INCENTIVES TO CORPORATE GOVERNANCE ACTIVISM

Dennis Leech

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by

Dennis Leech
University of Warwick

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Dr Dennis Leech
Department of Economics
University of Warwick
Coventry
CV4 7AL UK
Phone: (+44)(0)2476523047 (direct)
(+44)(0)2476523027 (messages)
email: d.leech@warwick.ac.uk
http://www.warwick.ac.uk/fac/soc/Economics/leech/

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Incentives to Corporate Governance Activism

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Dennis Leech, University of Warwick

Abstract
This paper considers the incentives faced by investors (financial institutions) to become actively involved in the direction of their under-performing portfolio companies as proposed by recent policy reports on corporate governance. It proposes a metric by which to measure the returns to activism in terms of the size of holding, measures of risk and return to the company, the degree of under performance and the level of commission received by fiduciary fund managers. By comparing this with costs of activism it proposes a method by which 'significant shareholdings' may be estimated. A significant shareholding is the level above which a shareholding in a company may be said to have private incentives to activism. This approach is applied to two groups of companies listed on the London Stock Exchange, the top 250 and a ten percent random sample. The results indicate that there are very strong incentives for shareholders to be activist participants in corporate governance among the top 250 companies while there is much more diversity among the smaller companies. Results differ considerably between those where the shareholder is an own-account investor and a fund manager.

Key words: Corporate governance; shareholder activism; incentives; free rider problem; agency.

Introduction

Much recent discussion of policies to improve standards of corporate governance has increasingly focused on the role of shareholders: as the legal owners of a company they can be said to have the ultimate responsibility for all aspects of its conduct and performance and therefore are the group to whom management is accountable. This contrasts with the more traditional view in which investors are not supposed to become involved in the direction of their portfolio companies - simply buying or selling their shares according to whether they do well or badly - and high standards of performance the market for corporate control ensure through takeovers or threat of takeovers. As a form of market regulation this has been shown by many studies to be inadequate and there are strong arguments for the new approach based on corporate governance activism[1]. At the same time, and on the other hand, there is considerable evidence that investors have yet fully to embrace their new responsibilities and discharge their associated duties[2].

Shareholder activism[3] or engagement derives from investors developing long-term face-to-face relationships with the companies in which they invest. Rather than their involvement being little more than that of anonymous speculators, trading their shares on the market, they become the owners with an interest in the company's progress, a

[1] See the Cadbury report (1992), Charkham and Simpson (1999), Monks and Minnow (2001).
[2] Myners (2001). Discussions of corporate governance include Morris (1994), Shleifer and Vishny (1997), Tirole (2001).
[3] It is important to note that the idea of activism embodied in the term shareholder - or sometimes shareowner - activism is fundamentally different from that implied in the term active portfolio management.

knowledge of its business and personnel and a commitment to its long term success; at the same time they have the capacity to influence the direction of the company through the voting rights that the shares carry.

The need for this changed relationship has come about in recent years because of the increased dominance of financial institutions as shareholders. The majority of shares on the London Stock Exchange are now held by British financial institutions: 51.9 percent in 1999 (ONS 1999). The growth in the size of pension funds and insurance companies means that increasingly, in many cases, institutional portfolios contain shares in a very large number of companies, if not every one listed on the market. At the same time relatively fewer shares are now held by individuals than in the past. This significantly restricts the opportunity for selling poorly performing shares without causing a substantial share price fall, and therefore limits the effectiveness of the market for corporate control as a discipline.

An activist shareholder engages with the company at the highest level. It[4] needs to be well informed about the company in order properly to be able to exercise its voting rights. It needs to engage in dialogue with the board of directors to understand its strategy and monitor its performance, especially when things are not going well, when it must take a view on the optimal action and if necessary intervene. An activist investor might increase its holding in a poorly performing company where it sees there is the potential for improvement after suitable changes have been made in its strategy or board membership. It needs to meet with the directors and management and use its influence to raise standards of performance on behalf of all the owners. That does not mean

confrontation - cooperation is obviously much to be preferred - but the relationship is one where the owner has power over the directors based on the ultimate sanction that changes in board membership might be brought about by a vote at the annual general meeting.

It is often argued that the majority of shareholders cannot be expected to discharge the traditional duties of stewardship that stem from ownership because they lack the necessary financial incentives. This argument against investor activism arises where there is a liquid equity market like in Britain and the United States so that typically ownership stakes are small in percentage terms. While it might be true that the holder of a very large block shareholding (usually taken as above 20 percent of the company's voting shares) has indeed a sufficient incentive to play the role of active owner - to monitor the company's performance, participate in decision making and to exercise the voting rights attached to the shares -nevertheless such large shareowners are few. Typically a company's largest shareholders each control only a few percent of the equity, a small proportion both as a share of cash-flow rights and voting power. Therefore, on the one hand, they are seen as lacking the necessary private incentives: any benefit they may expect to gain from their activism in improved company performance is assumed likely to be less than the cost of doing so. One the other hand, a shareholder with only a small fraction of the votes is not in a very powerful position from which to challenge directors by voting against board recommendations at a company meeting.

This paper examines this question by considering the private incentives faced by investors. It argues, in contrast to much of the theoretical literature, that the free-rider argument is frequently overstated and that very many shareholders, in fact, can be said to

[4] Shareholders are financial institutions and therefore it is appropriate to use the neuter

face the appropriate incentives attaching to their cash-flow rights. A typical shareholding held by an investor in a large company, although relatively small in percentage terms – the largest shareholder in a top-250 company not infrequently controls no more than 2 or 3 percent – nevertheless is very large in absolute terms. Therefore the expected private returns to such a holding following an improvement in company performance are likely to be considerable. By contrast the likely costs that must be incurred in order to participate are of a different order, being related to such activities as research, analysis, attending meetings and voting. The issue of investor incentives to activism is a real one but it is empirical in that some investors will have strong incentives while most undoubtedly lack them. This paper proposes an approach to this question based on a metric by which the returns to activism may be quantified. One of the main results I find is that it can be said that many leading investors in large companies have very large private incentives.

The approach adopted is a theoretical analysis applied to information on share ownership of real companies on the London Stock Exchange. The focus is on the question of whether the private incentives facing shareholders are such that it will pay them to behave socially responsibly by actively discharging the responsibilities of ownership. For a shareholder, being an activist means not only becoming informed about company performance and alternatives, becoming in a position to know what changes are needed to rectify weak performance; there is also the question of whether it has enough votes to be able to carry them out. I ignore this problem in this paper by maintaining the reasonable fiction that the required changes will always be implemented. This is a

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gender for them.

reasonable assumption because there is also an incentive to share its information with the other shareholders in order to inform a vote that would bring this about. Competing shareholders have common interests in the outcome of such a vote.

The usual arguments against activism are considered before presenting the model and results for the UK. These typically run together a number of related issues that are better separated. I treat the free rider arguments separately from those involving conflicts of interest, since their natures are fundamentally different. I address the question of whether the free rider argument would be compelling by itself in the absence of conflicts of interest. I consider incentives formally abstracting from conflicts of interest.

The paper is organised as follows. In section 1 the free-rider argument is examined as a public goods problem but I show that the key issue here is whether there are private incentives to supply a public good; in the case where there are, the question becomes fundamentally different from that normally considered in the literature. Section 2 presents a conventional discussion of conflicts of interest that inhibit investors, and argues the need for rules to remove these. The model is presented in section 3; this assumes a shareholder activist is also a passive portfolio investor: shares are held long term in the portfolio subject to the normal random fluctuations in returns, which are screened every year. Severe underperformance is taken as indicating a substantial problem with the management of the company and therefore likely returns to intervention. This is the basis of a measure of the expected returns to activism which can be compared with the associated costs. This model makes it possible to estimate the size of investment that would be large enough to carry private cash flow incentives to activism. This is applied to two groups of British companies in section 4, separate

analyses for the Top 250 largest companies and a Random Sample taken from the whole market. I present results showing that there are in fact very strong incentives to corporate governance activism on shareholders of the largest companies but much more mixed for the market as a whole. Section 5 is the conclusion and discussion.

1. Obstacles to Activism: the Free Rider Argument

Those who have advocated that shareholders should become more involved in the direction of their portfolio companies when they perform badly have argued, implicitly or explicitly, that such intervention is not only in the public interest but also in the investors' own best interests. The Cadbury Report, for example, described the voting rights attaching to ordinary shares as a valuable asset: "Given the weight of their votes, the way in which institutional shareholders use their power to influence the standards of corporate governance is of fundamental importance. Their readiness to do this turns on the degree to which they see it as their responsibility as owners, and in the interest of those whose money they are investing, to bring about changes in companies when necessary, rather than selling their shares … Voting rights can be regarded as an asset, and the use or otherwise of those rights by institutional shareholders is a subject of legitimate interest to those on whose behalf they invest." (Cadbury, 1992) This statement can be read as a plea to shareholders to use their votes collectively, as a service to the public, and slightly leaves open the question of whether there exist private incentives for individual institutional shareholders to use their votes.

The Myners Report, on the other hand, is explicit in suggesting that shareholder intervention in failing companies is in the shareholders' own interests: "In managing

pension funds' assets, fund managers have also pursued only a limited range of strategies to deliver value to clients. In particular, the review found evidence of general reluctance to tackle corporate underperformance in investee companies, particularly pre-emptive action to prevent troubled companies developing serious problems. … The review was given a number of reasons for this, none of which it believes to be compelling …. If fund managers are truly to fulfil their duty of seeking to maximise value for their shareholders, then there will be times - certainly more than at present – when intervention is the right action to take. Of course there are many occasions when simply selling an entire holding is the appropriate response. But this is often difficult where holdings are large, where the share price is already depressed, or where a zero holding cannot be adopted for other reasons (such as constraints on departures from an index benchmark). … *The case for action does not rest on a public interest argument about shareholder responsibility but on the basic duty of the manager to do their best for the client*. Nor need (or should) it represent 'micro-management' by fund managers." (Myners, 2001, p.10, emphasis added) "The review is not making a public interest argument about shareholder responsibility. *The most powerful argument for intervention in a company is financial self-interest, adding value for clients through improved corporate performance leading to improved investment performance*. *One would expect that for institutional investors with long-term liabilities, such an approach would appeal*." (Myners, p.90, emphasis added)

Against this is the argument that shareholders typically lack suitable incentives to activism because that would, in effect, mean supplying what is a public good to the community of all shareholders. The following passage is typical of many: "Most public companies are held by many shareholders owning only small stakes … an active

shareholder cannot capture all of the gain from becoming involved, studying the enterprise, or sitting on the board of directors, thereby taking the risks of enhanced liability. Such a shareholder would incur the costs but split the gains, causing most fragmented shareholders to rationally forgo involvement. In the language of modern economics, we have a collective action problem among shareholders – despite the potential gains to shareholders as a group, it's rational for each stockholder when acting alone to do nothing, because each would get only a fraction of the gain, which accrues to the firm and to all of the stockholders. This shareholder collective action problem is then layered on top of a principal-agent problem – agents, in this case the managers, sometimes don't do the principal's, in this case the stockholder's, bidding." (Roe, 1994). Another example is: "…dispersed shareholders have little or no incentive to monitor management. The reason is that monitoring is a public good: if one shareholder's monitoring leads to improved company performance, all shareholders benefit. Given that monitoring is costly, each shareholder will free-ride in the hope that *other* shareholders will do the monitoring. Unfortunately, all shareholders think the same way and the net result is that no – or almost no – monitoring will take place. Sometimes this free-rider problem can be overcome by someone who acquires a large stake in the company and takes it over (or exerts control in some other way)." (Hart, 1995).

This argument relies on the fact that the activist shareholder receives only a small fraction of the gain resulting from its actions. I wish to ague here that this comparison is inappropriate and that what actually matters as a basis for action is only whether the benefit exceeds the costs. An investor with a 1 percent holding, for example, might nevertheless be substantially better off by being active than not, even though 99 percent

of the gains thereby generated benefit other shareholders. For there to be an appropriate incentive it is sufficient that the likely private benefit from an action exceeds the cost of taking it[5].

There will always be a form of shareholder collective action problem but it is necessary to make a distinction between two different situations. The first case is where all shareholders have such small stakes that the benefits they might receive from activism never exceed the associated costs. This is the case described above, in the quotations from Roe and Hart, and which appears widely in the literature; this case gives rise to the 'rational abstention' of Downs (1957), and the 'logic of collective action' problem of Olson (1963). The coordination problem is decisive in this case and 'free riding' behaviour by all shareholders is rational. This situation is obviously one where there is poor corporate governance.

The second case however is where the stakes of some shareholders are sufficiently large that the private benefits they can expect to receive as a result of successful intervention outweigh the costs they incur. This case is fundamentally different from the previous one because now the system of corporate governance can be based on companies being held accountable by active shareholders in possession of the right incentives; in this case the shareholders are economic actors with private incentives to supply a public good.

There remains a co-ordination problem in this case, however, because there is still an incentive to free ride. But a complete coordination failure, caused by all shareholders

[5] This argument is also used by Stapledon (1996).

behaving in this way, that would result in the public good not being supplied, would be irrational and pathological[6]. An activist shareholder who is able to bring about an improvement in the company's performance is better off whatever the others decide to do in terms of activism. If others free ride by doing nothing in the knowledge that the public good will be supplied, then, *ceteris paribus*, the free riders will do better in relative terms. But that is irrelevant to an investor unless the investors are competing according to some common benchmark. It will be a problem in such cases - for example where they are fund management companies competing for business on the basis of relative performance. But the problem there is rather in the nature of a conflict of interests and will be discussed in the next section. If the shareholder is acting on its own account, as for example a pension fund which is managed in-house by its trustees, or a personal shareholding held by an individual then what matters is the return it receives on the shares, not the comparative position of different fund managers in the performance league tables.

The question of the dividing line between the first and second of these situations is essentially empirical. It is the thesis of this paper that the second case does not give an empty group – far from it: that there are many shareholdings that can be shown to possess individual incentives to corporate governance activism. I will refer to them as "significant shareholdings".

I do not consider voting power in this paper. In previous work I have investigated the relationship between the degree of dispersion of the share ownership and the voting power represented by the combined votes of a group of shareholders acting together. (Leech, 1987, 2001, Leech and Leahy, 1991) A robust result to have emerged from this

[6] This is formally similar to a game of 'chicken' in game theory where the worst outcome

work is that in almost all companies of whatever size a few top shareholders – rarely more than seven - if they combined and voted together as a bloc, would have enough voting power for effective control (Leech, 2001).

In the current study I abstract from the question of voting power and make the assumption that an activist shareholder is always able to bring pressure to bear by having, as the ultimate sanction over recalcitrant management, the capacity to win votes in order to change the directors at company annual meetings. If an individual "significant" shareholder, as a result of activism, is in a position to make proposals for changes in strategy or board membership that would improve results then it also has an incentive to make its information freely available to its rivals in order to induce them to support it in a vote. It is not unreasonable to make this assumption because all investors at this level of abstraction have a common interest in the matter and therefore the question of voting here is secondary to that of incentives. Obviously this is an unrealistic assumption to make in practice because there are many obstacles to coordinated shareholder action, some of which are detailed in the next section.

2. Obstacles to Activism: Conflicts of Interest

Accepting that it is possible that shareholders may have the incentives described above, there remain major obstacles in the way of investor activism. I consider these conflicts of interest here before returning to the main theme in the next section. They may arise from several sources.[7]

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is the one where all players defect.

[7] The Myners report (Myners, 2001), provides a comprehensive description of conflicts of interest.

First, the way in which financial institutions select and reward their fund managers creates perverse incentives. If fund managers are judged against performance criteria in terms of short term, such as quarterly, figures they will have little motivation to press portfolio companies to adopt strategies that have a longer time scale, more relevant to institutional investors with long-term liabilities. This conflict of interest can perhaps be reduced by specifying a longer period over which performance should be judged.

Second, conflicts arise through fund managers having other interests because they may be part of a larger financial organisation. They will be keen to attract and keep other business, for example the company pension scheme, the investment banking or insurance business of the company and therefore will not risk losing this by activism. More generally a fund manager may not wish to risk losing similar business, or fail to attract new business, from other companies by being seen publicly, or get a reputation, as a 'troublemaker'. Such major disincentives can be reduced by effective 'Chinese walls' to ensure that the interests of their client funds are protected and not subordinated to their wider business interests.

Third, it is often said that investors do not seek to control the companies in their portfolio because that would entail them becoming part of management and might open them up to a charge of insider trading if they acted on the information they received. However where an investor, on the basis of a meeting with a company's management, decided not to sell a holding, but to hold it in the hope of being able to influence the company to adopt a better strategy that would benefit it in the long run, that would hardly lead to an accusation of insider trading, even though it might be acting on inside information.

Fourth, the most serious obstacle to activism might be the possibility, mentioned above, of other investors being able to free-ride off the efforts of the activist shareholder. If fund managers were competing against similar performance indicators there would be perverse incentives because the ones who did nothing – and avoided incurring the costs - would perform better in the league tables than the active one who intervened and did incur the costs. There would seem to be a simple remedy however in that the activist investor would be in a position of being able to trade on the information it possessed: the information that it had obtained both through its investment in activism (which need not be inside information) and also the fact that it was going to act on it to the benefit of the share price. Therefore it could gain by increasing its holding temporarily relative to its long term portfolio level and then sell the overweight portion when the company performance returned to normal. In absence of an agreement between investors the activist shareholder could recoup its additional costs by speculating on its own activism and need not lose out to free riders.

Such conflicts of interest as these are peripheral to the main issue of whether investors have pure private incentives to activism. I turn to this question in the next section.

3. A Model of the Incentives of an Activist Shareholder

In this section I propose a framework by which the financial incentives of institutional investors can be evaluated in terms of the costs and benefits of activism. The following assumptions are made. First, the conflicts of interest described above are ignored. Second, there are no practical obstacles in the way of shareholder activism being successful in achieving its aims of improved company performance. Both of these are

very strong assumptions from a practical point of view but they are valid abstractions from the perspective of this paper.

I assume that the key issue in corporate governance is the accountability of the company's management for its overall performance. The model of an activist investor presented in this section maintains the assumption that an activist investor is concerned with company performance *as a whole* rather than some aspect of strategy such as executive pay which may be incidental to it.

An activist investor is assumed to be a financial institution that consists essentially of two funds: (1) the main portfolio; and (2) an activist portfolio. The main portfolio comprises holdings in a wide range of companies' shares held on a long-term basis for income in the form of dividends. The main portfolio can be thought of being managed according to a passive investment strategy that aims to track an index or benchmark. The activist fund consists of the shares of a small number of selected companies which have been chosen both because they have been underperforming and there exist clearly identified remedies for this underperformance available within the company by changes at board level. The activist shareholder is a catalyst for change and looks for opportunities to bring about change to improve performance which it can exploit by bringing pressure to bear on the management. Companies are held in this portfolio for a limited time until their performance improves and then they are returned to the main portfolio.

A firm in the main portfolio is assumed to generate a return on its shares at rate r, a random variable. The expected rate of return is μ and risk (measured by the standard

deviation) is σ. In what follows I assume r to be normally distributed for convenience. The relevant measure of risk is firm-specific risk.

3.1 The Private Benefits of Intervention

The investor screens the performance of all shares in the main portfolio. However, if the performance of a company is exceptionally bad its shares are considered for transfer to the activism fund.[8] Suppose the investor has a policy of transferring the worst-performing 100α% of companies in its main portfolio to the activism fund; equivalently the probability of intervention in a company is α.

Let the threshold rate of return below which the company's shares are transferred to the activism fund be r_α , defined by the condition,

$$P(r = r_\alpha) = \alpha.$$

In the case where r is normally distributed, then

$$r_\alpha = \mu - Z_\alpha\sigma \quad , \qquad (1)$$

where Z is the standard normal deviate, and Z_α such that $Pr(Z < Z_\alpha) = \alpha$.

Therefore the minimum expected return to intervention is equal to:

$$\mu - r_\alpha = Z_\alpha\sigma \qquad (2)$$

[8] This depends not only on the share's performance but also on there being the potential for restoring it to normal profitability through activism. In the model it is assumed that this is always the case.

An investor holding a stake of £k of the shares of the company will expect to make an annual monetary return of $Z_\alpha \sigma$ k whose estimated capital value based on an expected rate of return of μ, will be

$$Z_\alpha \sigma \, k/\mu. \qquad (3)$$

3.2 The Costs of Activism

It is assumed that the total additional direct costs of activism are equal to an amount £A. These costs include the additional management costs of holding the shares in the activism fund, the costs of research into the particular circumstances of the company that would lead to poor performance and remedies, the costs associated with meetings between senior personnel and top managers of the company, and the costs associated with shareholder voting and co-ordinated shareholder action to change company policy or directors. A major part of the costs of activism arise from the necessity that to be successful it be led by senior high calibre personnel, who are able to formulate and implement the intervention strategy including being able to deal with top company managers on equal terms.

The cost of activism is a one-off investment which must be compared with the present value of the expected returns it is expected to bring. Therefore the condition under which activism pays is,

$$Z_\alpha \sigma \, k/\mu \geq A \qquad (4)$$

3.3 Fiduciary Investors and Own Account Investors

The above analysis must be modified to allow for the case where the institution exercising control rights is different from the beneficial shareholder. Here the benefits

received by the fund manager reflect the level of the management fee paid in the form of an *ad valorem* commission on the value of the fund. Let the shareholding of the institutional investor be £K and the rate of commission paid to the fund manager be c. Then the incentives which apply to the fund manager relate to a holding of cK rather than k, and this substitution must be made in (3) and (4) above. It is then possible to find the minimum size of shareholding which will be large enough that its manager would find activism profitable.

Writing k = cK in (4) gives the condition

$$Z_\alpha \sigma \, cK/\mu \geq A \qquad (5)$$

and therefore,

$$K \geq A\mu / cZ_\alpha \sigma \, . \qquad (6)$$

Expression (6) is the basis for the definition of a significant shareholding.

3.4 Definition: A Significant Shareholding

A significant shareholding is one sufficiently large that there is a private incentive to the investor or fund manager who controls it to intervene to improve the performance of the company concerned. A significant shareholding, K_0, is the smallest value of K that satisfies inequality (6):

$$K_o = A\mu/cZ_\alpha\sigma. \qquad (7)$$

The cost of capital for the company, μ, is estimated using the capital asset pricing model, by the relationship: $\mu = r_f + (r_m - r_f)\beta$, where r_f is the risk-free interest rate, r_m is

the return on the market portfolio (both common to all companies), and β is the company's systematic risk.

4. Significant Shareholdings in British Companies

Now I apply the model described in the previous section to evaluate significant shareholdings in UK companies and discuss their implications for corporate governance. The conclusion is that there is evidence of pervasive and very strong incentives for own-account investors, as might be expected, but also that strong private incentives exist also for fiduciaries managing holdings in very large companies.

4.1 The Data and Assumptions about Parameter Values

The data set consists of two groups of companies listed on the London Stock Exchange that were observed at the end of December 1999: (1) the largest 250; and (2) a ten-percent random sample of all companies listed on the main exchange (166 companies). The share ownership data, which was purchased from a commercial financial company, comprises all shareholdings above a certain threshold. For the top 250 companies the threshold is 0.015 percent of the issued ordinary share capital[9] which means that typically the largest 320 shareholdings representing about 85 percent of the equity are observed[10]. For the smaller companies the threshold is 0.1 percent[11] and for a typical company in this group this gives about 80 holdings with 86 percent of the equity. The risk data comprising the market risk, beta, and the firm-specific risk, σ, was provided by the London Business School Risk Measurement Service.

[9] That is, all shareholdings larger than a fraction equal to 0.00015 of the equity.
[10] Corresponding figures for the top 100 companies are 475 shareholdings and 85% of the equity.
[11] That is, all holdings bigger than 0.001 of the shares.

The estimate of the costs of activism, A, that I have used is based on discussions with fund managers involved in the management of pension funds. The figure chosen is meant to be representative in that it is plausible to an order of magnitude in many cases rather than a precise estimate. I have taken a figure of £250,000 per year as the additional costs incurred by the investor, as a result of the company being the focus of activism and transferred to the activism fund, over the costs of its shares remaining in the main portfolio. I have assumed this figure to be independent of the size of company or the returns to activism. Experience reported by activist investors suggests that a successful intervention typically requires a minimum of two years to have the desired effect and restore the company's performance to normal. Therefore I have used a ballpark estimate of A=£500,000 in the analysis, for all companies. This is of course, a gross oversimplification and it is likely that these costs will increase with the size of the company. Many of the costs incurred by an investor who is active in the affairs of a large and complex company with many divisions might be expected far to exceed those for a smaller single product firm, for example. Moreover the costs of taking coordinated shareholder action might be expected to vary according to circumstances depending on many factors. Assuming a constant value for A is therefore a first approximation and much further empirical research into this area is needed.

I have conducted three different analyses assuming different levels of commission. The most important distinction here is between a shareholder who is an own-account investor, such as a private individual or a pension fund managed in-house, and a fiduciary fund manager who receives a fee in the form of commission. In an important sense (not least legally) this distinction should be irrelevant because fiduciaries

have a moral and legal obligation to manage funds solely in the interests of their beneficiaries, so there should be no differences in behaviour. However the payment of fund managers by commission on an *ad valorem* basis gives rise to a possible principal-agent problem and a misalignment of incentives that is important from the point of this investigation.

For an own-account investor, all the gains from activism accrue to the investor and therefore I have assumed a value of c = 1 for this case. For the analysis of fiduciaries, I have taken two different levels of typical commission corresponding to different styles of fund management. Assuming an index tracker fund (corresponding to a 'passive' style of management), I have used a rate of commission of 19 basis points (c = 0.0019 or 0.19 percent), a typical figure. Assuming a fund manager with an 'active' style of portfolio management, I have used the average fee for a £200M actively managed UK fund, reported in Brealey and Neuberger (2001), of 30 basis points, c = 0.003 or 0.3percent.

In calculating the cost of capital, I have taken the risk-free rate, r_f , equal to 5.5%, and the equity premium, $r_m - r_f$, of 4.5%. I have assumed the probability of a company being selected for the activism portfolio to be 1 percent, $\alpha = 0.01$ ($Z_\alpha = 2.3263$); that is the investor is assumed to select the bottom-performing 1 percent of the companies in the main portfolio for transfer to the activist portfolio. Therefore an investor whose main portfolio comprised all listed companies would expect to be actively involved in the governance of16 companies.

4.2 The Results

The results are presented in four ways in Tables 1 to 4. Tables 1 to 3 show descriptive statistics for both groups of companies and Table 4 gives results for the top 20

companies by name for illustration. Table 1 shows the distribution of estimates of significant shareholdings by size, Table 2 the numbers of significant shareholdings and Table 3 the voting rights controlled by significant shareholders. As well as the results of applying the model, Tables 2 and 3 also present analyses using other definitions of significant shareholdings that have been proposed by Charkham and Simpson (1999) and by Sykes (2000).

Significant Shareholdings

The distribution of the estimates of significant shareholdings, K_0 , obtained using expression (7) are shown in Table 1. As is to be expected there is a very large difference between the results for own account shareholders and those for fiduciaries.

Own Account Investors. For own account investors virtually any shareholding is large enough to satisfy condition (6). In the Top 250 group a significant shareholding held by an own-account investor ranges between a minimum of £10,000 and a maximum of £470,000 with a median £80,000. In the Random Sample, it ranges around a median of £70,000 , between a minimum of £5,000 and a maximum of £430,000.

Fiduciary Investors. For fiduciary investors significant shareholdings are very much larger. If c=19bp, corresponding to an index tracker, the median becomes £44.3 million among the Top 250 and £34.7 million among the Random Sample. The range is between £7.9 million and £245.6 million among the Top 250. The minimum is £2.5 million in the Random Sample. Higher levels of commission rates reduce the values of K_0 for both groups.

Table1: Estimated Significant Shareholding K_0 (£M)

	Top 250 Companies			Random Sample		
	Fiduciary		Own Account	Fiduciary		Own Account
	c=19bp	c=30bp	(c=1)	c=19bp	c=30bp	(c=1)
Minimum	7.9	5.0	0.01	2.5	1.6	0.005
Lower Quartile	33.5	21.2	0.06	28.1	17.8	0.05
Median	44.3	28.0	0.08	34.7	22.0	0.07
Upper Quartile	51.4	32.6	0.10	47.3	29.9	0.09
Maximum	245.6	155.5	0.47	226.3	143.3	0.43
Mean	47.8	30.3	0.09	41.8	26.5	0.08
Standard Deviation	29.8	18.9	0.06	28.1	17.8	0.05

Numbers of Significant Shareholdings by Company

Table 2 shows the distribution of the *numbers* of significant shareholdings per company, that is the number of holdings that are larger than K_0. These results are useful in giving one indication of the feasibility of improved corporate governance based on coordinated shareholder action.

The table also shows, for comparison, alternative numbers on different definitions of a significant shareholding that have been proposed in the literature. Charkham and Simpson (1999) proposed a slightly different definition of what they called 'significant ownership' from the one in this paper. In order to improve corporate governance, they proposed placing formal obligations on large shareholders to act as guardians of companies and for the purpose suggested such significant ownership might be 0.5% of the equity or, as an alternative in the case of a very large company where there might be few such shareholders, a cash sum of £25 million. I present results for both figures. A

similar idea has been suggested by Sykes (2000) as part of his proposed programme for reform of corporate governance; one of his proposals is for institutional shareholders to be made "accountable for exercising their voting rights in an informed and sensible manner above some sensibly determined minimum holding (e.g. £10m)". I have taken this as the authority for an alternative definition of a significant shareholding, and presented numbers based on it also in Table 2.

Table 2: Numbers of Significant Holdings by Company

	Top250						Random Sample					
	Fiduciary		Own	£25M	£10M	0.50%	Fiduciary		Own	£25M	£10M	0.50%
	c=19bp	c=30bp	Account				c=19bp	c=30bp	Account			
Minimum	0	0	1	0	1	1	0	0	1	0	0	1
Lower Q	4.0	8.0	122.0	7	17	23	0.0	0.0	24.0	0	0	17
Median	8.5	13.0	165.5	14	28.5	29	0.0	0.0	44.0	0	1	22
Upper Q	17.8	24.0	227.8	26.8	46.8	33	0.0	1.0	80.0	1	5	30
Maximum	168	249	955	249	363	46	168	249	875	249	358	39
Mean	15.3	22.2	199.4	24.1	43.5	27.0	3.0	4.5	68.4	4.3	8.4	22.4
SD	21.9	29.5	131.5	33.9	51.6	8.7	14.7	21.3	87.8	21.3	31.4	8.7

Own Account Investors. Table 2 shows somewhat different results for the two groups of companies. However, there are nearly always very many significant shareholders. Among the larger companies in the Top 250 group, every company has at least one significant shareholder, the lower quartile is 122, the median 165.5, and the maximum 955. In the Random Sample, the median is 44 and three quarters of companies have at least 24 significant shareholders. These figures suggest that most companies ought to have a substantial group of highly motivated shareholders.

Fiduciary Investors. Assuming investors are fiduciaries again leads to different conclusions for the two groups of companies. Among the Top 250, most companies have a number of significant shareholdings, although there are some with none: assuming c=19bp, the median is 8.5, the lower quartile 4 and the maximum 168 and there are thirteen with 0. However, among the Random Sample companies, the picture is different: for c=19bp, 129 - more than three quarters of the sample - companies have no significant shareholder. The higher level of commission, c=30bp, gives slightly higher numbers, with a quarter of Random Sample having at least one significant shareholding.

Other Definitions of Significant Shareholdings. The numbers based on the fixed definitions of significant shareholding of Charkham and Simpson (£25M) and Sykes (£10M) are broadly similar: there is a substantial body of incentivised investors for almost all the Top 250 companies but the Random Sample suggests this is not typical of the market as a whole. The numbers for the £25M definition of Charkham and Simpson are quite close to those assuming fiduciaries with c=30bp. The 0.5% definition of Charkham and Simpson gives many more significant shareholders in the Random Sample, there being always at least one, the lower quartile being 17 and the median 22.

Thus these results suggest that, for the market as a whole (in contrast to the largest companies such as the Top 250), and on the assumptions made, a typical company is likely to have few significant shareholders with the necessary incentives to activism. This suggests the likelihood of a corporate governance failure due to financial institutions lacking incentives to activism among the smaller companies.

Table 3: Percent Equity Held in Significant Holdings

	Top250						Random Sample					
	Fiduciary		Own	£25M	£10M	0.50%	Fiduciary		Own	£25M	£10M	0.50%
	c=19bp	c=30bp	Account				c=19bp	c=30bp	Account			
Minimum	0.0	0.0	3.4	0	2.9	2.9	0.0	0.0	3.0	0	0	3.3
Lower Q	28.0	38.6	63.6	38.2	51.5	48.2	0.0	0.0	68.4	0	0	61.0
Median	40.2	47.4	73.1	48.1	59.6	60.3	0.0	0.0	78.2	0	19.4	73.2
Upper Q	52.8	60.3	83.3	61.9	71.2	71.7	0.0	19.7	87.3	20.1	46.3	83.7
Maximum	100	100	100	100	100	100	100	100	100	100	100	100
Mean	40.2	47.8	72.2	49.3	60.2	59.8	9.5	13.6	74.3	13.1	24.5	69.2
SD	21.2	20.0	17.4	18.3	16.7	18.0	21.0	23.0	19.6	22.6	26.5	19.9

Voting Rights of Significant Shareholders.

Table 3 shows the percentage of the equity held by investors with significant holdings. For own account investors, these figures are nearly always very large suggesting the potential for voting control exists in the great majority of companies. For the other definitions, however, the results are, as before, different for large and smaller companies. For c=19bp, in the Top 250 group, the median is 40.2%, and the lower quartile is 28%, suggesting that most companies in this group could be controlled by a bloc of financial institutions, with the right incentives, acting together. In the Random Sample there is an absence of significant shareholdings on the definitions I have used; again, the figures for the £25M definition correspond fairly closely to those for c=30bp. The 0.5% group suggest there is no lack of significant shareholders.

Table 4 about here

5. Conclusion

The argument often advanced against basing a policy of improving standards of corporate governance on investor activism - that there is a pervasive lack of incentives in a market based system such as Britain where shares are widely held - has been shown to be untrue. What is important is whether the likely returns to be received by activist shareholders as a result of intervening to improve underperforming companies exceed the associated costs, a question that has scarcely been addressed by academic economists. The expected returns to activism depend strongly on the absolute size of shareholding while the costs are largely independent of it. The size of shareholding as a relative share of ownership is irrelevant to determining incentives to corporate governance activism. The incentives to activism possessed by individual shareholders are arguably more important than the voting power of their shares because all beneficial investors in a company have a collective interest in good performance and therefore activist shareholders rationally have a common interest in sharing costly information.

A model of the incentives faced by an activist investor has been proposed which provides a measure of the minimum expected returns to activism to compare with the associated costs. The model is based on the assumption that a company in the investor's main portfolio produces a return which is a random variable against whose distribution under-performance can be identified. The minimum expected returns to activism are defined using this distribution: activism is assumed to restore the company's performance to the expected rate of return and this provides the required measure.

The model has been applied to two samples of British companies, the largest 250 and a random sample of all listed companies, and for both own-account investors and

fiduciary fund managers paid commission, assumed to be motivated solely by self interest. The results, which should be interpreted as representative orders of magnitude rather than exact estimates, indicate that, for fund managers, among the largest companies shareholder incentives to activism are powerful, while among the smaller companies they are mixed. The question of incentives should be seen as an empirical question with a lot of variation between companies. For the own-account investors incentives appear to be pervasive.

The approach used here is very preliminary and approximate; the results should be considered as no more than indicative of orders of magnitude and suggestive of directions for future research. In particular, the model of an activist shareholder is extremely stylised, the intention being to abstract from many real-world factors in order to focus on the pure private incentives. The model ignores conflicts of interest that affect many financial institutions to a substantial degree. It oversimplifies the nature of corporate governance activism by making the unreal assumption that it is always possible for a shareholder to turn round an underperforming company by making suitable changes in strategy or senior personnel, yet in practice a company's underperformance may reflect deeper, fundamentally intractable reasons. It sidesteps the whole question of voting power, which has been dealt with elsewhere; this would be justified if voting, and the formation of voting coalitions for control, were costless, since in determining incentives it would only be necessary to consider the shareholders' ideal points, and it would be irrelevant if they had a controlling holding or not. In practice, however, part of the cost of activism must be seen as due to the need to coordinate the votes of diverse shareholders.

The assumptions made more generally about the costs of activism are extremely simplistic and crude, and further research is needed.

References

Brealey, Richard A. and Anthony Neuberger (2001), The Treatment of Investment Management Fees and Commission Payments: An Examination of the Recommendations Contained in the Myners Report, London: Fund Managers' Association.

Cadbury, Adrian (Committee on the Financial Aspects of Corporate Governance), (1992), Report, London: Gee Publishing.

Charkham, Jonathan and Anne Simpson (1999), Fair Shares: the Future of Shareholder Power and Responsibility, Oxford: Oxford University Press.

Downs, A. (1957), An Economic Theory of Democracy, New York: Harper and Row.

Hart, Oliver (1995), Firms, Contracts and Financial Structure, Oxford: Clarendon Press.

Leech, Dennis (1987), " Ownership Concentration and the Theory of the Firm: a Simple Game Theoretic Approach", Journal of Industrial Economics, XXXV(3),225-40.

---------- (2001), "Shareholder Voting Power and Corporate Governance: a Study of Large British Companies", Nordic Journal of Political Economy, 27(1), 33-54.

Leech, Dennis and John Leahy (1991), "Ownership Structure, Control Type Classifications, and the Performance of Large British Companies", Economic Journal, 101(6), 1418-37.

Monks, Robert and Nell Minnow (2001), Corporate Governance, 2nd Edition, Oxford: Blackwell.

Morris, Derek (1994), "The Stock Market and Problems of Corporate Control in the UK", in T. Buxton. P.G.Chapman and P.Temple, eds., Britain's Economic Performance, London: Routledge.

Myners, Paul (2001), Institutional Investment in the United Kingdom: a Review, (The Myners Report) HMSO.

Olson, Mancur (1965 and 1971), The Logic of Collective Action, Cambridge: Harvard University Press.

ONS (1999), Office of National Statistics, Share Ownership: A Report on the Ownership of Shares, HMSO.

Roe, M. (1994), Strong Managers, Weak Owners, Princeton: Princeton University Press.

Shleifer, Andre and Robert Vishny (1997), "A Survey of Corporate Governance", Journal of Finance, 52, 33-56.

Short, Helen and Kevin Keasey (1997), “Institutional Shareholders and Corporate Governance”, in Kevin Keasey and Mike Wright (eds.), Corporate Governance: Responsibilities, Risks and Remuneration, Chichester: Wiley.

Stapledon, Geof (1996), Institutional Shareholders and Corporate Governance, Oxford: Clarendon Press.

Sykes, Allen (2000), Capitalism for Tomorrow: Reuniting Ownership and Control, Oxford: Capstone.

Tirole, Jean (2001), "Corporate Governance", Econometrica, 69, 1-36.

Table 4: Results for the Top 20 Companies

	c=0.0019				c=0.003				c=1			
	(a) K_0 £M	(b) N >K_0 #	(c) Equity £B	(d) Votes %	(a) K_0* £M	(b) N >K_0 #	(c) Equity £B	(d) Votes %	(a) K_0* £M	(b) N >K_0 #	(c) Equity £B	(d) Votes %
BP Amoco	55.3	153	66.4	54.8	35.0	211	68.9	56.8	0.105	955	73.7	60.8
British Telecom	46.9	127	53.7	54.6	29.7	163	55.1	55.9	0.089	530	57.6	58.5
Vodafone Airtouch	40.2	168	53.2	55.8	25.4	249	55.8	58.5	0.076	875	59.0	61.9
HSBC Holdings	71.3	72	28.7	39.4	45.2	94	30.0	41.2	0.136	599	33.9	46.5
Glaxo Wellcome	55.8	98	39.7	62.3	35.3	135	41.3	64.8	0.106	671	44.6	70.1
Shell T & T	58.9	78	26.9	52.6	37.3	106	28.2	55.2	0.112	473	30.5	59.7
AstraZeneca Group	47.8	82	32.5	71.2	30.3	106	33.4	73.2	0.091	481	35.3	77.3
SmithKline Beecham	51.0	85	34.8	78.5	32.3	120	36.2	81.6	0.097	706	39.3	88.8
Lloyds TSB Group	79.0	60	19.0	44.8	50.0	85	20.6	48.6	0.150	559	24.9	58.7
Marconi	50.0	59	16.3	54.5	31.7	75	16.9	56.7	0.095	394	19.1	64.0
Barclays Plc	59.2	49	15.5	58.5	37.5	67	16.3	61.8	0.113	504	19.0	71.9
Cable & Wireless	51.6	55	14.6	57.1	32.7	87	15.9	62.2	0.098	577	18.5	72.7
Prudential	55.0	59	13.0	54.8	34.8	85	14.1	59.3	0.104	499	16.8	70.6
NatWest Bank	53.4	60	14.9	67.2	33.8	80	15.7	71.0	0.101	396	17.3	78.0
COLT Telecom	20.6	67	13.5	65.1	13.0	84	13.8	66.5	0.039	235	14.4	69.2
BSkyB	33.2	11	11.8	68.4	21.0	15	11.9	68.9	0.063	193	12.3	71.7
DIAGEO	76.1	35	6.8	39.8	48.2	52	7.8	45.8	0.145	579	11.1	65.4
Anglo American	47.2	27	15.1	89.9	29.9	34	15.3	91.5	0.090	226	16.1	96.2
Rio Tinto	51.0	44	8.0	50.6	32.3	59	8.6	54.3	0.097	440	10.7	67.7
Halifax Group	36.4	31	10.4	67.5	23.0	43	10.8	69.8	0.069	215	11.3	73.2

The table shows (for each commission rate): (a) the significant shareholding (*£millions); (b) the number of investors with significant shareholdings; (c) the value of equity held by those investors (*£billions); (d) the percentage of the voting equity held by them.