

Incentives and restrictions in venture capital contracts*

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In venture capital markets, contracts between investors and enterprises stipulate special incentives and restrictions in order to address the occurrence of severe asymmetric information, to reduce investor risk, and to facilitate successful exits. The purpose of this paper is to provide an overview of the international literature on venture capital contracts with a primary focus on empirical aspects, and to compare the authors' findings with the Hungarian practice as reflected in the questionnaire-based survey conducted among venture capital funds. We concentrated our research on management control rights, the application of convertible debt, cash flow rights, voting rights, and drag-along and tag-along rights. In the article we describe the key features of venture capital contracts, the characteristics of selected contract elements and their impact on corporate operations and the contracting parties. After the presentation of individual contract elements, we summarise the relevant empirical evidence of international papers and draw conclusions in light of the Hungarian contracting practice.

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1. Introduction

Venture capitalists can be best described as organisations investing in projects that offer high return potential but also high risk (Sahlman 1990), typically setting a pre-determined time horizon for their investments (Karsai 2012). The most prominent difference between venture capitalists and other financial intermediaries is that VCs play a role above and beyond traditional financial intermediaries in that they provide not only capital, but also professional support to the selected firms and as such, they are actively involved in the enterprises as owners (Hellmann–Puri 2002).

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During the term of the investment, as well as in the pre-screening and contracting phase, a condition of asymmetric information may arise from the fact that the investor and the entrepreneur typically do not know each other's product,¹ and they have no control over each other's activities or the result thereof. The first issue may give rise to adverse selection, while the second may become problematic because of the presence of moral hazard. The degree of adverse selection and moral hazard is usually higher in venture capital finance, which is typically aimed at innovative, high-risk projects with uncertain outcome. Moreover, the problems may also become double-sided, running the risk of double moral-hazard situations where not only the entrepreneur, but also the venture capitalist assumes an active role, with both parties functioning as agents.²

Venture capitalists develop their contract design carefully, and subsequently continue to monitor the enterprise (*Sahlman 1990*) so that they can recognise and manage the effects of information asymmetry. Venture capital markets, in particular, the relationship between the venture capitalist and the entrepreneur and the contract elements defining the particulars of the investment (including their characteristic features and impact on the future success of the project) are topics that have been discussed increasingly often in the international literature since the early 2000s. This paper is intended to contribute to these discussions by providing a comprehensive review of the findings of international empirical studies on the one hand and, on the other hand, to start bridging the gap in the Hungarian literature by offering an analysis on the special features of the continuously expanding Hungarian venture capitalist and entrepreneur community. In the absence of a contract database, we settled for the next best solution, and employed a questionnaire-based survey to obtain an insight into the relevant Hungarian practice. The experience gleaned from the exercise reflects the responses of 15 Hungarian equity fund managers, complemented with the full contents of 32 syndicate agreements.

2. International research used for this paper

Over the past ten years, the empirical analysis of venture capital contracts has come into special focus. In our research, we collected empirical studies that investigated the elements of venture capital contracts.

Table 1 presents a summary of the databases accessed by the authors of the empirical studies reviewed. The majority of the results reflect investor practices in the United States, with most researchers relying on US contracts for their analyses.

¹ The word "product" is used in the most comprehensive sense of the term. The entrepreneur's product may be the project itself, or the entrepreneur's managerial skills. The venture capitalist's product may embody his professional network or investment expertise.

² A description of the so-called "Principal and Agent" problem in Hungarian (*Rees 1985*).

This can be partly attributed to the fact that the United States boasts the longest history of the venture capital industry, and partly to transparency – or the lack thereof. Due to the reluctance of fund managers, it is difficult to gain access to venture capital contracts in most countries. Apart from the United States, exceptions include Germany, where Hirsch and Walz compiled an impressive database from the investment records of German private equity funds, and Italy, where Caselli et al. succeeded in collecting a nearly full set of Italian investment data.³⁴⁵⁶⁷

Table 1.
Summary table of the empirical research reviewed

Author, date	Examined period	Geographical focus	No. of companies	Contracting stage ³
Trester, 1998	n.a.	United States	kb. 100 ⁴	n.a.
Kaplan–Strömberg, 2003	1992–2001	United States	119	first and further stage contracts
Kaplan–Strömberg [2004]	1992–2001	United States	67 ⁵	first and further stage contracts
Kaplan et al., 2007	1998–2001	23 countries ⁶	145	first and further stage contracts
Cumming, 2008	1996–2005	Europe	223	n.a.
Bengtsson, 2011	2006–2007	United States	182	first stage contracts
Hirsch–Walz, 2013	1990–2004	Germany	290	first stage contracts
Caselli et al., 2013	1999–2005	Italy	563 ⁷	first and further stage contracts

Source: Own compilation based on the used studies.

The studies reviewed for this paper did not provide any details about additional characteristics of the groups of enterprises included in their samples, such as the size of the target firms or the ratio of the funds raised to firm size. Thus, we interpret the results as being pertinent to the venture capital market in general. State participation and thus the proportion of government support varies from country to country. According to the data (for 25 countries and over 22,000 investments) of

3 Under the first venture capital financing round, the authors examine early stage investments: these firms are “pre-revenue enterprises” not yet involved in actual operations. Later round venture capital financing usually refers to a second financing round; entry is made at a later stage when the growth-stage company is already collecting revenues.

4 The author did not offer precise information in the article.

5 The sample is the sub-sample of *Kaplan and Strömberg (2003)*.

6 For the most part, 1–5 contracts per country, except Israel (15), the United Kingdom (10), Germany (14), Switzerland (27) and Sweden (23).

7 The authors disclosed the number of contracts but not the number of enterprises.

Brander et al. (2015), venture capital funds typically rely on private investors in the United States, while government sponsorship is more prominent in Germany and several other European countries, with state involvement as high as 30 or 50 per cent. In Hungary, there is a strong⁸ presence of funds in public-private partnership, especially after the recent launch of the JEREMIE programme;⁹ accordingly, our research primarily covers JEREMIE funds.

In the course of the empirical research referred to above, the authors sought answers to numerous questions, such as the preferred proportion of incentives and restrictions in contracts, or the impact of certain restrictions on exit options and thus the venture capitalist's profit. In the following, we highlight the most typical findings.

3. Management control, control rights and board control

Besides cash flow rights, control rights in venture capital contracts have the most extensive literature of all venture capital incentives. Empirical evidence shows that this is no coincidence; both control and cash flow rights constitute an organic and inseparable part of the contracting process. As with most incentives, control rights are designed to handle the principal-agent problem, granting the investor, whose compensation depends entirely on the success of the enterprise, a measure of control over the operation of the business.

Management control rights mean the right to appoint or fire executive officers, i.e. the chief executive officer (CEO) and the chief financial officer (CFO). Under management control, in case of a failure to meet a pre-agreed and contractually stipulated observable measure of performance, the investor is entitled to replace the CEO (*Fried–Hisrich 1995*). Such a metric for the CEO may be a significant deviation from the business plan agreed upon contract conclusion (shortfall in revenues, overspending, substantial underperformance of after-tax profit goals). The appointment of the chief financial officer by the investor may be an efficient means to ensure financial oversight over operations. Essentially, the goal of the venture capitalist is to have input into business strategy, to oversee financial processes and to ensure the adequate utilisation of the invested funds; it is less likely to intervene at the operational level.

Board control entitles the investor to elect or delegate members of the supervisory board or the board of directors and, through their position, exert an influence

⁸ For more details on the JEREMIE programme and the so-called JEREMIE Funds available under the programme, see *Lovas and Rába (2013)*.

⁹ The first JEREMIE programmes were launched in June 2009 in Hungary. By now, 28 venture capital funds have been established under the programme with co-financing from the European Union, and they currently account for around 70 per cent of the market (*MNB 2015*).

on corporate strategy and assume operational control (*Sahlman 1990*). The involvement of the venture capitalist in the supervisory board or the board of directors through a delegated proxy is more common for high-risk investments. Board representation ensures more in-depth insight into the conduct of business and control over decisions in the case of higher exposure.

3.1. International experiences

Board control rights are commonly used tools by venture capitalists in the first round contracts examined by Bengtsson. In the reviewed sample, the venture capitalists had not only one, but 2.1 board seats on average. Remarkably, in nearly one fifth of the cases (18%), the investor had full control over corporate decisions by virtue of controlling a majority of board seats (*Bengtsson 2011*). Based on US contracts, Bengtsson argues that protective covenants¹⁰ in the form of veto rights are less common when investors negotiate weaker control rights; investors are more likely to stipulate such covenants when they have more substantial exposure – such as debt contracts – and exercise them even if they have majority control over business decisions (*Bengtsson 2011*).

With respect to management control, the research by *Cumming (2008)* focuses on the replacement of the CEO, while it addresses the investor's majority position on the board in the context of board control.¹¹ The author's multivariate logit model describes the marginal effects of changes in veto rights – veto rights in connection with asset sales, asset purchases, changes in control and issues of equity. He found a statistically significant correlation between the stipulation of management/board control and veto rights, and the exit vehicle of acquisition.

Negotiating the right to replace the CEO increases the probability of acquisition by 38.6 per cent in itself; however, when all other correlating variables are taken into account – such as board control, veto rights, drag-along right and anti-dilution protection – this rate drops to 23.6 per cent.

The investor's majority position on the board and its majority voting right, *ceteris paribus*, increase the probability of an acquisition exit by 23.7 per cent. As in the previous case, *Cumming* explores the effect of the correlating variables mentioned above; namely, that each individual variable increases the probability of an acquisition exit by 12.2 per cent.

¹⁰ Covenants are commitments intended to bring in line the interests of the investor with those of the entrepreneur and protect collateral. For further details, see *Walter (2014)*.

¹¹ It should be noted that the Hungarian and Anglo-Saxon practice of corporate governance differ from one another with respect to decision-making. In the Hungarian practice, significant decisions are made at the General Meeting or the Member's Meeting, while in the Anglo-Saxon system decision-making takes place at the Board Meeting, and anyone without representation will miss the chance of having an input.

Investment write-offs are 31.7 per cent less likely to take place when the right to replace the CEO (founder) is negotiated, and 18.2 per cent less likely when control rights (drag-along rights and anti-dilution protection) are granted to the investor. Although the correlation between the stipulation of the right to replace the CEO and control rights is 0.54 in Cumming's model, this does not affect the significance of the positive effect of control rights provisions on acquisition and their negative effect on write-offs.

On the whole, *Cumming (2008)* found that contractual clauses pertaining to these rights are more likely to lead to acquisition and weaker control rights tend to facilitate IPOs (initial public offering) or the unsuccessful closure of the investment, i.e. write-offs.

Kaplan and Strömberg (2004) investigated the relationship between the use of control rights and certain risk factors surrounding the investment. They classified risks into three categories. Risks in the first group – internal risks – arise from a condition of asymmetric information, such as the investor's difficulty in monitoring the enterprise or the entrepreneur's capital utilisation habits. By contrast, VCs and founders may face risks that are equally uncertain for both parties. Examples of such external risks include the response of competitors or future demand for the enterprise's products. Finally, the third group comprises execution risks. These risks materialise when, despite a seamless relationship between the entrepreneur and the investor and both parties' high expectations about future demand, the parties fail to implement the corporate strategy. Empirical evidence confirmed the assumption that the exacerbation of both internal and external risk factors is in equal proportion to the increase in investor control. The riskier the enterprise's operating environment, the stronger investor control can be expected. Execution risks, however, showed no correlation with the degree of control, and appear to be related to other contractual mechanisms, such as vesting structures and liquidation rights¹² (*Kaplan–Strömberg 2004*).

Caselli et al. (2011) examined 834 private equity deals, seeking a correlation between the composition of the board and expected returns. Since their sample included 563 venture capital contracts as well, their results are also relevant to this segment of private equity. They found that the number of contemporaneous and previous seats on boards was negatively related to performance; moreover, internally appointed VC board members correlated negatively with performance. While this finding may have numerous explanations, there is one clear conclusion for venture capitalists: a firm will perform better with external experts on the board of directors, i.e. when the appointed director's relationship with the fund is weaker.

¹² Vesting structures can be viewed as the "gradual acquisition of stake". Under liquidation rights, upon the sale or the liquidation of an enterprise, venture capitalists enjoy a higher rank in the hierarchy instead of simply collecting the proceeds on a pro-rata basis. For further details, see *Zsembery (2014)*.

3.2. Hungarian market experience

In examining Hungarian practice, we essentially sought to find answers to two questions: is it important for Hungarian fund managers to have an option to change executive officers, and do they exercise any control over their portfolio companies through board seats? Our results confirmed our initial hypothesis that, consistent with the evidence of international research, these two mechanisms were also important in Hungary.

Most respondents (13 funds out of 15) negotiate contract clauses ensuring seats on the board, while nearly all respondents (all except 1) retain the right to recall and appoint executive officers (CEO/CFO). However, in Hungary the role of the Board of Directors is different from the Anglo-Saxon practice in that all important decisions are made at the General Meeting or at the Member's Meeting. Reflecting on the analysis performed by Caselli et al., i.e. whether fund managers prefer to appoint "outside" or "inside" board members, nearly half of Hungarian respondents (6 out of 15) appointed external experts from time to time, while in most cases, they had their own employees sit on boards who are actively involved in different sectors and investments. There may be two reasons behind this result: on the one hand, Hungarian fund managers are smaller in size compared to their international peers and, due to their limitations in size, they are less likely to have sufficient resources and connections to recruit suitable external experts and employees. On the other hand, of the limited pool of such experts, few can afford to accept a job with entry-level pay at a high-risk start-up in Hungary and similarly, there is an extremely limited number of experts who, besides having experience obtained at multinational corporations, are also capable of managing a small enterprise.

4. Voting rights

For an investor, the allocation of *voting rights* and the assumption of *veto rights* are also conditional on investor control in certain questions (Sahlman 1990). The investor may clinch a control position through the appropriate allocation of voting rights in the Member's Meeting or General Meeting of the enterprise, but even without having a majority voting position, an investor seeks to stipulate a veto right (in the articles of association or the statutes) in several questions (such as the election or replacement of executive officers, the entry of new members, acquisition of stake in another enterprise, approval of the business plan). As a result, in certain issues no decision can be made without the investor in any case.

4.1. Empirical results in the international literature

Bengtsson (2011) found that the allocation of voting rights (minority vs. majority) was related to the number of contractual covenants (e.g. restrictions on capital injection and asset acquisition, election of management). In the case of the

investor's controlling interest, 2.45 covenants are applied on average compared to 3.06 covenants for minority shareholding, which underpins the higher risk assumed by minority shareholders (*Bengtsson 2011*).

Empirical evidence from the analysis of German contracts demonstrates that the allocation of voting rights largely depends on the type of the venture capitalist, i.e. whether the VC controls the assets of independent private investors, or the funds of an institution (bank or government). In the first case, venture capitalists receive more than 50 per cent of voting rights on average, while this ratio is less than 25 per cent in the latter case (*Hirsch–Walz 2013*).

In the first round US contracts analysed by Kaplan and Strömberg, the voting power of venture capitalists was a minimum of 41 per cent, but in one case it was as high as 69 per cent (*Kaplan–Strömberg 2003*). Similar ratios were seen in contracts outside of the United States: investors held 37 per cent of the votes on average (*Kaplan–Strömberg 2003*).

4.2. Hungarian market experience

In Anglo-Saxon countries some stakes (business share at LLCs) do not ensure voting rights or board membership. By contrast, in Hungary ownership rights and voting rights almost always go together, and they are rarely separate from one another. The proportion of voting rights (and thus, ownership rights) varies widely in Hungarian practice, ranging between 25 per cent + 1 vote to as high as 75 per cent; it is equally common to have minority rights or the majority of votes. This is also consistent with Kaplan and Strömberg. With reference to Bengtsson's conclusions, we identified the relevant covenants, but due to the small size of our database, we failed to find a correlation with investor share. As most of the funds reviewed involved independent, private investors providing capital in a mixed model alongside European Union financing, we were unable to identify any relevance of Hirsch and Walz's research to the practice observed in the Hungarian venture capital market.

5. Cash flow rights

In a world without information asymmetry, there would be no need to use cash flow rights. In reality, however, the outcome of a firm's activity hinges upon the will and the abilities of the entrepreneur, and since investors have no opportunity to fully observe and monitor this (or it would be prohibitively costly), they needed to find a way to protect themselves from unsuccessful outcomes. At a theoretical level, *Holmstrom (1979)* demonstrated that, with limited liability and risk averse investors, an optimal contract design could provide maximum downside protection, allocating 100 per cent of cash flows to the investor. In the real world of venture capital contracts, however, this is not the case: most clauses ensure some payoff to the entrepreneur even in the case of a failure.

Cash flow rights diverted from ownership ratios for a share in corporate cash flows, however, are not only intended to provide downside protection. The additional functions of cash flow rights play an especially important role in the case of innovative start-up companies; indeed, these enterprises do not have any accumulated assets to be liquidated in the case of default. Cash flow rights are designed to serve three purposes: not only do they ensure priority share for investors from the “recoverable” cash flow, but they also protect the investor’s share from being diluted when additional financing happens at a lower valuation; thirdly, cash flow rights define the exit payment hierarchy, and as such, they allow the investor to achieve the expected return.

The most commonly used cash flow rights can be classified into seven categories (based on the classification of *Bengtsson and Sensoy 2011*). By their design, *cumulative dividend rights*, *liquidation preference* and *participation rights* secure a higher share for the investor from corporate cash flows in case of poor performance or indeed, allocate all of the cash flow to the investor. *Anti-dilution rights* protect the investor against future share issues at a lower valuation than the current – protected – round (i.e. the investor’s investment), by allocating additional shares to the investor in such cases. As a result, the venture capitalist’s share in the enterprise will not decrease excessively. At the same time, anti-dilution provisions also serve as a means to sanction poor performance by the entrepreneur. *Redemption rights* allocate a put option to the investor, allowing him to sell his own share to the enterprise or to the original owners in case of poor performance. By contrast, *pay-to-play rights* are intended to protect the entrepreneur against the cash flow rights described above, by determining the extent to which the investor will lose his rights if he chooses not to participate in the next financing round. In most Hungarian venture capital contracts, *liquidation preference* provisions define the payment hierarchy and the extent to which the investor receives proceeds from the exit price, depending on the internal rate of return (IRR).

Investment in the form of convertible debt and convertible preferred equity allows for an endogenous allocation of cash flow rights, and it is a common form of financing provided to start-up enterprises (*Hellmann–Puri 2002*). Through convertibility, the features of loans and shares are combined in a single security, providing protection to the venture capitalist for the eventuality of underperformance, for example, by way of the debtors’ rank in the payment hierarchy during liquidation. If the enterprise is successful, the VC can choose to convert the security and enjoy additional proceeds relative to the loan payment.¹³

¹³ For more detail about the risks and cash flow effects of mezzanine finance, see *Kőszegi and Walter (2014)*.

5.1. International experiences

Bengtsson and Sensoy (2011) investigated the relationship between cash flow rights – in particular, downside protection rights – and investor abilities. Their main finding was that more experienced venture capitalists with superior abilities typically obtain weaker downside protection rights. These VCs prefer the use of board representation and voting control as a means to ensure the success of the portfolio company.

Kaplan and Strömberg (2003) confirmed the assertion proposed in the first part of the chapter, namely, that the degree of cash flow control correlates with the enterprise's performance and project stage. In the authors' sample, the portion of cash flows to which investors were entitled under the worst-case scenario exceeded the portion received under the best-case scenario by 8.8 per cent. Another, even more important observation was the fact that venture capitalists controlled almost half of the cash flows in the sample despite being, for the most part, minority shareholders in the portfolio company. By way of comparison, in this sample, founders were entitled to a third, while other stakeholders to a fifth of cash flows. The authors also provided evidence that venture capitalists tend to consider the protection of their investments as a priority when the enterprise is sold or performs poorly. Of the 213 financing rounds in the sample, it was only in one case that founders' claims were not preceded in seniority by investor claims, and 98 per cent of these claims were at least as high as the originally invested amount. Evidently, for the time being, investors are not inclined to share the non-performance of the entrepreneur. The frequency of anti-dilution provisions (95 per cent) is similar to the frequency of liquidation rights.

In Cumming's research, common equity investment usually entailed fewer and weaker control rights than those stipulated in the case of convertible preferred equity investment. IPO as an exit vehicle was 12 per cent more likely in the case of common equity investments. Acquisition exits, in turn, were far more likely when the form of finance was convertible preferred equity (*Cumming 2008*).

The share of convertible securities in the financing structure varies across countries. According to Kaplan and Strömberg, 96 per cent of the contracts included convertible securities, while 79 per cent of US contracts exclusively stipulated convertible stock (*Kaplan–Strömberg 2003*). A few years later, an American study (*Bengtsson 2011*) confirmed the significance of convertible securities, but their share was only 58 per cent according to this research. Compared to the financing structure prevailing in other countries, convertible preferred equity was used only in 54 per cent of non-USA investments (*Kaplan et al. 2007*).

Evidence shows that the proportion of convertible securities correlates with the severity of information asymmetry. Preferred equity is the dominant contract in

early stage financing when the condition of asymmetric information is more likely to arise.¹⁴ As the enterprise ages and matures and the control of the enterprise simplifies, the preference tends to shift to debt contracts (*Trester 1998*).

5.2. Hungarian market experience

Bengtsson and Sensoy (2011) found overall that the effect of cash flow rights declines in line with the improvement in performance, and eventually it dissipates altogether. This statement, however, is only true for markets where IPO is a realistic goal for an enterprise. In Hungary, however, this exit vehicle is far less common in an environment of low liquidity, high issue costs, small firm sizes and the lack of transparency demanded by the stock exchange. An enterprise has reached the pinnacle of success when it is sold on the private market, where cash flow rights, through liquidation preference, are still credited with great significance.

While Bengtsson and Sensoy concentrated on downside protection rights, based on the analysis of 32 Hungarian syndicate agreements we found that liquidation preference had become an indispensable part of syndicate agreements. In our questionnaire-based survey, we focused on the manner in which upside payoffs were shared.

Liquidation rights essentially mean that the investor receives a larger share of the exit proceeds than the pro-rata allocation would be until the expected return is reached, and as soon as the share to which he is entitled based on his ownership coincides with the expected return, the remaining proceeds are divided between the entrepreneur and the investor in a pre-defined proportion.

In the survey, we wanted to find out whether Hungarian investors were prepared to relinquish a certain portion of the exit payoffs to the entrepreneur before reaching the expected return on their investment and, should the return surpass expectations, were they willing to grant a larger proportion of the proceeds to the successful entrepreneur than the pro-rata payment.

Of the 15 respondents, 13 fund managers applied exclusive liquidation preference up to the invested amount plus an expected return. As the survey examined fund manager practices rather than individual contracts, this does not necessarily mean that, in most exits, it is only the fund manager that collects proceeds up to the amount of the expected return; however, it shows that diverting the purchase price is a common practice in the Hungarian venture capital market for the protection of the investor. More than a half of the fund managers (9 out of 15) stipulated pro-rata allocation even when the expected return was exceeded. The former

¹⁴ As preferred equity is considered to be equity financing, it does not increase leverage relative to convertible bonds. For more detail on leveraged finance, see *Berlinger et al. (2012)*.

result is not surprising: meeting the expected return is a minimum objective for all investors; the message of the latter, however, is intriguing. In a certain sense it means that the investor appreciates the entrepreneur's efforts in making the enterprise succeed only to the extent of the entrepreneur's shareholding – even after achieving sufficiently large payoffs (above the critical amount), the investor is unwilling to share the proceeds beyond a pro-rata basis.

6. Drag-along and tag-along rights

The use of drag-along and tag-along rights has become so widespread that these rights are now identified with the venture capital contract itself. During a potential divestiture, conflicts of interest may arise both on the part of the investor and the entrepreneur. This “hold-up” problem occurs when one party wishes to sell its stake but the other party makes it impossible by refusing to sell its own, when the buyer is only interested in acquiring a 100 per cent ownership. The so-called “co-sale” obligation or drag-along right was designed to solve this problem by allowing the investor to force the entrepreneur to sell his stake under identical terms and conditions (*Berglöf 1994; Zsembery 2014*). Tag-along rights (co-sale rights) are meant to ensure that, should the entrepreneur want to sell his stake, the investor has the opportunity to sell his own with the same terms, and vice versa (*Feld–Mendelson 2012*).

It is precisely because of the various contractual mechanisms that minority and majority status is not the most important issue for venture capitalists. These contractual stipulations may divert certain control and cash flow rights from the ownership ratio. The use of drag-along and tag-along rights independent of ownership share is an excellent example. Without going into details, it is important to note that not only the investor but usually all other shareholders have equity issuance rights and the right of first refusal, which allows them, in case of the enforcement of the drag-along right, to retain ownership in the enterprise by purchasing the stake of the investor; for this, however, they must offer at least the same price as the third-party buyer.

6.1. International findings

Empirical studies focusing on the use of drag-along and tag-along rights are scarce for the time being, perhaps because it has become so common that the incorporation of these rights into the contract is taken for granted. *Caselli et al. (2013)* appear to confirm this assumption by pointing out that these two rights are the two most frequently used covenants in venture capital contracts: they were observed in 87 per cent of the contracts comprising the authors' sample. The same study explored the correlation between these rights and returns and found that

their use did not correlate either with future returns or the success of the project. This observation also underpins their role as default covenants.

Since their significance is limited to a potential sale situation, we might think that there is some correlation between their use and the exit vehicle (write-off, acquisition, IPO). Relying on the database Cumming developed for Europe, he concentrated on the effect of drag-along rights when making comparisons between the exit vehicles of IPOs and acquisitions. It should be noted that *Cumming (2008)* discusses drag-along rights alongside additional control rights such as the investor's right of first refusal at sale and anti-dilution protection (extra control rights). In addition to management, board control and veto rights, the author incorporated drag-along rights, the right of first refusal and anti-dilution protection into his model and found that each individual variable increased the probability of acquisition exits by 12.2 per cent, and the extra control rights reduced the likelihood of write-offs by 18.7 per cent. Drag-along rights proved to be far more important and determinant than the rest of the extra control rights under review; drag-along provisions reduced the probability of IPOs by 15.8 per cent, and increased the likelihood of acquisition exits by 31.5 per cent (*Cumming 2008*).

6.2. Use of drag-along and tag-along rights in Hungary

Our analysis of 32 syndicate agreements revealed that, although fund managers had drag-along and tag-along rights in all cases, they could not always exercise these rights without restriction.¹⁵ In most cases, the use of drag-along rights was subject to conditions. The conditions imposed can be classified into four groups. The first group is associated with profitability, which means that, for the protection of the entrepreneur, investors could only exercise their right if the purchase price (adjusted for 100 per cent ownership) reached a multiple of a certain profitability indicator (typically EBITDA). The second group included conditions where this purchase price was linked to a nominal value. The third group of conditions focused on the performance of the business plan: the investor was only entitled to exercise his drag-along right in the case of missed milestones. The last restriction linked the enforcement of drag-along rights to a date which, once again, protected the entrepreneur by allowing him ample time to prove himself, without being forced to exit the project prematurely. The typical period stipulated by the contract was three years from the date of investment. In most cases, a combination of these conditions was used.

¹⁵ From the aspect of Hungarian practice, it should be noted that the enforcement of these rights by court order is considered by several legal counsels to be highly questionable in the case of limited liability companies.

Table 2.
Restrictions on the use of drag-along rights among Hungarian respondents

Restriction	% of usage among asset managers
EBITDA	27.30%
Nominal	36.40%
Business Plan	9.10%
Timing	100%
Other	18.20%

Source: Own compilation based on our own survey.

As indicated by the results presented in *Table 2*, in their contracts, Hungarian fund managers stipulate various restrictions on the use of drag-along rights. It should be stressed that all fund managers employ some temporal restriction, which prevents entrepreneurs from having to bail out prematurely.

7. Summary

Investors can choose from a wide variety of options to manage the risk of adverse selection and moral hazard, including control rights, liquidation rights, drag-along and tag-along rights. Evidence shows that the number of incentives and restrictions applied varies in function of the geographical area, investment types and the risk-level of the project. They have a profound impact on exit options and thus, the profitability of the enterprise; for instance, stronger investor rights increase the probability of IPOs.

We found that the mechanisms applied by Hungarian venture capitalists were similar to those employed in international markets, and were included in venture capital contracts in a similar fashion. Some observations, however, were interesting: for example, fewer Hungarian fund managers elect external members to sit on the board of their portfolio companies, and domestic fund managers explicitly prefer to render the use of certain rights conditional on the profitability (EBITDA) of the enterprise.

The reason behind both observations is likely to be the same: the smaller size of Hungarian fund managers. On the one hand, they have fewer resources to search for and recruit external board members; and on the other hand, they cannot rely on statistical samples in managing their portfolio companies, so in each case, they must give priority to profitability in order to ensure the expected return of their own investors.

Results pertaining to market entry and investment exits are unavailable for the time being, as the JEREMIE funds constituting the backbone of our research are still in the capital allocation phase; the evaluation of their success should be the subject of future research.

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