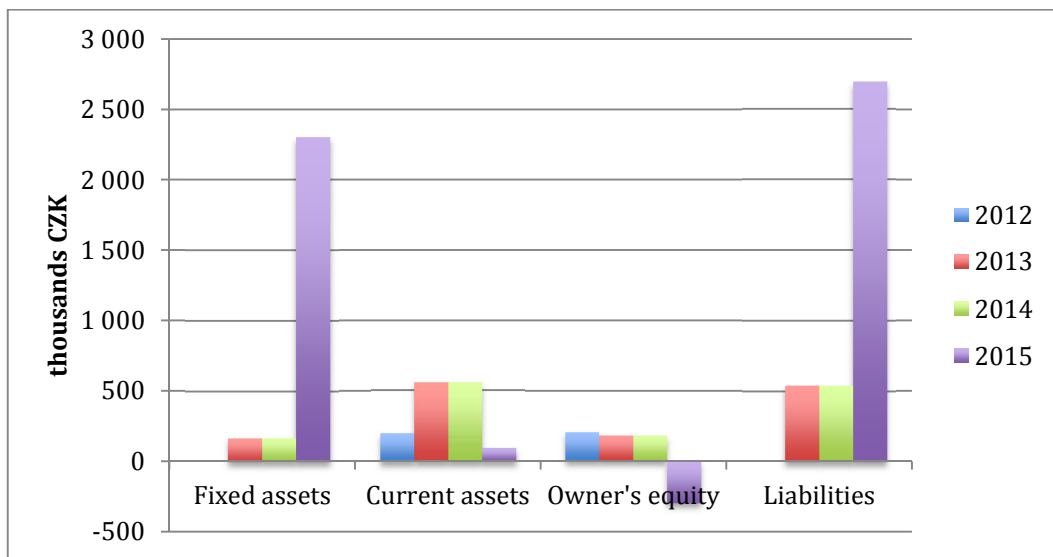


Figure 24 The structure of Start-up C's total assets
 Source: Reworked according to company's balance sheet in 2012-2015

4.7.2 Evaluation of Investment Rounds

Figure 25 displays individual shares of investors in the company Start-up C. In comparison to other start-ups, the owner's have the smallest share of equity, barely 51%. As early as 2013, they sold 34% of shares of their equity to the company Y Soft Ventures, keeping majority share of 66%. In the next year, their share dropped to 50.8%, leaving Y Soft Ventures with 49.2% shares of company's equity. As the company will still need another investment round in the future to keep doing their business and to increase their portfolio, its owners faces a situation of losing the majority share of their business and leaving Y Soft Ventures in charge of most of their decisions.

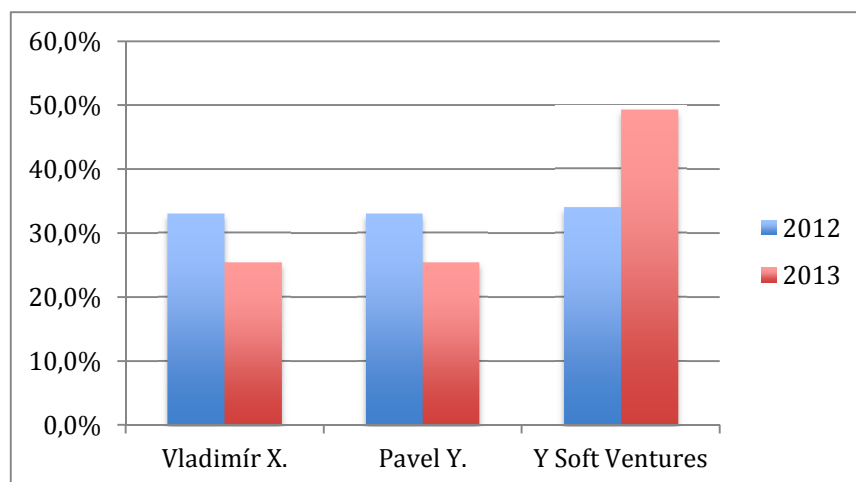


Figure 25 Start-up C's investors and their share
 Source: Reworked according to the Public Register of the Ministry of Justice

Y Soft Ventures invested in Start-up C in two investment rounds, in the first round 2.7mil CZK for which the company obtained 34% and valuation was 7.9mil CZK (smaller than the valuation of Start-up B, i.e. 23.7mil CZK). During the next year, Start-up C received another investment in amount of 3.3mil CZK, for which Y Soft Ventures' share increased by 15.2% (i.e. 49.2%) and valuation decreased by 1.2mil CZK, with current valuation 6.7mil CZK. At this moment, the company Y Soft Ventures does not expect to invest in the company in the third round.

4.7.3 Net Working Capital

Working capital was calculated for the two years, 2014 and 2015 to measure company's short-term financial health. The results are demonstrated in Table 16 together with a comparison with other two start-ups, Start-up A and Start-up B.

In 2014, the company is capable of repaying its short-term debt, however, the working capital ratio (1.03) indicates, that the company had to sell almost all of its current assets.

In 2015, company's current assets decreased by 456,000 CZK and caused company's inability to cover its short-term debt with current assets. The net working capital is negative (-2.5mil CZK), resulting in liquidity problem. Also working capital ratio decreased below one (0.04), indicating the usage of paying company's debt from own resources.

Table 16 Start-up C's Net Working Capital (in thousands CZK)

	2014	2014 Start-up A	2015	2015 Start-up A	2015 Start-up B
+ Current assets	555	13,783	99	13,768	3,411
- Current liabilities	541	1,406	2,684	3,591	747
= NWC	14	12,377	2,585	10,177	2,664
Working capital ratio	1.03	9.80	0.04	3.83	4.57

Source: Reworked according to company's balance sheet in 2014-2015 and financial analysis of Ministry of Industry and Trade, ©2005

4.7.4 Financial Plan

Since August 2015, the company started discussion with a new investor from the Media Entertainment market and new product is under development. This project has global ambitions and is mainly focused on the consumer market currently in Europe with prospects of development into the United States' market.

In 2016, the company is expecting to hire a senior management team who will be responsible for taking over the current management during the expansion phase after the product is finalized.

As it is seen in Table 17, the company's revenues are zero value in 2015 as its product was still in progress and available for user only in free-of-charged version. Start-up C allows its users to try their application for free, however, its usage is

limited to 10 videos in one folder. To have unlimited videos organized in folders, the user has to pay 0.99 USD for premium account and 16.99 USD for business account. The company spent in total 1.4mil CZK for developing this video organizer and the connected general and administrative expenses were 1.9mil CZK, resulting in negative 3.3mil CZK of OPEX.

Table 17 Data from start-up C's Profit and Loss statement in 2015 (in thousands CZK)

	Q1-Q3 2015	Q4 2015	Σ 2015
Revenues	0	0	0
Gross Margin	0	0	0
OPEX	2,433	946	3,379
Sales	0	0	0
R&D	1,027	405	1,433
G&A	1,406	541	1,946
EBIT	2,433	946	3,379

Source: Start-up C's Profit and Loss statement in 2015

Based on the decision to start new cooperation with the media entertainment company and to increase their portfolio, Start-up C estimated the following financial plan. Due to finishing development of the product in 2016, the company expects to increase its revenues up to 2.8mil CZK and to achieve 13mil CZK in 2019. Company's sales expenditures are planned to increase by 30% in every year, while R&D expenses are expected to increase by 45% in the first year, by 20% in the next two years and by 15% in the last year. G&A expenses should increase slowly by 15% in 2016 and 10% in every other year. The company expects to reach positive EBIT indicator in 2018.

Table 18 Start-up C's financial plan (in thousands CZK)

	2016	2017	2018	2019
Revenues	2,850	5,273	8,436	13,498
Gross Margin	2,325	4,301	6,882	11,011
OPEX	4,431	5,312	6,143	6,959
Sales	115	150	195	253
R&D	2,077	2,700	3,241	3,727
G&A	2,238	2,462	2,708	2,979
EBIT	1,581	40	2,293	6,539

Source: Reworked according to Start-up C's financial plan

4.7.5 Decomposition of ROE Indicator

Interview was conducted with one of Start-up C's owners, based on which a financial plan was prepared to conduct a decomposition method of ROE indicator using INFA methodology.

The ROE indicator is negative in the first two years, influenced mostly by ROA indicator, which is expected to be -0.33 in 2016 and -0.01 in 2017. Since then the ROA value should increase by 20% in 2018 and by 14% in 2019 reaching positive values. Another important item influencing the ROE indicator is equity and assets ratio (i.e. assets divided by owner's equity). Assets ratio is fluctuating around the value 1.3 (similarly to other start-ups) and the equity ratio is fluctuating approximately around the value 0.77, the value lower than in case of the start-up Start-up B (0.9) and Start-up A (0.87). Chargeable resources have no effect due to venture capital financing.

ROA indicator is influenced mainly by an amount of company's turnover, which is a part of turnover assets ratio and EBIT turnover ratio. Thus, the negative EBIT indicator will cause negative values of EBIT turnover ratio in the first two years. The average value of turnover assets ratio is during the four years 70.5%. A detailed decomposition is in appendix.

4.8 Identification of Dependencies within Qualitative Factors of Effectiveness

Due to small number of data frequency, the Fisher's exact test was employed to test hypothesis.

H₀: ROA values higher than the industry average does not depend on the amount of start-up's revenues

H₁ ≠ H₀

The first hypothesis tested, whether the amount of revenues has any effect on the ROA value being higher than the industry average. Data for ROA indicator for the industry average were obtained using INFA methodology and the frequency is demonstrated in Table 19.

Table 19 Frequency table for hypothesis no. 1 testing

	ROA (in 2016-2019) > industry average (2014)	ROA (in 2016-2019) < industry average (2014)
Revenues < 10mil CZK	2	4
Revenues ≥ 10mil CZK	4	2

Source: Reworked according to the software Statistica 12

Fisher test p-value = 0.57

α = 0.05

The expected cell frequency for null hypothesis is equal to three. The Fisher two-tailed test is equal to 0.57, which is higher than the significance level of alpha.

Thus, the null hypothesis cannot be rejected and results in statement that the ROA values do not depend on the amount of revenues.

H₀: ROA values higher than the industry average does not depend on the number of start-up owners

H₁ ≠ H₀

The second hypothesis tested, whether the number of start-up owners has any effect on the ROA value being higher than the industry average. The frequency is demonstrated in Table 20.

Table 20 Frequency table for hypothesis no.2 testing

	ROA (in 2016-2019) > industry average (2014)	ROA (in 2016-2019) < industry average (2014)
1 owner	0	4
2 owners	6	2

Source: Reworked according to the software Statistica 12

Fisher test p-value = 0.06

α = 0.05

The expected cell frequency for null hypothesis is equal to two in the first row and four in the second row. The result of Fisher two-tailed test is equal to 0.06, value on the edge of not rejecting the null hypothesis. However, the value is higher than the significance level of alpha. Thus, the null hypothesis cannot be rejected and results in statement that higher ROA values do not depend on the number of owners.

H₀: ROA values higher than the industry average does not depend on the EBIT indicator

H₁ ≠ H₀

The third hypothesis tested, whether the value of EBIT indicator has any effect on the ROA value being higher than the industry average. The frequency is demonstrated in Table 21.

Table 21 Frequency table for hypothesis no.3 testing

	ROA (in 2016-2019) > industry average (2014)	ROA (in 2016-2019) < industry average (2014)
1 owner	1	6
2 owners	5	0

Source: Reworked according to the software Statistica 12

Fisher test p-value = 0.02

$\alpha = 0.05$

The expected cell frequency for null hypothesis is equal to 3.5 in the first row and 2.5 in the second row. The result of Fisher two-tailed test is equal to 0.02, which is lower than the significance level of alpha. Thus, the null hypothesis will be rejected. The amount of EBIT indicator influences the ROA value to be higher than the industrial average.

4.9 Evaluation of Current Funding Opportunities for SMEs

Present “calls” announced by CzechInvest are related to energy companies (Smart grids I. and II.), low-carbon technologies or for innovative companies with projects for protection of industrial property rights. These calls are active since December 2015. There are currently no “calls” for selected sample of start-up companies.

Program EUROSTARS, previously described in the theoretical part of this thesis, is currently closed and will open again in June 2016 with a deadline till December 2016. The overview of last years applications is demonstrated in Table 22.

Table 22 Program Eurostars in numbers

EUROSTARS in numbers	
Applications submitted	3,548
Projects funded	783
Estimated amount of funding	EUR 465mil
Average success rate	23%

Source: Reworked according to Eurostars, ©2015

The program is constructed for SMEs fulfilling the following conditions:

Table 23 EUROSTARS' conditions necessary for submission of applications

	Start-up A	Start-up B	Start-up C
SME must operate in R&D	✓	✓	✓
SME wants to access new markets	✓	✓	✓
SME wants to operate on global scale	✓	✓	✓
SME wants to rapidly commercialized its product	✓	✓	✓
SME wants to develop a new and innovative product/process/service			✓

Source: Reworked according to Eurostars, ©2015

The EUROSTARS program is suitable only for Start-up C. This company did not succeeded with the first product developed and is currently focusing on developing new product and finding investors. However, the company already signed contracts with new investors in Media Entertainment field. The Start-up A and Start-up B have already developed their products and need to focus more on expanding globally.

The program ALFA and Seed Fund are not suitable for either start-up company. The selected sample of start-ups are not fulfilling the ALFA program's conditions to be operating on the field of energy or protection of the environment, which is a pre-condition for registration. In addition, the program Seed Fund, a financial instrument for supporting companies requiring seed or start-up funding, was closed by the Ministry of Industry and Trade on 24.4.2014 due to insufficient time on realization of the project and due to changes in legislation. This project will be replaced by the program National Innovative Fund which should be launched in 2017.

In conclusion, selected start-up companies should continue to find new venture capital investors or acquire another investment round from the company Y Soft Ventures until there are more possibilities to obtain funding from the European Union.

5 Discussion

The partial results of this diploma thesis are discussed within this chapter, however, it was difficult to compare them as there is lack of similar researches due to the specific focus of this thesis.

To successfully complete the thesis, it was necessary to study especially digital information resources concerning start-up companies and venture capital investments. There are only few sources defining the term “start-up” and there is a lack of books covering the whole topic. To acquire the further information and qualitative data, several interviews were conducted with start-up owners as well as with financial consultants from the selected venture capital company. The financial aspects regarding the venture capital investments were covered by usage of internal information of start-up companies together with the industry financial performance benchmark provided by the Ministry of Industry and Trade.

The practical part of this thesis was focused on companies sample consisted of venture capital investor, Y Soft Corporation, Ltd., and three selected start-up companies. The reason for choosing this company was the fact that the company was established as a start-up company as well and due to its professional experience. Y Soft Corporation gradually increased its financial performance and cash flow necessary to start investing in start-up companies. The financial stability of the company was proved by financial analyses conducted during the period 2009 to 2015, which were then compared with benchmark provided by the Ministry of Industry and Trade. The initial analysis of profit and loss statement revealed no loss for accounting period, on the contrary, the company’s profit was increasing every year and showed higher values than the industry average. The company also proved to be efficient in managing their assets and equity capital, respectively its operational efficiency. The profitability ratios were also compared to the ICT industry average, revealing similar values for return on assets, except the year 2013, which was considered as the most successful year for the company Y Soft Corporation. However, the return on equity was significantly higher in every year compared to the industry average with values between 10% to 20%. Moreover, return on sales for the company showed an increasing trend, unlike the industry average, where the return on sales decreased every year. Using the benchmarking diagnostic system INFA was demonstrated company’s ability to generate a positive economic value added. It was possible to utilize benchmark results only for the period 2009 to 2014 as the benchmarking diagnostic system does not have the data for the year 2015. This system was proved efficient in comparison with the ICT field, showing the industry average of cost of equity around 10%. Even though Y Soft Corporation had larger cost at the beginning of the examined period, the company successfully managed to decreased them to the industry average and thus achieved a positive economic value added.

Y Soft Corporation established a daughter company Y Soft Ventures in 2012 to support starting entrepreneurs in the Central and Eastern Europe. The company has invested in three start-up companies, which were described in the practical part of this thesis. Even though the company has a thorough due diligence process, start-up companies always represent a higher entrepreneur risk. After an investment was made in Start-up A, the company's assets and owner's equity increased and thus helped the company to cover its loss for accounting period, which was 19mil CZK. Even though the literature defines private equity as a form of an investment mostly suitable for later-stage of company's development, the Start-up A received an investment not only from venture capitalists, but from the company RSJ Private Equity as well. The efficiency of the investment was supported by the valuation of this start-up, which was estimated at the value 25mil CZK after the first investment round and 36mil CZK in the second round. The company's value increased, however, its co-owners lost another share of equity, leaving them with only 52.5%. The company is in a situation of losing majority share in favor of another investment rounds. Furthermore, it was observed that the start-up has enough current assets to cover its short-term debt and so it is constituting the net working capital creation. Based on the financial analysis from the Ministry of Industry and Trade the net working capital was compared, resulting in higher industry average values. However, the ICT field reveals a smaller working capital ratio close to one. The company Start-up A will dispose of 12mil CZK of resources after repaying its short-term debt. Due to large investment amounts that the Start-up A received, in total 7.5mil CZK, the company was able to sign new contracts with two large software companies, to increase its revenues and to support sales with cash inflows in research and development of new products. In addition, based on interviews conducted with start-up owners, the financial plan was constructed with aim to achieve a profit in 2019. To achieve the goal, the company will have to cut its operation expenses after the year 2016. Based on the decomposition of ROE indicator were determined factors that have the highest influence on company's profitability. Company's ROE indicator is expected to be negative during the period 2016 to 2018 and is supposed to reach positive value in 2019. These values are influenced by annual increase of ROA indicator, which was negative during the three years. The negative values were caused by company's loss for accounting period. The ROE indicator was further influenced by equity ratio (in average 0.87) and assets ratio (in average 1.1). According to Hrdý (2013) definition, the company's equity is not sufficiently profitable compared to investment's risk. It is expected that Start-up A can succeed on four different market segments. The first segment, where the company can find potential customers, is digital cinema, which uses only the JPEG 2000 format. The second market segment is television, where this format is used less commonly. The third market segment is health care and its education and the last segment is government sector with its video transmissions in the area of security, where JPEG 2000 is suitable for satellite imaging or digital archiving.

The company Start-up B is Y Soft Venture's newest investment with the goal to expand globally. It is also considered by Y Soft Venture's as the most effective investment. This start-up was established by two co-founders, each having 50% shares. Y Soft Ventures invested in this start-up the highest amount of overall venture capital investment, i.e. 23.7mil CZK and obtained 25% of start-up's equity. The valuation was 95mil CZK, higher than in case of Start-up A. This start-up has a possibility to decrease their share and still keep the majority of company's equity. The company Start-up B proved to have sufficient current assets to cover its current debt. The investment resulted in an increase of company's sales as well as revenues, which exceeded the growth of revenues in first three quarters combined. Due to a cooperation with the company Y Soft Corporation, the Start-up B was able to start its production in Y Soft Corporation's production facility and to produce first tags and anchors during the trial runs. The owners of Start-up B expect to reach 48mil CZK of revenues and 37mil CZK of profit before taxes in 2019, which keeps the company Y Soft Corporation interested in next investment round. The top-level indicator of profitability is influenced by return on assets, positive in every year, which should continue to increase by 4% to 7% annually. Assets ratio is fluctuating around the value 1.1 and the equity ratio is fluctuating approximately around the value 0.9. Chargeable resources have no effect due to venture capital financing. The EAT profit ratio has also no effect on the top-level indicator as the value remains the same in all years. Start-up B has a large potential to become a leader in the ICT market in providing solutions of precise location data and wireless sensors. Unlike its competitors, Start-up B has developed the product RTLS with better accuracy. The company's advantage is in their possibilities to significantly improve production process of other companies and to prevent pointless errors. Also in addition to Y Soft Venture's funding, Y Soft Corporation is able to provide this start-up with resources to speed up their time to success including manufacturing, global distribution and logistics, marketing and HR. These resources are often lacking in early-stage companies. Based on the financial plan, the company is well-suited to operate on a global scale.

The last subject, Start-up C, is on the market for the longest period of time, i.e. since 2012. However, the start-up did not operate between the years 2013 and 2014 as the company was focusing on developing its product. The company experienced a loss in owner's equity, which will have to be managed for instance by increasing registered capital by new deposits from owners, e.g. by receiving a new investment. However, Y Soft Corporation decided not to further invest in this company as the start-up shows the less profitable opportunity and due to its business-to-customer focus, in which the company Y Soft Corporation lacks the experience. Furthermore, the company already disposes of only 50.8% of their equity sharing it with Y Soft Ventures (49.2%). This company also faces a situation of losing the majority share of their business in favor to another investment rounds. Due to a lack of Y Soft Corporation's interest in another investment round, the Start-up C began a new discussion with an investor from Media Entertainment market, from which they have the possibility to have a guidance as they operate on

the same market segment. The company also plans to hire new management to support the company's decisions and growth and plans to finalize a new, possibly more successful, product. Up to this moment, the company had no revenues as their application was in trial run available to users in free version. However, with new product, the company plans to increase its revenues to the amount of 13mil CZK by 2019. Company's working capital showed that the company is able to repay its short-term debt in 2014, however, the low working capital ratio (1.03) indicates that the company had to sell almost all of its current assets. In 2015, company's current assets decreased and caused company's inability to cover its short-term debt with current assets. The result of net working capital was negative (-2.5mil CZK), resulting in liquidity problem. Also working capital ratio decreased below one (0.04), indicating the usage of paying company's debt from own resources. Start-up C's decomposition of ROE indicator was constructed as in the case of previous two start-ups. The ROE indicator is negative in the first two years, influenced by ROA values (-0.33 in 2016 and -0.01 in 2017). Another indicator influencing the top-level indicator is assets ratio (1.3 in average) and equity ratio (0.77 in average). The equity ratio demonstrates lower values than Start-up A (0.87) and Start-up B (0.9).

Furthermore, the practical part of the thesis was completed by hypotheses testing using Fisher exact probability test which was selected due to small number of data frequency. Three hypotheses were testing to determine the indicators causing companies' ROA values to be higher than the industry average. The first two hypotheses supported the statement of null hypothesis that the amount of start-up's revenues as well as the number of owners does not cause the ROA value being higher than the industry average. In the third hypothesis testing, the null hypothesis was rejected, indicating that EBIT indicator is an important factor influencing the amount of ROA values and thus the top-level ROE indicator.

Currently, companies are not suitable to use any of the European Union's funding programs as the program EUROSTARS is currently closed to submission, ALFA program is not suitable for hardware & software companies and there are no relevant "calls" announced on the internet website CzechInvest. However, the companies are all in close cooperation with new investors allowing them to support their further growth.

Based on these three venture capital investments, the company Y Soft Corporation strengthened its due diligence process with a decision to support only companies with business-to-business approach operating on software and hardware fields. In addition, based on current development of start-up companies, Y Soft Corporation has at least one successfully conducted investment (i.e. Start-up B) with global potential.

Venture capital investments are considered beneficial for companies requiring larger sums of capital investments as in case of the selected start-ups. The advantage of this type of financing was not only the monetary contribution, but also Y Soft Corporation's know-how and strategy consulting. These advantages also correspond to the literature review, precisely with advantages defined by

Nývtová, Režňáková (2007). Another advantages of venture capital investments are no repayments of initial funding and owner's ability to keep management control in their own hands. However, entrepreneurs usually lack the skills to attract the investor.

6 Conclusion

The main objective of this diploma thesis was to identify the economic benefits and key factors for effective investments of ICT companies into start-ups in the Czech Republic involving financial support resources from the European Union. The selected sample of start-ups was created by three companies operating on software and hardware field. The selected venture capital investor, Y Soft Corporation, Ltd., is a globally operating company in the ICT field with resources to support starting entrepreneurs. The evaluation of the company was done based on financial analysis conducted during the period 2009 to 2015 and the results were compared to the relevant ICT field. Data for this industry were gathered from the Ministry of Industry and Trade.

The theoretical part of this thesis provided several definitions of the term “start-up” and its possibilities how to raise a capital, including a summary of investments in the CEE region according to company’s development stage. In addition, each financial analysis was described together with the conducted financial analysis employing the benchmarking system INFA of the Ministry of Industry and Trade.

The first partial objective was accomplished by the evaluation of selected venture capital investor Y Soft Corporation’s structure of assets and liabilities and its financial situation using horizontal and vertical analysis, analysis of profit and loss statement, profitability ratios and economic value added, which was calculated using benchmarking diagnostic system INFA. These results were further compared with relevant industry average values. Profitability ratios demonstrated company’s ability to manage their assets and equity capital more efficiently than the ICT field. Analysis of profit and loss statement revealed higher ratio of EAT indicator and added value than the industry average in the last two examined years. Furthermore, with EVA analysis was demonstrated that the company has higher ROE values than the cost of equity, resulting in positive economic value added.

The second objective was fulfilled by gathering secondary data and conducted interviews, based on which the company Y Soft Ventures, investment strategy and portfolio were identified and described.

The third objective was accomplished by evaluation of selected start-up subjects. The impact of investment on economic performance of start-up companies (i.e. one of the research questions) was graphically demonstrated on companies’ structure of assets and liabilities. The effectiveness of investment was analyzed by evaluation of individual investment rounds. To identify decision-making processes of Y Soft Corporation to invest in selected start-ups in another investment round, the financial plan was drawn up using interviews and internal data of start-up companies to determine the break-even point, which result in positive EBIT values. Based on the financial plan, the decomposition of ROE indicator was conducted to reveal the influence of decomposed partial indicators on their aggregated indicators.

I assess the Y Soft Corporation's due diligence process as efficient in the case of company Start-up B, which evinced increasing revenues and positive EBIT indicator. It could be recommended to repeat the venture capital investment in the company Start-up B according to the conducted analysis of profitability development.

Partial goals were resolved in the previous chapter, which were a precondition to fulfillment of the main objective of this thesis. Partial goals also lead to an answer on research questions concerning the efficiency of selected start-up subjects and the impact of venture capital investment on their performance.

7 Literature

BUDÍKOVÁ, Marie, Maria KRÁLOVÁ a Bohumil MAROŠ. *Průvodce základními statistickými metodami*. Praha: Grada, 2010. Expert (Grada). ISBN 978-80-247-3243-5.

Business Dictionary. *Management buy-in* [online]. 2016 [cit. 2016-02-13]. Available at: <http://www.businessdictionary.com/definition/management-buy-in.html>

Business Dictionary. *What is startup?* [online]. 2016 [cit. 2016-02-05]. Available at: <http://www.businessdictionary.com/definition/startup.html>

Business Info. *Základní informace o rizikovém kapitálu*. [online]. 1997-2016 [cit. 2016-02-13]. Available at: <http://www.businessinfo.cz/cs/clanky/zakladni-informace-o-rizikovem-kapitalu-12802.html#uvod>

Business Info. *Základní informace o Seed Fondu*. [online]. 1997-2015 [cit. 2016-01-15]. Available at: <http://www.businessinfo.cz/cs/clanky/zakladni-informace-o-seed-fondu-28226.html>

Business Insider. *This Is The Definitive Definition Of A Startup*. [online]. 2016 [cit. 2016-03-18]. Available at: <http://www.businessinsider.com/what-is-a-startup-definition-2014-12>

Business Vize. *EVA (Economic Value Added) – moderní ukazatel rentability*. [online]. 2010-2011 [cit. 2016-01-06]. Available at [:http://www.businessvize.cz/financni-analyza/eva-economic-value-added-moderni-ukazatel-rentability](http://www.businessvize.cz/financni-analyza/eva-economic-value-added-moderni-ukazatel-rentability)

COYLE, Brian. *Mergers and acquisitions*. Library ed. Chicago: Fitzroy Dearborn, 2000, 124 p. ISBN 18-889-9880-6.

CUMMING, Douglas. *The Oxford handbook of private equity*. New York: Oxford University Press, 2012. ISBN 01-953-9158-6

CVCA. *Czech Private Equity and Venture Capital Association* [online]. Praha, 2010 [cit. 2016-01-15]. Available at: <http://www.cvca.cz/cs/>

- Cyrrus Advisory. *Dotace a zdroje financování pro inovativní firmy*. [online]. c2012 [cit. 2016-04-03]. Available at: <http://www.seedfond.info/dotace-a-zdroje-financovani-pro-inovativni-firmy/>
- Cyrrus Advisory. *Popis a představení Seed Fondu*. [online]. 2012 [cit. 2016-01-15]. Available at: <http://www.seedfond.info/seed-fond/duvody-vzniku/>
- Czech Invest. *Aktuální výzvy* [online]. 2016 [cit. 2016-05-18]. Available at: <http://www.czechinvest.org/aktualni-vyzvy>
- Czech Invest. *Business Angels*. [online]. 1994-2016 [cit. 2016-01-15]. Available at: <http://www.czechinvest.org/business-angels>
- Czech Invest. *Snadná cesta k rozvoji firmy*. [online]. 1994-2016 [cit. 2016-01-15]. Available at: <http://www.czechinvest.org/data/files/snadna-cesta-k-rozvoji-firmy-472.pdf>
- ČIŽINSKÁ, Romana a Mária REŽŇÁKOVÁ. *Mezinárodní kapitálové trhy: zdroj financování*. 1. vyd. Praha: Grada, 2007, 222 s. Finance (Grada Publishing). ISBN 978-80-247-1922-1.
- DVOŘÁČEK, Jiří. *Due diligence: podstata, postupy, použití*. Vyd. 1. Praha: Wolters Kluwer, 2014, 172 s. ISBN 978-80-7478-596-2
- European Commission. *Funding opportunities*. [online]. 2015 [cit. 2016-05-18]. Available at: <https://ec.europa.eu/research/participants/portal/desktop/en/opportunities/index.html>
- European Commission. *Innovation in SMEs*. [online]. 1995-2016 [cit. 2016-04-03]. Available at: <https://ec.europa.eu/programmes/horizon2020/en/h2020-section/innovation-smes>
- European Commission. *The Eurostars programme*. [online]. 2015 [cit. 2016-04-03]. Available at: <https://ec.europa.eu/programmes/horizon2020/en/h2020-section/eurostars-programme>

- European Commission *What is Horizon 2020?* [online]. 2015 [cit. 2016-05-17]. Available at: <https://ec.europa.eu/programmes/horizon2020/en/what-horizon-2020>
- Eurostars. *Trends and stats*. [online]. 2015 [cit. 2016-04-03]. Available at: <https://www.eurostars-eureka.eu/trends-and-stats>
- Eurostars. *What is Eurostars?* [online]. 2015 [cit. 2016-04-03]. Available at: <https://www.eurostars-eureka.eu/about-eurostars>
- Finance Scotland. *Venture capital: pros and cons*. [online]. 2012-2015 [cit. 2016-04-03]. Available at: <http://www.finance.scotland.gov.uk/types/equity/venture/pros-and-cons>
- FOTR, Jiří a Ivan SOUČEK. *Podnikatelský záměr a investiční rozhodování*. 1. vyd. Praha: Grada Publishing, 2005, 356 s. Expert (Grada). ISBN 80-247-0939-2.
- FUNDLIFT. *Czech crowdfunding platform* [online]. 2015 [cit. 2016-05-08]. Available at: <http://fundlift.cz/>
- GILBERTSON, Claudia Bienias, Mark W LEHMAN a Debra Harmon GENTENE. *Century 21 accounting: general journal*. 10e. South-Western: Cengage Learning, 2013, xvi, 769 pages. ISBN 978-084-0064-981.
- HRDÝ, Milan a Michaela KRECHOVSKÁ. *Podnikové finance v teorii a praxi*. Vyd. 1. Praha: Wolters Kluwer Česká republika, 2013, 267 s. ISBN 978-80-7478-011-0
- Inc. *How to Choose an Exit Strategy*. [online]. 2016 [cit. 2016-04-03]. Available at: <http://www.inc.com/guides/2010/10/how-to-choose-an-exit-strategy.html>
- Invest Europe. *An EVCA special paper*. [online]. 2014 [cit. 2016-04-03]. Available at: <http://www.investeurope.eu/media/403969/EVCA-CEE-Statistics-2014.pdf>
- Invest Europe. *Guide on Private Equity and Venture Capital*. [online]. 2015 [cit. 2016-05-12]. Available at: <http://www.investeurope.eu/media/78722/guide-on-private-equity-and-venture-capital-2007.pdf>

- Investopedia. Buy-in management buyout [online]. 2016 [cit. 2016-02-13]. Available at:
<http://www.investopedia.com/terms/b/buyinmanagementbuyout.asp>
- Investopedia. *Definition of startup*. [online]. 2016 [cit. 2016-02-10]. Available at:
<http://dictionary.reference.com/browse/startup>
- Investopedia. *Initial Public Offering - IPO*. [online]. 2016 [cit. 2016-04-03]. Available at: <http://www.investopedia.com/terms/i/ipo.asp>
- KISLINGEROVÁ, Eva a Jiří HNILICA. *Finanční analýza: krok za krokem*. 2. vyd. Praha: C.H. Beck, 2008, xiii, 135 s. C.H. Beck pro praxi. ISBN 978-80-7179-713-5.
- KISLINGEROVÁ, Eva a Ivan NOVÝ. *Chování podniku v globalizujícím se prostředí*. 1.vydání. Praha: C H Beck, 2005. ISBN 8071798479
- KNÁPKOVÁ, Adriana, Drahomíra PAVELKOVÁ a Karel ŠTEKER. *Finanční analýza: komplexní průvodce s příklady*. 2., rozš. vyd. Praha: Grada, 2013, 236 s. Prosperita firmy. ISBN 978-80-247-4456-8.
- KNÁPKOVÁ, Adriana a Drahomíra PAVELKOVÁ. *Finanční analýza: komplexní průvodce s příklady*. 1. vyd. Praha: Grada, 2010, 205 s. Prosperita firmy. ISBN 978-80-247-3349-4.
- Listed Private Equity. *Private equity pros and cons*. [online].2016[cit.2016-04-03]. Available at:
<http://www.lpeq.com/Listedprivateequityexplained/Privateequityprosandcons.aspx>
- METRICK, Andrew a Ayako YASUDA. *Venture capital*. 2nd ed. New York: Wiley, 2011. ISBN 978-047-0454-701
- Ministry of Industry and Trade. *Benchmarking diagnostic system*. [online]. 2005 [cit. 2016-02-05]. Available at: <http://www.mpo.cz/cz/infa.html>
- MINISTRY OF INDUSTRY AND TRADE. *New Investment Fund for start-ups*. [online]. 2005 [cit. 2016-05-18]. Available at:
<http://www.mpo.cz/dokument165184.html>

- Minority Business Development Agency. *5 Types of company mergers: U.S. Department of Commerce* [online]. 2015 [cit. 2016-02-10]. Available at: <http://www.mbda.gov/blogger/mergers-and-acquisitions/5-types-company-mergers>
- MULAČOVÁ, Věra a Petr MULAČ. *Obchodní podnikání ve 21. století*. 1. vyd. Praha: Grada, 2013, 520 s. Finanční řízení. ISBN 978-80-247-4780-4.
- MYGOV.SCOT. *Equity finance* [online]. 2015 [cit. 2016-05-08]. Available at: <https://www.mygov.scot/ways-to-fund-your-business/equity-finance/>
- NÝVLTOVÁ, Romana a Mária REŽŇÁKOVÁ. *Mezinárodní kapitálové trhy: zdroj financování*. 1. vyd. Praha: Grada, 2007, 222 s. Finance (Grada Publishing). ISBN 978-80-247-1922-1
- Penize.cz; *Primární emise akcií (IPO): veřejná nabídka*. [online]. 2000-2016 [cit. 2016-04-03]. Available at: <http://www.penize.cz/akcie/16778-primarni-emise-akcii-ipo-verejna-nabidka>
- PILGER, David. *Leveraged buyouts a practical introductory guide to LBOs*. Petersfield, Hampshire, Great Britain: Harriman House Ltd, 2012, 161 p. ISBN 08-571-9224-8
- Public Register of the Ministry of Justice. *Justice* [online]. [cit. 2016-05-19]. Available at: www.justice.cz
- REŽŇÁKOVÁ, Mária. *Řízení platební schopnosti podniku*. Praha: Grada, 2010. Prosperita firmy. ISBN 978-80-247-3441-5.
- RIES, Eric. *The Lean Startup: how constant innovation creates radically successful businesses*. London: Portfolio Penguin, 2011. ISBN 978-067-0921-607.
- Roman Šebl. *Konzultant osobních investic: Co je private equity?* [online]. 2015 [cit. 2016-04-03]. Available at: <http://www.romansebl.com/co-je-private-equity/>
- RŮČKOVÁ, Petra. *Finanční analýza: metody, ukazatele, využití v praxi*. 4., aktualiz. vyd. Praha: Grada, c2011, 143 s. Finanční řízení. ISBN 978-80-247-3916-8.
- SEDLÁČEK, Jaroslav. *Finanční analýza podniku*. 2., aktualiz. vyd. Brno: Computer Press, 2011. ISBN 978-80-251-3386-6.

- SCHOLLEOVÁ, Hana. *Ekonomické a finanční řízení pro neekonomy*. 2., aktualiz. a rozš. vyd. Praha: Grada, 2012, 268 s. Expert (Grada). ISBN 978-80-247-4004-1
- SCHOLLEOVÁ, Hana. *Investiční controlling* 1. vyd. Praha: Grada, 2009, 285 s. Prosperita firmy. ISBN 978-80-247-2952-7
- SLAVÍK, Jakub. *Finanční průvodce nefinančního manažera: jak se rychle zorientovat v podnikových a projektových financích*. 1. vyd. Praha: Grada, 2013, 175 p. ISBN 978-80-247-4593-0.
- SRPOVÁ, Jitka a Ivana SVOBODOVÁ. *Podnikatelský plán a strategie*. 1. vyd. Praha 7: Grada Publishing, 2011, 200 s. ISBN 8024770768
- Start podnikání. *Rizikový kapitál*. [online]. 2016 [cit. 2016-02-13]. Available at: http://startpodnikani.cz/index.php?open=rizikovy_kapital
- Start-up Guide. In: *Harvard* [online]. 2011 [cit. 2016-04-03]. Available at: http://otd.harvard.edu/upload/files/OTD_Startup_Guide.pdf
- Start-up map. *Mapa startupů v ČR* [online]. 2016 [cit. 2016-04-03]. Available at: www.startupmap.cz
- SYNEK, Miloslav a Eva KISLINGEROVÁ. *Podniková ekonomika*. 5., přeprac. a dopl. vyd. Praha: C.H. Beck, 2010. Beckovy ekonomické učebnice. ISBN 978-80-7400-336-3.
- SYNEK, Miloslav. *Manažerská ekonomika*. 4., aktualiz. a rozš. vyd. Praha: Grada, 2007, 452 s. ISBN 978-80-247-1992-4.
- ŠMEJKAL, Š. Rizikový kapitál jako nástroj pro rozvoj malého a středního podnikání [online]. Brno, 2009 [cit.2012-10-15]. Available at: http://is.muni.cz/th/99951/esf_m/. Diplomová práce. Masarykova univerzita. Vedoucí práce Ing. Viktorie Klímová, Ph.D.
- VC-BW. *Stages of Venture Capital-Financing*. [online]. Stuttgart, 2012 [cit. 2016-03-19]. Available at: <https://www.vc-bw.de/en/for-start-ups/finanzierungsphasen/>
- VOCHOZKA, Marek. *Metody komplexního hodnocení podniku*. 1. vyd. Praha: Grada, 2011, 246 s. Finanční řízení. ISBN 978-80-247-3647-1

Vysoká škola ekonomická v Praze. *Rizikový kapitál*. [online]. 2016 [cit. 2016-05-12]. Available at: <http://www.vse.cz/cfuc/164>

WAGNER, Jaroslav. *Měření výkonnosti: jak měřit, vyhodnocovat a využívat informace o podnikové výkonnosti*. Praha: Grada, 2009. ISBN 978-80-247-2924-4.

YOUNG, Thomas Elliott. *The everything guide to crowdfunding*. Avon, Mass.: Adams Media, 2013. ISBN 14-405-5033-6.

Y SOFT. *About Y Soft Corporation* [online]. 2015 [cit. 2016-05-18]. Available at: <https://www.ysoft.com/cs/company/o-spolecnosti-y-soft-1>

Y SOFT VENTURES. *About Y Soft Ventures* [online]. 2015 [cit. 2016-05-18]. Available at: <https://www.ysoft.com/cs/company/y-soft-ventures>

8 List of Figures

Figure 1	Investment cycles in relation to a company's development stage	17
Figure 2	CEE venture capital investments by stage (in mil €)	22
Figure 3	Division of private equity in the world	23
Figure 4	Annual investment value in the CEE region in 2003-2014 (in million EUR)	30
Figure 5	Classification of companies according to EVA indicator	35
Figure 6	INFA methodology (Pyramid decomposition of ROE)	36
Figure 7	Development of Y Soft Corporation's assets during 2009-2015	44
Figure 8	Development of Y Soft Corporation's liabilities during 2009-2015	45
Figure 9	Y Soft Corporation's Balance Sheet compared to the ICT field in 2014	45
Figure 10	Structure of assets in 2009-2016 (in %)	46
Figure 11	Structure of owner's equity and liabilities in 2009-2015 (in %) Source: Balance Sheet Statement of Y Soft Corporation, Ltd. in 2009-2016	47
Figure 12	Comparison of Y Soft Corporation's profit for accounting period with the ICT field (in %)	49
Figure 13	Wages & salaries and personnel expenses (in thousands CZK)	50
Figure 14	Comparison of Y Soft Corporation's ROA values with the ICT field	52
Figure 15	Comparison of Y Soft Corporation's ROE values with the ICT field	52
Figure 16	Comparison of Y Soft Corporation's ROS values with the ICT field	53

Figure 17	Comparison of Y Soft Corporation's r_e with the ICT field	54
Figure 18	Start-up A's structure of assets and liabilities in 2013-2015	60
Figure 19	Start-up A's investors and their shares	61
Figure 20	Decomposition of Start-up A's ROE indicator for the period 2016-2019	65
Figure 21	Structure of Start-up B's assets and liabilities	66
Figure 22	Start-up B's investors and their shares	67
Figure 23	Planned structure of Start-up B's equity	67
Figure 24	The structure of Start-up C's total assets	71
Figure 25	Start-up C's investors and their share	71

9 List of Tables

Table 1	Number of start-up companies in the Czech Republic	16
Table 2	Advantages and disadvantages of venture capital investments	20
Table 3	Pros and cons in Private Equity financing	24
Table 4	Types of investments in the CEE region in 2013-2014	29
Table 5	Contingency table 2x2	37
Table 6	Y Soft Corporation's milestone	42
Table 7	Selected indicators of profit and loss statement (in thousands CZK)	48
Table 8	Profitability ratios in 2009-2015	51
Table 9	EVA analysis	54
Table 10	Start-up A's Net Working Capital (in thousands CZK)	62
Table 11	Data from start-up A's Profit and Loss statement in 2014 and 2015 (in thousands CZK)	63
Table 12	Start-up A's financial plan (in thousands CZK)	63
Table 13	Start-up B's Net Working Capital (in thousands CZK)	68
Table 14	Data from start-up B's Profit and Loss statement in 2015 (in thousands CZK)	69
Table 15	Start-up B's financial plan (in thousands CZK)	69
Table 16	Start-up C's Net Working Capital (in thousands CZK)	72
Table 17	Data from start-up C's Profit and Loss statement in 2015 (in thousands CZK)	73
Table 18	Start-up C's financial plan (in thousands CZK)	73
Table 19	Frequency table for hypothesis no. 1 testing	74
Table 20	Frequency table for hypothesis no.2 testing	75

Table 21	Frequency table for hypothesis no.3 testing	76
Table 22	Program Eurostars in numbers	76
Table 23	EUROSTARS' conditions necessary for submission of applications	77

Appendices

A Y Soft Corporation's Balance Sheet

	06/15			06/14			06/13		
	Net value (CZK)	Absolute value	Relative value (%)	Net value (CZK)	Absolute value	Relative value (%)	Net value (CZK)	Absolute value	Relative value (%)
Total assets	619 010	142 664	0,30	476 346	131 057	0,36	363 289	104 364	0,40
Fixed assets	280 782	62 058	0,28	218 724	51 464	0,31	167 260	13 543	0,09
Intangible assets	81 506	24 892	0,44	56 614	11 425	0,25	45 189	96	0,00
Tangible assets	27 053	1 137	0,04	25 916	-7 317	-0,22	33 233	18 018	1,18
Financial investments	172 223	36 028	0,26	136 195	47 357	0,53	88 838	-4 571	-0,05
Current assets	327 241	76 684	0,31	250 557	63 149	0,34	187 408	87 689	0,88
Inventory	14 805	5 257	0,55	9 548	-3 151	-0,25	12 699	3 120	0,33
L-T receivables	4 060	-890	-0,18	4 950	1 897	0,62	3 053	1 175	0,63
S-T receivables	254 616	77 754	0,44	176 862	49 552	0,39	127 310	45 783	0,56
S-T financial assets	53 760	-5 437	-0,09	59 197	14 851	0,33	44 346	37 611	5,58
Accruals	10 987	3 922	0,56	7 065	-1 556	-0,18	8 621	3 132	0,57
Total equity and liabilities	619 010	142 664	0,30	476 346	113 057	0,31	363 289	104 364	0,40
Owner's equity	220 655	63 709	0,41	156 946	35 080	0,29	121 866	46 978	0,63
Registered capital	151 730	107 397	2,42	44 333	-15 667	-0,26	60 000	15 000	0,33
Capital funds	12 140	12 174	-358,06	-34	506	-0,94	-540	-6 247	-1,09
Funds created from profit	0	0	0,00	0	-4 000	-1,00	4 000	2 000	1,00
Profit (loss) for the previous years	647	-61 761	-0,99	62 408	57 227	11,05	5 181	2 770	1,15
Profit (loss) for the year (+/-)	56 138	5 897	0,12	50 241	-2 984	-0,06	53 225	33 455	1,69
Liabilities	150 247	34 460	0,30	115 787	26 428	0,30	89 359	2 115	0,02
Provisions	6 992	-2 155	-0,24	9 147	-3 297	-0,26	12 444	9 497	3,22
L-T liabilities	0	-10 508	-1,00	10 508	0	0,00	10 508	0	0,00
Current liabilities	70 572	27 040	0,62	43 532	9 204	0,27	34 328	-5 882	-0,15
Bank loans and borrowings	72 683	20 083	0,38	52 600	20 521	0,64	32 079	-1 500	-0,04
Accruals	248 108	44 495	0,22	203 613	51 549	0,34	152 064	55 271	0,57

	06/12			06/11			06/10			06/09
	Nett value (CZK)	Absolute value	Relative value (%)	Nett value (CZK)	Absolute value	Relative value (%)	Nett value (CZK)	Absolute value	Relative value (%)	Nett value (CZK)
Total assets	258 925	69 267	0,37	189 658	53 643	0,39	136 015	29 875	0,28	106 140
Fixed assets	153 717	47 085	0,44	106 632	16 499	0,18	90 133	20 424	0,29	69 709
Intangible assets	45 093	2 583	0,06	42 510	9 748	0,30	32 762	6 593	0,25	26 169
Tangible assets	15 215	6 539	0,75	8 676	3 329	0,62	5 347	666	0,14	4 681
Financial investments	93 409	37 961	0,68	55 448	3 424	0,07	52 024	13 165	0,34	38 859
Current assets	99 719	18 008	0,22	81 711	40 543	0,98	41 168	5 936	0,17	35 232
Inventory	9 579	-3886	-0,29	13 465	2 061	0,18	11 404	2 057	0,22	9 347
L-T receivables	1 878	1163	1,63	715	715	0,00	0	-410	-1,00	410
S-T receivables	81 527	15 100	0,23	66 427	36 765	1,24	29 662	7 161	0,32	22 501
S-T financial assets	6 735	5 631	5,10	1 104	1 002	9,82	102	-2 872	-0,97	2 974
Accruals	5 489	4 174	3,17	1 315	-3 399	-0,72	4 714	3 515	2,93	1 199
Total equity and liabilities	258 925	69 267	0,37	189 658	53 643	0,39	136 015	29 875	0,28	106 140
Owner's equity	74 888	27 346	0,58	47 542	9 835	0,26	37 707	7 948	0,27	29 759
Registered capital	45 000	55000	-5,50	-10 000	-20 000	-2,00	10 000	0	0,00	10 000
Capital funds	5 707	7576	-4,05	-1 869	-1 283	2,19	-586	1 004	-0,63	-1 590
Funds created from profit	2 000	0	0,00	2 000	1 000	1,00	1 000	0	0,00	1 000
Profit (loss) for the previous years	2 411	-35 847	-0,94	38 258	17 908	0,88	20 350	8 047	0,65	12 303
Profit (loss) for the year (+/-)	19 770	617	0,03	19 153	12 210	1,76	6 943	-1 103	-0,14	8 046
Liabilities	87 244	-10 955	-0,11	98 199	23 659	0,32	74 540	14 809	0,25	59 731
Provisions	2 947	-8 660	-0,75	11 607	9 039	3,52	2 568	-2 038	-0,44	4 606
L-T liabilities	10 508	0	0,00	10 508	-2 000	-0,16	12 508	2 000	0,19	10 508
Current liabilities	40 210	-4115	-0,09	44 325	16 087	0,57	28 238	2 656	0,10	25 582
Bank loans and borrowings	33 579	1820	0,06	31 759	534	0,02	31 225	12 190	0,64	19 035
Accruals	96 793	52876	1,20	43 917	20 149	0,85	23 768	7 118	0,43	16 650

B Pyramid decomposition of ROE (Start-up B)

ROE	
2016	0,46
2017	0,47
2018	0,52
2019	0,53

EAT/profit		ROA		Equity ratio		Chargeable resources		Assets ratio	
2016	0,81	2016	0,49	2016	0,86	2016	0,86	2016	1,16
2017	0,81	2017	0,53	2017	0,91	2017	0,91	2017	1,10
2018	0,81	2018	0,60	2018	0,93	2018	0,93	2018	1,07
2019	0,81	2019	0,64	2019	0,98	2019	0,98	2019	1,02

EBIT turnover ratio		Turnover/Assets	
2016	0,59	2016	0,83
2017	0,69	2017	0,76
2018	0,73	2018	0,82
2019	0,77	2019	0,83

(VA-PE)/Turnover		Other resources	
2016	0,83	2016	0,24
2017	0,88	2017	0,19
2018	0,90	2018	0,17
2019	0,92	2019	0,16

VA/Turnover		PE/Turnover	
2016	0,91	2016	0,08
2017	0,93	2017	0,05
2018	0,94	2018	0,03
2019	0,94	2019	0,02

C Pyramid decomposition of ROE (Start-up C)

ROE	
2016	-0,51
2017	-0,01
2018	0,22
2019	0,34

EAT/profit		ROA		Equity ratio		Chargeable resources		Assets ratio	
2016	1,00	2016	-0,33	2016	0,64	2016	0,64	2016	1,55
2017	1,00	2017	-0,01	2017	0,81	2017	0,81	2017	1,24
2018	0,81	2018	0,21	2018	0,77	2018	0,77	2018	1,31
2019	0,81	2019	0,35	2019	0,85	2019	0,85	2019	1,18

EBIT turnover ratio		Turnover/Assets	
2016	-0,55	2016	0,59
2017	-0,01	2017	0,73
2018	0,27	2018	0,77
2019	0,48	2019	0,73

(VA-PE)/Turnover		Other resources	
2016	0,17	2016	0,73
2017	0,50	2017	0,51
2018	0,66	2018	0,38
2019	0,76	2019	0,28

VA/Turnover		PE/Turnover	
2016	0,96	2016	0,79
2017	0,97	2017	0,47
2018	0,98	2018	0,32
2019	0,98	2019	0,22