Is it the Law or the Lawyers?

Investment Fund Covenants Across Countries*

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Abstract

This paper introduces a new dataset from 50 private investment funds from 17 countries around the world. We analyse the frequency of use of investment covenants imposed by institutional investors governing the activities of private investment fund managers in areas pertaining to investment decisions, investment powers, types of investments, fund operations, and limitations on liability. We control for relations between the use of fund covenants and institutional factors such as offshore fund structures, as well as fund specific variables such as fund size, industry market-book, and the identity of the fund's investors, among other control variables available in the rich and detailed new data introduced herein. The data do indicate a role for country legality in affecting the frequency of use of fund covenants. But the data further indicate that the presence of legally trained managers has a more pronounced role in affecting the use of covenants. Overall, therefore, the lawyers appear to be more responsible than the law for the presence of the covenants that govern private investment funds across countries.

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JEL Classification: G24, G28, G31, G32, G35

1. Introduction

Private equity and venture capital funds [hereafter "private investment funds"] are financial intermediaries between intuitional investors and entrepreneurial firms. Private investment funds are often set-up as limited partnerships with the use of very long-term contracts that typically last for 10 to 13 years. The institutional investors are the limited partners not involved in the day-to-day operation of the fund; the fund managers are the general partner. Institutional investors impose covenants on the general partners in order to mitigate the agency problems associated with the investment of the institutional investors' capital. The covenants are privately negotiated between the institutional investors and fund managers in a way that efficiently manages the incentives and controls the potential for opportunistic behaviour among the fund managers. This type of flexible investment fund structure has been heralded as a paramount reason for the success of the US venture capital industry (Sahlman, 1990; Gompers and Lerner, 1996, 1999, 2001a,b; Lerner and Schoar, 2004a).

While there has been much research on the relations between private investment fund managers and their investee entrepreneurial firms in both theoretical[1] and empirical studies[2], there has been a comparative dearth of evidence on agency problems and contracts between private investment funds and their institutional investors. This is surprising, given the paramount importance of fund structures to understanding private equity and venture capital finance (Sahlman, 1990; Gompers and Lerner, 1999, 2001). To date, there have only been three empirical studies, and each is derived from data exclusively from the US (Gompers and Lerner, 1996; Lerner and Schoar, 2002; Litvak, 2004). Private investment fund structures in different countries, however, have not been the focus of much scrutiny. In one study with international comparisons, Mayer *et al.* (2004) show different sources of funds affect the way in which funds are invested which is suggestive of different fund structures and restrictive covenants in different countries; however, that study does not explicitly consider how fund structures differ internationally. Overall, while evidence is suggestive that fund structures are likely to differ in different countries, there has been no empirical analysis of the differences in fund structures in different countries outside the US. In the spirit of empirical work

[1] See, e.g., Bigus (2002, 2004), Bascha and Walz (2001a), Bergmann and Hege (1998), Berger and Udell (1998); Kirilenko (2001); Casamatta (2003), Neus and Walz (2004), Kanniainen and Keuschnigg (2003, 2004), Keuschnigg (2004a,b), Keuschnigg and Nielsen (2001, 2003a,b, 2004a,b).

[2] See, e.g., Megginson and Weiss (1991); Gompers (1995, 1998), Gompers and Lerner (1999, 2000, 2001a,b), Lerner (1994a,b, 1999), Bascha and Walz (2001b), Hsu (2004); Schwienbacher (2002); Hege *et al.* (2003).

comparing private equity and venture capital investment across countries,[3] this paper investigates how and why private investment fund structures differ internationally.

Our empirical approach in this paper is similar in spirit to the seminal work of Gompers and Lerner (1996). We focus on contractual covenants imposed by institutional investors on fund managers in the operation of venture capital funds. We further consider funds that might more broadly be classified as "private equity" due to international differences in fund investment stage definitions and the differences in adherence of focus to specific stages stated by the funds. As indicated, therefore, hereafter we simply refer to all of these funds as "private investment funds". This international comparison of contractual covenants among private investment funds across countries is the first empirical study of its kind.

We analyse the frequency of use of investment covenants imposed by institutional investors governing the activities of private investment fund managers in areas pertaining to investment decisions, investment powers, types of investments, fund operations, and limitations on liability. We introduce a new dataset hand-collected from 50 funds from 17 countries including developed and emerging markets (Belgium, Brazil, Canada, Cayman Islands, Finland, Germany, Italy, Luxembourg, Malaysia, Netherland Antilles, the Netherlands, New Zealand, Philippines, South Africa, Switzerland, the UK and the US.).

Our central hypothesis is that the frequency of covenants is influenced by the quality of law of the country in which the fund is legally registered. On one hand, we might expect that countries with weaker laws have funds which make use of more covenants in order to substitute for the poor legal protections otherwise afforded to the parties. On the other hand, we might expect the legal certainty offered by countries with superior law quality gives rise to a greater benefit/cost of negotiating and implementing covenants governing funds.

Our related central hypothesis is that the frequency of covenants is influenced by the presence of legally trained fund managers. Each institutional investor contributing capital to a fund will have legal counsel that reviews the covenants pertaining to the setup of a fund. Likewise, the fund itself will have legal counsel the review the covenants. We would expect the marginal impact of the presence of a lawyer among the fund managers, however, to be quite significant since the manager will be directly attuned to the meaning and importance of each of the fund covenants through his/her legal training, and because these rights and

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3 See, e.g., Jeng and Wells (2000), Manigart *et al.* (2002), Lockett and Wright (2002), Wright *et al.* (2002); Mayer *et al.* (2004); Lerner and Schoar (2004a,b).

obligations will directly influence the day-to-day job rights and responsibilities of the fund manager.

The data indicate mixed support for the two main hypotheses in the paper by that the presence of a legally trained fund manager increases the probability of the use of covenants, and the quality of law affects the use of covenants across countries. First, regarding the quality of the rule of law and related factors pertinent to the legality of a country, we observe a statistically significant positive relation between the quality of a country's laws and the number of covenants pertaining to fund operations (such as the sale of fund interests, restrictions on fundraising, and matters pertaining to public disclosure). An increase in the Legality index from 20 to 21 (a typical improvement among developed nations) increases the probability of an extra covenant pertaining to fund operation by approximately 1%, whereas an increase from 10 to 11 (a typical improvement among emerging markets) increases the probability of an extra covenant pertaining to fund operation by approximately 2%. The data further indicate that civil law countries are approximately 6% more likely to have covenants pertaining to the types of investment; however, the common/civil law differences were not notable for any other type of covenant.

Second, with respect to legally trained fund managers, an increase in one fund manager of five with legal training increases the probability of additional covenants pertaining both to investment decisions (such as the size of any single investment and co-investment) and types of investment (in different asset classes) by approximately 10%. Taken together, therefore, while law and lawyers are both important, the presence of lawyers has a more economically significant impact on the use of covenants than the legal environment itself.

Third, it is noteworthy that a number of control variables indicate a significant influence on the probability of use of covenants. In particular, our analyses show an important relation between fund covenants and institutional factors such as offshore fund structures, as well as fund specific variables such as fund size, industry market-book, and the identity of the fund's investors. In particular, offshore funds have fewer covenants; larger funds have more covenants; funds that operate in industries with higher market/book ratios have more covenants; and funds with more experienced managers are more likely to be granted limited liability protections for the fund managers. It is also noteworthy that in times of stronger market conditions, institutional investors are more likely to grant limited liability protection to fund managers. There are other significant factors that we identify in the rich and detailed new data introduced herein.

It is perhaps noteworthy that our analyses are somewhat related to international studies of differences in contract terms written between private funds and entrepreneurial firms (Lerner and Schoar, 2004b); however, our focus is not on contracts with entrepreneurs, but rather, we focus on contracts between institutional investors and the fund managers. This difference is significant for a number of reasons. First, contracts in the establishment of funds are much longer term (typically at least 10 years) than those written between fund managers and entrepreneurs, and cannot be altered over time. Second, the types of contracts studied here determine the overall structure of the private investment fund and not merely the assignment of rights and responsibilities among the fund managers and a single investee of the fund. Because fund structures have been heralded as determinative of the success of the US venture capital industry (Gompers and Lerner, 1999), and because there are massive differences in the size and success of venture capital markets across countries (see, e.g., Black and Gilson, 1998; Jeng and Wells, 2000), prior work suggests it is important and worthwhile to study international differences in fund structures.

This paper is organized as follows. Section 2 sets up the theory and hypotheses. The new data used to test the hypotheses are introduced in section 3. Empirical tests are presented in section 4. Limitations and alternative explanations are considered in section 5. The last section concludes.

2. Theory and Hypotheses

In this section we first describe the types of restrictive covenants in private investment funds, and the rationale for such covenants, in subsection 2.1. The relation between the legal and institutional environment and fund covenants is considered in subsection 2.2. Subsection 2.3 considers human capital factors in influencing fund covenants. Thereafter we discuss a variety of control variables in subsection 2.4. The data and empirical tests follow in subsections 3 and 4, respectively.

2.1. Types of Restrictive Covenants

Venture capital and private equity funds are financial intermediaries between institutional investors (such as banks, endowments, pension funds, life insurance companies, wealthy private individuals) and private entrepreneurial firms. Institutional investors do not have the time and skills to carry out due diligence in selecting worthy entrepreneurial firms for financing, and carry out the monitoring and value-added advice to bring investments in small and medium sized enterprises to fruition (the investment process in an entrepreneurial firm can take between 2-7 years before an exit event such as an IPO, acquisition or write-off). Institutional investors therefore commit capital to venture capital and private equity funds so that specialized fund managers can manage the investment process in entrepreneurial firms.

The most common form of organization of venture capital and private equity funds in the US has been a limited partnership structure that typically lasts for 10 years, with an option to continue for an additional 3 years to ensure the investments have been brought to fruition and the fund can be wound up (Sahlman, 1990; Gompers and Lerner, 1996, 1999). Other countries around the world that allow limited partnership structures have likewise made use of such structures.[4] Countries that do not allow limited partnership structures have made use of corporate forms that closely resemble limited partnerships in the covenants governing the partnership.[5]

Limited partnerships and similar forms of organization involve an assignment of rights and responsibilities in the form of a very long term contract over a period of 10 or more years. The purpose of this contract is to mitigate the potential for agency problems associated with the venture capital managers' investing institutional investor capital in private entrepreneurial firms. The massive potential for agency problems in the reinvestment of capital (elaborated below), and the very long term nature of the limited partnership contract, make extremely important the assignment of rights and obligations in the contract in the form of restrictive covenants. The characteristics of these restrictive covenants among funds in different countries around the world are the focus of this study.

In this paper we group the venture capital fund restrictive covenants into five categories, as follows. We formed four of the categories of covenants on the basis of Gompers and Lerner (1996). We have however made changes to those four categories to take into account new types of covenants more commonly used now and to include covenants relating to the limitation of the fund manager's liability. We have also made changes that reflect the structure of funds in non-US countries, where funds may be organised in various legal forms. The changes were made with advice provided by a VC practitioner (specifically, the head legal advisor of a venture capital fund in Malaysia), and we confirmed the

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[4] For example, for funds in Europe, see www.evca.com.

[5] Australia, for example, has only allowed limited partnerships since 2003; prior to that time funds were set up as trusts, but functionally these trusts involved rights and responsibilities that mimicked the limited partnership structure; see Cumming *et al.* (2005).

appropriateness of the categorizations based on interviews with six fund managers at nine different funds in three different countries.

Category 1: Authority of Fund Manager Regarding Investment Decisions

The restrictions on investment decisions limit the agency problems associated with the investment of the institutional investor's capital (Gompers and Lerner, 1996). This is important, since the institutional investors cannot (as limited partners they are legally prohibited from interfering, otherwise they lose their limited liability status) interfere with the day-to-day operations of the fund. These restrictions include, first, restrictions on the size of investment in any one portfolio company because otherwise a fund manager might lower his or her effort costs associated with diversifying the institutional investors' capital across a number of different entrepreneurial firms.[6] Second, there are restrictions on the ability of a fund manager to borrow money such as in the form of bank debt and reinvest that borrowed money alongside the institutional investors' capital. That type of behaviour would increase the leverage of the fund and increase the risks faced by the institutional investors. Third, there are restrictions on co-investment by another fund managed by the fund manager, as well as restrictions on co-investment by the fund investors. Those restrictions limit the conflicts of interest in the allocation of opportunities to different institutional investors of the fund, as well as limit the incentive by a fund manager to bail out the poor performing investments of a companion fund operated by the same manager. Fourth, there are restrictions on the re-investment of capital gains obtained from investments brought to fruition. Some fund managers might otherwise pursue a strategy of "fame not fortune" in terms of trying to get as many IPO successes as possible, at the expense of a risk of losing the profits of one investment into a new unproven venture. Fifth, there are restrictions on the overall ability and independence of the fund manager to make investment decisions. Finally, there are other less common covenants on other types of investment and divestment decisions (such as limits in terms of timing of investment with drawdowns, and timing of exits).[7]

Category 2: Restrictions on Fund Manager's Investment Powers

The covenants in the class of restrictions on investment powers also limit the agency problems in the separation of ownership (i.e., by the institutional investors) and control (i.e., by the fund managers) in the investment process. The first restriction in this class involves co-investment of the Fund Managers themselves. This is similar to co-investment by the

[6] Note, however, in some cases funds are set up in a way that enables such restrictions to be waived upon approval of all the investors.

[7] Waiver of these covenants may also be subject to approval of the Fund's Board of Advisors, which usually comprises institutional fund investors.

fund's institutional investors and co-investment of prior funds (as described above in Category 1), but instead involves the personal funds of the Fund Managers. This restriction limits the incentive problems associated with the allocation of attention by the fund managers to different entrepreneurial firms in the fund portfolio. If the fund manager were able to co-invest personal funds, there would be distorted incentives for the fund manager to spend the most of their time allocating effort to the firms in which the manager is personally invested, instead of trying to maximize the value of the overall portfolio (as would be expected by intuitional investors). Second, there are covenants pertaining to the sale of fund interests by the fund managers, since the institutional investors financial interest will be compromised by the addition of new institutional investors, and more significantly the loss of commitment of the fund manager who is usually also the general partner or most active fund shareholder. Third, key person provisions and limits of the additions of investment principals regarding the fund managers, since the contract is made with specific fund managers and the institutional investors do want the management of their capital to be in the hands of specific people with whom they have contracted. Finally, there could be other types of restrictions on other actions of fund managers.

Category 3: Covenants Relating to the Types of Investment

Covenants pertaining to the types of investment ensure that the institutional investors' capital is invested in a way that is consistent with their desired risk/return profile. Restrictions include investments in other venture funds, follow on investments in portfolio companies of other funds of the fund manager,[8] public securities, leveraged buyouts, foreign securities, and bridge financing. Without such restrictions, the fund manager could pursue investment strategies that better suit the interests of the fund managers regardless of the interests of the institutional investors.

Category 4: Fund Operation

Covenants on fund operation are designed to oversee the administrative aspects of a fund, and include the sale of fund interests by fund investors[9], restrictions against the fund manager on raising a new fund,[10] public disclosure of fund matters to investors, and provisions to allow fund investors to vote to remove the fund manager without cause (no fault divorce clauses). The covenant restricting the sale of fund interest by fund investors (in this

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[8] This is similar to the co-investment restriction in category 1, but where the category 1 restriction is against another fund managed by the fund manager investing in the fund, this restriction in category 3 is against the fund itself investing in another fund's (usually an earlier fund) portfolio company, also managed by the fund manager .

[9] In category 2, we identified a similar covenant on sale of fund interests by fund managers.

[10] This restriction on fundraising is typically either for a set period of time or hurdle rate.

category 4) is differentiated from the covenant restricting the sale of interest by fund manager (as specified in category 2) because the specific fund manager action of selling pertains to things fund managers cannot do, whereas this category 4 pertains to administrative aspects of all investors. Recall that the fund manager is also the general partner or most active shareholder of a fund, unlike all other fund investors; hence, the different categorizations for seemingly related actions.

Category 5: Limitation of Liability of the Fund Manager

While categories 1-4 considered covenants constraining the activities of fund managers, this last category of covenants pertains to favourable awards of limited liability for the fund managers. Fund manager liability can be limited in the event of disappointing returns from investments made, limited if the fund manager fails to investment committed capital within the agreed time, and/or limited if the fund manager is found to be mismanaging the fund.

In the remaining subsections of section 2 we conjecture how the frequency of use of these covenants varies by the fund's legal and institutional environment, the human capital of the fund, and various other variables that might plausibly impact the use of fund covenants.

2.2. Legal and Institutional Environment

One source of international differences in venture capital markets is most likely attributable to the impact of laws and institutions on venture capital governance structures. Our central hypothesis is that the frequency of covenants is influenced by the quality of law of the country in which the fund is legally registered. There are two competing hypotheses. On one hand, we might expect that countries with weaker laws have funds which make use of more covenants in order to substitute for the poor legal protections otherwise afforded to the parties. On the other hand, we might expect the legal certainty offered by countries with superior law quality gives rise to a greater benefit/cost of negotiating and implementing covenants governing funds. We formally state these two competing hypotheses as follows.

H1a: Higher rule of law indicies, and related legality factors, give rise to improved legal certainty and therefore a greater benefit/cost of negotiating and implementing covenants governing funds.

H1b: Higher rule of law indicies, and related legality factors, give rise to fewer covenants as the need to substitute for poor country-wide legal protections diminishes.

We test H1a and H1b with the use of the “Legality” index. The Legality index is a weighted average of the legal index variables introduced by La Porta *et al*. (1997, 1998), as defined by Berkowitz *et al*. (2003). The *Legality* index is a broad measure based on La Porta *et al.* (1997, 1998) which comprises civil versus common law systems, the efficiency of the judicial system, the rule of law, corruption, risk of expropriation, risk of contract repudiation, and shareholder rights (the Legality index is a weighted sum of the factors based on Berkowitz *et al.*, 2003). A higher Legality index indicates better substantive legal content pertaining to investing, the quality and likelihood of enforcement. Higher numbers indicate ‘better’ legal systems across each of the factors. Note that Legality in the context of fund structure appropriately refers to the laws of the country in which the fund was formed. The Legality index values for the countries in our dataset are: Belgium (20.82), Brazil (14.09), Canada (21.13), Cayman Islands (20.41), Finland (21.49), Germany (20.44), Italy (17.23), Luxembourg (21.91), Malaysia (16.67), Netherland Antilles (21.67), the Netherlands (21.67), New Zealand (21.55), Philippines (8.51), South Africa (14.51), Switzerland (21.91), the UK (20.41) and the US (20.85).[11]

One component of international differences in laws not picked up by the Legality index is the civil versus common law difference.[12] We might expect civil law countries to be more formalized about writing contracts in accord with a rule-based legal system, at least relative to common law countries.

H2: Civil law countries have fund managers more inclined to be rule-based and write more covenants in fund contracts.

Finally, an interesting aspect of international differences in investment funds is that sometimes funds are setup “offshore”. The institutional investors of such funds invariably come from a diverse array of countries. We therefore expect differences in the frequency of covenants for such funds.

[11] These values are provided by Berkowitz *et al.* (2003). For the Cayman Islands, the Legality index was not available. As such, we inferred the value of the Legality index based on a regression model which used the GNP per capita of all countries around the world for which Legality is available. The correlation between GNP per capita and Legality around the world is extremely high at approximately 0.9.

[12] More generally, there are legal origin differences focused on my La Porta et al. (1997, 1998); however, with the limited degrees of freedom in our dataset, we focus of the common versus civil law difference.

H3: Offshore funds involve institutional investors from a greater number of disparate countries, have greater negotiation and contracting costs, and therefore fewer covenants.

In addition to these legal environment variables, there are human capital factors and other fund- and market-specific variables that might affect the use of covenants, as discussed below.

2.3. Human Capital Factors

Perhaps the most compelling idea pertaining to contract choice is that the human capital elements of the contracting parties determine the contract clauses. In the context of private investment funds, the human capital of the fund managers unilaterally carrying out the day-to-day operations of the fund is what is relevant. We first conjecture that the frequency of covenants is influenced by the presence of legally trained fund managers (as conjectured in Armour, 2004). Each institutional investor contributing capital to a fund will have legal counsel that reviews the covenants pertaining to the setup of a fund. Likewise, the fund itself will have legal counsel that review the covenants. We would expect the marginal impact of the presence of each lawyer among the fund managers, however, to be quite significant since the managers will be directly attuned to the meaning and importance of each of the fund covenants through his/her legal training, and because these rights and obligations will directly influence the day-to-day job rights and responsibilities of the fund manager.

H4: Legally trained fund managers write more covenants governing the activities of the fund.

In testing H4, note that we also control for the presence of fund managers with MBA or CFA training, as well as distinguish between managers with a Ph.D. in either a scientific or non-scientific discipline.

Our last hypothesis pertains to fund manager experience. For the more experienced fund managers, we expect fewer restrictive covenants among more experienced fund managers, and more covenants granting limited liability to fund managers. This prediction is based on the simple reasons that the bargaining power is greater among more experienced fund managers, and that institutional investors have less concern among fund managers with a track record.

H5: Funds with more experienced managers will have fewer restrictive covenants, and more covenants granting limited liability protections for the fund managers.

2.4. Control Variables

A number of other factors could reasonably be expected to influence the use of covenants. First, larger funds might have more covenants if the contracting costs are worth bearing with an increase in the scale of the fund. Second, funds that operate in industries with higher market/book ratios, and among investees in their earlier stage of development, will have more covenants given the risks and scope for opportunistic behaviour are more pronounced. Third, in stronger market conditions, institutional investors might be more likely to acquiesce fewer covenants to the fund managers and grant limited liability protection to fund managers if the supply of funds from institutional investors to private equity and venture capital exceeds the talent available in the market for managing these funds. Finally, the type of institutional investors and the year in which the fund was formed may also be relevant control variables for similar reasons.

3. Data

3.1. Methods and Survey Instrument

The data assembled for this paper are derived primarily from a survey of private equity funds across the developed and emerging private equity markets carried out between July 2004 and December 2004. This method of data collection was deemed the most efficient way to obtain the information we required to test our hypotheses for various reasons. Whilst there are various publications providing both quantitative and qualitative information as provided by private equity fund managers from mainly developed private equity markets,[13] detailed information on the covenants used by both fund investors and fund managers to regulate their relationships is almost never made public. Also, as the agreements used to govern the relationship between fund investors and fund manager may not necessarily be in English, the language common to us, we felt it best to allow the fund managers themselves to provide the data related to such agreements in a manner that was readable to us. Finally, in view of the fact that the funds surveyed will be subject to different laws, thus affecting the format and literal content of such agreements, we felt it would be far more efficient to allow the fund managers, as those bound by the terms of the agreements, to provide the information

[13] See, e.g., www.evca.com for European data.

regarding the relevant covenants governing, or more specifically, restricting their investment decisions. These publications and other information obtained from respondents' websites were however used to verify and enhance data obtained by the survey.

The instrument we used to obtain detailed data about the structure of funds across both developed and emerging private equity markets is a 9 page questionnaire, comprising 24 questions. Robustness is achieved chiefly by framing questions in a way that calls for numeric responses, or a simple "yes" or "no" response. In view of the fact that the potential respondents are from both developed and emerging private equity markets across the world, a glossary of terms was provided in the survey to ensure uniformity in defining terms which may not necessarily be used in the same manner across markets.

The survey questions were organised in 4 parts. First, information about the organization of both the funds and the fund management firms was sought. Fund managers were asked to indicate the legal organizational types of both the fund and the management firm, including fund size, vintage year, life of fund, investment period, the number and terms of any allowable extensions, and the composition of fund investors. The managers were also asked to include a breakdown of the composition of fund investors indicating the number of foreign investors, and the percentage of capital provided by equity, loans or guarantees. Other fund characteristics such as whether the funds are deemed as onshore or offshore funds, with differentiation made between outbound offshore and inbound offshore, were also asked to be indicated. Second, details on investment strategy including regional focus, investment stage or type of allowable financing, and more importantly industry composition of fund investments were sought from the managers. Third, information was sought on the type of agreements used to govern the relationship between the investors and the fund manager, including detailed information about the covenants relating to fund and management restrictions. Managers are asked to indicate the extent of the limitation of their liabilities as provided by the agreements. The questionnaire also addressed the issue of fund governance, requesting respondents to indicate the composition of the fund board of advisors or directors, the composition of the fund scientific or technical advisory board, and more importantly the extent of their influence over investment decisions. Finally, fund managers were required to indicate the average number of relevant work experience years of the principal fund managers in the management firm at the time of fund raising and the proportion of the team with MBA/CFA degrees, Law degrees, and Ph.Ds in both scientific and non-scientific disciplines. The data we have compiled provide a unique set of variables, which are summarised and defined in Table 1.

[Insert Table 1 About Here]

3.2. Potential Sample Selection Bias

The potential respondents were identified from various sources including, but not limited to the following:

1. The Galante Database of Venture Capital and Private Equity Firms 2003;
2. Regional venture capital and private equity associations such as the European Venture Capital Association and the Asia Pacific Venture Capital Alliance;
3. National venture capital and private equity associations; and
4. Firm and Fund web sites.

Pursuant to identifying the appropriate contact persons, the survey instrument was sent to approximately 1000 venture capital fund management firms worldwide. Participation was chiefly solicited with the promise that the aggregated survey results would be disseminated to respondents. Only one questionnaire was sent to any target fund management firm and was addressed only to senior venture capital and private equity fund managers.

One limitation to obtaining data through a survey is the possibility of sample selection bias. While we acknowledge that this is a possibility, we believe from a detailed analysis of the responses received and the data obtained form the responses that this concern does not arise in this exercise. First, survey data were gathered for a final sample of 50 funds in 17 countries, as managed by 50 fund managers in 21 countries. We are aware that the seminal work carried out by Gompers and Lerner (1996) utilised a sample of 140 contracts used to establish funds, and obtained from instuitutional investors (two fund of funds and one endowment). Litvak (2004) has data from 38 funds in the US. We believe however that by obtaining data from funds situated both in and outside the US, and by having access to data regarding contracts entered into by 21 different fund managers, response bias is mitigated as much as possible. Limitations in our sample size from each country from which we derived data, as well as the limited information about venture capital and private equity funds around the world, however, makes reliable statistical comparisons of our sample relative to the population of funds intractable. Our sample of respondent funds includes 8 funds each the Netherlands and the US, 6 funds each from the UK and Malaysia, 4 funds from the Netherlands Antilles, 3 funds each from Germany and Belgium, 2 funds each from the Cayman Islands and South Africa, and 1 fund each Philippines, Canada, Finland, New Zealand, Luxembourg, Brazil, Switzerland, and Italy (see Table 2). The respondent fund managers include 7 each from the Netherlands, Malaysia and the Netherlands, 6 from the US, 3 each from the UK and Germany, 2 each from Belgium and South Africa, and 1 each from the Philippines, Canada, Finland, New Zealand, Brazil, Italy, Vietnam, the Czech Republic, Sweden, Norway, France, South Korea and Uzbekistan. The number of respondents, and the fair representation of both funds from developed and emerging private equity markets, make a response bias even less likely.

[Insert Table 2 About Here]

Secondly, a broad array of respondents replied to the survey. For example, the data show the median respondent fund size of US$39,487,200 and the average being US$103,974,889 (minimum US$263,378; maximum US$482,766,000), indicating respondents were of a variety of fund sizes and of typical size for a sample of non-US countries.[14] The possibility of sample selection bias is further reduced by the presence of both onshore and offshore funds within the final sample, the presence of funds organized not only in both common law and civil law jurisdictions, but also within jurisdictions in legal systems with English, French, Scandinavian and German based legal systems, and also the presence of funds situated in countries where English in not the primary language.

Finally, a sufficient number of variables regarding both fund and fund manager organization and the relevant features of the fund asset size, fund vintage, investor composition, investment strategy, industry composition of fund investments and governance structures, more specifically the specific covenants provided in the terms within the agreements that govern the relationship between fund investors and fund manager, were collected to minimise the risk of response bias. We unfortunately realise that we cannot be absolutely rule out the possibility of a response bias as the data we have collected here is unique.

3.3. Summary Statistics

The summary statistics are presented in Table 2, Figure 1 and Figure 2.

[Insert Figures 1 and 2 About Here]

[14] For some comparative information on fund sizes among non-US funds, see, e.g., www.evca.com

The variables as set out in the Summary Statistics in Table 2 used to test our hypotheses are broken down into 4 main categories:

1. Restrictive covenants (Investment decisions, Investment powers, types of investment, fund operation, limitation of manager liability, and sum of all covenants excluding limitation of manager liability);
2. Legal and market conditions (country legality index, common law country, MSCI index, vintage year of fund, outbound offshore and inbound offshore);
3. Fund manager characteristic (Percentage of legally trained fund managers, MBA/CFA trained fund managers, and Ph.d (science/non-science based disciplines) qualified fund managers within a team, and the average number of years of relevant work experience of principal fund managers); and
4. Fund characteristics (Amount of funds raised, composition of fund investors (banking institutions and government bodies/agencies), organization as a Limited Partnership, Industry Market/Book ratio, and early stage investee focus).

As the primary variables used to prove our hypotheses are within the first main category, they are further elaborated by Figure 1 which sets out the frequency of the use of each of the 5 sub-categories (not including the additional summation category set out in Table 2), and Figure 2 which sets out the frequency of the use of each specific covenant within each sub-category (not including the summation category set out in Table 2). Each variable is presented in 24 rows (28 in total) and 18 separate columns, one column representing the total sum or average of the total sum of the rest of the 17 columns, which represent each sample jurisdiction.

The first row in Table 2 sets out the sum total of the sample set as 50 funds, with the sample of funds comprising 8 funds each the Netherlands and the US, 6 funds each from the UK and Malaysia, 4 funds from the Netherlands Antilles, 3 funds each from Germany and Belgium, 2 funds each from the Cayman Islands and South Africa, and 1 fund each Philippines, Canada, Finland, New Zealand, Luxembourg, Brazil, Switzerland, and Italy. The sample countries are listed alphabetically.

Rows 3 to 6 in Table 2 set out the average frequency of the use of covenants within agreements governing the relationship between fund investors and fund manager, relating to investment decisions, investment powers, types of investment, and fund operation. Row 8 sets out the total average and sum of the 3 types of covenants used across markets. Row 7, although setting out a type of covenant relating to the limitation of liability of fund managers, is not included in the sum of restrictive covenants as they essentially act to provide more latitude to fund managers in exercising their investment powers. From the data (as summarized in Table 2 and Figure 2), we are able to observe that the most commonly used covenant is that restricting the size of investments made by fund managers, while the least commonly used covenant is that which restricts co-investments by other fund investors. This is possibly due to the fact that investors seek to mitigate the fund's investment risk by ensuring diversification of fund assets, minimizing downside risk. Co-investments by fund investors, on the other hand, will maximize investors' upside potential. We are also able to observe (from Table 2 and Figure 1) that funds on average do not utilize all of the possible restrictive covenants available to them, although they do utilize a majority of them. It is for this reason that we seek to determine the importance of industry-specific factors in driving the use of covenants.

To carry out our empirical analysis we use a second category of variables, Legal and market conditions, comprising primarily a country legality index (based on Berkowitz *et al.*, 2003; see also Table 1) which is a weighted average of following factors: civil versus common law systems, efficiency of judicial system, rule of law, corruption, risk of expropriation, risk of contract repudiation, shareholder rights (as per La Porta *et al.*, 1997, 1998). Of course the log of this variable is used in the empirics to account for a diminishing effect with larger numbers in the multivariate analyses in section 4 below. To test for robustness, we also included variables such as the system of law within each sample country, the MSCI Index of the specific country for the year prior to the vintage year of the fund which is also provided. The year prior to fundraising is deemed to be most relevant as decisions to invest in private equity by institutional investors will be based on available economic indicators. Again, the log of (1+MSCI) is used in the empirics to account for a diminishing effect with larger numbers.

To further test our hypotheses, a third category in Table 2 comprising variables on fund manager characteristic is provided to determine the extent the human capital factor affects the use of covenants. The percentage of legally trained fund managers, MBA/CFA trained fund managers, Ph.d (science/non-science based disciplines) qualified fund managers within a team, and the average number of years of relevant work experience of principal fund managers are set out in Rows 17 to 21 of Table 2. From this data we are able to observe that a vast majority of fund managers have financial discipline backgrounds, with an MBA/CFA qualification, while less than 10% have advanced scientific degrees.

The final category in Table 2 provides variables regarding fund organization characteristics, including composition of investors and type of fund. Variables include the average sum of funds raised by all 50 funds, and the average of each jurisdiction represented. The proportion of banking institutions and government bodies within each fund, as averaged, is also set out. The proportion of funds organized as Limited Partnerships, the respective industry market/book ratio and the proportion of funds with an early stage investee focus is also included.

Although we have set out the most relevant variables for the purposes of testing our hypotheses, there are other variables within the dataset which serve to confirm and augment the set of variables we have chosen here. Additional variables not explicitly presented, as well as alternative specifications of the models below, are available upon request.

3.4. Correlation Matrix

Table 3 presents a correlation matrix of the primary variables of interest. The correlations provide preliminary insights into the relations between the hypothesized relations set out in section 2. For instance, there are fewer covenants among common law countries, but more covenants among countries with higher legality indices. Offshore funds tend to have fewer covenants. Funds with a greater percentage of legally trained fund managers tend to have more covenants. Funds that invest in companies operating in industries with higher market/book ratios have more covenants. Tables 3 provides some other insights into the relations between other variables, as well as guidance for the potential for collinearity problems in the multivariate empirical tests provided in section 4 immediately below.

[Insert Table 3 About Here – Re Correlation Matrix]

4. Econometric Tests

The econometric tests focus on the counts of the number of different covenants used within the five main categories enumerated above: investment decisions, investment powers, types of investment, fund operation, and limitation of liability. For each of the categories separately, we use ordered logit models to consider the multivariate determinants of the use of covenants. The ordered logits appropriately account for the fact that the dependent variable is ranked and takes a finite number of values. We further consider the determinants of the sum of covenants across the first four categories,[15] and use standard OLS regressions for that dependent variable.[16] For each of the six different dependent variables, we present three alternative specifications to show the robustness of the results to the included right-hand-side variables. The explanatory variables include legal and market conditions, fund manager characteristics, and fund characteristics, as enumerated above (see section 3 and Table 1). Overall, there are 18 regression models presented (3 for the first category of fund covenants, 3 for the second, etc., including the fifth category, and 3 for the sum of categories 1-4 of covenants). The regression results are presented in Table 4.

[Insert Table 4 About Here]

In this section we describe both the statistical and economic significance of the results. The standard logit and OLS regression coefficients are presented. The marginal effects for the economic significance of the logit coefficients were computed separately (using Limdep Econometric Software), and are not reported in the tables for reasons of succinctness and tractability in presentation, but are nevertheless discussed below to highlight the economic significance of the results.

The data provide some support for the hypothesized determinants of fund covenants across countries as outlined in section 2. First, in respect of legality, the data indicate a statistically significant positive relation between the quality of a country's laws and the number of covenants pertaining to fund operations (such as the sale of fund interests, restrictions on fundraising, and matters pertaining to public disclosure); see Models 10-12 in Table 4. The legality variable is significant at the 10% level of significance in Models 10 and 12, and at the 5% level in Model 11. However, legality is not a statistically relevant variable for any of the other classes of dependent variables.[17] In Models 10-12, the results indicate the legality variable is also economically significant. For example, an increase in the Legality index from 20 to 21 (a typical improvement among developed nations) increases the probability of an extra covenant pertaining to fund operation by approximately 1%, whereas

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[15] We exclude the fifth category in the sum of all covenants since the fifth category is for limited liability and not negative covenants constraining behaviour.

[16] Ordered logit models on more than 20 categories in the dependent variable are not tractable for a dataset with 50 observations; hence OLS was used in this last set of regressions. Other specifications were considered, such as Poisson regression models, but did not improve the properties of the model given the distribution of the use of covenants across the funds (see Figure 1). Alternative specifications are available upon request.

[17] Legality is statistically significant at the 10% level in Model 16, but that result is not robust in Models 17 or 18.

an increase from 10 to 11 (a typical improvement among emerging markets) increases the probability of an extra covenant pertaining to fund operation by approximately 2%.

Overall, the data indicate support for H1a (and not H1b; see subsection 2.2) insofar as it relates to fund operation, but not the other classes of covenants. It is perhaps not surprising that the legal environment most directly relates to fund operations, and not the other covenants on the activities of fund managers. Covenants on fund operations such as disclosure and the removal of fund managers are enforced only in conjunction with the corporate laws in the country in which the fund has been set up. This class of covenants is most directly related to the corporate governance of the fund administration. The more specific covenants in the other categories pertain to the day-to-day activities of running the fund itself, and may or may not be used independently of the legal environment in which the fund has been set up.

We next turn to the second hypothesis (H2), which pertains to common versus civil law countries. To this end, we conjectured that the propensity to write rules would be more pronounced in rule based legal systems (civil law countries) as a matter of practice, and not a matter of legal substance. The data do provide some support for this conjecture insofar as civil law countries are approximately 6% more likely to have each additional covenant pertaining to the types of investment (category 3; Models 8 and 9, the common law coefficient is negative and significant at the 5% and 10% levels, respectively). At the same time, however, it is noteworthy that the common/civil law differences are not statistically significant for any other type of covenant; hence, the data only weakly support for H2.

Regarding H3, the data indicate offshore funds are about 10% less likely to have each covenant for the authority of the fund manager (Models 3) and the types of investment (Model 9). This is consistent with our prediction, in so far as offshore funds involve a multitude of investors from different jurisdictions and contracting costs are therefore greater. These results might also be related to the fact that offshore funds are set up as they are more tax efficient for international investors who seek to take advantage of the profits to be made form emerging private equity markets as their own developed ones become over saturated. These international investors thus have less of a concern with the specific investment decisions made by the fund manager regarding types of investments carried out. For example, a few of the sample funds organised in Cayman Islands, the Netherlands, Luxembourg, Malaysia (Labuan), and Netherlands Antilles are managed by fund managers situated in Vietnam, Czech Republic, Malaysia, and South Korea.

Further to the issues in H3, note specifically that the results in Table 4 indicate that (1) outbound offshore funds have fewer covenants restricting the authority of the fund manager, and (2) inbound offshore funds have fewer restrictions for the types of investments made by the fund manager. An outbound offshore fund obtains its funds primarily from one jurisdiction, and invests its funds in a jurisdiction outside that of the fund jurisdiction and that of the primary investors. Conversely, an inbound offshore fund obtains its funds from investors in many jurisdictions, and invests its funds in a specific jurisdiction or region, sometimes including that of the fund jurisdiction and that of its investors. We have included the 2 categories of offshore funds, albeit an overly simplistic categorization, as in practice many funds combine attributes of each of the categories, to take into account the character of investors of offshore funds. By looking at the character of the offshore fund and the direction of investment fund inflow and outflow, we are able to see how they affect the use of covenants. Fewer covenants restricting the authority of the fund manager for outbound offshore funds may be related to the fact that the primary investors are more likely to share a common jurisdiction, and have similar levels of contracting costs. It has to be noted that there are numerous factors that fund managers consider in selecting a jurisdiction in which to organize an offshore fund. Given the likely target investor base, not only the tax laws of the fund's jurisdiction is taken into account, but also those of the country in which potential investors reside, and of the country or region in which the fund may invest. Offshore fund jurisdictions also vary as to the degree of local regulation, the necessity of minimal contacts by the investors with the jurisdiction, the requirement for local fund administrators, forms of available corporate organizations, and quality of available legal and financial advice. When the primary investors are from one jurisdiction, it is easier for the fund manager to select the optimally beneficial jurisdiction for the primary investors, and as such the primary investors will have less issue with the corporate governance of the fund, or the authority of the fund manager over the fund. On the other hand, where the investors are dispersed, fund managers have difficulty in selecting an offshore jurisdiction as compromises will have to be made to achieve some sort of equilibrium amongst investors. Even factors such as the status and reputation of that potential jurisdiction within the financial community may be crucial as it will determine the number of treaties it is a party to, and thus the withholding taxes payable by investors. This compromise, and the high contracting costs related to reaching an agreement, may be related to our finding that inbound offshore funds have fewer restrictions for the types of investments made by the fund manager. The primary issue during the contract negotiation will not be the powers held by the fund manager in carrying out investments, but more the corporate governance issue related to the fund itself, being situated in a jurisdiction probably unfamiliar to many if not most of the investors, as all the investors come to an agreeable compromise.

Regarding H4, with respect to legally trained fund managers, the data indicate that an increase in one fund manager of five (a 20% increase) with legal training increases the probability of additional covenants pertaining both to investment decisions (Category 1, including factors such as the size of any single investment and co-investment[18]) and types of investment (Category 3, for different asset classes) by approximately 10%. The presence of legally trained fund managers, however, does not influence the frequency of use of other types of covenants pertaining to investment powers (Category 2), fund operation (Category 4) and limitation of liability (Category 5). The data therefore suggest legally trained fund managers are more sensitive to specifying rules pertaining to their daily activities of investment selection and investment decisions, and neither no more nor less sensitive to specifying rules for fund operation relative to non-legally trained fund managers. Note as well, we further control for MBA/CFA training and Ph.D. (scientific versus non-scientific) training, and do not find significant differences for these other types of training.

There is some support for H5 regarding the relevant work experience of the fund managers in Model 15 (the coefficient is statistically significant at the 10% level). The economic significance is such that a fund with managers with an average of 30 years relevant work experience are 20% more likely to have an extra covenant pertaining to limited liability than a fund with managers with an average of 5 years relevant experience. Note, however, that for the first group of covenants pertaining to investment decisions, Model 3 indicates at the 10% level of significance more covenants with more work experience (counter to our expectations), and the other groups of covenants are unrelated to work experience. One explanation for this result is that it may be that a more relevant variable would be the number of prior funds run by the fund managers; however, that variable was intractable for many of the funds in our data due to the fact that fund managers derived experience from funds other than the group of funds in which they were currently employed.[19]

It is noteworthy that a number of control variables indicate a significant influence on the use of covenants. In particular, Table 4 indicates an important relation between fund covenants and fund size, industry market-book, and the identity of the fund's investors. In particular, larger funds have more covenants; for example, for the third category of covenants

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[18] However, for Category 1 in Model 3 the inclusion of the additional right-hand-side variables gives rise to a statistically insignificant coefficient for legally trained fund managers, unlike Models 1 and 2.

[19] Also, a manager may create a special purpose vehicle for the management of a specific fund, albeit for all intents and purpose that vehicle comprises managers who have managed other funds together before. Proxies for the number of prior funds run by the fund itself did not yield materially different results.

on types of investment, an increase in funds raised from US$90 to US$100 million increases the probability of an extra covenant on types of investment by about 0.2%, and an increase from US$10 to US$20 million increases the probability of an extra covenant by about 2% in Model 9. Funds that operate in industries with higher market/book ratios have more covenants; for example, for the third category of covenants on types of investment, an increase in the average industry market/book ratio of investee companies from 2 to 3 increases the probability of an extra covenant on types of investment by about 4%, and an increase from 1 to 2 increases the probability of an extra covenant by about 6% in Model 9. It is also noteworthy that in times of stronger market conditions, institutional investors are more likely to grant limited liability protection to fund managers (see, Models 14 and 15); an increase in the MSCI index return from 15% to 20% in the year prior to fundraising increases the probability of an extra limited liability clause by 0.7%, and an increase from 5% to 10% in the year prior to fundraising increases the probability of an extra limited liability clause by 0.8%. Overall, therefore, a number of economic factors influence the frequency of use of covenants alongside the influence of the legal environment and the influence of the lawyers as identified above.

5. Limitations, Alternate Explanations and Future Research

This paper introduced the first international dataset on private investment fund covenants from non-US funds. Private investment fund covenants are private contractual details that are not widely disclosed, and in fact highly confidential. In short, while the data obtained in this paper are new and unique and extremely difficult to obtain from private investment funds, there are of course limitations in the number of observations. Further work could consider expanding the data in terms of the number of countries and funds, as well as possibly for different time periods. Nevertheless, as we have discussed in the paper, we do not have any reason to believe there are biases with regard to sample selection in the data we were able to obtain.

It is noteworthy that we focused on the Legality index (Berkowitz *et al*., 2003), which is a weighted average of a number of different legal indices from La Porta *et al.* (1997, 1998). A limited number of degrees of freedom prevented inclusion of each subcomponent of the Legality index separately. As well, the components of the Legality index themselves are very highly correlated, so collinearity problems prevent simultaneous inclusion of these different variables. As well, the GNP per capita in each country is highly correlated with the Legality index, so it could not be included as a separate variable. While the use of these different variables did not material changes the inferences drawn from the available data, further work with additional data and/or different countries might shed light on the issue of which specific legal index is most pertinent to venture capital fund structures. As well, while as yet there is no particular theory that would lead one to prefer one legal index over another (or prefer one legal index to the exclusion of another index), further theoretical work might shed additional light on these issues in relation to private investment fund structures, and covenants more generally (in the spirit of McCahery and Vermeulen, 2004).

International differences in fund covenants are one aspect of international differences in fund structures. Further research might also explore international differences in compensation arrangements and investment strategies (in the spirit of Mayer et al., 2004, for example). Numerous related issues on how and why fund structures differ across countries could be considered, as well as the relation between fund structures (as per the covenants studied herein) and contractual arrangements between private investment funds and their investee entrepreneurial firms. This type of research would likely better help us to better understand why some private equity and venture capital markets are comparatively more successful than their counterparts in other countries.

6. Conclusion

This paper analysed the frequency of use of investment covenants imposed by institutional investors governing the activities of private investment fund managers in areas pertaining to investment decisions, investment powers, types of investments, fund operations, and limitations on liability. We introduced a new dataset hand-collected from 50 funds from 17 countries including developed and emerging markets (Belgium, Brazil, Canada, Cayman Islands, Finland, Germany, Italy, Luxembourg, Malaysia, Netherland Antilles, the Netherlands, New Zealand, Philippines, South Africa, Switzerland, the UK and the US.). Our primary hypotheses considered the role of law versus lawyers in the writing of covenants in contracts establishing private investment funds. Numerous control variables in the new and detailed data were considered in testing the hypotheses developed herein.

The data indicated a statistically significant positive relation between the quality of a country's laws and the number of covenants pertaining to fund operations (such as the sale of fund interests, restrictions on fundraising, and matters pertaining to public disclosure). An increase in the Legality index from 20 to 21 (a typical improvement among developed nations) increases the probability of an extra covenant pertaining to fund operation by approximately 1%, whereas an increase from 10 to 11 (a typical improvement among emerging markets) increases the probability of an extra covenant pertaining to fund operation by approximately 2%. The data further indicate that civil law countries are approximately 6% more likely to have covenants pertaining to the types of investment; however, the common/civil law differences were not notable for any other type of covenant.

The data further indicated an important role for the presence of legally trained fund managers in influencing the number of fund covenants. An increase in one fund manager of five with legal training increases the probability of additional covenants pertaining both to investment decisions (such as the size of any single investment and co-investment) and types of investment (in different asset classes) by approximately 10%. Taken together, therefore, while law and lawyers are both important, the data indicated that the presence of lawyers has a more economically significant impact on the use of covenants than the legal environment itself.

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Figure 1. Histogram of Different Types of Covenants

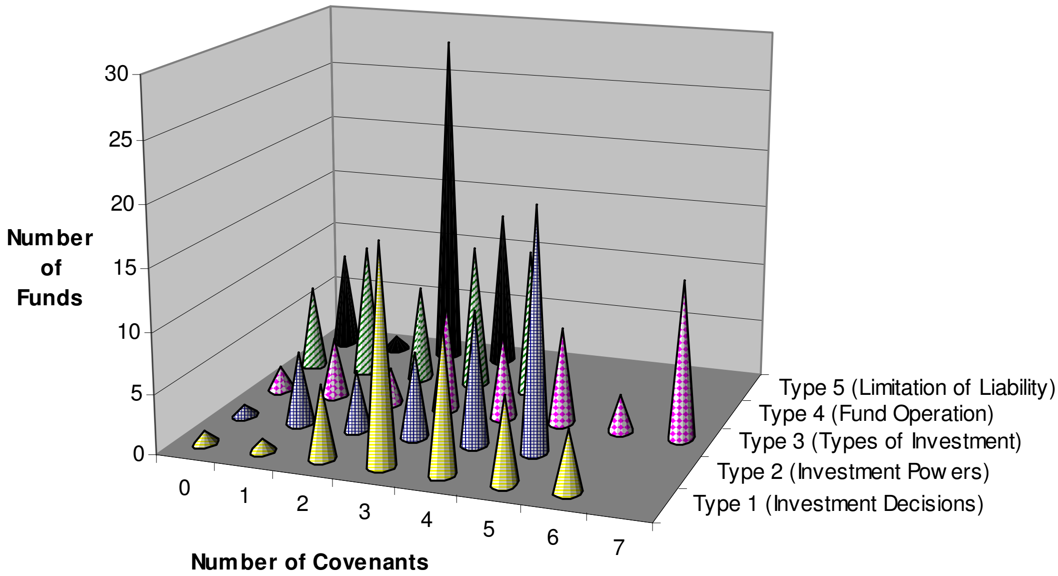

Figure 2. Frequency of Use of Each Covenant

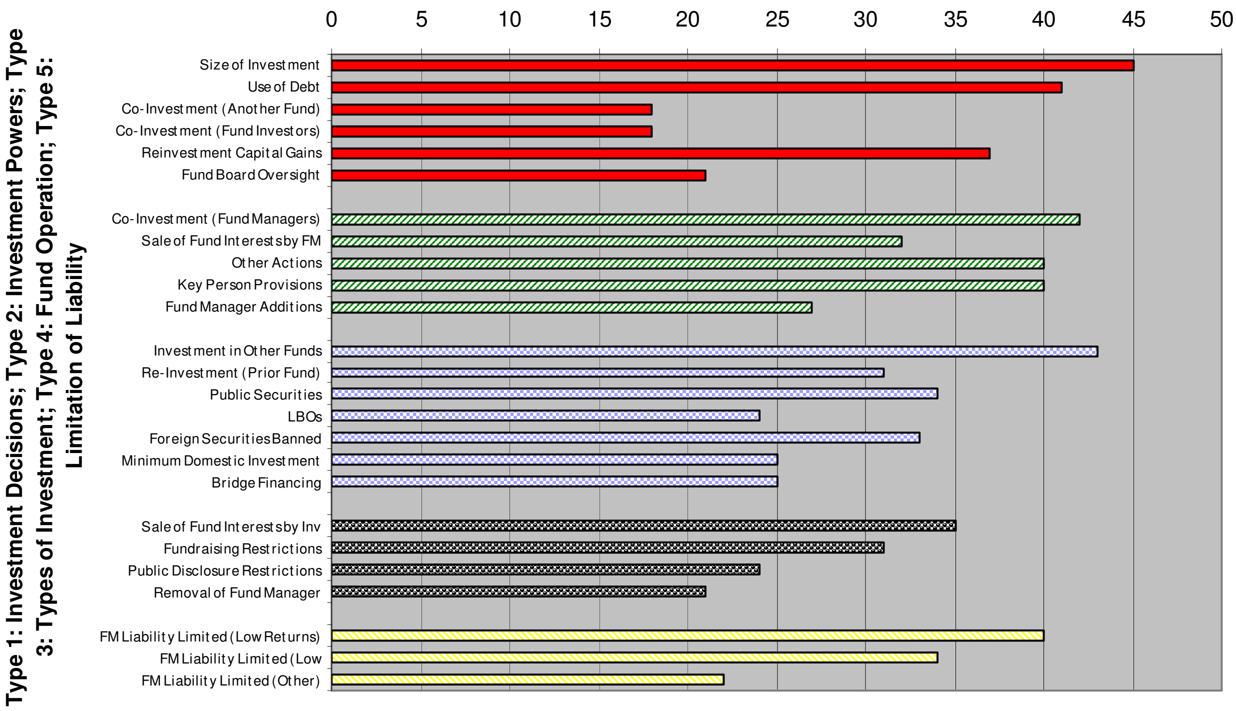

Table 1. Definition of Variables	
This table defines the variables considered in this paper. Summary statistics are presented in Tables 2 and 3.	
Variable	**Description**
Restrictive Covenants	
Investment Decisions	The sum of dummy variables equal to 1 for each of 6 questions regarding the restrictions placed upon fund managers relating to investment decisions in carrying out their duties as manager of the fund. Such restrictions include restrictions on size of investment (either in dollar value or percentage of fund capital) on any one investee firm or portfolio company, restrictions on use of debt instruments, restrictions on co-investment by another fund managed by the fund manager, restrictions on reinvestment of capital gains and restrictions on the fund manager making investment decisions independently, without fund input.
Investment Powers	The sum of dummy variables equal to 1 for each of the 5 questions regarding the restrictions placed upon fund managers in their carrying out their duties as General Partner or most active shareholder of a fund company. Such restrictions include restrictions against the fund manager investing in any of the investee firms, restrictions on the sale of fund interest by the fund manager, and restrictions on investment principal additions to the fund manager. The presence of key person provisions regarding the fund manager, and any other important restrictions governing the actions of the fund manager in his capacity as General partner or most active fund shareholder is also indicated.
Types of Investments	The sum of dummy variables equal to 1 for each of the 7 questions regarding the restrictions placed upon fund managers in their making specific types of investments. Such restrictions include restrictions on making investments in other investment funds, restrictions on follow-on investments in an investee firm of which another fund managed by the fund manager has an interest, restrictions on investments in public listed securities, restrictions on investments in leveraged buyouts, restrictions on investments in foreign securities, and restrictions on bridge financing. The presence of a minimum percentage of domestic investments is also indicated..
Fund Operation	The sum of dummy variables equal to 1 for each of the 4 questions regarding the restrictions placed upon fund managers in their administrative operation of the fund. Such restrictions include restrictions on sale of fund interest by any investor, restrictions on the fund manager raising new funds, and restrictions on public disclosure of fund matters. The presence of a no-fault divorce provision that allows fund investors to remove the fund manager without cause is also indicated.
Manager Liability Limited	The sum of dummy variables equal to 1 for each of the 3 questions regarding the limitation of liability of the fund manager. Limitation of liability includes in the event of disappointing returns from investments made, failure to invest committed funds within the agreed investment period, and mismanagement of funds.
Sum of all covenants (excl. Limited Liability)	Sum of all covenants deemed to restrict fund manager actions as General Partners or most active shareholder, and fund manager investment powers.
Legal and Market Conditions	
Country Legality Index	Weighted average of following factors (based on Berkowitz *et al*., 2003): civil versus common law systems, efficiency of judicial system, rule of law, corruption, risk of expropriation, risk of contract repudiation, shareholder rights (as per La Porta *et al*., 1997, 1998). Where the weighted average is not available, especially for less developed countries, an approximate index isderived by multiplying the country's GNP per population with a constant variable obtained by carrying out a regression of the legality indices available. Higher numbers indicate 'better' legal systems. The log of this variable is used in the empirics to account for a diminishing effect with larger numbers.
Common Law Country	A dummy variable equal to 1 for a fund organized within a common law jurisdiction
MSCI Index	The country-specific MSCI Index taken for the year prior to that when fund raising commenced . The year prior to fund raising is deemed to be most relevant as decisions to invest in private equity by institutional investors will be based on available economic indicators. The log of (1+MSCI) is used in the empirics to account for a diminishing effect with larger numbers.
Vintage Year of Fund	The year fund raising commences
Outbound offshore	A dummy variable equal to 1 for a fund located offshore that obtains its capital from investors from a certain jurisdiction but fund investments are made primarily in assets other than in the jurisdiction of the fund and the fund investors. With reference to United States jurisdictional boundaries, a fund will be considered to be an outbound offshore fund if it obtains capital from United States investors, but it invests outside the United States.
Inbound offshore	A dummy variable equal to 1 for a fund located offshore that obtains its capital from investors from various jurisdictions but fund investments are made primarily in assets in a certain jurisdiction. With reference to United States jurisdictional boundaries, an inbound offshore fund will be a fund located offshore which invests primarily in assets within the United States yet obtains its capital from non-United States investors.
Fund Manager Characteristics	
Percentage of Legally Trained Fund Managers	Percentage of principal fund managers with investment making decisions who are legally trained, or are qualified as lawyers
Percentage of MBA/CFA Trained Fund Managers	Percentage of principal fund managers with investment making decisions who have obtained an MBA or CFA qualifications
Percentage of PhD (Science) Trained Fund Managers	Percentage of principal fund managers with investment making decisions who have obtained a PhD in a science based discipline
Percentage of PhD (Non-Science) Trained Fund Managers	Percentage of principal fund managers with investment making decisions who have obtained a PhD in a non-science based discipline
Average # Years of Relevant Work Experience of Principal Fund Managers	Average number of years relevant work experience of principal fund managers at the time of fund raising. The log of this variable is used in the empirics to account for a diminishing effect with larger numbers.
Fund Characteristics	
Funds Raised	The fund size, or amount of funds raised in US Dollar. Where the amount is provided in a local currency, an exchange rate as at December 2003 is used for conversion of such amounts into US Dollar equivalents. The log of this variable is used in the empirics to account for a diminishing effect with larger numbers.
Bank Institutional Investors	The proportion of banks as the fund's institutional investors
Government Investors	The proportion of government agencies or ministries as institutional investors
Limited Partnership Funds	A dummy variable equal to 1 for the fund being organized as a limited partnership
Industry Market / Book	The industry market/book ratio of the industries for which the fund has invested in. The industry market/book ratio of 5 general categories, Biotechnology and Medical, Communications and Internet, Computers and Electronics, Manufacturing and others, is obtained by averaging the total book value of specific industries falling within the general categories. The log of this variable is used in the empirics to account for a diminishing effect with larger numbers.
Early Stage Investee Focus	A dummy variable equal to 1 for funds which indicate a focus on financing provided to firms in their early / expansion stages of development (not late stages or buyout stages). More specific stages of focus were not tractable due to international differences in the definition of stage focus, as well as style drift that is often observed among different stages of development.

Table 2. Summary of the Data

This table summarizes the funds in the data based on the country in which the fund was formed. The average values of each category per country are reported.

		Country of Fund Formation																
	Total	Belgium	Brazil	Canada	Cayman Islands	Finland	Germany	Italy	Luxem-bourg	Malaysia	Netherland Antilles	Nether-lands	New Zealand	Phili-ppines	South Africa	Switz-erland	UK	US
Number of Funds in Our Data	50	3	1	1	2	1	3	1	1	6	4	8	1	1	2	1	6	8
<u>Restrictive Covenants</u>																		
Investment Decisions	3.60	4.00	6.00	4.00	3.50	4.00	3.67	5.00	3.00	4.33	3.00	3.50	4.00	3.00	3.00	2.00	2.83	3.75
Investment Powers	3.62	3.00	3.00	4.00	2.00	5.00	3.33	1.00	4.00	4.17	5.00	3.38	5.00	3.00	3.50	1.00	3.00	4.38
Types of Investments	4.30	2.33	6.00	6.00	1.50	4.00	3.00	4.00	3.00	3.67	7.00	6.38	5.00	5.00	3.00	1.00	2.67	4.88
Fund Operation	2.22	1.67	3.00	4.00	3.50	3.00	1.33	2.00	0.00	1.50	4.00	2.13	3.00	1.00	0.50	1.00	1.83	3.00
Manager Liability Limited	1.92	2.67	2.00	3.00	2.00	3.00	2.00	2.00	0.00	2.33	2.00	1.75	2.00	0.00	2.00	0.00	1.83	1.88
Sum of all covenants (excl. Limited Liability)	13.74	11.00	18.00	18.00	10.50	16.00	11.33	12.00	10.00	13.67	19.00	15.38	17.00	12.00	10.00	5.00	10.33	16.00
<u>Legal and Market Conditions</u>																		
Country Legality Index	19.82	20.82	14.09	21.13	20.41	21.49	20.44	17.23	21.91	16.67	21.67	21.67	21.55	8.51	14.51	21.91	20.41	20.85
Common Law Country		No	No	Yes	Yes	No	No	No	No	Yes	No	No	Yes	No	Yes	No	Yes	Yes
MSCI Index	0.11	0.19	0.62	-0.14	0.01	1.19	0.00	-0.03	0.01	0.03	0.16	0.18	0.20	-0.63	0.17	-0.08	0.14	0.07
Vintage Year of Fund	2000	1999.3	2000.0	2004.0	2000.0	1999.0	1998.0	2002.0	1997.0	2001.5	2000.3	1997.6	2003.0	1998.0	2001.0	2000.0	2000.5	2000.9
Outbound offshore	0.28	0.00	0.00	0.00	0.50	0.00	0.00	0.00	1.00	0.17	1.00	0.00	0.00	1.00	0.00	0.00	0.50	0.38
Inbound offshore	0.12	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.50	0.13
<u>Fund Manager Characteristics</u>																		
Percentage of Legally Trained Fund Managers	5.96	8.33	20.00	33.00	0.00	5.00	3.33	25.00	5.00	4.17	0.00	12.50	5.00	0.00	0.00	0.00	5.00	1.88
Percentage of MBA/CFA Trained Fund Managers	75.40	58.33	80.00	67.00	90.00	80.00	86.67	25.00	80.00	78.33	80.00	63.75	80.00	50.00	83.50	70.00	90.00	77.00
Percentage of PhD (Science) Trained Fund Managers	8.80	33.33	0.00	0.00	0.00	5.00	3.33	0.00	5.00	5.83	5.00	9.38	5.00	50.00	0.00	0.00	10.00	9.38
Percentage of PhD (Non-Science) Trained Fund Managers	12.56	33.33	0.00	0.00	0.00	10.00	6.67	0.00	10.00	10.00	30.00	15.63	10.00	0.00	0.00	30.00	3.33	15.38
Average # Years of Relevant Work Experience of Principal Fund Managers	14.07	11.33	14.00	18.00	11.00	18.00	11.67	20.00	10.00	14.75	14.00	12.13	20.00	10.00	7.00	15.00	15.67	17.25
<u>Fund Characteristics</u>																		
Funds Raised	1.04E+08	1.43E+08	1.00E+07	6.79E+07	8.43E+07	3.46E+07	1.49E+08	2.66E+08	3.60E+07	3.21E+07	3.04E+08	4.66E+07	2.00E+07	2.30E+07	2.81E+07	2.63E+05	1.63E+08	1.10E+08
Bank Institutional Investors	0.16	0.56	0.00	0.00	0.02	0.00	0.45	0.60	0.24	0.17	0.10	0.19	0.00	0.00	0.09	0.00	0.07	0.08
Government Investors	0.15	0.06	0.15	0.00	0.42	0.20	0.03	0.00	0.00	0.30	0.10	0.25	0.22	0.40	0.10	0.00	0.07	0.08
Limited Partnership Funds	0.48	0.00	0.00	1.00	0.50	1.00	0.67	0.00	0.00	0.17	1.00	0.25	0.00	0.00	0.00	0.00	1.00	0.75
Industry Market / Book	4.04	3.89	4.84	2.72	2.87	2.48	3.75	2.70	4.75	4.42	4.82	3.66	5.79	6.19	5.03	4.10	4.14	3.71
Early Stage Investee Focus	0.50	0.33	1.00	0.00	0.50	1.00	0.67	0.00	0.00	0.67	0.00	0.38	1.00	1.00	1.00	1.00	0.50	0.50

Table 3. Correlations

This table presents correlations across the variables defined in Table 1. Correlations significant at the 5% level are highlighted in bold and 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)	(24)	(25)
(1)	Investment Decision Covenants	1.00																								
(2)	Investment Power Covenants	**0.33**	1.00																							
(3)	Types of Investment Covenants	0.24	0.26	1.00																						
(4)	Fund Operation Covenants	0.08	**0.47**	**0.37**	1.00																					
(5)	Limitation of Liability Covenants	**0.52**	**0.52**	0.04	0.19	1.00																				
(6)	Sum of All Covenants (excl. liability)	**0.56**	**0.71**	**0.77**	**0.68**	**0.41**	1.00																			
(7)	Log (Legality)	-0.12	0.08	0.10	**0.28**	0.11	0.13	1.00																		
(8)	Common Law	0.01	0.10	**-0.28**	0.04	0.13	-0.08	-0.13	1.00																	
(9)	Log (1+MSCI)	0.07	0.07	-0.01	0.08	**0.36**	0.07	**0.43**	-0.08	1.00																
(10)	GNP / Capita	-0.19	-0.06	0.05	0.18	-0.17	0.00	**0.77**	**-0.33**	0.12	1.00															
(11)	Year of Fund Formation	0.03	0.19	-0.08	0.13	0.25	0.08	-0.07	**0.32**	-0.01	-0.16	1.00														
(12)	Outbound Offshore Fund	**-0.35**	0.25	0.04	**0.38**	-0.13	0.12	-0.03	0.06	-0.07	0.09	0.03	1.00													
(13)	Inbound Offshore Fund	-0.22	0.01	**-0.34**	0.12	0.03	-0.19	0.12	0.23	0.05	0.07	0.07	0.18	1.00												
(14)	Percentage Legal Trained Fund Managers	**0.33**	-0.06	0.24	-0.06	0.06	0.18	0.05	-0.19	-0.11	0.01	0.12	**-0.33**	-0.19	1.00											
(15)	Percentage MBA Trained Fund Managers	-0.19	0.05	**-0.28**	-0.08	-0.01	-0.20	0.09	**0.33**	0.19	-0.05	0.00	0.24	0.07	**-0.27**	1.00										
(16)	Percentage Phd (NonScience) Trained Fund Managers	0.01	0.14	**0.32**	0.10	-0.01	0.24	**0.30**	**-0.31**	-0.06	**0.29**	-0.04	0.10	**-0.27**	0.14	**-0.30**	1.00									
(17)	Percentage Phd (Science) Trained Fund Managers	-0.19	0.03	-0.13	0.03	-0.17	-0.10	-0.17	-0.14	-0.31	-0.02	-0.03	0.22	0.21	0.06	-0.19	0.10	1.00								
(18)	Log (Years Relevant Work Experience)	0.21	0.09	0.08	0.06	**0.30**	0.15	0.17	0.18	0.21	0.10	0.28	0.05	0.02	0.13	-0.20	0.09	-0.14	1.00							
(19)	Log (Funds Raised)	-0.10	0.10	0.22	0.36	0.09	0.22	0.16	0.00	0.17	0.10	0.25	**0.36**	0.04	-0.06	0.00	0.12	-0.16	0.01	1.00						
(20)	Bank Institutional Investors	-0.12	-0.25	-0.13	**-0.28**	0.12	**-0.27**	0.07	**-0.31**	0.14	0.11	-0.07	-0.22	-0.15	0.00	-0.06	0.00	-0.01	-0.06	**0.28**	1.00					
(21)	Government Investors	0.17	0.17	0.16	-0.01	0.15	0.18	-0.19	0.04	-0.15	**-0.30**	0.00	-0.16	0.13	0.05	**-0.34**	-0.09	0.07	-0.03	**-0.25**	-0.23	1.00				
(22)	Pension Investors	0.01	-0.21	0.07	0.05	0.02	-0.02	-0.12	0.20	0.15	-0.10	0.06	0.08	-0.09	-0.06	-0.09	0.00	-0.22	-0.06	0.24	-0.10	-0.15	1.00			
(23)	Endowment Investors	-0.04	0.18	0.24	**0.29**	-0.01	0.26	0.24	0.08	0.07	0.20	-0.18	**0.45**	0.03	-0.07	0.17	0.16	-0.18	0.07	**0.40**	-0.18	-0.14	0.21	1.00		
(24)	Limited Partnership Fund	-0.13	0.25	0.05	**0.37**	0.21	0.18	**0.33**	0.20	0.19	**0.27**	0.11	**0.47**	0.14	-0.12	0.28	0.04	-0.03	0.10	**0.40**	-0.24	-0.20	0.20	**0.54**	1.00	
(25)	Log (Industry Market / Book)	-0.03	0.13	**0.34**	0.01	-0.04	0.21	**-0.25**	-0.03	-0.24	**-0.21**	0.06	0.21	-0.08	-0.16	-0.07	0.21	0.17	0.06	-0.06	-0.07	0.14	0.03	-0.05	-0.12	1.00
(26)	Early Stage Fund Focus	0.18	-0.04	-0.05	**-0.33**	0.00	-0.09	**-0.30**	0.16	-0.20	**-0.27**	0.08	**-0.27**	0.00	0.12	0.09	-0.08	0.23	-0.03	**-0.57**	-0.22	**0.27**	-0.10	**-0.27**	-0.16	**0.34**

Table 4. Regression Analyses

This table presents OLS and ordered logit regressions of the number of contractual covenants used to govern the operation of private investment funds. Ordered logit estimates are used for Models 1-15 where the dependent variable has up to 7 different values; for Models 16-18, the dependent variable can take up to 26 different values, hence ordered logits cannot be used and OLS is used. The sample comprises 50 funds from 17 countries in Australasia, Europe, and North and South America. The variables are as defined in Table 1. White's (1980) HCCME is used in each regression. *, **, *** Significant at the 10%, 5% and 1% levels, respectively.

	LHS Variable: Sum of Covenants for Investment Decisions						LHS Variable: Sum of Covenants for Investment Powers					
	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic
Constant	4.752	1.568	6.762	1.971**	110.821	1.116	3.058	-0.403	-1.432	-0.424	-112.821	-1.121
Legal and Market Conditions												
Log (Country Legality Index)	-0.880	-0.934	-1.427	-1.338	-1.652	-1.379	0.938	0.843	0.713	0.692	0.757	0.660
Common Law Country			0.202	0.585	-0.016	-0.043			0.035	0.097	0.074	0.183
Log (1+MSCI)			1.273	1.870*	0.712	0.990			0.432	0.637	0.569	0.790
Vintage Year of Fund					-0.053	-1.064					0.056	1.110
Outbound Offshore Fund					-1.099	-2.095**					0.401	0.777
Inbound Offshore Fund					-0.576	-1.089					-0.456	-0.816
Fund Manager Characteristics												
Percentage of Legally Trained Fund Managers	0.037	2.455***	0.041	2.549**	0.027	1.466	0.015	-0.782	-0.008	-0.515	-0.009	-0.488
Percentage of MBA/CFA Trained Fund Managers			-0.009	-0.960					0.004	0.430		
Percentage of PhD (Science) Trained Fund Managers					-0.004	-0.363					0.004	0.334
Log (Average # Years of Relevant Work Experience of Principal Fund Managers)					0.815	1.758*					-0.014	-0.028
Fund Characteristics												
Log (Funds Raised)	-0.035	-0.368	-0.033	-0.322	0.200	1.285	0.099	0.680	0.136	1.253	-0.019	-0.120
Bank Institutional Investors			-0.398	-0.588	-1.232	-1.547			-1.145	-1.659*	-0.746	-0.936
Government Investors			0.449	0.561	0.638	0.796			0.767	0.977	1.030	1.311
Limited Partnership Funds					0.005	0.011					0.269	0.614
Log (Industry Market / Book)	-0.057	-0.112	0.056	0.107	0.036	0.057	0.524	1.122	0.620	1.152	0.570	0.872
Early Stage Investee Focus					0.258	0.550					-0.279	-0.553
Ordered Logit Cut-off Parameters												
μ_1	0.306	1.316	0.320	1.324	0.309	1.264	0.208	4.729***	1.088	4.916***	1.051	4.644***
μ_2	1.073	5.115***	1.121	5.113***	1.172	4.722***	0.191	7.083***	1.498	7.498***	1.477	7.182***
μ_3	2.179	11.565***	2.297	11.724***	2.570	11.952***	0.183	9.615***	1.939	10.314***	1.956	10.123***
μ_4	2.918	14.269***	3.069	14.545***	3.422	15.441***	0.200	11.717***	2.553	12.411***	2.609	12.203***
μ_5	3.562	13.457***	3.751	13.602***	4.152	14.262***						
Number of Observations	50		50		50		50		50		50	
Pseudo R^2	0.043		0.075		0.139		0.019		0.053		0.075	
LogLikelihood	-77.875		-75.197		-70.043		-75.447		-72.848		-71.144	
Chi-Squared	6.922		12.278		22.588*		2.886		8.084		11.493	

Table 4. Regression Analyses (Continued)

	LHS Variable: Sum of Covenants for Types of Investment						LHS Variable: Sum of Covenants for Fund Operations					
	Model 7		Model 8		Model 9		Model 10		Model 11		Model 12	
	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic
Constant	-5.150	-1.709*	-4.488	-1.327	135.031	1.286	-5.309	-1.736*	-5.900	-1.712*	-113.999	-1.077
<u>Legal and Market Conditions</u>												
Log (Country Legality Index)	1.317	1.419	1.420	1.368	1.772	1.522	1.685	1.791*	2.301	2.163**	2.284	1.932*
Common Law Country			-0.750	-2.074**	-0.703	-1.786*			-0.277	-0.725	-0.318	-0.739
Log (1+MSCI Index)			0.302	0.463	-0.016	-0.023			-0.279	-0.409	-0.135	-0.186
Vintage Year of Fund					-0.071	-1.348					0.054	1.019
Outbound Offshore Fund					-0.041	-0.078					0.407	0.764
Inbound Offshore Fund					-1.424	-2.599***					-0.258	-0.471
<u>Fund Manager Characteristics</u>												
Percentage of Legally Trained Fund Managers	0.042	2.434**	0.035	1.895*	0.039	1.834*	-0.004	-0.236	-0.013	-0.797	-0.003	-0.170
Percentage of MBA/CFA Trained Fund Managers			-0.008	-0.858					-0.010	-1.028		
Percentage of PhD (Science) Trained Fund Managers					-0.008	-0.711					0.008	0.698
Log (Average # Years of Relevant Work Experience of Principal Fund Managers)					0.236	0.506					-0.115	-0.233
<u>Fund Characteristics</u>												
Log (Funds Raised)	0.171	1.761*	0.279	2.593***	0.403	2.564**	0.241	2.431**	0.394	3.492***	0.234	1.479
Bank Institutional Investors			-1.524	-2.221**	-1.825	-2.311**			-2.700	-3.268***	-2.570	-2.679***
Government Investors			1.064	1.171	1.798	1.800*			0.151	0.186	0.766	0.971
Limited Partnership Funds					0.042	0.092					0.042	0.095
Log (Industry Market / Book)	1.803	3.540***	1.817	3.466***	1.952	3.164***	0.469	0.907	0.278	0.512	0.484	0.762
Early Stage Investee Focus					0.106	0.224					-0.785	-1.644
<u>Ordered Logit Cut-off Parameters</u>												
μ_1	0.723	3.422***	0.810	3.519***	0.932	3.579***	0.799	4.727***	0.953	5.055***	0.955	4.945***
μ_2	1.018	4.915***	1.141	5.125***	1.339	5.398***	1.267	7.228***	1.462	7.724***	1.479	7.475***
μ_3	1.726	8.957***	1.913	9.454***	2.252	10.300***	2.009	9.146***	2.314	9.446***	2.403	9.155***
μ_4	2.177	11.26***	2.399	11.823***	2.803	12.962***						
μ_5	2.687	13.132***	2.977	13.417***	3.456	14.655***						
μ_6	2.893	13.359***	3.231	13.424***	3.736	14.544***						
Number of Observations	50		50		50		50		50		50	
Pseudo R^2	0.088		0.147		0.202		0.064		0.155		0.182	
LogLikelihood	-87.763		-82.014		-76.757		-74.291		-66.997		-64.867	
Chi-Squared	16.874***		28.371***		38.886***		10.077**		24.665***		28.925***	

Table 4. Regression Analyses (Continued)

	LHS Variable: Sum of Covenants for Limited Liability						LHS Variable: Sum of All Types of Covenants (Excl. Limited Liability)					
	Model 13		Model 14		Model 15		Model 16		Model 17		Model 18	
	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic
Constant	-0.027	-0.008	0.494	0.120	-154.758	-1.110	-7.256	-0.935	-2.703	-0.367	91.172	0.250
Legal and Market Conditions												
Log (Country Legality Index)	0.500	0.493	0.178	0.138	-1.573	-1.115	4.104	1.752*	3.329	1.341	3.364	1.119
Common Law Country			0.542	1.351	-0.019	-0.042			-0.859	-0.857	-0.816	-0.761
Log (1+MSCI Index)			2.039	2.501**	1.508	1.772*			2.244	1.184	1.485	0.742
Vintage Year of Fund					0.079	1.132					-0.049	-0.269
Outbound Offshore Fund					-0.927	-1.586					-0.472	-0.216
Inbound Offshore Fund					0.212	0.358					-3.146	-1.164
Fund Manager Characteristics												
Percentage of Legally Trained Fund Managers	0.001	0.031	0.009	0.513	-0.004	-0.195	0.102	3.020***	0.086	2.629***	0.074	1.720*
Percentage of MBA/CFA Trained Fund Managers			-0.005	-0.533					-0.025	-0.969		
Percentage of PhD (Science) Trained Fund Managers					-0.003	-0.256					-0.001	-0.031
Log (Average # Years of Relevant Work Experience of Principal Fund Managers)					1.059	1.817*					0.951	0.703
Fund Characteristics												
Log (Funds Raised)	0.0242	0.236	-0.026	-0.225	-0.205	-1.157	0.637	1.508	0.964	2.283**	0.982	1.675*
Bank Institutional Investors			1.136	1.485	1.701	1.785*			-6.719	-2.987***	-7.004	-2.680***
Government Investors			1.173	1.340	1.669	1.847*			2.955	1.250	4.685	1.676*
Limited Partnership Funds					1.174	2.241**					0.403	0.274
Log (Industry Market / Book)	-0.406	-0.747	-0.164	-0.286	0.112	0.155	4.294	2.245**	3.850	2.194**	3.849	1.904*
Early Stage Investee Focus					-0.599	-1.085					-0.636	-0.468
Ordered Logit Cut-off Parameters												
μ_1	0.078	1.043	0.096	1.048	0.104	1.039						
μ_2	1.656	6.836***	1.913	6.626***	2.200	6.390***						
Number of Observations	50		50		50		50		50		50	
Pseudo / Adjusted R^2	0.011		0.119		0.226		0.102		0.209		0.146	
LogLikelihood	-51.721		-46.084		-40.488		-139.996		-133.885		-131.740	
Akaike Information Criterion	---		---		---		5.800		5.755		5.910	
Chi-Squared / F-Statistic	1.197		12.471		23.663*		2.39*		2.44**		1.56	