OECD Science, Technology and Industry Working Papers
2003/01

Venture Capital Policy Review: United Kingdom

Günseli Baygan

https://dx.doi.org/10.1787/266158318353

OECD

Unclassified **DSTI/DOC(2003)1**

Organisation de Coopération et de Développement Economiques
Organisation for Economic Co-operation and Development

28-Jan-2003

English text only

DIRECTORATE FOR SCIENCE, TECHNOLOGY AND INDUSTRY

DSTI/DOC(2003)1
Unclassified

VENTURE CAPITAL POLICY REVIEW: UNITED KINGDOM

STI WORKING PAPER 2003/1
INDUSTRY ISSUES

Günseli Baygan

JT00138305

English text only

STI Working Paper Series

The Working Paper series of the OECD Directorate for Science, Technology and Industry is designed to make available to a wider readership selected studies prepared by staff in the Directorate or by outside consultants working on OECD projects. The papers included in the series cover a broad range of issues, of both a technical and policy-analytical nature, in the areas of work of the DSTI. The Working Papers are generally available only in their original language – English or French – with a summary in the other.

Comment on the papers is invited, and should be sent to the Directorate for Science, Technology and Industry, OECD, 2 rue André Pascal, 75775 Paris Cedex 16, France.

The opinions expressed in these papers are the sole responsibility of the author(s) and do not necessarily reflect those of the OECD or of the governments of its member countries.

http://www.oecd.org/sti/working-papers

VENTURE CAPITAL POLICY REVIEW: UNITED KINGDOM

Günseli Baygan

Abstract

Despite high levels of private equity financing in the United Kingdom, relatively little funding is reaching small, technology-based companies. Institutional investors, both domestic and foreign, remain focused on later-stage deals. The United Kingdom has implemented several policy initiatives to improve the access of small firms to equity financing, including generous tax incentives and support for business angel networks. However, problems persist in targeting financing to smaller enterprises, start-ups and outlying regions. A new policy approach, which follows the example of the United States, has recently been introduced. This combines government equity with private sector management to leverage private financing for small deal sizes and also eases rules on institutional investors. This paper analyses trends in UK venture capital markets and makes policy recommendations which have been developed through an OECD peer review process.

POLITIQUES DE CAPITAL-RISQUE AU ROYAUME-UNI

Günseli Baygan

Résumé

Malgré le niveau élevé d'investissement privé par prises de participation qui prévaut au Royaume-Uni, l'apport de capitaux aux petites entreprises de technologie est relativement peu abondant. Les investisseurs institutionnels tant nationaux qu'étrangers continuent d'intervenir en priorité dans les dossiers d'entreprises plus matures. Le Royaume-Uni a mis en œuvre différentes initiatives visant à améliorer l'accès des petites entreprises au financement par prises de participation, dont des dispositifs généreux d'incitation fiscale et le soutien de réseaux d'investisseurs providentiels (*business angels*). Il reste toutefois difficile d'axer les financements sur les PME, les jeunes entreprises et les régions excentrées. Une nouvelle stratégie inspirée de l'exemple américain a récemment été mise en œuvre. Elle conjugue apport de capitaux publics et gestion privée pour attirer des financements privés au profit de petits projets, et assouplit le régime applicable aux investisseurs institutionnels. Ce document analyse les tendances des marchés britanniques du capital-risque et formule des recommandations d'action qui ont été élaborées au cours du processus d'examen par les pairs en vigueur à l'OCDE.

TABLE OF CONTENTS

ASSESSMENT AND RECOMMENDATIONS

Despite high levels of private equity financing in the United Kingdom, relatively little funding is reaching small, technology-based companies. Institutional investors, both domestic and international, remain focused on later-stage deals. The growing size of UK private equity funds, combined with profitable investment alternatives in the management buy-out/management buy-in (MBO/MBI) market, have caused capital to be channelled to larger deals and companies rather than start-ups, which are considered riskier and less liquid investments. However, the share of equity going to earlier-stage and technology-based companies is now increasing.

The United Kingdom has implemented a range of policy initiatives to improve the access of small firms to equity financing. A number of generous tax incentives, *e.g*. the Enterprise Investment Scheme (1994), the Venture Capital Trust Scheme (1995) and the Corporate Venturing Scheme (2000), were introduced to encourage individual and corporate investments in venture capital. To provide exit vehicles for venture capitalists, second-tier stock markets were created, *e.g.* AIM (1995), OFEX (1995), and techMARK (1999), but these remain small and fragmented. The government supports business angel networks, but problems persist in linking investors with small firms deriving from continuing mismatches and high search costs.

A new policy approach, which follows the example of the United States, uses government equity to leverage private financing for small deal sizes and eases rules on institutional investors. New venture capital schemes introduced in 2000, *e.g.* the High Technology Fund, Regional Venture Capital Funds, Community Development Venture Fund, and the Early Growth Fund (2002), combine government funding with private expertise to target financing to smaller enterprises, start-ups and outlying regions. There are plans to further liberalise rules for venture investments by institutions. A summary of progress and recommendations concerning UK venture capital policies is given in **Table 1**.

Table 1. Progress and recommendations on UK venture capital policies

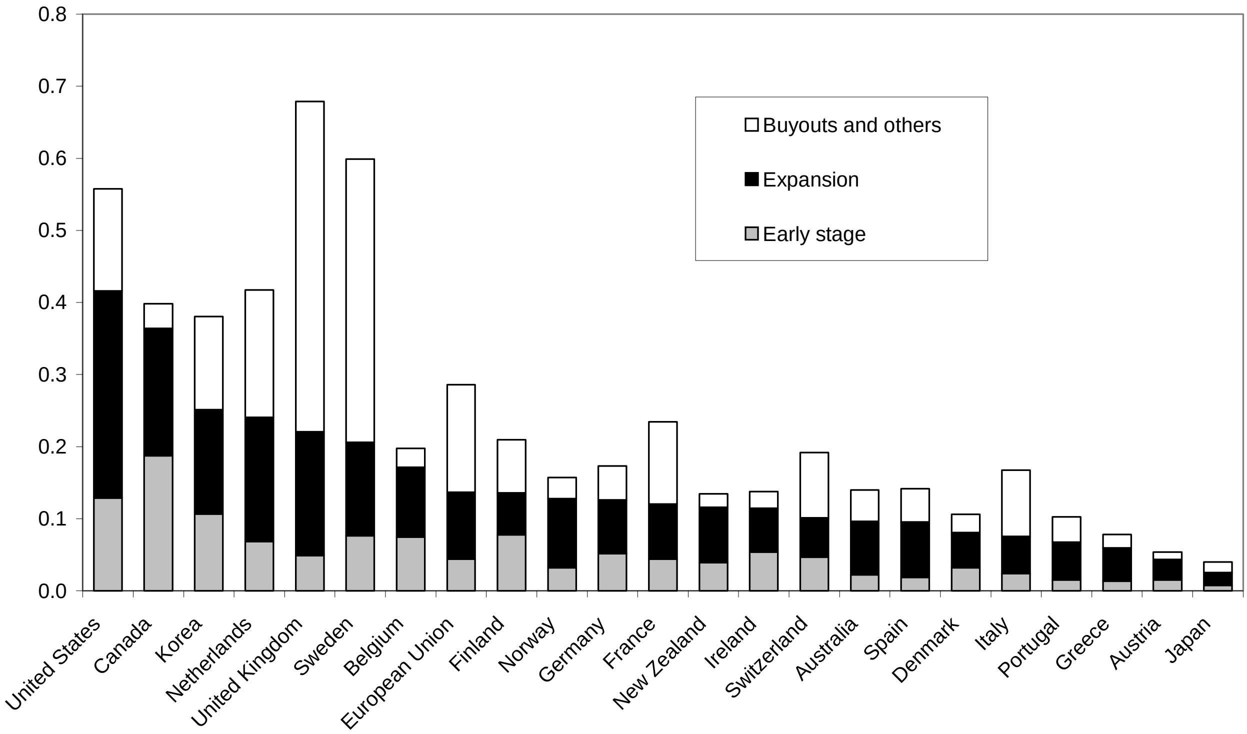
Area	Recent/planned action	Recommendations
Investment regulations	2000 Financial Services and Markets Act and proposals for replacing MFR will promote more institutional investment in private equity.	Review effects of new rules on private venture markets and further liberalise, if needed.
Tax incentives	Corporate Venturing Scheme added in 2000 to other tax incentive schemes.	Evaluate effects of these tax incentives on venture capital supply and consider phasing them out over time.
Equity programmes	Several targeted government equity programmes recently introduced (High Technology Fund, Regional Venture Capital Funds, Community Development Venture Fund, Early Growth Fund).	Evaluate costs/benefits of these schemes in leveraging private financing.
Business angel networks	Government has long supported National Business Angels Network Limited (NBAN).	Ensure supply of investment-ready small firms.
Second-tier stock markets	TechMark introduced in 1999 for high-technology firms.	Overcome fragmentation and small size by joining with European partners to create a single second-tier stock market.

TRENDS IN VENTURE CAPITAL MARKETS

Overview

The UK private equity market evolved from a small and fragmented base in the 1980s to a respectable size in the late-1990s. In terms of venture capital investment (which for the UK includes later-stage buy-outs) as a share of GDP in the period 1998-2001, the United Kingdom ranks first overall in the OECD (**Figure 1**). In the 1980s, the UK private equity market was in its early stages of development. Market size and depth were limited. The amount of capital invested increased in the late 1980s, but this was short-lived as the market was negatively affected by the economic recession of the early 1990s (**Figure 2**).

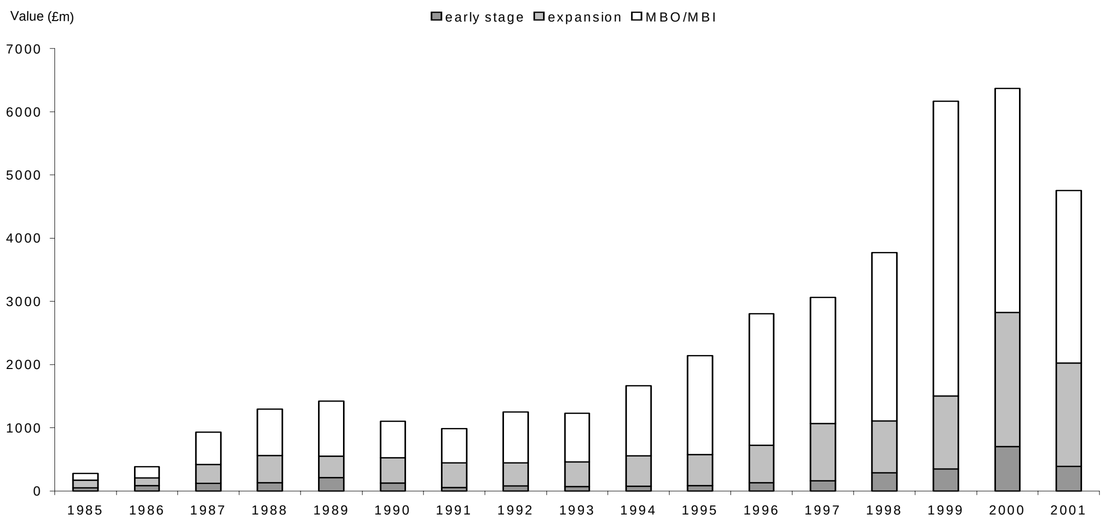
Figure 1. OECD venture capital investment by stages as a percentage of GDP, 1998-2001



Note: The definition of private equity/venture capital tends to vary by country.
Source: OECD venture capital database, 2002.

From mid-1990 to 2000, the UK private equity market extended the scope of its investments, and the capital under management grew rapidly. It is now the largest, most developed market in Europe (accounting for about 38% of venture investments) and attracts a substantial amount of capital from overseas, in particular from North America. In the second half of the 1990s, private equity investments in the UK tripled in value, reaching a little over GBP 6 billion in 2000. Following the stock market correction in mid-2000, private equity investments declined 25% in 2001, but still remained higher than the investment level in 1998.

Figure 2. UK venture capital investment by financing stage



Source: BVCA (2002).

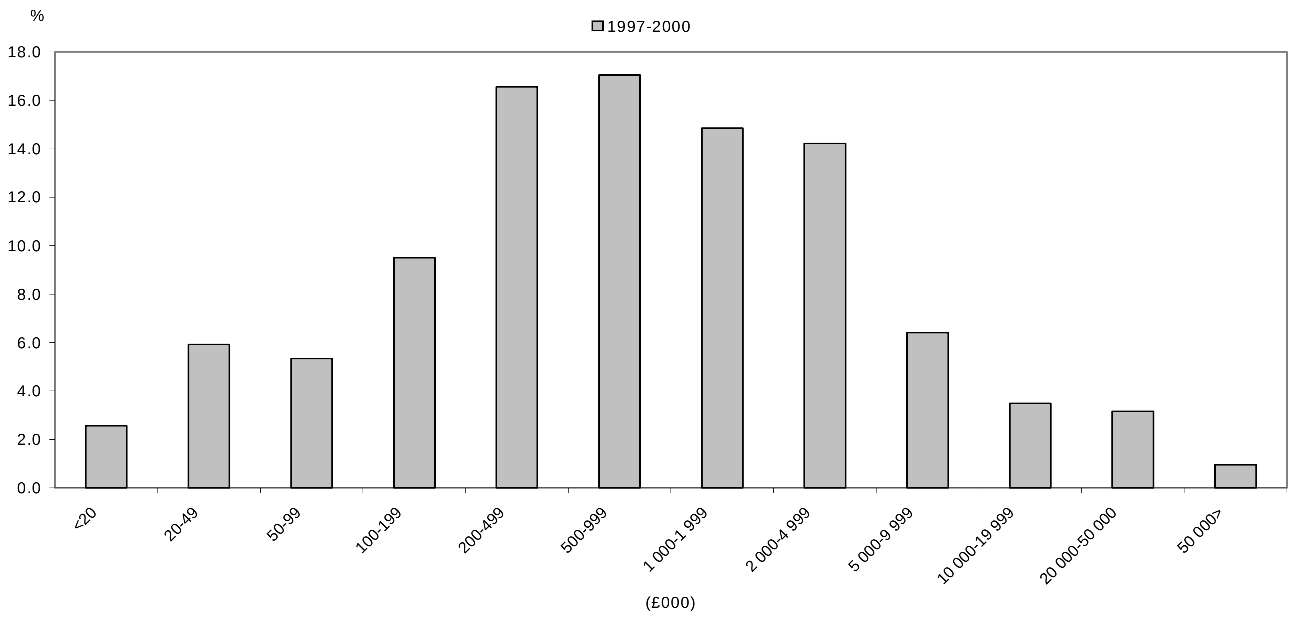
Investment by stage and deal size

Even though UK private equity investments have grown in value, especially after 1995, funds have gone primarily to later stages of investment, larger deal sizes and larger companies. The total number of UK firms that received equity financing remained relatively stable over the 1990s. More than 1 300 companies received private equity in 2001, a 10% increase from 2000. But only 32% of these companies received financing for early stage investment, with 50% going to the expansion of existing firms and the rest for management buy-ins and buy-outs (MBO/MBI).

The upward trend in the UK private equity market has been driven primarily by the vibrant MBO/MBI market. Increasing competitive pressures at national and international levels have led many UK firms to restructure and dispose of unprofitable units and business lines, creating ample room for lucrative MBO/MBI deals. UK funds have also grown in size and the attractiveness of investing small amounts in early stages for seed or start-up capital has declined. Although there has been a gradual increase in the number of companies that receive start-up and early-stage financing, the later-stage preference of UK private equity funds remains unchanged. The market for MBO/MBIs is now becoming saturated as seen in a decline in the number of companies and value of deals in 2000.

The UK private equity market is fragmented in terms of deal size, but generally favours larger transactions (**Figure 3**). The majority of companies are clustered around a deal size in the range of GBP 200 000 to GBP 5 million. It is normal to have fewer companies at the higher end of the distribution, as deal sizes increase exponentially. However, there is a scarcity at the lower end of the distribution, *i.e.* deal size lower than GBP 200 000. Transaction costs are relatively high for early-stage deals that require smaller investments, given the high due diligence such investments need. As a result, access to capital for smaller deal sizes and firms in the United Kingdom remains limited.

Figure 3. Distribution of UK private equity-backed companies by deal size (% of total)



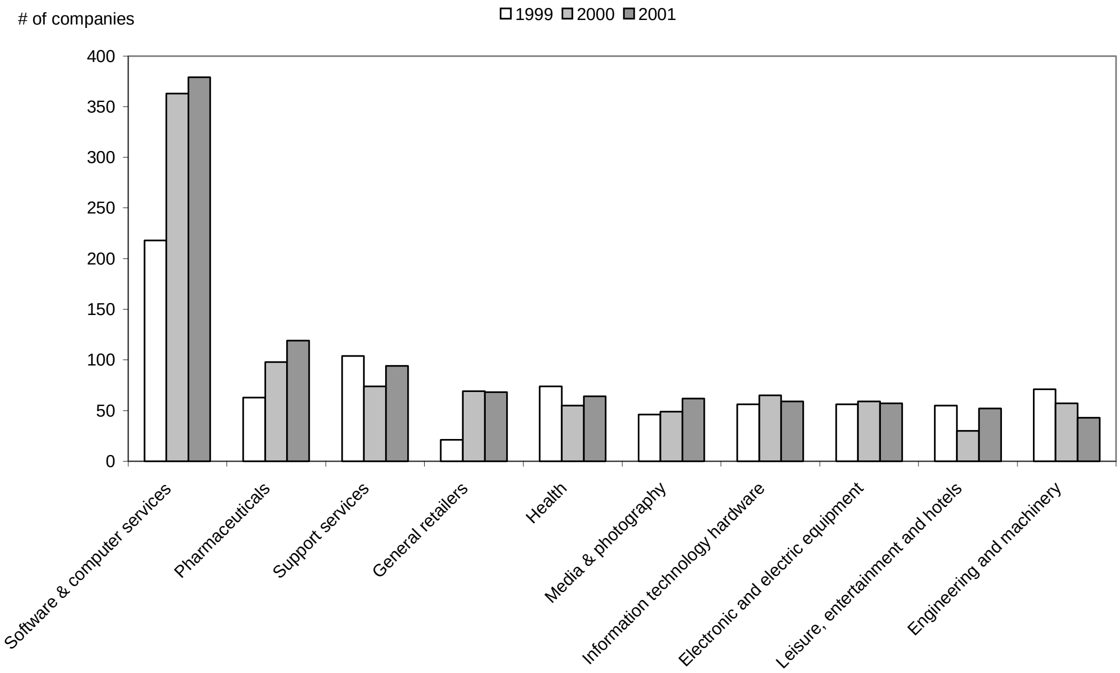
Source: BVCA (2001).

Investment by sector

The UK venture market has not been oriented towards high-technology sectors, although this is now changing. In the period 1995-2000, about 15% of UK venture capital went to sectors based on information and communications technology (ICT) compared to over 70% in the United States. This is a reflection of the emphasis on later stages of investment and larger firms in the United Kingdom. However, the share of equity going to technology-based enterprises is increasing for all firm sizes. Software and computer services accounted for almost 30% of the total number of companies that received private equity financing and 11% of the total amount invested in 2001 (**Figure 4**). They were followed by other technology sectors, *e.g.* pharmaceuticals, health, and IT hardware, in addition to newer sectors such as media and photography and the leisure industry.

Software companies received the highest level of financing, both in terms of value and the number of companies in 2001, followed by communications and biotechnology. In spite of the high business failure rate, the UK Internet sector remained strong in 2001 and continued to attract early and expansion stage financing. However, the relatively large number of high-technology companies that received financing in 2000-2001 may not be sustainable given the downturn in technology markets. The only funds that showed slight positive returns in 2001 targeted later-stage deals, *i.e.* mid-size to very large MBOs.

Figure 4. UK venture capital investment by sector

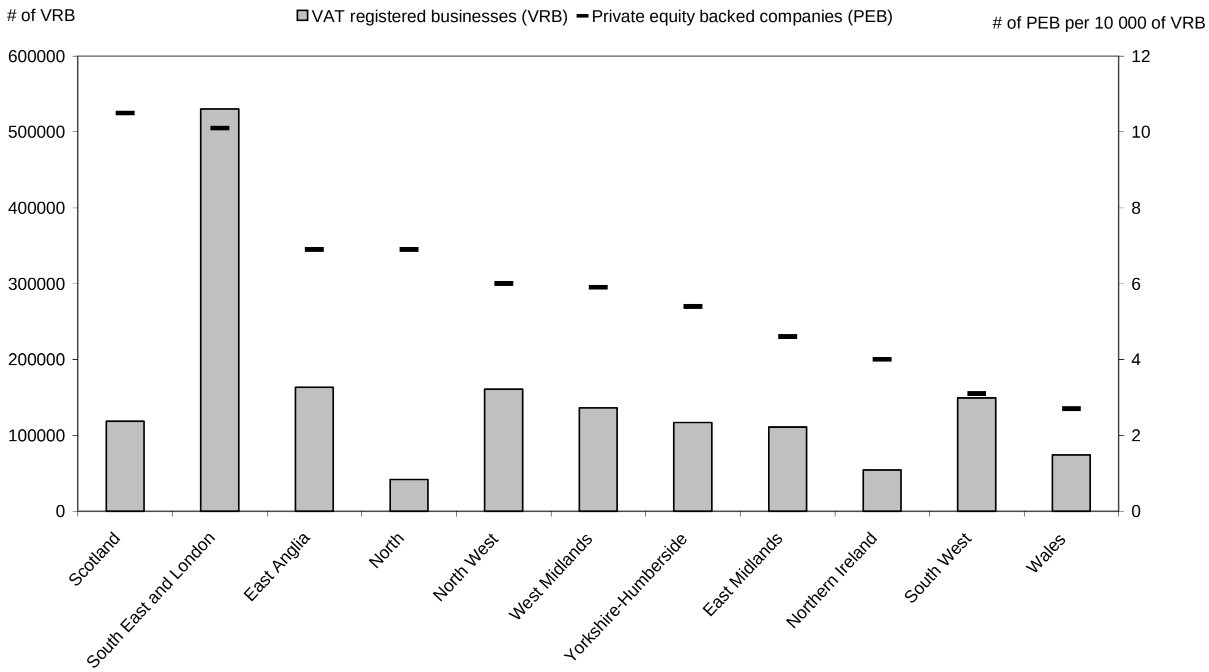


Source: BVCA (2002).

Investment by region

There are marked regional imbalances in the UK private equity market. The South East and London, in the 1980s as well as in the 1990s, attracted the highest level of venture capital, both in value and number terms. This region represented 52% of total UK investments in 2001. Even though investment levels increased across all regions in the second half of the 1990s, there was no significant convergence, and the regional divide between the south and the rest of the United Kingdom persists (**Figure 5**). In addition, venture capital growth in outlying regions was primarily in the form of later-stage investments (Mason and Harrison, 2002*b*). The geographical concentration of venture activity is positively correlated with regional economic activity, particularly proximity to a major financial centre. As in other OECD countries, regions that evolved from traditional sectors towards more high technology manufacturing and service sectors and which are closer to financial centres attract relatively more private equity investment (*e.g.* London). In contrast, some regions remain deprived of venture capital (*e.g.* South West and Wales).

Figure 5. UK investment activity by region, 2000

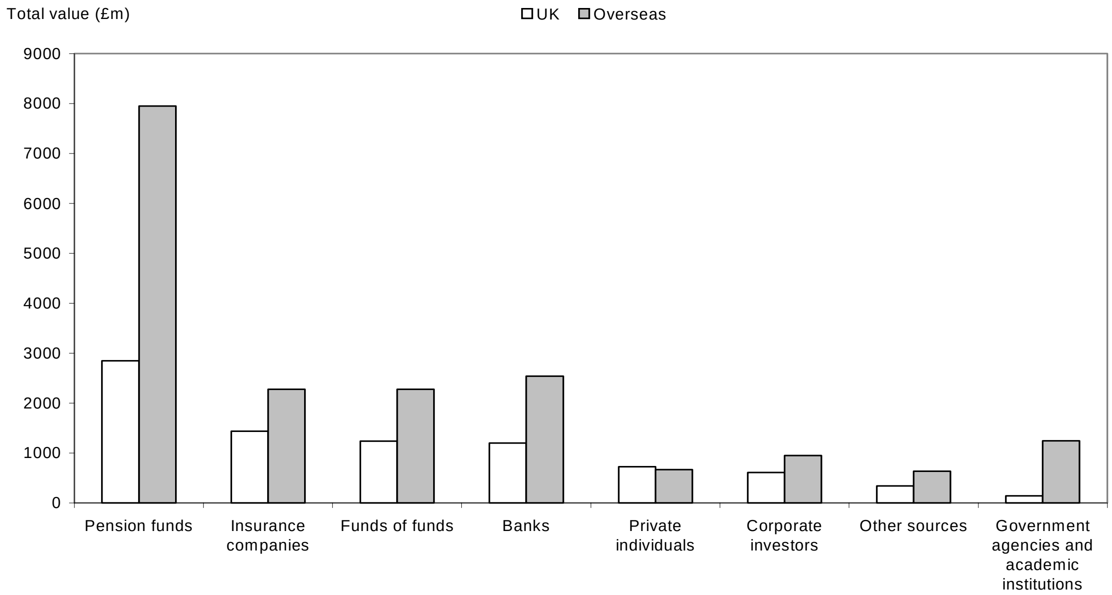


Source: BVCA (2001).

Funds raised by source

Venture funds are raised from diverse sources in the United Kingdom, *e.g*. institutional investors, banks, corporations, individuals and government (**Figure 6**). Pension funds are the largest domestic source of capital followed by insurance funds and banks. However, their role is small compared to the United States, where pension funds account for over 50% of capital raised compared to traditionally about 25% in the United Kingdom. The United Kingdom has a low level of corporate investors compared to the United States. The UK private equity market is also highly dependent on international flows similar to markets in Canada and Israel. More than 70% of funds raised in 2001 came from overseas investors, notably from North America, which contributed 46% of international capital. Overseas pension funds invested three times as much as UK pension funds between 1999-2001.

Figure 6. UK funds raised by source, 1999-2001



Source: BVCA (2002).

VENTURE CAPITAL POLICIES AND PROGRAMMES

Overview

The UK private equity market was fragmented and underdeveloped until the late 1980s, and there remains a strong orientation towards later-stage and larger deals. The UK government has undertaken numerous policies and programmes to increase access to financing for smaller start-ups. Market failures in small firm financing were first identified by the Committee on Finance and Industry (the Macmillan Committee) in 1929. In 1945, with the support of the Bank of England, the clearing banks and Scottish banks were combined to finance the creation of the Industrial and Commercial Finance Corporation (ICFC). The ICFC evolved into *3i*, which became one of the UK's top venture capital funds.

Despite this and several tax incentive schemes, lower levels of financing persist with regard to various investment sizes, stages, sectors and regions. Although the financing environment for SMEs in the United Kingdom has generally improved, the smallest firms, those in technology sectors and in particular geographic areas, still have relatively less access to equity financing. The government is trying a new approach, including changes to regulations for institutional investors and more targeted government schemes to leverage private venture funding, both domestic and foreign, for small firms.

Investment regulations

Slow growth in institutional investment in venture capital in the United Kingdom is partly due to government regulation. Less than 1% of institutional investment assets (*e.g.* pension and insurance funds) in the United Kingdom are allocated to private equity compared to almost 7% in the United States. As of 2000, the assets of UK occupational pension funds reached GBP 755 billion (81% of GDP), representing a sizeable source of capital. However, these institutions are reluctant to invest in private equity markets, and in venture capital in particular which is considered too risky and illiquid. Compared to returns to quoted equities (17% per year), UK private equity firms involved in early stage deals achieved less than 8% per year in the 1990s.

UK regulations and accounting standards have influenced the perspectives of institutional investors. The 1986 Financial Services *Act* excluded the majority of UK pension funds from investing directly in private equity funds. In addition, a minimum funding requirement (MFR) was introduced by the 1995 UK Pensions Act and came into force in April 1997. It was designed to increase the protection of defined benefit scheme members, requiring such schemes to hold a minimum level of assets to meet liabilities and establishing time limits within which any underfunding must be met. The protections designed to limit risks for pensioners further depressed private equity investment.

The 1994 Amendment to the Insurance Companies Regulation Act relaxed investment constraints on insurance companies, who slightly increased their venture investments. Although UK pension funds increased their contribution to domestically-raised funds from 24% in 1999 to over 40% in 2001, reversing the downward trend of the mid-1990s, the majority of these investments were targeted to later-stage deals.

The UK government then reviewed proposals to replace the MFR with a long-term funding standard combined with improved transparency and disclosure standards.

In 2000, the Myners Review argued that funding and investment objectives should be linked to a scheme's liability structure rather than some external benchmark, as liabilities differ between funds and over time. The Myners Review proposed changes to the 1986 Financial Services Act to liberalise conditions for pension fund investments in private equity funds. A new financial reporting standard (FRS17) will come into effect in 2003, whereby the assets and liabilities of pension funds will be valued by reference to current market conditions. The 2000 Financial Services and Markets Act is to replace the existing regulatory framework contained in the 1982 Insurance Companies Regulation Act, the 1986 Financial Services Act and the 1987 Banking Act to create a single regulator for the financial services industry. The new framework and MFR proposals are expected to encourage greater diversity in institutional investments and greater willingness to invest in riskier and earlier-stage instruments. The government will need to review the effects of these new provisions on private fund-raising and whether further reforms to encourage institutional investment are needed.

Tax incentives

The UK government has introduced generous tax incentives targeted to different types of investors to increase the supply of venture capital (**Box 1**). The Enterprise Investment Scheme (EIS) provides tax relief to individuals or business angels who invest in ordinary shares of qualifying companies. The Venture Capital Trust (VCT) Scheme provides for pooled investment funds attracting capital from individual investors and re-investing these funds in suitable ventures, with both the VCTs and individuals entitled to tax relief. The Corporate Venturing Scheme is intended to encourage the involvement of the UK corporate sector in venture capital markets, which has been limited until now. To improve the fiscal environment for entrepreneurs and venture capitalists, effective capital gains tax rates on the disposal of business assets held for more than two years were reduced from 40% to 10% by means of taper relief.

It is difficult to ascribe increases in individual (business angels) investments just to these schemes. Tax incentives, properly designed, can contribute to changes in investor behaviour. With regard to corporate venturing, the scheme introduced in 2000 is too new to evaluate. The specifics of corporate investments depend on the technology and the industry involved. Investments could be made as financial (cash) or in-kind (management or technical) contributions, in return for equity or non-equity stakes, such as licensing deals, shared ownership of patents, etc. And while many corporations may establish venture capital units in boom periods, they usually close or scale-down their investments as a first response to the downturn in private equity markets. The government should fully evaluate the effects of these tax schemes in raising private venture investment.

Box 1. UK tax incentive schemes for venture capital

The Enterprise Investment Scheme (EIS) was introduced in 1994 to help overcome the problems faced by small companies in raising small amounts of equity finance. It is available for start-ups as well as established firms. The EIS provides a range of tax reliefs for investors:

- *Income tax relief* is a reduction in income tax liability, calculated at the lower rate of income tax (20% in the tax year 1999-00) normally on the full amount of investment in eligible shares in qualifying companies, up to a total of GBP 150 000 for shares issued in any one tax year. If the investors are qualified for income tax relief, they may also be eligible for one of the following reliefs when they dispose of the shares in question:

- *Capital gains tax exemption*: Provided that no income tax relief has been withdrawn, a gain arising after at least three years on the disposal of any shares on account of their increase in value over the holding period will be exempt from capital gains tax where the GBP 150 000 investment is not exceeded.

- *Loss relief:* If on the other hand, there is a capital loss on disposing of the shares at any time, the investor is entitled to loss relief, deducting the loss (less income tax relief attributable to the shares) from his income for tax purposes.

- *Capital gains deferral:* Investors may also defer a chargeable gain made on the disposal of any other asset if the gain is re-invested in an EIS company. There is no limit on the amount of gain that may be deferred and there is no requirement that the investment also obtains income tax relief.

The Venture Capital Trust (VCT) scheme was initiated in April 1995. VCTs are quoted companies, which attract investment from individuals and then invest their funds in qualifying companies. Individuals who invest in VCTs are entitled to various income tax and capital gains tax reliefs, and VCTs are entitled to exemption from corporation tax on any gains arising on the disposal of their investments. There are two *income tax reliefs*: exemption from income tax on dividends from ordinary shares in VCTs (dividend relief), and income tax relief at the rate of 20% for the tax year in which an investment is made in VCT shares, provided that they are held for at least three years. There are also exemptions from *capital gains tax* on gains arising on disposal of ordinary shares in VCTs and *deferral of capital gains* arising on the disposal of any assets on or after April 1995. The reliefs are applicable on shares in VCTs acquired up to a maximum of GBP 100 000 per tax year.

The Corporate Venturing Scheme, introduced in 2000, is intended to encourage venture investments by corporations. The incentives are available in respect of qualifying shares issued between 1 April 2000 and 31 March 2010. The following tax reliefs are available to the investing company:

- *Investment relief* against corporation tax at 20% of the amount subscribed for new full-risk ordinary shares of unquoted small higher risk trading companies, provided that those shares are held for a minimum of three years.

- *Deferral of corporation tax* on any chargeable gains on disposal of corporate venturing investments reinvested in a new shareholding qualifying for investment relief.

- *Capital loss relief* against income for any capital losses on disposal of corporate venturing investments, net of any investment relief retained after the disposal.

To be eligible for these tax incentives, both the investing company and the company receiving the investment have to fulfil a set of requirements: the investing company must not hold more than 30% of the issuing company's ordinary share capital, and the gross assets of the issuing company in return should not exceed GBP 15 million.

Equity programmes

In the late 1990s, the UK government shifted its focus from regulatory and tax policies to more targeted initiatives to increase access to venture capital for small firms. The 1998 Competitiveness White Paper announced the establishment of the UK High Technology Fund and Regional Venture Capital Funds (RVCF), which were followed by the Community Development Venture Capital Fund (CDVF) and the Early Growth Fund in 2002 (**Box 2**). The first is a fund-of-funds where government seed financing leverages additional private investment, while the regional funds aim to reduce geographical imbalances in the allocation of private equity investments. In addition, Scotland, Wales and Northern Ireland have their own venture capital programmes. A derivative is the Community Development Venture Capital Fund (or Bridges Fund) which aims to stimulate the provision of venture capital to SMEs in the relatively more deprived areas of the United Kingdom. The High-Technology and Early-Growth Funds are the most recent additions, designed expressly to target early-stage and technology-based firms.

Box 2. Government venture capital funds in the United Kingdom

The Enterprise Fund (1998) is intended to stimulate the availability of finance for small firms as well as foster regional development. In addition to loan guarantees, there are other types of assistance available through this fund:

- *The UK High Technology Fund* (2000) is a fund-of-funds supporting early-stage high technology businesses. The DTI plans to invest GBP 20 million as a cornerstone investor and to leverage up to GBP 100 million additional investment, particularly from UK institutional investors.

- *The Regional Venture Capital Funds* (RVCFs) (2000), the first of which became operational in 2001/2002, aim to create a network of venture capital funds in the country's nine regions. Each fund must have a commercial focus, be managed by experienced fund managers and raise significant private sector investment. Each fund needs to raise and manage at least GBP 10 million with the first round of investments only up to GBP 250 000; subsequent investments (at least six months later) may add a further GBP 250 000. The European Investment Fund agreed to invest around 20% of the maximum programme size.

The University Challenge Fund aims to strengthen public/private partnerships by facilitating the transfer of science, engineering and technology from universities into commercial application. The fund provides capital for early-stage financing to enable universities to develop business proposals and start-up companies.

The Community Development Venture Fund (CDVF) (2000) is a pilot fund, in which the Government will contribute up to GBP 20 million in matched funding, for provision of venture capital to SMEs in deprived districts in England. It is managed by a commercial venture capital partnership. Initial investment deal sizes may be up to GBP 500 000 with possible subsequent investments of GBP 250 000.

The Early Growth Fund is a fund created by the Small Business Service in 2002 to encourage risk funding of start-ups. All bids have to have commercial focus, be linked to the local business infrastructure and be complementary to existing activities.

In creating these funds, the UK government is attempting to leverage private investment through provision of equity. By emphasising the local dimension, it is hoped that the failure rates for early-stage deals can be lowered. Regional and community funds can also increase awareness about venture financing among the local business community. On the other hand, there can be a "crowding out" effect from government backed funds, although the UK schemes seem to have been designed not to compete with existing finance sources. Private investors could be driven out as the rate of return of private funds and publicly-backed funds diverge. This could be especially important if the size of the market is limited -- particularly in given regions and communities -- and the number of potential deals is small. The government should evaluate these schemes after a few years in place and allow greater scope for private equity once the imbalances regarding smaller, earlier-stage deals are overcome.

Business angel networks

The United Kingdom provided the earliest government support to the creation of business angel networks, which now figure prominently on the UK venture capital landscape. There are a growing number of business angel networks, estimated at 50 in 2001, one of the highest levels in the OECD. There are an estimated 20 000 to 40 000 business angels in the United Kingdom, who invest around GBP 500 million to GBP 1 billion a year in 3 000 to 6 000 businesses, putting them at par with private fund investment in early-stage deals (Mason and Harrison, 2000).

UK business angels tend to invest in the technology sector (30%) in businesses in their areas, and generally have a longer investment horizon (five years or longer) than formal private equity funds. These business angels are high net worth individuals, *e.g.* entrepreneurs, senior managers, etc., who invest in small businesses, primarily during the early stages of development. They operate in a specific segment of venture capital markets considered too risky by many other investors with a median deal size of GBP 75 000. They also provide small firms with managerial advice to improve their investment readiness.

In 1999, the UK government assisted in the creation of the National Business Angels Network Limited (NBAN), supported by the UK Small Business Service and sponsored by major banks and financial firms. NBAN is also affiliated with Business Links and local Enterprise agencies which help to match businesses seeking finance and potential investors. EquityLink™, developed by Business Links in 1994, helps firms prepare business plans in line with the requirements of investors. However, demand for venture capital by smaller firms in the United Kingdom may be insufficient regardless of supply initiatives. Complementary schemes, such as improving co-ordination with local business angel networks, widening coverage of investment readiness programmes, and increasing incubator programmes and university spin-offs may be needed.

Second-tier stock markets

The London Stock Exchange introduced the Alternative Investment Market (AIM) in 1995 as a second-tier stock market with less stringent admission requirements and lower initial and continuing costs, better suited to the initial public offerings (IPOs) of young, high growth companies. OFEX was created as an off-market trading facility to prepare companies to progress to AIM. Several other sub-exchanges were also introduced: techMark was launched in 1999 for firms in high-technology sectors. Changes to the listing rules of the London Stock Exchange allowed innovative high-revenue growth companies without a three-year trading record to seek a listing on the main market and to join techMARK. For example, techMark mediscience concentrates on the healthcare sector, namely biotechnology, pharmaceuticals and medical technology, while landMARK has been introduced as a market for quoted regional companies.

The rise of secondary markets in the United Kingdom has not been matched with a parallel increase in market capitalisation and liquidity. The highest amount of exits in the United Kingdom in recent years have mainly been in the form of trade sales (38%) rather than through IPOs. Although the number of UK divestments increased considerably in 2001, this was mainly from write-offs as many private equity funds re-evaluated their portfolios and divested portfolio firms that had bleak prospects. Compared to the NASDAQ in the United States, which had 4 000 listed companies and market capitalisation around 28% of GDP in 2001, the AIM is still under-performing (**Table 2**). In 2001, listed companies on AIM totalled 629, IPOs numbered 177 and market capitalisation amounted to 1.2% of GDP. However, the UK markets which were created in the mid to late 1990s cannot be expected to be as mature as the NASDAQ, created in 1971.

In general, there is the problem of fragmentation in European second-tier markets. Several second-tier markets were recently launched in Europe, including Euro.NM, a consortium of the French *Nouveau Marché* (1996), EASDAQ (1996), the German *Neuer Markt* and the Belgian New Market (1997). The fragmentation of the European stock exchanges and the resulting limited capitalisation and liquidity of individual markets seem to be an important barrier to the development of venture capital in the United Kingdom and elsewhere. Capital market regulation in the European Union may need reform to allow the creation of a single stock market for growth companies (including the UK markets) to promote more economies of scale.

Table 2. Comparison of NASDAQ (US) and AIM (UK), 1997 to mid-2002

Year	Number of initial public offerings (IPOs)		Number of quoted companies		Market capitalisation (billion USD)		Market capitalisation (% GDP)	
	NASDAQ	AIM	NASDAQ	AIM	NASDAQ	AIM	NASDAQ	AIM
1997	494	107	5487	308	1835	9	22.1	0.7
1998	273	47	5068	312	2589	7	29.5	0.5
1999	485	102	4829	347	5205	22	56.0	1.5
2000	397	277	4734	524	3597	22	36.1	1.6
2001	63	177	4109	629	2900	17	28.0	1.2
Mid 2002	29	66	3883	663	2161	18	19.8	1.2

Source: www.londonstockexchange.com and *www.nasdaq.com*.

REFERENCES

Bank of England (2001), *Financing Technology-Based Small Firms*.

Bank of England (2002), *Finance for Small Firms*.

Barkley, B., D.M. Markley and J. Rubin (1999), "Public Involvement in Venture Capital Funds: Lessons from Three Program Alternatives", Rural Policy Research Institute.

Baygan, G. and M. Freudenberg (2000), "The Internationalisation of Venture Capital Activity in OECD Countries: Implications for Measurement and Policy", STI Working Paper 2000/7, OECD.

Black, B.S. and R.J. Gilson (1998), "Venture Capital and the Structure of Capital Markets: Banks versus Stock Markets", *Journal of Financial Economics,* Vol. 47.

British Venture Capital Association (BVCA) (2000), *Private Equity and Venture Capital Performance Measurement Survey*.

British Venture Capital Association (BVCA) (2001), *Sources of Business Angel Capital*.

London Business School (LBS) (2000*a*), *UK Private Equity as an Asset Class for Insurance Companies.*

London Business School (LBS) (2000*b*), *UK Private Venture Capital and Equity as an Asset Class for Institutional Investors.*

Mason, C.M. and R. T. Harrison (2000), "The Size of the Informal Venture Capital Market in the United Kingdom", *Small Business Economics*, 15.

Mason, C.M. and R.T. Harrison (2002*a*), "Is It Worth It? The Rates of Return from Informal Venture Capital Investments", *Journal of Business Venturing*, vol. 17, 211-236.

Mason, C.M. and R.T. Harrison (2002*b*), "The Geography of Venture Capital Investments in the United Kingdom", *Transactions of the Institute of British Geographers*.

OECD (1997), *Government Venture Capital for Technology-Based Firms* [OCDE/GD(97)201].

Penguin Dictionary of Economics (1998), "The Macmillan Committee".

UK Inland Revenue (2001), *Budget 2001*.

UK Small Business Service (2001), "Early Growth Funding Information Pack and Bidding Guidance for Applicants".