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FAMILY BUSINESS INVESTOR BUYOUTS: THE ITALIAN CASE

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Abstract
Family business succession is often viewed by academics and practitioners as a critical step in the life of a firm: it can affect a variety of matters, ranging from its competitive potential and its hierarchy to its own capability to survive. This is particularly true in Italy, where firms are by and large small or medium, with no direct access to the capital market, and where many entrepreneurs who actively took part in the industrial development of the second half of the 20th century are now giving up their jobs. In this paper we try to understand whether Private Equity can be an effective answer to this emerging issue or not. To this end, at this first stage of the research, we focused on those Italian deals where the Private Equity investor was heavily involved (meaning that it acquired at least a majority stake in the target family firm) and we examined the effect of the deal performances of firms (comparing the performance two years before and three years after the deal). The sample includes 21 of the 44 family business investor buyouts (FBIBO) carried out in Italy during the 1990s. The results are ambivalent. Some of the identified variables (such as Turnover, EBITDA, …) are not statistically significant, meaning that performance trends before and after the deal cannot be tracked back to the role of the Private Equity investor. Case study analysis thus becomes more relevant. In the attempt to identify some pattern of behaviour, we clustered the firms according to their trends in Turnover and EBITDA margin (both adjusted by industry). This categorization gave some interesting results. Generally, PE intervention causes a discontinuity in the life of a firm, generating a shift in performance trends: from bad to good and vice versa. This result wasn't expected, considering that target firms belonged mainly to mature business and that existing management was kept in place. Almost a third of the analyzed firms achieved very good performances after the PE investment, while another third displayed some signs of failure. In the middle, some mixed situations emerged, where growth was reached at the expense of profitability or where profitability was increased as growth diminished.

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1. Executive Summary

In this paper we analyse a sample of family business investor buyouts (FBIBO) that occurred in Italy during the second half of the 90s. In more details, we focus on 21 of the 44 FBIBOs that took place in Italy from 1995 to 2000, analysing the financial performances of the target firms two years before and three years after the deals. The research is the first step towards a more comprehensive study of the role of private equity (PE) in family businesses in Italy and in Europe.

One contribution of this study is to investigate the structure and dynamics of FBIBO phenomena in Italy. The choice to focus the research on the role of PE in family businesses analysing the most "radical" transaction – where PE investors acquire (eventually with management involvement) the firm's control rights – intends to study the impact of this investments on the firm's performance in order to deepen the possibility that the FBIBO constitutes a "structural" solution to the family succession problem (generational change included). This solution implies both openness by the firm to the external equity and, in some cases, to the public capital market (with their consequences in term of transparency and governance articulation) and a deep change in the organizational structure towards a significant enhancement of the value of human capital (management) inside and outside the firm.

The empirical research has been carried out in two stages: firstly, we tracked the evolution of financial performances (based on accounting data) of the 21 target firms before and after the deal; then a cluster analysis has been performed.

The firm performance indexes didn't display any statistically significant change before and after the deal. That is to say that trends in the selected financial measures, such as EBITDA margin and Turnover (both industry adjusted), weren't related to the PE intervention. Anyway, some evidence was apparent in this stage of the analysis. In particular, capital structure ratios (Net Financial Debt to Turnover, Equity to Turnover) changed after the deal: on average PE investors drew heavily on

leverage to carry out the deal. The same applies to another set of ratios, such as ROS, Tax to Turnover, Net Income to Turnover and Net Fixed Asset to Turnover. EBIT, Taxes and Net Income (as a percentage of Turnover) decreased after the deal, while Net fixed Assets increased. These results are due to the ways FBIBOs are managed in Italy (see paragraph 5): namely, the merger between the bidder and the target goes along with an asset revaluation (Net Fixed Asset goes up), which increases amortizations and depreciations (ROS goes down) and allows tax reduction. In this stage of the analysis we therefore shed some light on the typical FBIBO structure; anyway we needed to go further to understand how the target firms performed before and after the deal.

To this end, we grouped firms according to their trend in EBITDA margin and Turnover (both industry adjusted) before and after the deal. The aim was to find out whether "patterns of behaviour", before and after the deal, were visible or not. Quite surprisingly, we found out that 65% of the firms changed their performance trend after the deal: this is to say that often the ones performing better before the FBIBO achieved the worst results after the deal, and vice versa. Furthermore, according to our cluster analysis, the firms performing better after the PE intervention were the only ones that improved working capital management; on the other side, Taxes to Turnover reduction was achieved only by those firms with the worst Net Income to Turnover ratio after the deal.

These results point at least in two directions. First of all, informative asymmetries between the seller and the buyer seems to be a major concern in this kind of deals. If the seller, in the two years before the deal, increases firm's performances by adopting short run strategies, little room is left to the PE, once it acquires the firm, to keep the same results. Secondly, even if the PE deal produces a discontinuity in the life of the target firm, there is no clear evidence that FBIBOs systematically improve firms' performances. In this perspective, an issue to be further deepened is related to the role played in the target firm by human capital and, namely, by the knowledge of the entrepreneur. As long as family succession is concerned, the PE seems to experience great difficulties in replacing the talented people (mostly the entrepreneur him or herself).

The following of the paper is structured as follows. Section 2 discusses the family succession topics and the role of private equity. Section 3 is an overview of the literature on buyouts and firm performance. Section 4 describes the studied sample, focusing mainly on the financial measures and Section 5 evaluates the effects of deals on firms' performances, presenting a cluster analysis as well. Finally, Section 6 contains a summary, some concluding remarks and the issues to be further investigated.

2. Family succession and private equity: the family business investor buyout

The family succession represents a critical aspect in the evolution and governance of the family firm, particularly evident in Italy and Europe, given the fact that the first (and second) generation that was at the basis of the industrial development in the second half of the last century are, in many cases, at the end of their (at least entrepreneurial) lives. This topic has been investigated by the literature and judged to be at an embryonic stage (Morris et al., 1997; Dyck et al., 2002; Howorth, 2004). The difficulty to transfer the business to the next generation of family members (Lansberg, 1999) and the complexity of a multi-staged process with implications for all the stakeholders makes succession a period of danger for the survival of the family firm (Rubenson and Gupta, 1997). If there is no risk to succession, it can however, represent an opportunity for the firm (Dyck et al., 2002), given the fact that it could "oblige" the old proprietorship to introduce some change in the firm's organization, management, governance and ownership too, in order to support the future of the enterprise.

Like the general phenomenon, also the specific forms of succession have not been studied in depth by academics and practitioners (Birley and Westhhead, 1990). At first glance, we can recognize the following succession routes (excluding the PE intervention):

- Ownership, governance and management transfer to the next generation of family members (with a full family continuity, with its opportunities and risks).
- Family proprietorship is preserved and management is delegated (by the family) to an external professional team, with the appointment of a CEO from outside the family. This may improve the management and provide increased impetus to the firm's strategy, but involves trusting an "outsider" to take care of the "family fortune" (Neubauer and Lank, 1998).
- Sale to a third party, that can be a positive choice for the family as an owner (Birley et al., 1999), but can be irrespective of the existence of potential successors and the future identity and job prospects of the employees (Howorth et al., 2004).

These options (above all the first two) can be strengthened by an initial public offering, with the limit that this "reinforcement" is mostly out of the reach of many family firms. Moreover, and this is easier, the first two options can be preceded by a reallocation of property rights inside the family branches, where some of them decide to convert their share into cash and others decide to maintain the link between their capital and the firm.

In this stylized scenario, private equity can have two different roles:

- Investing in a minority equity stake, with a role of reinforcing (reducing the risk and increasing the opportunity space) the previous family succession routes (i.e., contributing to a family property rights reallocation, to the firm managerialization and facilitating, in some case, an IPO).
- Acquiring the majority (up to the whole) equity stakes and realising a transfer of control rights to a new property structure (typically characterized by the management partecipation).

In the first role, the PE involvement can be limited or substantial depending on the characteristics of the firm and the deal. In most cases, the minority stake (in a mature business) entails a limited intervention in the firm's governance and management, with a presence on the board (as a financial and strategic advisor) and various contractual arrangements that limit the PE risk especially at the

moment of the buyout (i.e., put option on the PE equity stake and/or call option on the control rights). The PE minority intervention can be a (supporting) element of a *family buy out* (FBO), where a change in the control of the firm is effected between the family members (or branches).

The transfer of control between the family and a new property structure – with the presence of a PE organization (generally a PE investor) and, almost necessarily, the management (insider or outsider) – qualifies an (investor) buyout in a family business (FBIBO).

In the definition by EVCA (2002) "a buyout fund typically targets the acquisition of a significant portion or majority of control of the business which entails a change of ownership. Buyout funds ordinarily invest in more mature companies with established business plans to finance expansions, consolidations, turnarounds and sales, or spinouts of divisions or subsidiaries. Financing expansion through multiple acquisitions is often referred to as a 'buy and build' strategy".

In an FBIBO, given the limited entrepreneurial and operational competence inside the PE organizations (funds and their advisors), it is typical to observe a management equity participation. In the presence of a consistent management equity ownership the IBO can be better defined as a MBO or MBI, even though many analysts and research centres use the term MBO/I to qualify all (investor) buyouts in which management has a form of participation (as happens in almost every IBO). In the following we use the term FBIBO or, simply, buyout to refer to a family business investor buyout in which management holds typically (but not necessarily) an equity stake. An empirical and theoretical topic would be to investigate what conditions influence the "efficient" management stake in this (complex) contract (for a thorough analysis of the problem in the venture capital industry, see Kaplan and Strömberg, 2002a and 2002b)

The FBIBO implies a "radical" transfer of the control rights from the family members to the PE investors and management (with different gradation depending on the situation), with the possibility that, inside the management team, some family members remain, but with a specific managerial role. In this sense, the FBIBO calls for a clear separation between management and shareholders, with PE organizations representing an active investor that provides finance, advice and monitoring

of the firm. Another interesting point is to establish what could be the "optimal" level of control and monitoring by PE investors in a buyout, holding the management position.

Another essential feature of buyout is the wide usage of leverage to finance the control rights acquisition. In successful cases the debt in excess (compared to what is regarded as normal for the business sector in question) is repaid by the operating free cash flow of the acquired company and by cash flow deriving from asset disposal. The "optimal" amount of leverage in an FBMBO/I is another interesting empirical and theoretical point, that must be investigated taking into account the economics of the (acquired) firm and the PE investors (funds included). Leverage is an essential condition that permits a "target" PE funds internal rate of return (IRR) to be realized (in case of success) in this type of PE investment. The management of leverage is actually one of the main PE investor competences and the successful running of this competence implies an accumulation of relational capital that favours the raising of debt (and the whole arrangement of the deal) by the PE investor himself. In this sense, it should be noted that it appears over-simplified to judge the leverage only from the firm's point of view (from which it is difficult to explain why the firm itself cannot arrange a capital structure change exploiting the value debt potential): in many cases (and this is a decisive topic to study in depth) the leverage judgement, realization and management implies a financial (and strategic) competence and relational capital that is out of reach of the target firm (given its actual ownership and managerial structure). Considering the leverage structure of this deal, it is preferable to talk about leveraged buyout (LBO) or leveraged management buyout (LMBO/I).

We prefer not to use this acronym because leverage is just one of the ways in which the PE can achieve a target return on an investment. To get a proper picture of the investment many other value drivers (both operational and structural) should be taken into account.

As regards the other family succession options, the FBIBO provides a means of realizing the family's investment while maintaining and enhancing the role of the management team (Wright and Coyne, 1985), possibly including the most capable and motivated family member managers

(Handler, 1994). In this way, there is a greater possibility that the firm's identity and ethos will remain the same, keeping the option to be an independent entity open (Westhead, 2001). This option can be reinforced by the possibility given to the firm to stimulate an IPO and/or to acquire control of the company or to promote another (secondary) buyout, letting the first PE investors to achieve their capital gain. Despite its appeal and diffusion, research in the two areas of family firm succession and IBOs has tended to ignore the family firm IBO phenomenon. IBO research is generally based on agency theory that expects conflict to be absent in the family firm buyout and family firms succession research focuses almost exclusively on internal succession (Howorth et al., 2004).

In the following sections, after reviewing the literature on buyouts (in general), we analyze the phenomena in Italy and we develop a first empirical step regarding these topics.

3. Buyout and firm performance: the literature

Institutional buyouts (mostly called leveraged buyouts) became common in the US during the 1970s and in Europe in the 1980s. These operations, although characterized by some common traits (firm acquisition by PE specialized investors with a high use of leverage subsequently restructured through the operation of free cash flow and asset disposal) have been effectively differentiated in time and space, so today one may argue that LBOs constitute a simple technique for acquisition and it is necessary to specify the whole investment goal and the object in order to discuss characteristics and value effects.

Starting from the first numerous deals in the US, the first phase, that made these deals famous, can be placed into the field of "(public) corporate restructuring". Particularly, LBOs have been regarded as public company (hostile) takeovers, followed by "going private" operations and asset restructuring in search of business portfolio "optimization" and free cash flow "maximization". In these first applications, the empirical evidence was almost unanimously positive on the effect on a

firm's performance (anticipated by the strong share price increase at the buyout announcement) and these forms were considered (Jensen, 1989) a new long term (structural) form of organization with superior efficiency.

The majority of empirical studies on "going private" deals shows significant premiums at the buyout announcements, given positive effects anticipated by the market (DeAngelo et al., 1984, Smith, 1990 and the reviews by Amihud 1989 and Jensen 1989). Furthermore, on the evidence emerging from market indexes, many studies dwell on operating performance, highlighting positive dynamics following buyout deals due to corporate restructuring. The operating indexes have been analysed comparing the pre and post-buyout performance (corrected by industries) along many dimensions: growth in turnover, operating profitability, return on equity and on investment, and productivity (DeAngelo et al., 1984; Lowenstein, 1985; Baker and Wruck, 1989; Bull, 1989; Kaplan, 1989; Yago, 1989; Muscarella and Vetsuypens, 1990; Singh, 1990; Smith, 1990; Long and Ravenscraft, 1993).

At the basis of these improvements the literature has underlined two main phenomena: agency relationship improvements and a significant increase in managerial entrepreneurship.

From the agency theory point of view, (leveraged institutional) buyouts promote efficiency through: debt discipline (that induces management to pursue cash flow and asset disposal potentials in order to meet periodic debt obligations), access to information by professional investors (that reduces asymmetry with insiders and promotes the professionals' active monitoring function) and lastly the sharing of the value of managers (which enlarges their value enhancement efforts).

Entrepreneurial theory would suggest that rather than simply involving mechanisms to control agency costs, buy-outs enable managers to be alert to, and take advantage of, opportunities for growth. Moreover, the buy-out enables managers to undertake actions that they were not able to do within the well-known restraints of large, multi-divisional organizations (Wright et al., 1987). The two approaches overlap to some extent since the equity-ownership incentive mechanism contributes

both to reducing agency theory costs and encouraging managers to seek out and exploit opportunities (Wright et al., 1992).

Bull (1989), Malone (1989) and Zahra (1995), among others, have tried to highlight the entrepreneurial effects of buyouts. Bull asserts that the post buyout performance improvements would be due to greater managerial alertness to opportunities to create wealth. Malone examined the characteristics of individuals undertaking buy-outs as well as post-buy-out operating changes with respect to shifts in the nature of decision-making, changes in the form of managerial remuneration, and a range of other operating changes including new product development, tighter financial control, asset disposals and managerial change. Major changes were found in terms of marketing and new product development, with other cost control factors also given greater importance. Zahra (1995) states that, apart from highlighting that post-LBO performance is greater than that prior to LBO, companies reported increases in their product development, technology-related alliances, R&D staff size and capabilities, and new business creation activities, which appear significantly and positively associated with changes in company performance.

Along with this interpretation of entrepreneurial buyouts, Bruining and Wright (2002) underline the wider industrial fields where buyouts have recently taken place (not only mature industries, but also some more innovative and technologically complex sectors) and the new PE investors' role, more similar to that of "classical" venture capitalists, where financial support is complemented by strategic advising and operational help. In the words of Bruining and Wright (2002), buyouts have traditionally been viewed as involving firms in mature sectors with few investment demands and low growth prospects (Jensen, 1989). However, the main rationale for buy-outs has shifted from cost reduction and strategic reorientation in mature sectors to creating value in technology sectors through product development and innovation (Wright et al. 2000, 2001). A shift is occurring in the buyout market from downside protection in deals led by LBO associations to VCs that look for the upside potential of firms (and with which in the US some LBO associations are joining forces). A recent study by Wright et al. (2001) identifies different types of buyouts and suggests that different

types of financial investor may have different roles to play in its monitoring. In the more traditional highly leveraged buyouts, LBO associations may be more appropriate as they are adept at financial monitoring. In contrast, in buyouts requiring some limited form of investment and innovation (revitalisation buyouts) or involving major entrepreneurial innovation (entrepreneurial buyouts) venture capital firms may have a greater role to play as there is a need for technical as well as financial monitoring. Bruining and Wright (2002) analyse how buy-outs improve the entrepreneurial orientation of firms (applying the EO-model by Lumpkin and Dess, 1996) following the change in ownership and how VCs contribute to this process through the development of a post-investment relationship. The case studies show that buy-outs do occur where entrepreneurial opportunity exists and provide support for Wright et al. (2000) who argued that buyouts do not simply involve improving efficiency in companies in mature sectors. The success of post-investment depends not only on effective informal relationships but also on the position of the VC as a majority shareholder. There is a need for further investigation of the post-investment involvement of the VCs to distinguish those buy-outs that can be supervised better with contractual relationships compared to those where greater emphasis on relationship building between the VC and CEO is likely to be more effective in enhancing EO.

Sceptical voices on buyout effects have not been lacking in the US either, especially referring to their long term effects. According to Rappaport (1990), the financial and governance structures typically associated with buyouts are necessarily transitory, given their weaknesses: limited strategic flexibility due to high debt, shareholders' needs to realize their investment as soon as possible, lack of immediate market price information that steers managerial actions and restricted market applicability.

These limits are a public company's strengths and this form - even restructured via buyout - should be a structural (stable) governance arrangement in a market economy. Rappaport's perspective has been described as being like a "shock therapy" conception of buyout (Kaplan, 1991), where

managers are pushed into achieving a quick, radical corporate restructuring. After this exceptional effort, managers incentives are necessarily more limited and new ownership and governance changes are expected in order to create a more stable and long-lived structure (like a "new" public company). In Kaplan's reinterpretation (Kaplan, 1991), after the initial benefits have been reaped, the owner-managers involved in a buyout would find themselves bearing a high level of undiversified risk which eventually would bring them back to public ownership. The high level of debt incurred in most buyouts may bring irksome restrictions to the scope of management who may wish to go public in order to reduce the reliance on debt.

Hutchinson (1999) observes that, whether buy-outs continue to be as popular in the future or not, the phenomena do provide confirmation of the notion that there are problems associated with public ownership and the consequent separation of ownership and control. Going private provides a useful contrast to going public and suggests that organizational ownership and control are not only important factors but dynamic ones as well and that enterprises may switch between public and private ownership.

In the European context, the LBO (or MBO/I) has been developed, starting in the UK at the end of the 1980s, and has assumed particular features, among them the different extent and characteristics in specific European countries (Wright et al., 1992).

In the Wright et al. (1992) suggestion, the local specificity may be interpreted as having three dimensions: the generation of buyout opportunities, the infrastructure to complete a transaction and the opportunity for the investors in a buyout to achieve a profit. In particular, the generation of entities for sale may take various forms with e.g. succession issues in family firms, divestment of unwanted divisions, privatization of public sector activities and the going private of companies quoted on a stock market.

In some initial observations, Wright and Coine (1985) found that improvement could be observed in areas such as profitability and cash management. This was supported by Thomson *et al* (1989) who also found that the financial results post buy-out were better than forecasted. Wright et al. (1992)

observe that LBOs appear to undertake a greater level of new product development and asset purchase after buy-out than their counterparts do in the U.S. and have placed less emphasis on asset disposal than in the U.S. Managers involved in buyouts frequently tightened up their control of working capital. The results of the survey indicate support for both the entrepreneurial and agency cost-reduction perspective on buy-outs, with the former perhaps being somewhat more in evidence.

Weir and Laing (1998) consider a sample of small management buyouts in the UK analysing them in terms of two performance indicators, cash management and profitability, seen against three benchmarks: prior company performance, the performance of a company of similar size and the performance of the industry on average. In general, there is no real evidence of better cash management, but there is some evidence of improved profitability. The result, therefore, offers limited support for the role of incentives proposed by the agency model.

Desbrières and Schatt (2002) measure, for the first time in France, the impact of LBO investments on a number of performance variables regarding the companies purchased, both overall and with regard to the motive or source of the buyout (succession in family business or divestiture of subsidiaries or divisions in larger groups). The authors observe that French LBOs differ from those in the US or the UK, mainly as regards family-run firms (MBOs of family firms represented 55,5% of the investments carried out in France from 1991 to 1997) and the divestment of French subsidiaries controlled by industrial and commercial groups (41,6% in the same period). In contrast to the US and UK, there are very few LBOs of publicly-held corporations in France and Desbrières and Schatt observe that, unlike the context on which Jensen's (1989) theory is based, French MBOs are characterized by a considerable concentration of the ownership of the acquired firms (family businesses and subsidiaries of groups) and that agency cost reduction (and so a possible acquired enhancement of a firm's performance) is better explained by the ownership transfer to new managers and venture capitalists than by what is usually admitted, i.e. the lowering of the separation of ownership and decision-making functions.

Given the heterogeneous situations in which firm control transfer is conducted via LBO in the UK, France, Italy and other European countries, an in-depth analysis of the phenomena must consider the various buyout cases (i.e., family business succession, divestiture of subsidiaries from groups, privatization from public sectors). In every (broadly defined) LBO case, the agency theory and/or the entrepreneurial perspectives might be applied, underlining the specific arguments that can emerge.

From an agency theory point of view, in family business (investor) buyout, the critical relationships are those among (at least) three subject categories: (family) founders, managers (insiders or outsiders) and financial investors (venture capitalists in a broad sense). Also in this situation, active monitoring by investors, equity sharing by managers and debt "discipline" should be powerful incentive tools. But, as Desbrières and Shatt observe, it is necessary to take into account the risk that might emerge when the founders hold the main share of the specific business knowledge, which appears particularly critical when firms are not very complex (on complexity and organization, the Authors referred to Fama and Jensen, 1983). The latter condition makes decision management and control more personal and weakens the positions of buyers (investors and management too), especially when the founder has not made the effort to delegate this specific information and associated decision-making rights (Jensen and Meckling, 1992).

In connection with the entrepreneurial perspective on buyout, the performance effect in a family business might be related to the entrepreneurial age and energy incentives. In some cases, the founder's entrepreneurial effort should be decreasing, giving the new (also insiders, but not fully exploited) management some relevant space for value enhancements through technical, commercial and organizational innovation. In other cases, the founders' entrepreneurial competence might be a threat for the buyers, if they are not able to replicate and/or to overcome this "resource"; the situation could be worsened by the possibility that the founders could undertake some new (concurrent) initiatives.

One of the first investigations into the family business buyout agency relationship is offered by Howorth e al. (2004) and puts a particular emphasis on the balance of information and the relationship between vendors and purchasers (utilizing also the complementary theoretical framework relating to trust and negotiation behavior). The case studies confirmed that information asymmetries were widespread, providing opportunities for the parties with more information to negotiate price and structure to their advantage. Where the MBO/MBI was part of the family firm's long-term strategy, there were fewer information asymmetries, and knowledge transfer was facilitated.

The French evidence given by Desbrières and Schatt (2002) reveals that family businesses subjected to LBO showed superior (relative to industry average) results before LBO (in terms of return on equity, return on investment, debt levels, margin ratios and liquidity) that decreased after buyout (placing them below the industry average). This evidence is contrary to the main US studies (which referred to the general buyout phenomena, and especially to "going private" deals) and also to some UK studies previously cited; this evidence could be the subject of further investigation in order to analyse the time-persistency of these differences and their causes.

In the next sections of this paper, we offer some further empirical findings on FBIBO performances in Italy, from the middle of the 1990s until now.

4. The FBIBO: description of target firms

Sources of data

The empirical study was carried out on IBOs performed in Italy from 1995 to 2000 on family owned firms (Family Business Investor Buy-Out - FBIBO). The research focuses on deals where the PE acquired at least a majority stake in the target firms.

Choosing the period of analysis two main issues were taken into account:

- The need to track the financial performances of the target firms before and after the IBO. To this end, accounting data were gathered from year T-2 (where T is the year of the deal) to T+3 (if the PE still held the stock in T+3) or to T+2 (if the PE sold the stock in T+3).
- The availability of accounting data. We used the database of Infocamere (provided by the Italian Chamber of Commerce): it contains firms' annual reports from 1993 up to now. This is to say, T-2 couldn't go back before 1993 (T equal to 1995) and T+3 couldn't go beyond year 2003 (T equal to 2000).

According to our sources of information, from 1995 to 2000, 44 FBIBOs were completed[1]. In the empirical work, the following were not included:

- Deals involving target firms whose annual reports were not available;
- Deals carried out in ways preventing the comparability of financial data: when the PE acquired only a business unit (not the entire firm, for which annual reports were available) or, on the other hand, when it acquired more than one firm at the same time, it was not possible to compare accounting data before and after the deal.

Considering these two constraints, the empirical work was conducted on 21 FBIBOs. In eleven cases, the PE sold its stake in the target firms by December 2003, holding the equity participation (on average) for 3.0 years (Table 1).

As we see in table 2, 5 out of the 11 ways out were trade sales (with a mean length of deal of 4.0 years), 2 were releverage (3.0 years) and IPO (2.0 years), 1 each for write off and other (Table 2). In the other 10 cases, the PE still has its stake in the target firms, with a mean period (up to December 2003) of 4.3 years (1.3 years longer than the mean period recorded for the FBIBOs already concluded).

[1] This research wouldn't have been possible without the contribution of AIFI and, namely, of its research team who provided the FBIBOs which occurred from 1995 to 2000. We would like to offer special thanks to Anna Gervasoni, Roberto Del Giudice, Cristina Soppelsa and Francesco Bollazzi for their contribution.

In T-1, the nominal turnover of the 21 studied firms ranges from a minimum of €6.5 m to a maximum of €1,016.5m. The mean nominal turnover (in T-1 it equals €106.0 m) is strongly influenced by the two biggest firms: their turnovers are respectively around €1,000m and €500m. Not taking into account the two biggest firms, in T-1 the mean nominal turnover decreases from €106.0m to €36.5m. The same applies to the number of employees: in T-1, it ranges from a minimum of 23 employees to a maximum of 5,517, the mean being 517.7. Ignoring the two biggest firms, the mean number of employees shrinks to 158.6.

According to the Ateco 2002 code (used by Istat, the Italian Statistical Institute), the 21 firms belong to 10 industries (two-figure classification scheme). Table 8 shows that the industries represented tend to be mature. The most represented industries are "Manufacture of metal products" and "Manufacture of mechanical machinery" that altogether account for 47.6% of the firms.

Finally, it is worth mentioning that in 18 FBIBOs the PE investor didn't change the management team after the deal. In one case the investor added an external manager to the ones already in place and only in two cases was the management team substituted. Such evidence underlines the importance assigned by the investor to the human resources developed by the target firm: to preserve and leverage these competencies investors often granted managers a stake in the firms they worked for.

Accounting data

For each of the 21 firms, the annual reports were gathered from year T-2 to year T+3 (only if the PE still held its stock in the target firm in T+3) and, when available, the deed of merger (see below). The balance sheets and the profit and loss accounts were classified (using the footnotes to the financial statements as well) in order to arrive at the following measures:

– Net working capital, Net fixed assets, Net invested capital, Net financial debt and Equity;

– Net sales, EBITDA, EBIT, Earnings before extraordinary items and taxes, Income before taxes and Net income.

Furthermore, from year T-1 to T+3 (and for each firm) the cash flow statement has been provided, highlighting the net investment in fixed assets (tangible, intangible and financial). Finally, the usual set of ratios has been computed.

In a limited number of deals (5 out of 21), to have a proper picture of the financial performances in year T (when the deal occurred), it has been necessary to sum the profit and loss account of the target firm and of the bidder. On one occasion, to compare the performances before and after the deal, the financial data of two firms (both acquired by the PE) have been summed for year T-2 and year T-1.

Typically, the PE carries out the investment by means of a company (a New Company or an already existing one) that acquires the target firm(s): after the acquisition, the bidder and the target firm(s) are merged, the former taking the name of the latter. The IBO is usually associated with revaluation of its assets, which might be of its tangible fixed assets (by and large to real estate and less frequently to plant, machinery and equipment) or its intangible fixed assets (typically to goodwill or similar, sometimes to licenses, trademarks and patents). Sometimes (6 occurrences out of 21) the vendor keeps any real estate involved by unbundling it from the target firm before the IBO.

Because of the asset revaluation, the Net fixed assets of the merged firm are usually higher than those of the target firm. The sum of the Net fixed assets (21 firms) increases from €396.4m in year T-1 to €1,320.3m in year T+1, while the mean goes up from €18.9m to €62.9m. This is to say that the Net fixed assets are not homogeneous before and after the IBO: this is why we analysed the financial performance of the firms involved focusing on the measures not affected by the revaluation of their assets (i.e. EBITDA, see below).

Financial data

The firms' financial data have been adjusted for inflation[2]. Furthermore, turnover has been adjusted for the sector each firm belongs to: to this aim, we used the total turnover index provided by Istat divided into the three-digit Ateco 2002 classification scheme. To adjust EBITDA by sector we had to draw on a different source of data: namely, we made use of two datasets created by Unioncamere (the Italian Chamber of Commerce) regarding the balance sheets and profit and loss accounts of almost 2,000 companies (from 1993 to 2003), divided into 32 sectors[3].

Turnover (adjusted for inflation and sector) has been standardized on T-2 in order to remove the effect of size. Similarly, the other variables (EBITDA, EBIT, Taxes, Net income or loss, Net Working Capital, Net fixed assets, Net invested capital, Net financial position, Equity) have been divided by sales of the respective years.

In the following section, the 21 firms are described in relation to their financial performances. We focus on the capital structure (Net financial debt, Net fixed assets and Equity) and on some variables that can be viewed as proxies for the degree of growth (turnover) and efficiency (EBITDA, EBIT, Taxes, Net income or loss, Net working capital) achieved by the firms (see Table 4 for a first synthesis of the variables taken into account: means and standard deviations are reported for the 21 target firms, from year T-2 to year T+3).

5. FBIBO: the effect on firms' performances

Means before and after the FBIBO

In this section we undertake a first explorative analysis of the performance achieved by the 21 studied firms before and after the FBIBO. To this end, a number of financial measures have been

[2] From now on, financial variables are adjusted for inflation, apart from when otherwise specified.
[3] In particular, the first dataset tracks the financial performances of 1,941 companies from 1993 to 2002; the second one tracks the financial performances of 1,945 companies from 1994 to 2003.

selected (such as Turnover, EBITDA, ROS etc., see Table 5) and for each one the simple means for the two-year period before and three years after FBIBO have been determined. Furthermore, to evaluate the statistic significance of the means, the "Paired Sample 1-tailed T-test" has been performed.

As Table 5 shows, the ratios of Net financial debt to turnover and Net fixed assets to turnover increase substantially after the FBIBO. This trend can be ascribed mainly to two distinctive traits of the deals: on the one hand (obviously), the leverage of target firms; on the other, the revaluation of assets followed by the merger between the bidder and the target. The latter affected other ratios (via the subsequent amortizations and depreciations in years T+), such as ROS and Net income (or loss) to Turnover, that declined after the IBO. The same can be stated for taxes (as a percentage of Sales) that dropped after the deal, suggesting a more effective tax shield management by the PE. The Net working capital to turnover ratio increases in the post buy-out period, indicating the inability to improve the efficiency of operations from this point of view (working capital management).

Other growth and efficiency measures (such as Turnover, EBITDA, Number of employees, Equity to Turnover ratio) didn't show any clear trend at this stage of the analysis. At first glance, Turnover, Turnover adjusted for sector and EBITDA (we refer to the means) increase after the IBO, meaning that on average the performance improved after the deal; as opposed to this, the mean EBITDA margin slightly declines in T+ and the same applies to the number of employees. Nevertheless none of these variables (and, in this sense, the Equity to turnover ratio must be added to the list) is statistically significant under the "Paired Sample 1-tailed T-test". This result may be due both to the narrowness of the sample studied and to the high standard deviation of the variables. Anyway, it is worth noting that even though it cannot be stated that financial performances grow after the IBO, neither can it be stated that they decline after the deal[4].

[4] It is worth noting that the mean EBITDA margin and the mean EBITDA margin adjusted for sector display a different trend before and after the deal, the former decreasing and the latter increasing. This result, that is not statistically

Groups' identification

The results described above shed some light on the behaviour of a number of relevant measures in the time horizon around the PE deal. A possible weak point of the analysis at an aggregate level is that different phenomena can be confused, throwing the whole picture out of focus.

The first consequence is the low statistical significance of changes found in performance variables before and after the PE investment (Table 5), disallowing conclusions on the economic impact of PE. Moreover, it suggests that a better understanding could be obtained through the identification of more homogeneous groups of companies, since completely different patterns of behaviour seem to coexist.

We therefore cluster companies according to the values assumed by the observed variables more directly linked with economic performance, namely Turnover (corrected for inflation and sector performance) and EBITDA Margin adjusted for sector. The first measure effectively gathers the development of competitive strength, while the latter is an expression of overall efficiency[5].

The first step has been the identification of a measure capable of expressing the tendency of values in the time series. The coefficients (B value) of the linear regression models of Sales and EBITDA Margin (dependent variable) over time (independent variable) made the case; the statistical significance of those regressions is not of interest, since we are only interested in obtaining a concise measure of the tendency of observed values over time and this is provided by the coefficients of the estimated model, no matter how well it fits actual observations.

To emphasize the discontinuity impact of the PE investments and the post buy-out performance we performed a regression analysis for the period before the investment (from T-2 to T) and for the period after (from T to T+3). We therefore obtained, for each company, a measure of the trend in

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significant, should be taken carefully, considering that we made the correction building on two datasets not as comprehensive as the one used to correct Turnover.

[5] We chose such financial measures because they are not affected by the way the deal is carried out in Italy (as mentioned above, the IBO usually implies a heavy asset revaluation). Given these conditions, financial measures otherwise employed to study IBOS (i.e., Desbrières and Schatt, 2002), such as return on asset, return on equity and the like, proved not to be relevant in the Italian situation.

values before the investment and after. An additional measure was calculated as the difference in the two tendencies, in order to highlight the change which had occurred.

12 cases out of 21 show a positive trend after the PE. 10 of them improved the Sales trend after the investment, 3 improving already growing values, 7 inverting a previously declining trend. On average they improved their trend by 19% while showing a post investment Sales increase of 17% a year. These companies, before the operation, showed a declining trend in sales of about 2%.

In 9 cases, on the contrary, declining sales followed the buy out. In 8 cases the post PE trend is worse than before. In fact, in 7 cases sales were growing before the PE, in 1 they were declining slower. The average decrease of post PE sales trends is of about 10%, due to a switch from an average increase of 4% before the investment to an average decrease of 6% a year.

It is worth underlining that in 14 cases out of 21 the PE is followed by a change in direction of the sales trend, from positive to negative and vice versa. This evidence, even though not allowing any conclusion about the economic impact of the PE investments, permits confirmation of the discontinuity associated with such operations.

Table 7 shows pre and post buy-out trends of EBITDA Margin industry adjusted. Here are 10 companies showing a positive post investment trend. 6 of them were declining before the operation, 2 are still growing but at a lower rate and 2 are growing at a higher rate. The average improvement for these companies is about 4%, from a pre buy-out value of 0% to an ex-post performance of 4%.

11 companies show a declining EBITDA Margin rate after the PE, even though 3 of them show an improvement against their pre buy-out performance. The average decrease is about 5%, from an annual increase of 2% before, to a figure of –3% after the operation.

The EBITDA Margin changes the sign of its trend in 13 cases.

One of the most surprising findings of this analysis is that many of the ex-post growing companies, both for Turnover and EBITDA Margin, were declining before the buy-out. Moreover, companies declining after the investment were often growing before. PE seems to have a strong discontinuity effect, changing bad into good and vice versa.

To interpret this evidence it is worth recalling that "restructuring" efforts are likely to follow the PE deal. In fact, in the effort to strengthen the profitability of the company, it is possible that sales reductions could be consciously accepted. On the other hand, it is also possible that a temporary reduction in profitability is accepted in order to acquire market share and foster sales. Hence, a better understanding of the discontinuity which companies involved in the PE buy-out experienced, can be obtained through the joint consideration of Sales and EBITDA Margin.

We therefore built the Matrix (Figure 1) ordering the companies from left to right in the horizontal dimension according to their post PE sales trend and from top to bottom in the vertical dimension according to the ex-post EBITDA Margin trend.

In the top-left quadrant (A) there are the 7 companies growing both in Sales and EBITDA after the PE. They are the "success stories". Top-right (B) we find 3 companies improving their EBITDA Margin while reducing sales. Bottom-left (C) there are the 5 companies improving sales and reducing EBITDA Margin. Groups B and C could be called "question marks", since they show mixed behaviour in performance indicators. Finally, bottom-right (D), we find 6 companies with a declining trend in post buy-out performance for both sales and EBITDA. For this group, especially for those companies close to the bottom-right corner, the most adequate label is "failure".

Tables 9 to 12 show the mean and standard deviation of main indicators over the 5 years of observation.

Certain elements of the evidence from the average financial data of the four groups are worth underlining.

Firstly, it is surprising that Group D, with a declining trend both in Sales and EBITDA Margin, is the one with the highest average EBITDA Margin (industry adjusted) in the T- years. The companies labelled as "failures" were the most profitable before the deal.

Secondly, and this point is possibly related to the first, together with group C, group D has the highest increase in Net Financial Debts and Net Fixed Assets. These two measures show similar behaviour because they are both related to the price paid by the PE, given the typical structure of

these buy-outs (see above). The price paid can well have been high, given the Sales trend and the EBITDA Margin level.

Another issue that can be raised concerns the tax shield effect of FBIBO. In the previous section we noted a statistically significant reduction in tax paid as a percentage of sales. In fact, thanks to the group analysis, we note that this result has been achieved mainly because of Groups D and C, which can be more easily explained as a consequence of the worsening of profitability rather than an effective tax policy.

As noted in the previous section, the Net working capital to turnover ratio increases in the post buy-out period, indicating the inability to improve the efficiency of operations. In the group analysis we can see that this is due to groups C and D.

We performed a multinomial logistic regression to verify whether the fact of belonging to one of the four groups can be explained by ex-ante relevant variables. The variables taken into account are size (Turnover and employees), industry, the year of the buyout, the leading investor and the reasons for selling from the former owner's perspective. None of them displayed a statistical significance.

Finally, going back to one of the opening issues, it is of interest to analyse the distribution of the ways out among the four groups and, if the target firm is still controlled by the PE, the group it belongs to (Table 13).

Table 13 Shows that 4 out of the 10 firms still held by the PE belong to group D, the worst performing group, 3 to group C (turnover increases and EBITDA margin falls after the IBO) and 3 to group A (which is the "success" quadrant). Trade sales are spread over groups A and B (2 each) and D (1); finally, releverage is concentrated in group A (2 out of 2).

6. Conclusions

In this paper we have focused on those family businesses that have faced the family succession issues via a deal with a PE. Our main focus was to evaluate the impact of the PE on the firm's financial performances. That is to say, the main question was whether the PE could be an efficient way to support the family business's succession or not.

To this end, a review of the literature on this topic has been presented (sections 2 and 3). Then a sample of 21 deals, carried out from 1995 to 2000, was selected, on which the empirical research was performed. The 21 target firms were studied focusing (at this stage of the research) mainly on accounting data, to appraise the evolution of their financial performances over a period of five years (from the two years prior to the FBIBO to the three years after the FBIBO).

We then described the evolution of a set of financial ratios for all the studied target firms (section 4). Some evidence appeared in this stage of the analysis. Focusing on the capital structure, it was apparent that such measures as Net financial debt and Net fixed assets rose greatly (on average) after the IBO, mainly because of the typical configuration of the Italian deals.

Considering that other growth and efficiency measures were not statistically significant, we clustered firms in order to find some "pattern of behaviour" (in terms of financial performance) before and after the FBIBO according to turnover and EBITDA margin industry adjusted.

In doing so, we found that 65% of the studied target firms changed their performance trends after the deal, meaning that the PE can be viewed as causing discontinuity in their evolution. Specifically, this means that the firms performing worst before the IBO were the ones which performed better after the IBO and vice versa.

Taking jointly the two performance variables, we clustered target firms into four groups (the analysis was based on the T+ trend). A detailed examination of the performance measures before and after the deal for each group gave us some insights about "patterns of behaviour". We found a number of success stories (7 target firms), meaning that both turnover and EBITDA improved after

the deal, some failures (6), with both variables falling after the PE acquired a stake, and a number of middle performing firms (8), with one performance variable worsening while the other improved.

It was quite surprising that the worst performing firms after the deal were the most profitable (both in terms of turnover and EBITDA) before the IBO; furthermore, these firms showed the highest growth rate in net financial debt after the deal. Some surprising evidence regarding efficiency measures also emerged. On one hand, improvement in working capital management was displayed only by the better performing firms; on the other hand, an average decrease in taxes to turnover ratio was displayed only by those companies that achieved the worst results in terms of Net income, while the others didn't display any significant change.

Concluding, even though no clear evidence of the sometimes stated superior managerial skills brought by the PE was found, post IBO performances of the target firms were seen to be not worse than performances before.

Private Equity deals are complex investments that include many critical issues other than that of family succession. Some results indicate that issues relating to the informative asymmetry between the seller and buyer are of great importance. Our finding that the companies with the worst economic performance after the deal had the best performances before it may suggest that information asymmetries among parties led to too much money being paid for the target company. It may also indicate that difficulty in replacing the talents of the previous owners is a critical element in the intervention of Private Equity.

In this sense, the directions already planned for the development of this research are related to the integration of evidence of economic and financial measures with a wider set of indicators about the competitive and managerial conditions of the firms. The aim is to identify significant changes, associated with PE buy-outs, in aspects which do not have a direct impact on financial performance, such as governance structures and managerial skills, and which are linked to the competencies brought by the investor.

Another improvement could be the extension of the time horizon of the analysis, since the effect of the IBO may only work itself out fully over a longer period.

Moreover the characteristics of firms before the buy-out will be considered in relation to their belonging to one of the four identified groups.

Tables

Table 1. Number of years the PE retained its stake in the target firms for the deals ended by December 2003

Nr. Of years the PE retained its stake	Nr. of deals	%
1	1	8.3%
2	5	41.7%
3	2	16.7%
4	1	8.3%
5	1	8.3%
6	0	8.3%
7	1	8.3%
Mean (years)	**3.0**	

Table 2 Ways out of the deals ended by December 2003

Way out	Nr. Of deals	Mean length of the deal (years)
IPO	2	2.0
Trade sales	5	4.0
Releverage	2	3.0
Write off	1	2.0
Other	1	1.0
Total	11	

Table 3. Industries represented by the 21 target firms

Ateco 2002 code	Description	Nr. of firms
18	Manufacture of clothing; dressing and dyeing of fur	2
19	Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harnesses and footwear	1
22	Publishing, printing and reproduction of recorded media	1
28	Manufacture of fabricated metal products, except machinery and equipment	6
29	Manufacture of mechanical machinery and apparatus	4
31	Manufacture of electrical machinery and apparatus	1
33	Manufacture of medical appliances, precision and optical instruments, watches and clocks	1
34	Manufacture of motor vehicles, trailers and semi-trailers	1
35	Manufacture of other motor vehicles	2
36	Manufacture of furniture and other manufacturing activities	2
Total		21

Table 4 Mean and standard deviation of the major financial measures

	T-2		T-1		T		T+1		T+2		T+3 (*)	
	μ	σ	μ	σ	μ	σ	μ	σ	μ	σ	μ	σ
Turnover %	100.0%	0.0%	104.4%	10.9%	102.8%	18.6%	106.2%	40.1%	116.2%	66.4%	101.4%	19.2%
Turnover industry adj.%	100.0%	0.0%	103.2%	12.9%	100.6%	20.7%	103.0%	41.0%	114.8%	65.8%	108.2%	26.2%
EBITDA margin industry adj.	13.4%	7.7%	13.0%	9.9%	15.2%	10.0%	13.4%	8.7%	15.6%	16.7%	19.7%	15.7%
ROS	9.6%	6.2%	8.3%	8.9%	7.7%	5.3%	5.9%	5.6%	2.9%	11.6%	3.1%	6.5%
Tax/Turnover	-4.3%	3.5%	-4.5%	3.9%	-3.8%	3.2%	-2.9%	2.3%	-2.4%	2.8%	-1.7%	2.1%
Net income/Turnover	4.1%	3.4%	2.5%	7.0%	1.4%	4.4%	-0.4%	5.1%	-3.8%	14.8%	-2.4%	7.9%
Net working capital/Turnover (1)	22.3%	17.7%	23.3%	17.8%	27.1%	27.1%	26.9%	23.8%	26.6%	21.6%	31.6%	22.1%
Net fixed assets/Turnover	15.1%	12.3%	14.0%	13.1%	52.7%	59.7%	50.6%	42.7%	48.3%	38.8%	44.3%	29.8%
Net invested capital/Turnover	37.2%	22.0%	37.1%	21.0%	78.2%	79.6%	78.0%	61.1%	76.0%	52.0%	75.9%	46.1%
Net financial debt/Turnover	-9.4%	16.7%	-8.9%	17.6%	-50.8%	64.5%	-52.3%	48.9%	-54.1%	46.1%	-51.8%	43.8%
Equity/Turnover	27.8%	18.1%	28.2%	21.1%	27.4%	19.2%	25.7%	15.7%	21.9%	18.0%	24.2%	15.1%
Nr. of employees (2)	100.0%	0.0%	103.3%	14.3%	108.9%	22.1%	118.5%	49.3%	131.2%	81.5%	106.7%	30.5%
Value added/Turnover	31.1%	10.1%	30.5%	12.3%	31.9%	12.2%	32.4%	10.0%	30.8%	11.1%	31.4%	9.8%

(1) Computed on 20 firms out of 21
(2) Computed on 19 firms out of 21
(*) As mentioned above, 15 out of 21 firms were still held by the PE in T+3. Considering the available source of information, it was possible to gather data for 13 of the 15 identified firms.

Table 5 Comparison of mean measures of the 21 firms using averages of the two T – and T + Years and results of Paired Samples 1-tailed T-test (Financial adjusted for inflation)

Variable	**Mean T-**	**Mean T+**	**T test**	**Sign.**
Turnover	105,40	110,81	0,180	
Turnover adj. for sector	106,69	113,37	0,131	
EBITDA	11,92	13,31	0,179	0
EBITDA margin	14,30%	13,29%	0,332	
EBITDA margin adj. for sector	13,24%	15,67%	0,212	
ROS	8,93%	3,94%	0,020	**
Tax/Turnover	-4,39%	-2,41%	0,009	***
Net Income/Turnover	3,29%	-2,30%	0,011	**
Net working capital/Turnover (1)	22,81%	26,80%	0,074	*
Net fixed assets/Turnover	14,54%	47,25%	0,000	***
Net inevsted capital/Turnover	37,14%	74,79%	0,000	***
Net financial debt/Turnover	-9,12%	-51,90%	0,000	***
Equity/Turnover	28,03%	22,89%	0,093	*
Numeber of employees (2)	574	560	0,398	
Value added/Turnover	30,83%	31,36%	0,377	

*** Significance 99%; ** Significance 95%; * Significance 90%.

(1) 20 out of 21 firms
(2) 19 out of 21 firms

Table 6 Trends in Sales, before and after the PE investment

	Trend T+	Trend T-	Difference in trend from T+ to T-	(a)	(b)
7	0.94	0.07	0.87	+	+
15	0.24	-0.03	0.26	+	+
12	0.18	0.05	0.13	+	+
3	0.15	0.07	0.08	+	+
14	0.12	0.15	-0.03	+	-
9	0.10	-0.16	0.26	+	+
1	0.08	-0.04	0.12	+	+
4	0.08	-0.13	0.21	+	+
10	0.05	-0.14	0.19	+	+
5	0.04	-0.13	0.18	+	+
16	0.03	-0.05	0.07	+	+
6	0.01	0.06	-0.05	+	-
19	-0.01	0.02	-0.03	-	-
13	-0.02	0.09	-0.12	-	-
2	-0.03	0.24	-0.27	-	-
8	-0.04	0.02	-0.06	-	-
11	-0.04	0.01	-0.05	-	-
20	-0.05	-0.16	0.11	-	+
18	-0.06	0.08	-0.13	-	-
21	-0.12	0.06	-0.18	-	-
17	-0.20	-0.03	-0.17	-	-
m1	0.17	-0.02	0.19		
m2	-0.06	0.04	-0.10		
m	0.07	0.00			

(a) Sign of the trend in T+

(b) Sign of the difference in trend from T+ to T-
m1: Mean value of companies growing after the IBO (from 7 to 6)
m2: Mean value of companies declining after the IBO (from 19 to 17)
m: Mean value for the whole sample

Table 7 Trends in EBITDA Margin adjusted for sector, before and after the PE investment

	Trend T+	Trend T-	Difference in trend from T+ to T-	(a)	(b)
16	0.18	0.03	0.16	+	+
6	0.07	0.03	0.04	+	+
15	0.05	-0.02	0.08	+	+
20	0.03	-0.03	0.06	+	+
12	0.02	-0.01	0.03	+	+
2	0.02	-0.01	0.03	+	+
9	0.02	-0.01	0.03	+	+
11	0.00	0.02	-0.02	+	-
14	0.00	0.02	-0.02	+	-
1	0.00	-0.01	0.01	+	+
5	-0.00	0.02	-0.02	-	-
8	-0.01	-0.04	0.03	-	+
21	-0.01	-0.01	0.00	-	+
19	-0.01	0.01	-0.02	-	-
7	-0.01	0.02	-0.04	-	-
10	-0.01	-0.03	0.02	-	+
3	-0.01	0.02	-0.03	-	-
18	-0.03	0.04	-0.08	-	-
13	-0.04	0.06	-0.10	-	-
4	-0.05	0.15	-0.19	-	-
17	-0.13	-0.06	-0.07	-	-
M1	0.04	0.00	0.04		
M2	-0.03	0.02	-0.05		
m	0.00	0.01			

(a) Sign of the trend in T+
(b) Sign of the difference in trend from T+ to T-
m1: Mean value of companies growing after the IBO (from 16 to 11)
m2: Mean value of companies declining after the IBO (from 5 to 17)
m: Mean value for the whole sample

Table 8 Group A – Financial performances

	T-2		T-1		T		T+1		T+2		T+3		Mean		
	μ	σ	μ	σ	μ	σ	μ	σ	μ	σ	μ	σ	T-	T+	Δ
Turnover	175.7	368.0	181.9	378.1	165.6	343.5	215.8	420.2	179.9	356.4	192.0	361.4	178.8	195.9	17.1
Turnover industry adj.	180.0	378.9	176.5	363.9	165.6	343.5	201.5	385.8	194.6	392.9	208.8	391.4	178.3	201.6	23.4
Ebitda Margin	9.4%	4.3%	8.8%	5.3%	9.4%	5.3%	10.9%	4.7%	11.2%	5.6%	10.6%	2.0%	9.1%	10.9%	1.8%
Ebitda margin industry adj.	8.7%	4.1%	9.0%	5.5%	9.4%	5.3%	10.2%	4.6%	21.7%	24.1%	23.5%	23.3%	8.9%	18.5%	9.6%
ROS	4.5%	4.0%	4.5%	2.6%	5.3%	2.7%	4.1%	2.2%	2.8%	6.9%	3.1%	5.3%	4.5%	3.3%	-1.2%
Tax/Turnover	-1.7%	2.0%	-1.8%	1.9%	-1.8%	1.4%	-1.4%	1.0%	-1.5%	2.7%	-2.0%	1.4%	-1.7%	-1.6%	0.1%
Net income/Turnover	1.3%	2.8%	1.2%	1.1%	1.9%	2.4%	0.2%	1.1%	-1.6%	5.8%	-2.0%	6.6%	1.3%	-1.1%	-2.4%
Net working capital/Turnover	23.6%	13.9%	24.6%	18.1%	22.0%	21.8%	24.1%	15.3%	23.4%	12.6%	23.6%	14.5%	24.1%	23.7%	-0.4%
Net fixed assets/Turnover	14.3%	7.7%	11.9%	6.3%	35.3%	27.2%	35.3%	26.0%	43.9%	38.1%	29.7%	28.7%	13.1%	36.3%	23.2%
Net invested capital/Turnover	37.9%	13.0%	36.5%	15.2%	57.4%	24.8%	59.4%	20.7%	67.3%	34.2%	53.4%	30.2%	37.2%	60.0%	22.9%
Net financial debt/Turnover	-17.7%	15.1%	-17.1%	15.2%	-32.5%	22.4%	-37.6%	14.1%	-47.3%	30.7%	-37.3%	30.6%	-17.4%	-40.7%	-23.3%
Equity/Turnover	20.1%	10.4%	19.4%	10.0%	24.8%	9.5%	21.7%	10.8%	20.0%	9.5%	16.1%	6.6%	19.8%	19.3%	-0.5%
Nr. of employees	1053	2354	923	2027	919	1996	1206	2270	1084	2173	903	1864	987.6	1064	76.5
Value added/Turnover	25.4%	8.9%	24.9%	11.1%	25.2%	9.8%	27.7%	8.8%	26.5%	9.0%	23.3%	3.7%	25.1%	25.9%	0.7%

Table 9 Group B – Financial performances

	T-2		T-1		T		T+1		T+2		T+3		Mean		
	μ	σ	μ	σ	μ	σ	μ	σ	μ	σ	μ	σ	T-	T+	Δ
Turnover	37.4	19.1	40.8	28.7	39.7	30.3	37.4	29.3	38.2	30.9	n.a.	n.a.	39.1	37.8	-1.3
Turnover industry adj.	35.9	17.3	39.2	26.3	39.7	30.3	36.8	30.2	36.1	30.0	n.a.	n.a.	37.5	36.5	-1.0
Ebitda Margin	13.1%	6.8%	8.7%	13.5%	9.5%	14.9%	14.4%	11.7%	15.8%	9.3%	n.a.	n.a.	10.9%	15.1%	4.2%
Ebitda margin industry adj.	10.8%	9.2%	5.9%	16.8%	9.5%	14.9%	11.3%	13.2%	13.8%	11.6%	n.a.	n.a.	8.4%	12.6%	4.2%
ROS	8.8%	3.7%	1.3%	18.0%	2.9%	10.2%	7.7%	4.9%	7.2%	2.8%	n.a.	n.a.	5.0%	7.5%	2.4%
Tax/Turnover	-2.8%	2.2%	-3.8%	3.5%	-3.1%	2.8%	-3.1%	3.9%	-3.5%	2.3%	n.a.	n.a.	-3.3%	-3.3%	-0.1%
Net income/Turnover	2.3%	1.6%	-5.9%	17.2%	-3.6%	9.0%	0.8%	0.6%	0.5%	2.8%	n.a.	n.a.	-1.8%	0.6%	2.4%
Net working capital/Turnover	10.8%	17.5%	11.5%	18.9%	12.8%	15.6%	13.9%	21.8%	13.5%	21.6%	0.0%	n.a.	11.2%	9.1%	-2.1%
Net fixed assets/Turnover	23.8%	26.3%	24.4%	31.2%	29.8%	45.5%	30.4%	36.0%	26.4%	32.8%	n.a.	n.a.	24.1%	28.4%	4.2%
Net invested capital/Turnover	40.3%	34.3%	42.6%	37.3%	48.1%	45.6%	56.2%	48.5%	56.2%	51.2%	n.a.	n.a.	41.4%	56.2%	14.8%
Net financial debt/Turnover	-16.9%	27.2%	-21.1%	30.1%	-34.3%	39.6%	-39.4%	38.5%	-38.5%	42.1%	n.a.	n.a.	-19.0%	-39.0%	-20.0%
Equity/Turnover	23.4%	12.0%	21.5%	32.6%	13.8%	16.6%	16.8%	10.1%	17.7%	9.4%	n.a.	n.a.	22.5%	17.2%	-5.2%
Nr. of employees	160	33	173	50	156	45	149	37	161	56	n.a.	n.a.	166.5	155	-11.5
Value added/Turnover	29.4%	14.1%	26.1%	18.5%	26.3%	17.2%	30.7%	17.0%	32.5%	15.2%	n.a.	n.a.	27.7%	31.6%	3.9%

Table 10 Group C – Financial performances

	T-2		T-1		T		T+1		T+2		T+3		Mean		
	μ	σ	μ	σ	μ	σ	μ	σ	μ	σ	μ	σ	T-	T+	Δ
Turnover	37.8	36.9	40.9	42.6	44.6	52.0	56.7	59.3	79.3	89.1	12.8	7.0	39.3	49.6	10.3
Turnover industry adj.	42.9	43.5	42.0	43.7	44.6	52.0	59.1	62.1	81.9	92.2	n.d.	n.d.	42.4	70.5	28.1
Ebitda Margin	17.0%	8.5%	17.3%	11.6%	23.4%	13.5%	20.7%	8.8%	20.3%	9.6%	21.0%	12.2%	17.2%	20.7%	3.5%
Ebitda margin industry adj.	16.5%	7.7%	16.2%	11.6%	23.4%	13.5%	22.0%	9.2%	19.5%	9.7%	19.9%	10.2%	16.3%	20.5%	4.1%
ROS	12.5%	7.1%	12.7%	10.2%	10.8%	5.6%	11.2%	3.1%	9.1%	4.8%	-2.6%	10.4%	12.6%	5.9%	-6.6%
Tax/Turnover	-6.2%	4.1%	-6.7%	5.3%	-6.7%	3.7%	-5.6%	1.9%	-5.2%	2.4%	0.0%	3.6%	-6.4%	-3.6%	2.8%
Net income/Turnover	6.2%	3.5%	5.1%	4.1%	0.3%	3.0%	0.9%	6.7%	-1.1%	10.1%	-9.6%	12.7%	5.6%	-3.3%	-8.9%
Net working capital/Turnover	20.6%	31.6%	20.4%	27.5%	32.4%	48.0%	27.7%	39.7%	27.7%	39.4%	53.0%	35.2%	20.5%	36.1%	15.6%
Net fixed assets/Turnover	14.6%	13.1%	14.1%	11.9%	101.6%	106.9%	75.1%	65.6%	67.7%	54.3%	71.4%	35.3%	14.4%	71.4%	57.0%
Net invested capital/Turnover	35.2%	35.0%	34.5%	29.2%	133.9%	153.5%	102.8%	103.8%	95.5%	91.0%	124.4%	67.4%	34.9%	107.5%	72.7%
Net financial debt/Turnover	3.0%	10.2%	4.3%	12.4%	-95.1%	124.8%	-69.9%	89.0%	-65.2%	85.8%	-97.0%	72.0%	3.6%	-77.4%	-81.0%
Equity/Turnover	38.2%	33.8%	38.8%	34.5%	38.9%	30.8%	32.9%	18.4%	30.3%	15.5%	27.4%	27.6%	38.5%	30.2%	-8.3%
Nr. of employees	159	75	170	86	200	114	288	235	374	385	119	124	164.5	260	95.6
Value added/Turnover	35.4%	12.5%	36.3%	16.0%	42.9%	13.9%	40.0%	11.8%	39.3%	12.7%	45.8%	5.4%	35.8%	41.7%	5.8%

Table 11 Group D – Financial performances

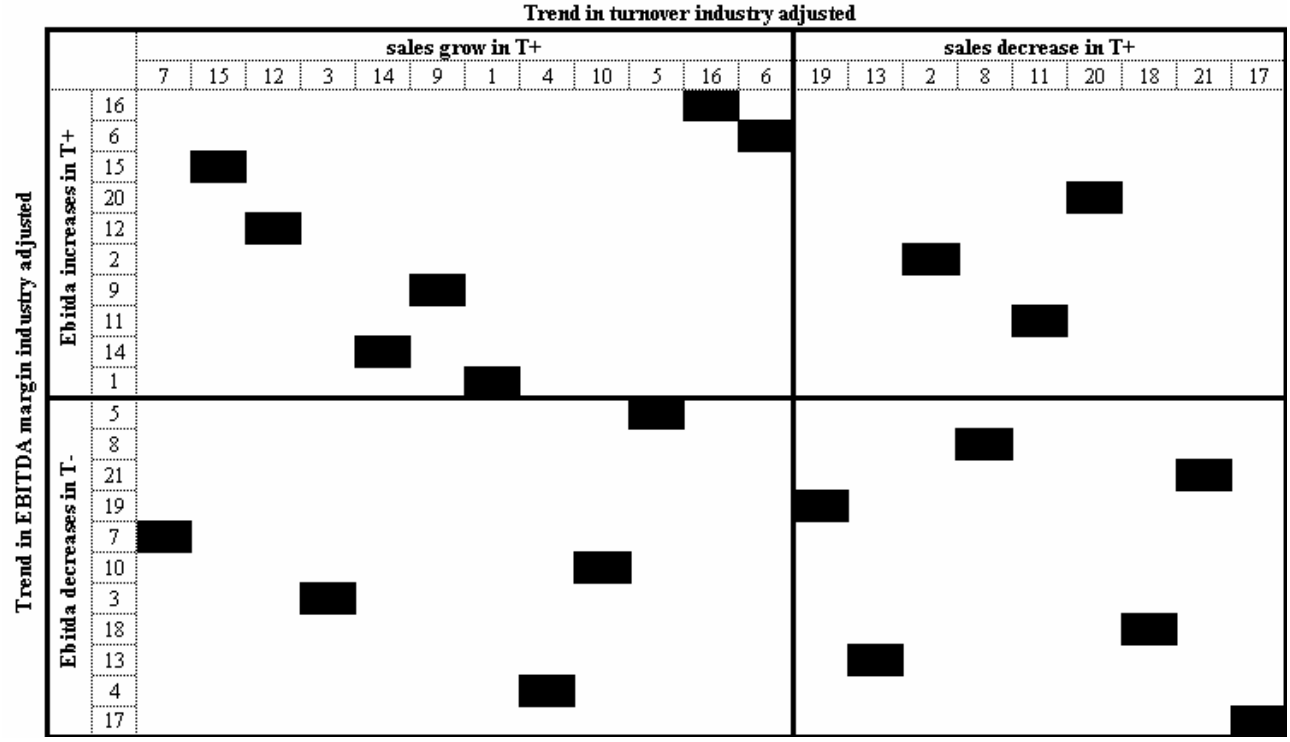
	T-2		T-1		T		T+1		T+2		T+3		Mean		
	μ	σ	μ	σ	μ	σ	μ	σ	μ	σ	μ	σ	T-	T+	Δ
Turnover	103.1	186.5	112.8	205.2	118.6	226.4	106.1	206.4	98.9	191.6	26.1	19.2	108.0	77.1	-30.9
Turnover industry adj.	105.4	194.4	117.2	216.0	118.6	226.4	104.9	206.8	100.6	197.0	27.0	21.0	111.3	77.5	-33.8
Ebitda Margin	19.9%	5.7%	19.4%	5.6%	18.1%	2.5%	12.1%	7.2%	5.5%	21.6%	16.1%	0.9%	19.7%	11.2%	-8.4%
Ebitda margin industry adj.	17.8%	8.8%	18.7%	7.2%	18.1%	2.5%	10.5%	6.8%	6.0%	13.1%	14.1%	5.1%	18.2%	10.2%	-8.1%
ROS	13.5%	5.5%	12.5%	5.0%	10.4%	1.3%	2.2%	7.3%	-4.2%	19.3%	7.3%	3.0%	13.0%	1.8%	-11.2%
Tax/Turnover	-6.4%	3.4%	-6.3%	3.4%	-3.8%	3.2%	-2.0%	0.7%	-0.7%	1.8%	-2.5%	2.0%	-6.3%	-1.7%	4.6%
Net income/Turnover	6.6%	2.2%	6.0%	2.2%	4.4%	2.5%	-2.6%	7.5%	-10.8%	26.6%	2.3%	2.7%	6.3%	-3.7%	-10.0%
Net working capital/Turnover	24.3%	10.9%	26.2%	11.2%	31.1%	19.5%	31.1%	22.0%	31.4%	15.7%	27.6%	18.3%	25.3%	30.0%	4.8%
Net fixed assets/Turnover	12.2%	10.0%	11.0%	9.5%	43.7%	29.6%	55.7%	38.9%	48.3%	33.1%	45.8%	21.9%	11.6%	49.9%	38.3%
Net invested capital/Turnover	36.5%	19.2%	37.2%	17.5%	71.0%	43.1%	86.8%	59.5%	79.7%	39.5%	73.4%	35.6%	36.9%	80.0%	43.1%
Net financial debt/Turnover	-6.1%	14.8%	-4.1%	12.3%	-43.5%	33.6%	-58.8%	41.4%	-60.5%	28.7%	-39.6%	25.1%	-5.1%	-53.0%	-47.8%
Equity/Turnover	30.4%	8.1%	33.1%	9.4%	27.5%	17.7%	28.0%	20.9%	19.1%	30.6%	33.8%	11.9%	31.7%	27.0%	-4.7%
Nr. of employees	479	844	508	908	499	879	463	804	456	797	146	123	493.2	355	-138.2
Value added/Turnover	35.2%	6.4%	34.5%	5.7%	33.5%	5.8%	31.5%	3.2%	27.7%	9.2%	32.8%	5.6%	34.8%	30.7%	-4.2%

Table 12 Ways out and groups

Way out	Nr. of FBIBOs	Mean length of the FBIBOs (years)	Group			
			A	B	C	D
IPO	2	2.0	0	0	2	0
Trade sales	5	4.0	2	2	0	1
Releverage	2	3.0	2	0	0	0
Write off	1	2.0	0	0	0	1
Other	1	1.0	0	1	0	0
Not yet sold (as of Dec 03)	10	4.3	3	0	3	4

Figures

Figure 1 Comparison of post FBIBO trend of Turnover and EBITDA Margin adjusted for sector.



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