

Venture Capital and Private Equity in Italy: Evidence from Deal - level Data

Andrea Generale and Enrico Sette*

Bank of Italy

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Abstract

The goal of this paper is to provide a detailed picture of the venture capital and private equity industry in Italy. We collected deal level data through interviews with entrepreneurs and by submitting questionnaires to venture capital and private equity investors. We provide evidence about contract structure, entrepreneur characteristics, and investor propensity to provide advice to the entrepreneur. Our preliminary results suggest that Italian deals frequently employ veto rights, exit protection clauses, and anti-competitive clauses for the entrepreneur, while hybrid securities between debt and equity, and conditional voting rights are not as common as in the US market. A multivariate analysis suggests that protections to investors are coherent with firm characteristics, while, interestingly, prior knowledge of the entrepreneur does not reduce the likelihood of using protection clauses. Moreover, the presence of managers with specific skills raises the likelihood investors provide advice on strategic matters in venture capital deals. Entrepreneur education and experience also seem to have an effect. Finally, perceived improvements brought by investors are positively correlated with their equity stake in private equity deals.

Keywords: Venture Capital, Private Equity, Deal level data, Italy

JEL Codes: G24, G32

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1 Introduction

The goal of this paper is to provide a detailed picture of the venture capital and private equity industry in Italy. We collected information about contract structure, firm, entrepreneur, and investor characteristics at the deal level. Such information comes both from interviews with entrepreneurs (or other top managers, such as the CFO of the company) and from questionnaires filled by private equity investors, containing roughly the same information as those collected in the interviews with the entrepreneurs. The main goal is to test predictions about contract structure and its relation with entrepreneur and investor characteristics. A second key objective is to investigate to what extent venture capital / private equity (VC/PE) investors provide value added in terms of professional advice on strategic, operational, financial issues.

There already exist some work that test incomplete contract theories using detailed deal information (Kaplan and Stromberg 2003 and 2004). There also exist contributions that attempt to ascertain whether VC/PE favoured the professionalization of firms through hiring of specialized marketing, sales, financial directors, etc. (Hellman and Puri 2002). This work contributes to this literature in several ways. Firstly, it provides evidence on contract structures in Europe and in particular in a country where contract enforcement is poor¹. Secondly, we can use information on firm, entrepreneur and intermediary characteristics to understand their interrelation with contract structure. No previous work has access to data containing simultaneously information about contract structure, firm (entrepreneur) characteristics, extent to which the investor provided advice, fostered changes in operations and strategy, improved the activity of the firm. Finally, we can investigate the relation between firm (entrepreneur) characteristics and the extent to which the intermediary provided consulting services and advice to the entrepreneur.

As our first goal is to provide a picture of the private equity industry in Italy, including venture capital, our database includes information relative to operations at different stages. We have early-stage / start-up, expansion / replacement and buyouts. On the one hand, this is a positive feature of our database as we can investigate different kind of operations². On the other hand, this implies that we can rely on a limited number of observations for each class of operations. As the sample size increases thanks to fur-

¹The World Bank's "Doing Business" Report 2009 underlines that the civil judiciary in Italy ranks 156th out of 181 and it takes about 4 years to obtain the enforcement of a contract from a judge.

²There is essentially no paper investigating the structure of expansion/replacement operations, and only a recent paper by Acharya and Kehoe (2008) have access to detailed information about buyout contracts.

ther planned interviews with entrepreneurs, we expect to reach a reasonable sample size within each deal class.

The paper develops as follows: section 2 contains a review of the literature, section 3 presents the data, section 4 provides a descriptive analysis of the data, section 5 attempts at conducting a multivariate analysis, section 6 contains a discussion of the results and plans for future research.

2 Related literature

Starting from the early nineties, a large literature investigated both theoretically, and empirically, the characteristics of venture capital contracts. The theoretical literature³ suggests the optimality of contractual provisions such as milestones, veto power, exit clauses, and of securities featuring characteristics both of debt and of equity (“hybrid securities”). The theory also suggests what firm and investor characteristics should be more strongly correlated with certain clauses and contractual features. The empirical literature attempted to provide confirmation to such predictions. An important paper in this area is Kaplan and Stromberg (2003) who is the first to contain deal-level data. Using data from intermediaries operating in the American market, they show that situations in which contracts are more "incomplete" are associated with wider use of veto power and exit protections for the investors. Kaplan and Stromberg (2004) using a subset of the same data, investigate how firm characteristics as perceived by venture capitalists affect the use of certain contractual provisions. They also investigate how the degree of activism of the investor depends upon firm characteristics as perceived by the investor. The latter is stronger, the larger the fraction of equity detained by investors. Recent work by Bienz and Hirsch (2006), using German data collected by intermediaries, analyze staging and milestones as a function of measures of firm’s opacity. They show that staging is more frequent when the project is surrounded by greater uncertainty, while the degree of tangibility of assets seems to have little explanatory power. Bienz and Walz (2006) use the same data to investigate how rights attributed to the intermediaries vary over time. They show that such rights do not change quantitatively, but they do change qualitatively, as intermediaries tend to lose rights on management aspects and gain rights concerned to exit the investment as time goes by.

The issue of investor activism has been tackled recently by Bottazzi et al. (2008)

³Among the theoretical contributions Casamatta (2003), Chemla et al (2004), Cornelli et al (2003), Cumming et al (2002, 2006, 2008), Cuny et al. (2004), Gilson (2003), Hellman (1998 and 2004), Sahlman (1988, 1990 and 1991), Schmidt (2003).

on data collected through questionnaires sent to intermediaries. They show that more experienced and "independent" (from banks) intermediaries are more active and that greater activism seems to raise the chances the investment is exited through an IPO.

Another important topic is the extent to which venture capitalists provide "value added" to the entrepreneur by offering advice on various aspects such as marketing, sales, finance, strategy design, etc., or favour the professionalization of the firm. This issue is partly tackled by Hellman and Puri (2002) by sending questionnaires to firms. They show that firms obtaining venture capital financing are more likely to hire professional managers or an external CEO.

There is little work investigating the structure of private equity deals (expansion, replacement, turnaround, buyouts). A recent paper by Acharya and Kehoe (2008) provides some evidence on the structure of deals and attempts to relate performance measures to characteristics of the deal and of the investors.

The extent to which venture capital and private equity creates value is a key question and several papers attempted to provide an answer to it⁴. Unfortunately, it is very difficult to identify causal effects due to the difficulty in finding adequate control groups, or valid instruments for venture capital investment. Then, it is not clear whether venture capitalist are just good at picking better firms (selection) or they also contribute in improving firms' performance (true effect). Some papers focussed on whether venture capital spur innovation (Kortum and Lerner 2000), on the performance of venture backed IPOs (Brav and Gompers 1997), A very recent paper by Puri and Zarutskie (2008) suggests that venture backed firms grow more and faster than non venture backed firms. However failure rates are overall similar. The authors can use a large control group to find appropriate matches for venture backed firms and this is likely to attenuate selection problems.

Finally, there are a few papers focussing on Italy. Del Colle et al. (2006) provided first evidence on venture capital investments in Italy. They show that firms financed by venture capitalists achieve a more balanced financial structure, while little differences in terms of performance and growth can be identified. Caselli et al. (2008 - I) attempt to investigate whether venture capitalists favoured new innovations on a dataset of Italian venture backed companies. They show that venture capitalists concentrate on marketing existing innovations and refrain from pursuing new ones, which does not seem particularly surprising. Caselli et al (2008 - II) investigate whether the presence of independent directors affect performance of a set of Italian private equity deals. Their results suggests that the presence of independent directors have no correlation with performance.

⁴A recent interesting paper comparing Europe and the US is Hege et al. (2003).

3 Data

Our data cover 70 deals over the period 1997 - 2008. Data have been collected in two ways. Firstly through interviews with the entrepreneur (or the CFO) of a firm that received venture capital financing, private equity financing (expansion, replacement, turnaround), or that was part of a buyout. Interviews were based on a questionnaire that aimed at obtaining information about: the firm and its performance before and after the deal (or at the latest available date)⁵, the structure of the deal (percentage of ownership of the founder, of the investor in each financing round, type of securities employed, etc.), the presence of veto rights, fraction and type of rights that vested over time, presence of milestones, the entrepreneur, her previous experience, the way the match between the entrepreneur and the investor occurred, the investor, the activism of the investor, a subjective evaluation of the entrepreneur about the way the deal developed and her degree of satisfaction. We run 36 interviews to date, most of them covering early stage or expansion deals. Secondly, we sent questionnaires to intermediaries through the Italian Venture Capital and Private Equity Association (AIFI). Such questionnaires are very similar to those used in interviews with firms. The main difference is that such questionnaires, for obvious reasons, did not ask for the evaluation of the deal by the entrepreneur. We collected 34 questionnaires to date. They mostly cover buyouts. Summary descriptive statistics of the deals are displayed in Table 1 - Panel A. The sample includes 29 early stage (seed and start-up) operations, 15 expansion/replacement and 26 buyouts. The sectorial distribution is displayed in Panel B. The majority of firms operate in manufacturing and in services. Firms operating in hi-tech sectors such as bio-tech and IT are more concentrated in early stage operations, as expected. The proportion of firms operating in bio-tech and hi-tech sectors is much larger than that in the overall population of Italian firms. Finally, firms' age is displayed in panel C. 29 firms are less than 10 years old, 13 are between 10 and 30 years old, and 28 are older than 30 years. This reflects the type of deals included, as expansion and buyouts concern more mature companies.

Table 2 shows the "demographics" of entrepreneurs. In 50 per cent of the cases, the entrepreneur is the founder and in 13 per cent it is the son/daughter of the founder. Most entrepreneurs had previous experience, and slightly more than a quarter already made a deal with VC/PE investors. About 22 per cent of the entrepreneurs is less than 40 years old, and the great majority has at least a degree. With respect to the overall

⁵We checked the information provided by comparing it with balance sheet data coming from the CADS (Company Account Data System), the database collecting balance sheet of Italian companies that applied for a bank loan.

population of Italian entrepreneurs, those involved in VC/PE deals are younger and more educated.

An important question is to what extent our sample is representative of deals in the Italian market and whether our data are affected by any selection bias. The firms to be interviewed were chosen from a list of deals given to us by the AIFI and by checking news about deals as well as websites of funds operating in Italy. Such deals are therefore broadly representative of the Italian market. However, our sample could be affected by biases due to the fact that we missed venture capital deals that ended with the liquidation of the company⁶, and due to the fact that firms facing hard times, or involved in operations such as a delisting, refused to be interviewed. This is not a great problem for this work as we are not directly concerned with the issue of identifying the effect of Venture Capital / Private Equity on performance. The deals described by the investors in questionnaires were chosen freely by them. Therefore we can imagine they chose the most successful deals. However, again, we are not directly concerned with measuring performance. Biases may arise if unsuccessful deals were characterized by a particular structure, e.g., they had little veto powers for the investor. This problem is not easily solvable and affects most of the literature using deal - level data.

4 Univariate Analysis

In this section we start presenting the results of our investigation. At first, we focus on descriptive statistics about the structure of contracts, firstly in the whole sample, and then disaggregating for different operations. We also present data about the extent to which the investor had an “interventionist” approach either by changing the CEO, or by modifying substantially the scope of firm’s activity, and the extent to which the investor provided advice to the entrepreneur. Table 3 contains information about some general features of the deal. Firstly, we asked whether the deal was started thanks to the initiative of the VC/PE. Data suggests that deals start from the impulse of the investor more frequently in the case of early stage. This is interesting as at first thought it can be imagined that start up are the most constrained firms. However, in the Italian market, many start ups are linked to projects developed by university research centers and a few specialized investors seek for the most promising projects. In the case of Buyouts the initiative is often taken by third parties, such as other financiers of the firm, that suggest entrepreneurs to approach a specialized intermediary to undertake a buy out. Then, we collected information about the main purpose for which the firm seek funds, in

⁶In this case there was no firm any more and we could not contact the failed entrepreneur.

particular whether it was planning to introduce a new product or to get a new patent, or whether the deal was mostly driven by the desire to re-balance the firm's financial structure. Results, as expected, suggest that early stage were mostly investing to develop new products/patents. Then, we got information about the presence of managers with specific technical expertise in the fund investing in the firm. For example, whether the managing team had an IT engineer in an investment in an IT firm. This happened most frequently for early stage deals. Finally, we got information about the capital structure of the deal, and in particular on the equity share of the VC-PE investor(s), the founder, other partners of the founder, and other investors. It is interesting to notice that the equity share in early stage deals is smaller than that found by Kaplan and Stromberg in their investigation on US data.

Table 4 contains the frequency of occurrences of some "structural" characteristics of the deal. Data clearly show that the division in rounds, the use of contingent financing (milestones), the participation in syndicates are more frequent in more opaque operations such as early stage and expansion. Similarly the use of hybrid securities is more frequent in operations where the incentives of both the entrepreneur and the venture capitalist need to be aligned the most (early stage and buyouts). It is interesting to notice that hybrid securities are much less common than in the existing evidence about the US market. These securities can be important in providing the right incentives to both entrepreneurs and investors (Hellman 2004, Casamatta 2003). One possible explanation is that such hybrid securities were not allowed by the Italian civil law code until 2004. Even after they have been allowed, agents are probably not very comfortable with the mechanics of such instruments, as their use is still rare and most operations use just plain vanilla equity and debt. Another interesting result is that milestones financing and conditional voting rights seem to be less common than in what reported by Kaplan and Stromberg about the US market.

Table 5 describes the use of veto powers given to investors and actions prohibited to the entrepreneur. Veto powers are quite common, and especially so for buyouts and early stage operations. The investor has veto power on critical decisions such as changing shareholders or the financial structure, selling or buying assets and stakes, changing the strategic plan and liquidating the firm. The entrepreneur is prevented from starting a competing firm, use the firm's name. These occur in more than 50 per cent of the deals, and are even more common for buyouts, on aspects that are especially important in these operations such as the sale and purchase of assets or stakes in other firms, changes in the financial structure or in shareholders composition.

Table 6 describes the use of different type of protection clauses. Clauses that more

strongly shape the incentives of the entrepreneur to work for the success of the company, such as priority to the investor in the distribution of dividends, options on acquiring the firm, are used mostly in early stage deals. Clauses that protect the exit of investors are more common in early stage and buyouts, as these are riskier, while they are not frequently used in expansion and replacement deals. It is interesting to notice that agreements among shareholders about the ownership structure, regulating the entry and exit of shareholders, are quite common, especially in early stage deals⁷.

Table 7 investigates the substitutability/complementarity of different instruments to protect the investor. The table shows pairwise correlations among different instruments, and whether this is significantly different from zero. The sample is split in venture capital (early stage, seed and start up) and private equity (expansion, replacement and buyout) deals. Even if the sample size is limited, there are a few interesting results. In early stage deals, the use of stage financing and the use of clauses restricting competitive activity on part of the entrepreneur are negatively correlated. Moreover, as maybe expected, the use of staging and that of milestones is positively correlated. In buyout deals, clauses protecting the exit of the investor are positively correlated with the presence of veto rights.

Finally, the last set of descriptive tables concerns the advice given by the investor, and perceived improvements in different dimensions of the firm's activity. Table 8 suggests two interesting results. The first is that investors seem to provide advice on financial aspects and on the outline of strategies, while contributing much less to developing Human Resources (HR) strategies, marketing actions, production matters. In this respect, Hellman and Puri (2002) showed that venture capital funds contributed to enhance the professionalization of portfolio firms by affecting their HR policy. The second is that investors seem to ease the access to the stock market more for buyouts and expansions than for early stage deals. This is not very surprising as the latter involve more mature firms that are "fitter" to go public. The table also suggests that venture capital and private equity funds contributed to improve the access to other existing investors, notably banks. Entrepreneurs reported that investors played a certification role for other providers of funds. Table 9 shows the occurrence of changes favoured, or imposed, by investors in firms' strategies. The lack of such changes is not necessarily a bad signal, as portfolio firms may already be on the right track to grow and create value, and changes may not be desirable. It is, however, interesting to notice that changes in the type of products offered are more frequent in early stage deals than in other deals. For what concerns the other dimensions, growth strategy, distribution strategy, marketing strategy,

⁷So called "patti parasociali".

changes occurred mostly in buyouts⁸.

All the results discussed above represent univariate evidence. It is interesting to turn to multivariate analysis in order to exploit the information about the firm and the entrepreneur in order to get a further understanding about the determinants of contract structure, and of investor propensity to provide advice. This is done in the following section.

5 Multivariate Analysis

We investigate in greater depth the results of the previous section by focussing on two main issues.

The first is contract structure and the complementarity / substitutability of different clauses. The goal of this exercise is to highlight possible peculiarities of the Italian market with reference to “best practice” contract used in the US. A further goal is to provide evidence on venture capital contract structure controlling for specific features of the deal, such as whether the deal was offered by the intermediary, or whether the entrepreneur and the intermediary already interacted in the past, that are likely to influence the quality and riskiness of the deal, and that were not observed in previous work.

The second is the determinants of advice and of perceived improvements provided by the investor. In both cases, we split the sample in venture capital (early stage deals) and private equity deals (expansion and buyout). Again, the goal is to identify characteristics that are correlated with advice and perceived improvements in a multivariate framework.

5.1 Contract Structure

We run regressions to further investigate correlations between different contractual clauses. We estimate the following probit models

$$\Pr(\text{veto_rights}_i = 1) = \Phi(\alpha + \beta_1 \text{share}_i + \beta_2 \text{size} + \beta_3 \text{new}_i + \beta_4 \text{match_pe}_i + \beta_5 \text{agreem}_i + \beta_6 \text{staging}_i + \beta_7 \text{exit}_i + \beta_8 \text{preknow} + \varepsilon_i)$$

⁸As expected, given that often Buyout are motivated by opportunities to modify the strategy of the firm to enhance its profitability.

$$\Pr(\text{exit}_i = 1) = \Phi(\alpha + \beta_1 \text{share}_i + \beta_2 \text{size} + \beta_3 \text{new}_i + \beta_4 \text{match_pe}_i + \beta_5 \text{agreem}_i + \beta_6 \text{staging}_i + \beta_7 \text{veto_rights}_i + \beta_8 \text{preknow} + \epsilon_i)$$

$$\Pr(\text{staging}_i = 1) = \Phi(\alpha + \beta_1 \text{share}_i + \beta_2 \text{size} + \beta_3 \text{new}_i + \beta_4 \text{match_pe}_i + \beta_5 \text{agreem}_i + \beta_6 \text{veto_rights}_i + \beta_7 \text{exit}_i + \beta_8 \text{preknow} + \eta_i)$$

$$\Pr(\text{agreem}_i = 1) = \Phi(\alpha + \beta_1 \text{share}_i + \beta_2 \text{size} + \beta_3 \text{new}_i + \beta_4 \text{match_pe}_i + \beta_5 \text{veto_rights}_i + \beta_6 \text{staging}_i + \beta_7 \text{exit}_i + \beta_8 \text{preknow} + \varsigma_i)$$

where for each deal i :

- *veto_rights* is a dummy variable taking the value one if at least one of the veto rights listed in Panel A of table 5 is present in the deal
- *exit* is a dummy variable taking the value one if at least one of the protection to exit listed in Table 6 is present in the deal
- *staging* is a dummy variable taking the value one if the financing is structured in different rounds
- *agreem* is a dummy variable taking the value one if some of the rights of the investor are protected by shareholders' agreements

we do not include a test for the use of vesting because such clauses are infrequent and estimation is difficult as the dependent variable varies little across deals.

Control variables are:

- *share* is the log of the percentage equity stake held by the investor in the first round
- *size* is the amount invested in the first round
- *new* is a dummy variable taking the value one if the firm seek funding to introduce a new product or a new patent
- *match_pe* is a dummy variable taking the value one if the investor proposed the deal

- *preknow* is a dummy variable taking the value one if the investor and the entrepreneur already knew each other.

The dummies *new*, *match_pe* and *preknow* aims at capturing the riskiness and uncertainty surrounding the investment and at proxing for the quality of the deal. If the investor contacted the firm, it is likely that the firm perspectives were good, and on average better than if the firm approached the investor (who however agreed to finance the firm).

Results are displayed in Table 10 for venture capital deals. It can be seen that veto rights are substitutes of shareholders agreements, while staging is used in conjunction with exit protection clauses. These two characteristics are more likely in larger deals. Finally, it is interesting to notice that the share of the investor seems to have no significant correlation with any of the contractual features analyzed. Moreover, prior knowledge between the entrepreneur and the investor appear to have no influence on the likelihood of observing a particular contractual provision.

Table 11 contains results from the same analysis performed on private equity deals. Results indicate that shareholders agreement and explicit veto rights are substitutes, while there is little relationship between other contractual clauses. It can be noticed that protection to investor's exit is more frequent in deals in which the firm plans to introduce new products or services.

In principle there was little theoretical guidance on how these instruments should be related. Firstly, it should be noted that, in the case of venture capital deals, clauses that limit the activity of the entrepreneur, such as veto rights and shareholders agreements (that typically include prohibitions to implement certain strategies, or to sell stakes to outsiders), are more likely when the deal was initiated by the entrepreneur. Notice that this is true controlling for the possibility that the entrepreneur and the investor already knew each other before the deal. This may signal that the investor, in these cases, fears the entrepreneur is more likely to take actions that reduce the value of the venture, and therefore requires appropriate incentives to prevent such actions. On the other hand, protections to exit are more likely in deals initiated by the investor, and entrepreneurs activities are less constrained.

Secondly, the fact that shareholders agreements and veto rights are substitutes is sensible, as these are different ways to pose limits on entrepreneurs activities. Shareholders agreements, however, can also tie investors' hands. These contractual provisions are often criticized, as they limit firms' openness to outsiders. However, in the case of start up or early stage companies, these concerns are probably less strong.

Thirdly, staging and clauses protecting investor’s exit are positively correlated. This may seem surprising, as staging can be considered a way to protect the exit of the investor. However, both instruments are more frequent on larger deals (bigger first round investment). This may signal that when the first round investment is already large, investors are reluctant to provide further funds without checking intermediate performance, and require clauses protecting their exit. Results on private equity deals confirm the result about the substitutability of shareholders agreements and veto rights. In this type of deals, concerns about the negative effect of shareholders agreements on firm’s openness to outside investors can be more important.

Finally, prior knowledge of the entrepreneur does not seem to affect the likelihood of using protection clauses. This may point to the fact that the specific features of the deals are more important than characteristics of the entrepreneur. This result is consistent with the recent evidence in Kaplan et al. (2008).

Overall, we believe these results are interesting as they suggest new evidence about how venture capital and private equity deals are structured in practice, when controls for proxies of quality and riskiness of the deals are included. Moreover, when correlations are significant, they are not counterintuitive, suggesting that contract design is logically coherent.

5.2 Advice

We now turn to the study of the factors that may have favoured the provision of advice from the investor to the entrepreneur. We firstly investigate whether characteristics of the investor influenced the likelihood she provided advice to the entrepreneur. To this aim, we estimate the following probit model (again splitting venture capital and private equity deals):

$$\Pr(\text{Advice}_{yi} = 1) = \Phi(\beta_1 \text{share}_i + \beta_2 \text{size}_i + \beta_3 \text{new}_i + \beta_4 \text{match}_{pe}_i + \beta_5 \text{ent}_{ex}_i + \beta_6 \text{ent}_{edu}_i + \beta_7 \text{tech}_{man}_i + \varepsilon_i)$$

where:

- *tech_man* is a dummy variable taking the value one if managers with specific technical skills were part of the management team of the fund investing in the firm.
- *ent_ex_i* is a dummy taking the value one if the entrepreneur was a repeated entrepreneur

- ent_edu_i is a dummy taking the value one if the entrepreneur had a postgraduate degree in the case of venture capital, and at least a degree in the case of private equity deals⁹
- all the other variables have been described above

Results, for venture capital deals, are presented in Table 12. It can be seen that the presence of managers with technical skills is positively associated with all three kinds of advice, but it is significant only in the case of strategic advice. The fact that the CEO has a postgraduate degree is positively associated with the likelihood the investor provided advice on financial and HR management matters. This can signal the fact that CEOs with academic background are probably less skilled in financial and HR matters. However, it should be recalled that this is the perception of the entrepreneur, and it can be that more skilled entrepreneurs are more able to appreciate the contribution of the investor, and we cannot distinguish between these two effects. CEOs with prior experience are more likely to receive advice on strategic matters. This is maybe surprising, but it should be remembered that start up and early stage firms typically work on new products for which prior experience on strategic matters is not very relevant. On the other hand, having prior experience may render the entrepreneur more receptive to suggestions from the investor. The fact that prior experience seems to be uncorrelated with the likelihood of receiving advice on financial matters and HR management is consistent with this interpretation: entrepreneurs with prior experience already know how to deal with such aspects. Finally, neither the size, nor the shareholding of the investor are correlated with the probability she provides advice to the entrepreneur. In theory, we should expect a positive relation with shareholding, as this provides stronger incentives for investors to exert effort and provide additional value on top of providing funds.

Estimates for the same model on the sample of private equity deals are reported in Table 13. It can be seen that in this case, the fact that the CEO had prior experience reduces the likelihood the investor provides advice on all the three dimensions analyzed. The fact that the firm aims at working on new products or services raises the likelihood the investor provides advice on HR management and on strategic matters. This suggests that investors provide advice when it is most needed. The fact that the CEO is skilled raises the likelihood she receives advice on strategic matters. Finally, it should be noted that a larger share of the investor is associated with a higher probability she provides

⁹In the sample of venture capital deals essentially all entrepreneurs have a degree, and many of them have doctorates. Thus, I define as skilled, those with postgraduate studies. In the case of private equity deals, as opposed to venture capital, there is a non trivial fraction of entrepreneurs that did not attend, or complete, college.

advice on all three dimensions, and the size of the investment in the first round is negatively correlated with the probability the investor provides advice on financial or strategic matters. This seems to suggest that advice is more likely on smaller deals, and thus smaller firms, consistently with expectations.

Overall these results seem to suggest that investors provide advice to entrepreneurs. That this happens in situations where it would be expected. Moreover, the presence of managers with specific technical skills seems to be an important factor for advice on strategic matters in venture capital deals. On the other hand, it does not seem to matter in private equity deals.

5.3 Improvements

Finally, we investigate whether the investor induced changes in the strategy of the firm, in the portfolio of products, in the range of activities and whether the entrepreneur perceived that the investor contributed to improve the performance and the operations of the firm in financial and non financial dimensions. For what concerns to improvements, we estimate the following model:

$$\Pr(\textit{improve_fin}_i = 1) = \Phi(\beta_1 \textit{share}_i + \beta_2 \textit{size} + \beta_3 \textit{new}_i + \beta_4 \textit{match_pe}_i + \beta_5 \textit{ent_ex}_i + \beta_6 \textit{ent_edu}_i + \beta_7 \textit{tech_man}_i + \varepsilon_i)$$

$$\Pr(\textit{improve_nonfin}_i = 1) = \Phi(\beta_1 \textit{share}_i + \beta_2 \textit{size} + \beta_3 \textit{new}_i + \beta_4 \textit{match_pe}_i + \beta_5 \textit{ent_ex}_i + \beta_6 \textit{ent_edu}_i + \beta_7 \textit{tech_man}_i + \varepsilon_i)$$

where all controls are the same as in previous regressions, and the dependent variables are dummies. The first *improve_fin* takes the value one when the entrepreneur reported that she believes the investor improved on financial matters, such as increased chances of going public, better financial terms obtained from other investors (notably banks, etc.). The second, *improve_nonfin* takes the value one if the entrepreneur believes the investor improved on the distribution policy, the access to suppliers, etc. This question does not make reference to operative performance, nor to improvements in the definition or implementation of the business strategy.

Table 14 shows results for venture capital deals. Improvements on financial matters are less likely when the CEO had prior experience, or has some postgraduate studies.

This may either indicate that such entrepreneurs already had good financial policies, or that such entrepreneurs were more demanding and did not observe significant improvements. Results for non financial matters are more interesting, and striking. Firstly, the presence of managers with technical skills in the fund seems to be associated with a lower probability of improvements in non financial matters. This is not necessarily surprising as the question referred to improvements in the distribution policy, in marketing, etc. so that specific technical skills are probably not very relevant in these dimensions. Secondly, such improvements are more likely when the CEO has a more academic background. This is interesting as anecdotal evidence suggests that CEO coming from the academia often lack managerial skills in areas such as marketing, distribution, etc. Finally, it is interesting to notice that a larger share for the investor is associated with a lower probability of improvements in non financial matters. This could be due to reverse causality: investors acquire a smaller share in firms that need more improvements and are therefore less promising ex-ante. This could still be true after controlling for whether the deal originated by the investor.

Table 15 shows results for private equity deals. Improvements in financial matters are more likely if the firm aimed at introducing new products or services, while they are less likely if the entrepreneur had prior experience. Both results are consistent with intuition. Firms working on new products are probably managed by entrepreneurs with less experience in financial matters, while more experienced entrepreneurs are more likely to adopt sound financial policies. A further important result is that investors seem to provide more improvements in deals on which they have a larger equity share. This is consistent with theoretical predictions¹⁰ suggesting that a larger equity share provides stronger incentives for the investor to exert effort, and that this should be observed when the advice of the investor is most valuable. This seems to be the case as the financial expertise of the investor is a value added of venture capital and private equity financing.

For what concerns improvements in non financial dimensions, the only significant variable is the dummy for experienced entrepreneurs, which is consistent with expectations.

6 Discussion and future research

These results are still preliminary and should be taken only as indicative, as sample size is still limited. As data collection is still in progress, we expect to be able to

¹⁰Casamatta 2003 shows that incentives to exert effort for the investor increase in her equity stake and this is beneficial when the advice of the investor is most valuable.

further increase sample size, although this kind of surveys are bound to be run on a relatively small number of firms. Still, some intriguing result seems to emerge. Firstly, incentives to the entrepreneur in Italy seem to be provided by a larger equity stake and by the presence of contractual clauses. The use of hybrid securities, or the use of conditional voting rights, is much less frequent than in the US, in which investors tend to hold a larger equity stake in invested firms. Somehow, this could be interpreted as indicating that contracts in Italy tend to be based on simpler clauses. Conditional voting rights, for example, are probably more difficult to implement in case of controversies, as they may require verifying whether a given contingency occurred. On the contrary, veto rights, simply state that certain actions cannot be taken, and pose less problems in case of litigation. Whether relatively simpler structures are able to replicate the incentives created by more complex provisions is still an open question. Secondly, the multivariate analysis suggests a series of interesting results. Contract structure seems to be coherent as correlations with deal size and measure of riskiness have the right sign, and as correlations between different instruments appear sensible. Prior knowledge of the entrepreneur seem to have no effect on the likelihood protection instruments, staging, etc. are used. The specificity of the venture is the most relevant dimension. The presence of managers with specific technical expertise seem to be relevant in the provision of advice on business strategy for early stage deals. This is important, as it is sometimes claimed that the limited development of the sectors is also due to the scarcity of specialized intermediaries. Finally, there is a positive correlation between the educational attainment of the entrepreneur and the probability the investor provides advice on top of just financing the project, suggesting the presence of complementarities with entrepreneurial skills.

It should be emphasized, though, that all results of the regression analysis should be not be intended as the identification of a causal relationship. Even if we are able to control for features of the deal and of the entrepreneur that are strongly correlated with the unobservable quality or riskiness of the deal, results should be intended as conditional correlations.

We plan to extend this analysis in various directions. The first is to assess the effect of different contractual provisions on measures of firm's performance. We have access to company balance sheet data that can be combined with information from the survey. The second is to further investigate the result suggesting that prior knowledge of the entrepreneur does not seem to affect contract structure, by adding other characteristics such as education and prior experience. Preliminary results seem to confirm our finding

that entrepreneur characteristics matter less than firm characteristics. Thirdly, it seems interesting to study how the chosen way of exit affects the likelihood the investor provides advice to the entrepreneur, and measures of performance. Finally, we would like to study in further detail the composition of the board of directors, especially whether the presence of outsiders in the board, or the fact that the investor has an executive director in the board affect the probability the investor provides advice, and whether it affects performance measures such as revenue and employment growth.

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7 Appendix - Tables

Table 1: Characteristics of the deal

Panel A	
	Number of Deals
Early Stage	29
Expansion	15
Buyout	26
Panel B	
Biotech/medical	14
ICT	9
Manufacturing	21
“Skilled” manufacturing	7
Services	17
Construction	2
Panel C	
Less than 10 years old	29
Between 10 and 30 years old	13
More than 30 years old	28

Table 2: Characteristics of the entrepreneurs

	Whole Sample
Entrepreneur is the founder	50%
Entrepreneur is son/daughter of the founder	13%
Entrepreneur has prior managerial experience	52%
Entrepreneur has VC-PE experience	27%
30 - 39	22.6%
40 - 49	35.4%
50+	42%
High School	16.7%
University degree	65.1%
Master+	18.2%

Notice: WS = Whole Sample, ES = Early Stage, Exp = Expansion, Replacement, Turnaround, BO = Buy Out.

Table 3: General Features of the deal

	WS	ES	Exp	BO
The deal offer was from the investor	52.3%	88%	36%	15%
Firm seek funds to introduce new product/patent	47%	82%	13%	25%
The investor had managers with technical expertise	41%	62%	21%	27%
Equity share of investor in first round	46%	39%	34%	61%

Table 4: Structural Characteristics of the deal

	WS	ES	Exp	BO
Operation in rounds	31.4%	48.2%	20%	19%
Milestones for new financing	31.4%	51.7%	33.3%	7.7%
VC/PE had majority stake	37.1%	24%	20%	61%
Use of hybrid securities	7.1%	10.7%	0%	7.5%
Operation in Syndicate	29%	34%	33%	20%
Outsiders in Board	60%	68%	66%	46%
Automatic conversion clauses	1.5%	0%	0%	4%
Conditional voting rights of entrepreneur	4.5%	7%	0%	4%

Table 5: Veto power and prohibitions

Veto power on:	WS	ES	Exp	BO
Changing shareholders	70%	62%	61%	89%
Selling/Buying assets	64%	56%	53%	83%
Selling stakes in other firms	69%	62%	53%	89%
Changing financial structure	62%	56%	46%	83%
Paying dividends	49%	54%	33%	53%
Liquidating the firm	71%	72%	53%	83%
Changing the strategic plan	56%	48%	46%	76%
The entrepreneur could not:				
Have relations with competitors	54%	57%	15%	82%
Use the name of the firm	53%	45%	23%	87%
Start competing firms	66%	80%	23%	76%

Table 6: Protection Clauses

	WS	ES	Exp	BO
Priority in dividends distribution	22%	50%	0%	6%
Option on acquiring the firm	33%	61%	28%	0%
Conversion rights	6%	15%	0%	0%
Lock-in clauses	64%	59%	64%	73%
Put for the investor	45%	50%	25%	66%
Protection clauses in firm's charter	53%	50%	43%	71%
Shareholder's agreements	36%	43%	30%	30%

Table 7: Complementarity - substitutability of exit protection clauses, staging and use of hybrid securities

Early Stage							
	PEx	S	HS	VR	ACC	SA	M
Protection to Exit (PEx)	1	0.30	0.07	0.07	-0.02	0.05	-0.03
Staging (S)		1	0.07	0.07	-0.34*	0.05	-0.03
Hybrid securities (HS)			1	0.24	-0.16	-0.19	0.26
Veto rights (VR)				1	0.09	-0.01	0.46**
Anti Competition Clauses (ACC)					1	0.1	0.26
Shareholders agreements (SA)						1	0.01
Milestones (M)							1
Buyout							
	PEx	S	HS	VR	ACC	SA	M
Protection to Exit (PEx)	1	0.25	0.09	0.37**	-0.01	0.18	-0.02
Staging (S)		1	-0.12	0.18	-0.17	-0.09	0.22
Hybrid securities (HS)			1	-0.20	0.06	-0.07	-0.10
Veto rights (VR)				1	0.12	0.15	0.06
Anti Competition Clauses (ACC)					1	0.17	-0.04
Shareholders agreements (SA)						1	-0.05
Milestones (M)							1
*** p<0.01, ** p<0.05, * p<0.1							

Table 8: Advice and Investor involvement in the firm's life

	WS	ES	Exp	BO
Advice on production processes	12%	16%	0%	15%
Advice on financial matters	86%	90%	73%	91%
Outline of strategies	77%	79%	57%	88%
HR management	38%	33%	33%	48%
Marketing	26%	30%	14%	30%
Improved access to suppliers/distributors	29%	36%	20%	29%
Improved access to existing investors	72%	69%	50%	87%
Easier access to the stock market	63%	36%	53%	95%
Starting relations with new investors	66%	52%	50%	87%

Table 9: Intervention of the investor on firm's activity

	WS	ES	Exp	BO
Firm's growth strategy	60%	44%	46%	84%
Choice of products	26%	33%	6%	30%
Distribution strategy	22%	11%	20%	34%
Marketing Strategy	28%	23%	20%	38%

Table 10: Contract Structure - Venture Capital Deals

COEFFICIENT	(1) veto_rights	(2) exit	(3) staging	(4) agreem
share	-0.61 (0.39)	-0.56 (0.36)	0.24 (0.34)	-0.71 (0.77)
size	-0.05*** (0.02)	0.04** (0.02)	0.13* (0.07)	0.03 (0.08)
new	2.31 (1.43)	0.40 (0.86)	-0.28 (0.81)	-0.13 (0.74)
match_pe	-2.73*** (0.91)	1.62** (0.66)	-1.04 (0.73)	-4.20* (2.18)
agreem	-1.63* (0.87)		-0.31 (0.70)	
staging	0.31 (0.69)	0.99* (0.57)		-0.87 (0.73)
exit	1.02 (0.82)		1.27** (0.62)	2.30 (1.51)
preknow	0.86 (0.73)	-0.31 (0.67)	0.15 (0.57)	-1.05 (0.77)
veto_rights		0.73 (0.72)	-0.21 (0.65)	-1.03 (0.92)
Constant	2.07 (2.02)	-0.10 (1.70)	-0.75 (1.67)	6.16* (3.67)
Observations	27	27	27	27

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 11: Contract Structure - Private Equity Deals

COEFFICIENT	(1) veto_rights	(2) exit	(3) staging	(4) agreem
share	0.58* (0.33)	-0.98** (0.47)	-0.71** (0.36)	-0.13 (0.37)
size	-0.00* (0.00)	-0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)
new	-0.67 (0.76)	1.51* (0.78)	0.55 (0.75)	
match_pe	0.37 (0.55)	-0.01 (0.57)	-0.24 (0.59)	0.68 (0.58)
agreem	-1.49** (0.64)	-0.22 (0.73)	0.05 (0.60)	
staging	0.21 (0.53)	0.03 (0.61)		-0.82 (0.58)
exit	0.71 (0.58)		0.02 (0.52)	-0.37 (0.68)
preknow	-0.62 (0.53)	-0.30 (0.56)	-0.64 (0.57)	-1.02 (0.78)
veto_rights		0.59 (0.56)	0.25 (0.57)	-1.64*** (0.63)
Constant	-1.49 (1.45)	3.70* (1.99)	1.75 (1.42)	1.05 (1.88)
Observations	37	37	37	37

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 12: Advice - Venture Capital Deals

COEFFICIENT	(1) Financial Advice	(2) HR Advice	(3) Strategic Advice
size	-0.02 (0.01)	-0.01 (0.02)	-0.16 (0.19)
share	-0.58 (0.43)	0.06 (0.39)	-0.69 (0.55)
new	-1.04* (0.63)	-1.77* (0.94)	-1.35 (0.84)
tech_man	0.54 (0.67)	1.25 (0.92)	1.58* (0.87)
match_pe	-1.74** (0.75)	-0.22 (0.63)	-0.41 (0.78)
ext_ex	-0.43 (0.59)	1.14 (0.74)	1.81*** (0.67)
ent_edu	1.97** (0.82)	1.45* (0.76)	1.14 (0.87)
Constant	3.26* (1.72)	-1.58 (1.76)	2.32 (2.22)
Observations	27	27	26

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 13: Advice - Private Equity Deals

COEFFICIENT	(1) Financial Advice	(2) HR Advice	(3) Strategic Advice
size	-0.01** (0.00)	-0.00 (0.00)	-0.01** (0.00)
share	1.38*** (0.52)	0.67* (0.36)	1.31** (0.53)
new	1.19 (0.75)	1.38* (0.72)	1.21* (0.68)
tech_man	-0.39 (0.69)	-0.13 (0.68)	
match_pe	-0.65 (0.53)	-0.51 (0.57)	-1.11** (0.52)
ext_ex	-1.80** (0.89)	-1.53** (0.62)	-2.88** (1.40)
ent_edu	0.46 (0.65)	-0.30 (0.51)	1.80** (0.70)
Constant	-2.15 (1.66)	-1.58 (1.31)	-2.01 (1.59)
Observations	36	36	35

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 14: Improvements - Venture Capital Deals

	(1)	(2)
COEFFICIENT	Improve_fin	Improve_nfin
share	0.08 (0.34)	-3.18*** (0.84)
size	0.20 (0.24)	-0.93*** (0.27)
tech_man	-1.19 (0.77)	-8.13*** (2.01)
match_pe	0.91 (0.68)	3.58*** (1.07)
ent_ex	-1.23* (0.70)	-3.52*** (0.92)
ent_edu	-1.83*** (0.58)	4.11*** (1.24)
Constant	1.40 (1.41)	13.99*** (3.55)
Observations	25	25

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 15: Improvements - Private Equity Deals

	(1)	(2)
COEFFICIENT	Improve_fin	Improve_nfin
size	-0.01* (0.00)	0.00 (0.00)
share	1.42*** (0.49)	0.07 (0.36)
tech_man	-0.57 (0.58)	-0.29 (0.58)
new	1.62*** (0.59)	-0.44 (0.68)
match_pe	-1.45** (0.58)	1.05 (0.65)
ent_ex	-1.62** (0.77)	-1.57** (0.74)
ent_edu	0.56 (0.74)	-0.07 (0.56)
Constant	-2.86* (1.67)	-0.39 (1.39)
Observations	34	35

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1