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LAW, INNOVATION AND FINANCE: A REVIEW

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by

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Abstract
A number of recent national and EU initiatives have sought explicitly to encourage innovative firms and venture capital finance. In keeping with the policy debate, this paper focuses explicitly on the role of law and lawyers in facilitating venture capital: that is, both supply by investors, and demand by entrepreneurs. It reviews existing literature in a way that seeks to clarify the links between law and legal institutions and the facilitation of venture capital finance, identifies open research questions and suggests a number of hypotheses. As such, it forms the first part of a wider study which will seek to test these hypotheses.

JEL Codes: G24, G38, K22.

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Introduction

Venture capital is used to finance a small minority of companies with the potential and ambition to grow rapidly. It is thought to be of disproportionate importance in stimulating innovation. Start-up companies with new business ideas and high growth potential, but lacking liquid assets, may be unable to obtain bank finance because of the high risk they present. Venture capital involves the supply of equity finance—so the investor shares in the benefits of high growth—alongside 'hands-on' governance so as to assist in bringing about the success of such companies.

Venture capital investment differs widely from country to country, both in terms of the aggregate sums invested and the way in which the venture capitalists structure their relations with investee companies. In keeping with the comparative program of much recent corporate finance scholarship, how to account for these differences is an important question for positive social science. It is also a question that has considerable interest for policy makers. A number of recent national and EU initiatives have sought explicitly to encourage innovative firms and venture capital finance. For example, the European Commission's Risk Capital Action Plan is designed to stimulate this type of activity throughout Member States (European Commission, 1998; 2000a). The UK Government has set itself the goal of making Britain the 'best place in the world to start and grow a business' (SBS, 2001a: 3). The stimulation of the market for venture capital will clearly play an important part in this process, and an understanding of the determinants of venture capital investment is of obvious importance in achieving this objective.

This chapter reviews evidence about the extent to which law and lawyers 'matter' for venture capital investment. As such, it relates both to the policy debate about financing innovative firms and more generally to the comparative finance literature that has investigated the extent to which law may be one of the determinants of differing patterns of corporate finance across various countries. The review is organised around the idea that law may 'matter' in a variety of ways for corporate finance. The starting point is a model of what venture capital investment involves, derived from empirical studies in the US. The venture capitalist is a financial intermediary, who raises funds from end-investors which are then used to finance small entrepreneurial firms. The contracts between the venture capitalist and the investee firms have complex terms which can be understood as responses to agency problems inherent in the financing relationship. The first way in which laws may 'matter' is by affecting the way in which the practice of venture capital investment is structured—most obviously,

in the terms of the contracts used. Empirical studies of the contracting practices of venture capitalists show clear differences between national practices, and it is plausible that some at least of these may be driven by differences in the legal regimes. Most obviously, these might arise due to mandatory legal rules—for example, local tax laws—which distort choices of inframarginal investors in favour of a particular type of financial contract.

A related possibility is that the variety in contracting practices is partly caused by learning externalities in the market for contract terms. These could arise wherever the costs of contract drafting make it economic to rely on 'standard forms' which are customised in individual cases. Once a particular form has been used, it may be cheaper for lawyers negotiating a similar transaction simply to apply the terms used the first time rather than to start again from scratch. As a given set of terms is used over and over, familiarity with its contents will spread, in time becoming acquired by judges called upon to decide its meaning. These factors can give rise to situations where contract terms are chosen not for their intrinsic merit, but simply because the learning and network costs of using an 'unusual' term would outweigh the benefits. Term choice is then said to be 'path dependent', because what determines the outcome is not their current relative usefulness, but the historical reasons for the original selection. Empirical studies show that venture capital contracts are written by lawyers who customise and apply standard terms. Path dependencies created by the use of such standards might give rise to differences in contracting practices between legal systems. The meaning of contract terms is likely only to arise for consideration by lawyers qualified in the jurisdiction of their governing law, and hence learning and network benefits are likely to be limited to a particular jurisdiction—implying differences in terms used from one legal system to another, but less so within a given legal system.

Laws may also 'matter' for the aggregate levels of venture capital investment. At the margins, distortions introduced by mandatory rules can be expected to lead to more or less investment in aggregate. Such rules may by affect either investors' willingness to supply venture capital finance, or entrepreneurs' demand for such finance. From a policy perspective, demand-side factors such as the taxation of entrepreneurs' returns or the potential consequences of personal bankruptcy are probably much more important for stimulating innovative businesses than factors which affect the supply-side. This is because investors' funds can travel across borders much more readily than can entrepreneurs. Thus if domestic laws—for example, pension fund regulations—inhibit domestic investors, entrepreneurs may still be able to raise finance from overseas investors whose jurisdictions do not impose such restrictions.

However, overseas investors from such ‘supply friendly’ jurisdictions will not invest in domestic firms unless there is demand from local entrepreneurs. Thus for policymakers seeking to foster innovative firms, measures which stimulate demand are likely to produce a greater return on reform energies than changes designed to foster supply.

The rest of the paper is structured as follows. Part I considers the way in which law and legal institutions may affect the *content* of the VC-portfolio company relation. It is striking that the financial contracts used in US VC investment agreements seem to be uniquely homogeneous, almost all making use of convertible preferred stock, whereas in other countries for which data are available, terms tend to be much more diverse. This does not appear to be driven by any evolution towards the ‘best’ terms in the US, but rather is likely to be the result of aspects of US law, and possibly learning externalities generated amongst the close-knit community of VC lawyers.

Part II then describes how the incidence of venture capital finance differs across countries. Consideration is paid in Part III to a range of mandatory rules of law which may affect the *incidence* of venture capital finance. In each case, the enquiry proceeds first by hypothesising how the relevant rules may affect the practice of venture capital investment as described in the model. These are categorised according to whether the posited effect will be on the *supply* of venture capital—i.e. willingness to invest—or the *demand*—i.e. the creation of entrepreneurial projects or the attractiveness of venture capital finance. After the hypotheses are identified, relevant evidence is reviewed and UK developments are considered. Part IV considers the impact of cross-border movements of funds, and in so doing seeks to sort the potentially relevant variables into some sort of hierarchy to assist a policy-maker in deciding which may be the most urgent issues to address. Part V is a brief conclusion.

I. How Might Law Affect the Practice of Venture Capital Investment?

A. Terms in VC Investment Agreements

‘Start-up’ firms developing new technologies commonly do not generate steady cash flows which can be used to make interest payments on debt. By contrast, their cash flows are often *negative*, with large sums being ‘burnt’ in order first to develop a product and second to grow the market. This leads to a long lag-time before any repayment to investors can be made. Furthermore, the extreme uncertainty associated with developing new technologies makes it difficult to predict how much return (if any) will be generated. These factors make debt

investment unsuitable, as the 'upside' returns are fixed by the rate of interest charged (Bank of England, 2001), and at very high interest rates an 'adverse selection' problem would emerge (Stiglitz and Weiss, 1981). A second problem for start-ups seeking debt finance is that many lack liquid assets. The key feature of debt that allows the financial contract to work is the ability of the financier to take control of the assets should default occur which makes credible their threat to enforce in bad states (Hart, 1995). However, the value (if any) of a start-up firm will inhere in the ideas—the 'human capital' of the entrepreneur, and their opportunities for growth, which are not amenable to enforcement by an investor.

Through their specialist knowledge, venture capitalists are able to add value through 'active monitoring' of the firm's business operation, as well as financial backing (Black and Gilson, 1998). The *terms* on which VCs are willing to invest are thought by financial economists to play a crucial role in maximising the benefits of the investment.[1] They respond to the same information asymmetry concerns as debt contracts, but are adapted to the context of the start-up firm with few liquid assets. The terms used in US investment agreements have been investigated empirically (Sahlman, 1990; Kaplan and Stromberg, 2000), and their structure is now fairly well understood.

Finance is not advanced all at once, but rather is 'staged'. Subsequent 'rounds' of finance may not be available, or only on considerably more expensive terms, if performance targets are not met in the interim. This process gives the venture capitalist control rights over the decision whether or not to continue the project. Instead of pulling assets out of a firm (default on debt) the venture capitalist simply refuses to put more assets *in*. In either case, the denial of assets leads to closure of the firm's business.

Venture capitalists typically take preferred shares, usually convertible on demand into ordinary shares, whereas the entrepreneur takes 'plain' ordinary shares. Conversion by the VC will of course remove the liquidation preference, and so will only be done where the portfolio company is doing well. Investment agreements usually provide for automatic conversion on a successful IPO.

Investment agreements usually also provide for a range of control rights to be given to the venture capitalist. The venture capitalist can arrange for their preferred shares to carry enhanced voting rights in the general meeting, usually by providing that they can be voted on an 'as-converted' basis. If a controlling stake is accorded, this will entitle them to remove the members of the board of

directors. The venture capitalist can demand entitlements to appoint directors to the board.

It is impossible for the entrepreneur to alienate her human capital. However, by making greater cash flow rights vest over time, the entrepreneur can be 'locked in' to the business. This is typically achieved through option vesting schemes, whereby the executives are given options to purchase stock provided that they remain with the firm for a fixed period. Furthermore, entrepreneurs usually also sign covenants not to compete, which apply should they cease to work for the firm.

Whilst a good deal is known about the standard terms used in US VC investment agreements, many more questions have yet to be answered. One particularly troublesome issue is that the theoretical explanations do not fully explain why convertible preferred stock appears to be the financial contract of choice. The indeterminacy has two aspects. On the one hand, the liquidation priority it affords is unlikely to be of much value to venture capitalists, for the same reason as debt finance is inappropriate. A typical start-up firm will have few liquid assets and therefore the returns from liquidation, if the 'downside' outcome eventuates, will be small. Thus it is unclear why the VC does not simply take ordinary stock (Bratton, 2001; Gilson and Schizer, 2002). On the other hand, in cases where the assets do have some downside value, and liquidation priority may be worth taking, theoretical accounts of the value of convertability do not distinguish between convertible debt and preferred equity (e.g. Cornelli and Yosha, 1997; Repullo and Suarez, 1998; Hellmann, 2000; Schmidt, 2001). Thus we might expect in some cases to see convertible debt, and in others ordinary equity. Yet convertible preferred is the instrument of choice in the US.

A number of studies have also been done of the financial contracts employed in venture capital investments outside the US. In none of these are convertible preferred stock found to be ubiquitous in the same way. Bascha and Walz (2001) find that convertible preferred is only used in a small subset of German venture capital investment agreements, as does Cumming (2000) in respect of Canadian VC contracts, and Cumming (2002) in respect of contracts taken from a range of European countries. Furthermore, Cumming (2001) finds that US VCs who invest in Canadian start-up companies do not use convertible preferred stock with anything like the frequency observed in their US investments. Rather, each of these studies found a heterogeneous mix of financial instruments were used in their samples—including ordinary shares, preference shares, and convertible debt. The next two subsections consider

whether these differences are in whole or in part explicable by reference to varying domestic legal rules, or the practices of lawyers in particular jurisdictions. It seems likely that 'law matters' here in the sense of being able to determine the contents of financial contracts.

B. The Role of Law

There are several possible explanations for the international differences in financial contracts revealed by the empirical literature. Nor are these accounts necessarily mutually exclusive. The first story is that a Darwinian process of 'survival of the fittest' is occurring, whereby terms gradually evolve towards the optimal financial instrument—in this case, the convertible preferred share favoured by US VCs for their domestic investments. The reason that contracting practices in other jurisdictions differ is that their venture capital markets are less mature, and consequently the process of evolution has not yet progressed so far. This theory receives some support from the findings of Bascha and Walz (2001). In their sample, investments made by private venture capital funds employed more convertible instruments and more covenants than those made by public funds, suggesting that the latter were perhaps less well-incentivised to control the actions of their portfolio companies. However, this theory cannot recover from the problem that there is no satisfactory explanation for the posited superiority of convertible preferred stock over ordinary equity or (as the case may be) convertible debt. Furthermore, the idea that funds in the US are somehow further along a process of evolutionary development than those in other jurisdictions is flatly contradicted by the findings of Cumming (2001) that US funds do not use convertible preferred stock when investing in Canadian companies. If the Darwinian explanation were right, then it would be precisely these investors we should expect to see leading the dissemination of 'better-adapted' terms.

A second theory suggests that the ubiquity of convertible preferred as the financial contract of choice in the US is driven by regulatory or institutional constraints, as opposed to its innate efficiency. On this 'law matters' view, the evolution of US terms has been artificially curtailed. The normative implication is that convertible preferred may represent a laggard, as opposed to a leader, in an evolutionary race. Gilson and Schizer (2002) develop a tax-based explanation (first suggested in Sahlman (1990)) of the fact that US VCs rarely take ordinary shares in investee companies. They argue that the entrepreneur will usually take compensation in the form of shares. As start-ups rarely pay dividends, the entrepreneur will be unlikely to see any cash return until he eventually sells these shares, which typically he will not be permitted to do for a

number of years. Under the US federal tax regime, the value (at the date he receives them) of the entrepreneur's shares will be taxed as income. The difference between this value and that which he obtains when he sells them will then be taxed—when it is eventually realised—as a capital gain. The entrepreneur will wish to 'finesse' matters so that as much as possible of his return is taxable as a capital gain. This is because marginal rates of CGT are much lower than for income tax, and because CGT is not payable until the realisation occurs whereas income tax is payable annually and may create liquidity problems for the entrepreneur. Thus to minimise income tax liability (and thereby increase the portion of his ultimate return which is assessable for CGT), the entrepreneur will wish to attribute as low a valuation as possible to the shares. Yet the entrepreneur will want to attribute as *high* a value as possible to shares taken by the venture capitalist so as to minimise dilution. This difficulty is finessed, for the benefit of the tax authorities, by issuing preferred stock to the venture capitalist and ordinary shares to the entrepreneur, each of which can be valued differently.

A complementary explanation is given by Bratton (2001) for the non-observance of convertible debt in US investment agreements. This is, he argues, because of fears of lender liability which might accompany a holding of debt. Under US corporate law, lenders who, as VCs do, become involved in making management decisions, may face direct liability to other creditors or even to shareholders should their decisions work out badly. This provides a significant disincentive to combining debt investment with active governance. These explanations could be tested by comparisons with the tax codes of other jurisdictions. In particular, in countries where capital gains tax liability is lower, or more substantial tests as to the valuation of shares are used, then it predicts that convertible preferred shares would be used less frequently, in favour of ordinary stock; and in countries with less stringent lender liability laws, we would expect to see more convertible debt.

The evidence from other jurisdictions is not inconsistent with the predictions of the 'law matters' view. As has been noted, a much wider range of financial contracts are employed in virtually every other jurisdiction that has been studied apart from the US. To test these theories, it would be necessary to compare the relevant US laws with those in other jurisdictions where convertible preferred stock is not the financial contract of choice. Gilson and Schizer (2002) briefly consider the position in Canada, suggesting that it is unnecessary to create a separate class of stock to enable the manager to have entirety of his compensation assessable for CGT, rather than income tax. This is because the tax code does not treat stock or options received by entrepreneurs as income,

and allows their capital gains assessment to be at particularly favourable rates. A similar regime obtains in the UK, where since 1984, employees who are compensated with stock options will thereby incur no liability to income tax and no CGT until exercise, provided that the options were held for a specified period. This favourable treatment has since 1999 been extended in the guise of the 'Enterprise Management Initiative' (EMI), which allows 'small, high-risk' firms to offer options to employees which not only incur no income tax liability, but also no CGT liability until the sale of the shares. Under the UK system, there would appear to be no need for the sort of 'finessing' described by Gilson and Schizer, and hence if their explanation is valid, convertible preferred should not be the financial contract of choice for UK VCs. As yet, good evidence on this question is not available, although anecdotal accounts suggest a plurality of contracts are used.

C. The Role of Lawyers

A third possible explanation for the differences in financial contracts has to do with the role played by lawyers in designing contract terms. As we have seen, the legal structure of venture capital investments is something that is primarily *contractual*. This implies, therefore, that the *lawyers* who are involved in the design of the contracts may have a crucial role to play in facilitating venture capital finance. Gilson (1984) posits that, contrary to the popular myth that lawyers simply destroy value through adding an extra layer of costs, argues that business lawyers play a role of 'transaction cost engineers', *adding* value by structuring transactions in such a way as to facilitate parties' reaching their desired outcomes.

Qualitative studies of the services provided by Silicon Valley law firms suggest that these lawyers at least *perceive* themselves as offering benefits to their clients—principally high-tech local businesses—which are unavailable elsewhere. An initial study conducted by Friedman *et al* (1989) revealed that lawyers who advised 'start-ups' provided not only general legal advice, but often also more general business advice, and through their networks were able to broker meetings between their clients and venture capitalists, thus facilitating access to finance. The interviewees also described their approach as being geared towards finding the 'work-around' for any legal problem. They considered their transaction documentation to contain less verbiage than that of their Manhattan contemporaries, with the gaps in these incomplete contracts filled by norms of trust and reciprocity engendered by the fact that they, and both parties to the deal, were members of a relatively close-knit community in which reciprocity and reputation were important.

A more wide-ranging subsequent study elaborated upon these findings. Suchman and Cahill (1996) present interview evidence suggesting that Silicon Valley lawyers help to reduce the uncertainty experienced by participants to hi-tech financing deals in a variety of ways. For example, Silicon Valley law firms are allegedly much more willing than their counterparts elsewhere to agree to defer billing until a start-up client has made revenues (effectively bearing the risk that it will never do so) or indeed to bill by taking equity in the client.[2] Furthermore, these firms are willing to give opinion letters to allay venture capital investors' due diligence concerns without undergoing the same level of scrutiny (because of the intense pressure of time) as counterpart firms elsewhere might do. In effect, the result is that the law firm provides insurance to the high-tech client.

Moreover, Silicon Valley law firms are the first 'port of call' for entrepreneurs seeking to obtain venture capital finance. The lawyers can investigate the entrepreneur's quality, and reject those whose business plans are obviously unlikely to get funded. More importantly, they can act as a valuable intermediary by channelling clients towards VCs with preferences for particular types of project. In each case, the recommendation of the entrepreneur by a law firm with an interest in maintaining its reputation serves as a 'bond' of the quality of the client.[3]

A third way in which Suchman and Cahill identify lawyers as adding value is through 'coaching' clients about the norms of the venture capital community—what to expect and what not to expect. This can reduce transaction costs by ensuring homogeneity of expectations, thereby minimising the likelihood that a dispute will break out. However, to the extent that VCs rely on the degree to which a potential investee is aware of community norms as a signal of quality, then coaching by law firms may be detrimental. Rock (2001) argues that VCs look favourably on potential investees who 'know the rules of the game' as this signals their seriousness of commitment. However, if law firms coach clients, then this reduces the cost to entrepreneurs of becoming informed, and hence the signal becomes noisier.

Finally, Suchman and Cahill argue that the use of standardised terms helps reduce the transaction costs of negotiation in any individual deal. This seems intuitively plausible: whilst the hypothetical 'best' contract may require significant customisation to fit the needs of the parties *ex post*, this may not be the best where *ex ante* negotiation and drafting costs are included in the equation. It may be cheaper simply to use a 'standard form' which is understood

by, and therefore acceptable to, both sides. Furthermore, a standard form may be better understood by courts and therefore offer greater benefits of certainty of interpretation.

Of all the apparently beneficial practices identified by Suchman and Cahill, the issue of standardisation of terms is perhaps most interesting in the context of venture capital finance. Whilst standardisation may generate savings, it is not necessarily optimal. Difficulties could arise where (i) there is a subset of firms for whom a different type of investment agreement would be preferable; or (ii) circumstances change such that the original standard terms are no longer the best 'average' fit to the requirements. In each case, the 'network externalities' which are created by the dominant term—i.e. the ease for lawyers of understanding, the ease of judicial interpretation, etc—and the fact that the full costs of moving from that network must be borne by the first party to do so—will create a powerful impediment to change unless lawyers can co-ordinate on the design of a new set of terms (Kahan and Klausner, 1996; 1997). Furthermore, Bernstein (1995) questions whether the terms are likely not also to be systematically redistributive in favour of VCs, who are repeat players, and away from entrepreneurs, who usually are not.

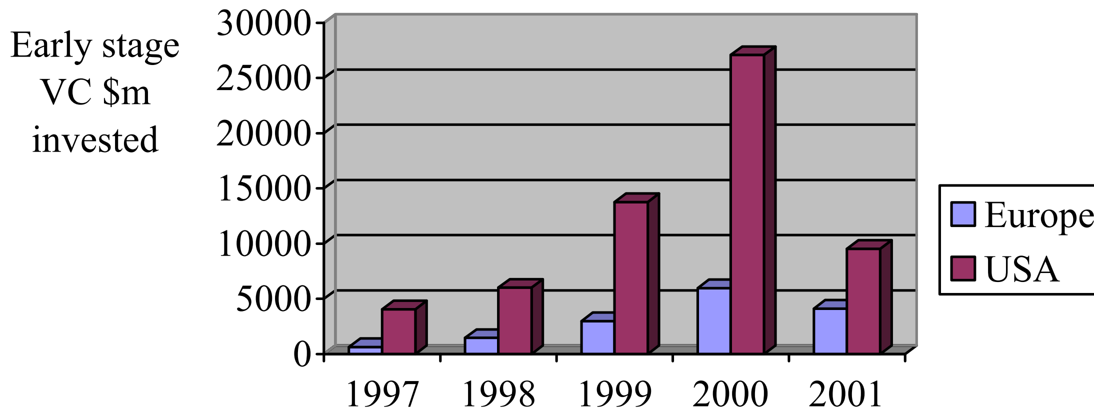
To conclude this section, it is in principle possible that the ubiquity of convertible preferred stock in US investment agreements could be explicable by reference to the close-knit communities of lawyers advising high-tech firms, and their influence in standardising contracts. However, not enough is known about contracting practices in other jurisdictions to be able to say with any degree of confidence whether or not this is a significant influence. On the evidence presently available, the most promising theoretical explanation for the differences between financial contracts remains that legal rules matter for the terms of parties' contracts.

II. How Does the Incidence of Venture Capital Investment Vary Across Countries?

The main sources of data on venture capital investment activity in different countries are the annual reports published by the trade associations, such as the NVCA in the US and EVCA in Europe. There are some difficulties in comparing the data, because of differences in measurement between associations, and even between years within a particular series of reports (Baygan and Freudenberg, 2000). These drawbacks notwithstanding, it is possible to illustrate several important trends by reference only to aggregated data.

First, venture capital investment is cyclical, and Graph 1 shows how early-stage funds invested rose during the late 1990s in both Europe and the US. As might be expected, 2001 has seen a sharp decline although this has been less pronounced in Europe than in the US.

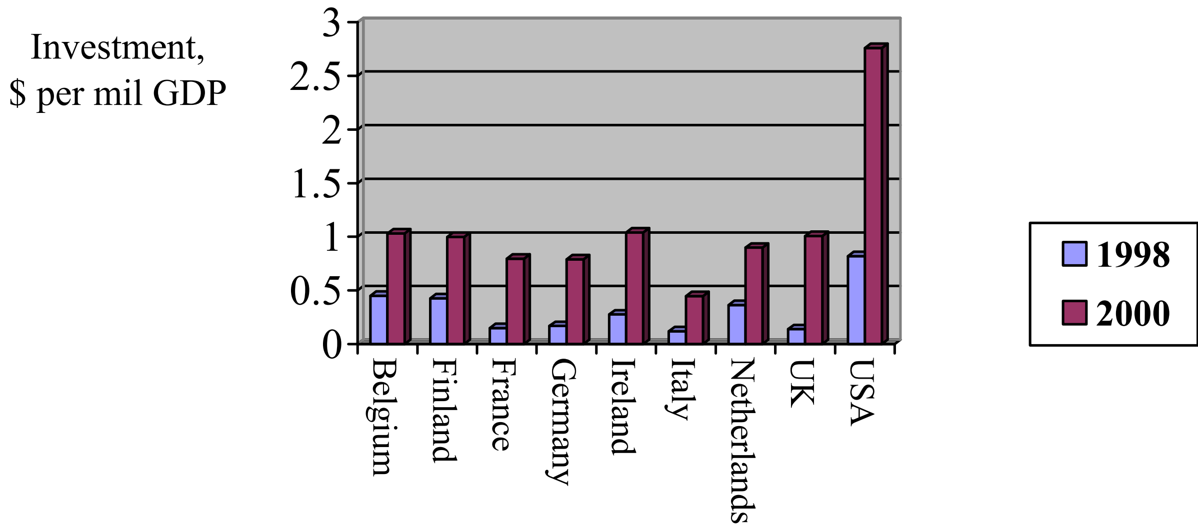
Graph 1. *Recent trends*



Sources: PwC MoneyTree, EVCA

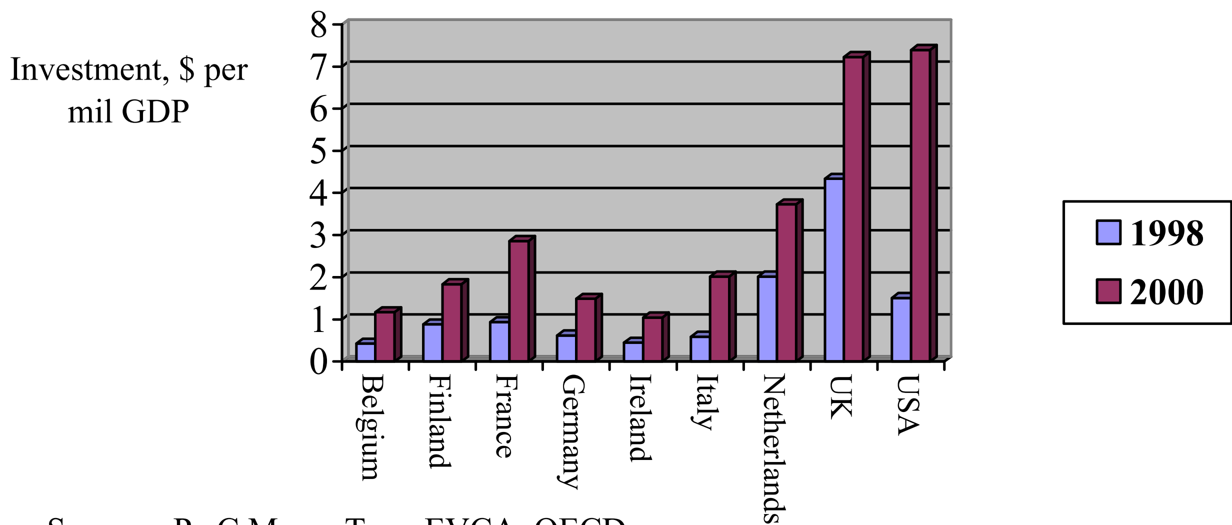
Secondly, the overall level of venture capital investment varies significantly from country to country. Graph 2 shows levels of early-stage investment in 1998 and 2000 for a range of European countries and the US, divided by GDP so as to allow comparison in relation to the size of the economies. More than twice as much early-stage venture capital per million dollars of GDP is invested in the US than in any European country. Within Europe, the UK in 1998 ranked behind Germany, Finland, Ireland, and perhaps surprisingly, Belgium and the Netherlands. The UK's position had advanced within Europe by 2000, but in light of subsequent events this looks to be a 'bubble year', and so it is difficult to know how much reliance to place upon these data. The relative levels of early stage investment have themselves changed over time. During the mid 1980s, more early-stage venture capital was invested per million dollars of GDP in the UK than in the US, as Graph 3 shows. By the mid 1990s, this trend had been reversed.

Graph 2. *Early-stage VC investment, by country*



Sources: PwC MoneyTree, EVCA, OECD

Graph 3.
Expansion & Buyout private equity investment, by country



Sources: PwC MoneyTree, EVCA, OECD

A third observation is that relative national levels of investment of later-stage private equity finance—i.e. expansion and buyouts—are quite different to those of early-stage venture capital. Graph 3 shows levels of expansion and buyout finance, adjusted for GDP, between the same range of countries. These data are sufficient to raise some intriguing puzzles. Why is early-stage investment made at such a lower rate in countries like the UK than in the US, or indeed in other European countries? And why have these differences changed over time?

III. How Might Law Affect the Incidence of Venture Capital Finance?

We now turn to consideration of a range of different legal rules which may affect either the supply of (investors' willingness to provide funds) or the demand for (entrepreneurs' willingness to develop new projects) early-stage venture capital finance. We begin with the most obvious—taxes and subsidies—and then look at the regulation of pension funds, organisational law, labour law and finally insolvency law. In each case, hypotheses are established, relevant empirical literature is reviewed, and the position in the UK is considered.

A. Taxes and Subsidies

The use of tax incentives or subsidies to stimulate venture capital investment is very topical, as it features centrally in many countries' policies towards fostering entrepreneurship. Clearly, these incentives could operate either at the supply or the demand side.

1. Capital Gains Tax.

Lower rates of capital gains tax could be expected to stimulate either or both the supply of venture capital and its demand, by increasing the returns to both investors and entrepreneurs. Mason and Harrison (2000) conducted a questionnaire study of UK angel investors, and concluded that CGT was a high-order factor influencing their decision-making about investments. The usefulness of these findings is diminished by the fact that they necessarily do not include extramarginal investors. Conversely, Gompers and Lerner (2000), in their study of fundraising by US venture capitalists from 1972 through to 1994, found that reductions in the rate of CGT increased the level of venture capital funds raised both at state, industry and firm level.[4] However, the changes in CGT did not, as one might expect if the effect were supply-side driven, result in relatively greater commitments of funds from taxable as opposed to tax-exempt investors. Rather, all investors put up proportionately more. This led Gompers and Lerner to conclude that the primary impact of capital gains tax was felt not by investors, but by potential entrepreneurs.

In the UK, CGT was modified in 1998 through the introduction of 'taper relief' for assets held for more than a certain number of years, the scope of which was broadened in 2000. For 'business assets' held for four years or more, the applicable rate of CGT for higher-rate taxpayers falls from 40% to 10%.[5] All shares in unquoted trading companies are classed as business assets. For quoted trading companies, shares held by employees are classed as business assets, as are shares held by outside investors comprising more than 5% of the company's share capital (Inland Revenue, 2001a: 34-55). This relief can be expected to stimulate both supply and demand for venture capital finance, as it reduces the CGT payable both by outside investors and entrepreneurs. The extension of relief to quoted companies is important, as it ensures that exits after an IPO are not penalised.

2. Subsidies.

Many countries have sought to stimulate investment in venture capital through granting subsidies. These can take various forms, ranging across a spectrum from targeted tax reliefs to investors in venture capital funds, through 'partnership' funds which are partially state-funded and raise private investment as well, and which invest in specific types of firm, to tax relief on stock options and finally direct state investment in high-technology enterprise. We would expect investment tax relief primarily to stimulate supply of finance, direct subsidies and tax relief on stock options to stimulate demand, and 'partnership' funds to do both.

It is undoubtedly the case that appropriately-designed subsidy schemes can stimulate the provision of venture capital finance. For example, the US Small Business Investment Company (SBIC) scheme, a federally-guaranteed risk capital form in operation from 1958-1969, led to the provision of more than $3bn to small firms, more than three times the money that was privately provided during this period. Furthermore, the more recent Small Business Innovation Research programme (SBIR), in operation from 1983 to 1995, provided as much funding for small, high-technology companies in 1995 as the entire private supply of early-stage venture capital in that year (Lerner, 1996:2).

However, careful setting of the eligibility criteria is necessary. The problems of failure to do so are illustrated by the Business Expansion Scheme (BES) set up by the UK government during the 1980s. This gave tax relief on investments in unquoted companies, but had criteria which were too widely-drawn to prevent substantial abuse, and little funds were actually raised for the benefit of small high-risk companies at which the scheme was originally aimed (DTI, 1999: 30).

A less obvious problem is that inappropriately-targeted subsidised schemes may 'crowd out' the private provision of funds. In Canada, Cumming and MacIntosh (2001) provide evidence that the introduction of legislation setting up subsidised Labour-Sponsored Venture Capital Corporations (LSVCCs) actually led to an overall reduction of the supply of venture capital funds. One possible cause is that the LSVCCs' cheaper cost of capital and readily-available funds meant that the valuations attributed to private equity investments were driven up, making returns unattractive to private funds.

Another important criterion for assessment is whether the schemes produce good returns. Subsidies are not well spent on funding poor projects. Over the years, various German subsidy schemes have produced very poor investments. Becker and Hellman (2000) present a fascinating case study of the first German venture capital fund, the WFG. Inexperienced managers and fears by bank co-investors that the fund might become a competitor for their small firm business led to the adoption of very poor contractual protection mechanisms, and the WFG's average internal rate of return was –25%. Even today, Bascha and Walz (2001) document that German public-private partnership funds do not make use of such sophisticated contractual protection as their purely private counterparts.

In contrast, Lerner (1996) provides evidence that investee firms of the publicly-funded SBIR programme experienced greater long-run growth (measured in terms of sales and employee numbers) than matching firms which did not receive such investment. Interestingly, however, this outperformance was limited to investee firms which were located in areas where there were substantial levels of private venture capital investment as well. Public funds invested in companies in areas where venture capital investment was not already prominent did not produce returns better than matched firms in those areas.

A range of tax incentives specifically targeted at venture capital are on offer in the UK. The Venture Capital Trust (VCT) form, introduced in 1993, offers investors relief from both income and capital gains tax on funds invested for more than 5 years.[6] In 1994, the Enterprise Investment Scheme (EIS) was introduced, providing extensive tax reliefs to encourage individuals to invest in ordinary shares in small, high-risk unquoted companies.[7] The recently-launched Enterprise Fund employs the 'partnership fund' model (Bank of England, 2001: 67-68). Its first element is the UK High Technology Fund, which invests in venture capital funds that specialise in providing early-stage finance to high-technology firms. The second element consists of Regional Venture Capital Funds set up throughout England to specialise in the provision of small-scale

equity finance to local firms. In each case, the funds invested are only partially public money, with the majority being privately sourced.

Similarly, the granting of tax relief towards stock options, which as we have seen are widely used as a means of incentivising employees, has been used in an attempt to stimulate demand for venture capital finance. The Finance Act 1984 provided that stock options would not be subject to income tax provided they were held for a specified period, and if held as part of a formal scheme, would create no CGT liability until exercise. A further scheme known as the 'Enterprise Management Initiative' (EMI) was introduced in 1999. This allowed 'small, high-risk' firms to offer options to employees which not only incur no income tax liability, but also incur no CGT liability on their exercise, deferring this until the sale of the shares. Furthermore, the four-year holding period for taper relief under CGT is deemed to start at the time of grant, rather than exercise, of the options. The scheme was extended in 2000 to allow an individual company to grant options within the scheme to employees to purchase shares up to a total value of £3m (at the time of grant) (Inland Revenue, 2001b).

B. Regulation of Institutional Investment: The Case of Pension Funds

Much of the finance raised by venture capitalists in the US and UK comes from pension funds, insurance companies and other collective investment mechanisms. The simple theory here is that regulations which inhibit fund managers from investing in 'high risk' asset classes such as private equity and venture capital may hinder supply in economies where a large amount of private wealth is tied up in such schemes.

The effect of pension regulation on venture capital investment in the US has been documented by Gompers and Lerner (1999, 2000). They point to a dramatic rise in fundraising and disbursements by venture capital firms which followed the liberalisation of the law. Under the Employee Retirement Income Security Act ('ERISA'), pension fund trustees are required to select investments according to the standard which a 'prudent man' would apply. It was once thought that certain asset classes—such as private equity—were inherently too risky to be within the rule. However, in 1979 the US Department of Labor explicitly clarified that private equity could fall within the prudent man rule.[8] Over the next three years, there was a huge upsurge in venture capital fundraising, and a much greater proportion came from pension funds. Gompers and Lerner (2000) demonstrate a significant link between the liberalisation of

the ERISA rules and the supply of venture capital finance, which is robust to controls for a range of other possible influencing factors.[9]

During the late 1990s, there was an absolute *decline* in private equity investment by UK pension funds. (Myners, 2001, pp. 174-5). Thus by 1999, only 0.5% of the assets under management by UK pension funds were held in private equity, compared with 6.6% of US funds. Could the regulation of institutional investment in the UK be a hindrance to the supply of venture capital finance? This issue was considered in a recent Treasury-commissioned review of institutional investment conducted by Paul Myners ('The Myners Review, 2001), which concluded that inappropriately-designed pension regulation could well be impeding inflows of capital to UK private equity.

There have been significant reforms in UK pension regulation in recent years. The Maxwell affair and related scandals in the early 1990s led to the enactment of the Pensions Act 1995, which was designed to tighten safeguards for pension fund beneficiaries. One such mechanism was the introduction of a 'minimum funding requirement' (MFR) for defined-benefit pension schemes. This was designed to ensure that pension funds remained adequately capitalised, protecting employees against the risk of their employer's insolvency and the risk of gross mismanagement by their fund trustees. It operates by requiring that current assets of the fund (marked to market value) exceed liabilities by a defined margin. Clearly, with long-term obligations such as pensions the way in which future liabilities are discounted to present value is crucial.

The MFR links liability valuations to the rates of returns on a specific portfolio of assets.[10] Unfortunately this creates an additional risk for pension fund managers who invest in assets outside these classes—that of 'mismatch' between prevailing rates of return on their *assets* and the 'MFR portfolio' rates which will be used to discount their liabilities. The Myners Review concluded that this had tended to bias decisions about 'asset classes' in favour of those which were included within the MFR portfolio, leading to underinvestment in venture capital.

The Myners Review recommended the abolition of the MFR, a proposal which had already found favour with government. A consultation paper published by the Department of Work and Pensions in September 2001, *The Minimum Funding Requirement: The Next Stage of Reform*, explains plans to scrap the MFR. Also recommended by Myners was the introduction of a Cadbury-style 'voluntary' regime of transparency and disclosure, with pension trustees being required annually to *explain* asset allocation decisions, or give reasons for not so

doing. It was argued that this would generate more communication between managers and trustees on this issue, and also encourage trustees to think more in absolute terms about the assessment of managers' performance.

However, the problem may be reincarnated as the new Financial Reporting Standard (FRS 17) which is to be introduced for the compilation of pension fund balance sheets. Again, this creates a possibility of 'mismatch risk' because assets are marked-to-market, whereas liabilities are discounted using a reference portfolio—in this case the yield on AA-grade bonds. It is thought that this will stimulate demand for bonds and further depress the supply of pension fund money into venture capital.

Pension reform is also on the EU's legislative agenda, under the twin guises of the Financial Services Action Plan (FSAP) and the Risk Capital Action Plan (RCAP). Under the RCAP, the European Commission is seeking to promote investment in, and employment and growth by, high-tech SMEs throughout Europe. A key facet of the strategy is linked to the FSAP: the liberalisation of pension fund rules will, it is hoped, facilitate the supply of funds into venture capital finance. The FSAP, in a bid to enhance the performance of European pension funds, proposes to introduce a pan-European standard of prudential pension regulation based on a 'prudent person' standard. Under this approach, the trustee is given discretion to select the appropriate mix of investments, according to the standard of prudence, based upon requirements of risk and return, liquidity etc, specific to the fund in question (European Commission, 2000b). At present, many European countries mandate that pension trustees invest according to quantitative lists defining the mix of investments which trustees must make. However, historical returns on pension assets in countries adopting the prudent person standard have been much higher than those in other European jurisdictions which have adopted a quantitative list approach (Bolkestein, 2000).

The introduction of a pan-European prudent person standard would undoubtedly increase the supply of funds available for investment in VC. In many jurisdictions, pension trustees are simply prohibited by the scope of the 'legal list' according to which they must invest from putting funds into risk capital. Under the proposed reforms, this would be legitimate—even desirable—provided that the overall portfolio balance of risk and returns was appropriate. However, the reforms may yet be modified in a way which will be much less likely to stimulate the supply of VC finance. Following dissent from various Member States whose prudential pension regulation schemes currently adopt a quantitative approach, the Spanish Presidency has suggested that a compromise

standard, dubbed ‘prudent person plus’ might be adopted instead. Whilst the details of the proposal have not been made clear, the fear is that it may involve quantitative restrictions of some type, especially on the level of high-risk investments, such as venture capital and private equity. Because of the pan-European effect of any Directive, this would be binding on the UK and therefore might amount to a net retrograde step from the current position (Financial Times, 2002).

C. Organizational Law

Organisational law may affect the incidence of venture capital finance on both the supply and the demand side. On the supply-side, the impact will be felt through the design of business organisations used by venture capitalists to structure their funds. On the demand side, it will be through the organisational structures available to entrepreneurs seeking to incorporate their businesses.

1. Supply Side: Limited Partnerships

The standard organizational form used by venture capitalists in the US is the limited partnership (Gompers and Lerner, 1999: 9-10). The venture capitalist himself is a general partner, and is exposed to unlimited personal liability, whereas the end-investors are limited partners. This structure is typically adopted because of its tax transparency: profits are for tax purposes allowed to ‘pass through’ the partnership and are taxed as income in the hands of the end-investors. This allows tax-exempt investors such as pension funds to invest alongside others, without losing their privileged status. In order to minimise the costs of conflicts of interest between venture capitalists and end-investors, their action space is usually circumscribed by a range of covenants, for example restricting the size of any investment in a given firm, restricting co-investment in portfolio companies by general partners and restricting the fund from investing in particular types of firm (Gompers and Lerner, 1999: 29-55). If it is difficult to employ an organisational form which allows for ‘pass-through’ taxation, then we might expect this to have a negative impact on the supply of venture capital finance, at least by tax-exempt investors.

In the UK, the limited partnership vehicle has also become an important form of organisation for venture capitalists (Myners, 2001). They are structured under the Limited Partnerships Act 1907. There are two key problems under the current law. Firstly, the maximum number of partners is limited to 20.[11] This prevents risk-sharing amongst more than 20 investors, forcing parties to set up parallel partnerships which add to organisational complexity (DTI, 2001b: 4). The rule was introduced by the Joint Stock Companies Act of 1844 in order to

‘channel’ parties towards incorporation by registration, because of the procedural difficulties encountered in suing a large partnership at the time. Procedural developments in the interim mean that partnerships can now sue and be sued in their own name, and so this rationale no longer exists. The DTI consulted on the removal of the limit in 2001 (DTI, 2001a), and the government have announced their intention to abolish it (DTI, 2001c).[12]

Second, the 1907 Act provides that limited partners shall lose the benefit of limited liability if they take part in the management of the partnership business.[13] The Act thus envisages limited partners as purely passive contributors of capital. According to the Myners review (Myners, 2001: 168), this can create problems in practice as end-investors usually want some degree of oversight of the business. The 1907 Act does allow for limited partners to inspect the books and ‘examine into the state and prospects of the partnership business and … advise with the partners thereon.’ However, its precise scope is unclear, particularly as to whether a distinction should be drawn between ‘advice’ and veto power exercised in respect of covenants.

The structure of limited partnership law is currently under review by the Law Commission. Their recent consultation paper (Law Commission, 2001) has proposed the introduction of ‘safe harbour’ provisions along the lines of those found in Delaware and Jersey limited partnership statutes, which would make it clear that specified actions do *not* constitute participation in management. Under the proposed rule, participation in ‘extraordinary’ business decisions would not result in a loss of limited status.[14] Activities falling into this category would be further clarified by the ‘safe harbour’ list, as including: consulting and advising a general partner on the limited partnership business; investigating or approving accounts; being an employee of the firm or of its general partner; or voting on ‘fundamental’ business decisions such as an amendment to partnership deed, a change in nature of business activities, conflict of interest transactions between general and limited partners, and resolutions to wind up the partnership.

2. Supply Side: Private Companies

Organisational law may also affect venture capital investment at the level of the investee company. Where legal entity structures are excessively rigid and do not adequately facilitate contracting with a concentrated investor—such as a venture capitalist—over rights to returns and control in the manner discussed in the preceding sections, this will make the investment less attractive. Although little empirical work has been done on the extent to which these issues do in fact impede venture capital investment, it is possible to identify some key concerns in the theoretical literature.

First, it must be possible for parties to customise corporate constitutions. Vermeulen (2001) documents the problems which Dutch law's mandatory terms concerning the corporate constitution would create for a US-style venture capital contract. Secondly, the legal treatment of shareholder remedies is crucial. On the one hand, expressly-bargained for rights—for example, those held by the VC—should be afforded adequate protection from opportunistic acts which seek subsequently to dilute them (Bratton, 2002). On the other hand, the too-ready availability of a 'minority oppression' remedy in circumstances other than where parties have expressly bargained for protection can serve to undermine the investment process, by undermining non-legal governance mechanisms to which the parties might otherwise turn (Rock and Wachter, 1999). Thirdly, if an IPO is desired as an exit mechanism, organisational law should not place impediments in the way of the firm's subsequent listing. In the US, it is common for start-up firms to make use of the public corporation form, notwithstanding that these are less flexible than forms designed specifically for small businesses, such as partnerships and LLCs (Bankman, 1994). It is thought that this is due first to investors' greater familiarity with the public company statutes, and secondly to certain tax advantages which are available to corporations but which are not to other entities—for example, the relief on CGT granted to holders of 'small business stock' (Steel, undated).[15]

In the UK, a range of mandatory rules of company law may create difficulties for venture capitalists. For example, directors' mandatory fiduciary duties to act in the best interests of the company may hinder a venture capitalist's nominees from exercising their governance function in situations of partisan conflict between the interests of the venture capitalist and of the founders.[16] This duty, which will be breached if consideration is only given to the interests of their venture capitalist appointee, cannot be modified through the terms of the articles of association.[17] Comben and Wilkinson (2000: 172), authors of a practitioner manual on the drafting of shareholder agreements, state that the common understandings of parties are usually that a nominee director will act in the interests of his appointer, such that there is a 'considerable divergence between the law and the practical reality'.

Similarly, the 'maintenance of capital' principle, in its statutory incarnation, prohibits a shareholder from claiming damages from the company for breach of a promise to redeem shares, and make such promises unenforceable by specific performance unless the company is able to pay for the repurchase out of distributable profits.[18] This makes it impossible to replicate the term frequently found in US investment agreements whereby the venture capitalist has the right

to 'put' his shares to the firm—in effect, the ability to bring about its liquidation on demand. That said, it is possible for the venture capitalist to contract for liquidation rights by other means—as, for example, through 'exploding votes' in a winding-up resolution,[19] or through a voting agreement under which the entrepreneur agrees to vote in conformity with the venture capitalist on resolutions for liquidation.[20]

3. Demand Side: The Accessibility of Corporate Forms to Entrepreneurs

To the extent that the organisational law of a jurisdiction hinders incorporation by small firms, it may restrict the demand for venture capital finance. We would expect that the availability of a limited liability business entity at minimal cost will be a primary concern for entrepreneurs, a point that is borne out by empirical studies which show that limited liability is a primary motivation for incorporation by very small businesses.[21] Furthermore, entrepreneurs will wish to be able to operate such an entity with minimum regulatory costs, such as requirements that they perform a costly annual audit. As documented by Djankov *et al* (2000), the costs of forming an incorporated business entity vary widely across jurisdictions. Although these authors do not test for this, it might be anticipated that in states where incorporation is easy, demand for venture capital finance would be strongest. However, Djankov *et al* (2000) indicate that, whilst involving more red tape than some jurisdictions (most notably Canada), the UK is still one of the easiest places in the world to incorporate a business, taking into account all of the regulatory measures which must be complied with.

English company law appears relatively attractive to the entrepreneurial business. A potential problem in many European jurisdictions is the incidence of rules mandating a minimum share capital prior to incorporation, often coupled with a ban on payment for shares other than in cash, or with a requirement for costly valuation of non-cash consideration. This may make it more difficult for a wealth-constrained entrepreneur to establish a limited company at the pre-funding stage. Fortunately, UK company law contains no minimum capital requirement for private companies, and provides no impediment to the issue of shares in exchange for non-cash consideration to be supplied by an entrepreneur. Similarly, the approach of English courts to all questions involving the 'corporate veil' has been to ensure it remains as impermeable as possible.

D. Labour Law

It is arguable that labour law may have an impact on the demand-side of the venture capital market. This could operate in a number of ways. On the one hand, extensive redundancy entitlements designed either to insure employees against the risk of redundancy, or to protect their investments in firm-specific human capital against employer opportunism may hamper a start-up firm's ability to recruit staff (Black and Gilson, 1999). If the business is extremely risky, then the potential cost of employee redundancy entitlements will have to be taken into account in hiring decisions—it will not be enough simply to offer employees stock in the firm and thereby allow them to bear the risk themselves. Credence is given to this account by Jeng and Wells (2000) finding in their cross-country study of the determinants of venture capital finance, that labour market rigidities were negatively correlated with venture capital investment. The study used employee mobility as a proxy for labour market rigidities, and so is not a perfect test of the hypothesis considered above. Further qualitative work is necessary to establish what link, if any, exists in practice.

Another way in which labour law might hamper demand for start-ups is suggested by Gilson (1999). He argues that a key factor in the relative success of the Silicon Valley 'cluster' over the earlier-established 'Route 128' corridor is the difference in the willingness of courts in each jurisdiction to enforce covenants not to compete. In California, such covenants are routinely not enforced. This might at first glance seem detrimental to the success of a region—surely it would enhance concerns about the appropriation of new technologies by competitors, and reduce willingness to invest in their development? This is conceded by Gilson, who counter-argues that such losses must be offset against gains in second-stage agglomeration economies—the facilitation of the transfer of new information throughout players in the region. Provided that departing employees remain in the region, going to another local firm, and that traffic is multi-lateral, then firms can expect on average to recoup such losses. Furthermore, the benefits in information transfer may allow new discoveries to be exploited much more rapidly, and in different ways, than in a jurisdiction where covenants to compete are rigidly enforced.

E. Insolvency Law

The possible impact of insolvency law on the incidence of venture capital finance is not something which has been explored in the literature in any sustained way. The insolvency literature has, until very recently, tended to focus on the case of publicly-traded firms, and has only just begun to focus on

the incentives the law offers to those running small businesses. This section will argue, perhaps counter-intuitively, that *personal* insolvency law is likely to have a more important impact on the incidence of venture capital finance than *corporate* insolvency law.

1. Supply Side: Corporate Insolvency Law

Much has been written elsewhere about the differences between 'creditor friendly' and 'debtor friendly' corporate insolvency laws. An intriguing argument which may repay closer consideration is that a 'debtor friendly' corporate insolvency law may be able to increase the supply of venture capital finance.

An important difference is whether or not the corporate insolvency law promotes adherence to the so-called 'absolute priority rule' (APR): namely that the priorities of payments agreed between investors should be respected in the making of distributions in insolvency proceedings. Almost all corporate insolvency regimes involve some amount of divergence from this. The most obvious is the elevation of certain types of claimant to 'preferred' status, such as employees and tax claims. Additionally, insolvency laws may distribute wealth away from secured creditors, by restricting their rights to enforce against their collateral. More fundamentally, however, under some systems it is possible for shareholders to receive payments even if the creditors are not paid in full.

An example of a system where this type of breach of the APR occurs routinely is Chapter 11 reorganisation in the US. Under this procedure, creditors and the debtor engage in a form of structured bargaining over a plan of reorganisation. When the plan is confirmed by the court, the debtor emerges from Chapter 11 proceedings and the parties' pre-confirmation claims are extinguished and replaced with the claims against the firm detailed in the plan. Typically, creditors will agree to accept payment of *less*, and *later*, than they had originally contracted for. If the APR were respected, then we would expect shareholders not to receive any payment under these plans where the firm's assets are worth less than its liabilities. Yet empirical studies have confirmed that it is normal for the old shareholders to receive claims in the reorganised firm—worth somewhere in the region of 5% of its market value—notwithstanding that the creditors are receiving claims that are worth less than their outstanding debts.[22] Insolvency scholars believe this outcome occurs in the US because of the way the law is structured so as to give considerable bargaining leverage to the debtor.

By contrast, in a 'creditor-friendly' jurisdiction such as the UK, there is no question of the law facilitating such outcomes. Creditors are firmly in control of insolvency proceedings, and the only way in which the shareholders will retain any claim on a reorganised firm is if the creditors consider they are contributing value to it, e.g. through their human capital. We would think that, *ceteris paribus,* breaches of the APR would make debt investment *ex ante* less desirable, and equity more desirable. Might this therefore have the effect of stimulating venture capital finance for high-risk, high-growth firms?

This argument encounters an important objection. Reorganisation law is likely to be less relevant for 'start-up' firms than for others. Consider that if the venture capitalist decides not to continue funding the firm, then it is unlikely to be able to obtain finance from elsewhere. The fact that the venture capitalist, an insider with knowledge about the project, has decided it is not going to succeed, will send a clear signal to potential alternative funders which will deter them from investing. For the same reasons, a sale of the business as a going concern in insolvency will not be feasible. So what will be left? Given that there will be few liquid assets, there is unlikely to be much to fight over at all (Gilson & Schizer, 2002; see also Gebhard, 2000; Corcoran, 2002). On this view, therefore, the priorities of distribution directed by insolvency law are largely irrelevant: there is nothing to distribute.[23]

A second dimension on which corporate insolvency laws vary is the legal consequences of firm failure for executives. In the UK, managers of insolvent firms may face personal liability for 'wrongful trading' if a court considers that, from the point in time when they should have realised that the company had no reasonable prospect of avoiding insolvent liquidation, they did not take every reasonable step that they might to protect the interests of creditors. This liability may be incurred not only by those who are in fact directors of the company, but also by 'shadow directors': those in accordance with whose instructions the board of directors habitually act. Similarly, directors (and shadow directors) whose companies go into insolvency proceedings will find that their conduct is investigated, and they may be disqualified by the court from participating in the management of companies for a period of 3 to 15 years if their conduct is found to have been such as to make them 'unfit' to act as directors. Similar penalties for those in control of companies which become insolvent do not exist under US corporate insolvency law. It might be thought that these extra penalties could serve as a deterrent to venture capital investment.

A problem with the application of the UK regime is that it depends on the ability of the court to decide appropriately as to the managers' conduct. When

business decisions are judged with hindsight, it may be all too easy for a court to conclude that a director should have realised that insolvency was inevitable, and should have done more to protect the interests of creditors. Thus the venture capitalist's nominees, who sit as board members in portfolio firms, or the VCs themselves—who in certain circumstances may constitute themselves 'shadow directors'—may fear that an inappropriate court decision will lead to the imposition of liability or disqualification. Might this be a factor which would inhibit the supply of venture capital finance at the margin?

This second apparent comparative disadvantage to investment in UK start-up companies also vanishes on closer inspection. First, a legal comparison that looks solely at 'insolvency law' may be misleading. Directors in other jurisdictions may owe duties to creditors which arise from *corporate* law, once their firm becomes insolvent.[24] As a result, they too may face personal liability to contribute to the insolvent company's assets if they do not act sufficiently in the interests of creditors.

Secondly, and more importantly, the structure of the venture capitalist's incentives under the investment agreement are likely to mean that there is little chance of any tardiness in bringing about liquidation. Recall that the venture capitalist typically has preferred shares. These will allow him to rank ahead of the entrepreneur for the purposes of repayment of capital in a liquidation, if there is any money left over after creditors have been paid. Thus, as soon as the venture capitalist decides that the company is not going to be a success, he will have an incentive to liquidate it as soon as possible so as to maximise his chances of getting something back. A court would be most unlikely to seek to second-guess the decision of a venture capitalist as to whether the firm is likely to prosper: not only does the venture capitalist have greater expertise than the court, but the sincerity of his belief is credibly demonstrated by his willingness to invest funds.

2. Demand Side: Personal Insolvency Law

So far, we have argued that it unlikely that the structure of a country's corporate insolvency law will have a significant impact on the supply of venture capital finance in that jurisdiction. By contrast, personal insolvency law may be a much more important factor than would seem apparent at first blush. Superficially, we may point to the limited liability which incorporation of the business will generate for entrepreneurs. Of course, it is possible to 'contract out' of limited liability through the grant by shareholders of personal guarantees of business indebtedness. Such guarantees are indeed demanded as a matter of course by banks lending to small firms (Freedman and Godwin, 1994). Yet for start-up

companies without major debt investors, such guarantees may not be so prevalent. To see the possible relationship between venture capital finance and personal insolvency, it is necessary to consider the process of business initiation.

Imagine a putative entrepreneur who is considering starting a firm. He will not be able to obtain venture capital finance until a reasonably advanced stage of development. To begin with, he will likely seek investment from family and friends, and run up credit card debt. When these sources are exhausted, he may seek 'angel' finance, and only by the time he has a defined business plan and a reasonably well-developed technology will the firm become an attractive proposition to VCs. From here on, let us focus on three broad sectors of outcome. First, he might not succeed in raising venture capital finance. In this case, it is quite possible that he will have over-extended his personal finances to reach this point, and will face personal insolvency. Second, he may raise venture capital finance and the firm subsequently prospers. In this case, his personal debt load will be paid off. Third, he may raise venture capital finance and the firm subsequently fails. Whilst in the interim he may have received salary from the firm, it is still quite possible that he is so over-extended that the collapse of the firm will precipitate personal insolvency as well. Thus in the first and third cases, the content of personal insolvency law will matter a great deal to the entrepreneur. *Ex ante*, at the point in time immediately before our story starts, the putative entrepreneur will have made a decision to go into business on his own. One factor in this decision will be the potential 'downside' consequences if scenarios one or three eventuate.[25]

If personal insolvency law imposes harsh consequences upon the individual, then *ex ante* the attractiveness of entering into a risky entrepreneurial endeavour will be reduced, particularly if the individual is risk-averse. This theory would predict that a harsher personal insolvency law should be related to a reduced demand for venture capital finance, as less entrepreneurs are willing to initiative high-risk businesses.

An initial test of this theory might be to compare the personal insolvency laws of the UK and US, two jurisdictions with readily accessible legal materials. In the UK, the estate of the bankrupt, minus certain exemptions, is taken over by a trustee and sold for the benefit of his creditors (Fletcher, 1996). The exemptions include items for the bankrupt's personal use in employment and clothing and household items required for his basic domestic needs and those of his family. The bankrupt is then subject to certain legal disabilities for a three-year period,[26] including an inability to incur credit of more than £250 without disclosing his

status as a bankrupt, a ban on trading under a different name without disclosing the name under which he was declared bankrupt, and being disqualified from participating in the management of a limited liability company.[27] During this time, the whole of the bankrupt's income apart from a very modest living allowance must be transferred to the trustee for the benefit of his creditors. At the end of three years, the 'first time' bankrupt receives a 'discharge' and all legal disabilities cease.[28]

This position may be contrasted with that which obtains in the US (Tabb, 1997). An individual debtor may opt either to enter bankruptcy proceedings under either Chapter 7, Chapter 11 or Chapter 13 of the federal code. Chapter 7, the most frequently used, normally provides a debtor with an immediate automatic discharge from most of his debts, in return for handing over all of his non-exempt assets for the benefit of creditors.[29] From this point onwards, no creditor may seek to collect pre-bankruptcy debts from the debtor, and the debtor may keep the proceeds of any subsequent earnings.[30] There is no specified period during which the debtor is subject to legal disabilities, and proceedings typically take around 3-4 months to finalise. Indeed, the bankruptcy code specifically protects debtors from any discriminatory treatment on account of the fact that they have filed for bankruptcy.[31] The range of property which is exempt from the bankrupt estate is largely defined by reference to the state in which the debtor has been domiciled for the 180 days preceding the filing.[32] The level of exemptions varies widely, the most notoriously generous being the 'homestead' exemptions under Florida and Texas law, which allow the debtor to retain an interest in his home of unlimited value. However, in some other states, such as Pennsylvania, the debtor is allowed to exempt no more than a total of $300-worth of property.[33]

Given that UK personal insolvency law is considerably stricter than its US counterpart, we might expect that this would lead to a reduced demand for venture capital finance, particularly amongst start-up firms. The data on comparative incidence of venture capital appear to bear this out. Further, albeit indirect, support for this hypothesis comes from a recent study by Fan and White (2000). This found a significant correlation between incidence of owner-managed businesses and the total value of property which might be exempted from bankruptcy under state law in the US.

The UK's Enterprise Bill 2002 contains a number of features designed to reduce the harshness of personal insolvency for individuals who have become bankrupt simply because of bad luck, as opposed to irresponsible risk-taking on their part. Under the new legislation, the time to automatic discharge will be reduced to 12

months, although if fraud is shown then the bankrupt may be made subject to a Bankruptcy Restraining Order which will, *inter alia*, prohibit him from being involved in the management of a company for a period of 5-15 years. Furthermore, the legal disabilities associated with the status of undischarged bankrupt will be scrapped, as a bid to send a signal to society that bankruptcy should carry less stigma. At the European level, the EC's Risk Capital Action Plan has identified the need to facilitate the 'softening of bankruptcy laws to allow failed entrepreneurs a second chance…' (European Commission, 2000b), although specific proposals for reform have yet to be tabled.

Ironically, proposed reforms in the US will move personal bankruptcy law in the opposite direction. The proposals will see the introduction of means-testing for debtors who wish to make use of Chapter 7 proceedings, requiring those whose incomes are above a certain threshold instead to make use of the Chapter 13 procedure, which involves a composition with creditors as opposed to an outright discharge (American Bankruptcy Institute, 2001). The reforms will also restrict the ability of fraudulent debtors to rely on the homestead exemption, meaning that a debtor convicted of securities fraud or certain types of felony would be unable to shield more than $125,000 of real estate (Washington Post, 2002). These reforms may have the effect of making entrepreneurship less attractive at the margins.

IV. The Impact of Regulatory Competition

The hypotheses considered in Part III all proceeded on the strong assumption that entrepreneurship and venture capital investing is primarily a domestic affair. We now relax this assumption to look at the possible impact of regulatory competition on venture capital investment. As a first observation, it is worth noting that funds for investment in venture capital flow readily across borders. Baygan and Freudenberg (2000) present an analysis of trade association data which shows the extent to which this took place in Europe during the 1990s. Some of their findings are replicated in Table 1. This has important implications for policy, suggesting that law reform efforts designed to stimulate venture capital finance should be directed at the demand, rather than the supply side. Transnational capital flows may simply bypass several of the supply-side legal 'barriers' to venture capital considered in Part III. Of course, entrepreneurs are also able to repatriate themselves in favour of jurisdictions where demand-side variables are more favourable to their endeavours. Yet it seems plausible that the necessary differential between national legal systems so as to provoke

substantial movements of entrepreneurs would have to be much greater than for movements of funds.

Table 1. *Cross-border private equity investment flows, 1999 (% of domestic investments)*

	Outflows (to other countries)	Inflows (from other European countries)	Net inflows
Ireland	10	372	362
Finland	16	76	60
Italy	5	13	8
Germany	17	22	5
France	25	22	-3
Netherlands	50	38	-12
Belgium	54	41	-13
UK	33	5	-28

Source: Baygan and Freudenberg (2000)

Consider first the case of pension fund regulation. The Myners Report itself notes that there was a spectacular growth in funds committed to UK venture capital during the second half of the 1990s—but that most of the influx was from abroad, particularly from US pension funds (Myners, 2001, p. 175). The problem with pension fund governance is therefore probably not one of undersupply of venture capital finance to UK firms. Rather, it is a problem for pension fund beneficiaries, who cannot reap the benefits of such investment. This view is echoed by Mayer (2001: 7), who questions whether the relatively low levels of venture capital investment in early-stage companies in the UK is not due to demand-side problems, such as the availability of entrepreneurs with good projects.

Secondly, if a domestic law, such as that of England, creates significant barriers to using the Limited Partnership form for venture capital funds, then a fund may simply engage in ‘forum shopping’ by using a Delaware or Jersey business form instead. The logic of the same argument may be extended to choice of state of incorporation for start-up firms seeking to raise venture finance. To the extent that domestic organisational forms hinder their ability to contract effectively with VCs, they may simply opt to incorporate elsewhere, even if the business does not physically move (see Rock, 2001).

Factors which affect the demand for venture capital—i.e. those legal variables which may have an impact on the level of entrepreneurial activity—would therefore appear to be more important areas to address if policy-makers are keen to promote early-stage venture capital finance. In a world of global capital flows, demand-side factors such as capital gains tax, personal insolvency law and labour law (to the extent that these may be shown to affect entrepreneurial activity) will be more important than the more supply-side oriented factors considered above.

V. Conclusion

This paper has reviewed theories and evidence as to the extent to which law 'matters' for the provision of venture capital finance, and a central theme has been that it may do so in a variety of ways. Clearly, regulatory provisions may affect the incentives of marginal investors and entrepreneurs, thereby affecting the aggregate levels of venture capital investment in a country. Theoretically, a range of different regulatory provisions may have an impact on the incentives of investors to supply, or of entrepreneurs to demand, venture capital finance. The available empirical evidence tends to support the claims that taxes and pension fund regulation may be determinants of investment. The evidence as respects the effects, if any, of organizational law, labour law and insolvency law is still equivocal or non-existent, and these issues constitute important questions for future research. The advent of globalisation is likely to mean that law reform which seeks to stimulate the supply of domestic venture capital will make less of a difference to overall levels of investment than efforts to stimulate demand.

Law may also matter for inframarginal investors, by determining the content of their venture capital investment agreements. Theoretical studies of the agency problems in financing innovation suggest that there are several different financial contracts which might be adequate to overcome the worst difficulties, but are somewhat ambivalent as to which is optimal. As we have seen in Part I, it appears that US tax law may be a reason for US venture capitalists' propensity to take convertible preferred stock in their American investee companies—but not when they invest in Canadian companies, where a different tax regime applies. Although the law determines the form of the contracts, the theoretical studies suggest there will be little effect, if any, on their optimality.

Notes

[1] For reviews of the extensive literature on venture capital investment contracts, see Gompers and Lerner (2001), Hart (2001) and Klausner and Litvak (2001).

[2] This practice, and the ethical concerns to which it gives rise, is considered in more detail by Puri (2001), who explains how it has now spread to other parts of the US, Canada and even some English firms.

[3] Bernstein (1995) offers an explanation why lawyers might have comparative advantage over VCs in doing this: for a VC, if screening returns a negative result, there is no payoff. However, for lawyers, there is a payoff in a wider range of cases because can match to a range of VCs. This explanation, however, ignores the point that a VC's upside payoff is much larger than that of lawyers.

[4] Specifically, the introduction in 1993 of a relief for 'small business stock' permitted gains on shares held in qualifying corporations for more than fives years to be taxed at 14% instead of the standard 28% (I.R.C. § 1202).

[5] This now compares favourably with the maximum capital gains tax rate applied in the US for long-term gains (ie where the asset has been held for more than 12 months) of 20%. However, noncorporate taxpayers may reduce the tax payable on gains from "small business stock" to 14%, up to a statutory ceiling (IRC § 1202).

[6] More specifically, an individual subscribing for up to £100,000 of shares in a VCT will get income tax relief at 20% on his investment, provided the shares are held for at least five years, and will pay not CGT on the disposal of his VCT shares; furthermore, the VCT itself will not be subject to CGT on the sale of shares it holds in investee companies (SJ Berwin, 1997: 5).

[7] The scheme allows an individual to invest up to £100,000 per annum in unquoted companies, and provided that they are held for more than 5 years, will confer income tax relief at 20% on those investments and exempt disposals from CGT (SJ Berwin, 1997: 6).

[8] Provided that a fund's portfolio is appropriately diversified, and consideration is paid to the risk-reward profile of a particular investment class, then 'riskiness' *per se* is not a reason to make investment imprudent.

[9] Jeng and Wells (2000) did not find any correlation between the size of the pension funds under management in a particular country and the levels of VC finance. This is not, however, surprising, as the study did not control for differing regulation of pension funds in different jurisdictions.

[10] Under the MFR, liabilities to current *pensioners* are discounted by the current rate of gilts, and liabilities to current *employees* are discounted at the

current rate for equities for their projected remaining time in employment, and at the rate for gilts for the expected period for which they will be pension recipients.

[11] Companies Act 1985 s 716; Limited Partnerships Act 1907 s 4(2).

[12] A special relaxation of the rule has applied from 22 March 2002 for limited partnership collective investment schemes authorised under the Financial Services and Markets Act 2000.

[13] Limited Partnerships Act 1907 s 6(1).

[14] The scope of the proposed safe harbour would draw on the distinction between 'ordinary' and 'extraordinary' business matters which is already found in the default management provisions of the 1907 Act (*ibid.* s 6(5)). Ordinary business decisions may be decided upon by a majority of general partners, it being implicit that 'extraordinary' decisions require the consent of *all* partners.

[15] I.R.C. § 1202. *Cf.* Callison (2000), who argues that the relative unattractiveness of the LLC form to venture capital investors is because of its governance attributes, which assume that every investor will be an active participant in all business decisions.

[16] *Scottish Co-operative Wholesale Society v Meyer* [1959] AC 324; *Kuwait Asia Bank EC v National Mutual Life Nominees Ltd* [1991] AC 187.

[17] Companies Act 1985 s 310.

[18] See generally, Armour (2000: 363-370).

[19] *Bushell v Faith* [1970] AC 1099.

[20] See *Russell v Northern Bank Development Corporation Ltd* [1992] 1 WLR 588.

[21] Freedman and Godwin (1994) and Hicks *et al.* (1995).

[22] For a review, see Armour (2001).

[23] The effect of corporate insolvency law on venture capital supply might not, however, be direct. If creditors fare worse in traditional manufacturing businesses, and shareholders fare better, then the range of industries in which venture capital becomes the cheapest form of outside finance may increase. This might have a knock-on effect of stimulating the growth of venture capital funds, which in turn then develop expertise sufficient to invest in other, more risky firms.

[24] For example, Delaware: see *Credit Lyonnais Bank Nederland NV v Pathe Communications Corp* (1991 Del Ch)).

[25] It may be argued that entrepreneurs are by nature optimistic, and will have sufficient belief in their project to discount the risk of failure. In this case, the consequences of personal bankruptcy will be less important to them *ex ante*. This may well be accurate as a description of those whose do

choose to become entrepreneurs, but it proves nothing about those who choose not to do so because of the fear of bankruptcy.

[26] The period may be reduced to two years for cases involving total debts of less than £20,000.

[27] There are a range of other disabilities, including being barred from sitting as a Member of Parliament or of the House of Lords.

[28] If the individual was previously discharged from bankruptcy less than 9 years beforehand, then discharge is not automatic.

[29] 11 USC §§ 524, 727(a).

[30] 11 USC §§ 524(a); 541(a)(6).

[31] 11 USC § 525.

[32] 11 USC § 522(b). The same subsection also provides a federal list of exemptions which the debtor may elect to apply instead of state exemptions (§ 522(d)), provided that his state of domicile has not legislated to deny its debtors this choice. Tabb (1997: 643-644) notes that 'as of 1997, 35 states had opted out of the federal scheme, rendering § 522(d) a dead letter in much of the nation'.

[33] The US bankruptcy system is not quite as reckless in its generosity to debtors as it at first may seem. There are a number of grounds for denying discharge, perhaps the most important of which is that a discharge may not be granted more than once every six years. Furthermore, if the court considers that the debtor is committing a 'substantial abuse' of the system by not filing for Chapter 13, under which a debtor enters into a repayment compromise with his creditors lasting three years, then he may also dismiss the case. Finally, a range of debts such as those incurred on the basis of fraud, student loans, alimony payments and certain tax claims may not be discharged.

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