

ILLEGAL BUYOUTS*

Douglas Cumming

Associate Professor and Ontario Research Chair
York University - Schulich School of Business
4700 Keele Street
Toronto, Ontario M3J 1P3
Canada

e-mail: Douglas@Cumming.com

Web: <http://Douglas.Cumming.com>
<http://www.schulich.yorku.ca/>

Simona Zambelli

University of Bologna,
Assistant Professor – Department of Management,
Faculty of Economics,
Piazzale della Vittoria 15, 47100
Forlì, Italy

e-mail: simona.zambelli@unibo.it

Web: <http://www2.sa.unibo.it/docenti/simona.zambelli/indexeng.html>

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Abstract

This paper empirically examines the effects of LBO regulations on the structure of LBO transactions based on data from Italy from 1999-2006. We show that rendering LBOs illegal prior to 2004 reduced the frequency of LBOs in Italy but did not exclude them altogether. Rather, it inhibited efficient LBO structure by causing private equity managers to focus on evading regulations. LBOs were in fact structured in a different way in the period of illegality, with investors holding a minority portion of board seats, fewer control rights and smaller equity ownership percentages. Moreover, LBOs were more intensively screened for the fit ('agreeableness') with the target firm management. By contrast, during the period of legality LBOs were more intensively screened for the quality of the business plan in reference to market conditions and the ability to efficiently structure the investment. Overall, the data are consistent with the view that uncertainty regarding the legal validity of LBOs impedes efficient governance and distorts decision making.

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JEL Classification: G23, G24, G28, K22, K34

1. Introduction

The massive growth in the private equity market in recent years had prompted widespread debate over the need for greater regulation.¹ Restrictions and/or bans on leveraged buyout transactions (LBO) have been commonplace in many European countries and Asia, including Italy and South Korea, for example.² Some countries have even experienced outright prohibition of leveraged buyout transactions, and private equity managers that finance buyout transactions have even been characterized as “locusts”.³ The rationale is that leveraged buyouts are often associated with a conflict of interest with managers being allowed to bid at auction for the stockholders’ assets against those same stockholders. LBOs involve the acquisition of the equity capital of a target firm by another company (newco), realized by using a large amount of debt relative to the asset value of the acquired company. The debt financing is obtained under the expectation that it will be repaid by the target. As a result, the target pays the economic price of its own acquisition. Further, buyouts typically involve a lack of full disclosure to stockholders and are often characterized by a private knowledge held by the insiders that would otherwise be qualified as insider trading in other types of transactions (i.e., there is a general breach of fiduciary duty that managers owe to their stockholders).

While LBO regulations have been examined in the legal literature (e.g., Ferran, 2007), there has been comparatively less empirical attention paid to the financial implications of such regulations (although for related work Goergen *et al.*, 2005, Goergen and Renneboog, 2003; Renneboog *et al.*, 2007; Wright *et al.* 1992, 1996, 2001, 2006, 2007). Prior empirical research has not examined the impact of illegality or uncertain legitimacy on the structure and governance of buyout transactions. This paper intends to fill this gap by examining the effect of LBO regulation on the structure of LBO transactions. It is also instructive to investigate how restrictive regulation on leveraged buyouts affects entrepreneurial governance and efficiency.

¹ For example, in the US context it has been argued by US commentators that LBOs should be outright prohibited. See Ben Stein, “On Buyouts, There Ought to Be a Law” The New York Times (September 3, 2006), at <http://www.nytimes.com/2006/09/03/business/yourmoney/03every.html?ex=1314936000&en=6679077c5af5c4a6&ei=5088&partner=rssnyt&emc=rss>.

² Up-to-date legislative developments are available on many public websites on the Internet, including for example <http://www.altassets.com/casefor/countries/2004/nz4561.php>, and <http://www.altassets.com/casefor/sectors/2003/nz3097.php>

³ This view is most widely associated with social democrat politician Franz Müntefering from Germany. See [http://en.wikipedia.org/wiki/Locust_\(private_equity\)](http://en.wikipedia.org/wiki/Locust_(private_equity))

In this paper, we focus on the Italian buyout market, which experienced a period of illegality or uncertain legitimacy of LBOs and have only recently have been legalized. In Italy, the legitimacy of LBOs has been highly debated over the last decade. The Italian Supreme Court (*Corte di Cassazione*, February 4, 2000, n. 5503) had even specifically deemed leveraged buyouts to be illegal (following numerous decisions of lower courts in prior years).⁴ This statement intensified rather than solving the debate on the legal validity of LBOs. Thereafter, on 1 January 2004, a legislative safe harbor was created for leveraged buyouts in Italy. This regulatory change enables one to assess whether outright prohibition of leveraged buyouts improves the governance associated with these transactions.

By examining leveraged buyouts before and after this legislative change, we specifically address the following questions: (1) did leveraged buyouts exist in Italy prior to the 2004 regulatory change, (2) how exactly were buyout transactions structured before and after this regulatory change, and (3) does the motivation for carrying out a buyout transaction and the nature of due diligence differ in different legal settings? By analyzing these complementary issues with new detailed data, we assess whether regulation of leveraged buyouts improves governance standards and thereby better protect the interests of firm's stakeholders.

Considering the legal uncertainty surrounding the legitimacy of LBOs in Italy before 2004, it is not surprising that the Italian buyout market is less well developed relative to other European countries. For example, the U.K. and the Netherlands have the largest buyout markets in Europe (the value of buyouts is about 1.5% of their GDP). In the French and German markets they are approximately 0.75% of their GDP. In contrast, from 2002-2005, the value of buyout transactions in Italy relative to GDP has typically been less than 0.5%, and among the lowest in Western continental Europe.⁵ As a result of an unfavorable legal environment and Supreme Court's prohibition, it is not puzzling that the value of buyouts comprises a smaller proportion of GDP relative to other European countries. Rather, the interesting puzzle is that these transactions were in fact carried out in Italy despite the prohibition.

⁴ Examples of cases part of the existing jurisprudence on LBOs in Italy are the following: Tribunal of Milan, May 14, 1992; Penal Tribunal of Milan, June 30, 1992; Tribunal of Ivrea, August 12, 1995; Tribunal of Milan, October 27, 1997, Supreme Court Decision 5503/2000. However, there is no clear and uniform trend in the jurisprudence.

⁵ Wright et al. (2006) report the value of buyouts per GDP in Italy to be approximately 0.2% in 2004, 0.55% in 2003 and 0.3% in 2002. The EVCA Yearbook (2006) reports the value of buyouts per GDP to be approximately 0.1% of GDP in 2005. See Wright *et al.* (2006) for a discussion of economic factors that explain the size of buyout markets across countries in Europe; see also Armour and Cumming (2006) for an analysis of the size of private equity markets per GDP in Europe and North America. Other buyout statistics are reported in Axelson et al. (2007a,b), Holmstrom and Kaplan (2001), Ljungqvist et al (2007), Renneboog et al., (2007), and Wright et al. (1992, 1996, 2001, 2007).

This paper empirically examines the frequency, structure and motivations underlying leveraged buyouts in Italy with a new detailed hand-collected dataset. The dataset consists of 103 buyout firms acquired by 27 private equity funds during the period January 1999 – July 2006. The data comprise a significant proportion of the private equity market in Italy (approximately 50% of the private equity funds in the market and 85% of the buyout funds actively involved in Italy). Comparison tests with publicly available data (Private Equity Monitor –PEM- database) indicate little or no bias in terms of representativeness of our sample.

The data show that private equity investors frequently carried out leveraged buyouts in Italy prior to 2004 and, as would be expected, the legislative change in January 2004 increased the frequency of leveraged buyouts. According to our dataset, during the period 1999 – 2003 (period of legal uncertainty and illegality risk) the frequency of buyouts was 55% and it rose up to 73% after January 2004 up to the July 2006 (period of legality). Our data show that in the period of legality private equity firms invest approximately 19-27% more capital relative to the pre-money valuation of the investment.⁶ Further, after the regulatory change private equity funds increased:

- a) their ownership in the target firm by approximately 25% (which is consistent with the greater capital investment relative to pre-money valuation due to the greater exposure of the private equity fund));
- b) the use of convertible debt by 4-9%;
- c) the level of involvement in the Target's business activity, in terms of the right to replace the CEO and the right to take a majority of the board seats. In particular, the use of the contractual provision allowing the private equity fund to replace the CEO increased by 18-41% and willingness to take a majority of the board seats increased by 25-37%.

We further show that the motivation for undertaking a buyout transaction was different during the illegal period relative to the period of legality after January 1, 2004. During the period of legal uncertainty and prohibition, leveraged buyouts were approximately 15% more intensively screened for the fit ('agreeableness') with the target firm management and 8% more intensively screened for fit with the firm generally. By contrast, during the period of legality leveraged buyouts were 19% more intensively screened for the quality of the business plan in reference to

⁶ While the statistical significance is quite robust, the economic significance of the estimated effects depends on the econometric specification, as explicitly shown in part 4.

market conditions and 9% more intensively screened for external market conditions generally. Further, during the period of legality, leveraged buyouts were 19% more intensively screened for the efficient investment structure (amount of capital required, ownership percentages obtained in the target firm, time to reach the break even point, strategic fit with the other firms in the fund's portfolio, IRR).

Overall, our data are consistent with the view that laws prohibiting LBOs results in less efficient LBO arrangements. The laws prohibiting LBOs give rise to transactions that are less hostile to incumbent management of the target firm so that the transaction will not be contested and deemed illegal. Our data consistently show this regulation gives rise to less investment by private equity funds, fewer incentives for the private equity fund to be actively involved in the governance of the organization, as well as private equity fund due diligence focus over the agreeableness of the target firm management as opposed to substantive factors associated with the business plan and external market conditions.

Our paper is most closely related to a growing literature on the regulation of buyouts. In one paper closely related to our research question, Betzer (2007) finds that leveraged buyouts in continental Europe traded at a discount relative to buyouts in the UK, and those differences are attributed to UK common law versus the prevailing civil law traditions in continental Europe. Similarly, Cao and Lerner (2007) and Cumming, Wright and Siegel (2007) summarize evidence that shows leveraged buyouts in the US have performed better than those in Europe (see also Nikoskelainen and Wright, 2007, and Cressy et al, 2007, for UK evidence). Other works in law and finance in the spirit of La Porta et al. (1997, 1998) considers the relevant impact of legal and institutional settings on private equity markets (e.g., Gompers and Lerner, 1996, 1998, 1999; Keuschnigg and Nielsen, 2001, 2003, 2004; Hamao, Packer, and Ritter, 2000; Manigart et al., 2000; Enriques 2002; Lockett et al., 2002; Allen and Song, 2003; Hege et al., 2003; Gilson and Schizer, 2003; Leleux and Surlemont, 2003; Lerner and Schoar, 2005; Mayer et al., 2005; Kaplan et al., 2006; Bottazzi et al., 2006; Cumming et al., 2006; Bigus, 2006; Fried and Gaynor, 2006; Broughman and Fried, 2007).

Prior research, however, has not considered specific regulatory prohibitions on buyouts and the effect of regulatory changes on the structure of buyout transactions. Our paper is aimed at filling this gap and it complements the related literature on buyouts in a number of novel ways. First we use a new hand-collected database, which covers approximately the 85% of Italian the

buyout funds. Second, we emphasize the importance of the legal environment in the private equity market, extending the works of Lerner and Schoar (2005) and La Porta et al (1997, 1998). Third, the results of our analysis provide guidance for policymakers designing buyout regulation in other countries around the world.

This paper is organized as follows. Section 2 outlines the theoretical propositions and testable hypotheses associated with regulation of leveraged buyouts. The data are introduced in section 3, and summary statistics are provided in that section. Section 4 provides the multivariate empirical analyses. Concluding remarks follow in the last section.

2. Legal and Institutional Details and Testable Hypotheses

This section first discusses Italian regulation of leveraged buyouts for the period spanning 1999-2006. Thereafter, subsection 2.2 summarizes testable hypotheses on the structure of leveraged buyouts in relation to regulatory developments in Italy.

2.1 How are Leveraged Buyouts Regulated in Italy?

For the period spanning 1999 – 2006 (the years covered by our data, as described below), it is possible to identify three important sub periods, which we label “Dark”, “Hope” and “Sun”. The “Dark” period represents the period over which the legitimacy of buyouts was uncertain and highly debated among legal scholars and courts (period of illegality risk). It spans the January 1999 – September 2001 time horizon. The debate intensified in 2000, when the Italian Supreme Court (Corte di Cassazione, February 4, 2000, n. 5503) had deemed leveraged buyouts to be illegal (following numerous decisions of lower Courts in prior years). In October 2001, the Parliament approved a delegation Law (Law 366/2001, published in Gazzetta Ufficiale n. 234, October 8, 2001) pursuant to which the Italian Government has been empowered to issue legislative decrees aimed at reforming the Italian corporate law and governance, according to a set of principles and guidelines. Among other things, the Parliament specifically requested to reconsider buyout regulation and work towards providing a safe harbor for such transactions (art. 7d). Thereafter on 1 January 2004, a legislative safe harbor was in fact created for leveraged buyouts in Italy (Legislative Decree 6/2003, applicable as of January 1, 2004). The period spanning October 2001 – December 2003 is labeled in our sample as the “Hope” period. The period subsequent to January 2004 (and ending July 2006 in our data) is labeled as the “Sun”

period. In this period the buyout legitimacy is finally clarified: LBOs are permitted, but subject to specific regulatory restrictions (art. 2501 bis). As noticed, we also define this period as “the period of legality”. By contrast, we use the term “period of illegality risk” to refer to the Dark period.⁷

These three periods, which we label Dark, Hope and Sun, are described in greater detail in the following subsections 2.1.1, 2.1.2 and 2.1.3, respectively.

2.1.1 The Dark Period (Pre-October 2001): The legitimacy of LBOs is unclear and debated

Prior to October 2001, the legal validity of LBOs was uncertain and strongly debated in Italy. The Italian case law (Jurisprudence) and legal scholars (Doctrine) provided contrasting and inconsistent interpretations on the legitimacy of LBOs.⁸ The debate has intensified after the illegality declaration by the Supreme Court (Corte di Cassazione, February 4, 2000, number 5503).⁹ *“The LBO scheme born in the United States” (...) “cannot be imported into the Italian system because it is in contrast with the principle stated by article 2358 of the Civil Code”.*

At the core of this dispute was the interpretation of the final result of a Leveraged Buyout transaction, often confused with a share-buyback. In line with this view, LBO transactions were considered an instrument to realize a share buyback by the target, through the intermediation of the newco, eluding the limits specified by the Italian Civil Code (c.c). In particular, two provisions were often invoked against the legitimacy of LBOs: article 2357 and article 2358.

Article 2357 sets a series of conditions to limit the share buyback event by a firm. A company can repurchase its own shares only if they are fully paid and within the limits of the available net earnings and reserves. Furthermore, the purchase must be approved by the shareholders’ meeting and the par value of the shares shall not exceed 1/10 of the entire share capital. These limits also apply to purchases realized through an intermediary or a fiduciary

⁷ For the purpose of this paper we use the term “illegality” to define the period in which the legal validity of LBOs was uncertain and highly debated. This period is also characterized by the prohibition and illegality statement by the Supreme Court in 2000.

⁸ Examples of cases part of the existing jurisprudence on LBOs in Italy are the following: Tribunal of Milan, May 14, 1992; Penal Tribunal of Milan, June 30, 1992; Tribunal of Ivrea, August 12, 1995; Tribunal of Milan, October 27, 1997; Tribunal of Milan, May 4, 1999, Supreme Court Decision 5503/2000. These cases do not show a clear and uniform legal interpretation. For a detailed analysis of the debate on the legitimacy of LBOs and of the cases judged by the Italian Courts see: Zambelli (2005).

⁹ Supreme Court’s decision, V penal section, n. 5503, February 4, 2000.

company.¹⁰ The rationale of article 2357 is to protect the target's paid-in share capital, avoiding a weakening of the guarantees granted to the target's creditors. In fact, if a company buys back its own shares using funds other than current available earnings, the result is a partial restitution of equity capital to shareholders. To minimize this risk, before implementing a share buyback the company needs to create a proper special reserve (article 2357-ter). From a financial point of view, by draining funds from the company and increasing the leverage ratio, pre-existing loan obligations become more risky, to the obvious detriment of the firm's creditors. According to the "share buyback view"¹¹, the result of an LBO transaction was considered similar to what would be obtained if the target company acquired its own shares through the intermediation of the newco, violating the share-buyback restrictions indicated by the law (article 2357, article 2357-ter). The newco would represent only a vehicle to elude the law and to implement a share buyback without respecting the limits indicated by the Civil Code. The decision of Milan Court, May 4, 1999 reinforced this view in the *Pepperland SpA* case, in line with earlier Italian jurisprudence (Tribunal of Milan, June 30, 1992 with reference to the *Farmitalia* case).

Article 2358 prohibits a company from making loans or providing guarantees for the purchase of its own shares, either directly or indirectly through the intermediation of a third party (*financial assistance rule*). Before the introduction of the New Corporate Governance Law (described below), a violation of this provision was punishable under criminal law with a sentence of up to 3 years of prison (according to article 2360 c.c., 1st paragraph, number 2)¹². The rationale behind article 2358 is twofold: (1) to protect the equity of the target company in the interest of creditors, similarly to article 2357. The legislator wants to avoid a deterioration of the target firm's capital structure; and (2) to avoid abusive behavior by the target's directors, e.g. to prevent them from taking over the company fraudulently through a hidden acquisition of its own shares. For example, the directors could misuse the funds of the company by making loans or providing guarantees to an outside party (trustee). This implies that, through the intermediation of that party, the directors could indirectly take over the company and influence the shareholders' meeting.

¹⁰ In case of a violation of these restrictions, the shares exceeding the specified limits must be sold within one year from their purchase. If this does not occur, the shares shall be cancelled and the book value of the share capital shall be reduced by a corresponding portion. Otherwise, a Court must intervene and order the reduction of the share capital.

¹¹ For a more detailed discussion on this interpretation see, among others: Montalenti (1996, 1990).

¹² This article has been eliminated by the Legislative Decree 6/2003, applicable as of January 1, 2004.

Article 2358 represented the most-often invoked provision against the validity of LBOs in Italy.¹³ As a consequence of the merger, in fact, the target's assets serve as a guarantee for the payment of the debt previously contracted by the newco. According to a particular interpretation of the law (known as "*tesi sostanzialistica*")¹⁴, the LBO transaction is realized with the only purpose to elude the provisions specified by Article 2358. In fact, according to this view, the target company de-facto provides a guarantee for the purchase of its own shares. The newco in turn is interpreted as an intermediary acting on behalf of the target company. According to this particular view, the result of an LBO transaction is similar to what would happen if the target firm played an active role facilitating its acquisition, by making loans or providing a guarantee to the newco for the purchase of its own shares. This would be prohibited by Article 2358. The Italian Supreme Court confirmed this view in 2000 (Corte di Cassazione, February 4, 2000, number 5503)¹⁵

2.1.2. The Hope Period (November 2001 – December 2003): LBOs May Become Legal

In October 2001, the Italian Parliament delegated the Government (with Law 366/2001)¹⁶ to fully reform the Italian corporate Law. This "delegation Law" indicated only principles and guidelines. Among the various guidelines, the Parliament specified that LBOs should not be considered illegal (article 7-d): "*The merger of two companies, one of which had received debt financing in order to acquire the control of the other, does not imply a violation of the prohibition to make loans or provide guarantees for the purchase or the subscription of own shares*".

This law however was not an effective Law. Its aim was to authorize and spur a future corporate governance reform by the Government, which was in fact introduced a few years later. Law 366/2001 offered some hope to solve the uncertainty surrounding the legitimacy of LBOs in Italy, but there were no guarantee of specific dates and/or absolute certainty regarding the legality of LBOs in Italy.

2.1.3. The Sun Period (Post January 1, 2004): LBOs are Legal

¹³ A famous case accused to elude the provisions of article 2358 c.c. is represented by: Manifattura di Cuorgnè (Decision of Ivrea Tribunal, August 12, 1995).

¹⁴ For a more detailed discussion on this particular interpretation see Zambelli (2005).

¹⁵ Supreme Court's decision, V penal section, n. 5503, February 4, 2000.

¹⁶ Law n. 366/2001, published in "Gazzetta Ufficiale", October 8, 2001.

In line with the principles indicated in the previous delegation Law, the Government introduced a new Corporate Law Reform (Legislative Decree 6/2003, applicable as of January 1, 2004). This reform was aimed at regulating, among other things, the LBO process in Italy (Article 2501-bis, Legislative Decree 6/2003).

Specifically, Article 2501-bis states that a “merger between two companies”, one of which acts as a leverage vehicle (newco) obtaining a debt financing in order to acquire a controlling stake in the other (target company), “where as a consequence of the merger the target provide a general guarantee for debt financing, or represent the source of reimbursement for the financing”, is permitted subject to a series of specific conditions. First, it is necessary to prepare a merger plan describing the financial resources that will be used by the new merged company to repay the debt originally contracted by the newco for the acquisition of the target (II paragraph). The merger plan must contain, among other things, a description of the share exchange ratio. Second, the board of directors of each merging company has to write a particular report indicating: a) the reasons justifying the entire LBO transaction and the merger process; b) the business and financial plan describing the objectives of the merger and the specific sources of funds that the directors expect to obtain as a result of the merger, and c) a description of the objectives that the directors intend to achieve through the LBO (III paragraph). Third, an external auditor’s report is also necessary in order to validate the content of the merger plan (IV paragraph). Finally, a special report prepared by an independent financial expert is necessary in order to confirm the reasonableness of the merger plan and the directors’ report (V paragraph). This report is then aimed at confirming the fairness of: the merger, the financial plan; the share exchange ratio; the director’s report.

This new corporate law reform has reduced the ambiguity surrounding the legal validity of LBOs in Italy, and has eliminated the risk for managers of the merged company to receive a sentence of up to 3 years of prison, according to the previous provision of Article 2630. However, the debate is still open with reference to the legal consequences of particular LBO transactions which do not occur according to the scheme disciplined by Article 2501-bis. In line with the new reform, forward merger LBOs are then considered legal. However, in the case of a reverse merger technique (when the newco is incorporated into the target company), the debate on the legitimacy of the whole transaction remains strongly debated. In this context a violation of the financial assistance rule (prohibited by Article 2358 Civil Code) or of the share buyback provisions (disciplined by Article 2357 Civil Code) appears to be more probable (Zambelli,

2005). In any case, the reform represents a step forward in the direction of spurring the PE activity in Italy.

2.2. Testable Hypotheses

The three regulatory phases in Italy over the 1999 – 2006 period suggest a few straightforward hypothesis.

First, we would expect that the legislative change on January 1, 2004, naturally increases the probability that an investor will in fact carry out a buyout transaction as opposed to some other type of private equity transaction (such as expansion financing or mezzanine private equity investments).

Hypothesis 1. *In the “Hope” period after the January 1, 2004 legislative change permitting leveraged buyouts, there will be an increase in the frequency of buyouts relative to other types of private equity transactions.*

Second, we expect buyout transactions to be structured in a different way than it was in the pre-legislative change period. Particularly in the Dark period (January 1999 – October 2001), we expect buyouts to be structured in a way that minimizes liability associated with a transaction that is illegal. In the event of a shareholder dispute or dispute from any other interested stakeholder of the target and/or newco, Italian law in the Dark period does not afford protection to the private equity fund carrying out the leveraged buyout. As such, the private equity fund will seek to minimize legal risk and exposure by investing a smaller amount relative to the pre-money valuation. Further, the private equity fund will minimize involvement by acquiring a smaller ownership percentage of the company.

Hypothesis 2. *Private equity fund common equity ownership shares and the amount of capital invested by the private equity fund relative to pre-money valuation will be greater in the “Sun” period (after January 2004) in which leveraged buyouts are legal. Also, private equity ownership and investment levels will be greater in the “Hope” period (November 2001 – December 2003) when Parliament announced the intention of making leveraged buyouts legal in the future relative to the Dark Period (prior to October 2001) when buyouts were illegal.*

Third, we expect that private equity investors will seek and obtain fewer control rights in terms of majority board control and the right to replace the CEO in order to minimize involvement and legal liability. Private equity funds will have comparatively fewer control rights and smaller ownership percentages in the Dark period. Their ability to negotiate ownership and control will be diminished given the illegality issues highlighted by the Italian Jurisprudence. We would expect that the “Hope” period during which the Italian Government announced an intention to make leveraged buyouts legal would enable greater private equity fund ownership and control due to less risk exposure to illegality and comparatively greater bargaining power. The greatest extent of private equity fund ownership and control would follow in the “Sun” period when leverage buyouts transactions are legal.

Hypothesis 3. *Private equity fund control rights (majority board and the right to replace the CEO) in leveraged buyouts will be greater in the “Sun” period (after January 2004) in which leveraged buyouts are legal. Also, private equity control rights in leveraged buyouts will be greater in the “Hope” period (October 2001 – December 2003) when Parliament announced an intention to make leveraged buyouts legal in the future relative to the Dark Period (prior to October 2001) when buyouts were illegal.*

Further, the highest risk of a buyout transaction being undone was during the period of illegality. Any stakeholder could undo a transaction by registering a complaint and showing harm to a stakeholder and/or the company generally. The focus of due diligence during the period of illegality risk will therefore reflect the need to mitigate the transaction risk. During the “Dark” period, due diligence is expected to focus on the target firm itself and, in particular, the management to see whether or not the transaction will be contested. During the “Hope” and “Sun” period, by contrast, it is more natural to expect due diligence to focus on the quality of the business plan, the market conditions and the structure of the investment itself (the amount of capital required, ownership percentages obtained in the target firm, time to reach the break even point, strategic fit with the other firms in the fund's portfolio, IRR; see Muscarella et al., 1990; Wright et al., 1992, 1996, 2002).

Hypothesis 4. *The due diligence associated with a leveraged buyout transaction during the “Dark” period of illegality will be focused on minimizing transaction risk*

associated with a target firm and its management seeking to void the transaction by virtue of illegality. In the “Hope” period, with a legislative intention to make buyouts legal, and in the “Sun” period when buyouts were declared legal, due diligence efforts will be more heavily concentrated on the quality of the business plan in conjunction with market conditions, and whether or not the private equity fund is able to structure the investment efficiently.

These four hypotheses are the focus of the empirical tests in the next sections of the paper. Section 3 introduces the data employed in the empirical analyses, and presents univariate summary statistics in relation to the regulation of leveraged buyouts. Section 4 provides multivariate analyses of the impact of regulation on leveraged buyouts with control variables that account for market conditions, characteristics of the investor, characteristics of the investee, and the nature of the transaction.

3. Data and methodology

In this section we first describe the data collection process. Survey methods were used out of necessity, since no public detailed information on buyout deals is available. As emphasized by Frank and Goyal (2005) a survey approach presents several advantages in obtaining both quantitative and qualitative information. Implementing a survey methodology was time consuming and required much endeavor, but allowed us to collect a unique dataset on the structure and organization of buyout transactions implemented in Italy over the period 1999-2006 (first semester). Our dataset is much more detailed than all currently existing public datasets on Italian private equity deals. Our data comprise information that is easily quantified (such as the percentage of board seats held by an investor, or whether a particular clause was used in the contract), as well as more qualitative information (such as rankings on a scale of 1 – 5 for the importance of different types of screens in due diligence). We then completed the dataset with information from different sources: Datastream by [Thomson Corporation](#), [Borsa Italiana](#), the Italian Venture Capital Association website, Private Equity Monitor (PEM[®] database) and the Private Equity Fund websites.

Subsection 3.1 explains in detail the methodology used (see also the Appendix for additional details). Subsection 3.2 considers potential sample selection bias. Subsection 3.3 summarizes the nature of the information collected and provides summary statistics. A

correlation matrix and comparison tests under the different legal regimes is presented in subsection 3.4. Thereafter multivariate tests are presented in section 4.

3.1. Methods and Survey Approach

In the attempt to maximize the response rate we adopted a Sequential Mixed Mode Survey Approach: the use of a different survey mode in a sequential way (e.g. non respondents to our mail survey –phase 1- have been contacted by phone or by mail and asked to answer the questionnaire through an interview –phase 2). Recent evidence shows that this approach effectively improves the response rate (see, e.g., DeLeeuw, 2005; Dillman et al., 2004).

Our sequential mode survey approach followed the steps highlighted in Dillman et al. (2004).¹⁷ The questionnaire was addressed to partners of each private equity firms active in the Italian market. In particular:

PHASE 1- mail questionnaire: We first implemented a mail survey, through a semi-structured questionnaire on the private equity investment process. This phase was implemented following the Total Design Method –TDM- according to the standard suggestions by Dillman (1978). The survey was addressed to each private equity firms active in the Italian market and the unit of observation was represented by the specific investee firm (target firm) in which the PE firm invested during the last 10 Years. According to the Private Equity Monitor Reports (PEM[®] database), published by the Italian Venture Capital and Private Equity Association (AIFI) in association with the “Masters in Merchant Banking” team of Università Carlo Cattaneo – LIUC, the number of investors active in the private equity sector in 2005 was 57, but no public data were available about the identity of investors active in this sector. Consequently, in order to minimize potential selection biases, as a first step, we sent the questionnaire to all members of AIFI, according to the list published in October 2005, which included 88 investors, being aware of the fact that the questionnaire was not applicable for some investors: some of them were new, or simply not active in the private equity sectors. According to the non applicable replies received in the following two months, and the information available on the investors’ web site, we constructed a final list of 56 active investors, whose transactions were applicable to our survey. This number is in line with the PEM database 2005 (57 investors). Among these active PE investors, only 5 investors (9%) replied sending the questionnaire back by fax, or mail.

¹⁷ See the Appendix for additional detailed information about the steps followed for our survey.

PHASE 2- interview process: Following Dillman et al. (2004), we interviewed non-respondents. We contacted all non-respondents to the mail questionnaire and asked them to answer it through a structured interview. 8 investors replied by fax (14%). For confidentiality reasons, 14 non-respondents asked a personal visit to their office place, eventually followed by a second visit represented by a structured face to face interview. Trust was the major constraint for the effectiveness of our survey project, since it involved confidential information about the specific private equity deal. The result of this second phase was quite positive: the 100% of the investors who requested a personal visit in their office place, agreed to fill the questionnaire.

PHASE 1 and 2 overall response rate: With reference to the PE sector the sequential mode approach highlighted by Dillman et al. (2004) allowed us to increase the response rate from 9% (5 PE firms) up to 47% (27 PE firms). Focusing on the Buyout sector, we obtained a response rate of 84%.¹⁸ Both response rates compare favorably with previous surveys in finance, ranging from approximately 9% (Graham and Harvey 2001) to 19% (Brau, Fawcett 2006).

Several factors contributed to establish a trust relationship with the investors and allowed us to improve the response rate: personal visit aimed at providing detailed information related to the objective and the motivation of this specific survey, the university affiliation of the two authors, the non profit goals of the project, and the confidentiality agreement included in the questionnaire package left to each investors in both phases.

3.2. Potential Sample Selection Bias

Table 1 presents comparison tests for our dataset spanning the period from January 1999 to July 2006 against that collected by the Private Equity Monitor (PEM[®] database) in Italy over the period January 1999 to December 2005. Data for 2006 was not available in the PEM dataset at the time of preparation of this paper.

The comparison tests indicate scant statistical significance in terms of differences observed in our data relative to the PEM data. As shown in Panel A, the proportions of buyout transactions is extremely similar in both dataset, with the sole exceptions of 2000 and 2004 where

¹⁸ According to AIFI statistics (2005 first semester) the number of investors active in the buyout sector was 25. In our database, the number of investors who declared to be active in the buyout sector during the same period was 21.

there were larger proportions of buyouts observed in our data (albeit these differences are only significant at the 10% level of significance). In Panels B and C healthcare is the only industry sector with statistically significant differences between our data and the PEM data. Regional differences indicated in Panel D are not statistically significant in our data relative to the PEM data. Panel E indicates we have achieved a very high response rate. In terms of funds actively involved in the private equity sector (including buyouts, turnaround deals and expansion financing) we achieved a 47% response rate (as discussed above in subsection 3.1). In terms of investors active in the buyout sector, we achieved a 84% response rate (Panel E).

[Insert Table 1 About Here]

3.3. *Summary Statistics*

Table 2 defines the main variables used in the dataset and presents summary statistics. In total our dataset includes 162 buyout and private equity transactions (the unit of observation is a target firm), and of these, 103 are buyouts. The data comprise detailed information on actual contracts used between the investors and investees. As well, qualitative data were gathered for ranking the importance of different elements of due diligence for undertaking the investment.

[Insert Table 2 About Here]

The list of dependent and explanatory variables used in the next sections is provided in Table 2. Among the control rights, the right to replace the CEO is the closest to the notion of entrepreneurial control in incomplete contracting theories, like Aghion and Bolton (1992). As a residual right of control, it gives the investors the right to take a particular action. Investors may also be able to force an acquisition through other measures of residual rights of control, including whether they control a majority of the board, a majority of the votes, or whether there are other terms in the contract giving the VCs the power to force an exit – for example, a redemption right, or a drag-along clause. Our data comprise details on all of these contractual terms.¹⁹ We focus on the right to replace the CEO and majority board seats because these rights are perhaps best and most succinctly indicative of the degree to which investors have control.

¹⁹ Details are available upon request.

We do not report the amount of debt used in the transactions. In many cases debt is provided by the reporting investor alongside the ownership interest that they acquire. However, in many cases debt is also provided by a syndicated investor and/or bank and we do not have complete details on the full extent of debt used. We do know that 98 transactions involved a significant amount of debt so that the reporting investor considered the buyout to be leveraged buyout (in five cases the investor was more cautious to call the transaction “highly leveraged”). Our results do not depend on the inclusion/exclusion of these transactions in the data. Alternative specifications and additional details are available upon request.

3.4. Difference of Means and Medians Tests and Correlation Matrix

Table 3 provides comparison tests for the different legal periods in the data: the “Dark” period (period of illegality risk -January 1999 – September 2001); the “Hope” period over which time there was publicly announced legislative intent to create a safe harbor for leveraged buyouts (October 2001 – December 2003); and the “Sun” period during which time leveraged buyouts were legal (January 2004 – July 2006). The comparison tests are provided in Table 3. The first comparison test refers to the full sample of 162 buyout and other private equity transactions; the subsample of 103 buyouts is used for all other comparison tests.

[Insert Table 3 About Here]

Table 3 indicates there were significantly more leveraged buyouts in the Sun period when buyouts were officially deemed to be legal. Figure 1 graphically illustrates the differences across the different periods. The 73% of the transactions were leveraged buyouts in the Sun period, and only 54% and 56% of transactions were leveraged buyouts in the Dark and Hope periods, respectively, which is consistent with Hypothesis 1 (subsection 2.2 above).

Table 3 shows that in the Hope and Sun periods investors are willing to contribute a greater proportion of their capital relative to the pre-money valuation of the deal (24% and 27%, respectively) relative to the Dark period (where only 14% was achieved), in line with Hypothesis 2.

[Insert Figures 1 and 2 About Here]

Further, Table 3 indicates that the ownership percent held by the investor, the attitude to take a majority position in the board of directors, the propensity to use convertible debt and the right to replace the CEO are all higher in the Sun and Hope periods relative to the Dark period, consistent with Hypotheses 2 and 3. Also, in line with Hypothesis 4, Table 3 indicates that leveraged buyouts were more intensively screened for the fit with the target firm and its management during the Dark period, and more intensively screened for the structure of the investment in the Sun period. A further scrutiny of these differences in a multivariate context is provided immediately below in section 4.

Table 4 presents a correlation matrix across many of the variables in the data. Consistent with the comparison tests in Table 3, Table 4 shows a significant negative correlation between the dummy variable for the “Dark” period (period of illegality risk) and private equity fund ownership and control rights. Table 4 also show a significantly positive correlation between the dummy variable for the “Sun” period (when leveraged buyouts were legal) and private equity fund ownership and control. The matrix gives further insights into the data, and provides guidance in terms of considering issues of collinearity in the regressions in section 4 immediately below.

[Insert Table 4 About Here]

4. Multivariate Analyses

This section carries out a number of regression analyses which are presented in Table 5. Models 1 and 2 are multivariate tests of Hypothesis 1 and consider the full set of observations (162): Models 1 and 2 are logit regressions of the probability of a leveraged buyout relative to some other type of private equity investment. Models 3 – 8 provide tests of Hypothesis 2 and consider the number of leveraged buyout transactions (103). Models 3 and 4 are tobit regressions of the amount invested by the respondent private equity fund relative to the pre-money valuation of the investment at the time of first investment. Tobit regressions are used because the dependent variable has a lower bound (and not an upper bound). Models 5 and 6 are OLS regressions of the percentage of ownership held by the respondent investor in the best case scenario for the transaction.²⁰ In Models 5 and 6 because the dependent variable is a fraction, the

²⁰ The regressions were not materially different with regard to specifications including the ownership percentage of syndicated investors, and/or the percentage of common stock held at the time of initial investment.

left-hand-side variable is transformed so that it is not bounded between 0 and 100%. The transformation used is a standard way of modeling fractions (see, e.g., Bierens, 2003), so that the residuals and estimates have properties consistent with assumptions underlying OLS. Specifically, if Y is a dependent variable that is bounded between 0 and 1 (i.e., a fraction), then a possible way to model the distribution of Y conditional on a vector X of predetermined variables, including 1 for the constant term, is to assume that

$$Y = \frac{\exp(\beta' X + U)}{1 + \exp(\beta' X + U)} = \frac{1}{1 + \exp(-\beta' X - U)}$$

where U is an unobserved error term. Then,

$$\ln(Y/(1-Y)) = \beta' X + U$$

which, under standard assumptions on the error term U , can be estimated by OLS. Models 7 and 8 are logit models where the dependent variable equals 1 if convertible debt is used in the transaction. Models 9 – 12 are tests of Hypothesis 3. In Models 9 and 10 the dependent variable equals 1 if the private equity investors have the right to replace the CEO (as described above in section 3). Models 11 and 12 are logit regressions for the probability that the private equity investors hold a majority of the seats of the board of directors. Finally, Models 13 – 17 test Hypothesis 4. While the dependent variables in Models 13-17 are ranking variables bounded between 1 and 5, OLS regressions are used (and not for example ordered logit regressions) because there was a dearth of data and responses for certain numbers within the rankings (and hence such models were not estimable by ordered logits for the number of transactions and rankings in the data, but were estimable by OLS). Note that all of the regressions use White's (1980) robust standard errors.

Note that we report the results using fixed effects for the three different legal settings in Models 1 – 4, and thereafter drop the dummy variable for the “dark” legal period in Models 5 – 17 and use a constant instead. In Models 7 and 8, we further drop the variable for the “hope” legal period. Models 1 and 2 comprise 162 observations, and the subsequent models comprise the subsample of 103 buyout observations. The fixed effects specifications were possible with the larger sample size in Models 1 and 2 and the continuous dependent variable in Models 3 – 6, but not with the smaller sample size of 103 observations together with limited dependent variables in Models 7 – 17. In the case of the limited dependent variables in Models 7 – 17, there were a dearth of observations for certain legal settings to enable robust estimation of fixed effects with the other included explanatory variables such that fixed effects dummies were not possible, but dummy variables with a constant were possible (see, e.g., Blankmeyer, 2006, for a discussion

of this issue that commonly arises in small samples). Despite this one limitation with the sample size, the results are robust to a variety of specifications; additional unreported robustness checks were considered with different specifications of right-hand-side variables and different estimation methods and are available upon request.²¹

[Insert Table 5 About Here]

The regression estimates in Table 5 indicate a number of interesting findings. First, in regards to Hypothesis 1, Models 1 and 2 indicate that the legislative change in Sun period post January 2004 increased the probability of a leveraged buyout over a different type of private equity transaction by approximately 13.8% (Model 1) to 38.4% (Model 2). These effects are statistically significant at the 10% level in Model 1 and the 1% level in Model 2. The magnitude of the economic significance does vary depending on the included right-hand-side variables as a result of collinearity across different sets of included variables. Regardless, the importance of the legality period for increasing the probability that leveraged buyouts take place is transparent in the regression evidence, as well as in the summary statistics reported above in Figure 1 and Table 3.

The private equity investors invest 18.5% (Model 3) to 26.8% (Model 4) more capital relative to the pre-money valuation of the investment in the Sun period of legality (relative to the Dark period of illegality). These effects are statistically significant at the 5% level in Model 3 and at the 1% level in Model 4, and consistent with the summary statistics reported in Figure 2 and Table 3. There is further statistically significant evidence at the 5% level in Model 4 that the ratio between investor capital over pre-money valuation is 22.0% greater in the Hope period as well, which again is consistent with the summary statistics in Table 3 and the graphical depiction of the data in Figure 2. We had expected proportionally greater private equity fund capital investment in buyouts in both the Hope and Sun period relative to the Dark period because of the mitigated transaction risk in both the Hope and Sun periods, as discussed above in section 2.

Further, the data show private equity funds take on an approximately 25% greater ownership percentage in the buyouts after the legislative change in Models 5 and 6, and this effect is statistically significant at the 1% level. Also, private equity funds are also 4-9% more

²¹ For example, we considered specifications with fund dummy variables and regional dummy variables, among others, but those specifications did not yield materially different results, particularly in reference to the legal variables pertaining to the central hypotheses analyzed.

likely to invest with convertible debt (Models 7 and 8) in the Sun period,²² and this effect is statistically significant at the 10% level. The greater frequency of use of convertible debt securities that enable further increases in equity ownership, and hence the intuition underlying the role of the transaction stability in Models 7 and 8 reinforces the interpretation in Models 5 and 6 that private equity investors have greater incentives to become owners in periods of legality (Hypothesis 2).²³ We may infer, generally, that this is a positive effect as it ensures alignment of interest and better governance in carrying out a successful buyout transaction. In other words, the prohibition against buyouts did not achieve the legislative intent of removing bad transactions (Models 1 and 2); rather, it limited the capital and equity participation and thereby the governance provided by the private equity funds. In effect, the prohibition of leveraged buyouts that was intended to protect stakeholders in fact appears to have made stakeholders worse off because the transactions still occurred but with less private equity fund participation and less efficient governance (see, e.g., Cao and Lerner, 2006, on the positive role of private equity funds in corporate governance).

The comparative dearth of governance provided by the private equity funds is further seen in Models 9 through 12, which show private equity funds are up to 40.2% more likely to have the right to replace the CEO (Models 9 and 10) and 24.9% - 37.2% more likely to have a majority of the board seats (Models 11 and 12) in the Sun period. The effect of the Sun period on the right to replace the CEO is statistically significant in Model 9 at the 1% level, but not in Model 10. Models 9 and 10, however, also show that a positive and statistically significant effect of the Hope period on the probability that the investor has control rights (the economic effect is also large at approximately 32% in Models 9 and 10 for the Hope period variable). The effect of the Sun period is statistically significant at the 1% level in Models 11 and 12 for majority board seats, but not for the Hope period. Overall, the data are highly consistent with Hypothesis 3 (section 2.2).

Models 13 – 17 present evidence that indicates the motivation for undertaking a buyout transaction is different under the various legal regimes. During the Dark period of illegality,

²² The Hope variable is suppressed in Models 7 and 8 for reasons of perfect collinearity, because there were no convertible debt buyout investments in the Dark period (Table 3). The comparative dearth of convertible debt investments generally likewise meant that it was necessary to exclude some other variables in Models 7 and 8 that were reported in the other models (as indicated in Table 5) for reasons of collinearity.

²³ An additional interpretation is that when LBOs became legal, this naturally leads to the increased use of debt. But when a company takes on additional debt (to swap for the equity) it increases the default risk of the company and therefore jeopardizes the existing covenants of the debt holders. One way to mitigate this is to offer existing debt holders additional convertible bonds (almost like an insurance policy for them).

leveraged buyouts were approximately 15% more intensively screened for the fit ('agreeableness') with the target firm management. This effect is statistically significant at the 5% level in reference to the Hope period variable in Model 13 (but not with reference to the Sun variable), and the calculation based on a 5-point ranking scale is $-0.753/5=15.04\%$. Consistent with this evidence, Model 14 shows that in the Dark period of illegality risk private equity funds were 8% more interested in screening leveraged buyouts for the fit with the firm generally (and this effect is significant at the 5% level). During the period of legality, by contrast, leveraged buyouts were 19% more intensively screened for the quality of the business plan in reference to market conditions (Model 15) and 19% more intensively screened for the structure of the investment (Model 17) in both the Hope and Sun periods relative to the Dark period (and these effects are statistically significant at at least the 5% level in Models 15 and 17). As indicated in Table 2, the efficient structure of the investment refers to the amount of capital required, ownership percentages obtained in the target firm, time to reach the break even point, strategic fit with the other firms in the fund's portfolio, and IRR. Overall, therefore, the evidence is quite consistent with Hypothesis 4 (section 2.2) that the illegality of buyouts reallocates attention in due diligence and screening away from important aspects of investment structures, business plans and market conditions and towards the agreeableness of the target firm and its management.

The control variables in Models 1 through 17 are in places statistically significant and generally consistent with economic intuition for factors other than legal conditions that influence leveraged buyout investment. For example, Model 4 indicates syndication is associated with lower capital contributions / pre-money valuation per investor, as would be expected. Models 5 and 6 show lead investors and investors that provide more capital obtain greater ownership percentages, as would be expected by virtue of allocating ownership to the investor that provides more capital and value added as a lead investor. Similarly, Models 9 and 10 show lead investors are more likely to have the right to replace the CEO. Model 6 indicates ownership percentages diminish over more staged financing rounds, consistent with Gompers (1995, 1998) and Kaplan and Stromberg (2003). Model 8 indicates greater staging frequency is associated with convertible debt, which is consistent with theoretical work in the role of convertibles in mitigating window dressing (Cornelli and Yosha, 2003). Models 5 and 6 also show that funds with greater capital under management per fund manager have greater ownership percentages. If we can infer that funds with more capital per manager are more sophisticated, then this evidence is consistent with independent data provided by Hsu (2004) which shows sophisticated investors obtain better deal terms.

5. Conclusions

This paper considered the effect of a prohibition on LBO transactions in Italy prior to 2004 by examining Italian leveraged buyout data spanning the years 1999-2006. In particular, this paper empirically examined the frequency, structure and motivations underlying leveraged buyouts in Italy in relation to legislative changes in the legal discipline of leveraged buyouts.

The data in this paper indicate that the prohibition of buyouts does not prevent these types of transactions. Italian private equity funds were nevertheless more likely to carry out buyout transactions in the period of legality, after the 2004 legislative change. Also, in the period of legality private equity funds invested more capital in buyouts relative to the pre-money valuation of the investment. Further, the data show that in the period of legality private equity investors are more willing to acquire a greater percentage of ownership in the target firm, and have more incentive to invest with convertible debt. LBO legality also enabled contracts with stronger control rights allocated to private equity funds.

We further showed that the motivation for undertaking a buyout transaction was different during the period of illegality risk relative to the period of legality. Leveraged buyouts were more intensively screened for the fit with the target firm management during the period of illegality. During the period of legality leveraged buyouts were more intensively screened for the quality of the business plan in reference to market conditions and the ability to structure the investment efficiently.

Overall, the data in this paper are consistent with the view that prohibition of buyouts not only impedes efficient transaction structure but also distorts the due diligence process for carrying out the investment. LBO regulation encourages transactions that are less hostile to incumbent management of the target firm so that the transaction will not be contested and deemed illegal. Private equity fund managers thereby invest less, take fewer cash flow and control rights, and focus due diligence screening on the agreeableness of target firm management as opposed to substantive factors associated with the business plan and external market conditions. The prohibition of LBOs does not eliminate such transactions but rather impedes their efficient structure and distorts decisionmaking.

The implication from our data is that stakeholders' interests would be better protected by not prohibiting buyouts, but rather by some other form of regulation. The policy changes in Italy, however, do not enable an assessment of other types of regulation. Future research could consider an empirical assessment of the suitability of different types of regulations other than the prohibition of LBOs. For example, other forms of regulation could include limits on the debt-to-earnings ratio and disclosure of material conflicts of interest.²⁴ Additional data from other countries may more directly address these related research questions.

References

- Allen, F. and Song, W.-L., 2003. Venture capital and corporate governance, in P.K. Cornelius and B. Kogut, eds., *Corporate Governance and Capital Flows in a Global Economy*, Oxford University Press, New York, 133-156.
- Axelson, U., T. Jenkinson, P. Stromberg, and M.S. Weisbach, 2007a, Leverage and pricing in buyouts: an empirical analysis, Working Paper.
- Axelson, U., T. Jenkinson, P. Stromberg, and M.S. Weisbach, 2007b The financing of large buyouts: an empirical analysis, Working Paper.
- Betzer, A., 2006. Why private equity investors buy dear or cheap in European leveraged buyout transactions, *Kredit und Kapital* 39(3).
- Bierens, H.J., 2003. Modeling fractions. Research note posted online at: <http://econ.la.psu.edu/~hbierens/EasyRegTours/FRACTIONS.PDF>
- Bigus, J., 2006. Staging of venture financing, investor opportunism, and patent law. *Journal of Business, Finance and Accounting* 33, 939-960.
- Blankmeyer, E., 2006. How robust is linear regression with dummy variables? Working Paper, Texas State University.
- Bottazzi, L., M. Da Rin and T. Hellmann, 2006. What role of legal systems in financial intermediation? Theory and evidence, Working Paper, University of Bologna.
- Brau C, F. Stanley, 2006. Initial public offerings: an analysis of theory and practice, *Journal of Finance* 61, 399-436.
- Broughman, B., and J. Fried, 2007. Deviations from contractual priority in the sale of VC-backed firms. Working Paper, University of California, Berkeley.
- Cao, J., and J. Lerner, 2006. The performance of reverse leveraged buyouts, Working Paper, Harvard Business School.

²⁴ Regulations along these lines are currently being considered by the FSA, for example. See: http://www.fsa.gov.uk/pages/Library/Communication/Speeches/2007/0313_dw.shtml

- Chou, D-W., M. Gombola, and F-Y Liu, 2006. Earnings management and stock performance of reverse leveraged buyouts. *Journal of Financial and Quantitative Analysis*
- Cornelli, F. and O. Yosha, 2003. Stage financing and the role of convertible securities, *Review of Economic Studies* 70, 1-32.
- Cressy, R., A. Malipiero, F. Munari, 2007. Playing to their strengths? Evidence that specialization in the Private Equity industry confers competitive advantage, *Journal of Corporate Finance* 13, 647-669.
- Cumming, D., D. Siegel and M. Wright, 2007. Private equity, Leveraged buyouts and governance, *Journal of Corporate Finance* 13, 439-460.
- Cumming, D., G. Fleming and A. Schwienbacher, 2006. Legality and venture capital exits, *Journal of Corporate Finance* 12, 214-245.
- De Leeuw, E. D., 2005. To mix or not to mix data collection modes in surveys. *The Journal of Official Statistics*, 21 (2), 233-255.
- Dillman D., 1978. *Mail and telephone surveys: the total design method*, John Wiley & Sons, New York.
- Dillman D., Phelps G., Tortora R., Swift K., Kohrell J., Berck J., 2004. Response rate and measurement differences in mixed mode surveys. using mail, telephone, interactive voice response and the Internet. Working Paper, Washington State University.
- Enriques L., 2002. Do Corporate Law Judges Matter? Some Evidence From Milan. *European Business Organization Law Review*, Vol. 3, No. 4, pp. 756-821.
- Ferran, E., 2007. Regulation of private equity-backed leveraged buyout activity in Europe. ECGI Working Paper N°.84/2007
- Fried, J.M., and Ganor, M. 2006. The vulnerability of common shareholders in VC-backed firms, *New York University Law Review* 81, 967-1025.
- Frank, M. Z. and Goyal, V. K., 2005. Trade-off and Pecking Order Theories of Debt, available at SSRN: <http://ssrn.com/abstract=670543>.
- Goergen, M., Martynova, M. and L. Renneboog, (2005), *Corporate Governance Convergence: Evidence from Takeover Regulation Reforms in Europe*, *Oxford Review of Economic Policy* 21, 243-268.
- Goergen, M. and L. Renneboog, (2003), *Why are the Levels of Control (So) Different in German and UK Companies? Evidence from Initial Public Offerings*, *Journal of Law, Economics, and Organization* 19, 141-175.
- Gilson, R.J. and Schizer, D.M., 2003. Understanding venture capital structure: a tax explanation for convertible preferred stock. *Harvard Law Review*, 116, 874-916.
- Gompers, P.A. and Lerner, J., 1996. The use of covenants: an empirical analysis of venture capital partnership agreements. *Journal of Law and Economics*, 39, 463-498.

- Gompers, P.A. and Lerner, J., 1998. What drives venture fundraising? *Brookings Proceedings on Economic Activity - Microeconomics*, 149-192.
- Gompers, P.A. and Lerner, J., 1999. *The Venture Capital Cycle*, MIT Press, Cambridge, MA.
- Graham, J.R., C.R. Harvey, 2001, The theory and practice of corporate finance: Evidence from the field, *Journal of Financial Economics* 60, 187-243.
- Hamao, Y., F. Packer, and J. Ritter, 2000. Institutional affiliation and the role of venture capital: evidence from initial public offerings in Japan, *Pacific-Basin Finance Journal*, 8, 529-58
- Hege, U., Palomino, F., and Schwenbacher, A., 2003. Determinants of venture capital performance: Europe and the United States, Working Paper, HEC School of Management.
- Holmstrom, B., and S.N. Kaplan, 2001. Corporate governance and merger activity in the United States: Making sense of the 1980s and 1990s. *Journal of Economic Perspectives* 15, 121-144.
- Kaplan, S., F. Martel and P. Stromberg, 2006. How do legal systems and experience affect financial contracts? Working Paper, University of Chicago.
- Keuschnigg, C. and Nielsen, S.B., 2001. Public policy for venture capital. *International Tax and Public Finance*, 8, 557-572.
- Keuschnigg, C. and Nielsen, S.B., 2003. Taxes and venture capital support, *Review of Finance* 7, 515-538.
- Keuschnigg, C. and Nielsen, S.B., 2004. Start-ups, venture capitalists and the capital gains tax. *Journal of Public Economics*, 88, 1011-1042.
- La Porta, R., F. Lopez-De-Silanes, A. Shleifer and R. Vishny, 1997. Legal determinants of external finance. *Journal of Finance* 52, 1131-1150.
- La Porta, R., F. Lopez-De-Silanes, A. Shleifer and R. Vishny, 1998. Law and finance. *Journal of Political Economy* 106, 1113-1155.
- Leleux, B., and B. Surlemont, 2003. Public versus private venture capital: seeding or crowding out? A Pan-European analysis. *Journal of Business Venturing* 18, 81-104.
- Lerner, J. and Schoar, A., 2005. Does legal enforcement affect financial transactions? The contractual channel in private equity. *Quarterly Journal of Economics*, 120, 223-246.
- Ljungqvist, A., M. Richardson and D. Wolfenzon, 2007. The investment behavior of buyout funds. NYU Working Paper.
- Lockett, A., Wright, M., Pruthi, S. and Sapienza, H., 2002.. Venture capital investors, valuation and information: a comparative study of US, Hong Kong, India and Singapore. *Venture Capital: An International Journal of Entrepreneurial Finance*, 4, 237-252.
- Maginart, S., De Waele, K., Wright, M., Robbie, K., Desbrières, P., Sapienza, H., and Beekman,

- A., 2000. Venture capital, investment appraisal, and accounting information: a comparative study of the US, UK, France, Belgium and Holland. *European Financial Management*, 6, 380-404.
- Maginart, S., De Waele, K., Wright, M., Robbie, K., Desbrières, P., Sapienza, H., and Beekman, A., 2002. The determinants of the required returns in venture capital investments: a five-country study. *Journal of Business Venturing*, 17, 291-312.
- Mayer, C., Schoors, K., and Yafeh, Y., 2005. Sources of funds and investment activities of venture capital funds: evidence from Germany, Israel, Japan and the UK. *Journal of Corporate Finance*, 11, 586-608.
- Montalenti, P., 2004. The new Italian corporate law: an outline. *European Company and Financial Law Review* 3, 368-378.
- Montalenti P., 1990, Il leveraged buy-out, Relazione all'incontro di studio curato dal Centro studi di diritto fallimentare su l tema: "il leveraged buy-out in Italia", Roma, 26 gennaio 1990.
- Montalenti P., 1996, I giudici italiani e il leveraged buy-out tra responsabilità della capogruppo e divieto di assistenza finanziaria", in *Giur. It, sez. II.*, p. 195.
- Muscarella, Chris J., and Michael R. Vetsuypens, 1990. Efficiency and organizational structure: A study of reverse LBOs, *Journal of Finance* 45, 1389-1413.
- Nikoskelainen, E., Wright, M., 2007. The impact of corporate governance mechanisms on value increase in leveraged buyouts. *Journal of Corporate Finance* 13, 511-537.
- Renneboog, L., T. Simons and M. Wright, 2007. Why do public firms go private in the UK? The impact of private equity investors, incentive realignment and undervaluation *Journal of Corporate Finance* 13, 591-628.
- Renneboog, L., 2007. Leveraged and Management Buyouts in Europe, *MCA - Tijdschrift voor Organisaties in Control* 11, forthcoming.
- Wright, M., Hoskisson, R.E., Busenitz, L.W., and Dial, J., 2001. Finance and management buyouts: agency versus entrepreneurship perspectives. *Venture Capital: An International Journal of Entrepreneurial Finance*, 3, 239-262.
- Wright, M., L. Renneboog, T. Simons, and L. Scholes, 2006. Leveraged buyouts in the U.K. and Continental Europe: retrospect and prospect, *Journal of Applied Corporate Finance* 18, 38-55.
- Wright M., Thompson, S., Robbie, K., 1992. Venture capital and management-led leveraged buyouts: A European perspective. *Journal of Business Venturing* 7, 47-71.
- Wright, M., Wilson, N., Robbie, K., 1996. The longer term effects of management-led buyouts. *Journal of Entrepreneurial and Small Business Finance* 5, 213-234.
- White, H., 1980. A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity. *Econometrica*, 48, 817-838.

Zambelli, S., 2005. *Il Leveraged Buyout in Italia: controversie e casi aziendali*, Aracne Editrice, Roma.

Appendix- Survey details and Steps

Type of Survey	Sequential mixed mode survey, characterized by 2 phases: a) Phase 1: Structured mail questionnaire. b) Phase 2: Structured interview.
Questionnaire characteristics	a) Objective of the questionnaire: Private Equity Investment Process; b) Unit of observation: Investee firm (Target firm) c) Questionnaire-parts: • Transaction characteristics; • Screening criteria; • Due diligence and valuation; • Forms of finance and contractual provisions; • Board representation and venture corporate governance; • Exit expectations. d) Types of questions: multiple choices, numeric open-end questions; text open-end questions; e) Target respondent: Partner of PE firms operating in Italy; f) Length: 4 pages; g) Time to complete: 30-40 minutes (according to the pilot study);
Mailing list	The final version of the questionnaire was sent to all members of the Italian Venture Capital and Private Equity Association (AIFI): 88 members (Source: AIFI statistics October 2005). According to AIFI statistics and the Private Equity Monitor Survey (AIFI-PEM survey), the number of investors active in the PE market was lower. In fact, the number of investors active in the buyout sector was 25 (according to AIFI statistics -2005 1st semester). The number of active investor in the private equity sector was 57 (according to the PEM Database -2005). However, the identification of the investor active in the PE sector was not available. In order to minimize potential selection biases we sent the questionnaire to all 88 AIFI members. According to our ex-post analysis the number of active investors in the PE sector was 56, in line with PEM database (57).
Timing and Data collection	– September 2005-November 2005: Pilot study. The first draft of the questionnaire was tested by a small sample of academics, PE investors and lawyers during: We used the feedbacks to improve and revise the questionnaire. – December 2005- April 2006: Implementation of the Survey-Phase 1 (Mail Questionnaire). By the end of this phase only 5 investors replied (response rate: 9%), for a total of 19 investee firms. – We sent the following questionnaire package: • Personalized and signed cover letter, indicating the university affiliation of both authors, with the aim to explain the purpose of the research project and the questionnaire; • Presentation of the authors; • Questionnaire (6 parts, 4 pages long); • Confidential Agreement;

	• A reward promise, in terms of follow-on finding-reports and invitation to attend future potential related conferences organized by the authors (for those who declared an interest in being updated); • A short booklet with the instructions for completing the questionnaire and the definitions of the key PE terms used in it. – May 2006: Follow-ups by e-mail and phone. This phase allowed us to better identify the active investors in the PE sector. 8 investors replied by fax (response rate: 14%), for a total of other 33 investee firm. For confidentiality reasons, 14 investors (24%) requested a personal visit (in their office place), in order to evaluate in greater details the objective of the survey and the authors. After the personal visit, all investors decided to partake to the survey by filling the questionnaire in a subsequent structured interview. – June 2006 - August 2006: Implementation of Survey-Phase 2 (Face-to-face Interview). We interviewed 14 investors (response rate: 24%), for a total of 110 PE investee firm. A few weeks before the interview, we sent to each investor the same questionnaire package sent in phase 1. To minimize potential response biases, during the interview each investor had a hard copy of the questionnaire with the possibility to read and to fill the questionnaire in person.
Final Sample	After eliminating non usable questionnaire (not completed for at least the 60% of the questions) our database consists of : 162 investee firm realized during the period of 1999-2006 (first semester) by 27 PE investors. The PE deal can be divided into two parts: a) Buyouts transactions in 103 target firms; b) Other PE transactions (replacement and expansion) in 59 target firms. Among the 27 PE investors, 21 declared to be active in the buyout sectors.
Response rate	Considering the number of the investor active in the PE sector, we obtained a response rate of 47% (27 over 57 investors). Focusing only on the buyout sector, we obtained a response rate of 84% (21 over 25 investors). Both the above response rates compare favourably with previous financial surveys. For example: • Brau and Fawcett (2006) obtained a response rate of 19%; • Graham and Harvey (2001) obtained a response rate of 9%. The authors emphasize that their response rate is in line with previous financial surveys.

Figure 1. The Impact of Regulation on Buyouts versus Other PE

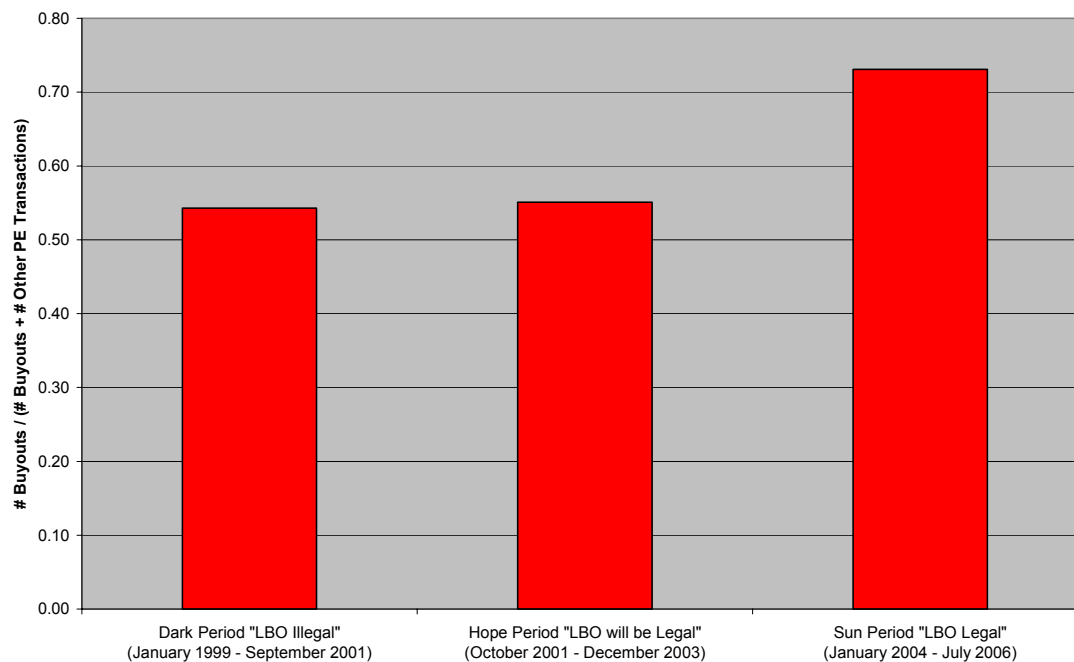


Figure 2. Impact of Buyout Regulation on Investor Capital / Valuation

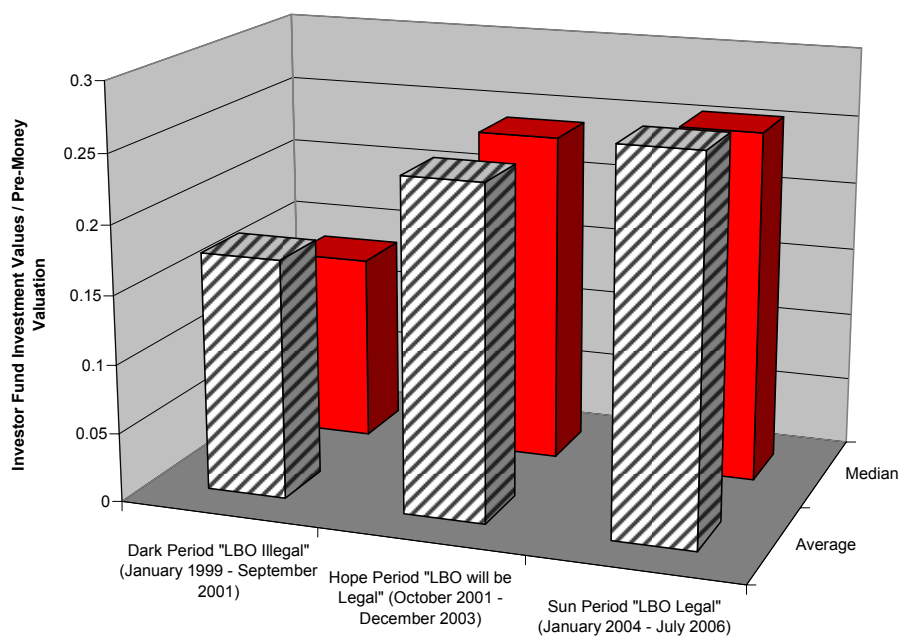


Table 1. Comparison of Proportions Tests

This table presents comparison of proportions tests between the survey data used in this paper relative to the data reported by the PEM® database, published by the Italian Venture Capital and Private Equity Association (AIFI) in association with the “Masters in Merchant Banking” team of Università Carlo Cattaneo – LIUC. To show the data are representative of the population, Panel A compares the proportion of buyouts relative to other types of private equity investments, Panel B compares the industry sectors for all types of PE investments, Panel C compares the industry sectors for buyouts only, Panel D compares the regional distribution of investments, and Panel E summarizes the response rate for our sample. The PEM data in Panels B-E comprise the period 1999-2003, the years for which the information was available. Comparison tests in our sample are reported for the 1999-2006 period for Panels B-D, but the shorter period 1999-2003 did not yield materially different results. Note that the PEM survey does not distinguish between different types of buyouts; in our data, all buyouts involved the use of substantial leverage with the exception of 5 transactions (as reported by the investors), and the inclusion/exclusion of those 5 transactions was immaterial to the tests reported herein. *, **, *** Statistically significant at the 10%, 5% and 1% levels, respectively.

PANEL A: Proportion of Buyouts	PEM ® SURVEY		OUR SURVEY		
YEARS - BUYOUTS	Total # of Transactions in PEM (99-2005)	Proportion Buyouts PEM (99-2005)	# TOTAL Transactions in Our Data (99-06 1 st sem)	Proportion Buyouts our Data	Comparison of Proportions Test
1999	56	0.45	12	0.58	-0.84
2000	69	0.33	15	0.60	-1.95*
2001	60	0.20	8	0.38	-1.12
2002	61	0.56	25	0.64	-0.68
2003	71	0.56	24	0.46	0.86
2004	55	0.71	29	0.90	-1.94*
2005	89	0.70	40	0.65	0.57
2006	Not Available	Not available	9	0.56	
PANEL B: Industry Sectors for All PE	PEM ® SURVEY		OUR SURVEY		
SECTORS- ALL TRANSACTIONS	Total # of Transactions in PEM (99-2003)	Proportion ALL Transactions IN PEM (99-2003)	# TOTAL Transactions in Our Data (99-06 1 st sem)	Proportion ALL transactions in our Data	Comparison of Proportions Test
Industrial / Basic Material	317	0.45	162	0.47	-0.39
Consumer Goods	317	0.20	162	0.15	1.23
Services / Financial Services	317	0.24	162	0.22	0.44
Telecommunication / Utilities	317	0.06	162	0.04	1.07
Technology	317	0.03	162	0.05	-1.05
Healthcare	317	0.02	162	0.07	-2.66***
PANEL C: Industry Sectors for Buyouts	PEM ® SURVEY		OUR SURVEY		
SECTORS - BUYOUTS	Total # of Total Buyouts Transactions in PEM (99-2003)	Proportion Buyouts PEM (99-2003)	Total # Buyouts Transactions in Our Data (99-06 1 st sem)	Proportion Buyouts our Data	Comparison of Proportions Test
Industrial / Basic Material	134	0.57	103	0.56	0.15
Consumer Goods	134	0.19	103	0.16	0.60
Services / Financial Services	134	0.15	103	0.17	-0.42
Telecommunication / Utilities	134	0.04	103	0.03	0.41
Technology	134	0.03	103	0.03	0.00
Healthcare	134	0.01	103	0.05	-1.87*
PANEL D: Area	PEM ® SURVEY		OUR SURVEY		
Area of investment (within Italy)	Total # of Transactions in PEM (99-2003)	Proportion ALL Transactions IN PEM (99-2003)	# TOTAL Transactions in Our Data (99-06) (Excluding 5 Investments Abroad)	Proportion of All transactions in our Data	Comparison of Proportions Test
North	317	0.81	157	0.75	1.51
Center	317	0.15	157	0.19	-1.11
South	317	0.04	157	0.06	-0.97

Table 1. (Continued)

PANEL E: Summary of Response Rate			
	Number of Investors AIFI Yearbook	Number of Investors in Our Dataset	Response Rate
Total Number of AIFI Members in October 2005 (AIFI 2005 1st semester)	88	27	31%
Total Number of AIFI Member in October 2005 (after deleting investors who merged or are new or do not exist anymore or are double counted)	76	27	36%
Number of Active Investors in 2005 in the PE sector only (*) (*) PEM [®] SURVEY , PEM Report 2005, P. 11	57	27	47%
Number of Active Investors in 2005 in the buyout sector only (**) (**) AIFI STATISTICS FIRST SEMESTER 2005	25	21	84%

Table 2. Definitions of Variables and Summary Statistics

This table defines the variables and provides summary statistics. The full sample comprises 162 observations, of which 103 are buyouts. Summary statistics are provided for the subsample of buyouts (with the sole exception of the buyout dummy variable itself). The data were derived from a survey and interviews with the investors carried out in 2005, as described in the body of the paper.

	Definition	Mean	Median	Standard Deviation	Minimum	Maximum	Number of Observations
<u>Dependent Variables</u>							
Buyout Dummy Variable	A dummy variable equal to 1 in case of buyout transactions	0.636	1.000	0.483	0.000	1.000	162
Investment / Pre-Money Valuation	Size of the Investor's capital contribution relative to the pre-money valuation of the investment	0.246	0.221	0.271	0.004	2.513	103
Investor Ownership %	The percentage ownership acquired by the respondent investor, including contingent claims in the event of successful performance of the investment	45.704	46.400	27.822	1.300	100.000	103
Convertible Debt Dummy	A dummy variable equal to 1 if the investor held convertible debt	0.078	0.000	0.269	0.000	1.000	103
Right to Replace CEO Dummy	A dummy variable equal to 1 if the investor had the right to replace the CEO of the investee	0.612	1.000	0.490	0.000	1.000	103
Investor Board Seats / Total Board Seats	The investor's board seats / total board seats (expressed in percentages)	62.841	66.667	23.744	20.000	100.000	103
Investor Majority Board Seats Dummy	A dummy variable equal to 1 if the investor held a majority of the board seats	0.709	1.000	0.457	0.000	1.000	103
Internal Criteria Relative to Firm Management	A ranking variable (1=low relevance, 5=high relevance) for screening criteria to decide to make the investment regarding internal criteria relative to the firm management (quality of management experience and track record)	3.932	4.000	1.041	1.000	5.000	103
Criteria Relative to the Firm's Business Plan	A ranking variable (1=low relevance, 5=high relevance) for screening criteria to decide to make the investment regarding internal criteria relative to the firm's business plan (uniqueness of product, technology, patent protection, growth potential)	3.854	4.000	0.901	1.000	5.000	103
Internal Criteria Relative to the Firm	A ranking variable (1=low relevance, 5=high relevance) for screening criteria to decide to make the investment regarding internal criteria relative to the firm (investment stage, reputation, business history)	3.709	4.000	0.925	1.000	5.000	103
External Criteria Relative to the Market	A ranking variable (1=low relevance, 5=high relevance) for screening criteria to decide to make the investment regarding internal criteria relative to the market (industrial sector, size of market, competitors, suppliers, customers, barriers to entry)	3.883	4.000	0.963	1.000	5.000	103
Criteria Relative to the Investment	A ranking variable (1=low relevance, 5=high relevance) for screening criteria to decide to make the investment regarding internal criteria relative to the investment (amount of capital required, ownership percentages obtained in the target firm, time to reach the break even point, strategic fit with the other firms in the fund's portfolio, IRR)	3.117	3.000	1.345	1.000	5.000	103

Table 2. (Continued)

	Definition	Mean	Median	Standard Deviation	Minimum	Maximum	Number of Observations
<u>Legal Conditions</u>							
Dark Period	A dummy variable equal to 1 for the “dark” period over which leveraged buyouts were illegal (up to September 2001, and starting at January 1999 for the transactions in the dataset).	0.184	0.000	0.390	0.000	1.000	103
Hope Period	A dummy variable equal to 1 for the “hope” period over which it was announced by the Italian Parliament that buyouts would soon be legal (October 2001 – December 2003e).	0.262	0.000	0.442	0.000	1.000	103
Sun Period	A dummy variable equal to 1 for the “sun” period where after buyouts were buyouts were legal (January 2004, and ending at July 2006 in the data).	0.553	1.000	0.500	0.000	1.000	103
<u>Market Conditions</u>							
3-Month Stock Market Return	The return on the stock market for the 3-month horizon preceding the investment date	0.013	0.005	0.091	-0.211	0.357	103
12-Month Stock Market Return	The return on the stock market for the 3-12-month horizon preceding the investment date	0.081	0.138	0.167	-0.277	0.410	103
Bubble Dummy Variable	A dummy variable equal to 1 for investments between January 1, 1999 – April 14, 2000	0.097	0.000	0.298	0.000	1.000	103
<u>Investment Characteristics</u>							
Syndication	The number of syndicated investors.	1.029	1.000	1.310	0.000	6.000	103
Number of Staged Financing Rounds	The number of staged financing rounds as at December 2005	1.107	1.000	0.394	1.000	4.000	103
Book Value of the Investment	The total amount invested by the respondent investor as at December 2005	12199.748	6000.000	30748.466	470.000	191000.000	103
Lead Investor	A dummy variable equal to 1 if the respondent investor was the lead investor	0.602	1.000	0.492	0.000	1.000	103
<u>Investee Characteristics</u>							
Industry Market / Book	The industry market / book value of the investee firm as at the year of investment	2.278	1.880	1.452	0.383	11.581	103
<u>Investor Characteristics</u>							
Fund Age	The age of the fund in years from date of formation to date of first investment in the investee firm	6.641	4.000	10.902	0.000	74.000	103
International Affiliation	A dummy variable equal to 1 if the Italian fund is affiliated with a fund in another country	0.816	1.000	1.532	0.000	8.000	103
Capital under Management per Investor	The amount of capital managed by the fund (in thousands of 2005 Euros)	111602.827	18750.000	300273.733	9307.143	1500000.000	103
Bank Subsidiary	A dummy variable equal to 1 if the investor is a subsidiary of a bank	0.262	0.000	0.442	0.000	1.000	103

Table 3. Comparison of Means and Median Tests

This table presents comparison of mean and median statistics for the “dark” period over which leveraged buyouts were illegal (up to September 2001, and starting at January 1999 for the transactions in the dataset), the “hope” period over which it was announced by the Italian Parliament that buyouts would soon be legal (November 2001 – December 2003), and the “sun” period where after buyouts were legal (January 2004, and ending at July 2006 in the data). Variables are as defined in Table 2. The full sample of 162 observations is used for the buyout test; the subsample of 103 buyouts is used for all the other tests. *, **, *** Statistically significant at the 10%, 5% and 1% levels, respectively.

	Dark Period LBOs are illegal January 1999 - September 2001			Hope Period LBOs will become legal in future October 2001 - December 2003			Sun Period LBOs are legal January 2004 - July 2006			Difference Tests between Dark and Hope		Difference Tests between Dark and Sun	
	Number of Observations	Mean	Median	Number of Observations	Mean	Median	Number of Observations	Mean	Median	Mean	Median	Mean	Median
Buyout Dummy	34	0.54	1.00	50	0.56	0.50	78	0.73	0.45	0.168	p <= 0.958	-1.717*	p <= 0.0452
Investment / Pre-Money Valuation	19	0.17	0.14	27	0.24	0.24	57	0.27	0.26	-1.154	p <= 0.001***	-1.493	p <= 0.000***
Investor Ownership %	19	25.99	15.38	27	48.71	49.00	57	50.85	51.00	-2.796***	p <= 0.071*	-3.811***	p <= 0.009***
Convertible Debt Dummy	19	0.00	0.00	27	0.04	0.00	57	0.12	0.00	-1.000	Not applicable	-2.800***	Not applicable
Right to Replace CEO Dummy	19	0.37	0.00	27	0.63	1.00	57	0.68	1.00	-1.765*	p <= 0.147	-2.437**	p <= 0.031**
Investor Board Seats / Total Board Seats	19	54.89	48.57	27	55.21	50.00	57	69.11	66.67	-0.040	p <= 0.454	-1.954*	p <= 0.579
Investor Majority Board Seats Dummy	19	0.47	0.00	27	0.63	1.00	57	0.82	1.00	-1.032	p <= 0.454	-2.737***	p <= 0.007***
Internal Criteria Relative to Firm Management	19	3.84	4.00	27	3.85	4.00	57	4.00	4.00	-0.030	p <= 0.525	-0.476	p <= 0.095*
Criteria Relative to the Firm's Business Plan	19	3.63	4.00	27	3.85	4.00	57	3.93	4.00	-0.757	p <= 1.000	-1.055	p <= 0.462
Internal Criteria Relative to the Firm	19	3.95	4.00	27	3.70	4.00	57	3.63	4.00	0.861	p <= 0.999	1.393	p <= 0.014**
External Criteria Relative to the Market	19	4.05	4.00	27	3.56	4.00	57	3.98	4.00	1.686*	p <= 0.995	0.358	p <= 0.497
Criteria Relative to the Investment	19	2.26	2.00	27	2.81	3.00	57	3.54	4.00	-1.364	p <= 0.550	-3.980***	p <= 0.000***

Table 4. Correlation Matrix

This table presents a correlation matrix for selected variables for the subsample of buyouts in the data (103 observations). Correlations greater than .19 in absolute value are statistically significant at the 5% level and highlighted in underline font.

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	Investment / Pre-Money Valuation	1.00																						
2	Investor Ownership %	<u>0.31</u>	1.00																					
3	Right to Replace CEO Dummy	0.10	<u>0.53</u>	1.00																				
4	Investor Majority Board Seats Dummy	0.10	<u>0.37</u>	0.15	1.00																			
5	Internal Criteria Relative to Firm Management	0.02	-0.06	-0.03	0.02	1.00																		
6	Criteria Relative to the Firm's Business Plan	-0.06	0.14	-0.04	0.18	-0.15	1.00																	
7	Internal Criteria Relative to the Firm	-0.02	-0.16	-0.17	<u>-0.32</u>	<u>0.20</u>	0.00	1.00																
8	External Criteria Relative to the Market	0.00	0.04	-0.06	0.06	-0.10	<u>0.27</u>	<u>0.32</u>	1.00															
9	Criteria Relative to the Investment	<u>0.20</u>	<u>0.39</u>	<u>0.43</u>	<u>0.22</u>	0.14	0.14	-0.02	0.06	1.00														
10	Dark Period	-0.13	<u>-0.34</u>	<u>-0.24</u>	<u>-0.25</u>	-0.04	-0.12	0.12	0.08	<u>-0.30</u>	1.00													
11	Hope Period	-0.01	0.06	0.02	-0.10	-0.05	0.00	0.00	<u>-0.20</u>	-0.13	<u>-0.28</u>	1.00												
12	Sun Period	0.11	<u>0.21</u>	0.17	<u>0.28</u>	0.07	0.09	-0.09	0.11	<u>0.36</u>	<u>-0.53</u>	<u>-0.66</u>	1.00											
13	3-Month Stock Market Return	-0.01	0.07	0.11	-0.04	0.00	0.02	-0.06	0.08	0.04	-0.02	<u>-0.25</u>	<u>0.24</u>	1.00										
14	12-Month Stock Market Return	0.03	0.17	0.19	0.13	-0.04	0.06	-0.02	<u>0.27</u>	<u>0.21</u>	0.08	<u>-0.67</u>	<u>0.53</u>	<u>0.65</u>	1.00									
15	Bubble Dummy Variable	-0.03	<u>-0.22</u>	<u>-0.28</u>	-0.15	-0.17	0.09	0.03	0.11	<u>-0.25</u>	<u>0.69</u>	<u>-0.20</u>	<u>-0.37</u>	0.13	0.05	1.00								
16	Syndication	<u>-0.25</u>	<u>-0.40</u>	<u>-0.20</u>	0.15	-0.05	-0.07	-0.09	-0.01	<u>-0.24</u>	<u>0.30</u>	-0.01	<u>-0.22</u>	-0.10	-0.13	<u>0.32</u>	1.00							
17	Number of Staged Financing Rounds	0.01	-0.01	0.01	0.07	-0.05	0.02	-0.10	-0.10	-0.13	-0.13	0.18	-0.05	-0.10	-0.15	-0.09	0.07	1.00						
18	Book Value of the Investment	<u>0.22</u>	<u>0.28</u>	0.15	0.11	-0.12	0.08	0.06	0.16	0.05	0.05	0.05	-0.09	0.09	0.14	0.12	0.07	0.11	1.00					
19	Lead Investor	0.16	<u>0.52</u>	<u>0.21</u>	0.00	-0.09	0.13	-0.04	0.03	<u>0.20</u>	-0.02	-0.06	0.07	0.08	0.09	0.07	<u>-0.24</u>	0.02	<u>-0.22</u>	1.00				
20	Industry Market / Book	-0.08	<u>-0.34</u>	-0.13	-0.13	-0.08	-0.04	0.11	<u>0.23</u>	-0.09	<u>0.35</u>	-0.18	-0.11	-0.07	0.01	<u>0.41</u>	<u>0.30</u>	-0.08	<u>-0.07</u>	<u>-0.26</u>	1.00			
21	Fund Age	0.02	0.17	<u>0.21</u>	0.17	<u>-0.26</u>	0.01	<u>-0.31</u>	-0.18	0.00	-0.17	-0.05	0.18	-0.02	0.08	-0.12	0.05	0.01	<u>0.37</u>	<u>-0.17</u>	-0.07	1.00		
22	International Affiliation	-0.08	-0.13	-0.03	<u>-0.25</u>	0.17	0.05	<u>0.29</u>	0.07	0.14	-0.02	0.10	-0.07	-0.06	-0.08	0.04	0.02	-0.05	0.02	0.06	0.03	<u>-0.03</u>	1.00	
23	Capital under Management per Investor	0.11	<u>0.27</u>	0.16	0.18	<u>-0.26</u>	<u>0.21</u>	-0.10	<u>0.26</u>	-0.09	<u>0.22</u>	0.07	<u>-0.23</u>	0.03	0.16	<u>0.21</u>	-0.01	0.03	<u>0.41</u>	0.04	-0.06	0.09	0.07	1.00
24	Bank Subsidiary	-0.18	<u>-0.35</u>	<u>-0.43</u>	<u>-0.25</u>	0.10	0.15	<u>0.21</u>	0.12	<u>-0.46</u>	0.17	0.15	<u>-0.26</u>	-0.09	<u>-0.23</u>	<u>0.25</u>	0.16	0.01	0.02	<u>-0.06</u>	0.01	<u>-0.20</u>	<u>0.45</u>	0.00

Table 5. Regression Analyses

This table presents regression analyses of the impact of buyout regulation on the likelihood of a buyout investment, the amount invested, the structure of the investment, and the motivations for undertaking the investment. Models (1) and (2) report logit models of determinants of the probability of a buyout investment relative to a different type of private equity investment. Models (3) and (4) report Tobit models of the determinants of the amounts invested by the respondent investor relative to the pre-money valuation of the investment at the time of first investment. Fixed effects are used in Models (1) – (4) for the different legal settings for buyout regulation. Models (5) – (17) suppress the dummy variable for the “dark” period and include a constant in the regressions. Models (5) and (6) report OLS regressions on the determinants of the respondent investor’s ownership % in the best case scenario for the success of the entrepreneurial firm. The dependent variable in Models (5) and (6) is adjusted with logs to account for the fact that it is bounded between 0 and 100%. Models (7) and (8) present logit analyses of the determinants that the investor used convertible debt with common equity (as opposed to straight debt with common equity). Models (9) and (10) report logit analyses of the determinants of the probability that the investors had the right to replace the CEO. Models (11) and (12) report logit analyses of the determinants of the likelihood that the investors have a majority of the board seats. Models (13) – (17) report OLS regressions for the ranking that the investor provided for reasons associated with undertaking the investment. Explanatory variables in all regressions include various variables for legal conditions, market conditions, investee characteristics and investor characteristics, as defined in Table 2. Alternative models are reported to show robustness to different included/excluded variables; in some cases certain variables were excluded by necessity due to collinearity. All of the regressions use White’s (1980) robust standard errors. *, **, *** Statistically significant at the 10%, 5% and 1% levels, respectively.

	LHS: Buyout Dummy				LHS: Investment / Pre-Money Valuation			
	Model 1: Logit Marginal Effect	t- statistic	Model 2: Logit Marginal Effect	t-statistic	Model 3: Tobit Marginal Effect	t-statistic	Model 4: Tobit Marginal Effect	t-statistic
<u>Legal Conditions</u>								
Dark Period	0.013	0.130	0.212	2.109**	0.078	0.747	0.145	1.266
Hope Period	-0.043	-0.559	0.015	0.145	0.147	1.585	0.220	2.151**
Sun Period	0.138	1.814*	0.384	3.034***	0.185	2.123**	0.268	2.700***
<u>Market Conditions</u>								
3-Month Stock Market Return	-0.309	-0.848	0.164	0.286	-0.115	-0.467	-0.120	-0.345
12-Month Stock Market Return			-0.728	-2.013**			-0.122	-0.475
Bubble Dummy Variable			0.080	0.627			0.138	1.223
<u>Investment Characteristics</u>								
Syndication							-0.038	-2.101**
Number of Staged Financing Rounds					-0.009	-0.166	0.001	0.013
Book Value of the Investment			4.257E-06	0.542				
Lead Investor					0.070	1.542	0.039	0.809
<u>Investee Characteristics</u>								
Industry Market / Book	-0.012	-0.612	-0.026	-0.996	0.002	0.145	-3.200E-04	-0.018
<u>Investor Characteristics</u>								
Fund Age			6.069E-04	0.063			-1.322E-04	-0.064
International Affiliation			0.248	2.715***			-5.745E-03	-0.366
Capital under Management per Investor	2.441E-06	1.535	8.940E-07	1.170	1.127E-07	1.512	1.049E-07	1.292
Bank Subsidiary			-0.528	5.323***			-0.073	-1.235
<u>Model Diagnostics</u>								
Number of Observations	162		162		103		103	
Chi-Square	20.152***		71.572***					
Pseudo R ²								
Decomp Based Fit Measure for Tobit)	0.095		0.337		0.052		0.082	
Loglikelihood	-96.163		-70.453		-7.550		-3.655	

Table 5. (Continued)

	LHS: Log (Ownership % / (1 - Ownership %))				LHS: Convertible Debt			
	Model 5: OLS		Model 6: OLS		Model 7: Logit		Model 8: Logit	
	Coefficient	t-statistic	Coefficient	t-statistic	Marginal Effect	t-statistic	Marginal Effect	t-statistic
Constant	-1.900	-3.627***	-1.474	-3.462***	-0.174	1.215	-0.046	-2.118**
<u>Legal Conditions</u>								
Dark Period								
Hope Period	1.543	3.607***	1.281	2.867***				
Sun Period	1.630	3.875***	1.060	2.986***	0.090	1.955*	0.048	1.655*
<u>Market Conditions</u>								
3-Month Stock Market Return	-1.233	-0.572	-2.209	-0.946	0.052	0.286	-0.004	-0.075
12-Month Stock Market Return			0.325	0.206				
Bubble Dummy Variable			-0.403	-0.668				
<u>Investment Characteristics</u>								
Syndication			-0.228	-2.608***				
Number of Staged Financing Rounds	-0.354	-1.543	-0.452	-2.207**	0.051	1.315	0.018	2.541**
Book Value of the Investment			1.888E-05	5.099***			-6.531E-07	-0.927
Lead Investor	1.365	5.360***	1.636	7.905***	0.015	0.571		
<u>Investee Characteristics</u>								
Industry Market / Book	-0.125	-1.605	-0.023	-0.345	-0.014	-0.695	-3.492E-03	-0.553
<u>Investor Characteristics</u>								
Fund Age			5.231E-03	0.436			-1.458E-03	-1.338
International Affiliation			-0.118	-2.391**				
Capital under Management per Investor	1.692E-06	2.663***	8.068E-07	1.798*	-8.816E-10	-0.010	1.350E-08	0.681
Bank Subsidiary			-0.530	-1.816*				
<u>Model Diagnostics</u>								
Number of Observations	103		103		103		103	
F-Statistic (Chi-Square for Logit)	10.25***		9.77***		12.157*		16.608*	
Adjusted R ² (Pseudo R ² for logit)	0.388		0.546		0.216		0.295	
Loglikelihood	-168.029		-148.720		-22.045		-19.819	
Akaike Information Statistic	3.418		3.179					

Table 5. (Continued)

	LHS: Replace CEO				LHS: Majority Board			
	Model 9: Logit		Model 10: Logit		Model 11: Logit		Model 12: Logit	
	Marginal Effect	t-statistic	Marginal Effect	t-statistic	Marginal Effect	t-statistic	Marginal Effect	t-statistic
Constant	-0.398	1.519	-0.239	-0.752	-0.092	-0.460	-0.045	-0.410
<u>Legal Conditions</u>								
Dark Period								
Hope Period	0.324	2.515**	0.319	1.667*	0.095	0.837	0.100	1.340
Sun Period	0.402	2.849***	0.175	0.922	0.372	2.733***	0.249	2.613***
<u>Market Conditions</u>								
3-Month Stock Market Return	0.408	0.712	-0.043	-0.048	-0.568	1.083	-0.546	-1.510
12-Month Stock Market Return			0.579	0.785			0.198	0.767
Bubble Dummy Variable							0.084	1.154
<u>Investment Characteristics</u>								
Syndication			-0.024	-0.442				
Number of Staged Financing Rounds	-0.034	-0.260	-0.032	-0.234	0.036	0.316	0.002	0.034
Book Value of the Investment			4.002E-06	0.792			-3.855E-06	-1.218
Lead Investor	0.218	2.016**	0.216	1.666*	-0.031	-0.338	-0.031	-0.606
<u>Investee Characteristics</u>								
Industry Market / Book Investor	0.015	0.369	0.005	0.116	-0.011	-0.381	-1.243E-02	-0.732
<u>Investor Characteristics</u>								
Fund Age			1.182E-02	1.040			4.478E-03	1.033
International Affiliation			0.056	1.413			-4.036E-02	-1.964**
Capital under Management per Investor	5.189E-07	1.932*	3.335E-07	0.856	8.245E-07	1.587	1.552E-06	1.376
Bank Subsidiary			-0.561	4.087***			-0.032	-0.470
<u>Model Diagnostics</u>								
Number of Observations	103		103		103		103	
Chi-Square	16.741**		40.001***		20.146***		31.175***	
Pseudo R ²	0.122		0.291		0.162		0.251	
Loglikelihood	-60.434		-48.804		-52.064		-46.550	

Table 5. (Continued)

	Internal Criteria Relative to Firm Management Model 13: OLS		Internal Criteria Relative to the Firm Model 14: OLS		Criteria Relative to the Firm's Business Plan Model 15: OLS		External Criteria Relative to the Market Model 16: OLS		Criteria Relative to the Investment Model 17: OLS	
	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic
Constant	5.114	11.289***	4.301	16.807***	2.720	5.939***	3.054	9.594***	3.031	8.976***
<u>Legal Conditions</u>										
Dark Period										
Hope Period	-0.753	-2.078**	-0.368	-1.302	0.851	2.229**	0.149	0.513	0.712	2.250**
Sun Period	-0.332	-1.087	-0.426	-2.299**	0.951	2.390**	0.430	1.923*	0.938	3.416***
<u>Market Conditions</u>										
3-Month Stock Market Return	0.861	0.592	-1.067	-0.926	-1.003	-0.716	-1.066	-0.913	-2.646	-1.928*
12-Month Stock Market Return	-0.864	-0.799	0.465	0.519	0.570	0.562	1.349	1.493	1.261	1.492
Bubble Dummy Variable	-0.803	-1.512	-0.407	-1.128	0.803	1.769*	-0.328	-0.957	0.229	0.561
<u>Investment Characteristics</u>										
Syndication	-0.010	-0.157	-0.104	-2.219**	-0.031	-0.632	-0.006	-0.110	-0.041	-0.670
Number of Staged Financing Rounds	-0.096	-0.315	-0.197	-1.457	-0.017	-0.107	-0.207	-1.218	-0.497	-3.252***
Book Value of the Investment	3.311E-06	0.663	9.540E-06	2.686***	-7.671E-08	-0.031	6.609E-06	2.480**	1.212E-05	3.356***
Lead Investor	-0.319	-1.540	-0.067	-0.409	0.200	1.029	0.195	1.158	0.410	1.955*
<u>Investee Characteristics</u>										
Industry Market / Book Investor	-0.094	-1.313	0.062	1.063	0.020	0.338	0.220	3.636***	-1.270E-02	-0.190
<u>Characteristics</u>										
Fund Age	-0.029	-3.928***	-0.032	-5.015***	5.309E-04	0.115	-0.024	-1.959*	-2.868E-02	-2.705***
International Affiliation	0.152	4.352***	0.167	5.479***	-0.051	-1.425	-0.033	-0.999	3.590E-01	5.469***
Capital under Management per Investor	-8.266E-07	-1.455	-7.132E-07	-1.598	7.016E-07	1.783*	8.080E-07	2.769***	-8.324E-07	-3.352***
Bank Subsidiary Model	-0.070	-0.289	0.072	0.359	0.460	2.015**	0.453	2.448**	-1.884	-5.331***
<u>Diagnostics</u>										
Number of Observations	103		103		103		103		103	
F-Statistic	1.98**		2.76***		1.28		2.82***		7.54***	
Adjusted R ²	0.119		0.194		0.037		0.200		0.473	
Loglikelihood	-135.663		-118.881		-125.351		-122.666		-135.598	
Akaike Information Statistic	2.925		2.600		2.725		2.673		2.924	