Article:
Toms, S, Wilson, N and Wright, M (2015) The Evolution of Private Equity: Corporate Restructuring in the UK, c.1945-2010. Business History, 57 (5). pp. 736-768. ISSN 0007-6791

https://doi.org/10.1080/00076791.2014.977262

The Evolution of Private Equity: Corporate Restructuring in the UK, c.1945-2010

By

Steven Toms*
Accounting and Finance Division
Leeds University Business School

Nick Wilson
Credit Management Research Centre
Leeds University Business School

Mike Wright
Centre for Management Buy-out Research
Imperial College Business School
And
University of Ghent

Word count: 10,100 (excluding tables and notes)

***Correspondence:**
J.S. Toms
Professor of Accounting and Finance
Leeds University Business School
Room 2.09, Maurice Keyworth Building
University of Leeds
Leeds
LS2 9JT
Tel: 44(113)-3434456
Email: J.S.Toms@leeds.ac.uk
http://business.leeds.ac.uk/about-us/faculty-staff/member/profile/steve-toms/

The Evolution of Private Equity: Corporate Restructuring in the UK, c.1945-2010.

Abstract

The paper analyses the role of private equity in restructuring the UK corporate economy. It develops a theoretical synthesis to show that the evolution of the PE industry and firms in which it invested were governed by the relations of corporate governance between investor and investee companies. Effective governance relations were a necessary condition for success and complement firm specific resources to create competitive advantage. Four case studies are used to show the contrasting effects of these determining factors, ICFC and Slater Walker, and the two waves of buy-out centred restructuring that developed with the maturity of the PE industry after 1980. In contrast to the evolutionary approach, the periodisations utilised in this study show that structural breaks associated with points of institutional reform are also necessary to make firm specific resource and governance determinants of competitive advantage operable.

Introduction

This paper analyses the radical impact of private equity (PE)[1] in restructuring the British corporate economy in the period 1945-2010. A historical approach is particularly useful because several contrasting models of industry financing and governance have been used since the Second World War resulting in differing performance outcomes. It is therefore possible to use these contrasts to examine the critical success factors associated with the provision of financial services to industry. To examine these contrasts the paper covers three periods. The first up to around 1980 featured attempts to mobilise venture capital by government backed initiatives on the one hand and aggressive speculative buying and selling of companies on the other, both of which were relatively unsuccessful. Second, the post 1980 period saw the rapid emergence of the PE industry and associated management buy-outs, the first wave of deals lasting until the late 1980s. The third period is the subsequent second PE wave in the early 2000s, with different characteristics, reflecting the greater maturity of the industry, and which lasted up to the financial crisis of 2007-08. By examining the determinants of success and failure in these three periods, the paper aims to identify critical success factors in corporate governance likely to assist practitioners and policy makers.

[1] Private equity is risk capital ("equity") provided outside the public markets (hence "private", as opposed to public) (Gilligan and Wright, *Private Equity Demystified*). Private equity is about buying stakes in businesses, transforming businesses and then realising the value created by selling or floating the business. These businesses range from early stage ventures, usually termed venture capital investments, through businesses requiring growth capital to the purchase of an established business in a management buyout or buyin. Although all these cases involve private equity, the term now generally refers to the buyouts and buyins of established businesses and these are the focus of this study. Private equity investments are illiquid and traded only on acquisition or exit (although this is changing). Generally, but not always, private equity managers have very good information prior to making their investment through their due diligence processes and during any investment through contractual rights and close involvement with the investee company.

Although the traditional business history style objective of using evidence from multiple sources to test period and context specific necessary conditions and cause and effect relationships is important, another aim is to show how the insights offered by evolutionary theory might be complemented. In evolutionary theory, the firm is normally taken as the unit of analysis, or variable whose evolution is to be theorised and whose behaviour is governed by capabilities, decision rules and routines. The variable set is governed by some inertial tendencies, but also subject to dynamic and systematic winnowing mechanisms and random variations.[2]

Examining the role of PE provides an innovative opportunity to theorise a new evolving variable set: the *relations* between the PE firm and investee firm.[3] These relations are essentially the governance and accountability structures that are enforced in return for the provision of financial resources.[4] Systematic winnowing mechanisms arise from market and non-market institutions, principally the market for corporate control (MCC) [5] and the institutions of political regulation respectively. At the same time, governance and accountability relations are subject to random variations, for example arising from continuous asset revaluations determined by trading or speculative activities and the impact on risk and return of claims associated with those assets. They are also subject to forms of inertia, for example where economic relations become embedded in social ties or through

[2] Nelson, 'Recent Evolutionary Theorizing', pp.54, 68. Nelson and Winter, *An Evolutionary Theory*, p.4.

[3] In the fashion of Nelson and Winter (*An evolutionary theory*, p.47), this variable is used for the purposes of 'appreciative theorising', applied using a business history approach.

[4] Such an approach complements studies that have examined the dynamics of large shifts in governance structure, such as the impact of deregulation Kole, and Lehn, 'Deregulation'.

[5] The MCC refers to the existence of conditions, for example liquid share markets, transparent and flexible managerial labour markets, appropriate institutions of financial inter-mediation, promoting the realisation of the collective value of the firm's assets (Hitt, et al, 'The market for corporate control').

contractual lock-in effects, managerial entrenchment and rent-seeking behaviour.[6] Because the relations of governance and accountability are the key variables, rent seeking is defined here as a function of human activity and the creation of knowledge assets, that might arise for example from R&D routines. Insofar as value arises from these routines through innovation, the rents can be captured purely by the individuals creating them where governance mechanisms are ineffective. Where governance is more effective, the profits of innovation are captured in the form of profits as an index of observable competitive advantage for the capital market.

Utilising a set of governance relation variables, the paper contributes in several ways. First, it enhances the strategic management literature by advancing a theoretically consistent explanation of how governance relationships might enhance competitive advantage. Second, by examining the creation of value through the possession of knowledge used in business relationships,[7] it provides a vehicle for improving our understanding of the symbiotic development of business organisations and the MCC. Rather than studying the MCC as an economic institution, this approach concentrates instead on examining the acquisition and application of knowledge by market participants. Financial services firms, such as merchant banks, venture capital and PE firms are of equal importance vis-a-vis firms producing goods and services, which are often the principal or sole focus of analysis in both the business history and strategic management literatures. Third, it adds to the business history literature by examining the strategic role of intermediate organisations and how they have contributed to the evolution of capitalist institutions, business organisations and their performance. In doing so it updates our knowledge of the

[6] On embedded relations, see Granovetter, 'Economic Action'.
[7] And builds on previous knowledge based approaches, e.g., Grant, `Toward a knowledge-based theory'.

development of the market for corporate control since 1980, up to and including the recent financial crisis.

To achieve these objectives the paper introduces a conceptual framework relating knowledge assets, financial resources and governance relationships to competitive advantage, set out in the next section. To assess the implied relationships, the paper then presents an empirical case study of the UK PE market 1950-2010 in three parts. The first deals with two contrasting case studies, the government backed Industrial and Commercial Finance Corporation (ICFC) and its successor organisation, Investors in Industry (3i) and the creation and downfall of the Slater Walker empire based on the speculative buying and selling of companies. The second examines the features of the first wave of PE. The third deals with the second PE wave. A final section draws conclusions.

Literature review and conceptual framework

In 1950 the governance and accountability relation between capital markets and industry was characterised by block shareholdings of family and managerial groups as a consequence of earlier phases of economic development.[8] The MCC promoted amalgamations of firms into industrial federations, encouraging director interlocks and limiting the influence of outside and institutional investors. Hostile takeovers became more prevalent in the 1960s as firms used the stock market to raise new capital and a more active market in company shares developed.[9] The development of diversified, decentralised managerially controlled firms proceeded in the period up to 1980, but was truncated by the subsequent institutional changes, characterised as 'financialisation', including financial market liberalisation,

[8] Chandler, *Scale and Scope*
[9] Hannah, *The rise of the corporate economy;* Higgins and Toms, 'Financial Institutions''

globalisation, and emphasis on higher and short term returns on financial investments as performance measures.[10]

The emergence of the PE industry and associated restructuring provides a strong contrast to the characteristics of family, insider and managerial capitalism adopted in some UK economic sectors in the period 1950-1980.[11] Its development has been associated with the evolution of deeper financial markets, more transparent corporate governance and a breaking down of monopoly rents in relational banking and in industrial sectors hitherto controlled by large firms.[12] Since 1980, the 'retain and reinvest' financial strategy of large corporations has been replaced by a 'divest and downsize' logic which has resulted in increased dividend payments and share repurchases and reductions in the workforces of large US and UK corporations, driven by financial market deregulation and the emergence of the MCC.[13] Contrasting these trends, prior business history literature has documented the development of the buy-out market, the emergence of PE funded buy-outs in the UK as a contrast to Chandler's explanation of British economic decline, and an explanation of the historic differences between the role of PE in the US and UK contexts.[14] The emergence of PE and other capital market intermediaries has been characterised as comparable to the managerial revolution in terms of its effect on business organisation and the distribution of

[10]Langley, 'In the eye of the perfect storm', p. 539; Stockhammer, 'Financialisation', p. 722; Cutler & Waine, 'Social insecurity', p.100).

[11] Toms and Wright 'Corporate governance, strategy and structure', Toms and Wilson, 'Scale, scope and accountability'.

[12] Rajan and Zingales, 'The great reversals'

[13]Lazonick and O'Sullivan, 'Maximising shareholder value'.

[14] Respectively, Wright, Chiplin, Robbie, & Albrighton, 'The development of an organisational innovation'; Toms and Wright 'Corporate governance strategy and structure'; Toms and Wright ' Divergence and convergence'.

surplus away from traditional stakeholders, including shareholders, in favour of a new elite.[15]

Observing these developments, as early as 1989, Jensen argued that the public corporation was being eclipsed by the emergence of PE and that this was a positive development. Business performance he argued was inhibited by embedded agency costs in the traditional diversified publicly quoted conglomerate. PE backed firms by contrast were able to embed capital market mentalities into managerial behaviour and incentives, whilst using high levels of debt to restrict access to free cash flow.[16] In contrast, Lazonick and O'Sullivan argue that the explosion in executive remuneration and the development of stock option based incentive packages for senior executives successfully created alignment of managerial behaviour in favour of shareholder value maximisation.[17] However, the use of these incentives has often led to opportunistic behaviour by managers at the expense of shareholders and internal stakeholders.[18] Private ownership and executive incentives may therefore be substitutes and act as necessary but not sufficient conditions for competitive advantage and the creation of shareholder value.

To build on this literature, we propose that the governance skills offered by PE investors can create competitive advantage, particularly through the application of specialist knowledge of capital market functions. Resource based view (RBV) theorists have argued that value arises from acquiring or merging with firms that possess different but complementary resource mixes, thereby creating synergistic complementarities.[19] Such

[15]Folkman, et al 'Working for themselves'; and c.f. Wood and Wright 'Wayward agents'.
[16] Jensen, 'The eclipse of the public corporation'.
[17]Lazonick and O'Sullivan (2000), 'Maximising shareholder value'
[18] Boyer, 'How to Control and Reward Managers'.
[19]Hitt, Hoskisson and Kim, 'International Diversification'.

resources might include both production *and* governance skills[20], which in turn are complementary within and between firms.[21] For PE firms, these might consist of financial and governance engineering.[22] Madhok defines 'governance skills', as the 'skills involved in structuring and managing the exchange relationship', suggesting that such skills are 'possessed' by 'the firm'.[23] However where competitive advantage and value is created through complementary resource mixes, it follows that governance skills must arise from the sharing of knowledge between corporate managers and the owners of capital, and cannot be fully internalised or appropriated by the firm, but must also be possessed to some extent by the providers of capital. It is useful to extend Madhok's and other RBV theorists' approaches in this fashion because it removes the problem of reification suggested by the notion of 'firms' possessing skills.

If a dynamic capability is defined as the firm's 'processes to integrate, reconfigure, gain and release resources, to match and even create market change,' [24] then effective governance processes are necessarily implicated in what is required to create competitive advantage on this basis. The role of PE, as outlined by Jensen, also matches these processes in that all can be linked to strategic value creation. For Jensen, this is effective because capital market mentalities are ingrained into managerial decision making. However this only follows insofar as capital market rationalities can be translated into clear decision making criteria for managers.[25] Where idiosyncratic knowledge is embedded in firm or asset specific processes, there are problems translating process specific probabilities and lead times into

[20] Barney, Ketchen and Wright, 'The Future of Resource-based Theory'.
[21] Madhok, 'Reassessing the fundamentals'.
[22] Kaplan and Stromberg, 'Leveraged buyouts'.
[23] Madhok, 'Reassessing the fundamentals,' pp.545-546.
[24] Eisenhardt and Martin 'Dynamic capabilities' p.1107.
[25] Where production is performed by teams and individual contributions are unknown, the transaction cannot be metered by markets, Alchian and Demsetz 'Production, information costs'.

parameters for capital market valuation models. For these reasons, PE firms rely on signals that go beyond the content of business plans, relying on sound ideas and social contacts, such that social capital ties are a necessary condition for the creation of dynamic capability.[26]

Intermediaries occupying a network position between otherwise unconnected actors, accrue rents by brokering information or resources, so that network centrality might put an intermediary in a better position to accrue rents.[27] For example, PE investors act as gatekeepers for their portfolio companies, facilitating information flows through their network.[28] Analogously, in a capital market informed individuals accrue abnormal returns through differential access to information.[29]

Although the end result is similar, firms and capital markets create rents in different ways. The firm, and firm level actors, create rents through the development of innovative resource combinations. In capital markets, rents arise from mispricing and adjustments towards equilibrium. Where new information reaches the market in the form of a generic shock, for example a sudden change in the oil price, it is more effective at processing information than individuals, and adjusting corporate valuations accordingly. Conversely, where new information reaches the market from within the firm, for example an investment in a process likely to lead to an R&D breakthrough, firm insiders will be better placed than the market to evaluate its likely effect. In the knowledge-based view, these directions of information arrival impact who appropriates surplus and the character of the surplus. Firm level knowledge where linked to discovery is value creating non-zero sum rent. Firm insiders

[26] Blyler and Coff, 'Dynamic capabilities'; Shane and Cable, 'Network ties'; Sacks, 'The social structure'.
[27] Burt *Structural Holes*, Blyler and Coff, 'Dynamic capabilities', p.683.
[28] Lam, 'Venture capital financing'.
[29] Grossman and Stiglitz, 'On the impossibility of informationally efficient markets'.

are in a good position to appropriate the gains from discovery where there is causal ambiguity of contribution or the knowledge is idiosyncratic.[30] Market engendered knowledge on the other hand arises from circulation of capital and in its purest form is a transaction cost driven zero sum game.

However, capital can never engage in pure circulation; at some point capital that has arisen from the productive sphere must re-enter it in the form of reinvestment. It is at these points of entry and exit that governance skills can be important and value adding.[31] Value creation arises from knowledge sharing; for example PE firms create competitive advantage through rigorous due diligence procedures.[32] Because firms have different levels of absorptive capacity, defined as the ability to identify, accumulate, process and use the new knowledge gained from external sources,[33] they will assimilate knowledge at different rates. Even in a fairly efficient market, abnormal returns accrue to relatively informed investors at the expense of the uninformed.[34] It follows that specialist capital market participants can create capital market based competitive advantage where knowledge processes are linked to technical market operations, for example derivative trading. Indeed evidence suggests that PE investors are better monitors with better incentives than public shareholders, especially in firms with significant derivative trading activity and derivative contract positions.[35] PE investors, as financial specialists, are often involved in further fund raising and M&A-operations.[36]

[30]Blyler and Coff, 'Dynamic capabilities', p.682.
[31] Secondary and derivative markets are more likely to resemble a pure zero sum game (Telser, 'Why there are Organised Futures Markets'.
[32] Wright, Jackson and Frobisher, 'Private equity in the UK', p.89.
[33] Zahra, Filatotchev and Wright,' How do threshold firms sustain corporate entrepreneurship'?
[34] Grossman and Stiglitz, 'On the impossibility'.
[35] Masulis and Thomas, **'**Does Private Equity Create Wealth?'
[36]Gorman and Sahlman, 'What do venture capitalists do?' Sahlman, 'The structure and governance '.

The joint determinants of competitive advantage that follow from this linkage, firm resources and governance skills, are set out in figure 1. These physical, knowledge and financial resources are used to categorise specific aspects of the *relations* between the investee firm and the portfolio firm investor, set out in the second and third columns. These are the critical success factors that if positive will be linked to strategic outcomes for the partner on each side of the relation. Following the above review, the framework hypothesises that rent accrual to insiders will be reduced by due diligence and related monitoring processes. PE firms will use their network to access external economies of scale and scope, e.g. cheaper and multiple sources of finance, and can add value through governance skills, e.g. due diligence, new forms of financing, technical knowledge of capital market operations, incentive alignment etc. In the cases below, empirical evidence is analysed according to the sub-sections in figure 1.

Figure 1 about here

Success and failure in corporate finance and restructuring pre 1980

For long periods, the British economy developed without the benefit of institutions focused on providing structured finance to industry, particularly small and medium sized enterprises (SMEs). As a consequence, historians have characterised the banking system as having 'failed' British industry.[37] A long run reason was the separation of 'high finance', the development of the London money market to support government and international

[37] Committee on Finance and Industry (Macmillan Committee): Report of Committee (Cmd. 3897), 1931; '[T]he same problem was being called the 'equity gap' in 2010, although the range was from £250,000 to one million pounds' Green, 'Foreword', p.3; Capie, and Collins, *Have the Banks Failed British Industry?*

borrowing, and 'low finance', the emergence of country banks to support industrialisation.[38] In the latter half of the nineteenth century, Gladstonian balanced budget finance created a demand for private sector bond finance and structured debt in the form of preference shares and debentures.[39] By the early twentieth century, banks had evolved into an oligopolistic risk-averse cartel, reluctant to lend start up capital to smaller businesses.[40] As a consequence, British firms were used to relying on banks for working capital finance, and regional stock markets for long term sources of funding. Established firms relied on their own resources, reinforcing family and insider control, whilst new risky ventures attracted funds from syndicates of wealthy investors.[41] In 1931, policy makers identified the lack of finance for industrial growth, in the range of £5000-£200,000, as the 'MacMillan gap', and this came to dominate the policy agenda for the next 70 years.

Against this background, the period 1945-1980 is worthy of more detailed analysis, as it provides a series of contrasts, at institutional, policy and firm levels, to the conditions that typically prevailed after 1980 and which facilitated the emergence of a substantial PE industry. These contrasts allow the sufficient and necessary conditions for the development of financial support for innovation and enterprise to be identified.

Two cases are chosen, ICFC and Slater Walker. For many years, ICFC was the only dedicated source of tailored PE finance for SMEs, which in contrast to the post 1980 PE industry was closely controlled by the banking institutions, including the Bank of England. Its achievements were modest until the mid 1970s, reflecting the conflicting objectives of its shareholders and providing a useful illustration of governance constraints on resource use. The activities of Slater Walker on the other hand typified the wave of conglomerate based

[38] Michie, *Guilty Money*.
[39] Cottrell, 'Domestic finance 1860–1914', pp.257-279.
[40] Coopey, 'The First Venture Capitalist', pp.262-263.
[41] Michie, 'Options, Concessions, Syndicates', pp.147-165.

reconstruction arising from the development of the MCC in the 1960s. Other firms, such as Lonrho, Hanson and GEC, were also leading cases, although their acquisitions could be related to their core industrial strategy or longer run investments.[42] For Slater Walker, the object was buying companies for purely financial investment purposes, so that the firm better typified the wasteful and ultimately ineffective corporate restructuring of the pre 1980 period. These organisations represent different aspects of venture capitalism, characterised by portfolio holdings of high risk businesses in need of expertise and finance.[43]

ICFC/3i

ICFC was set up by the government with enforced participation by the clearing banks in 1945. Its objective was to provide medium and long term finance to SMEs, with the Finance Corporation for Industry (FCI) providing finance for larger enterprises.[44] Owned and controlled by the clearing banks, ICFC replicated many of the traditions of British finance, notwithstanding its apparent venture capitalist role. There is little prior research evidence on the ICFC, and the histories that have been written credit it with limited success based on firm specific long run investments, including risky sectors that might have been ignored by the banks, and note that it was held back by the restrictive attitudes of its owners, the commercial banks. As a consequence, ICFC did not experience the same pressures for delivering short term returns as the standard venture capital model based on a closed end limited partnership.[45]

[42] For example Hanson claimed it was only interested in buying companies for long term investment and not for selling on. *Economist*, 29th October 1977,
[43]Martin, 'The Growth and Geographical Anatomy', p.391.
[44] Coopey and Clark, *3i*; *Economist*, 2nd November, 1974, p.91.
[45]Merlin Jones, *The Industrial and Commercial Finance Corporation,* p.7.

ICFC slowly built up its resource base and investment selection skills in the period 1945-1975. In the style of the traditional bank, it exercised careful scrutiny and conscientiously investigated funding applications.[46] It attracted criticism for its cautious lending policy, being overly selective and preferring larger firms in adverse economic conditions.[47] ICFC also provided expertise in new stock issues for firms wishing to float on the market, including provision of expertise in the allotment process.[48] There was also an emphasis on working capital finance and a reluctance to take up equity stakes.[49] In 1952, only 8% of funds were invested in equity, with 38% in secured loans and 22% in unsecured loans, reflected in a general reduction in bad debt provisions.[50] As selection criteria were tightened further in the credit squeeze of the 1950s, only 15% of cases supported were entirely new ventures.[51] ICFC did not always successfully screen potential investors and was found wanting in its flotation of Ralph Hilton Transport Services, being unaware of Hilton's lack of integrity and accounting manipulations.[52]

From the outset, ICFC was able to provide bespoke financial services giving firms access to lines of credit. Its lending policy was created to directly address the Macmillan gap, providing loans in the £5000 to £200,000 range.[53] As ICFC progressively introduced more specialist subsidiary operations, its client organisations could access additional

[46] Stress was placed on accounting, technical and management quality aspects. Coopey, 'The First Venture Capitalist', p.265; 'ICFC Finds Prosperity' *Economist*, 14th May, 1955; p. 596.'Industrial and Commercial Finance Corporation', *Economist*, 14th May, 1955, p. 628

[47] 'ICFC "Achieves Viability"', *Economist,* 20th November, 1948, p. 847.For example theWD Evans Golden Produce flotation; 'Sorting Out the Stags',6thMay 1961, p. 57.

[48] In doing so, it attracted criticism for assisting established businesses rather than addressing the 'MacMillan gap'. 'The Role of ICFC', *Economist*, 5th April, 1947, p. 509.'CFC and New Issues', 27thMarch, 1948, p. 519.

[49] 'The ICFC In A Hesitant Economy', *Economist,* 20th May, 1950.

[50] 'ICFC's Steady Expansion' *Economist,* 17th May 17, 1952; p. 470.

[51]*Economist,* 7th July, 1956; p. 89.

[52] 'ICFC and Accountants Blamed in Hilton Report', Michael Lafferty, *Financial Times*, 17th September, 1976; p. 34.

[53]Merlin Jones, *The Industrial and Commercial Finance Corporation,* p.5.

bespoke financial services. These included the Estates Duties Investment Trust Company Ltd ('Edith') in 1953 and Technical Development Capital (TDC) in 1966, which were established for very different purposes and only enjoyed moderate success.[54] ICFC engaged throughout the build up of the Ship Mortgage Finance Company, up to and including its public flotation by a £4m debenture issue, but the amounts involved were insufficient to develop the ability to win contracts.[55] The ICFC Venture Capital Fund was used inter alia to rescue strategic companies in difficulty.[56] As the MCC developed in the 1960s, ICFC became a more aggressive, merchant bank type organisation, and set up its Industrial Mergers Ltd subsidiary charging commission where it had previously offered informal advice. It thereby became involved in 33 successful mergers in its first year.[57]

Notwithstanding these apparent successes, a major limitation arose from ICFC's network relationship with financial institutions. The shareholding clearing banks deliberately referred 'hopeless' cases to the ICFC,[58] potentially undermining its ability to perform due diligence. They treated ICFC as a rival, which took business from them in times of tight credit.[59] Until the late 1950s ICFC's resources were frequently squeezed when its shareholding banks restricted capital or increased its cost.[60] This was overcome to some extent by an ICFC debenture issue in 1959. The £10m issue was a measure of lending

[54] Edith assisted family firms to market their shares and retain control in the face of capital succession taxes. With a 'strong board', its purpose was not to provide expertise, and it only took minority interests or non-voting preference shares, avoiding direct managerial roles. '"Edith" Steps Out', *Economist* ,28th March 1953; p. 892;'Edith Comes Out', *Economist* 29th May, 1954; p.731; TDC acted as a venture capitalist for high risk technology firms, but was only a 'moderate performer', Coopey, 'The First Venture Capitalist', p.267.

[55] 'Money for Ships', *Economist*, 10th September, 1960, p. 1025. 'Hole Amidships', *Economist,* 7th October, 1961, p. 72.

[56] 'Marwin's offer', *Economist* 27th January, 1973; p.68

[57] 'For the small fry', *Economist,* 24th June, 1967; **'**Modest targets', *Economist*, 15th June, 1968, p.67;

[58] Coopey, 'The First Venture Capitalist', p.265. Coopey and Clark, *3i.*

[59]Improving Export Finance', *Economist*, 4th November, 1961, p. 475; 'More Kites', *Economist,* 9th December, 1961, p. 1056. 'New Role Needed', *Economist*, 21st May, 1966, p. 874

[60] Coopey, 'The First Venture Capitalist', p.265.

success, albeit at rates commensurate with commercial lending during the credit squeeze.[61] Even so, in the 1960s ICFC lending reached another plateau, with commercial banks better able to lend due to tax allowances on borrowed funds.[62] Ultimate oversight by the Bank of England also meant that ICFC reflected the policy agenda. It made loans in the 'national interest', experienced an upsurge in lending requests following the restoration of first year tax investment allowances, and specifically backed export orientated ventures.[63] Even after it became involved in the buyout market, ICFC maintained a low profile. As Robert Smith, one time head of buyouts in the 1980s explained: 'ICFC though aware of the possibilities has to maintain a fairly low profile for pretty obvious reasons. Active promotion of financial services for MBOs risks the charge of enticing management to break away from their companies'[64]

ICFC's, later 3i's, approach to monitoring portfolio companies can be described as 'hands-off'.[65] ICFC protected its investment by maintaining client contact, insisting on the plough-back of profits, but not by 'interfering in day to day management', for example Fluidrive, a company specialising in clutches and gears, which was fostered through a 150k debenture.[66] Formal managerial incentive packages were not used, and managerial free cash flow limited through the use of participating dividends. Portfolio management executives

[61] 'The Fledgling Takes Flight', *Economist*, 13th June, 1959; p. 1041. 'ICFC', *Economist*,13th June, 1970, p. 63;
[62] 'The Gap Filled?' *Economist*, 13th July, 1963, p.156.
[63] 'ICFC And The Capital Market', *Economist* , 16th May, 1953; p. 462.'Industrial And Commercial Finance Corporation Ltd (ICFC)', *Economist*, 1st July, 1961, p. 80. Policy oriented lending was advocated by the Chairman, Lord Piercy, but opposed by the commercial bank shareholders. Merlin Jones, *The Industrial and Commercial Finance Corporation,* p.7.
[64] Smith, et al, 'Management Buyouts'. Smith's view was private. Indeed many of the attendees at this conference either did not wish to be named or gave a fictitious name (e.g. Mickey Mouse, Donald Duck…) as they were concerned that if their employers found out they risked dismissal.
[65] Sweeting and Wong, 'A UK Hands-off Venture Capital Firm'.
[66] '"Small" Finance Corporation's Progress,' *Economist*, Saturday, 29th June, 1946; p.1064; 'Fluidrive Share Introduction', *Economist*, 1st September , 1956; p. 747.

monitored portfolio companies through comparing monthly accounts with the budget. They typically would not take a board seat, notwithstanding contractual rights, leaving this to non-executive directors appointed from their networks. Portfolio management executives (investment controllers) were typically involved in monitoring considerably more investees than would be the case for PE firms in later periods. Informal contact with investees amounted to 11 hours per year, about a tenth of that for hands-on investors. This human capital resource constraint meant that the allocation of attention to individual firms was quite limited. Further, portfolio companies were typically minority investments, so avoiding subsidiaries reporting requirements.[67] Unlike closed end fund PE firms, ICFC was not time-constrained in the investee holding period. Rather, minority holdings made it difficult to force a realisation. Returns were therefore obtained through redeemable preference shares, and cumulative and participating dividends. Once redeemable preference shares were redeemed, ICFC were left with a small equity stake that effectively cost them very little. Participating dividends enabled ICFC to capture surplus cash once profits exceeded a predetermined level, also had a monitoring role. They pressured management to consider exiting or financial restructuring to avoid substantial cash flows which might otherwise be used for investment from being paid out to investors.[68] This whole approach stored up major challenges when 3i became a listed corporation and subsequently needed to restructure and exit much of its vast portfolio of investee companies many of which had been held for decades.

The performance outcomes were mixed, but generally improved through time as governance and policy constraints were relaxed. A commentator in the *Economist*

[67] Smith, et al 'Management Buyouts'
[68] Wright and Coyne, *Management Buyouts*.

summarised the strategy as 'performing a moderately useful function in a moderately cautious way'.[69] There were other modest signs of success. ICFC backed firms had higher growth rates and percentage net profit before interest than average for quoted companies (13.5% compared to 12.3% in the three years to 1968).[70] Some profits came from access to privileged information, for example, ICFC and Hambros Commercial Finance Corporation investment in the share issue of Shipton Automation.[71] There were also some headline cases of even the most promising innovative projects not being financed by ICFC.[72]

In short, prior to 1973, ICFC achieved limited results, held back by conflicts of interest with the banks and lacking resources required to offer significant financial services to industry. A watershed was reached in 1973, when ICFC and FCI were merged to create Finance for Industry (FFI).[73] As the FFI's subsidiary, and new Bank of England and clearing bank backed funding in response to the financial crisis of 1973, the ICFC became one of the largest lending institutions in Europe.[74] Demand for ICFC loans rose steeply in the wake of the financial crisis, which created interest rate volatility, so that ICFC loans were attractive to entrepreneurs.[75] The merger effectively doubled the lending capacity of ICFC.[76]

In summary, ICFC was slowed by constraints on resources as a result of its own governance arrangements and position within the wider financial institutional network and

---

[69] 'The ICFC In A Hesitant Economy', *Economist*, 20th May 20, 1950; p.1133; 'ICFC And Risk Capital', *Economist*, 12th May, 1951; p.1119; It puzzles Lord Piercy, wrote another, 'that for a fairy godmother his volume of business is remarkably small', although notes that its profitability is high. 'ICFC And Investment', *Economist*, 15th May, 1954, p. 562

[70]'Little but vital', *Economist* , 28th November, 1970, p. 80.

[71] 'Taking the Cream', *Economist*, 2nd May, 1964; p.524.

[72] 'No whizz-kids please, we're British', *Economist* , 5th August, 1978, p. 73.

[73]Subsequently renamed Investors in Industry (3i).

[74] 'Fee, FFI, fo, fum', *Economist* 16th November, 1974, p.92; 'The thoughts of three chairmen', *Economist*, 9th August, 1975, p.8

[75] 'Small Businesses Keen to Borrow More from ICFC', Nicholas Colchester. *Financial Times*, 7th December, 1977, p.7.

[76] Through a £17.1m rights issue and gearing up to a total of £85m. 'The Small Firm Will Gain', *Financial Times*, 21st November, 1973, p.19.

linkages to the policy agenda. These constraints were progressively removed, particularly after 1973, when its expanded resource base was used more explicitly for venture capital, restructuring and buy-out finance, thereby laying the foundations for the expansion of these facilities in the 1980s.

Slater Walker

Slater Walker (SW) was established in 1963 by the entrepreneur, Jim Slater. The history of SW is well documented,[77] although it has attracted little attention in the literature. Slater Walker's approach was similar to most of the UK funds controlled by traditional financial institutions (banks, pension funds, insurance funds) which adopted an "eyes-on, hands-off" approach to their investments, monitoring them, but having little or involvement in their management.[78]

Firm specific resources were not consistently well used by SW or its portfolio companies. For example Slater's investment in new laminating capacity at Productofoam following its takeover was a failure due to technical problems.[79] On the other hand, another SW company, Greengate and Irwell Rubber Company won a Queen's Award for innovation in mining technology in 1968.[80] At Greengate, Slater retained Marshall, the previous CEO to run the companies until a buyer could be found.[81] SW backed Greengate with investment in a new factory at Trafford Park for the Cable division in 1969, and rationalised a string of acquired rubber companies into Allied Polymer, which it sold at a profit in a public offer in

[77] For a chronology of the rise and fall of Slater Walker and narratives of takeover transactions, see Raw, *Slater Walker*.
[78] Rothwell, 'Venture finance, small firms and public policy in the UK'.
[79] Raw, *Slater Walker* p.157.
[80] Chairman's Statement, Slater Walker Securities, Annual Report and Accounts, 1968.
[81] Slater made himself Chairman after the takeover. Raw, *Slater Walker* pp. 208, 216-217

1971.[82] Frequently, incumbent managers were cast aside and their knowledge of the business ignored.[83] Following the Crittall Hope takeover in 1968, John Crittall, Michael Hope and other incumbent managers were excluded from the specialist investigation teams of commissioned by Slater and staffed by external advisers.[84] Crittall Hope was a family run firm of 5000 employees founded in 1818, earning consistent profits from an international portfolio of metal window frame manufacturing businesses. It was the product of a recent defensive merger between Crittall and Hope designed to protect market share from predatory pricing following the break-up of the Standard Metal Window price agreement by the Restrictive Practices Court in 1962, and was under pressure from the mid 60s slump in the UK building industry.[85] Slater's choice of this firm in this sector was not therefore informed by interest in growing the assets.

According to one reviewer in the *Economist*, Slater possessed strong skills, based on scrutiny of balance sheets, for the effective selection of investee firms.[86] Slater looked for target companies that were badly managed or with a mix of good and bad operating divisions where poor performing units could be sold.[87] In many leading cases however, SW paid scant attention to due diligence. SW's expertise consisted of discussing other deals with financial journalists, determining real estate values for potentially surplus factories and offices, and technical calculations establishing the minimum value of compensation for

[82] Raw, *Slater Walker* pp.219-220.

[83] Although because SW typically offered a high premium, most transactions occurred with the support of incumbent management Eg Productofoam, Thomas Brown, Crittall Hope; Raw, *Slater Walker* pp.101-102, 183. 225-226.

[84] Hope, 'On being taken over', pp.171-172. Subsidiaries were sold without consulting their managing directors, ibid, p.172.

[85] Hope, 'On being taken over', pp.164-66.

[86] 'Mr Slater looks for assets not earning adequate returns…He has his own means of finding out how far the balance sheet reflects asset values and the chances of making them work harder for their living'. 'Text-book takeovers,' *Economist*, 23rd Sept. 1967, p.1134.

[87] For example Drage's, which was a 'hotch potch' of mail order, retail, merchant banking, hire purchase and money lending. 'Mr Slater: Sir Isaac's favourite son?' *Economist*, 14th Sept. 1968, p.75.

redundant employees.[88] '[Max] King tells the story of SW selling some wattle estates in East Africa to Lonrho in a deal negotiated in just 90 minutes. As an afterthought, Tiny Rowland asked: "By the way, what is wattle?" to which Jim Slater replied: "Where is East Africa?"'[89] Raw describes the Keith Blackman takeover: 'But when Slater got a closer look at Blackman, he decided the job of reorganisation was not for him and within three months the company had been resold for £3.7m cash'.[90] Although the purchase and subsequent asset sale of Cork Manufacturing by SW's then main vehicle for takeovers, Productofoam, realised substantial capital profits, these were significantly reduced by subsequent undisclosed liabilities.[91] Prior to the takeover of Crittall Hope in 1968, SW had no idea of the problems with Crittall Hope's German subsidiary. The discovery of these losses inflated the takeover premium further, and underpinned the decision of the Crittall Hope board to accept the offer.[92] Over-optimistic profit forecasts, first from the old board £1.4m (exit P/E = 24) and then from Slater (£2.5m).[93] A subsequent analysis showed the corresponding actual profit for 1969 to be £635,000.[94] Forecasts for parts of SW's industrial group, Productofoam and George Wilson, also proved over-optimistic.[95] Productoform reported a profit in line with forecast in

[88] Hope, 'On being taken over', pp.174-176. Asset realisations included Hope's Windows, its highly profitable US subsidiary for £3.2m cash in 1969 (Raw, *Slater Walker*, p.229).
[89] Damien Reece, Business Comment, *Daily Telegraph*, 5th July, 2006.
[90] Raw, *Slater Walker* p.203.
[91] These included pre-acquisition losses, construction work necessary to realise the sale of the Chingford site and lower disposal values of subsidiaries than previously indicated. Raw, *Slater Walker* pp.175-177.
[92] Raw, *Slater Walker*, p.226. Slater's offer was on a 'sight unseen' basis, and Slater made it clear that he would only require full details in the event of re-negotiation for a more favourable deal (Hope, 'On being taken over', p.168.
[93] Gwinner, Christopher. "Crittall-Hope Profit Forecast out by £500,000." *Financial Times* 8 Aug. 1968: 13. *Financial Times*. Web. 9 Mar. 2012.'Slater Walker Cum Crittall-Hope', Lex. *Financial Times*, Monday, May 13, 1968.
[94] Raw, *Slater Walker*, p.235.
[95] C.f. *Financial Times*, 18th August, 1967 and Raw, *Slater Walker*, p.203.

1966, but from share-dealing, not from the core laminating business.[96] At the time of the Crittall deal (May 1968), Slater put out a profit forecast of £2.1m for SW itself, giving a prospective PE of 33. The high value of SW shares meant that the Keith Blackman takeover and subsequent disposal for cash created a surplus on the transaction.[97]

Meanwhile SW's activities, particularly asset disposals, rapidly built up reserves of cash and credibility with City institutions.[98] The company was therefore in a good position to offer access to capital and lines of credit to its portfolio companies and invest capital where needed. In 1969, SW acquired Ralli Brothers, an established and licensed bank, which subsequently became the groups banking division.[99] Notwithstanding these facilities, financial restructuring in subsidiaries was undertaken to benefit SW, rather than the investee company. For example Greengate's healthy pre takeover cash balances were replaced with an overdraft and a substantial inter-company debt.[100]

Governance and accountability mechanisms were imposed in terms of financial targets rather than strategic involvement. SW businesses were run on the basis of maximising cash flow, for example by reviewing supplier credit terms, cutting employee benefits and raising customer prices.[101] Profits from deals accrued to SW nominees, rather than as incentives for managers to achieve performance targets. At Crittall Hope, Slater installed himself as Chairman. He dismissed the non-executives, replacing them with his

[96] 'Productofoam Holdings Limited,' *Financial Times*, Tuesday, 1st February, 1966; pg. 4; Raw, *Slater Walker*, pp.158-158.
[97] Raw, *Slater Walker* p.203.
[98] For example surplus cash had reached £2.5m by 1967, according to Slater's statement to the annual general meeting ('Slater, Walker Securities.' *Economist*, 17th June 1967, p.1277.Credibility in the City increased for example following the 'spectacularly successful' Invan unit trust public issue. ('Mr Slater: Sir Isaac's favourite son?' *Economist*, 14th Sept. 1968: 75.
[99] 'Organic growth,' *Economist* 10th May 1969: 78
[100] Raw, *Slater Walker,* pp.209, 218-219.
[101] G. Owen, 'Reflections of a Takeover Victim'**,** *Financial Times*, 16th March, 1976; p.17.

nominees and although the two family directors, Crittall and Hope, kept their board positions their roles became nominal.[102]

SW's strategy was to buy poorly performing firms that were in need of capital and reorganisation. There is no evidence however that the firms acquired were successfully turned around or that the resources were successfully repackaged to create competitive advantage for the investee firms. Productofoam and George Wilson both lost money after acquisition, and Crittall Hope suffered significant declines in profit, return on sales, return on capital and sales per employee, notwithstanding significant redundancies. Indeed almost all of SW's organic growth came from banking and investment.[103] SW offered 16s per share for Crittall Hope, valuing it at £18m on an earnings multiple of 100, acquiring the firm on 18th June, 1968.[104] The premium over the market price was 25%. However the subsequent sale to Butterley (a public company already owned by SW) in 1971 only realised £9.25m.[105]

There were nonetheless successful rationalisations, for example Greengate and Allied Polymers, which resulted in significant exit profits for Slater Walker. Generally though, increases in portfolio value were mythical, and arose from subsidiary and asset sales within the group at unrealistic valuations. In 1976, SW collapsed, requiring a multi million pound bail out by the Bank of England.[106] A particular reason for the collapse was bad debts in the

[102] Hope, 'On being taken over', pp.171-172. Slater centralised power in similar fashion following other takeovers, for example Greengate, by installing himself as CEO and dismissing other directors. Raw, *Slater Walker* pp. 208, 216-217.
[103] Raw, *Slater Walker* pp.203, 205, 235-239.
[104] Raw, *Slater Walker* pp.225-226.'Crittall-Hope to Start Talks with Slater Walker Soon',Christopher Gwinner. *Financial Times*, Wednesday, 8th May, 1968, p.17. The P/E of 100 was based on latest CH profits factoring the German losses. The forecast multiple was 24. 'Slater Walker Cum Crittall-Hope',Lex. *Financial Times*, Monday, 13th May, 1968.
[105] Raw, *Slater Walker* p.225& 236.
[106] A Treasury note, dated 2nd December 1975, estimated the required facility to protect depositors at £70m, and further notes by Treasury officials (S. Wood and J. Bridgeman), dated 5th December 1975 estimated the upper end of the potential liability to be £50m and £20-40m respectively. http://www.hm-treasury.gov.uk/d/slaterwalker_part1.pdf

Banking division, which had a small number of large loans to SW portfolio companies and had also loaned extensively to finance mortgages for SW employees and associates.[107]

Emergence and development of Private Equity, post 1980

Private equity: the first wave of development

The late 1970s witnessed the emergence of the modern PE industry, as a consequence of legislative and institutional changes that had a dramatic effect on the structure and performance of firms in the UK economy. New investment in ICFC provided the initial impetus. It expanded its resource base and consequently the scope of its activities, including marketing, head office staff and cash management and analysis functions.[108]

An important aspect of the reformed and refinanced ICFC, previously undocumented in the literature, was its support for management buy-outs.[109] Although small in relation to the subsequent development of the buyout market discussed below, it was a turnaround in strategy post the 1973 FFI merger for ICFC. It commenced this strategy in 1976, reporting in 1978 that it had in the past two years loaned £3.4m secured on the equity of 23 management buy-outs.[110] Other banking institutions also began to enter the buy-out market in this period.[111] Smith quotes the following deal number figures: 10 years to 1977 = 43,

[107] 'What was Slater, Walker really made of?' *Economist*, 18th Sept. 1976
[108] 'UK Banking: Financial Times Survey: Aggressive Policy Helps ICFC to Expand', Richard Lambert. *Financial Times*, 1st September, 1980.
[109] Wright et al 'The development of an organisational innovation', refer to '43 buy-out transactions in the ten years up to 1977', p.151.
[110] Colchester, Nicholas. "ICFC Provides £3.4m. For Deals." *Financial Times* [London, England] 18 Sept. 1978: 4
[111] 'UK Banking: Financial Times Survey: Aggressive Policy Helps ICFC to Expand', Richard Lambert. *Financial Times*, 1st September, 1980.

1977/78 = 10, 1979/80 = 49, 1980/81 = 69.[112] Following the merger, only about a quarter of capital was provided as participating equity, with the rest as structured loan finance on high gearing multiples.[113] ICFC in particular was able to offer expertise to overcome legal obstacles to such transactions prior to the change in the law in 1981.[114] Section 54 of the Companies Act 1948 prevented companies using their assets as security to buy their own shares. The rule was modified in Companies Act 1981,[115] by which time ICFC had already built up a track record as Britain's most prolific supporter of management buy-outs. In the period 1977-1981, ICFC organised 150 deals, giving de facto control to incumbent managers on debt equity ratios ranging between 5 and 10 to 1. Despite apparent high risk, losses to buy-outs were lower than for conventional lending activities.[116] Restrictions on free cash flow arising from high structured debt levels, attention to cash management and planning, representing a change on the pre 1973 policy, and provision of specialist legal advice were the important aspects contributing to the success of this early buy-out wave.

The beginning of the 1980s was a decisive turning point. Legislative changes, the development of more liquid capital markets and the willingness of firms to divest previously over-diversified holdings, provided strong impetus for what might be termed the first wave

[112] Smith, 'Management Buyouts'.
[113] Through a £17.1m rights issue and gearing up to a total of £85m. 'The Small Firm Will Gain', *Financial Times*, 21st November, 1973, p.19.
[114] Wright, Norman and Robbie, *Management buy-outs*, p.4.
[115] Repealed provisions were re-enacted with modifications in Companies Act 1985, ss151-154, based on the Second EC Company Law Directive, EEC77/91, 31st Jan 1977. Although the law remained ambiguous, the courts began to discriminate between transactions with a genuine commercial purpose and those designed to defraud creditors, c.f. *Belmont Finance Corporation v Williams Furniture (No.2)* [1980] and *Charterhouse Investment Trust ltd v Tempest Diesels Ltd* [1986]
[116] 'Managerial capitalism prospers in the slump', *Economist* 29th August, 1981; p. 61. Jim Slater was prosecuted under this Companies Act rule.

of PE deals, which lasted until the late 1980s.[117] The UK deal value of private equity and buy outs reached £1bn for the first time in 1986.[118]

The synergistic properties set out in figure 1, that were almost completely absent in the SW empire, and only partially present in ICFC/3i, were now more fully realised. Incumbent subsidiary managers initiated many deals, taking advantage of their specialist and tacit knowledge, particularly in hi-tech sectors, to develop more radical entrepreneurial strategies than the previous ownership and control structure allowed.[119] When applying due diligence, managerial experience and marketing ability were the principal criteria used by PE firms and venture capital funds.[120] Internal rate of return became the most important measure, as prospective capital gain was the most important component of the pay-off from the investment.[121] Post deal they used systems of active monitoring, for example through board seats, requirements for regular provision of management accounts, bolstered by the provision and surveillance of debt covenants by loan providers.[122] Strong performance of PE firms was driven by capital restructuring, changes to managerial incentives, and relatively short time to exit, often through an initial public offering.[123]

---

[117] Toms and Wright, 'Corporate governance, strategy and structure', pp.107-108. Although the number of deals slowed, the UK PE market was not simultaneously affected by the junk bond crisis in the US in the late 1980s, partly because up to that point whole company LBOs had not been a significant part of the UK buyout market. Toms and Wright 'Divergence and convergence ', p.279.

[118] CMBOR database. The database comprises the population of management buy-outs and buy-ins in the UK, whether private equity backed or not. Data is captured from a twice-yearly survey of private equity firms, intermediaries and banks, with press and corporations annual reports are also used to identify and check further deals. For further details see www.cmbor.org.

[119] Wright, et al., *Management Buy-ins and Buy-outs*; Wright, et al 'Firm Rebirth'', Robbie et al, 'High-tech Management Buy-outs'; Toms and Wright, 'Corporate governance, strategy and structure'.

[120] Cary, *The Venture Capital Report*, Dixon, 'Venture capitalists and investment appraisal'. In the 1980s the overwhelming majority of proposals were rejected by VC funds which refused to modify their criteria to increase acceptance rates (Dixon, ibid)

[121] Dixon, 'Venture capitalists and investment appraisal'.

[122] On covenants see, Citron, et al, 'Loan covenants'.

[123] Kaplan, 'Future of private equity'; Cumming et al, 'Private equity'; Wright, Jackson and Frobisher, ''Private equity in the UK'.

Table 1 about here

In view of the increasing frequency of transactions after 1980, it is appropriate to examine their systematic impact on economic performance, using large sample approaches, and in contrast to the case studies of leading firms in the earlier years.[124] Evidence from the first wave of UK buyouts in the mid-1980s shows significant improvements in profitability, productivity and liquidity compared to matched non-buyouts. Table 1 compares the performance of buy-outs originating between 1982 and 1984 with a matched sample of non-buyout firms using a portfolio of financial and efficiency indicators over a period of six years after the buy-out transaction. In particular, out-performance of buyouts is notable from the second year post buyout to the fifth year in terms of profitability and productivity. By year 6, significant out-performance seems to disappear; this may be either because the benefits of efficiency gains through cost reductions are exhausted or because the higher performing firms have exited the buy-out structure and been acquired and so no longer figure in the sample.

Private equity: the second wave of development

In the second wave, which developed from the late 1990s up to the crisis of 2008, the scale and scope of PE increased dramatically. Deal value reached £10bn by 1996 and £26bn by 2006. Notwithstanding the relative lull in the early 1990s, by 1992 buy-outs accounted for 57% of all takeover transactions.[125] PE funds have diversified internationally to take advantage of the lower competition for deals outside the UK and US markets. Service and

[124] The multiple method approach in business history contrasts with evolutionary approaches which more typically offer explanatory power only in situations where there is a population of firms.
[125] CMBOR database

infrastructure firms became notable targets for buy-outs in the period 2000-2004.[126] At the same time they have become increasingly attractive to institutional investors, mobilising significant capital from global financial institutions.[127] As a consequence, there was a trend away from divisional level buy-outs, in a context of completion of many corporate divestment programmes, to more public to private (PTP) whole company buy-outs including more strategic level management buy-ins and investor-led public to private and secondary buy-out transactions.[128] Correspondingly, exits from PE deals in this period saw a marked shift away from IPOs to secondary buyouts.[129] The year 2007 witnessed the peak of buy-out activity in terms of deal value, with most of the hitherto largest scale bids occurring in that year and deal value totalling £42.2bn.[130] Value of bids reflect cyclical trends in the stock market, with a slump in deal values post 2007.

As a consequence of increased scale and scope of their activities, existing PE firms expanded their resource bases to accommodate more expertise and greater specialised knowledge. Specialised and complex resource bases have also become more important for investee firms as the UK has continued to shift towards a more knowledge based economy. There is much evidence, that experienced PE investors have become more adept at identifying target companies that are underperforming but nonetheless are cash generative with potential for profitability/productivity improvement via restructuring, refinancing and

[126] Kaplan and Stromberg, 'Leveraged buyouts and private equity'.
[127] Kaplan and Stromberg, 'Leveraged buyouts and private equity'.
[128]Wright, Chiplin, Robbie, & Albrighton, 2000; 'The development of an organisational innovation', Wright, et al., 'University spin-out companies'; 'Wright, Jackson and Frobisher, ''Private equity in the UK'.
[129] Evidence suggests that on average the returns to secondary buyouts are lower than for primary buyouts (Nikoskelainen and Wright, 'The impact of corporate governance'), suggesting that although incoming PE firms may seek to bring new skills and introduce new strategies, the value creation mechanisms already adopted during first buyouts make it hard for incoming PE firms to generate further value (see Jelic and Wright, 'Exits, performance'; Meuleman et al., 'Agency, Strategic Entrepreneurship'.
[130] Wright, Jackson and Frobisher, 'Private equity in the UK', p.86.

the changing of governance arrangements.[131] Experienced PE investors also became more involved in intensive post deal involvement to set the new strategic direction for the firm in the 'first 100 days' following buyout.[132] In contrast, this period also saw entry by inexperienced PE firms, attracted by previous high returns in the sector, with deals being completed with little if any due diligence.[133]

As with the first wave, and notwithstanding the expanded scale and scope of activity, the evidence suggests that the complementary effects of resource bases in investee firms and PE firms and governance skills also played an important part in sustaining the more recent second wave. A number of recent studies of the relative performance of PE backed buyouts over the second wave (1995-2011) have analysed the pre-buyout characteristics of PE investor target companies; the relative accounting performance of PE backed companies, looking at accounting ratios, against control samples of buyouts and non-buyouts; the relative productivity and profitability performance of company types in the context of multivariate econometric models; and the propensity to fail via insolvency of PE backed buyouts versus other buyout types and non-buyouts.[134]

To develop these analyses further and to examine the resource and governance complementarities implied in figure 1, Table 2 summarises results from multivariate regression models determining profitability and productivity for a novel dataset compiled by the authors comprising the population of PE backed buyouts for which data were available and control samples in the period 1995-2011.[135] Columns 1 and 3 summarise the determinants of profitability (return on assets, ROA) is specified as a function of industry

[131] Wilson and Wright, 'Private equity, buyouts and insolvency risk'.
[132] Wright, Jackson and Frobisher, 'Private equity in the UK'.
[133] Ibid.
[134] Gilligan and Wright, "Private Equity Demystified: 2012 Update".
[135] For a fuller analysis of the data, see appendix A.

risk, age, competition, company types. To capture governance effects, the models are inclusive of director/board characteristics. The regressions isolate the effects of PE relative to other company types in column 1 and buyout types in column 3. The models are reported inclusive of time dummies and are estimated for the whole period.[136] The coefficients on the PE dummy variables are significant and positive in all specifications, implying a positive profitability differential for PE over other company types of between 2 and 3%. Co-location is weakly significant and positive in the period prior to recession. Board size and director experience are positively associated with profitability whereas the average age of directors and multiple directorships have negative signs, suggesting that in line with figure 1, concentrations of experienced, younger directors are performance enhancing features of PE investment.

Table 2 about here

Columns 2 and 4 summarise the results from production function estimates for the two samples, all companies and buyout only. To examine differences in productive efficiency, production function models are specified. In these models total output (value added) is related to labour and capital inputs, together with controls for sector and competition to isolate productivity differentials for PE-backed companies versus other company types.[137] Capital and labour inputs were strongly significant, and their coefficients,

[136] The models appear to be well specified. Note that industry risk and company age are positively related to ROA, while industry concentration increases profits.

[137] The production function specification is Cobb-Douglas, frequently used in empirical studies of ownership-governance-performance linkages. CD is preferred to other functional forms such as the translog and CES specifications since (1) it fits the data well with plausible coefficients (2) the translog specification can give bias estimates through potential collinearity and due to the size of the

or elasticities, imply constant returns to scale. Meanwhile, the signs on the PE dummy variables are positive and significant in all specifications and time periods. The results therefore suggest a positive productivity differential of PE firms over other company types, which is actually stronger in the recession period. The differential is around 10% above the control sample and the interaction between PE and technology (high tech manufacturing) is positive. Results for the buyout sample show a superior performance of PE buyouts versus other management buy-ins.

Columns 5 and 6 of Table 2 summarise the factors determining variations in performance (profitability and productivity) amongst the sample of PE-backed companies.[138] The specification of the productivity and profit equations is the same, but to examine further the relationship between experience and performance implied in figure 1, for this subsample a range of variables reflecting the characteristics and experience of the PE investor are included. Variables are included to measure PE experience in terms of prior deals and orientation to specialist sectors.[139] The PE experience variable is positive and significant in both models. Interactions between the PE experience variable and technology are positive and significant, implying support for the complementarities between resource and governance suggested in figure 1.

The presence of a syndicate of PE firms leads to an improvement in performance, while foreign PE firms have a more significant impact on productivity. Controlling by type of PE buyout with a dummy variable for MBO shows that MBOs have superior performance.[140] Column 5 reports the estimates of the profitability equation. Again the PE experience

instrument matrix when controlling for the endogeneity of inputs. See Jones and Kato, 'Productivity effects' for an example empirical study.

[138] Full results are reported in Appendix A (A3 and A4).

[139] The number of UK deals that the investor has been involved in prior to the current buyout (PE experience).

[140] The omitted category is forms of buy-in.

variables are significant and positive but the foreign ownership attracts a negative but insignificant sign and the syndicate variable is positive but weakly significant. The productivity equations (Column 6) are well specified and the control variables are in line with previous estimates. For the variables of interest we find positive significant coefficients on all variables suggesting that PE experience, syndication and foreign ownership have positive impacts on productivity within the PE sub-sample. MBOs exhibit higher productivity compared to other forms of buyout.

The evidence suggests that the relationship between resources, governance and performance has persisted during the recent recession. Unlike in the US junk bond crisis of the 80s, UK PE firms seem to have avoided similar problems in the second wave, notwithstanding their adoption of whole company buy-outs and increased use of CDOs and CLOs and so-called 'cov-lite' loans[141], before 2008. Indeed in the period 2004-2007, PE firms were able to access debt relatively cheaply vis-a-vis LIBOR.[142] Profit and productivity differentials were higher in the recession period, particularly in relation to public companies and strongly significant (Appendix A, A1 and A2).This suggests that PE-backed buyouts can better maintain their profitability in recessionary periods than non-buyouts. Co-located directors may have a greater closeness to the business which may be more appropriate for activities to improve profitability in more buoyant economic conditions but these may be riskier such that profitability is adversely affected in recessionary conditions. The significance of interactions between resources and experience were also weaker after the onset of recession, possibility for the same reason.

[141] In contrast to loans in the first PE wave, these loans involved minimal use of covenants.
[142] Wright, Jackson and Frobisher, 'Private equity in the UK', p.88, table 1.

To examine the effect of the recession more closely, further evidence on the long term relative performance of PE backed buyouts vis-a-vis other buyout types and other non-buyout company types is provided in Table 3, based on multivariate models reported in Appendix A. Table 3 shows financial ratios reflecting profitability, leverage and debt coverage; working capital and growth in turnover, employment, value-added and profit.[143] We compare the mean and median values[144] of these ratios for sub-samples of company types covering the whole sample period; a period pre recession (2002-6) and the recession period 2007-2011. T-tests are conducted to identify significant differences in the means of the PE and other sub-samples (public and control samples).

Table 3 about here

The mean ROA, profit margin and interest coverage ratio for PE backed buyouts were higher in the recession period of 2007-2011 than in the pre-recession period (Table 3). The mean difference in profitability ratios was greater for PE-backed buyouts than for the matched private companies or the public companies. With respect to growth rates, PE-backed buyouts on average experienced greater growth in turnover, employment and value added in the recessionary period, but not in terms of profits. These increases were greater than for the matched private firms. This suggests that first because PE investors are skilled at targeting profitable companies (in lower risk sectors) with scope for efficiency and profit improvements they create companies that show scope for improving performance. Second, they are more robust in down turns, as their lower debt to total assets ratio during the

[143] Companies House website and annual reports

[144] Following Barber and Lyon, 'Detecting abnormal operating performance', p.368, outliers are dealt with by constraining ratios to be within the 1st and 99th percentile of the distribution.

recession period also suggests. Other recent evidence supports the view that PE restructuring using debt has not increased financial distress or bankruptcy risk and that PE firms as well as targeting better buyout prospects are in a better position, because of active ownership and governance, to adjust capital structure over the economic cycle and, therefore, manage insolvency risk and protect assets.[145]

PE backed firms had relatively greater liquidity. A greater proportion of invested capital was in liquid assets, particularly debtors and cash, financed by correspondingly higher levels of trade credit than in the matched non PE group (table 3 and appendix B). Lower dependency on fixed assets and sunk investments has reduced the vulnerability of these firms in the credit crunch, with PE backed firms maintaining high working capital ratios post recession (table 3), whilst creating greater flexibility and exit potential for the investor. Meanwhile, other survey evidence shows that PE backed firms achieve better working capital management and control.[146]

Discussion and conclusions

The paper has analysed the development of the private equity industry in the UK since 1950 using a range of empirical and statistical sources. There is considerable evidence to show that firm-specific resource characteristics, when complemented by governance skills from dedicated private equity investors, enhance firm performance. Within specific sub-periods, perhaps most notably since 1980, the governance relation appears to have characteristics consistent with evolutionary approaches, in that it acts as a systematic winnowing mechanism likely to impact on survival and success of particular firms or groups of firms.

[145] Wilson and Wright, 'Private equity portfolio'.
[146] Wood and Wright, 'Private equity'; Wright and Gilligan 'The economic impact of private equity'

Figure 2 about here

It has been shown that a periodisation approach enables a longer run perspective that incorporates sharp discontinuities, as the contrast of the pre 1980 and post 1980 periods illustrate. Figure 2 summarises the case studies analysed above using the criteria set out in figure 1. PE experiments prior to 1980 either failed disastrously, in the absence of both resource-based investment and governance skills as in the case of SW, or were only partially successful due to limited resource base and a 'hands off' approach to monitoring from the investor, as in the case of ICFC/3i. These earlier failures were bound up with the pre 1980 institutional and regulatory climate, which by emphasising creditor protection and capital maintenance not only stifled capital restructuring, but also failed to prevent fraud at the expense of creditors and minorities, as the SW case again illustrates. In the second period, characterised by divestment and downsizing by corporations, private equity investments typically involved performance improvements being generated through cost cutting and efficiency improvements. Human capital governance resources of private equity executives primarily involved financial monitoring, while portfolio firm management teams possessed specific human capital resources relating to the business. In the third period, when much of the corporate restructuring of the 1980/1990s had been completed, there was a shift in emphasis towards both efficiency improvements and growth seeking, with private equity executives' human capital governance resources involving more strategic value adding skills, especially for private equity firms with long experience.

In contrast to the evolutionary approach then, our more traditional business history methodology emphasises contrasting periodisations and their discontinuities. Path

dependencies and populations of firms and their behaviour are perhaps therefore better analysed within sub-periods rather than over the longer run. Further, as recent research has begun to examine the factors associated with shifting path dependencies[147], adopting a periodisation approach may enable these shifts to be identified. Even so, as our analysis illustrates, firm specific effects and governance skills might offer perennial routes to competitive advantage, for example continuing to prevail even after the 2007-08 financial crisis, provided the institutional framework is supportive.

[147] Ahuja and Katila, 'Where do resources come from?'

Sources

Centre for Management Buy-Out Research (CMBOR) database, comprising statistics on 30,000 deals, 1986-2012.

Companies House: Website and Annual Reports

Economist Historical Archive

Financial Times

References

Ahuja, G., and Katila, R. 'Where do Resources come from? The role of Idiosyncratic Situations,' *Strategic Management Journal* 25 (2004)**:** 887-907.

Alchian, A.A., and Demsetz H. 'Production, Information costs, and Economic Organization,' *American Economic Review* 62 (1972): 777–795.

Barber, B., and Lyon, 'Detecting Abnormal Operating Performance: The Empirical Power and Specification of Test Statistics,' *Journal of Financial Economics* 41 (1996): 359-399.

Barney, J.B., Ketchen, D. and Wright, M., 'The Future of Resource-based Theory: Revitalization or Decline?' *Journal of Management* 37 (2011): 1299-1315.

Blyler, M. and Coff, R. Dynamic capabilities, social capital, and rent appropriation: ties that split pies. *Strategic Management Journal*, 24 (2003): 677–686.

Boyer, R. 'How to Control and Reward Managers: The paradox of the 1990s', unpublished working paper.

http://webu2.upmf-grenoble.fr/regulation/wp/document/RR_serieCF_2005-1.pdf; (2005).

Burt R.S., *Structural Holes: The Social Structure of Competition*. Harvard University Press: Cambridge (1992)

Capie, F. and Collins, M., *Have the Banks Failed British Industry?* (London: Institute of Economic Affairs, 1992)

Cary, L., *The Venture Capital Report*: Guide to Venture Capital in the UK. London: Pitman (4th Ed., 1989)

Chandler, A., *Scale and Scope: The Dynamics of Industrial Capitalism* (Cambridge, MA: Harvard, 1990).

Citron, D., Robbie, K., & Wright, M., 'Loan covenants and relationship banking in MBOs', *Accounting and Business Research*, 27(4) (1997): 277-296.

Coopey, R. and Clarke, D., *3i. Fifty Years of Investing in Industry* (Oxford: OUP, 1995).

Coopey, R., The First Venture Capitalist: Financing Development in Britain After 1945, The Case of ICFC/3i, *Business and Economic History*, 23(1), 1994: 262-271.

Cottrell, P. 'Domestic finance 1860–1914,' in Floud, R. & Johnson, P (eds.) The Cambridge economic history of modern Britain: Vol 2, Economic maturity, 1860-1939. Cambridge: Cambridge University Press, 2004: 253-279.

Cumming, D, Siegel, D.S. and Wright, M., 'Private equity, leveraged buy-outs and governance', *Journal of Corporate Finance* 13, 2007: 439-460.

Cutler, MA., & Waine, B., Social insecurity and the retreat from social democracy. Review of International Political Economy, 8(1), 2001: 96–118.

Dixon, R., 'Venture capitalists and investment appraisal,' *National Westminster Bank Quarterly Review*, November, 1989: 2-21.

Eisenhardt KM, and Martin JA., 'Dynamic capabilities: what are they?' *Strategic Management Journal*, Special Issue 21(10–11), 2000: 1105–1121.

Folkman, P., Froud, J., Johal, S., & Williams, K., 'Working for themselves: Financial intermediaries and present day capitalism,' *Business History*, 49(4) 2007: 552–572.

Gilligan, J., and Wright, M. *Private Equity Demystified* – 2012 update. London: ICAEW 2012.

Gorman, M., and Sahlman, W. A., What do venture capitalists do? *Journal of Business Venturing*, 4(4), 1989: 231-248.

Granovetter, M., 'Economic Action and Social Structure,' *American Journal of Sociology*, 91(3) (1985): 481–510.

Grant, R. M., `Toward a knowledge-based theory of the firm,' *Strategic Management Journal* 17 (1996): 109-122.

Green, D. 'Foreword' in Merlin Jones, D., *The Industrial and Commercial Finance Corporation: Lessons from the past for the future,* London: Civitas, 2010.

Grossman, S. and Stiglitz, J., 'On the Impossibility of Informationally Efficient Markets,' *American Economic Review* 70 (1980): 393-408.

Hannah, L., *The rise of the Corporate Economy* (London: Methuen, 1979).

Higgins, D. and. Toms, S., Financial Institutions and Corporate Strategy: David Alliance and The Transformation of British textiles, c.1950-c.1990, *Business History,* 48 (4), 2006: 453-478.

Hitt, M., Hoskisson, R., Johnson, R., and Moesel, D. 'The market for corporate control and firm innovation,' *Academy of Management Journal*, 39 (1996):1084-1119.

Hitt, M., Hoskisson, R. and Kim, H., 'International Diversification: Effects on Innovation and Firm Performance in Product-Diversified Firms,' *Academy of Management Journal,* 40(4) 1997: 767–798.

Hope, M., 'On being taken over by Slater Walker,' *Journal of Industrial Economics*, 24(3), 1976: 163-179.

Jelic, R. and Wright, M. (2011), 'Exits, performance, and late stage private equity: The case of UK management buy-outs', *European Financial Management*,

Jensen, M.C., 'Eclipse of the Public Corporation', *Harvard Business Review* 67 (1989): 60-70.

Jones, D.C and Kato, T. 'The Productivity Effects of Employee Stock-Ownership Plans and Bonuses: Evidence from Japanese Panel Data', *American Economic Review*, 85(3) 1995: 391 - 414.

Kaplan, S., 'Morgan Stanley Roundtable on the State of Global Private Equity', *Journal of Applied Corporate Finance*, 23(4) (2011): 8–33.

Kaplan, S. and Stromberg, P., 'Leveraged buyouts and private equity', *Journal of Economic Perspectives* 23 (2009): 121-146.

Kole, S and Lehn, K., 'Deregulation, the Evolution of Corporate Governance Structure, and Survival,' *American Economic Review,* 87(2) (1997): 421-425.

Lam, S.S., Venture capital financing: A conceptual framework. *Journal of Business Finance and Accounting*, 18(2) (1991): 137-149.

Langley, P., 'In the Eye of the Perfect Storm: The Final Salary Pensions Crises and the Financialization of Anglo-American Capitalism,' *New Political Economy*, 9(4) (2004): 539–558.

Lazonick, W. and O'Sullivan, M., 'Maximising Shareholder Value: A New Ideology for Corporate Governance,' *Economy and Society*, 29(1) (2000): 13-35.

Madhok, A., 'Reassessing the fundamentals and beyond: Ronald Coase, the transaction cost and resource based theories of the firm and the institutional structure of production'. *Strategic Management Journal*, 23 (2000): 535-550.

Martin, R. (1989), 'The Growth and Geographical Anatomy of Venture Capitalism in the United Kingdom,' *Regional Studies*, 23(5) (1989): 389-403.

Masulis R. W. and Thomas, R. S., 'Does Private Equity Create Wealth? The Effects of Private Equity and Derivatives on Corporate Governance,' ECGI – Law Working Paper No.

113/2008 Vanderbilt Law and Economics Research Paper No. 08-20 September 28, 2008.

Merlin Jones, D. *The Industrial and Commercial Finance Corporation: Lessons from the past for the future,* London: Civitas, 2010.

Meuleman, M., Amess, K., Wright, M., and Scholes, L., 'Agency, Strategic Entrepreneurship and the Performance of Private Equity Backed Buyouts', *Entrepreneurship Theory and Practice* 33 (2009): 213-240.

Michie, R., 'Options, Concessions, Syndicates, & The Provision Of Venture Capital, 1880–1913'*Business Histo*ry, Vol. 23(2), 1981: 147-165.

Michie, R., *Guilty Money: The City of London in Victorian and Edwardian Culture, 1815–1914* (London, Pickering and Chatto, 2008).

Nelson, R and Winter, S., *An Evolutionary Theory of Economic Change*, (Harvard: Harvard University Press, 1982).

Nelson, R., 'Recent Evolutionary Theorizing About Economic Change', *Journal of Economic Literature* XXXIII (1995): 48–90.

Nikoskelainen, E. and Wright, M., The impact of corporate governance mechanisms on value increase in leveraged buyouts', *Journal of Corporate Finance* 13 (2007): 511-537.

Rajan, R. and Zingales, L., 'The great reversals: The politics of financial development in the twentieth century, *Journal of Financial Economics*, 69(1) (2003): 5-50.

Raw, C., *Slater Walker: An investigation of a financial phenomenon*, London: Andre Deutsch (1977)

Robbie, K. Wright, M., and Albrighton, M., 'High-tech Management Buy-outs', *Venture Capital*, 1(3) (1999):219-240.

Rothwell, R., 'Venture Finance, Small Firms and Public Policy in the UK,' *Research Policy*, 14(5) (1985): 253–265.

Sacks M., 'The social structure of new venture funding: stratification and the differential liability of newness', in *Research in the Sociology of Organizations*, Vol. 19, Lounsbury M, Ventresca M (eds). JAI Press: Greenwich, CT (2002): 263–294.

Sahlman, W. A., 'The structure and governance of venture-capital organizations', *Journal of Financial Economic*s, 27(2) (1990): 473-521.

Shane S. and Cable D., 'Network Ties, Reputation, and the Financing of New Ventures,' *Management Science,* 48(3) 2002: 364–381.

Smith, R. in Arnfield, R., Chiplin, B., Jarrett, M. and Wright, M., Management Buyouts: Corporate Trend for the 80s? Proceedings of a conference, March 19, 1981. Department of Industrial Economics, University of Nottingham.

Stockhammer, E., 'Financialisation and the Slowdown in Accumulation,' *Cambridge Journal of Economics*, 28 (2004): 719–741.

Sweeting R. and Wong, C.F.. 'A UK Hands-off Venture Capital Firm and the Handling of Post-Investment Investor-investee Relationships,' *Journal of Management Studies*, 34(1) (1997): 125-151.

Telser, L.G., 'Why there are Organised Futures Markets', *Journal of Law and Economics*, Vol.XXIV No. 1, 1981:.1-22.

Toms, S. and Wright, M., 'Corporate governance, strategy and structure in British business history, 1950-2000', *Business History.* Vol.44, No.3, 2002: 91-124.

Toms, S and Wilson, J.F., 'Scale, Scope and Accountability: Towards A New Paradigm of British Business History', *Business History*, 45(4) (2003):1-23.

Toms, S. and Wright, M., 'Divergence and Convergence within Anglo-American Corporate Governance Systems: Evidence from the US and UK, 1950–2000,' *Business History*, 47(2) (2005): 267-295.

Wood, G. and Wright, M., 'Wayward Agents, Dominant Elite, or Reflection of Internal Diversity? A Critique of Folkman, Froud, Johal and Williams on Financialisation and Financial Intermediaries', *Business History,* 52(7) (2010): 1048–1067.

Wood and Wright, M., Private equity: A review and synthesis. *International Journal of Management Reviews*, 11(4) (2009): 361-380.

Wilson, N. and Wright, M. 'Private Equity, Buyouts and Insolvency Risk' (forthcoming 2012).

Wilson, N. Wright, M. Siegel, D. Scholes, L. Private equity Portfolio Company Performance during the Global Recession, *Journal of Corporate Finance*, 18(1) (2012): 193–205.

Wright, M, Gilligan, J., & Amess, K., 'The Economic Impact of Private Equity. What we know and what we would like to know,' *Venture Capital* 11 (2009): 1-21.

Wright, M. and Coyne, J. *Management Buyouts* (Beckenham: Croom Helm, 1985)

Wright, M., Normand, J. and Robbie, K., *Spicer and Oppenheim's Management Buy-outs* (2nd ed., Woodhead Faulkner, 1990)

Wright, M. Jackson, A., and Frobisher, S., 'Private equity in the UK: Building a new future', *Journal of Applied Corporate Finance*, 22(4), 2010: 86-95.

Wright, M., Chiplin, B., Robbie, K., & Albrighton, M. 'The development of an organisational innovation: management buy-outs in the UK 1980–1997'. Business History 42 (2000): 137–184.

Wright, M., Clarysse, B., Lockett, A., & Binks, M., 'University spin-out companies and venture capital' *Research Policy*, 35(4), 2006: 481–501.

Wright, M. Chiplin, B. Thompson, S. and Robbie, K., *Management Buy-ins and Buy-outs: New Strategies in Corporate Management*, (London: Graham & Trotman, 1991).

Wright, M. Hoskisson, R. and Busenitz, L., 'Firm Rebirth: Management Buy-outs and Wealth Creation', *Academy of Management Executive*, 15(1) (2001):111-125.

Zahra, S. Filatotchev, I. and Wright, M., How do threshold firms sustain corporate entrepreneurship? The role of boards and absorptive capacity, *Journal of Business Venturing*, 24, 2009: 248–260.

Figure 1: Resource and governance relational synergies and strategic outcomes

Synergistic property	**Firm level investee characteristic**	**Portfolio investor level characteristic**
Resources		
- Firm specific resources	*Incumbent managers knowledge *Growth and productivity potential	*Firm selection skills *Due diligence *Investment against potential in long term productivity and employment
- External economies of scale and scope	Bespoke financial packages and access to lines of credit	Relationship with networks, financial institutions and credit markets
Governance and Accountability	*Incentive packages * Managerial equity ownership *Provision of full, timely information on current trading	*Investee Board membership *Financial monitoring skills and active intervention * Covenants * Restrictions on access to FCF
Strategic outcomes		
	*Cash flow and working capital control *Cost reduction	* Facilitation of exit strategy/realisation * increase in portfolio value

Table 1: Post Buyout Performance compared to non-buyouts in the first wave.

Variable	T+1	T+2	T+3	T+4	T+5	T+6
1.RoA	0.005	0.044	0.051	0.051	0.033	0.039
	0.015	0.052	0.087*	0.086*	0.064**	0.058
2.RoE	0.76	0.008	-0.37	-1.02	0.069	0.165
	0.30	0.982	-0.09	0.41*	0.305*	0.120
3.Profit/employee	348	1016	997	2804	1229	1327
	81	2704	3127**	4979	2204*	2150*
4.Current Ratio	1.35	3.91	1.60	1.34	1.76	1.43
	1.07	1.41	2.44	1.59*	1.35	1.56
5.Networth/total assets	0.338	0.39	0.39	0.345	0.298	0.299
	0.076	0.27*	0.36	0.392	0.325	0.339
6. MBO variable in Productivity Analysis	0.05	0.07*	0.16**	0.11*	0.21***	0.002

Notes: T+1 to t+6 relate to years post buyout
For rows 1-5, First figure in each row is mean for non-buyouts, second figure is mean for buyouts.
For row 6, figures are size of MBO dummy variable in Cobb-Douglas Production Function estimates and indicate that in years t+2 to t+5 MBO productivity is significantly higher than for matched non-buyout
*= 5%; ** 1% level; *** 0.01% significance levels based on mean difference t-tests

Sources: Based on 251 buyouts completed 1982-84 followed up to 1991 or failure; and 446 matched non-buyouts taken from Wright et al. (1996).

Table 2 Summary of Multivariate Models Determining Performance

		Control Samples					
		(1)	(2)	(3)	(4)	(5)	(6)
		Corporate Population		Buyout Population		PE Backed Population	
	Dependent Variable >	ROA	Productivity	ROA	Productivity	ROA	Productivity
Control Variables							
Age and Size	Capital		+		+		+
	Labour		+		+		+
	Company Age	+	–	+	–	+	+
Company Type	Listed	–	+		+		
	Family	–	–		–		
	Subsidiary	+	+		+		
Buyout Type	MBO	+	+	–	+	+	+
	MBI	–	–	–	–		
Industry Characteristics	Industry Risk - Failure Rate	+	–	+	–	+	+
	Competition Concentration	+	–	+	–	+	+
	High Technology	+	+	+	+	+	+
Board Characteristcs	Age Profile (Ave Age)	–	–	–	–	–	–
	Experience (sector, total)	+	+	+	+	+	+
	Multiple Directorships	–	–	–	–	–	–
	Colocation	+	–	+	–	+	+
PE Investors	PE Backed Dummy	+3%	+10%				
	PE * High Tech (Manuf)		+5%		+		
	PE* High Tech (Serv)	+2%		+			
	PE Experience					+	+
	Syndicated					+	+
	Foreign Parent					–	+
	PE Experience* High Tech (Manuf)					+	
	PE Experience* High Tech (Serv)					+	+
Macro Characteristics	Year	yes	yes	yes	yes		
Source: Appendix A		Table A2	Table A1	Table A6	Table A6	Table A4	Table A3

Table 3: Analysis of the Performance of PE Backed Companies Before and During the 2007-08 Recession

		PE Backed				Matched Private			
		Pre: Recession		Recession		Pre: Recession		Recession	
Profit & Debt		**Mean**	**Median**	**Mean**	**Median**	**Mean**	**Median**	**Mean**	**Median**
	ROA(%)	7.602	4.830	8.384	4.357	5.767	3.000	5.543	2.330
	Gross Margin(%)	36.338	31.804	34.932	31.480	34.343	26.330	29.645	21.157
	Debt/TA(%)	35.730	30.000	27.324	16.000	38.305	34.000	30.821	21.000
	Coverage(%)	25.440	3.130	36.906	3.570	27.415	2.311	29.418	1.833
Ave Annual Change									
	Growth Turnover	0.115	0.044	0.092	0.042	0.186	0.048	0.133	0.028
	Growth Employment	0.036	0.000	0.047	0.008	0.052	0.000	0.043	0.000
	Growth Value Added	0.162	0.048	0.169	0.049	0.233	0.058	0.198	0.042
	Growth Profit	0.358	0.077	0.307	0.058	0.423	0.069	0.310	0.026
Working Capital									
	Cash/TA	0.089	0.028	0.102	0.037	0.078	0.014	0.087	0.015
	Debtors/TA	0.237	0.232	0.233	0.194	0.115	0.026	0.107	0.159
	Creditors/TL	0.286	0.229	0.288	0.221	0.142	0.043	0.143	0.035
	Stock/TA	0.112	0.052	0.094	0.022	0.092	0.002	0.087	0.000

Figure 2: Resource and governance synergies and strategic outcomes over time

	Slater Walker, 1964-76		ICFC/3i, 1945-1980		1st PE buy-out wave, 1980-89		2nd PE buy-out wave, 1996-2008	
	Investees	**Investor**	**Investees**	**Investor**	**Investees**	**Investor**	**Investees**	**Investor**
Resource characteristics	*Incumbent managers' knowledge ignored * High exit and alternative use values	* Selection based on disposal/ break-up value * No due diligence * Emphasis on short term	* Effective use of incumbent knowledge *Growth and productivity potential	* Cautiously selective, larger firms only * Structural and competitive limitations on due diligence * long run investment policy	*Deals initiated by incumbent business unit managers *High growth and tech firms benefitted significantly	* Effective firm selection skills *Strict due diligence *Investment against potential in long term productivity and employment	*Board level involvement in whole company buy-outs *Specialised complex resource bases with potential for financial restructuring	* Further improvements in firm selection skills by experienced investors * limited due diligence by new investors * Investment against potential for productivity and growth
External economies of scale and scope	*Use of equity finance rather than structured loans	*Strong credibility with City institutions	*Bespoke financial packages through specialist subsidiary organisations	*Limited access to financial markets before 1973	*Bespoke financial packages and access to highly leveraged lines of credit with extensive covenants	*Relationship with networks, financial institutions and credit markets	*Bespoke financial packages and access to generally lower leveraged lines of credit with minimal covenants, collateralized debt obligations, etc.	*Relationships extended to global credit networks and suppliers
Governance skills	Incentive packages not used, local management not trusted No emphasis on managerial ownership Strong accountability on financial targets	*Investee board membership *Financial, not strategic control. Covenants not used All FCF remitted directly to investor	*Incentive packages not used *No emphasis on managerial ownership *Support for planning and marketing	*No board membership *'Hands off' approach *Covenants not used *Use of participating dividends restricts access to FCF	*Incentive packages * Managerial equity ownership *Provision of full, timely information using management accounts * Prevalence of executives directors from inside the firm	Implementation of governance mechanisms on deal *Investee Board membership *Financial monitoring skills and active strategic intervention * Covenants * Restrictions on access to FCF	*Value added by concentrations of experienced but younger directors * Greater prevalence of executive directors from outside (MBIs)	* Greater sector specific and specialist expertise * Intensive post deal involvement to set strategy in 'first 100 days'
Performance outcomes	*No efficiency improvements * Tight cash flow control * Cost reduction achieved	*Strong emphasis on exit/closure *High value transfers to investor, collapse and failure	Survival and growth without necessarily improving efficiency Cash flow control	*No emphasis on exit *Extended and illogical portfolio	* Increased profitability/efficiency * Cash flow and working capital control *Cost reduction	* Facilitation of exit strategy/ realisation often through stock market flotation (IPO) * increase in portfolio value	*Increased profitability/ productivity particularly in hi tech firms	* Higher performance returns mainly by experienced investors * Exits increasingly through secondary buyouts, very little IPO

APPENDIX A

Table A1: Regression Estimates of the Determinants of Productivity: Controlling for Director Characteristics

This table presents regression estimates of the determinants of productivity. Variable definitions are: Productivity (log value added); labor (log number of FT employees); capital (log assets deflated by GDP deflator); HHI competition (*Herfindahl-Hirschman Index* of industry concentration calculated by summing the squared market shares of each firm in the sector); industry risk (*indwoe* is the industry weight of evidence) measures the log odds of insolvency in each sector, at $t_{-1.}$); High technology codes for service and manufacturing and interaction terms with PE company dummies; company age (log Age); dummy variables for company ownership type in terms of PE backed buyouts (PE), management buyouts (MBO), management buy-ins (MBI), family owned firms (family), publicly listed corporations (Public), a subsidiary of a larger group (subsidiary); and time dummies. Variables reflecting the characteristics of directors. The analyses cover the whole period of the study (1995-2011), the pre-recession period (1995-2006); and the recession period (2007-2011).

Dep: Ln(Value Added)	1995-2011			Pre:Recession			Recession 2007-2011		
	Coefficient	t-statistic	Significance	Coefficient	t-statistic	Significance	Coefficient	t-statistic	Significance
Constant	5.254	210.72	.000	5.301	111.91	.000	5.486	111.87	.000
Ln (Labour)	.508	450.46	.000	.492	233.39	.000	.529	267.72	.000
Ln(Capital)	.483	348.23	.000	.493	190.84	.000	.472	185.39	.000
Ln(Age)	-.028	-13.96	.000	-.034	-9.02	.000	-.034	-8.23	.000
PE Backed	.106	12.58	.000	.099	6.17	.000	.130	7.69	.000
MBO	.152	16.75	.000	.152	9.33	.000	.158	9.63	.000
MBI	.033	1.63	.103	.086	2.36	.018	.041	1.13	.258
Public	.036	5.50	.000	.039	3.24	.001	.001	0.07	.945
Family	-.060	-10.20	.000	-.069	-6.32	.000	-.087	-8.53	.000
Subsidiary	.065	14.86	.000	.061	7.60	.000	.091	11.12	.000
Industry Risk	.000	0.05	.958	-.014	-2.73	.006	.004	0.63	.531
HHI Competition	.000	-2.33	.020	.000	-2.24	.025	.000	5.91	.000
HighTech_M	.041	6.63	.000	.008	0.66	.508	.055	4.45	.000
High_Tech_S	.261	41.60	.000	.280	24.99	.000	.359	32.31	.000
PE Backed* HighTech_M	.052	2.37	.018	.136	3.05	.002	.087	1.85	.065
PE Backed* HighTech_S	-.003	-0.13	.900	-.039	-0.81	.417	-.069	-1.50	.133
Board Size	.005	7.99	.000	.008	6.76	.000	.007	6.20	.000
Age Directors	-.008	-24.30	.000	-.009	-15.60	.000	-.008	-12.93	.000
Industry experience (Ave days)	.000	22.54	.000	.000	13.79	.000	.000	14.27	.000
Multiple Directorships	-.006	-21.63	.000	-.005	-9.72	.000	-.009	-19.08	.000
Ratio Local Directors	-.019	-3.73	.000	-.011	-1.13	.259	-.052	-5.69	.000
Time Dummies	YES			YES			YES		
R2		0.889			0.890			0.868	
F		27547.000			9532.000			9500.000	
Significance		0.000			0.000			0.000	
N=		204447			57685			71570	

Table A2: Multivariate Models Determining Return on Assets (ROA): Controlling for Director Characteristics

This table provide multivariate analysis models concerning the determinants of return on assets (ROA). Variable definitions are: HHI competition (*Herfindahl-Hirschman Index* of industry concentration calculated by summing the squared market shares of each firm in the sector); industry risk (*indwoe* is the industry weight of evidence) measures the log odds of insolvency in each sector, at $t_{-1.}$); High technology codes for service and manufacturing and interaction terms with PE company dummies; company age (log Age); dummy variables for company ownership type in terms of PE backed buyouts (PE), management buyouts (MBO), management buy-ins (MBI), family owned firms (family), publicly listed corporations (Public), a subsidiary of a larger group (subsidiary); Variables reflecting the characteristics of directors and time

dummies. The analyses cover the whole period of the study (1995-2009), the pre-recession period (1995-2006); and the recession period (2007-2009).

Dep: ROA	1995-2011			Pre:Recession			Recession 2007-2011		
	Coefficient	**t-statistic**	**Significance**	**Coefficient**	**t-statistic**	**Significance**	**Coefficient**	**t-statistic**	**Significance**
Constant	7.777	29.49	.000	9.531	18.40	.000	5.217	11.23	.000
PE Backed	2.447	16.47	.000	1.944	6.54	.000	4.135	15.57	.000
MBO	1.930	12.84	.000	2.991	10.25	.000	1.986	8.28	.000
MBI	-.221	-0.67	.502	.584	0.89	.374	.323	0.63	.530
Public	-2.863	-25.05	.000	-3.880	-17.74	.000	-3.148	-16.14	.000
Family	-.397	-3.98	.000	-.782	-3.97	.000	-.664	-4.24	.000
Subsidiary	.983	13.21	.000	.715	4.93	.000	2.045	16.26	.000
Industry Risk	.243	5.01	.000	-.028	-0.30	.761	.342	3.66	.000
HHI Competition	.000	2.59	.010	.000	-0.70	.483	.000	3.96	.000
Ln(AGE)	.719	22.38	.000	.468	7.53	.000	.848	14.14	.000
HighTech_M	.374	3.22	.001	-.355	-1.58	.113	1.360	6.45	.000
High_Tech_S	1.602	15.46	.000	1.398	7.23	.000	3.431	19.93	.000
PE Backed* HighTech_M	-.272	-0.67	.502	1.030	1.20	.230	1.061	1.37	.171
PE Backed* HighTech_S	1.725	3.80	.000	2.105	2.35	.019	-.244	-0.33	.745
Board Size	.154	15.35	.000	.222	11.37	.000	.154	9.20	.000
Age Directors	-.121	-24.44	.000	-.153	-15.87	.000	-.097	-11.59	.000
Industry experience (Ave days)	.000	18.89	.000	.001	14.22	.000	.000	11.91	.000
Multiple Directorships	-.072	-17.49	.000	-.061	-7.73	.000	-.078	-11.15	.000
Ratio Local Directors	.852	10.26	.000	1.076	6.69	.000	.101	0.75	.453
Time Dummies	**YES**			**YES**			**YES**		
R2		0.120			0.136			0.148	
F		174.900			76.500			123.900	
Significance		0.000			0.000			0.000	
N=		311528			85660			118582	

Table A3: Regression Estimates of the Determinants of Productivity: PE Backed Buyouts Only Sample

This table presents regression estimates of the determinants of productivity. Variable definitions are: Productivity (log value added); labour (log number of FT employees); capital (log assets deflated by GDP deflator); HHI competition (*Herfindahl-Hirschman Index* of industry concentration calculated by summing the squared market shares of each firm in the sector); industry risk (*indwoe* is the industry weight of

evidence) measures the log odds of insolvency in each sector, at $t_{-1.}$); High technology codes for service and manufacturing ;company age (log Age); Director and PE experience variables; PE experience interaction with the technology dummies. The analyses cover the whole period of the study (1995-2011), the pre-recession period (1995-2006); and the recession period (2007-2011).

Dep: Ln(Value Added)						
	Coefficient	**t-statistic**	**Significance**	**Coefficient**	**t-statistic**	**Significance**
Constant	5.600	66.929	.000	5.666	67.411	.000
Ln (Labour)	.534	109.503	.000	.528	108.099	.000
Ln(Capital)	.433	84.336	.000	.434	84.082	.000
Ln(Age)	.029	5.029	.000	.033	5.650	.000
Industry Risk	.050	5.648	.000	.065	7.301	.000
HHI Competition	.000	-.042	.967	.000	.230	.818
HighTech_M	.062	3.788	.000			
High_Tech_S	.257	13.757	.000			
Board Size	.021	7.531	.000	.022	7.914	.000
Age Directors	-.003	-3.205	.001	-.004	-3.858	.000
Industry experience (Ave days)	.000	10.049	.000	.000	9.616	.000
Multiple Directorships	-.010	-9.515	.000	-.010	-9.865	.000
Ratio Colocated Directors	.025	1.604	.109	.019	1.193	.233
Foreign PE	.071	4.630	.000	.083	5.394	.000
PE MBO	.077	7.206	.000	.081	7.546	.000
Syndicate	.245	2.949	.003	.240	2.870	.004
UK Experience of PE	.000	2.958	.003	.000	1.005	.315
Experience* High Tech_M				.000	1.118	.264
Experience* High Tech_S				.001	6.376	.000
R2		0.911			0.909	
F		3505.800			3450.200	
Significance		0.000			0.000	
N=		11584			11584	

Table A4: Multivariate Models Determining Return on Assets (ROA):PE Backed Buyouts Only Sample

This table provide multivariate analysis models concerning the determinants of return on assets (ROA). Variable definitions are: HHI competition (*Herfindahl-Hirschman Index* of industry concentration calculated by summing the squared market shares of each firm in the sector); industry risk (*indwoe* is the industry weight of evidence) measures the log odds of insolvency in each sector, at $t-_{1.}$); High technology codes for service and manufacturing ; company age (log Age); Variables reflecting the characteristics of directors and PE experience.PE experience interaction with the technology dummies. The analyses cover the whole period of the study (1995-2011), the pre-recession period (1995-2006); and the recession period (2007-2011).

Dep: ROA						
	Coefficient	**t-statistic**	**Significance**	**Coefficient**	**t-statistic**	**Significance**
Constant	10.913	7.745	.000	11.922	8.491	.000
Ln(Age)	1.304	8.048	.000	1.314	8.122	.000
Industry Risk	.777	3.119	.002	1.078	4.381	.000
HHI Competition	.000	1.893	.058	.000	1.924	.054
HighTech_M	-.114	-.243	.808			
High_Tech_S	3.584	6.961	.000			
Board Size	.054	.738	.461	.065	.888	.375
Age Directors	-.182	-6.509	.000	-.198	-7.103	.000
Industry experience (Ave days)	.001	5.157	.000	.001	5.322	.000
Multiple Directorships	-.159	-6.255	.000	-.165	-6.508	.000
Ratio Colocated Directors	1.119	2.637	.008	.959	2.260	.024
Foreign PE	-.205	-.492	.623	-.042	-.100	.920
PE MBO	1.699	5.777	.000	1.748	5.938	.000
Syndicate	3.658	1.914	.056	3.428	1.792	.073
UK Experience of PE	.005	2.701	.007	.003	1.449	.147
Experience* High Tech_M				.017	2.883	.004
Experience* High Tech_S				.010	2.097	.036
R2		0.148			0.139	
F		23.180			20.430	
Significance		0.000			0.000	
N=		14587			14587	

Appendix B Relative Performance: PE Backed and Matched Private Companies

This table presents mean data for PE backed buyouts and matched private firms for each year in the period 1999-2010 using a number of ratios relating to profitability and debt; changes in performance variables, and working capital variables: return on assets (ROA), gross margin, debt to total assets ratio (Debt/TA); interest coverage ratio (Coverage); cash to total assets ratio (cash/TA), Debtors to total assets ratio (Debt/TA); Creditors to total liabilities ratio (Creditors/TL); and Stock to total assets ratio (Stock/TA).

Year	PE Backed				Matched Private			
	ROA	**Gross Margin**	**Debt/TA**	**Coverage**	**ROA**	**Gross Margin**	**Debt/TA**	**Coverage**
1999	7.13	30.66	37.06	20.88	5.69	29.61	37.89	30.50
2000	5.60	30.60	37.59	22.00	5.05	28.63	38.40	30.04
2001	5.32	31.41	36.91	21.45	4.82	30.02	38.88	29.96
2002	4.87	33.28	37.86	21.75	4.56	32.13	39.15	31.14
2003	5.66	35.03	37.89	25.09	4.93	33.05	39.16	32.29
2004	7.19	35.86	36.12	23.84	5.78	33.99	38.68	27.92
2005	8.64	37.16	34.64	25.97	5.87	34.81	38.07	25.76
2006	8.74	37.15	34.50	26.71	6.24	35.06	37.68	25.34
2007	10.13	37.40	34.28	30.50	6.54	34.75	37.46	25.93
2008	9.21	36.42	30.58	35.27	5.72	31.37	36.33	26.50
2009	6.72	33.72	24.70	36.29	4.50	28.16	26.89	29.36
2010	7.30	31.86	14.52	47.11	5.40	25.19	16.90	36.46

Year	PE Backed				Matched Private			
	Cash/TA	**Debtors/TA**	**Creditors/TL**	**Stock/TA**	**Cash/TA**	**Debtors/TA**	**Creditors/TL**	**Stock/TA**
1999	7.65	25.04	27.52	13.27	6.627	13.30	15.60	10.01
2000	6.94	24.93	27.29	12.77	6.778	12.90	15.21	9.43
2001	7.53	24.84	27.10	12.88	6.980	12.36	14.62	9.31
2002	8.18	23.67	27.15	12.37	7.120	11.98	14.45	9.18
2003	8.20	23.35	27.99	12.06	7.346	11.84	14.52	9.21
2004	8.70	23.81	28.44	11.44	7.675	11.67	14.22	9.31
2005	9.14	23.86	29.27	11.24	8.005	11.34	14.00	9.19
2006	9.39	23.75	28.72	10.38	8.157	11.14	14.12	8.96
2007	10.01	22.82	29.25	10.11	8.437	10.96	14.21	8.85
2008	10.42	22.64	29.44	9.60	8.457	10.79	14.55	9.05
2009	10.17	21.36	27.53	8.82	8.784	10.25	13.77	8.55
2010	10.25	22.37	28.71	8.77	9.059	10.69	14.58	8.32