




“Critical financial and accounting issues of early-stage innovative enterprises”

AUTHORS	András Bethlendi   Roxána Urbanics
ARTICLE INFO	András Bethlendi and Roxána Urbanics (2018). Critical financial and accounting issues of early-stage innovative enterprises. <i>Investment Management and Financial Innovations</i> , 15(4), 144-157. doi: 10.21511/imfi.15(4).2018.12
DOI	http://dx.doi.org/10.21511/imfi.15(4).2018.12
RELEASED ON	Wednesday, 14 November 2018
RECEIVED ON	Tuesday, 28 August 2018
ACCEPTED ON	Thursday, 18 October 2018
LICENSE	 This work is licensed under a Creative Commons Attribution 4.0 International License
JOURNAL	"Investment Management and Financial Innovations"
ISSN PRINT	1810-4967
ISSN ONLINE	1812-9358
PUBLISHER	LLC “Consulting Publishing Company “Business Perspectives”
FOUNDER	LLC “Consulting Publishing Company “Business Perspectives”



NUMBER OF REFERENCES

24



NUMBER OF FIGURES

3



NUMBER OF TABLES

2

© The author(s) 2021. This publication is an open access article.



BUSINESS PERSPECTIVES



LLC "CPC "Business Perspectives"
Hryhorii Skovoroda lane, 10, Sumy,
40022, Ukraine

www.businessperspectives.org

Received on: 28th of August, 2018

Accepted on: 18th of October, 2018

© András Bethlendi, Roxána
Urbanics, 2018

András Bethlendi, Ph.D., Associate
Professor at Department of Finance,
Faculty of Economic and Social
Sciences, Budapest University
of Technology and Economics,
Budapest; Researcher at Public
Finance Research Institute, Faculty
of Science of Public Governance and
Administration, National University
of Public Service, Hungary.

Roxána Urbanics, Economics
teacher at Budapest Business School,
Hungary.



This is an Open Access article,
distributed under the terms of the
[Creative Commons Attribution 4.0
International license](https://creativecommons.org/licenses/by/4.0/), which permits
unrestricted re-use, distribution,
and reproduction in any medium,
provided the original work is properly
cited.

András Bethlendi (Hungary), Roxána Urbanics (Hungary)

CRITICAL FINANCIAL AND ACCOUNTING ISSUES OF EARLY-STAGE INNOVATIVE ENTERPRISES

Abstract

While the most important financial and accounting issues of early-stage enterprises with fast growth potential (startups) are widely covered in practice-oriented literature, academic studies do not deal with this subject. In the author's opinion, this subject should receive more attention in academic writing, as inappropriate financial management can make it more difficult for startups to raise capital at a later stage of operation and, thus, to grow further. This paper is based on a sample of financial and tax due diligences of Hungarian startups. The authors intended to present some of the issues identified and relevant also to startups operating outside Hungary. The sample shows that due to a loss making operation in the early years, this type of companies can quickly use up their equity and, therefore, they need continuous ownership (equity) financing. The sample demonstrates that debt financing is not a viable option for this group of companies, the only option for them is venture capital financing. The authors confirmed the positive relation between startups and R&D&I. In their opinion, compliance with the rules and the optimization permitted by the rules themselves is highly significant for startups to manage their high upfront losses and to attain their general aim to raise investment capital. The financial and tax due diligences at startups allowed to identify several inappropriate practices due to complicated accounting and tax laws.

Keywords

innovative companies, startups, venture capital, capital raising, financial and tax due diligence, taxation, accounting

JEL Classification

M13, M41, H25, G24, G32

INTRODUCTION

Regarding our field of study, the literature on startups is rather ambiguous. While the financial and accounting issues of early-stage enterprises with fast growth potential (startups) are covered in practice-oriented literature, the subject is basically lacking from academic studies. In our opinion, these issues should receive more attention in academic writing, because inappropriate financial management can make it more difficult for startups to raise capital at a later stage of operation and, thus, to grow further. In this respect, our aim is to broaden the literature by presenting the most important financial and accounting issues of startups based on our experiences of financial and tax due diligences.

Multi-phase and multi-aspect due diligence of startups is a decisive feature of the venture capital market. First of all, a company needs to pass the business and human requirements of potential investors (the business concept and business model are validated, the management's aptitude is proved), and only then comes the financial, tax and legal due diligence.

This paper is based on a sample of 23 cases (21 companies registered in Hungary, 1 in Hong Kong and 1 in the USA) coming from our finan-

cial and tax due diligences. Our sample is small in size, but, in view of the Hungarian startup market, can be regarded representative. According to the statistics of the HVCA¹, in the past years, there have been 100 to 130 investments per year in the Hungarian venture capital investment market. We note that most of the screened startups succeeded in raising venture capital, so our sample was positively distorted in this respect. According to the industry, the portfolio is diversified, as it covers companies specializing in life science, IT, Fintech, media, e-commerce and precision agriculture.

Following a summary of the international literature, we use two methodological approaches in this study. Firstly, we collected the main financial indicators of companies within our sample to analyze them using descriptive statistics. Secondly, based on our diligences, we build-up another dataset on the identified risk factors that founders and investors² of these types of companies are usually faced with. We use a typological approach in order to identify the main types of financial and accounting issues of startups. We present issues more generally, which, thus, may be relevant to startups operating in other countries and to many other newly started or small businesses. In the last section, we identify good practices as well, based on our experience regarding the due diligences.

1. LITERATURE REVIEW

There is no generally accepted definition for a startup. In general, a startup is an early-stage business having potential for fast growth. Although some authors (Reis, 2011) do not narrow down their definition of a startup to newly started businesses only, the basic characteristic of startups is innovation aimed at creating new products and services, entailing a significant risk. This paper deals with early-stage companies that venture capital investors find worth investing in, according to which, in our opinion, these companies can certainly be called startups.

Businesses with the above-described attributes have existed in the past, we just did not call them startups. Schumpeter's entrepreneurship, theory from the early 20th century needs to be noted here. According to Schumpeter (1912, 1980)'s classic writing, entrepreneurs are people of action in the field of economics, using their resources to attain new goals, influence the dynamics of economics and drive development – they are the heroes of modern economic growth.

Let us note that Schumpeter's idea on entrepreneurship and innovation has changed by the early 1940s. By this time he thought that this social function is gradually losing its significance in the 20th century, innovation becomes a routine activ-

ity, and technical development (inside large companies) will be done by a team of qualified specialists (Madarász, 2014). Ever since, there has been much dispute in the literature on what mechanisms – those of the state or the market – really serve innovation, and as far as mechanisms of the market are concerned, whether innovation is connected to large companies or small entrepreneurs (Berlinger, 2017). Nevertheless, there is an agreement that a positive relation exists between venture capital and investment into innovation (Schröder, 2013), and that startups play an important role in economic policy terms, as the majority of new jobs globally are created by small and/or earlystage companies growing dynamically (Békés & Muraközy, 2012).

There are several models for grouping companies according to their life cycles – the most widely used among them to determine the life sections of fast growing businesses is the Timmons (1977) typology, which we also applied, but divided into further subsections. In this paper, we focus on problems of the first 3 to 5 years after establishment of the company, during which, after doing a great deal of R&D activity, startups finish the processes of product development, market research, establishment of the management and entry to the market. What all these stages (R&D, seed and startup) have in common is that the company needs continuous financing in all of them, however, the success of the new

1 <http://www.hvca.hu/en/statistics/>

2 The paper makes a distinction between two types of owners: founders and external investors. The latter ones are mostly financial investors, while founders actively manage the company.

product/service is still very insecure, so all in all there is a great amount of uncertainty about how the company is viewed, and of course there is a high rate of failure as well. This stage is also called the “valley of death”. The general and long-term experience in developed countries is that half of all new businesses (regardless how we define them) do not last for five years (Gonzalez, 2017b).

Regarding our field of study, the literature on startups is rather ambiguous. The practice-oriented literature (various guidelines, websites) draws attention to the necessity of financial and tax compliance. However, very few academic studies focus on this subject.

Practical guidelines, for example, the guideline for startups devised by KPMG, point out that current and accurate financial information is of crucial importance in terms of taxation, raising capital from external investors and reporting for already existing investors (KPMG, 2014).

There is an extensive literature on the selection and decision-making process followed by venture capital investors (see, for example, Silva, 2004). One element of this process is due diligence of financial and taxation issues in the past. The main areas of due diligence are the following (Camp, 2002):

- 1) screening due diligence: the aim is to narrow down the investment opportunities to a number of deals that still can be handled;
- 2) due diligence of the management and the founders: it is very much true to the venture capital industry that it invests into “people”;
- 3) validation of the business model (the value creation process);
- 4) financial due diligence (evaluation of performance in the past and the business plan);
- 5) legal due diligence, main areas of which are proper protection of intellectual property, corporate form, tax issues, existing prerogatives, etc.

The above areas are grouped in different ways in practice. For example, validation of the business

model often covers the due diligence of business plans, while financial due diligence is many times understood as evaluation of past reports and tax issues as well. It is based on this approach that we apply the concept of “financial and tax due diligence” in this paper.

In general, a startup having inaccurate or incomplete financial statements or lacking up-to-date numbers is evaluated negatively by investors. Weak financial statements are indicators on the quality or the reliability of the management (they cannot manage the numbers or speak the language of numbers, or they hide something or manage finances vaguely), according to Camp (2002). Our experience also confirms that these shortcomings have a “qualitative indicator” effect, as after such a short period of operation, financial mistakes can mostly be corrected.

The venture capital market is underdeveloped for many reasons. One of them is that entrepreneurs are lacking knowledge and information on the venture capital industry and its processes, including insufficient financial competence (for example, being unable to devise a business plan) (Rajchlová & Svatošová, 2016).

We note here that investors’ demand for due diligence has already appeared in the area of the less formal and less professional equity-based crowdfunding, in order for the industry to grow. In recent years, the so-called syndicated form of equity-based crowdfunding has gained ground. In the framework of this, the leading investors execute both pre-investment screening of founders and projects and post-investment monitoring offline. Thus, if the leading investor has a good reputation, then funding can be raised from geographically more remote investors. In many cases, investors follow the leading investor and not necessarily the given transaction (Agrawal et al., 2015).

One direction of research is the methodology and practice applied by startups for business planning (Gonzalez, 2017a). In this area, we need to mention the so-called “lean” trend. This model aims at launching the product or service onto the market as soon as possible. The available working capital is used up for that purpose, and only as much

money as the most necessary is spent on the general infrastructure (e.g. book-keeping) (Ries, 2011). At the same time, this model also acknowledges implicitly that a startup should live up to basic standards on financial reporting.

All in all, startups generally have a brief history of operation, and investors tend to invest mainly into future plans, business models and people. Thus, the evaluation of past performance is less relevant for the decision on the investment. At the same time, material mistakes in past financial statements and in the area of taxation influence the decisions of venture capitalists negatively. As a matter of fact, updated and accurate financial statements can be considered as minimum requirements.

In early company phases, the role of management accounting is sharply changing. Controls of the organization are usually very informal and there are high levels of uncertainty. Positive market test, company growth and targeting venture capital financing all lead to the formalization of organizational processes, including management accounting. Developing formal management accounting has external reasons as well. Firstly, contracting reason means that management accounting is adopted in order to make it possible to co-operate with external stakeholders such as private equity and other partner companies. Secondly, legitimizing means that a company adopts management accounting and systems in order to make the company look more credible for external parties (Davila et al., 2009). According to Granlund and Taipaleenmäki (2005), little attention was paid to performance measurement, to strategic planning, and, in some cases, even to internal financial analysis at technical startups. They found that the role of the accounting and controlling function changes along the life cycle of a startup. The smallest startups typically outsource bookkeeping and do not have a CFO. The entrepreneur/CEO is usually responsible for financial calculations. Once the companies grow, the companies that previously took care of statutory and controlling tasks themselves hire a CFO. When the capacity of the CFO is not sufficient anymore, a separate controller is hired to help the CFO.

Besides the above-mentioned details, the literature provides us with the following findings that are relevant to the subject of our study (Schröder, 2013):

- Banking financing is less feasible for startups. As owners, venture capitalists can gain greater control over the target company, and in case of a positive outcome the venture capitalists can realise a high yield, while the banks can only work a fix interest, which allows them to take significantly lower risks³;
- Therefore, in a more bank-based financial system this type of companies get a lower amount of venture capital investment and the banking financing can cause a crowding out effect.

2. METHODS

We use two methodological approaches in this study.

Firstly, we collect the balance sheet and P&L information of companies within our sample (data of the full year before the due diligence). Then we analyze the financial indicators received using descriptive statistics in order to identify the main financial characteristics of startups.

Secondly, we build-up another dataset on the findings (identified risk factors) coming from 23 due diligences. A high number of risk factors were identified. We exclude from our sample the ones that are very unique or rather legal in nature, so 80 risk factors remained. Then we use a typological approach in order to identify the main types of financial and accounting issues of startups.

All accounting figures in this study are prepared according to the local financial reporting standards (Hungarian, US and HK SME). We focus on the main elements of the balance sheet and the income statement, therefore, different standards cause only a limited distortion. The only exception is the internally generated intangible asset, which might be an important economic factor for startups. According to the Hungarian GAAP, like in the IFRS, internally developed intangible assets can be recognized. The main conditions are: (i)

3 If risks get higher, banks many times or increasingly opt for credit rationing (decreasing supply by tightening credit terms and conditions) rather than increasing interests (Stiglitz & Weiss, 1981).

it is probable that the expected future economic benefits that are attributable to the asset will flow to the entity and (ii) the cost of the asset can be measured reliably. US GAAP and HK SME standards are stricter in this field and tend to limit the recognition of internally generated intangible assets on balance sheet with some exceptions. Only two companies are affected by this accounting standard difference in our sample, therefore, this distortion is not significant.

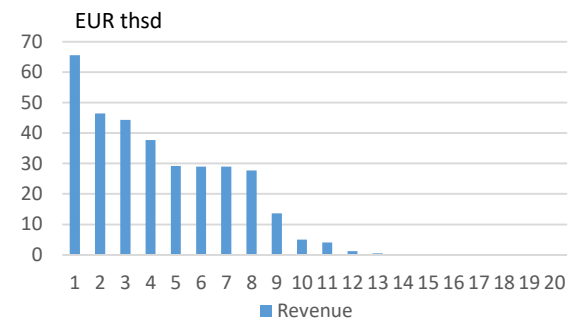
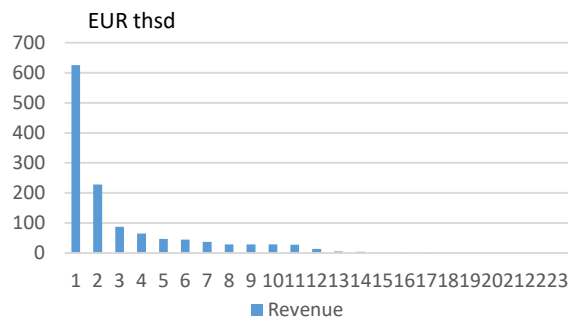
3. RESULTS

3.1. Financial characteristics of startups

The size of the companies in the sample is expressed by their annual revenue, on the one hand, and by their after-tax profit and own equity, on the other hand.

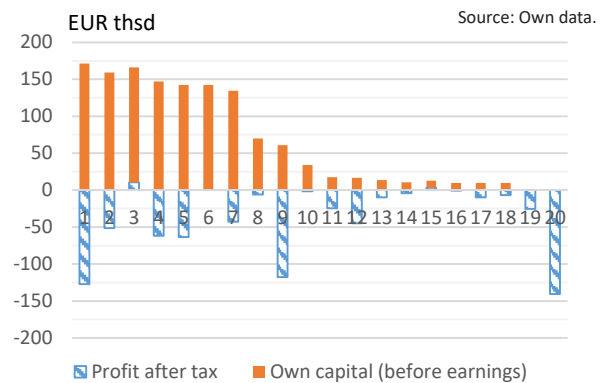
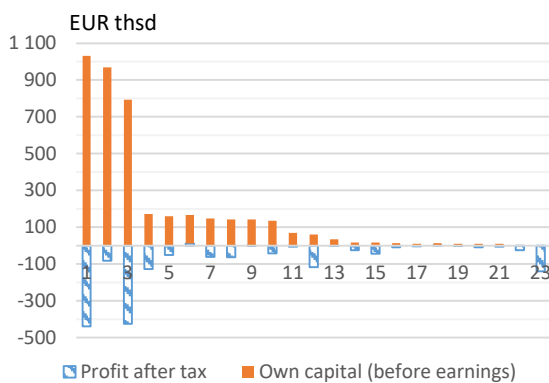
Regardless of the 3 companies with the highest revenues in our sample, the reviewed businesses have freshly appeared in the market, so they were truly in a startup stage (mean value of the companies' revenues was EUR 29 thousand). Four companies had no revenue at all in the year before the due diligence⁴. In six companies, a big portion of the revenue was generated by the capitalized own performance. The majority of the companies in the sample are in the service industry, but there are some that manufacture a certain product. Regarding their history of operation, these companies were typically established 2 or 3 years before the due diligence.

Among the reviewed companies, only 3 had a positive earnings. The companies lived up most of their equity during the year under review, which is typical to newly established startups. So, it is not by coincidence that literature calls this stage the "death of valley". In 6 companies, the equity



Source: Own data.

Figure 1. Total income in the year preceding the due diligence, for the whole sample and without the 3 biggest companies



Source: Own data.

Figure 2. After-tax profit and own equity (before taxes) for the whole sample and without the 3 biggest companies

4 Out of them 3 were already in the market and had revenue in the year of the due diligence.

turned to negative, and, in another 2, the equity was still in the positive range, but did not reach the half of the subscribed capital.

Expenditures are mainly of material type. The rate of personnel type of spending is low (median value is 15 percent). Similarly, the median statistical headcount is only 1 person. The founders of these companies typically work without reimbursement or for a very low amount of wage. And instead of employees, they apply external workforce in a more flexible arrangement, mainly as subcontractors (often sole entrepreneur).

Table 1. Main indicators applied in our sample

Source: Own data.

Financial indicator	Min.	Median	Average	Max.
Average statistical headcount	1.0	1.0	2.6	16.0
Revenues (in thousands of EUR)	–	29	81	722
Sales revenue	0%	90%	66%	100%
Capitalized value of own performance	0%	9%	32%	100%
Profit after taxation (in thousands of EUR)	–439.0	–25.4	–72.7	+10.8
Expenses (in thousands of EUR)	1	63	152	1,159
Material expenses	22%	78%	75%	100%
Personnel expenses	0%	15%	20%	78%
Depreciation	0%	2%	4%	23%
Other expenses	0%	0%	1%	6%
Total assets (in thousands of EUR)	1	75	188	1,131
The share of	–	–	–	–
Intangible assets	0%	25%	28%	81%
Tangible assets	0%	0%	3%	43%
Inventory	0%	0%	6%	86%
Receivables	0%	7%	13%	62%
Liquid assets	5%	38%	45%	100%
Deferred income and accrued expenses	0%	0%	4%	32%
Shareholders' equity (in thousands of EUR)	–140	32	106	887
Equity/total assets	–367%	76%	31%	100%
Third-party funds/total assets	0%	22%	67%	467%
Shareholder loan/total assets	0%	6%	56%	482%

In line with the literature, our sample aptly confirmed the positive relation between startups preferred by venture capital investors and R&D&I. The most dominant assets are the liquid and intan-

gible assets. Intangible assets constitute a significant proportion within total assets (median 25%), in spite due diligence proved that the developed intangible assets had not yet been brought into the company or the relevant costs have not or not yet been fully activated (in 9 cases). If we take these out of the sample, so if we consider those cases where these assets are under the management of the company, then the rate of intangible assets is significantly higher, with a median 43%. Besides, 22% of the businesses in our sample have won some kind of a tender (EU funds) connected to innovation or development, which also confirms that they are active in the field of innovation.

This type of companies is typically self-financed by the shareholders. Their high level of liquid assets is a result of ownership financing. In spite of the already mentioned companies with own equity, the median value of the equity/balance sheet total indicator is high (76%). Within third-party funds, the rate of shareholder loan is considerable. In our sample, none of the companies had a bank loan. It demonstrates that such risks cannot be managed by banks; debt financing is not viable for this group of companies. Besides the so-called 3Fs⁵, the only options for them are ways of capital market financing.

In terms of company form, our sample shows that startup entrepreneurs generally choose to be a “limited liability company” (or rarely the “joint-stock company”), for the following reasons:

- in general, a startup is established and operated by more than one founders for several reasons: various competencies need to be utilized in the project to reach fast success; at the beginning, they cannot really afford experts, so they offer ownership to them instead; the investors prefer to invest in “teams”;
- other company forms (limited partnership, cooperative) make external capital injection more difficult;
- because of the administrative burden and the costs of capital injection, the most frequent company form is limited liability company.

5 Founders, Family, Friends.

3.2. Identifying critical financial and accounting issues

We discuss the critical financial and accounting issues typical to this stage of business growth along the following main economic areas:

- 1) capital and liquidity management;
- 2) ownership connections;
- 3) taxation;
- 4) other issues.

There is often one thing in common with capital and liquidity management and ownership connections, and that is shareholder lending, so we handle it as a separate category. We group findings (identified risk factors) coming from due diligences under the above-mentioned areas and creating subgroups within them, we got the following distribution of risks.

The followings are structured according to Table 2.

1. Management of early loss-making years and liquidity problems

As mentioned above, the majority of startups typically go bankrupt within four to five years of operation. Compared to other new traditional activity businesses (e.g. a new bakery), the failure rate is higher in the case of a startup due to its new or novel and innovative activity (many times without experience on the given market) and relatively longer-term financing needs (due to R&D and product development).

From accounting aspects, loss-making operation and continuous liquidity problems raise the question how such businesses can comply with the principle of going concern. By signing the annual report or the consolidated annual report, company managers also “declare” that they can sustain operations for the foreseeable future. But what happens if they cannot involve additional financial resources and/or the market tests of the product or service under development are not satisfactory, and months after signing the report the startup goes bankrupt? Did the managers commit

Table 2. Distribution of financial and taxation risks identified

Source: Own data.

Main economic area	Risk type	Distribution of risks		Number of startups concerned
1. Capital and liquidity management	Intangible assets, rights of asset value and intellectual products are not brought into the company	40%	5%	4
	Issues with activating the capital and/or the R&D activity	–	11%	8
	Debts overdue	–	8%	6
	Cash in hand is enough to operate for 1-2 months	–	6%	5
	Own equity is negative or does not reach half of the subscribed capital	–	10%	8
2. Capital and liquidity management and ownership connections	Shareholder loans	13%	13%	10
3. Ownership connections	There is an active economic relationship between the target company and other interests of the owners	23%	9%	7
	Negative information is available about the activity of the current or previous contractors and/or senior managers of (any of) the owners	–	8%	6
	Other liabilities of the owner	–	6%	5
4. Taxation	Tax obligations	8%	8%	6
5. Other	Liabilities connected to EU funding	18%	9%	7
	Other	–	9%	5
Total	Total	100%	100%	–

Note: The table includes the proportion of 80 risks. It differs from the number of startups concerned by each problem.

bankruptcy fraud? More than half of the startups we examined were in such a situation at the time of their due diligence; they faced with at least one of the following problems: they had negative equity, a high amount of debts overdue, and liquidity enough for only 1-2 months. Therefore, proper equity management and complying with the rules concerning the sufficient level of equity is crucial.

It is typical to startups that post-creation capital raisings appear as an increase in the capital reserve, and subscribed capital is raised only minimally (capital increase by share premium). Basically, all the startups in our sample followed this practice. The reason for this is that capital reserve serves as collateral to early-stage losses. If the capital was raised in full by increasing the subscribed capital, the equity would easily decrease under the level of the subscribed capital due to the losses. Protecting a minimum level of equity is required by law in general. However, one third of the startups in our sample did not comply with this requirement. In fact, making efforts towards compliance may be important in a judicial investigation on an alleged bankruptcy fraud.

In case a startup is not successful, the business can be terminated with or without legal succession. However, the question might arise whether the managers of the startup committed bankruptcy fraud or not? For example, according to Hungarian law, however, bankruptcy fraud is an intentional act – a person can only be proved guilty of it if they were aware that the company was in a situation carrying potential danger of insolvency. This situation starts at a point in time when the managers of the business association foresee or could allegedly foresee that the business association would not be able to satisfy the claims against it in due time (Böcskei, 2014). Violating the rules on equity creates such a situation, for example, due to initial losses, startups have a high chance of getting thinly capitalized, which practically happens after a situation carrying potential danger of insolvency, so the legal responsibility of company managers can be established. In case a company is liquidated, bankruptcy fraud out of the question. Therefore, in practice, it is worth terminating an unsuccessful startup through legal succession or liquidation, and set aside the necessary (not significantly high) costs for this.

We have already mentioned that capital increase by share premium is an important tool in capital management. We would like to elaborate on techniques that can contribute to preserving the capital in the early years burdened by losses.

Our sample showed that most of the startups do significant R&D and/or product development. We see two kinds of practices for capital optimisation:

1. In an early stage, and in case the founders are private individuals, there is also a choice between internal and external (private) funding. Private individuals can use their own resources to do various developments, and they themselves can also do the development, and then they bring the resulting values into the startup business (see the next chapter on how they can do it), if the company's funding (by, for example, having an investor) and placing on the market seems to be on the right track. This is completely rational, as there is no point for a private individual as the owner in putting their own after-tax funds into a formal accounting-taxation system, when the success of the startup is still uncertain. Therefore, these activities do not burden the company's balance sheet.
2. A startup might find it beneficial to capitalize their R&D and product development costs to the greatest possible extent, within its means, as capitalised costs of R&D, or the finished product as a right in immovable assets or an intellectual product. Thus, costs become intangible assets and can be divided between years (as depreciation), improving the capital position of the startup in the early stages. Typical errors in the process of capitalization are:
 - a) the startup misses or takes little advantage of this opportunity, treats these costs as current expenditures, which may result in significantly negative equity;
 - b) the startup capitalizes too much, almost every cost item, including those that, by all means, need to be considered as current expenditures (e.g. the rent for the corporate seat), which cannot be substantiated in case of an external audit or tax inspection;

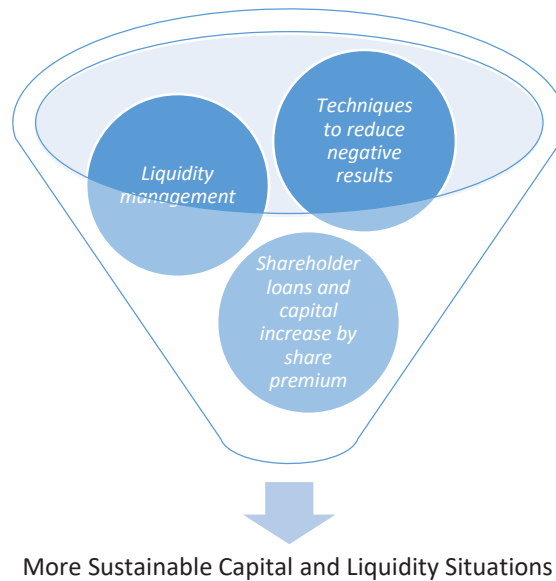


Figure 3. Capital and liquidity management

- c) there is no capitalization protocol, and without it is very difficult to prove subsequently that capitalization is substantiated for financial reasons.

Besides the above, capitalizing establishment and capital increase costs as the capitalized value of establishment/reorganization is also worthwhile. Costs of establishing a joint-stock company, for example, are significant, and capital increase may also involve high legal and due diligence costs. However, by way of capitalization, these costs become intangible assets, and their profit impact appears as depreciation, instead of a cost for the current year, so it is distributed in several years.

As already stated, it is typical to startups that their owners do R&D activities already before the establishment of the company. It often happens that, prior to the external investment, these R&D activities are not brought into the startup business. This should happen in a satisfactory manner – both in terms of the law (for example, with an agreement on transfer of ownership over an intellectual product) and accounting – which is indispensable for an external investor to invest in the business. These values can be brought into the company through contribution, free of charge transfer or

sale. Due to their relevance, the first two are discussed in more details here⁶.

Contribution is possible in the case of rights to ownership or intangible assets. The value of the contribution should be stated in its real market value, and it depends on the form of the company. It is important that the value of the contribution cannot be higher than the one established by an auditor or expert, but a lower value is possible.

Tangible and intangible assets transferred free of charge have to be recognized under other income as deferred income. After the depreciation of the tangible asset is recognized, the deferred income should be terminated in proportion to the depreciation.

If it is justifiable in terms of accounting, extreme cases also happen when the asset (for example, know-how, image elements, domain names⁷) received free of charge are entered basically with zero value into the books of the company. In such cases, the real value of these assets would be really hard to establish. The transfer of these assets serves to create legal certainty and prevent the copying of the product or service. In the case of intangible assets, rights in immovable assets and

⁶ Not a typical way of selling, because if the founders of the startup sell these assets to the startup, they withdraw sources from it.

⁷ A domain name can be preserved by paying an annual subscription fee, so in this case the liability of keeping the domain is transferred with its right of usage. Thus, it is justifiable to recognize this with zero value.

intellectual products taken over at a zero value, there is the possibility of appreciating these assets to their market value by value adjustment, which improves the startup's capital position.

2. Shareholder loans

At the time of the due diligence, 43% of the startups in our sample had already taken a shareholder loan. The primary aim of these loans is to ensure continuous liquidity. However, the typical problems connected to shareholder loans are:

- they are not documented or documented incompletely, and the way of interest payment and the schedule for principal repayment is not clear;
- they are not subordinated: the lender benefits from the cash flow before equity owners.

A new external investor provides capital injection so that the startup would develop further and not repay previous shareholders' loans. Therefore, investors will certainly demand a contract that stipulates (i) the source of repayment (own cash flow, capital injection, etc.) of the loan upon maturity (according to plans), and whether the term of repayment can be extended if such resources are not available; and (ii) whether the loan is subordinated to or handled at the same level as the investor's investment.

3. Ownership connections

For investors into startups, an ownership and management with proper professional background and reputation are of key importance. Many times it counts a lot more in the case of an external investment than the innovative idea itself, as the market success of the idea is still uncertain, but the success can be guaranteed by a reliable team of shareholders/managers having professional background.

Risks associated with shareholders can be mitigated in the following ways:

- if possible, the ownership structure should not include a person whose current or previous contractors and/or senior managers are in-

involved in publicly available negative information (e.g. bankruptcy, liquidation, tax arrears, unpaid loans);

- the shareholders have other significant liabilities (e.g. guarantor for a loan) or a general partner in a limited partnership (being responsible universally for all the liabilities of the partnership). In this case, if the liability is enforced, the share owned in the company may be transferred to an external third party.

At least one of the above risks appeared in the case of more than 40% of the startups in our sample.

It is also very common that the startup maintains active business relations with another party where any of the shareholders in the startup has economic interests. Proper handling of affiliated companies is a very significant aspect in terms of both taxation and an external investment, and not all startups pay enough attention to that. As far as an external investor is concerned, such an economic relationship may provide a way to pull out the investor's money from the startup in bad faith. There are special accounting and taxation requirements for affiliated companies, and startups should also comply with them. Due to the above, it is crucial in such relationships that the economic transactions are properly documented and comply with the relevant legislation.

4. Taxation

Taxation rules are rather country-specific. Therefore, this study summarizes the general – internationally relevant – experience. Regarding the Hungarian tax scheme, it is not the rate of the tax that creates problems, but the amount of information and administration needed to comply with the complex set of tax rules. A publication of the World Bank and PwC (2018) titled *Paying Taxes 2018* highlights that while the number of hours spent by Hungarian businesses with administration related to taxes is 277 hours per year on average, this time is 161 hours per year in case of businesses in other EU member states. Thus, the fact that inadequate practices connected to taxation and companies not taking advantage of the different positive taxation options (tax forms, tax advantages) were quite common in our sample is not surprising.

We note here based on anecdotal information that some of the startups coming from Hungary – established with the intention from the very beginning to appear in the global market – start their operation as a company registered in abroad (like two of the companies in our sample), partly due to more simple and favorable tax rules. An additional effect also contributes to making this decision, namely that having a tax residence in a more well-known country being closer to the target markets makes sales easier⁸.

5. Other issues

EU supports

More than 20% of the startups in our sample have won some kind of a non-refundable EU fund, in the value of EUR 119,000 on average. In only 2 out of 5 cases could the company actually use the EU supports. Another type of EU subsidies is participation in equity financing programmes (mostly in the JEREMIE program⁹).

However, compliance to the various EU requirements attached to these programs is a very important issue. The requirements concern either the use of the received funds or obligations of sustained operation. In certain cases, collateral requirements are imposed to restrict inadequate use of resources (e.g. shareholder guarantees).

The improper use of EU supports bears the risk of having to repay the subsidy. In case this is a signif-

icant risk, then it is enough in itself to hinder any external investor to invest in the startup.

Other

In the next section, we show three problems that appeared with a rate of 10% each.

Currently (according to accounting requirements prevailing in Hungary), changes in own-manufactured inventories have to be recognized once a year (at year-end). However, for external investors, this is mostly not transparent enough, as the value of own-manufactured stocks, semi-finished products and raw materials are constantly volatile and, thus, cannot be monitored. Therefore, manufacturing startups are advised to introduce preparing at least one internal controlling report to continuously monitor own-manufactured inventories so that they can be queried at any time (raw materials, unfinished production, semi-finished products, finished products in opened packages).

A relatively high amount of cash in hand (petty cash) is not too transparent for an external investor. This risk can be managed by applying proper cash handling rules.

Active management of expired accounts receivable is necessary even in this stage of operation. In fact, it is even more important than in the case of a well-established market presence, as a new company is only “getting acquainted” with its clients.

CONCLUSION

Regarding our field of study, the literature on startups is rather ambiguous. While the financial and accounting issues of early-stage enterprises with fast growth potential (startups) are widely covered in practice-oriented literature, this subject is basically lacking from academic studies. Our aim was to extend academic literature in this field. In our opinion, this subject should get more attention in academic writing, as inappropriate financial management can make it more difficult for startups to raise capital at a later stage and, thus, to grow further. In our paper, we intended to present some of the issues we identified that may be relevant to startups operating in other countries and to many newly established or small businesses.

8 For example, a company registered in the State of Delaware in the United States is more accepted in the global market than a company registered in Hungary.

9 Joint European Resources for Micro to Medium Enterprises is an initiative of the European Commission developed together with the European Investment Fund to promote the use of financial engineering instruments to improve access to finance for SMEs via Structural Funds interventions.

Multi-phase and multi-aspect due diligence of startups is a decisive feature of the venture capital market. First of all, a company needs to pass the business and human requirements of potential investors, and only then comes the financial and tax due diligence. This paper is based on experience gained by examining a sample of 23 instances of financial and tax due diligence. Our sample is small in size, but, in view of the Hungarian startup market, can be regarded significant.

Only a little more than 10% of the examined companies was profitable. The majority of them have lived up most of their equity during the year under review, which is typical to newly established startups. Our sample aptly confirmed the positive relation between startups and R&D&I. This type of companies is typically self-financed by the shareholders. In our sample, none of the companies had taken a loan from any financial institution. It demonstrates that such risks cannot be managed by banks, debt financing is not viable option for this group of companies.

Based on the due diligence of companies in our sample, we can say that complying with Hungary's complex financial accounting rules is a major challenge for startups, just as for any newly established company. Compliance with these rules and the optimisation permitted by the rules themselves is highly significant for startups for several reasons:

- 1) due to their high upfront losses and negative cash flow, proper equity and liquidity management is key for startups;
- 2) startups need to do everything to make it as easy as possible for the preferred external investor to obtain a share in the company, so that the finances and accounts of the company and the ensuing risks would not make it difficult.

We identified several inappropriate practices. Most of them are rooted in the complexity of economic legislation. This is what our paper intended to draw attention to. Then we also weighed these issues based on their impacts on finances and on a prospective capital investment.

Based on the risks we considered significant, we hereby define the following good practices:

- costs of establishment and capital increase and significant R&D and product development expenditures are recommended to be capitalised to a reasonable extent, which allows for mitigating major negative results and, thus, improving the capital position of the company in the early years of its operation;
- the results of R&D activities should be brought into the startup business in a satisfactory manner – both in terms of the law and accounting – without which an external investor will not invest in the business;
- the company should do its best to meet the requirements, if any, for the minimum level of equity. Insufficient equity levels should be sorted out with some technique;
- if the shareholders have other significant liabilities (e.g. guarantor for a loan) or a general partner in a limited partnership (being responsible universally for all the liabilities of the partnership), the ensuing risks should be mitigated;
- before the external investment arrives, the shareholder loans should be settled (e.g. by capitalization), or the startup should expect that the investor will subordinate the loan repayment to their investment;

- as for complex tax rules putting a significant administrative burden on the company (like, for example, the Hungarian taxation system), compliance with the rules should become a high priority for a startup;
- in the case of EU/state funds and preferential financing from EU/state resources, the company should be prepared that the investor will verify the regularity of the use of these funds.

Good practices for solving typical small-scale problems:

- in order to manage the legal risks of bankruptcy fraud, startup entrepreneurs should terminate an unsuccessful startup by legal succession or liquidation, and set aside the necessary amount for this well in advance;
- if there are economic connections between the startup and other companies where shareholders of the startup have economic interests, it is crucial that the economic transactions are properly documented and comply with the relevant legislation;
- manufacturing startups are advised to introduce preparing at least one internal controlling report to have an up-to-date monitoring of the stock;
- a relatively high demand for cash in hand (petty cash) needs to be managed in a reassuring manner;
- active management of expired accounts receivable is necessary even in this stage of operation.

REFERENCES

1. Agrawal, A., Catalini, C., & Goldfarb, A. (2015). *Are Syndicates the Killer App of Equity Crowdfunding?* (MIT Sloan Research Paper No. 5126-15). <https://doi.org/10.2139/ssrn.2569988>
2. Békés, G., & Muraközy, B. (2012). Magyar gazellák: gyors növekedésű vállalatok jellemzői és kialakulásuk elemzése Magyarországon. *Hungarian Gazelles: What Makes a High-Growth Firm in Hungary?* *Közgazdasági Szemle*, LIX(3), 233-262. Retrieved from <https://econpapers.repec.org/article/ksaszemle/1295.htm>
3. Berlinger, E. (2017). A piac és az állam szerepe az innovációban – Kornai János versus Joseph E. Stiglitz. *The Roles of the Market and the State in Innovation – János Kornai versus Joseph E. Stiglitz.* *Közgazdasági Szemle*, LXIV, 377-393. <http://dx.doi.org/10.18414/KSZ.2017.4.377>
4. Böcskei, E. (2014). Jegyzett tőkére vonatkozó törvényi előírások. In Statutory provisions for subscribed capital (pp. 343-345). Hungary: Heti Válasz Lap- és Könyvkiadó Szolgáltató Kft.
5. Camp, J. J. (2002). *Venture Capital Due Diligence. A Guide to Making Smart Investment Choices and Increasing Your Portfolio Returns.* New York: John Wiley & Sons, Inc.
6. Davila, A., Foster, G., & Li, M. (2009). Reasons for management control systems adoption: Insights from product development systems choice by early-stage entrepreneurial companies. *Accounting, Organizations and Society*, 34, 322-347. <http://doi.org/10.1016/j.aos.2008.08.002>
7. GEM (2015). 2015/16 *Global Report, Global Entrepreneurship Monitor.* Retrieved from <http://www.gemconsortium.org/report>
8. Gonzalez, G. (2017). Startup Business Plans: Do Academic Researchers and Expert Practitioners Still Disagree? *Muma Business Review*, 1(15), 189-196. Retrieved from <http://pubs.mumabusinessreview.org/2017/MBR-2017-189-197-Gonzalez-StartupPlans.pdf>
9. Gonzalez, G. (2017b). What Factors Are Causal to Survival of a Startup? *Muma Business Review*, 1(9), 97-114. Retrieved from <http://pubs.mumabusinessreview.org/2017/MBR-2017-097-114-Gonzalez-Survival-Factors.pdf>
10. Granlund, M., & Taipaleenmäki, J. (2005). Management control and controllership in new economy firms – a life cycle perspective. *Management Accounting Research*, 16(1), 21-57. <https://doi.org/10.1016/j.mar.2004.09.003>
11. Hall, B. (2002). *The Financing of Research and Development* (National Bureau of Economic Research Working Paper No. 8773). <https://doi.org/10.3386/w8773>

12. KPMG (2014). *Startup Success: A Guide to Growing Your Business*. Retrieved from <http://www.kpmg-institutes.com/institutes/global-enterprise-institute/articles/2014/02/kpmg-guide-to-startup-success.html>
13. Kuti, M., Bedő, Zs., & Geiszl, D. (2017). Equity-based Crowdfunding. *Financial and Economic Review*, 16(4), 187-200. <http://doi.org/10.25201/FER.16.4.187200>
14. Madarász, A. (2014). Hogyan született a vállalkozó? (Fogalomtörténeti töredékek Schumpeter vállalkozóelméletéhez). How was the entrepreneur born? Fragments on the history of definitions supplementing Schumpeter's theory of entrepreneurship. *Külgazdasági Szemle*, 58(7-8), 3-29. Retrieved from http://real.mtak.hu/15119/1/Madar%C3%A1sz_K%C3%BClg.2014_7-8.pdf
15. Nagy, L. (2017). Impact of the Tax System on the Competitiveness of Businesses and Capital Inflow. *Public Finance Quarterly*, 1, 22-38. Retrieved from https://www.penzugyiszemle.hu/pfq/upload/pdf/penzugyi_szemle_angol/volume_62_2017_1/nagy_2017_1_a.pdf
16. Rajchlová, J., & Svatošová, V. (2016). Benchmarking Study on the Venture Capital Market in the Czech Republic, Hungary and the Netherlands. *Investment Management and Financial Innovations*, 13(3-1), 191-202. [http://dx.doi.org/10.21511/imfi.13\(3-1\).2016.05](http://dx.doi.org/10.21511/imfi.13(3-1).2016.05)
17. Ries, E. (2011). *The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses* (1st ed.). New York: Crown Business.
18. Silva, J. (2004). Venture Capitalists' Decision-Making in Small Equity Markets: a Case Study Using Participant Observation. *Venture Capital*, 6(2-3), 125-145. <https://doi.org/10.1080/13691060410001675974>
19. Schröder, C. (2013). Does the Financial System Affects Early Stage Venture Capital Investments? *Banks and Bank Systems*, 8(1). Retrieved from <https://businessperspectives.org/journals/banks-and-bank-systems/issue-179/does-the-financial-system-affects-early-stage-venture-capital-investments>
20. Schumpeter, J. (1912, 1980). *A gazdasági fejlődés elmélete. Vizsgálódás a vállalkozói profitról, a tőkéről, a hitelről, a kamatról és a konjunktúraciklusról. Theory of Economic Development. An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle*. Budapest: Közgazdasági és Jogi Könyvkiadó.
21. Stiglitz, J. E., & Weiss, A. (1981). Credit Rationing in Markets with Imperfect Information. *American Economic Review*, 71(3), 393-410. Retrieved from https://www.jstor.org/stable/1802787?seq=1#page_scan_tab_contents
22. Timmons, J. (1977). *New venture creation: a guide to small business development*. US: R.D. Irwin.
23. Yung, Ch. (2009). Entrepreneurial Financing and Costly Due Diligence. *The Financial Review*, 44(1), 137-149. <https://doi.org/10.1111/j.1540-6288.2008.00213.x>
24. Worldbank, & PwC (2018). *Paying Taxes 2018*. Retrieved from <https://www.pwc.com/pay-ingtaxes>