

Earnings Management Ahead of M&A:

Can Corporate Governance Make The Difference?

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ABSTRACT

Financial economists, regulators and accountants have long recognised that managers exercise discretion over accounting rules to manipulate their firm's earnings in a variety of contexts. In light of the controversy generated by M&A activity in the literature, the paper provides an analysis of earnings management by bidders in the world's second largest takeover market, the London Stock Exchange, recognising that such opportunistic behaviour in an M&A setting can have irreversible wealth consequences for both target and acquirer shareholders. The paper then evaluates a range of corporate governance mechanisms and the extent to which the latter can restrain opportunistically-driven M&A decisions.

1. INTRODUCTION

Empirical evidence both for the US (e.g. Erickson and Wang, 1999) and for the UK takeover market (Botsari and Meeks, 2008) suggests that acquirers, particularly those financing the deal with the issue of shares, engage in income-increasing accrual manipulation in the period preceding the bid announcement in the hope of raising the market price of their stock, and therefore reducing the cost of buying the target. Whether earnings management succeeds in raising the market price of a bidder's stock will depend on the level of information efficiency in the market, and whether an analyst can "see through" and "reverse out" the earnings management device employed by the bidder's directors. But if they cannot – for example, the market is semi-strong efficient in Fama's (1970) terms whilst the earnings management is opaque to the analyst – and the bidder's price is affected, then earnings management in such takeovers may have much more powerful economic consequences than in routine financial reporting (Botsari and Meeks, 2008). In particular, if earnings management can allow acquirer managers' to induce overvaluation and use their overpriced stock as a cheap "acquisition currency" (Rhodes-Kropf and Viswanathan, 2004), then earnings management can shape takeover activity and can therefore have

serious implications for the efficient resource allocation through the capital market and the market for corporate control. This is because, investors would not necessarily have supported a deal and allocated control to a particular acquirer, had they not been misled about the quality of the acquirer's earnings.

This paper provides an analysis of earnings management by bidders in share for share mergers in the world's second largest takeover market (the London Stock Exchange). The analysis covers the period 1997-2004, and specifically includes the fifth takeover wave of the late 90s, when M&A activity reached a record level, share for share bids grew to dominate the value of transactions¹, and the UK accounted for 31% of the global value of cross-border acquisitions (UNCTAD (2000)).

The second objective of the paper is to analyse factors that could potentially mitigate or exacerbate acquirer managers' opportunistic behaviour. These factors include the impact of high-quality auditing, board structure, managerial ownership as well as various deal characteristics.

The paper is organised as follows: Section 2 reviews the relevant literature and sets the hypotheses to be tested; Section 3 describes the sample and discusses methodological issues; Section 4 presents the results; while Section 5 concludes the paper.

2. LITERATURE REVIEW AND TESTABLE HYPOTHESES

2.1. Earnings Management ahead of Share-for-Share Bids

Erickson and Wang (1999) were the first to test for earnings management by acquiring firms in stock for stock mergers. In a sample of 55 mergers performed by US companies and completed between 1985 and 1990, they find that acquiring firms manipulate total accruals, and hence manage earnings upward in the periods prior to the merger announcement (particularly in the quarter immediately preceding the offer). In contrast, they find no evidence of earnings management in a control group of 64 cash mergers. Their results also indicate that the degree of income increasing

¹ This was a global pattern: see Andrade et al. (2001), Holmstrom and Kaplan (2001), Shleifer and Vishny (2003), Rhodes-Kropf and Viswanathan (2004).

earnings management prior to the merger is positively related to the relative size of the deal².

Heron and Lie (2002) come to a different conclusion from Erickson and Wang. They examine 859 acquisitions (427 of which were paid with stock only) announced and completed by US companies between 1985 and 1997. Even though acquiring firms exhibit superior operating performance relative to their industry counterparts prior to acquisitions, they find no evidence of earnings management (even among the stock group) as proxied by discretionary accruals. They argue that the discrepancy with Erickson and Wang may be attributable to different samples or different procedures for estimating unexpected accruals.

The remaining literature focussing on stock for stock deals is consistent with Erickson and Wang. Louis (2004) examines 373 mergers (including 236 pure stock swaps) of publicly traded US companies that were announced and completed between 1992 and 2000. He finds that discretionary working capital accruals are positive and statistically significant for bidders engaging in stock swaps –especially in the quarter immediately prior to the merger announcement- whereas they are insignificant for acquirers that pay with cash.

In the UK, Botsari and Meeks (2008) provide evidence consistent with aggressive accrual reporting by UK bidders ahead of share-swap acquisitions undertaken between 1997 and 2001.

In an international setting, Rahman and Bakar (2002) analyse a sample of 125 Malaysian share acquiring firms over the period 1991-2000, and conclude that acquirers in share for share acquisitions manage earnings upward in the year prior to the acquisition³.

2.2. The Role of the Auditors

The employment of an independent external auditor to verify accounting numbers reported by managers is a market-induced mechanism to reduce agency costs (Jensen and Meckling, 1976; Watts and Zimmerman, 1983). Agency costs include managers' incentives to manage earnings. Wallace (1980) points out that audits are demanded at

² Erickson and Wang (1999) also analyse discretionary accruals for target companies, a topic not analysed in this paper. For further literature on targets see Christie and Zimmerman (1994), Easterwood (1998), Eddey and Taylor (1999), and North and O'Connell (2002).

³ Koumanakos et al. (2005) find no evidence of earnings management ahead of M&A in their study of the Athens Stock Exchange. However, they do not disaggregate their analysis according to the means of payment.

least partly because they reduce noise and bias in financial reporting. Kinney and Martin (1994) review nine studies and conclude that auditing reduces positive bias in pre-audit net earnings and net assets. Thus, an important economic role played by the audit is to monitor and control earnings management. Still, the extent to which auditors are expected to detect earnings manipulations depends on the quality of the audit.

DeAngelo (1981) defines audit quality as the joint probability of detecting and reporting material financial statement errors. Big auditors are identified in the literature as higher quality auditors. Dopuch and Simunic (1982) argue that investors may perceive Big 6 (now Big 4) auditors as (having or being of) higher quality because these auditors have more of the observable characteristics associated with quality, such as specialised training and peer reviews, than do non-Big 6 auditors. Teoh and Wong (1993) report that earnings response coefficients⁴ of firms audited by Big-8 auditors are higher than those of firms audited by non-Big 8 auditors, and conclude that the market perceives financial information audited by Big 8 firms as more credible. Craswell et al.'s (1995) findings indicate that Big 6 auditors devote more resources to staff training and development of industry expertise⁵ relative to non-Big 6 auditors. Because of their size, Big 6 auditors are also more likely to invest in information technology and employ state-of-the-art techniques to detect earnings management than non-Big 6 auditors. Furthermore, relative to non-Big 6 auditors, Big 6 auditors are in a better position to negotiate with clients who might adopt aggressive accounting practices. Gibbins et al. (2001), in their work on negotiation between auditors and clients, conclude that all the auditors reported having experienced such negotiations. Big auditors, however, are less willing to accept questionable accounting practices and more likely to report errors and irregularities. This is partly due to the fact that given their larger client base, big auditors have more to lose in the event of a loss of reputation and thus have greater incentives to protect their brand name and even screen out disreputable clients⁶. MacDonald (1997), for example, reports that

⁴ Earnings response coefficients are the coefficients in a regression of stock prices (or stock returns) on earnings and/or earnings components. These coefficients reflect the market's perception as to whether the independent variables under consideration capture value-relevant information.

⁵ On Big 6 auditor expertise and their ability to constrain earnings management, see Krishnan, G.V. (2003), "Does Big 6 Auditor Industry Expertise Constrain Earnings Management?", *Accounting Horizons*, 17: 1-16.

⁶ It can also be argued that given the large client base of big auditors, losing one client is, *ceteris paribus*, less damaging proportionately.

between 1994 and 1997, Big 6 auditors dropped 275 publicly traded audit clients because of concerns about harm to their reputation or litigation risk.

A number of empirical studies have investigated the determinants of auditor effectiveness in constraining earnings management and have tested the DeAngelo (1981) theory relating audit quality and auditor size, by examining whether earnings management is more tightly constrained by larger auditors than by smaller auditors. DeFond and Jambalvo (1991) report that, excluding fraudulent firms, the incidence of accounting errors is negatively associated with the presence of Big 5 auditors. In a later study, DeFond and Jambalvo (1993) find that audit conflicts over income-increasing accounting choices are positively associated with the presence of Big 5 auditors. Becker et al. (1998) find that clients of non-Big 6 auditors report discretionary accruals that are on average 1.5 to 2.1 percent of total assets higher than the discretionary accruals reported by clients of Big 6 auditors. This is consistent with non-Big 6 auditors allowing greater flexibility in management's choice of discretionary accruals. Similarly, Francis et al. (1999) find that even though Big-6 audited firms have higher levels of total accruals, they also have lower amounts of discretionary accruals. Hence, they conclude that Big 6 auditors mitigate firms' earnings management behaviour by constraining aggressive, potentially opportunistic reporting of accruals⁷. More recently, Krishnan (2003) also provides evidence that both the mean and median values of discretionary accruals for firms audited by non-Big 6 auditors are greater than those reported by Big 6 auditees. Davidson et al. (2005), for a sample of Australian firms, find that the presence of a Big 5 auditor is associated with a lower likelihood of earnings management (as measured by the absolute level of discretionary accruals), but this relation does not exhibit statistical significance. Chung et al. (2005) examine the effectiveness of high-quality auditors as an external monitoring mechanism for a sample of low-growth firms with high free cash flow, who have the incentive to report income-increasing accruals in order to offset the low or negative earnings that inevitably accompany investments with

⁷ Francis et al. (1999) also test the hypothesis that firms with a greater endogenous propensity to generate accruals have an incentive to convey that they are not managing earnings for private gain (as it might be anticipated) and seek credible ways of communicating this, such as hiring a higher quality auditor as external monitor. A nice question then arises: If Big auditors are more credible, why don't all companies hire one? First, although firms with greater accrual-generating propensity are more likely to benefit from costly Big-auditor audits, the additional cost of a Big auditor may deter many companies. Second, managers may believe that the market underestimates their earnings management opportunities and therefore prefer a smaller auditor in order to maximise their discretion.

negative net present values. They, too, find that Big 6 auditors are effective in deterring managers' opportunistic earnings management.

The theoretical evidence discussed above is incorporated in the model specification by including a dummy variable that takes the value 1 if the sample company is audited by a Big 4 firm and zero otherwise. If Big 4 auditors are more likely to detect earnings management, a negative association between the level of discretionary accruals and the presence of a Big 4 auditor is expected, as reflected in a negative sign for the coefficient of the dummy.

2.3. Board Composition

An important function of the board of directors is to minimise costs that arise from the separation of ownership and decision control of the modern corporation (Fama and Jensen, 1983). The board of directors receives its authority for internal control and other decisions from stockholders of corporations. This delegation occurs because stockholders generally diversify their risk by owning securities in numerous firms (Fama, 1980), and such diversification creates a "free-rider" problem [i.e. no individual stockholder owns a large enough stake in a firm to have the incentives to devote resources and ensure that management is acting in the stockholders' interests (Grossman and Hart, 1980)]. The board's role as an effective monitor and disciplinarian of executive management depends crucially upon its composition.

2.3.1. The Role of Non-Executive Directors

Corporate boards generally include outside members who act as arbiters in disagreement among internal managers and ratify decisions that involve serious agency problems (Fama and Jensen, 1983). Fama (1980) and Fama and Jensen (1983) hypothesise that the viability of the board as an internal control mechanism is enhanced by the inclusion of outside directors. The latter have incentives to develop reputation as experts in decision control given that the external market for their services prices them according to their performance as outside directors. Confirming this view, Kaplan and Reishus (1990) find that top executives of poorly performing firms are less likely to get additional directorships in other firms. Rosenstein and Wyatt (1990) suggest that stockholders value the inclusion of outside directors on boards as evidenced by a positive stock price reaction at the announcement of the appointment of an additional outside director. In the UK, the view that non-executive

directors can enhance corporate governance mechanisms was reflected in the publication of the *Cadbury Report* (1992). A key recommendation of the *Cadbury Report* was that UK boards should contain at least three outside directors, and that these should be “independent of management and free from any business or other relationship which could materially interfere with the exercise of their independent judgement, apart from their fees and shareholding”. As Peasnell et al. (2003) note, what the *Cadbury Report* represented was a non-mandatory codification of “best practice”; in which case, non-compliance with such best practice became more costly after the report than it was beforehand. Following the publication of the *Cadbury Report*, a statement by companies of the extent to their compliance with the *Cadbury* code of practice was adopted by the *London Stock Exchange* as a continuing listing requirement.

Prior research suggests that outside directors influence a wide range of board decisions. In a study of the banking industry, Brickley and James (1987) find that the presence of outside directors tends to reduce managerial consumption of perquisites. Weisbach (1988) provides evidence that the higher the proportion of outsiders on the board, the more likely that the board will replace the firm’s Chief Executive Officer (CEO) after a period of poor corporate performance. In a similar context, Lai and Sudarsanam (1997) and Dayha et al. (2002) find that the sensitivity of CEO turnover to poor performance is stronger when companies have a greater non-executive presence on the board. Johnson et al. (1993) document that outside directors instigate voluntary restructuring, especially when they own shares in the firm. Similarly, Lai and Sudarsanam (1997) find that the higher the proportion of non-executive directors, the higher the likelihood of both short- and long-term restructuring. Mehran (1995) reports a greater use of long-term incentive plans as part of executive remuneration contracts in companies with higher proportion of non-executives. Byrd and Hickman (1992) find that bidding firms on which independent outside directors hold at least 50% of the seats have significantly higher announcement-date abnormal returns than other bidders. In the UK, Constantinou and Constantinou (2003) also report a positive announcement effect when bids are launched by companies with greater non-executive representation. This evidence suggests that market participants consider non-executive directors to have more incentives to promote shareholder interests and to be more objective in evaluating the costs and benefits of an acquisition decision (Cotter et al., 1997). In other words, the market’s reaction suggests that the higher the

percentage of non-executive directors on the board, the higher the probability of a profitable acquisition, since non-executives are more likely to take decisions consistent with shareholder wealth maximisation. This is because the cost of supporting a harmful decision for shareholders could reduce the value of non-executive directors' reputational capital in the marketplace for decision experts⁸. Weir (1997) finds that, in acquisitions that took place in the UK between 1990 and 1993, one of the key governance characteristics that differentiate acquired and non-acquired companies is related to the proportion of non-executive directors on the board. This finding, coupled with the fact that acquired firms were poor performers, suggests that the executive-dominated governance structure of these firms had been ineffective.

Other studies have extended the influence of outside directors to the financial reporting process. Beasley (1996) reports that the incidence of financial statement fraud in the US is lower for firms where the proportion of outside directors is relatively high. In a study of a sample of firms subject to accounting enforcement actions by the Securities Exchange Commission, Dechow et al. (1996) find that these firms employ more income-increasing accounting procedures, have higher total accruals as well as higher estimated discretionary accruals, and are more likely to have a board of directors dominated by insiders. Klein (2002), using a US sample, finds a significantly negative association between abnormal accruals and the percent of outside directors on the board. Davidson et al. (2005), analysing a sample of listed Australian firms, report that a majority of non-executive directors on the board is found to be significantly associated with a lower likelihood of earnings management, as measured by the absolute level of discretionary accruals. In the UK, the results of Peasnell et al. (1998, 2000, 2005) indicate that the likelihood of managers recording income increasing abnormal accruals to avoid reporting losses and earnings reductions is negatively related to the proportion of outsiders on the board. Peasnell et al. (2000) conclude that "these results are consistent with the view that appropriately structured boards are discharging their financial reporting duties more effectively".

The board's effectiveness at monitoring the financial reporting process will depend on the ability of outside directors to understand earnings management methods. Although the level of accounting expertise, and hence monitoring effectiveness, will

⁸ On the other hand, opposing a proposed acquisition could endanger the directors' position on the board. However, this threat is less significant for non-executive directors holding multiple directorships, as it is often the case, given that non-executive directors are not full-time employees of the company on whose board they serve.

vary across the boards, there are at least two reasons for having confidence in outside directors' general ability in this regard (Peasnell et al., 2005). First, outside directors often have a financial background. For example, Peasnell et al. (1999) report that over a quarter of all UK board members (both executives and non-executives) are professionally qualified accountants. Second, outside directors frequently hold senior management positions in other large corporations and as such are likely to be familiar with financial reporting from a senior management perspective. Indeed, according to Cosh and Hughes (1997), non-executive directors in the UK are mainly drawn from the ranks of past or present CEOs and other executives of other large companies, or former executives of the company itself.

The benefit of non-executive monitoring is not consistently borne out in empirical studies, however. MacAvoy et al. (1983), Hermalin and Weisbach (1991), Mehran (1995), Klein (1998), and Bhagat and Black (2000) all report insignificant contemporaneous relations between accounting measures of performance and the fraction of outside directors on the board. Bhagat and Black (2000) also examine the effect of board composition on long-term stock market and accounting performance, but again fail to document a significant association between board composition and firm performance. Franks et al. (1999) report little impact from a high proportion of non-executive directors in poorly performing UK firms⁹.

Further research has questioned the monotonic relation assumed in studies that examine the association between board composition and firm performance. For example, Byrd and Hickman (1992), despite documenting a positive relation between abnormal returns at the announcement date of a bid and the fraction of non-executive directors serving on the acquirer's board, provide evidence that these benefits do not accrue continuously as the proportion of independent directors increases. Constantinou and Constantinou (2003) also report that although the market initially reacts favourably as the percentage of non-executives increases, after a certain level (over 48%), it reacts negatively to the announcement of bids from such acquirers.

⁹ Hermalin and Weisbach (2003) note that the results on the association between board structure and firm performance may be difficult to interpret, due to the endogenous relation between firm performance and board structure. In particular, the performance of a firm may be affected by existing board structure, but the performance of a firm may also influence subsequent director selection. For example, while it could be that non-executive directors do a good job as directors resulting in higher non-executive representation on the board being associated with better firm performance, it could also be the case that directors in higher demand and interested in building a good reputation will turn down directorship opportunities at poorly performing firms.

This non-monotonic market reaction could reflect the fact that as the percentage of non-executive directors on the board increases, the importance of executive directors is underrated, resulting in a loss of valuable information offered by them regarding the firm's activities. An alternative interpretation is provided by Hoskisson and Tuck (1990) who argue that outside directors concentrate more on financial evaluation than on strategic evaluation, because outsider-dominated boards lack the expertise and time needed to examine strategic directions (such as the decision for an acquisition, for example) and provide effective guidance. This, in turn, may cause managers to maximise short-term performance, at the expense of shareholders that may prefer long-term performance. This shortcoming of outside directors documented by Hoskisson and Tuck (1990) is particularly relevant to acquisitions, since they are, by default, of long-term nature.

In addition, some observers question whether outside directors add to economic discipline already imposed on managers by product and market factors, the managerial labour market, the market for corporate control, and alternative internal governance controls such as auditing, bonding, and ownership structure. Even if boards do not merely duplicate other governance mechanisms, critics suggest that managers inherently dominate the board by choosing the outside directors and providing the information they analyse (Mace, 1986; Patton and Baker, 1987; Shivdasani and Yermack; 1999). Moreover, as Sudarsanam (2000) notes, since the pool of potential non-executive directors is often limited to the top management of companies, there is scope of cross-board memberships with the CEO of one firm being on the board of another and vice versa. Thus, non-executive directors may not be truly independent.

Finally, even non-executive directors may have incentives other than to build reputation as external monitors. Opposing management may make non-executives less attractive to other firms whose management is looking to avoid scrutiny and interference (Hermalin and Weisbach, 1991). Thus, a reputation as a director who does not make trouble for CEOs is potentially valuable to the non-executive director as well (Hermalin and Weisbach, 2003). Moreover, as Holmstrom (1999) observes, wanting to be *seen* as doing the right thing, and *doing* the right thing are not always the same.

The above mentioned concerns may be of particular importance for the UK, as suggested by the studies investigating the effectiveness of the monitoring role of non-

executive directors in the UK. For example, Peasnell et al. (1999), after analysing the fees paid to non-executive directors, argue that, while the reported figures are not insignificant¹⁰, it is questionable whether a fee of this magnitude would be sufficient to attract and motivate those individuals best equipped to serve as non-executive directors. Significant equity stake in the company is another factor that would increase non-executive directors' incentives to monitor management. However, Peasnell et al.'s (1999) findings suggest that, on average, non-executive directors hold very little equity in the companies on whose boards they sit, either in terms of the proportion of total shares owned or in terms of the absolute value of the holding. More specifically, the average share ownership of the non-executive director group in the largest 700 non-financial companies was less than 2% of total outstanding equity (median 0.1%) as opposed to an average of approximately 7% (median 1.5%) for the corresponding executive director group¹¹. Therefore, Peasnell et al. (1999) suggest that UK non-executive directors appear to lack significant wealth incentives to monitor management on behalf of the shareholders. Furthermore, as noted above, the main factors motivating non-executive directors to act in shareholders' interests is their desire to establish a reputation in the labour market for directorships, thereby increasing the value of their human capital. If we accept the fact that the desire for additional board seats provides directors with a powerful incentive to maximise shareholder value, then Peasnell et al. (1999) conclude that, given the evidence reported in their study, the UK environment is unlikely to deliver such incentives. The low incentives from the external managerial labour market combined with the long tenure of many non-executives¹² cast doubt on the extent to which non-executive directors in the UK can be expected to perform an effective, independent monitoring role¹³.

¹⁰ Excluding non-executive chairmen and deputy chairmen, the average fee paid to the 397 non-executive directors included in the survey was £24,000.

¹¹ An analysis based on the absolute number of shares owned by non-executive directors (as opposed to the percentage of shares owned) could lead us to different implications regarding non-executives' incentives to monitor management. For example, a 2% ownership in a company such as BP (with more than 20m common shares outstanding) would represent a huge sum; and the return on that would vastly exceed the £24,000 fee.

¹² Both Cosh and Hughes (1997) and Peasnell et al. (1999) report that non-executive directors' average career length in a specific firm in the UK is between six and seven years, and conclude that such evidence suggests that non-executive directors' "outsider" status may become compromised.

¹³ In addition, Cosh and Hughes' (1997) study reveals that the proportion of "insider" non-executives (i.e. current or former executive directors of the same or similar companies) on UK boards is about 55%. Thus, Cosh and Hughes (1997) argue that the presence of significant numbers of "insider" non-executives is inconsistent with independent outsider judgements.

The effect of outside directors is captured by including the percentage of non-executive directors on the board as an explanatory variable to the model. If outside directors are effective in their role of monitoring management and constraining accruals manipulation, the coefficient of the variable will be negative.

2.3.2. Board Size

Jensen (1993) argues that boards of directors are ineffectual monitors when the board is too large. More specifically, he contends that “as groups increase in size, they become less effective because the co-ordination and process problems overwhelm the advantages from having more people to draw on”. Jensen (1993) states that the optimal board size is seven to eight people, because “when boards get beyond seven or eight people, they are less likely to function effectively and are easier for the CEO to control”. In other terms, the more members on the board, the weaker the board’s monitoring function. As Hermalin and Weisbach (2003) put it: “When boards become too big, [...] the board becomes more symbolic and less a part of the management process”. Lipton and Lorsch (1992) argue that the problems associated with large boards arise mainly from a reluctance to hold open and candid discussions about key executive decisions. The CEO’s ability to determine the agenda of board meetings and to control the dissemination of information to board members may play an important role in alleviating or exacerbating these problems. Moreover, Lipton and Lorsch (1992) contend that although increased board membership may confer benefits in terms of improved monitoring of the organisation’s activities, these benefits may be outweighed by costs such as slower decision making. Yermack (1996) also highlights the problems associated with co-ordination, communication, and effective decision making for an enlarged board. He tests this view empirically and indeed finds a significantly negative relation between firm value (as proxied by Tobin’s Q^{14}) and board size for a sample of large US corporations. Moreover, Yermack (1996) concludes that this association is convex, implying that the largest losses in firm value occur when a company moves from a small to medium sized board. Confirming Yermack’s (1996) findings, Eisenberg et al. (1998) document that a similar pattern holds for a sample of small and medium size Finnish firms. Conyon and Peck (1998) report a statistically significant negative relation between return on shareholders’

¹⁴ Tobin’s Q is defined as the ratio of a firm’s market value to the replacement cost of its physical assets.

equity and board size in all five European countries (UK, France, Netherlands, Denmark, and Italy) they study.

However, in a meta-analysis of 131 different study-samples with a combined sample size of 20,620 observations, Dalton et al. (1999) document a positive and significant relation between board size and financial performance (measured in terms of both accounting-based and market-based indicators). Xie et al. (2003) analyse the effectiveness of the board in constraining earnings management (as manifested in the level of observed abnormal accruals) and argue that, given the conflicting evidence regarding the association between board size and firm performance, they cannot offer any directional expectations between earnings management and board size. In fact, they report a negative and significant relation between earnings management and board size. This finding contradicts the results of other studies in earnings management settings (e.g. Beasley, 1996; Dechow et al., 1996; Kao and Chen, 2004). Xie et al. (2003) provide two alternative explanations for larger boards being associated with lower levels of discretionary accruals. First, larger boards are more likely to have independent directors with corporate or financial experience, who will be able to monitor and limit earnings management. Second, since board size is positively correlated with firm size, the reported results may simply capture a size effect (i.e. that smaller boards are associated with smaller firms who may operate with less scrutiny and may be able to engage in more earnings management).

The effect of board size is captured by including the total number of directors sitting on the board as an explanatory variable in the model specification. If the theoretical predictions regarding a less effective monitoring role of the board being associated with a larger board hold, then we would expect to find a positive relation between board size and the level of observed abnormal accruals.

2.3.3. The Effect of the CEO Duality

While duality of roles can promote focused objectives and a clear line of command (Finkelstein and D'Aveni, 1994), Jensen (1993) suggests that CEO and Chairman of the board be separated to reinforce the function of the board. This view is also reflected in *Cadbury Report's* (1992) recommendation to split the two roles in order to improve board independence. As Beasley (1996) notes, the appointment of the CEO to the position of the Chairman of the board can lead to concentration of power and possible conflicts of interest, resulting in a reduction in the level of monitoring.

Beasley (1996) and Dechow et al. (1996) find that the likelihood of fraud (as manifested in manipulated financial statements) increases when the CEO is also the Chairman of the board. Kao and Chen (2004) find a positive association between the duality of the CEO and the extent of earnings management as measured by discretionary accruals (although the results are not statistically significant). Davidson et al. (2005) also examine whether the separation of the chief executive and board chair roles is associated with earnings management. Using the same proxy for earnings management as Kao and Chen (2004), Davidson et al. (2005) find a positive but insignificant relation between earnings management and the duality of the CEO.

On the contrary, Rechner and Dalton (1989) find no significant difference in firm performance (as measured in terms of abnormal stock returns) between dual and non-dual firms. Similarly, Baliga et al. (1996) report evidence that duality does not reduce firm performance (in terms of both operating and long-term market-value measures). Xie et al. (2003) conclude that CEO duality is unrelated to earnings management, since they observe a negative and statistically insignificant association between CEO duality and discretionary current accruals.

In order to capture the effect of CEO duality, a dummy variable taking the value 1 when the CEO and the Chairman of the board are the same person and zero otherwise is included as explanatory variable in the model. If CEO duality decreases board independence and hence the effectiveness of the monitoring role of the board, the coefficient of the dummy is expected to be positive.

2.4. Managerial Ownership

As stressed by Berle and Means (1932), when managers hold little equity in the firm and shareholders are too dispersed to enforce value maximisation, corporate assets may be deployed to benefit managers rather than shareholders. Such managerial benefits can include shirking and perquisite-taking, but also encompass pursuit of such non-value-maximising objectives as sales growth, empire building, and employee welfare. According to Jensen and Meckling (1976), the costs of deviation from value-maximisation decline as management ownership rises. As their stakes rise, managers bear a larger share of these costs and are less likely to squander corporate wealth. Jensen and Meckling's (1976) "convergence-of-interest hypothesis" contends that as managerial ownership in a firm increases, the firm's performance increases

uniformly, as managers are less inclined to divert resources away from value maximisation.

However, this alignment of interests of shareholders and managers may be limited to relatively low levels of managerial stock ownership. Demsetz (1983) and Fama and Jensen (1983) have pointed out offsetting costs of significant management ownership. They recognise that when a manager owns only a small stake, market discipline [e.g. the managerial labour market (Fama, 1980), the product market (Hart, 1983), and the market for corporate control (Jensen and Ruback, 1983)] may still force him towards value maximisation. In contrast, a manager who controls a substantial fraction of the firm's equity may have enough voting power or influence more generally to guarantee his employment with the firm. At certain levels of equity ownership, managers' consumption of perquisites (an attractive salary, for example) may outweigh the loss they suffer from a reduced value of the firm. Morck et al. (1988) argue that high levels of managerial ownership could lead to "entrenchment" (i.e. pursue of self interests), as external shareholders find it difficult to control the actions of such managers. That is, at certain levels of ownership, managers find it worthwhile to consume perquisites reducing the firm's value, and, moreover, they have sufficient control to follow their own objectives without fear of discipline from other ownership interests. It can, therefore, be argued that conditions necessary for entrenchment (voting power, control of the board of directors, status as a founder etc.) are significantly correlated with increased managerial ownership. In the same context, Stulz (1988) argues that high levels of managerial stock ownership are harmful to shareholders, since managers become insulated from some corporate governance mechanisms (such as the market for corporate control¹⁵).

Evidence based on prior research seems to validate both the convergence-of-interest and the entrenchment hypothesis. This combination of the convergence-of-interest and entrenchment effects point towards a non-linear relation between the performance of firms and managerial ownership.

¹⁵ Stulz (1988) models the takeover process as a game between managers and an outside bidder vying for the voting rights of a number of small, competitive, and passive shareholders. Increases in managerial ownership force the outside bidder to pay higher premiums to gain control of the firm. Increases in the premium to be paid to the target may, in turn, result in the takeover not being profitable to the bidder after all. Hence, increases in managerial ownership increase the premium that the bidder must offer, and accordingly decrease the probability that the bidder will make an offer in the end. In other words, it is easier for managers holding large blocks of stock to keep their jobs, even if that means resisting a value-increasing offer.

Morck et al. (1988) and McConnell and Servaes (1990, 1995) find a positive association between Tobin's Q and insider director shareholdings¹⁶. Morck et al. (1988), however, document this positive relation between ownership and Tobin's Q only in the 0% to 5% and the beyond 25% board ownership range, whereas a negative relation exists in the 5% to 25% range¹⁷. Morck et al. (1988) argue that what their results indicate is that the convergence-of-interest effects are dominant within the 0% to 5% range and above the 25% level, while within the 5% to 25% ownership range, the entrenchment effect dominates.

Hermalin and Weisbach (1991) find that average Tobin's Q increases until ownership reaches 1%, turns negative in the ownership range of 1% to 5%, turns positive again in the ownership range of 5% to 20%, and then turns negative for ownership levels greater than 20%.

On the contrary, Mehran (1995) provides evidence that firm performance (as proxied by Tobin's Q and return on assets) is positively related to the percentage of equity held by managers as well as to the percentage of their compensation that is equity-based.

In a similar vein, Palia and Lichtenberg's (1999) results suggest that managerial ownership changes are positively related to changes in firm productivity, and that this sensitivity is higher for firms who have greater than the median change in managerial ownership.

Using a UK sample, Short and Keasy (1999) show that at low and high levels of managerial ownership, companies pursue profit maximising behaviour, while at intermediate levels there is evidence of managerial entrenchment¹⁸. Short and Keasy (1999) make specific reference to the impact that the different governance systems between the UK and the US can have on the relation between firm performance and managerial ownership. First, Short and Keasy (1999) provide evidence that the patterns of share ownership are quite different in the two countries. In particular,

¹⁶ These studies use Tobin's Q as an indicator of firm performance. Thus, a positive relation between managerial ownership and Tobin's Q suggests that the value of the firm increases as ownership becomes concentrated in the hands of managers.

¹⁷ Kole (1995) attributes the different results of Morck et al. (1988) and McConnell and Servaes (1990, 1995) to differences in the size of the firms analysed. More specifically, Morck et al.'s (1988) sample contains only large firms (371 firms from the Fortune 500), while McConnell and Servaes' (1990) sample consisted of 1,173 firms in 1976 and 1,093 firms in 1986. McConnell and Servaes (1995) extended their earlier work by adding a sample of 1,943 firms for 1988.

¹⁸ Short and Keasy (1999) note that "reverse" causality could underpin the estimated results. For example, alignment between performance and managerial ownership could simply reflect more successful firms awarding directors equity shares.

institutional ownership in US companies is much lower than in the UK. UK institutions (insurance companies, pension funds, etc.) are thought to be more active than their US counterparts (Black and Coffee, 1994). Black (1990) and Roe (1991) argue that financial institutions in the US face excess regulation, which raises the cost of participation in corporate governance. In contrast to their UK counterparts, US institutions are subject to various legal restrictions on stock ownership¹⁹, which prevents them from building significant stakes in individual corporations. In addition, much of the monitoring of companies by UK institutions takes place in a private “behind the scenes” way, which allows institutions to take joint action to curb managerial excesses without drawing public attention to the fact. Furthermore, the nature of the City of London means that institutional shareholders are in physical close proximity to each other, which aids the formulation of informal coalitions. Second, Short and Keasy (1999) note that the ability of US boards to adopt takeover defense mechanisms, coupled with the relative lack of power on the part of external shareholders, means that US corporate management is protected from external corporate control mechanisms to a far greater extent than are their UK counterparts. Taking all of the above arguments together suggests that management in the UK will need higher levels of ownership to become entrenched than is the case for US management. Indeed, Short and Keasy (1999) find that entrenchment effects dominate the relation between firm performance and managerial ownership in the 12 % to 41% ownership range, which is higher than the 5% to 25% range documented by Morck et al. (1988) for their US sample. This evidence is consistent with UK managers becoming entrenched at higher levels of equity ownership compared to US managers.

Studies analysing the effect of managerial ownership in an M&A context converge in providing support for the alignment-of-interest hypothesis. Lewellen et al. (1985) hypothesise that managers with large personal stockholdings in their firms are less likely to engage in acquisitions that reduce shareholder wealth than managers with small stockholdings. The reasoning behind this hypothesis is that first, the more stock managers own, the more they stand to lose in the event of share price declines; second, this cost should act as a counterweight to attempts to obtain other personal benefits through merger (such as increased job security, acquisition bonus, “empire

¹⁹ For example, Roe (1990) states that US insurance companies can invest a maximum of 2% of assets in a single company, while a maximum of 20% of assets can be invested in equity.

building”, size maximisation etc.). Indeed, Lewellen et al. (1985) find a persistently positive relation between abnormal stock returns to bidder firms in completed mergers²⁰ and the percentage of outstanding company common shares held by management. The hypothesis that managers’ personal welfare affects the merger decisions they make is also supported by Shinn (1999) who reports a significantly positive relation between firm performance and the ownership percentage of top executives, as manifested in the positive abnormal returns at acquisition announcement.

More relevant to the context of the current study are the papers analysing the effect of managerial ownership on accruals. For example, Warfield et al. (1995) show that the magnitude of discretionary accounting accrual adjustments is significantly higher when managerial ownership is low. More specifically, the absolute value of accrual adjustments when managerial ownership is under 5% is more than twice that for corporations with managerial ownership above 45%. Hence, Warfield et al. (1995) conclude that their findings (i.e. that increased discretionary accounting accrual adjustments are associated with low levels managerial ownership) are consistent with managers’ strategic accounting choice behaviour to mitigate contractual restrictions through greater adjustments in accruals.

Erickson and Wang (1999), in their analysis of the relation between discretionary accruals ahead of stock-financed mergers and management ownership, state that “managers have discretion over accounting policy, and it is reasonable to expect that the degree of discretion is positively related to the level of ownership”. Their results, though not statistically significant, are consistent with this prediction.

More recently, Klein (2002) and Kao and Chen (2004) find a positive but not statistically significant association between the absolute level of discretionary accruals and CEO shareholdings (the former) or total board ownership (the latter).

In the case of non-executive directors’ ownership, results seem to converge in finding that equity ownership by non-management board members creates an incentive for those directors to more actively oppose unprofitable activities in order to protect their financial stake in the firm (e.g. Jensen and Meckling, 1976; Beasley,

²⁰ In Lewellen et al.’s (1985) study, the term “completed” is used to describe an acquisition for which shareholder approval has been obtained. Furthermore, abnormal returns are the bidder’s cumulative abnormal returns starting 108 trading days prior to the offer announcement through the day stockholder approval is obtained.

1996; Kao and Chen, 2004; though in the latter case the results are statistically insignificant). An exception is provided by Shinn (1999) who does not find a significant relation between firm performance (as proxied by bidder's abnormal returns in the period surrounding an offer announcement) and the concentration of shares among outside owners. Shinn (1999), therefore, concludes, that "outsiders may not be monitoring the actions of the executives of acquiring firms".

In order to capture the potentially asymmetric effect of managerial ownership and consistent with the methodology adopted by Erickson and Wang (1999), we run two alternative model specifications. In the first one, the executive directors' as well as the non-executive directors' ownership are included as explanatory variables. In the second one, we partition sample firms into high and low ownership firms according to whether executive directors' (similarly non-executive directors') ownership is above or below the sample median. Subsequently, two dummy variables are introduced taking the value 1 when executive directors' (similarly non-executive directors') ownership is above the median and zero when it is below.

2.5. Deal Characteristics and Economic Incentives for Earnings Management

The incentives for acquiring firms to increase reported accounting earnings preceding a stock for stock merger should be an increasing function of the economic benefits that can be generated from such strategic behaviour (Erickson and Wang, 1999). Since earnings management is not costless²¹, when the economic benefits are

²¹ Dechow et al. (1996), analysing a sample of firms targeted by the SEC for allegedly overstating earnings, find that although managing earnings initially enables firms to enjoy a lower cost of capital, sample firms experience significant increases in their cost of capital once earnings manipulation is revealed. Beneish (1999), investigating the penalties related to earnings overstatements in firms that are subject to accounting enforcement actions by the SEC, reports that sanctioned managers suffer both monetary and reputation losses (e.g. they are more likely to be fired and less likely, once fired, to find subsequent employment or serve on a board of directors). More recently, Desai et al. (2006) also provide evidence that managers who fail to adhere to GAAP or aggressively interpret GAAP suffer significant negative personal consequences. First, once earnings manipulation is discovered, the board's reaction is, in most cases, quick and decisive in displacing managers found to manage earnings. Moreover, the external labour market also imposes significant reputation-related penalties (*ex-post* settling up) on the displaced managers, as evidenced by the significantly lower re-hire rate for managers of firms who restated their earnings. Marquardt and Wiedman (2004) classify the costs associated with earnings management into two broad categories: the costs of detected earnings management, and the costs of undetected earnings management. Costs under the first category include enforcement actions by the regulatory bodies, earnings restatements, shareholder litigation, qualified audit reports, and negative coverage in the business press. All these situations are associated with significant negative abnormal returns for the firm caught to manipulate earnings. Costs under the second category include constraints on the firm's future reporting flexibility (as earnings management in a previous accounting period necessarily constrains the firm's ability to manage earnings in the current period), audit costs (since the firm may need to undertake additional audit procedures to mitigate audit

small, the incentives for the acquiring firm to manipulate earnings are reduced. For example, if the size of the target is relatively small compared to the size of the acquiring firm, the economic benefits from increasing stock price via manipulated earnings will also be relatively small. On the other hand, if the size of the target is large relative to the size of the acquiring firm, the economic benefits at stake are of greater magnitude, and therefore so are the incentives to increase reported earnings prior to the transaction. Erickson and Wang (1999) find that an acquiring firm's earnings management magnitude, as proxied by the level of discretionary accruals, is an increasing function of the deal ratio (defined as the ratio of the deal's market value to the market value of the acquiring firm's equity). As a proxy for economic incentives, we include both the deal ratio as well as the ratio of the target's total assets relative to the acquirer's, where these are measured at book value.

Some further control variables are included in the model such as the premium paid by the acquiring company, whether a rival bidder is involved in the deal process, whether the target company belongs to the same industry as the acquirer, and whether the deal is a domestic or cross-border one. There is neither theory nor prior empirical evidence on the impact of these factors on earnings management; hence we make no predictions regarding the expected sign of the variable coefficients. Finally, we include the book-to-market ratio (defined as the book value of common equity over its corresponding market value) of acquiring firms as an explanatory variable to test whether being a "value" (high book-to-market ratio) or "glamour" (low book-to-market ratio) acquirer has an impact on the level of discretionary accruals recorded prior to the merger. According to Kothari et al. (2005), given that glamour firms are more sensitive to earnings fluctuations, such firms would benefit more from an increase in reported earnings and therefore should have greater incentives to manipulate earnings through accruals.

risk), a decrease in the perceived earnings quality (as high levels of accruals result in a decreased magnitude in the correlation between earnings and cash flows, a commonly used measure of earnings quality), and an increased probability of detection (given that the extent to which managers engage in earnings management increases the likelihood that their actions will eventually be uncovered). In an M&A context, as Erickson and Wang (1999) note, if earnings management is revealed then the costs of detection could be significant for the acquirer because, for example, the target firm may demand a higher exchange ratio or threaten to cancel the transaction.

3. RESEARCH DESIGN

3.1. Sample Description

The study analyses M&A transactions that were announced and completed²² by UK acquirers from January 1, 1997 until December 31, 2004. There are several reasons for focusing on the particular time period. The first part of the sample period (1997-2000) coincides with the peak of the fifth takeover wave of the 1990s, whereas the latter period (post-March 2000) reflects the stock market meltdown which followed the dotcom-bubble correction and ultimately halted the wave. Even though a sixth merger wave emerged in mid-2003 and up until 2007, this by no means reached the record levels of the fifth wave. In addition, addressing the study's hypotheses in the context of the sixth wave could prove problematic. This is because the accounting regime change following the mandatory adoption of International Financial Reporting Standards by all UK listed companies post-2005 could confound the results on earnings management.

Sample transactions were selected on the basis of the following criteria:

- (1) The acquirer is (or was at the time of the acquisition) a UK company listed on the London Stock Exchange²³.
- (2) The acquirer is a non-financial, non-utility company²⁴.
- (3) The bidder acquired a majority interest in the target company or ended up holding a majority interest as a result of the deal.
- (4) The transaction was completed in the form of a pure share exchange²⁵.
- (5) In order to ensure a material effect of the deal on the acquirer, the total consideration value must be at least 5% of the acquiring firm's market value as at the end of the month immediately preceding the deal announcement.

²² Since all bids included in the sample were successful, the terms "bidder" and "acquirer" are used interchangeably throughout the study.

²³ While only UK publicly traded acquirers were included in the sample, no restriction was applied on the listing status or origin of the target companies (in order to secure as broad a range as possible of acquisition activity).

²⁴ The rationale behind the exclusion of financial companies is that their financial reporting environments (regulatory regimes, internal governance structures) differ from those of industrial firms. In addition, financial firms have fundamentally different accrual processes that are not likely to be captured well by expectations models for normal accrual activity. Finally, the efficacy of the Jones (modified-Jones) model at detecting accrual management in financial firms has not been documented in the literature.

²⁵ Rules 9 & 11 of 'The City Code on Takeovers and Mergers' require UK acquirers to offer a cash alternative in an otherwise all share offer, if any shares have been purchased in the market for cash during the 12 months preceding the bid. Such transactions are also included in the sample as share-swap deals.

(6) An announcement date for the deal, distinct from its completion date, could be identified.

The above selection process resulted in identifying 90 purely equity-financed deals. The sample transactions were drawn from the Thomson Financial *Acquisitions Monthly* magazine and from the Thomson Financial One Banker M&A database, which provided the required information regarding the dates, the terms, and other details of the deals. Where necessary, these were cross-checked with the *Regulatory News Service* of the London Stock Exchange. All accounting and market-related data are from Datastream/Worldscope. As far as the governance data are concerned, all data regarding board composition, managerial share ownership, and auditor identity are collected from the *Price Waterhouse Corporate Register*. The *Corporate Register* is published quarterly by Hemmington Scott Ltd. and includes data for all firms listed on the *London Stock Exchange*. Hemmington Scott update their board composition database using information from the *London Stock Exchange* and *Reuters*.

A control sample comprising non-acquirers was also constructed. Non-acquirers have been matched to share acquirers on the basis of overvaluation, and according to the methodology proposed by Ang and Cheng (2006). More specifically, the misvaluation of a firm i at time t (MV_{it}) is computed as:

$$MV_{it} = \frac{(P/B)_{it} - (P/B)_{jt}}{(P/B)_{it}}$$

where $(P/B)_{it}$ is the market-to-book ratio of firm i at time t , and $(P/B)_{jt}$ is the median market-to-book ratio of industry j (two-digit SIC) to which firm i belongs at t . Overvaluation is measured as at fiscal year-end immediately preceding the offer announcement. Firms are ranked on the basis of their overvaluation, and then from all firms that have not experienced an M&A transaction in the two years preceding the announcement of a deal and in the three years following its completion, the one that has the closest overvaluation to each sample share acquirer is selected as the non-acquirer match. The rationale for constructing this sub-sample is the following: As far as the earnings management hypothesis is concerned, evidence of opportunistic accrual reporting by share acquirers but not by similarly overvalued non-acquirers would imply that it is the method of payment driving the earnings management incentives and not simply a glamour-effect manifesting into accruals.

<Table 1 around here>

Sample descriptive statistics are provided in Table 1. As can be seen, the average board in the sample contains 9 directors, of which approximately half are outsiders. The number of firms where the CEO is also the Chairman of the board is limited (only 9.52%). The typical sample firm has mean (median) executive shareholding of approximately 2.7% (0.15%), whereas the corresponding figure for non-executive directors is lower and equal to approximately 1.7% (0.03%). Some of these figures do not differ substantially from the ones reported by studies analysing board composition in the UK. For example, in Cosh and Hughes (1997), the mean (median) percentage of non-executive directors on UK boards in the mid-1990s is 52% (50%), while the mean (median) board size is slightly higher and equal to 13.2 (13.0). Directors (both executives and non-executives) hold on average 2.9% of their firms' shares, a figure lower than the combined 4.35% reported in the current study. Finally, in half of their sample companies the roles of the CEO and Chairman of the board are not separated. Peasnell et al. (2005) report a mean (median) non-executive representation for the years 1993-1996 of 42.7% (42.9%). The mean (median) board size is 8.01 (8.0), and executive directors own on average 8.6% of their firms' equity (the corresponding median value is 1.6%). The CEO also holds the Chairman's position in 24.5% of their sample firms²⁶. Finally, commenting on the auditor variable, sample descriptives suggest that 88.10% of the share-for-share acquirers included in the study have a Big 4 auditor. This figure is in line with the ones reported by other UK studies. For example, in Peasnell et al. (2005), 85.4% of the sample companies are audited by a big firm.

3.2. Measuring Earnings Management

Earnings management is proxied by discretionary (abnormal) working capital accruals obtained from the cross-sectional modified-Jones model (Dechow et al., 1995 following Jones, 1991). This involves a two-stage estimation process. In the first stage, Equation (1) is estimated for the financial year with an earnings release immediately preceding the announcement of an offer, using all non-acquiring firms with available data in the same industry portfolio (two-digit SIC code) as the acquirer.

²⁶ Earlier studies by the same authors (e.g. Peasnell et al., 1998; 2000; and 2003) report almost identical results regarding board composition and managerial ownership in the UK as the ones documented in Peasnell et al. (2005).

$$WCA_{ijp} / A_{ijp-1} = \alpha_{jp} + \beta_{1jp} (\Delta REV_{ijp} / A_{ijp-1}) + \varepsilon_{ijp} \quad (1)$$

where:

WCA_{ijp} = Working capital accruals for estimation portfolio j for firm i in event year p

ΔREV_{ijp} = Change in revenue (total sales) for estimation portfolio j for firm i in event year p

A_{it-1} = beginning of period total assets for estimation portfolio j for firm i in event year p

ε_{it} = error term for estimation portfolio j for firm i in event year p

i = 1,...,N firm index

j = 1,...,J estimation portfolio index

p = 1,...,P year index

In the second stage, the industry/event year specific parameter estimates obtained from Equation (1) are combined with acquiring firm specific data in Equation (2) to produce estimated discretionary working capital accruals (EDWCA):

$$EDWCA_{ip} = WCA_{ip} / A_{ip-1} - [a_{jp} + b_{1jp} (\Delta REV_{ip} / A_{ip-1} - \Delta REC_{ip} / A_{ip-1})] \quad (2)$$

An adjustment made in this second stage is that the change in accounts receivable (ΔREC) is subtracted from the change in total sales. This is in recognition of the fact that revenues may not be entirely exogenous (i.e. non-discretionary) and that earnings could be managed through discretionary revenues, particularly through the recognition of revenues on credit sales²⁷.

From a managerial perspective, accruals are likely to represent a favoured instrument for manipulating reported earnings (especially when the goal is to manage earnings temporarily) due to their opaque nature which makes it harder for external parties to adjust away their effect (Young, 1999). Even if accruals manipulation is suspected, the information needed to undo the accrual changes may be limited or unavailable. We particularly focus on working capital accruals given prior evidence that non-current accruals (such as depreciation and amortisation) have limited potential as earnings management instruments due to the greater disclosure requirements involved (e.g. Young, 1999), and that when valuing acquisition partners,

²⁷ For example, Marquardt and Wiedman (2004) provide evidence that equity-issuing firms resort to aggressive revenue recognition practices and indeed use accounts receivable to manage earnings.

investment bankers tend to rely more on EBITDA (Earnings Before Interest Tax Depreciation & Amortisation) figures (Louis, 2004). Following the concerns of Hribar and Collins (2002), working capital accruals are computed directly from the cash flow statement rather than from successive balance sheet changes.

4. RESULTS AND DISCUSSION

4.1. The Earnings Management Evidence

The earnings management evidence is presented in Table 2 which reports discretionary accruals in the year immediately preceding the announcement of an all-share bid. When the entire sample period is considered (Panel A), both mean and median discretionary working capital accruals for share acquirers are positive and statistically significant. In other words, both the mean abnormal accrual of 0.0250 and the median abnormal accrual of 0.0266 are indicative of earnings management (of approximately 2.5% and 2.7% of total assets respectively). In the descriptive statistics presented in Table 1, the median ROA for share acquirers is 8.9%. Therefore, even abnormal accruals of the magnitude of 2% of assets constitute surprisingly large values, since they represent more than 20% of the acquirers' asset returns. On the other hand, discretionary accruals for non-acquirers exhibit a completely different pattern: mean and median abnormal working capital accruals are virtually zero and non-significant. This pattern suggests that the positive and statistically significant abnormal accruals reported for share acquirers are not the result of a glamour-effect manifesting into accruals (since firms with similar overvaluation exhibit different accrual behaviour), but are instead evidence that the earnings figure of share acquirers contains opportunistic, and thereby value-irrelevant and unsustainable, components.

< Table 2 around here >

The documented earnings management evidence is particularly intense during the first part of the sample period (Panel B) which coincides with the booming market conditions of the late 1990s. This suggests that during a bull market prospective acquirers may have greater incentives to engage in income-increasing accrual manipulation in order to exploit the overall market euphoria by using their overvalued stock as cheap acquisition currency.

4.2. The Impact of Corporate Governance Characteristics

The impact on earnings management of the factors discussed in section 2 is tested for our sample of UK share-for-share acquirers using the following model specifications:

Model A:

$$\begin{aligned} IDAI = & \beta_0 + \beta_1 * AR + \beta_2 * DR + \beta_3 * 4W-PREM + \beta_4 * RIVALBID + \\ & \beta_5 * (4W-PREM * RIVALBID) + \beta_6 * INDR + \beta_7 * CB + \beta_8 * BTMRATIO + \\ & \beta_9 * EDOWN\% + \beta_{10} * NEDOWN\% + \beta_{11} * BOARDSIZE + \beta_{12} * DUAL + \beta_{13} * NED\% \\ & + \beta_{14} * AUD + \varepsilon \end{aligned}$$

Model B:

$$\begin{aligned} IDAI = & \beta_0 + \beta_1 * AR + \beta_2 * DR + \beta_3 * 4W-PREM + \beta_4 * RIVALBID + \\ & \beta_5 * (4W-PREM * RIVALBID) + \beta_6 * INDR + \beta_7 * CB + \beta_8 * BTMRATIO + \beta_9 * \\ & HLEDOWN + \beta_{10} * HLNEDOWN + \beta_{11} * BOARDSIZE + \beta_{12} * DUAL + \beta_{13} * NED\% + \\ & \beta_{14} * AUD + \varepsilon \end{aligned}$$

Model C:

$$\begin{aligned} IDAI = & \beta_0 + \beta_1 * AR + \beta_2 * DR + \beta_3 * 4W-PREM + \beta_4 * RIVALBID + \\ & \beta_5 * (4W-PREM * RIVALBID) + \beta_6 * INDR + \beta_7 * CB + \beta_8 * BTMRATIO + \beta_9 * \\ & HLEDOWN + \beta_{10} * HLNEDOWN + \beta_{11} * BOARDSIZE + \beta_{12} * DUAL + \beta_{13} * NED\% + \\ & \beta_{14} * AUD + \beta_{15} * (HLNEDOWN * NED\%) + \varepsilon \end{aligned}$$

where:

IDAI is the absolute value²⁸ of discretionary accruals recorded in the year immediately prior to the merger announcement

AR is the asset ratio, defined as the ratio of the target's total assets (*WC02999*) over the acquirer's total assets (both measured at book value), the year before the merger announcement

DR is the deal ratio, defined as the ratio of the total consideration paid for the target over the market value (*MV*) of the acquiring company, the year before the merger announcement

4W-PREM is the percentage premium paid by the acquirer with respect to the target's share price four weeks before the merger announcement

RIVALBID is a dummy variable for whether the bid is being contested, taking the value 1 when a rival bidder is involved in the deal process and zero otherwise

INDR is a dummy variable for industry relatedness, taking the value 1 when the acquirer and the target have the same two-digit SIC Code and zero otherwise

CB is a dummy variable taking the value 1 if the takeover is a cross-border one (i.e. when the target is a foreign company, publicly traded or privately owned) and zero otherwise (i.e. when the target is a UK company, publicly traded or privately owned)

²⁸ Consistent with prior studies (Warfield et al., 1995; Becker et al., 1998; Francis et al., 1999; Reynolds and Francis, 2000; Bartov et al., 2001; Frankel et al., 2002; Klein, 2002; Krishnan, 2003; Geiger et al., 2005), we use the absolute value of discretionary accruals as an indication of earnings management. As Peasnell et al. (1998) and Geiger et al. (2005) note, the absolute value of discretionary accruals measures the combined effect of income-increasing and income-decreasing earnings management. Hence, such a model specification tests whether the explanatory variables under consideration can exacerbate or mitigate managers' discretion over accruals in a general framework, regardless of the expected direction of earnings management. From a methodological point of view, when the dependent variable is in absolute terms and therefore restricted to positive values only, estimating the parameters in the regression under the assumption of lognormal distribution and using the maximum likelihood method would be more appropriate (Klein, 2002). However, as noted in Maddala (2001, p.116), in the linear regression model, we get the same estimators under the maximum likelihood method as those obtained by the method of ordinary least squares. Therefore, all three models are estimated using an OLS regression.

BTMRATIO is the book-to-market ratio of the acquirer, defined as the book value of common equity (*WC03501*) over its corresponding market value (*MV*), the year before the merger announcement

EDOWN% (similarly *NEDOWN%*) is the percentage of outstanding ordinary shares owned by executive directors (similarly non-executive directors) the year before the merger announcement

HLEDOWN (similarly *HLNEDOWN*) is a dummy variable taking the value 1 when executive shareholding (similarly non-executive shareholding) is above the sample median and zero if it is below

BOARDSIZE is the total number of directors (both executive and non-executive) on the board

DUAL is a dummy variable taking the value 1 when the CEO also acts as the Chairman of the board and zero otherwise

NED% is the percentage of non-executive directors on the board

AUD is a dummy variable taking the value 1 if the sample firm is audited by a Big 4 auditor and zero otherwise

Regression results for Models A, B, and C are reported in Table 3. Starting with analysing the effect of managerial ownership, the results provide only weak support for the hypothesis that higher equity ownership from executive directors is associated with lower extent of accrual manipulation – the coefficient on *EDOWN* in Model A has a negative sign, but is not statistically significant. On the contrary, it seems that when non-executive directors hold a significant stake in the company, they can play an effective role in monitoring management and mitigating their discretion over accruals (the coefficient on *NEDOWN* in Model A is negative and statistically significant). It could be argued at this point that in contrast to the more general evidence provided by other earnings management studies (where it is assumed that the firm's own shareholders want executives to publish the truth), in the case of share-for-

share mergers and acquisitions, non-executive directors with significant holdings in the acquiring firm may not want the executive directors to curtail earnings management. In other words, in a stock-financed acquisition setting, the interests of non-executives may be aligned with those of executives in wanting to get the best possible exchange rate between their own shares and those of the target, so that they can acquire the target at the most favourable price in terms of their own shares. The fact that such a scenario is not borne out by the empirical results could be attributed to the low level of non-executive shareholding in the sample (the median value is just 0.03%). However, the argument presented above could explain the opposite to the expected sign for other variables, such as the coefficient on *NED%* which will be discussed in greater detail later in this section.

< Table 3 around here >

When acquiring firms are partitioned according to the level of executive and non-executive shareholding relatively to the sample median (Models B and C), the results give rise to different interpretations. More specifically, the negative association between non-executive shareholding and discretionary accruals weakens (the coefficient on *HLNEDOWN* is negative but non-significant); while there is evidence that the extent of earnings manipulation increases in firms where the executive shareholding exceeds the sample median (the coefficient on *HLEDOWN* is positive in both models and statistically significant under Model C). Hence, the results support the convergence-of-interest hypothesis for low executive ownership levels, and the entrenchment hypothesis as the executive ownership increases.

Returning to the monitoring role of non-executive directors, we observe a positive and statistically significant relation between discretionary accruals and non-executive representation on the board across all models. This finding is opposite to what we would expect based on theoretical predictions and evidence from other earnings management studies. There are two alternative interpretations of these results.

First, outside directors cannot detect executives' earnings management behaviour. Park and Shin (2004), analysing the effectiveness of outside directors in mitigating managers' propensity to manipulate earnings upward in order to avoid reporting losses and earnings declines, also find a positive and statistically significant association between the level of discretionary accruals and the percentage of non-executive directors on the board. Interpreting these results, Park and Shin (2004)

argue that while outside directors may have the intention to curb earnings management, they may lack the necessary financial sophistication to do so. On the contrary, when outside directors are restricted to those who are officers of financial intermediaries, then a significantly negative relation to the executives' earnings management activity is observed. Thus, Park and Shin (2004) conclude that adding outside directors to the board may not achieve improvement in governance practices by itself, especially in jurisdictions where the outside directors' labour market may not be well developed (as discussed earlier, prior research suggests that this may actually be the case in the UK). Xie et al. (2003) also find that the likelihood of a firm engaging in earnings management is negatively related to the presence of non-executive board members with corporate or financial backgrounds. Furthermore, Baysinger and Hoskisson (1990), Conyon and Peck (1998) and Park and Shin (2004) cite information asymmetry as an impediment to effective monitoring by non-executive directors. Such an asymmetry between executive and non-executive directors (which could be due to the fact that, unlike executive directors, non-executive directors are not full-time employees at the company on whose board they serve, and typically spend only a fraction of their time at the company) implies that non-executive directors may not have access to all the relevant information to detect and correct earnings management.

A second possible interpretation, however, is that non-executive directors can detect managers' opportunistic activities, but have other incentives that prevent them from reporting such behaviour. As Conyon and Peck (1998) observe, the compensation received by outside directors, along with their chances of re-selection as a non-executive directors, tend to be heavily influenced by the views of the CEO. Hence, as Nickell (1995) remarks: "Why should they make a fuss rather than keep quiet and collect their fees?" Furthermore, there is the context-specific interpretation discussed earlier, i.e. that in the case of a share-financed acquisition, earnings management could be seen as in the interest of non-executive directors-shareholders.

A final point to consider is the potential intervening effect of managerial share ownership with non-executive representation on the board. Such an effect is captured by the interaction variable *HLEDOWN*NED%* in Model C. The motivation for teasing out this intervening effect stems from prior evidence that (assuming that the convergence-of-interest hypothesis regarding managerial ownership holds) there is a negative relation between the percentage of outside directors on the board and

executive directors' ownership (Weisbach, 1988; Zajac and Westphal, 1994; Denis and Sarin, 1999). These studies argue that if managerial share ownership is presumed to align managerial and shareholder interests, thereby alleviating the agency problem, then the need for strong monitoring by the board, and hence the need for a high proportion of independent outside directors on the board, is reduced. In other words, monitoring by outside directors and the direct incentive created by insiders' ownership may be substitute methods for controlling agency costs. Peasnell et al. (2005) argue that the relation between the two monitoring devices need not be linear. More specifically, for low and moderate ownership levels, incentive alignment effects result in a negative association between managerial ownership and the demand for outside directors. On the contrary, high managerial stock ownership increases the risk that executive directors will become entrenched and will expropriate the wealth of minority shareholders. Recognition of this risk will lower the price of the firm's stock, and with it the wealth of the insiders. Therefore, managers have incentives to put in place controls that will convince the market that entrenchment will not result in such wealth transfers. Peasnell et al. (2005) conclude "to the extent that outside directors represent a credible and cost-effective entrenchment-amelioration device, these arguments suggest a possible increasing demand for independent boards at high levels of managerial ownership". In other words, the appointment of outside board members provides executive directors with a less ambiguous means of signalling their commitment to high standards of internal control. Indeed, the coefficient on *HLEDOWN*NED%* is negative and significant. This finding suggests that in a setting where the need for board monitoring is greatest (due to the fact that the incentive to manipulate earnings is highest and external constraints at a minimum), non-executive directors are more likely to submit managers' decisions under greater scrutiny, and hence curtail their opportunistic reporting of accruals.

As far as the other board characteristics are concerned, we observe that the duality of the CEO is associated with higher abnormal accruals (the coefficient on *DUAL* is positive across all models and statistically significant under Model A). Such evidence implies that a CEO also acting as the Chairman of the board results in a concentration of power that reduces the monitoring role of the board and exacerbates managers' discretion over accruals. Evidence regarding the effect of the size of the board is contradicting, given that the coefficient on *BOARDSIZE* is negative under Models A

and C, but positive in Model B. However, none of the reported values is statistically significant.

Regarding the effect of audit quality, there is only partial evidence that when the acquiring firm is audited by a Big 4 auditor, managers' discretion over accrual reporting is mitigated. This is because the coefficient on *AUD* is negative across all models, but not statistically significant. Negative but insignificant association between the level of discretionary accruals and the presence of a big auditor is also documented in Peasnell et al. (2000), Davidson et al. (2005), and Peasnell et al. (2005). As Francis et al. (1999) note, audits can mitigate but not eliminate earnings management behaviour. This is because the auditing process is not perfect, and there will always be some asymmetry between what the managers know about accruals and what the auditor is able to cost-effectively glean and report.

As far as the deal-specific characteristics are concerned, we note that under all three model specifications there is indeed a positive and statistically significant association between economic incentives (as reflected in a higher asset ratio) and the extent of earnings management. However, the other proxy for economic incentives, namely the deal ratio, is negatively associated with earnings management and statistically significant under all models. It is interesting to pursue why these two regressors, that are supposed to be capturing the same effect according to theory, yield contradicting results. The earlier part of the transactions analysed in the study spans a period that begins less than a month after Alan Greenspan's (1996), Chairman of the *Federal Reserve Board* in Washington, speech that introduced the term "irrational exuberance" to describe the behaviour of the stock market investors, and ends over a year after the stock market peaked – a month after the publication of Shiller's (2000) *Irrational Exuberance*. Shiller (2000) provides evidence that in the late 1990s stock markets worldwide soared to unusually high and unsustainable levels, by historical standards. This "millennium boom", however, displayed the classic features of a "speculative bubble", i.e. a situation in which temporarily high prices are sustained largely by investors' enthusiasm and extravagant expectations rather than by consistent estimation of real value. Given the above evidence, it would not be prudent to draw conclusions based on market measures such as the deal ratio. On the contrary, if we use the more reliable book-value measure, i.e. the asset ratio, then theoretical predictions (namely that a larger deal relative to the acquirer's size increases managers' propensity to manipulate earnings) are confirmed.

Turning to other deal characteristics, we note a positive relation between bid premia and abnormal accruals (statistically significant under Model B). The premium is part of the total consideration paid by the acquiring firm; hence, an increased premium leads to an increased offer price and a higher exchange ratio in share-for-share deals. Therefore, if the acquiring company is planning to make a bid for targets for which high premiums may be expected (according to, for example, the industry the potential target belongs to), then the prospective acquirer has an incentive to boost earnings (and consequently share price) in order to achieve a more favourable exchange ratio in terms of the shares that will have to be issued to gain control of the target. Furthermore, the bidder will be able to pay a higher “apparent” premium, as the “real” premium will be much smaller (Rau and Vermaelen, 1998). On the contrary, a significantly negative relation between abnormal accruals and the presence of a rival bidder is observed. When the effect of bid premium and the incidence of a contested bid are jointly taken into account (as captured by the interaction variable *4W-PREM*RIVALBID*), the results yield a positive and highly significant association. A possible interpretation of these findings could be that although the expectation of a rival bidder does not on its own increase the likelihood of accrual manipulation, it can potentially lead to an increased premium from the acquiring firm in an effort to win the bid. Given the relation between bid premia and discretionary accruals, a contested bid associated with an increased premium increases the motive for earnings manipulation.

There is also partial evidence that the extent of earnings management increases when the acquiring firm and the target belong to the same industry as well as when the acquiring firm makes a cross-border bid (the coefficients on these variables are positive but not statistically significant). The sign of the coefficient on cross-border deals could be attributed to the information asymmetries and to the greater uncertainty involved when the potential target is a foreign company²⁹. It also has to be noted that in the vast majority of cross-border deals, the acquirer and the target belong to the same industry (as reflected in the same two-digit SIC Code). Hence, the positive sign for the coefficient on the *CB* variable could imply that the uncertainty arising from making an acquisition abroad dominates the related-industry effect (assuming that in the case of a related acquisition the acquirer has a better insight into the target’s

²⁹ In this context, Conn et al. (2005) argue that overseas targets are more difficult to value accurately due to imperfect capital information.

operating environment which mitigates the uncertainty involved in the deal). We could then argue that the positive coefficient of the *SIC* variable is partly driven by the cross-border deals. As far as the domestic related-industry acquisitions are concerned, a positive association with the pre-announcement discretionary accruals could imply that, as in the case of cross-border deals, other factors dominate the related-industry effect (such as, for example, an expectation of higher premiums for acquisitions occurring in that industry)³⁰.

The analysis based on the book-to-market ratio reveals that the lower the book-to-market ratio of the acquiring company, the higher the level of discretionary accruals (the coefficient on *BTMRATIO* is negative and statistically significant under all model specifications). This, in turn, implies that glamour acquirers are more likely to engage in earnings management activities. These results are consistent with Jensen's (2005) theory regarding the "agency costs of overvalued equity": managers of overvalued firms, faced with the prospect of disappointing the capital markets if this overvaluation is eliminated, have an incentive to defend the overvaluation (even through earnings management) in order to meet the market's optimistic performance expectations and continue to fool it for some period of time by providing the illusion of growth.

5. SUMMARY AND CONCLUSIONS

This paper examined factors that could curtail or exacerbate managers' opportunistic reporting of accruals in the period preceding the announcement of a share-swap takeover. The analysis was based on a sample of UK publicly traded firms undertaking share-financed mergers and acquisitions during the period 1997-2004.

When analysing the impact of managerial ownership, the results supported the convergence-of-interest hypothesis for low executive ownership levels, and the entrenchment hypothesis as the executive ownership increased. Interestingly, the hypothesis that non-executive directors can mitigate managers' propensity to manipulate earnings was not supported by the empirical findings. Two alternative

³⁰ One could argue that the deal-specific characteristics discussed above (i.e. the exact target identity, the premium paid, the presence of a rival bidder) are not determined until the deal is announced, whereas earnings management takes place in advance. In this context, personal discussions with mergers and acquisitions practitioners were very informative, because they revealed that a bidder may plan an acquisition for at least a year before it is announced. Hence, the bidder can form expectations based on, for example, the likelihood of a rival bid, the premium to be required etc., and plan its strategy accordingly.

interpretations of this evidence were provided: Either that non-executive directors cannot monitor managers effectively (due to lack of the necessary financial sophistication and/or information asymmetries between executive and non-executive directors that prevent the latter from having access to all the information needed to detect and correct earnings management); or that non-executive directors can detect managers' opportunistic activities, but have other incentives that prevent them from reporting this behaviour (such as developing a reputation as a director who is not opposing management, and hence becoming more attractive to other firms whose management is looking to avoid scrutiny and interference). In addition, in the particular setting studied, the interests of non-executives may be aligned with those of executives in wanting to get the best possible exchange rate between their own shares and those of the target, so that they can acquire the target at the most favourable price in terms of their own shares. This scenario implies that non-executive directors may not want the executive directors to curtail earnings management prior to a share-for-share bid. However, when the potential intervening effect of managerial share ownership with non-executive representation on the board was explored, the results showed that at high executive ownership levels, when the need for board monitoring is greatest (due to the fact that the incentive to manipulate earnings is highest and external constraints at a minimum), non-executive directors are more likely to submit managers' decisions under greater scrutiny, and hence curtail their opportunistic reporting of accruals.

Regarding other board characteristics, the study documented that the duality of the CEO is associated with higher levels of discretionary accruals. Such evidence implies that a CEO also acting as the Chairman of the board results in a concentration of power that reduces the monitoring role of the board and exacerbates managers' discretion over accruals.

Finally, as far as the effect of audit quality is concerned, there was only partial evidence that when the acquiring firm is audited by a Big 4 auditor, managers' discretion over accrual reporting is mitigated. This finding could imply that audits (even by big firms) can mitigate but not eliminate earnings management behaviour, as there will always be some asymmetry between what the managers know about accruals and what the auditor is able to cost-effectively glean and report.

As far as the deal-specific factors are concerned, the results suggested that earnings management is an increasing function of the economic benefits arising from such a strategic behaviour (particularly if a book-value-based measure to capture these economic benefits is employed). The analysis also documented a positive relation between the level of discretionary accruals and bid premia: a bidder engaging in earnings management will be able to pay a higher “apparent” premium, as the “real” premium will be much smaller. When the effect of bid premium interacts with the presence of a rival bidder, then again the results yield a positive and highly significant association with the likelihood of earnings management. The analysis based on the book-to-market ratio revealed that the lower the book-to-market ratio of the acquiring company, the higher the level of pre-announcement discretionary accruals. This finding supports Kothari et al.’s (2005) argument that, given that glamour firms are more sensitive to earnings fluctuations, such firms would benefit more from an increase in reported earnings and therefore should have greater incentives to manipulate earnings through accruals. The findings are also consistent with Jensen’s (2005) theory regarding the “agency costs of overvalued equity”, whereby managers of overvalued firms, faced with the prospect of disappointing the capital markets if this overvaluation is eliminated, have an incentive to defend the overvaluation (even through earnings management) in order to meet the market’s optimistic performance expectations.

REFERENCES

- Andrade, G., Mitchell, M. and E. Stafford (2001), “New Evidence and Perspectives on Mergers”, *The Journal of Economic Perspectives*, 15: 103-120.
- Ang, J.S. and Y. Cheng (2006) “Direct evidence on the market-driven acquisition theory”, *Journal of Financial Research*, 29(2): 199-216.
- Baliga, B.R., Moyer, R.C. and R.M. Rao (1996), “CEO Duality and Firm Performance: What is the Fuss?”, *Strategic Management Journal*, 17: 41-53.
- Bartov, E., Gul, F.A. and J.S.L. Tsui (2001), “Discretionary Accruals Models and Audit Qualifications”, *Journal of Accounting and Economics*, 30: 421-452.
- Baysinger, B. and R.E. Hoskisson (1990), “The Composition of Boards of Directors and Strategic Control: Effects on Corporate Strategy”, *Academy of Management Review*, 15: 72-87.
- Beasley, M. (1996), “An Empirical Analysis of the Relation Between the Board of Director Composition and Financial Statement Fraud”, *The Accounting Review*, 71 (October): 443-465.
- Becker, C., DeFond, M.L., Jiambalvo, J. and K.R. Subramanyam (1998), “The Effect of Audit Quality on Earnings Management”, *Contemporary Accounting Research*, 15 (Spring): 1-24.

- Beneish, M.D. (1999), "Incentives and Penalties Related to Earnings Overstatements that Violate GAAP", *The Accounting Review*, 74: 425-457.
- Berle, A.A. Jr. and G.C. Means (1932), *The Modern Corporation and Private Property*, Macmillan, New York.
- Bhagat, S. and B. Black (2000), "Board Independence and Long-Term Performance", Working Paper, Columbia Law School.
- Black, B.S. (1990), "Shareholder Passivity Re-examined", *Michigan Law Review*, 89: 520-608.
- Black, E.L., Sellers, K.F. and T. Sheehy (1998), "Earnings Manipulation Using Asset Sales: An International Study of Countries Allowing Non-Current Asset Revaluation", *Journal of Business, Finance and Accounting*, 25: 1089-1118.
- Botsari, A. and G. Meeks (2008) "Do acquirers manage earnings prior to a share for share bid?", *Journal of Business Finance and Accounting*, 35 (5&6): 633-670.
- Bradshaw, M., Richardson, S. and R. Sloan (2001), "Do Analysts and Auditors Use Information in Accruals?", *Journal of Accounting Research*, 39: 45-74.
- Brickley, J. and J. Christopher (1987), "The Takeover Market, Corporate Board Composition, and Ownership Structure: The Case of Banking", *Journal of Law and Economics*, 30: 161-181.
- Byrd, J.W. and K.A. Hickman (1992), "Do Outside Directors Monitor Managers? Evidence from Tender Offer Bids", *Journal of Financial Economics*, 32: 195-221.
- Cadbury, A. (1992), *Report of the Committee on the Financial Aspects of Corporate Governance*, Gee Publishing, London.
- Chan, K., Jegadeesh N. and T. Sougiannis (2004), "The Accrual Effect on Future Earnings", *Review of Quantitative Finance and Accounting*, 22: 97-121.
- Christie, A.A. and J.L. Zimmerman (1994), "Efficient and Opportunistic Choices of Accounting Procedures: Corporate Control Contests", *The Accounting Review*, 69: 539-566.
- Chung, R., Firth, M. and J.B. Kim (2005), "Earnings Management, Surplus Free Cash Flow, and External Monitoring", *Journal of Business Research*, 58: 766-776.
- Clikeman, P.M. (2003), "Where Auditors Fear to Tread", *Internal Auditor*, August: 75-79.
- Coles, J.L., Hertz, M. and S. Kalpathy (2006), "Earnings Management around Employee Stock Option Reissues", *Journal of Accounting and Economics*, 41: 173-200.
- Conn, R.L., Cosh, A., Guest, P.M. and A. Hughes (2005), "The Impact on UK Acquirers of Domestic, Cross-Border, Public and Private Acquisitions", *Journal of Business, Finance and Accounting*, 32: 815-870.
- Constantinou, T. and C.T. Constantinou (2003), "The Effect of Board Structure on Bidder Shareholders' Wealth: Further Evidence from the UK Bidding Firms", Working Paper, ESRC Centre for Business Research, University of Cambridge.
- Conyon, M.J. and S.I. Peck (1998), "Board Size and Corporate Performance: Evidence from European Countries", *The European Journal of Finance*, 4: 291-304.
- Cosh, A. and A. Hughes (1997), "The Changing Anatomy of Corporate Control and the Market for Executives in the UK", *Journal of Law and Society*, 24: 104-123.
- Cotter, J.F., Shivdasani, A. and A. Zenner (1997), "Do Independent Directors Enhance Target Shareholder Wealth During Tender Offers?", *Journal of Financial Economics*, 43: 195-218.
- Craswell, A.J., Francis, J. and S. Taylor (1995), "Auditor Brand Name Reputations and Industry Specializations", *Journal of Accounting and Economics*, 20 (December): 297-322.

- Dalton, D.R., Daily, C.M., Johnson, J.L. and A.E. Ellstrand (1999), "Number of Directors and Firm Performance: A Meta-Analysis", *Academy of Management Journal*, 42: 674-686.
- Das, S. and H. Zhang (2003), "Rounding-up in Reported EPS, Behavioural Thresholds, and Earnings Management", *Journal of Accounting and Economics*, 35: 31-50.
- Davidson, R., Goodwin-Stewart, J. and P. Kent (2005), "Internal Governance Structures and Earnings Management", *Accounting and Finance*, 45: 241-267.
- Dayha, J., McConnell, J.J. and N.G. Travlos (2002), "The Cadbury Committee, Corporate Performance, and Top Management Turnover", *Journal of Finance*, 57: 461-483.
- DeAngelo, E. (1981), Auditor Size and Audit Quality", *Journal of Accounting and Economics*, 3 (December): 183-199.
- Dechow, P.M, Sloan, R.G. and A.P. Sweeney (1995), "Detecting Earnings Management", *The Accounting Review*, 70: 193-225.
- Dechow, P.M, Sloan, R.G. and A.P. Sweeney (1996), "Causes and Consequences of Earnings Manipulation: An Analysis of Firms subject to Enforcement Actions by the SEC", *Contemporary Accounting Research*, 13 (1): 1-36.
- Dechow, P.M. and D.J. Skinner (2000), "Earnings Management: Reconciling the Views of Accounting Academics, Practitioners, and Regulators", *Accounting Horizons*, 14 (2): 235-250.
- Dechow, P.M., Richardson, S. and I. Tuna (2003), "Why are Earnings Kinky: An Examination of the Earnings Management Explanation", *Review of Accounting Studies*, 8: 355-384.
- DeFond, M.L. and J. Jiambalvo (1993), "Factors Related to Auditor-Client Disagreements over Income-Increasing Accounting Methods", *Contemporary Accounting Research*, 9 (Spring): 145-176.
- Demsetz, H. (1983), "The Structure of Ownership and the Theory of the Firm", *Journal of Law and Economics*, 26: 375-390.
- Denis, D.J. and A. Sharin (1999), "Ownership and Board Structures in Publicly Traded Firms", *Journal of Financial Economics*, 52: 187-223.
- Desai, H., Hogan, C.E. and M.S. Wilkins (2006), "The Reputational Penalty for Aggressive Accounting: Earnings Restatements and Manager Turnover", *The Accounting Review*, 81: 83-112.
- Dopuch, N. and D. Simunic (1982), "Competition in Auditing: An Assessment", Paper presented at *Symposium on Auditing Research IV*, University of Illinois at Urbana-Champaign.
- Easterwood, C.M. (1998), "Takeovers and Incentives for Earnings Management: An Empirical Analysis", *Journal of Applied Business Research*, 14: 29-47.
- Eddey, P.H. and S.L. Taylor (1999), "Directors' Recommendations on Takeover Bids and the Management of Earnings: Evidence from Australian Takeovers", *ABACUS*, 35: 29-44.
- Eisenberg, T., Sundgren, S. and M. Wells (1998), "Larger Board Size and Decreasing Firm Value in Small Firms", *Journal of Financial Economics*, 48: 35-54.
- Erickson, M. and S. Wang (1999), "Earnings Management by Acquiring Firms in Stock for Stock Mergers", *Journal of Accounting and Economics*, 27: 149-176.
- Fama, E. (1970), "Efficient Capital Markets: A Review of Theory and Empirical Work", *Journal of Finance*, 25: 383-417..
- Fama, E.F. (1980), "Agency Problems and the Theory of the Firm", *Journal of Political Economy*, 88: 288-308.
- Fama, E.F. and M.C Jensen (1983), "Separation of Ownership and Control", *Journal of Law and Economics*, 26 (June): 301-325.

- Filkenstein, S. and R.A. D'Aveni (1994), "CEO Duality as a Double-Edged Sword: How Boards of Directors Balance Entrenchment Avoidance and Unity of Command", *Academy of Management Journal*, 37: 1079-1108.
- Francis, J.R., Maydew, E.L. and H.C. Sparks (1999), "The Role of Big 6 Auditors in the Credible Reporting of Accruals", *Auditing: A Journal of Practice and Theory*, 18: 17-34.
- Frankel, R.M., Johnson, M.F. and K.K. Nelson (2002), "The Relation Between Auditors' Fees for Non-audit Services and Earnings Management", *The Accounting Review*, 77: 71-105.
- Franks, J.R., Mayer, C. and L. Renneboog (1999), "Who Disciplines Management in Poorly Performing Companies?", Working Paper, London Business School.
- Geiger, M.A., North, D.S. and B.T. O'Connell (2005), "The Auditor-to-Client Revolving Door and Earnings Management", *Journal of Accounting, Auditing and Finance*, 20: 1-26.
- Gibbins, M.J., Salterio, S. and A. Webb (2001), "Evidence About Auditor-Client Management Negotiation Concerning Client's Financial Reporting", *Journal of Accounting Research*, 39: 535-563.
- Greenspan, A. (1996), "The Challenge of Central Banking in a Democratic Society", Francis Boyer Lecture, *American Enterprise Institute for Public Policy Research*, Washington, D.C., December 5, 1996.
- Gregory, A. (2005), "Long Run Returns to Acquiring Firms: The Form of Payment Hypothesis, Bidder Hostility and Timing Behaviour", Working Paper presented at the Centre for Finance and Investment (Xfi) Conference on Mergers and Acquisitions, University of Exeter.
- Grossman, S.J. and O.D. Hart (1980), "Takeover Bids, the Free-Rider Problem, and the Theory of the Corporation", *Bell Journal of Economics*, 2: 42-64.
- Hart, O.D. (1983), "The Market Mechanism as an Incentive Scheme", *Bell Journal of Economics*, 14: 366-382.
- Hartzell, J., Ofek, E. and D. Yermack (2004), "What's in it for me? CEOs whose Firms are Acquired", *Review of Financial Studies*, 17: 37-61.
- Healy, P.M. and J.M. Wahlen (1999), "A Review of the Earnings Management Literature and its Implications for Standard Setting", *Accounting Horizons*, 13: 365-383.
- Hermalin, B. and M. Weisbach (1991), "The Effects of Board Composition and Direct Incentives on Firm Performance", *Financial Management*, 20: 101-112.
- Hermalin, B. and M. Weisbach (2003), "Boards of Directors as an Endogenously Determined Institution: A Survey of the Economic Literature", *Economic Policy Review-Federal Reserve Bank of New York*, 9: 7-26.
- Heron, R. and E. Lie (2002), "Operating Performance and the Method of Payment in Takeovers", *Journal of Financial and Quantitative Analysis*, 37: 137-155.
- Higson, C. and J. Elliott (1998), "Post-Takeover Returns – The UK Evidence", *Journal of Empirical Finance*, 5: 27-46.
- Holmstrom, B. (1999), "Managerial Incentive Problems: A Dynamic Perspective", *Review of Economic Studies*, 66: 169-182.
- Holmstrom, B. and S.N. Kaplan (2001), "Corporate Governance and Merger Activity in the United States: Making Sense of the 1980s and the 1990s", *The Journal of Economic Perspectives*, 15: 121-144.
- Hoskisson, R. and T.A. Turck (1990), "Corporate Restructuring: Governance and Control Limits of the Internal Capital Market", *Academy of Management Review*, 15: 459-477.

- Hribar, P. and D.W. Collins (2002), "Errors in Estimating Accruals: Implications for Empirical Research", *Journal of Accounting Research*, 40: 105-134.
- Jensen, M.C. (1993), "The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems", *Journal of Finance*, 48: 831-880.
- Jensen, M.C. (2005), "Agency Costs of Overvalued Equity", *Financial Management*, 34: 5-19.
- Jensen, M.C. and Ruback, R.S. (1983), "The Market for Corporate Control: The Scientific Evidence", *Journal of Financial Economics*, 11: 5-50.
- Jensen, M.C. and W.H. Meckling (1976), "Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure", *Journal of Financial Economics*, 3: 305-360.
- Johnson, R.A., Hoskisson, R. and M.A. Hitt (1993), "Board of Director Involvement in Restructuring: The Effects of Board versus Managerial Controls and Characteristics", *Strategic Management Journal*, 14: 33-50.
- Jones, J. (1991), "Earnings Management during Import Relief Investigations", *Journal of Accounting Research*, 29: 193-228.
- Kao, L. and A. Chen (2004), "The Effects of Board Characteristics on Earnings Management", *Corporate Ownership and Control*, 1: 96-107.
- Kaplan, S.N. and D. Reishus (1990), "Outside Directorships and Corporate Performance", *Journal of Financial Economics*, 27: 389-410.
- Kinney, W.R. Jr. and R.D. Martin (1994), "Does Auditing Reduce Bias in Financial Reporting? A Review of Audit-Related Adjustment Studies", *Auditing: A Journal of Practice and Theory*, 13: 149-156.
- Klein, A. (1998), "Firm Performance and Board Committee Structure", *Journal of Law and Economics*, 41: 275-299.
- Klein, A. (2002), "Audit Committee, Board of Director Characteristics, and Earnings Management", *Journal of Accounting and Economics*, 33: 375-400.
- Kole, S.R. (1995), "Measuring Managerial Equity Ownership: A Comparison of Sources of Ownership Data", *Journal of Corporate Finance*, 1: 413-435.
- Kothari, S.P., Loutskina, E. and V. Nikolaev (2005), "Agency Theory of Overvalued Equity as an Explanation of the Accrual Anomaly", Working Paper, Massachusetts Institute of Technology.
- Kothari, S.P., Sabino, J.S. and T. Zach (2005), "Performance Matched Discretionary Accrual Measures", *Journal of Accounting and Economics*, 39: 163-197.
- Koumanakos, E., Siriopoulos, C. and A. Georgopoulos (2005), "Firm Acquisitions and Earnings Management: Evidence from Greece", *Managerial Auditing Journal*, 20: 663-768.
- Krishnan, G.V. (2003), "Audit Quality and the Pricing of Discretionary Accruals", *Auditing: A Journal of Practice and Theory*, 22: 109-126.
- Lai, J. and P.S. Sudarsanam (1997), "Corporate Restructuring in Response to Performance Decline: Impact of Ownership, Governance, and Lenders", *European Finance Review*, 1: 197-233.
- Lewellen, W., Loderer, C. and A. Rosenfield (1985), "Merger Decisions and Executive Stock Ownership in Acquiring Firms", *Journal of Accounting and Economics*, 7: 209-231.
- Lipton, M. and J.W. Lorsh (1992), "A Modest Proposal for Improved Corporate Governance", *Business Lawyer*, 48: 59-77.
- Louis, H. (2004), "Earnings Management and the Market Performance of Acquiring Firms", *Journal of Financial Economics*, 74: 121-148.
- MacAvoy, P., Cantor, S., Dana, J. and S. Peck (1983), "ALI Proposals for Increased Control of the Corporation by the Board of Directors: An Economic Analysis", in Statement

- of the Business Roundtable on the American Law Institute's Proposed *Principles of Corporate Governance and Structure: Restatement and Recommendation*, New York: Business Roundtable.
- MacDonald, E. (1997), "More Accounting Firms are Dumping Risky Clients", *Wall Street Journal*, April 25.
- Mace, M. (1986), *Directors: Myth and Reality*, Harvard University, Boston, MA.
- Maddala, G.S. (2001), *Introduction to Econometrics*, 3rd edition, John Wiley & Sons, Engand.
- Marquardt, C.A. and C.I. Wiedman (2004), "How are Earnings Managed: An Examination of Specific Accruals", *Contemporary Accounting Research*, 21: 461-491.
- McConnell, J.J. and H. Servaes (1990), "Additional Evidence on Equity Ownership and Corporate Value", *Journal of Financial Economics*, 27: 595-612.
- McConnell, J.J. and H. Servaes (1995), "Equity Ownership and the Two Faces of Debt", *Journal of Financial Economics*, 39: 131-157.
- Megginson, W.L., Morgan, A. and L. Nail (2000), "Changes in Corporate Focus, Ownership Structure, and Long-Run Merger Returns", Working Paper.
- Mehran, H. (1995), "Executive Compensation Structure, Ownership and Firm Performance", *Journal of Financial Economics*, 38:163-184.
- Morck, R., Shleifer, A. and R.W. Vishny (1988), "Management Ownership and Market Valuation: An Empirical Analysis", *Journal of Financial Economics*, 20: 293-315.
- Nickell, S.J. (1995), *The Performance of Companies*, Blackwell, Oxford.
- North, D.S. and B.T. O'Connell (2002), "Earnings Management and the Mode of Payment in Takeovers", Working Paper, University of Richmond.
- Palia, D. and F. Lichtenberg (1999), "Managerial Ownership and Firm Performance: A Re-examination using Productivity Measurement", *Journal of Corporate Finance*, 5: 323-339.
- Park, Y.W. and H.H. Shin (2004), "Board Composition and Earnings Management in Canada", *Journal of Corporate Finance*, 10: 431-457.
- Patton, A. and J. Baker (1987), "Why do not Directors Rock the Boat?", *Harvard Business Review*, 65: 10-12.
- Peasnell, K.V., Pope, P.F and S. Young (1998), "Outside Directors, Board Effectiveness, and Earnings Management", Working Paper.
- Peasnell, K.V., Pope, P.F and S. Young (1999), "Directors: Who are they?", *Accountancy*, 123 (March): p.106.
- Peasnell, K.V., Pope, P.F and S. Young (2000), "Accrual Management to Meet Earnings Targets: UK Evidence Pre- and Post-Cadbury", *British Accounting Review*, 32: 415-445.
- Peasnell, K.V., Pope, P.F and S. Young (2003), "Managerial Equity Ownership and the Demand for Outside Directors", *European Financial Management*, 9: 231-250.
- Peasnell, K.V., Pope, P.F and S. Young (2005), "Board Monitoring and Earnings Management: Do Outside Directors Influence Abnormal Accruals?", *Journal of Business, Finance and Accounting*, 32: 1311-1346.
- Rahman, R.A. and A.A. Bakar (2002), "Earnings Management and Acquiring Firms Preceding Acquisitions in Malaysia", Working Paper, University Technology Mara.
- Rau, P.R. and T. Vermaelen (1998), "Glamour, Value and the Post-Acquisition Performance of Acquiring Firms", *Journal of Financial Economics*, 49: 223-253.
- Rechner, P.L. and D.R. Dalton (1989), "The Impact of CEO as Board Chairperson on Corporate Performance: Evidence vs. Rhetoric", *Academy of Management Executive*, 3: 141-143.

- Reynolds, J.K. and J.R. Francis (2000), "Does Size Matter? The Influence of Large Clients on Office-Level Auditor Reporting Decisions", *Journal of Accounting and Economics*, 30: 357-400.
- Rhodes-Kropf, M. and S. Viswanathan (2004), "Market Valuation and Merger Waves", *Journal of Finance*, 59: 2685-2718.
- Roe, M.J. (1991), "A Political Theory of American Corporate Finance", *Columbia Law Review*, 91: 10-67.
- Rosenstein, S. and J.G. Wyatt (1990), "Outside Directors, Board Independence, and Shareholder Wealth", *Journal of Financial Economics*, 26: 175-191.
- Schipper, K. (1989), "Commentary in Earnings Management", *Accounting Horizons*, 3: 91-102.
- Shiller, R.J. (2000), *Irrational Exuberance*, Princeton University Press, Princeton, New Jersey.
- Shinn, E.W. (1999), "Returns to Acquiring Firms: The Role of Managerial Ownership, Managerial Wealth, and Outside Owners", *Journal of Economics and Finance*, 23: 78-89.
- Shivakumar, L. (2000), "Do Firms Mislead Investors by Overstating Earnings before Seasoned Equity Offerings?", *Journal of Accounting and Economics*, 29: 339-371.
- Shivdasani, A. and D. Yermack (1999), "CEO Involvement in the Selection of New Board Members: An Empirical Analysis", *Journal of Finance*, 54: 1829-1854.
- Shleifer, A. and R.W. Vishny (2003), "Stock Market Driven Acquisitions", *Journal of Financial Economics*, 70: 295-311.
- Short, H. and K. Keasey (1999), "Managerial Ownership and Performance of Firms: Evidence from the UK", *Journal of Corporate Finance*, 5: 79-101.
- Stulz, R. (1988), "Managerial Control of Voting Rights: Financing Policies and the Market for Corporate Control", *Journal of Financial Economics*, 20: 25-54.
- Subramanyam, K.R. (1996), "The Pricing of Discretionary Accruals", *Journal of Accounting and Economics*, 22: 249-281.
- Sudarsanam, S. (2000), "Corporate Governance, Corporate Control and Takeovers", in Cooper, C. and A. Gregory (eds.), *Advances in Mergers and Acquisitions*, JAI Press, New York, 119-155.
- Teoh, S.H. and T.J. Wong (1993), "Perceived Auditor Quality and the Earnings Response Coefficient", *The Accounting Review*, 68: 346-367.
- United Nations Conference on Trade and Development (UNCTAD), (2000), *World Investment Report 2000*, United Nations Publication, New York and Geneva.
- Wallace, W.A. (1980), *The Economic Role of the Audit in Free and Regulated Markets*, Touche Ross and Company Aid to Education Programme.
- Warfield, T.D., Wild, J.J. and K.L. Wild (1995), "Managerial Ownership, Accounting Choices, and Informativeness of Earnings", *Journal of Accounting and Economics*, 20: 61-92.
- Watts, R. and J.L. Zimmerman (1983), "Agency Problem, Auditing, and the Theory of the Firm: Some Evidence", *Journal of Law and Economics*, 26: 613-633.
- Weir, C. (1997), "Corporate Governance, Performance and Take-overs: An Empirical Analysis of UK Mergers", *Applied Economics*, 29: 1465-1475.
- Weisbach, M. (1988), "Outside Directors and CEO Turnover", *Journal of Financial Economics*, 20: 431-460.
- Xie, B., Davidson III, W.N. and P.J. DaDalt (2003), "Earnings Management and Corporate Governance: The Role of the Board and the Audit Committee", *Journal of Corporate Finance*, 9: 295-316.

- Xie, H. (2001), "The Mispricing of Abnormal Accruals", *The Accounting Review*, 76: 357-373.
- Yermack, D. (1996), "Higher Market Valuation of Companies with a Small Board of Directors", *Journal of Financial Economics*, 40: 185-211.
- Young, S. (1999), "Systematic Measurement Error in the Estimation of Discretionary Accruals: An Evaluation of Alternative Modelling Procedures", *Journal of Business, Finance and Accounting*, 26: 833-862.
- Zajac, E. and J. Westphal (1994), "The Costs and Benefits of Managerial Incentives and Monitoring in Large US Corporations: When is More Not Better?", *Strategic Management Journal*, 15: 121-142.
- Zhang, H. (2002), "Detecting Earnings Management: Evidence from Rounding-up in Reported EPS", Working Paper, University of Illinois at Chicago.

Table 1
Descriptive Statistics

	1997-2004 (N=90)	1997-2000 (N=47)	2000-2004 (N=43)
<i>Accounting-related variables</i>			
Turnover (in £m)	79.30	117.58	34.60
Net Income (in £m)	2.44	9.03	0.51
CFO (in £m)	6.00	17.48	0.79
Total Assets (in £m)	84.00	127.17	66.21
Market Value (in £m)	211.13	315.47	87.28
ROA (%)	8.90	11.65	4.31
Revenue Growth (%)	20.11	22.12	18.33
P/B ratio	3.76	3.76	3.83
Overvaluation (%)	34.32	28.09	38.63
<i>Deal-related variables</i>			
Deal Value (in £m)	43.45	62.00	29.00
Relative Size	0.41	0.48	0.38
Premium (%)	29.50	27.25	32.85
Days to announcement	166.00	171.00	155.00
Days to completion	63.00	65.00	57.00
Cross-border deals	22	12	10
Domestic deals	68	35	33
Industry-related deals	68	35	33
Conglomerate deals	22	12	10
Hostile deals	5	4	1
Contested deals	6	3	3
Public Targets	68	39	29
Private Targets	22	8	14
<i>Governance-related variables</i>			
BOARDSIZE	9.00		
NED (%)	50.00		
EDOWN (%)	0.15		
NEDOWN (%)	0.03		
DUALITY (%)	9.52		
BIG4_AUDITOR (%)	88.10		

The reported figures represent the median values for the corresponding variables. All accounting variables are computed as at the end of the financial year immediately preceding the announcement of a deal. *Turnover*, *Net Income*, *CFO*, *Total Assets* and *Market Value* are the acquirers' net sales (WC01001), net income before extraordinary items (WC01551), cash flow from operations (WC04860), total assets (WC02999) and market capitalisation (MV) respectively. *Return on Assets* (ROA) is computed as Earnings Before Interest and Tax (WC18191) over the average of opening and closing Total Assets (WC02999). *Revenue growth* is the percentage change in net sales (WC01001). *P/B* is the Price-to-Book ratio, defined as the market value (MV) of common equity of the acquirer over the book value of common equity (WC03501). *Overvaluation* is measured relatively to each sample firm's industry Price-to-Book ratio, as in Ang and Cheng (2006). *Deal value* is the total consideration paid for the target company. *Relative size* is defined as the total consideration value over the acquirer's market value at the end of the month immediately preceding the announcement of the deal. *Premium* is the percentage premium paid by the acquirer with respect to the target's share price four weeks before the deal announcement (it applies to public targets only). *Days to announcement* measures the time lapse between the most recent annual report release date and the offer announcement date. *Days to completion* measures the time lapse between the announcement date and the completion date of a bid (i.e. the date when an offer is declared unconditional). A *cross-border deal* (as opposed to a domestic deal) is one where the target is a foreign company (either publicly traded or privately owned). An *industry-related or horizontal deal* (as opposed to a conglomerate or diversifying deal) is one where the acquirer and the target have the same two-digit SIC code. A *hostile deal* (as opposed to a friendly deal) is one where the target company opposes the acquirer's approach. A *contested deal* is one where a rival bidder is involved in the process of the negotiations. *BOARDSIZE* is the total number of directors (both executive and non-executive) on the board. *NED (%)* is the percentage of non-executive directors on the board. *EDOWN %* (similarly *NEDOWN %*) is the percentage of outstanding ordinary shares owned by executive directors (similarly non-executive directors) the year before the merger announcement. *DUALITY (%)* represents the percentage of firms where the CEO also acts as the Chairman of the board. *BIG4_AUDITOR (%)* represents the percentage of firms audited by a Big 4 auditor .

Table 2
Acquirers' Discretionary Accruals in the Year Preceding the Bid Announcement

The table reports discretionary working capital accruals, a proxy for the acquirers' earnings management behaviour in the year immediately preceding the announcement of a deal, estimated from the modified-Jones model. Significant results are marked in bold and the corresponding *p*-values are given in parenthesis; ***, ** and * indicate 1%, 5% and 10% level of significance respectively. Parametric (*t*-test for the means) and non-parametric (Wilcoxon signed-ranks test for the medians) tests are reported. Tests for the differences are based on Mann-Whitney non-parametric tests.

Panel A: Sample period 1997-2004

	Share Acquirers (<i>N</i> =90)	Non-acquirers (<i>N</i> =90)	Share vs. Non-Acquirers
Mean	0.0250** (0.0175)	0.0023 (0.4059)	0.0227* (0.0663)
Median	0.0266*** (0.0021)	-0.0009 (0.3760)	0.0275 (0.1085)

Panel B: Sample period 1997-2000

	Share Acquirers (<i>N</i> =47)	Non-acquirers (<i>N</i> =47)	Share vs. Non-Acquirers
Mean	0.0351*** (0.0028)	0.0105 (0.2109)	0.0246* (0.0844)
Median	0.0318*** (0.0000)	0.0041 (0.5000)	0.0277* (0.0592)

Panel C: Sample period 2000-2004

	Share Acquirers (<i>N</i> =43)	Non-acquirers (<i>N</i> =43)	Share vs. Non-Acquirers
Mean	0.0139 (0.2509)	-0.0067 (0.3156)	0.0206 (0.2040)
Median	-0.0076 (0.5000)	-0.0111 (0.2712)	0.0035 (0.6690)

Panel D: Comparison between sample sub-periods (1997-2000 vs. 2000-2004)

	Share Acquirers (<i>N</i> =43)	Non-acquirers (<i>N</i> =43)
Mean	0.0212 (0.1893)	0.0172 (0.1837)
Median	0.0394* (0.0698)	0.0152 (0.5718)

Table 3
OLS Regressions of Abnormal Accruals on
Corporate Governance, Audit, and Deal Characteristics

	Predicted Sign	Model A	Model B	Model C
Intercept	?	0.0016 (0.973)	-0.0310 (0.675)	-0.0924 (0.230)
<i>AR</i>	+	0.0350*** (0.001)	0.0367*** (0.002)	0.0321*** (0.005)
<i>DR</i>	+	-0.0468*** (0.008)	-0.0521*** (0.007)	-0.0427** (0.020)
<i>4W-PREM</i>	?	0.0002 (0.311)	0.0004* (0.089)	0.0002 (0.424)
<i>RIVALBID</i>	?	-0.2027*** (0.007)	-0.2117*** (0.010)	-0.2482*** (0.003)
<i>4W-PREM*RIVALBID</i>	?	0.0059*** (0.000)	0.0062*** (0.000)	0.0066*** (0.000)
<i>INDR</i>	?	0.0066 (0.726)	0.0078 (0.730)	0.0052 (0.807)
<i>CB</i>	?	0.0103 (0.597)	0.0062 (0.775)	0.0223 (0.312)
<i>BTMRATIO</i>	-	-0.0556** (0.036)	-0.0507* (0.078)	-0.0450* (0.096)
<i>EDOWN</i>	?	-0.0013 (0.327)		
<i>HLEDOWN</i>	?		0.0237 (0.312)	0.1723** (0.036)
<i>NEDOWN</i>	-	-0.0040* (0.061)		
<i>HLNEDOWN</i>	-		-0.0150 (0.502)	-0.0046 (0.829)
<i>BOARDSIZE</i>	+	-0.0027 (0.452)	0.0009 (0.853)	-0.0006 (0.884)
<i>DUAL</i>	+	0.1031** (0.048)	0.0183 (0.644)	0.0301 (0.425)
<i>NED%</i>	-	0.0018** (0.023)	0.0014* (0.073)	0.0027*** (0.010)
<i>HLEDOWN*NED%</i>	-			-0.0030* (0.057)
<i>AUD</i>	-	-0.0109 (0.595)	-0.0074 (0.826)	-0.0021 (0.947)
R-sq.		0.8101	0.7765	0.8142
Adj. R-sq.		0.6836	0.6275	0.6749

p-values are given in parenthesis

*** denotes significance at the 1% level

** denotes significance at the 5% level

* denotes significance at the 10% level

Variable definitions are as follows:

IDAI is the absolute value of discretionary accruals recorded in the year immediately prior to the merger announcement

AR is the asset ratio, defined as the ratio of the target's total assets (*WC02999*) over the acquirer's total assets (both measured at book value), the year before the merger announcement

DR is the deal ratio, defined as the ratio of the total consideration paid for the target over the market value (*MV*) of the acquiring company, the year before the merger announcement

4W-PREM is the percentage premium paid by the acquirer with respect to the target's share price four weeks before the merger announcement

RIVALBID is a dummy variable for whether the bid is being contested, taking the value 1 when a rival bidder is involved in the deal process and zero otherwise

INDR is a dummy variable for industry relatedness, taking the value 1 when the acquirer and the target have the same two-digit SIC Code and zero otherwise

CB is a dummy variable taking the value 1 if the takeover is a cross-border one (i.e. when the target is a foreign company, publicly traded or privately owned) and zero otherwise (i.e. when the target is a UK company, publicly traded or privately owned)

BTMRATIO is the book-to-market ratio of the acquirer, defined as the book value of common equity (*WC03501*) over its corresponding market value (*MV*), the year before the merger announcement

EDOWN% (similarly *NEDOWN%*) is the percentage of outstanding ordinary shares owned by executive directors (similarly non-executive directors) the year before the merger announcement

HLEDOWN (similarly *HLNEDOWN*) is a dummy variable taking the value 1 when executive shareholding (similarly non-executive shareholding) is above the sample median and zero if it is below

BOARDSIZE is the total number of directors (both executive and non-executive) on the board

DUAL is a dummy variable taking the value 1 when the CEO also acts as the Chairman of the board and zero otherwise

NED% is the percentage of non-executive directors on the board

AUD is a dummy variable taking the value 1 if the sample firm is audited by a Big 4 auditor and zero otherwise