

# **MANAGEMENT BUYOUTS, FAMILY SUCCESSION AND IMPACT ON EARNINGS MANAGEMENT**

Lokman Tutuncu

Bulent Ecevit University, Turkey

## **Abstract**

In a unique sample of 227 UK private firms, we investigate earnings management practices in family and non-family firms preceding management buyouts (MBO). We find no evidence of earnings management in private family owned firms whilst significant income-increasing earnings management is reported in non-family firms prior to buyout transaction. The results related to family firms are consistent with a family succession scenario where long-run value of the firm, rather than personal gains is cared for in the MBO process. Absent such family culture and succession, exiting managers in non-family firms opportunistically overstate earnings to obtain greater personal gains. The findings remain robust to the performance adjustment and choice of accruals.

**Keywords:** Management buyout, earnings management, family firm, family succession.

**JEL Classification:** G23, G34, M41.

# MANAGEMENT BUYOUTS, FAMILY SUCCESSION AND IMPACT ON EARNINGS MANAGEMENT

## 1. Introduction

Prior research has investigated earnings management in public to private buyouts (Perry and Williams, 1994; Mao and Renneboog, 2013) and in publicly listed family firms (Achleitner et al., 2014). This study explores earnings management practices preceding MBOs of non-listed firms. Although non-listed firms constitute the majority of MBOs worldwide (Stromberg, 2008) and family firms represent an important source for these deals (Howorth et al., 2004; Scholes et al., 2008); disproportionate emphasis has been given to MBOs of listed firms in the prior literature and evidence on private and family businesses is limited. In this study, special attention is paid to non-listed family and non-family owned firms, whose managers, in MBO context, have varying motivations to engage in or refrain from earnings management. Analysis of earnings management behaviour in family and non-family owned MBO setting provides an ideal environment to observe managerial deviations from the so-called fiduciary duties and moral hazard problems pointed in the prior MBO research.

On the other hand, a growing body of literature investigates earnings management in listed family firms (Wang, 2006; Prencipe et al., 2008; Tong, 2008; Achleitner et al., 2014) and private family firms (Stockmans et al., 2010). These studies, however, investigate financial reporting in a conventional family setting that lack the unique managerial motivations and agency conflicts induced by initiation of MBO process. The moral hazard described in the past MBO research involves incumbent managers of listed firms expropriating shareholders by exploiting their decision-making powers and dispersed ownership structure of the firm (Perry and Williams, 1994). The manager-owner relation is, however, more complicated and sometimes works in reverse as far as MBOs of private firms and private family firms are concerned. Private firms characteristically have concentrated ownership and consequently, blurred manager-owner responsibilities. More importantly, the selling owner-managers or family members often possess control powers to manipulate earnings upwards to the detriment of MBO team. This contrasts with MBOs of listed firms, where managers who are part of the MBO team have powers and opportunistic incentives to understate earnings. An examination of non-listed MBOs therefore provides an opportunity to shed light on an important but still unanswered question as to whether/why private firms in general, and private family firms in particular, engage in earnings management prior to MBO. For many private firms, financial statements are the only source of public information. A better

understanding of the quality of this information is therefore important for investors in private equity, creditors, and regulators.

This study aims to investigate moral hazard in this special private family MBO context and explore the impact of family succession on incentives to manage earnings. Previous research on earnings management presents evidence for privately owned firms but do not make any distinction or comparison between family and non-family owned private firms (e.g. Burgstahler et al., 2006).<sup>1</sup> Although private family firms represent the majority of firms worldwide (IFERA, 2003), we still know very little about the family firms' accounting practices (Hutton, 2007; Salvato and Moores, 2010). The empirical evidence on earnings management in family firms comes almost exclusively from public family firms, and is inconclusive.<sup>2</sup> Notably, the literature on public family firms proxies for the 'family' nature of sample firms by the degree of ownership concentration or the presence of block holders thus implicitly assuming that these concentrated owners will be members of the founding or controlling family which often is not the case. In this study, we capture the essence of family firms by applying much stricter definition for family firms thus capturing families' representation on the boards and families' socioemotional potential.

The findings of the study show considerable heterogeneity with respect to the existence as well as direction of earnings management in private firms. We find no evidence of earnings management in private family owned firms prior to MBO. In non-family firms, however, we report statistically significant income-increasing earnings management preceding MBO transactions. The findings of the study counter existing research that show MBOs are preceded by income-decreasing earnings management. The results underline heterogeneous nature of buyouts and positive impact of family succession on wealth motivated moral hazard induced by MBO, while urging caution against drawing general conclusions about MBOs based on evidence from listed firms alone.

Our study makes two contributions to the existing body of research. First, we add to the buyout literature by providing the first analysis of earnings management in MBOs of non-listed firms. Second, we contribute to the private firm and family literature by providing the

---

<sup>1</sup> Authors however conjecture that the incentives to hide true firm performance are likely to be particularly strong in family-owned private firms (Burgstahler et al., 2006; p.987).

<sup>2</sup> For example, evidence presented in Cheng et al., 2008; Warfield et al. 1995; Ali et al., 2007; Hutton, 2007; tend to highlight positive effect of concentrated ownership resulting in less earnings management. Gabrielsen et al. (2002) and Cheng and Warfield (2005) on the other hand highlight management entrenchment leading to more earnings management.

first analysis of earnings management related to a major corporate event where event-specific incentives to manage earnings are in place (i.e. acquisition via buyout).<sup>3</sup>

The rest of the paper is organised as follows. In section 2, we review the literature and develop hypotheses. Section 3 describes our data and discusses methodology. Section 4 presents the results. Section 5 concludes.

## **2. Literature and hypotheses development**

Managers in public companies manage earnings in order to influence information available to investors and/or financial intermediaries, to avoid violation of contractual terms and to influence the information set of third parties (Walker, 2013).<sup>4</sup> Private companies are often considered to have less agency conflicts, monitoring and regulatory pressures compared to public corporations (Fama and Jensen, 1983). Evidence from European private firms, however, consistently shows the presence of earnings management in private companies (Coppens and Peek 2005, Burgstahler et al. 2006). Coppens and Peek (2005) argue that managers in private companies tend to adjust their standing to the particular legal system and market to exercise discretion over accounting practices. Burgstahler et al. (2006) present evidence that private firms exhibit more severe earnings management than public firms. Authors argue that, due to more concentrated ownership, privately held firms can efficiently communicate among shareholders via private channels. Consequently financial statements and reported earnings play a less important role in communicating firm performance. Private firms have therefore relatively fewer incentives to report informative earnings and may even have incentives to obfuscate firm performance because the EU requires them to file financial statements to the corporate registrar. None of the previous studies however examined and compared earnings management practices in different types of privately-owned firms.<sup>5</sup>

---

<sup>3</sup> Previous literature on private companies focused on analysis of institutional settings across different markets (Coppens and Peek 2005, Burgstahler et al. 2006). To the best of our knowledge there were no separate examinations of earnings management surrounding specific corporate events in private companies.

<sup>4</sup> For example, the previous empirical evidence shows that managers have incentive to manage earnings upward to achieve targets (Gore et al. 2007, Daske et al. 2006). More recent UK evidence reports that some firms use classification choices (Athanasakou et al. 2009) and/or earnings guidance (Athanasakou et al., 2011) to meet or beat the consensus forecasts. Other documented motives for earnings management are managers' personal benefits related to bonus schemes (Healy and Wahlen, 1999) and improved valuation prior to IPOs (Teoh et al., 1998). Finally, the empirical studies of the third parties' (e.g. customers, regulatory bodies, competitors, etc.) motives tend to report downward earnings management (Walker, 2013).

<sup>5</sup> The entrepreneurship literature emphasise the need for studies on agency conflicts during private firm family successions (Howorth et al. 2004; Scholes et al. 2008) and the need for comparative studies on earnings management in family and non-family firms (Salvatore and Moore, 2010).

## **2.2 Earnings management in private non-family firms**

In addition to other incentives common to managers in all private and public companies, MBO transactions provide managers with strong incentives to adjust earnings due to potential post-transaction gains.<sup>6</sup> In the US, one of the main drivers of earnings management prior to public to private buyouts is the disappearance of detection fear resulting from regulatory cover for the newly private firm in the post buyout period (Perry and Williams, 1994). Unlike in the US, European MBOs do not operate under financial information blackout and regulatory cover after buyout transaction. EU regulations still require private firms to report audited financial statements, which are publicly accessible, in private (i.e. buyout) stage. Since our sample companies do not undergo a change in their reporting requirements after buyout, a considerable reduction in managers' personal wealth motivations is expected.

On the other hand, manager-on-manager conflicts, rather than financial reporting can play an important role in shaping the incentives for earnings management prior to MBO deal. Specifically, earnings can be overstated by outgoing managers before MBO transaction since they cease involvement in the firm following buyout and do not bear the future costs of accrual reversals (Mao and Renneboog, 2013). In private firms, incentives to overstate earnings might be even stronger if the outgoing managers hold large chunks of shares and sell them through buyout. Kaplan (1989) finds that a large number of managers who are not part of the MBO team sell their shares in the MBO. These managers are likely to have incentives and powers to inflate earnings to obtain a higher profit. Demsetz and Lehn (1985) argue that large shareholders (i.e. owner/managers) are able to monitor management more effectively and prevent managerial expropriation in firms where ownership and control is not separated. In contrast, ability of MBO team to understate earnings is likely to be constrained due to strict monitoring by outgoing owner/managers. Therefore, an upwards earnings management can be projected in private firms prior to MBO deal.

A key difference between MBOs of public and private companies is that it is the outgoing owner/managers of private companies who are likely to be motivated to manage earnings whereas in public companies it is the incoming owner/managers who tend to manage earnings. Owners of public firms often do not have the controlling powers to influence accounting decisions, thus they are exposed to expropriation by opportunistic managerial

---

<sup>6</sup> Indeed, the collective evidence from US and UK public to private MBOs conclusively shows downward earnings management (Perry and Williams, 1994; Wu, 1997; Fischer and Louis, 2008; Mao and Renneboog, 2013).

behaviour. However owner/managers in non-listed firms can actively influence vital decisions and accounting practices. These selling owner/managers would be sufficiently powerful and motivated to overstate earnings at the expense of buying managers in the MBO team, since the resulting deal price will directly influence their wealth. Thus, we conjecture that managers in UK private firms systematically overstate earnings prior to MBO.

Thus, we test the following hypothesis:

*H1: Managers in private companies overstate earnings prior to MBO transaction.*

## **2.2 Earnings management in private family firms**

The private firm research emphasises that altruism between family members (Eisenhardt, 1989), while reducing agency conflicts, can lead to pursuit of non-economic objectives in family firms (Chrisman et al., 2004; Stockmans et al., 2010) creating family-on-family conflicts which are harder to resolve due to family members reluctance to put pressure on other members (Schulze et al., 2001). These unique conflicts are often associated with poorer performance for family firms (Demsetz and Villalonga, 2001; Che and Langli, 2014) and willingness to manage earnings upwards (Stockmans et al., 2010). On the other hand, the agency conflicts in private firms might be manifested in the form of an attempt by entrenched large shareholders to expropriate minority shareholders (Chrisman et al., 2004; Salvato and Moores, 2010). In both cases, the underlying assumption is that the family or large shareholder strives for its survival. Private family firms, however, are less likely to witness expropriation of minority shareholders by family since family wealth itself is dependent on firm wealth (Schulze et al., 2001). Moreover, in the context of MBO by which the dominant shareholders effectively terminate their ownership, stakeholders are less likely to suffer from intra-family conflicts or from expropriation attempts by large shareholders. Expropriation theory implicitly assumes that minority shareholder wealth is sufficiently large to deserve expropriation. Private family firms are, however, typically strictly owned by family members and minority shareholding is small (Ansari et al., 2014).<sup>7</sup> Thus controlling family is unlikely to risk a clash with minority shareholders in return for small private benefits. This explanation is more likely to be valid in public firms where family firm ownership is more

---

<sup>7</sup> Descriptive statistics report that the median non-family shareholding in our sample family firms is a small 6%.

loosely defined than in private firms.<sup>8</sup> Therefore the emphasis should be given to the relationship between managers and outgoing owner/managers.

The stewardship theory (Davis et al., 1997) is an ideal starting point to explore relations between managers and family owners (Corbetta and Salvato, 2004). It posits that family members identify with the organisation and this identification process can be internalised by the selected managers who hold close relationships with the owners. Lansberg (1983) reports that family firms often select and appoint non-family managers based on the personal connections between controlling family and individuals. As a result, managers and owners form a trust-based relationship driven by more than economic goals (Chrisman et al., 2004; Howorth et al., 2004; Stockmans et al., 2010). In this type of governance structure, both managers and owners are likely to forego their private rents for the benefit of the entire family organisation.

On the other hand, family succession is an important motivator and source of MBO deals in private companies. Burkart et al. (2003) emphasise that family succession issues are crucial to the family firm governance and survival. In the absence of a suitable family member to succeed the retiring generation (Wright et al., 1992), families might consider transferring control to a trusted management team through an MBO (Howorth et al., 2004; Scholes et al., 2008). Family identity and reputation concerns play a vital role in the succession decisions. An MBO succession route is often preferred for the preservation of business, family identity and reputation (Westhead, 1997; Howorth et al., 2004). Family firms gain economic and non-economic benefits from their reputation in their dealings with third parties, suppliers and lenders. For example, families with a long history in the business can enjoy more favourable debt financing terms compared to non-family firms (Anderson et al., 2002). Since transfer of the family business to an outsider would reduce the private benefits of family control (Burkart et al., 2003), families seek to sustain and capitalise on their reputation built over a long time. Therefore family successions constitute a sizeable portion of MBO transactions. Scholes et al. (2008) report that 20% of MBOs in Europe results from takeover of family businesses. Although information asymmetries still exist between management team and

---

<sup>8</sup> See Ansari et al. (2014) for a measure of minority shareholder expropriation in listed family controlled firms.

family during MBO negotiations (Howorth et al., 2004), the opportunistic incentives to manage earnings are expected to be minimal in these deals.<sup>9</sup>

Thus, we test the following hypothesis for the subsample of family firms:

*H<sub>2</sub>: Managers of private family firms do not manage earnings prior to MBO.*

### **3. Data and methodology**

#### **3.1 Sample selection and data issues**

This study comprises buyouts completed between 2004 and 2012 in the UK. Data for buyout transactions are collected from Thomson One Banker (TOB) database. TOB also provides deal announcement and completion dates, firm industry and SIC codes, deal value, and deal synopsis that gives information on bidders, presence of PE investor and the source of buyout transaction. Accounting data required for earnings management estimations collected from financial statements obtained from Fame database, the database with largest coverage of UK private companies. The annual return filings were also used to obtain surnames and addresses of shareholders and managers in order to identify family members (i.e. blood relations).

Management buyout deals are selected based on the following general criteria: Acquisition target must be a private company registered in the UK, transaction must be led by an incumbent management team –hence MBO- and the selected companies must have the necessary accounting data to estimate earnings management prior to buyout transaction. Our search resulted in 860 MBOs. Secondary management buyouts (SMBO), former subsidiaries, and public to private buyouts were excluded from the sample.<sup>10</sup> In line with Perry and Williams (1994), we also dropped buyouts originated from liquidations (i.e. formerly bankrupt targets). Those troubled firms are likely to have limited ability for earnings management due to strict monitoring prior to MBOs. Finally, we excluded MBOs involving financial firms.

Our sample includes a large number of small and medium sized companies which are allowed to report modified or abridged accounts. Companies classified as small do not have to file

---

<sup>9</sup> For example, MBO team of Mansfield Pollard & Co Limited “express their gratitude to the controlling family for their 40 years of service” and stress the sustenance family culture in the annual account. Another family firm Raymond Brown Limited initiated succession plans three years before MBO. The senior management team involved in the MBO had, on average, 14 years of service with Raymond Brown.

<sup>10</sup> SMBOs are complex deals and very different from primary buyout transactions (Zhou et al. 2013, Achleitner and Figge 2012). Former subsidiaries (i.e. divestments and spin-offs) are dropped as their managers need to follow a parental accounting policies and are less independent in corporate decision-making.



income statement while companies classified as medium do not need to state their sales figure. These reporting exemptions introduce data intermittence across years and consequently a significant data loss to our sample since we need items from both balance sheet and income statement for any of the 2 years before buyout.<sup>11</sup> After eliminating companies with missing accounting, governance and detailed ownership data, we were left with 227 sample MBOs. Table 1 presents the distribution of sample buyouts and their family status across years.

[Insert Table 1 about here]

Our sample is larger than any of samples used in previous related studies and it is a good representative of the population of UK private to private buyouts (Panel A). For example, the sample comprises 26% of the entire UK MBO population (including public to private MBOs), during the sample period.<sup>12</sup> The number of our sample buyouts which disclosed deal value comprises about 60% of the number of UK buyouts with disclosed deal value, during the sample period.<sup>13</sup> Around 31% of our sample buyouts are family-owned with (as expected) extremely high ownership concentration (mean value of 88%) (Panel B). The average percentage of shares owned by a lead family owner (LFO) is also high (74%).<sup>14</sup>

### **3.2 Definition of family business**

Family business literature defines a family firm in a variety of ways depending on the market and research question. While a wide range of family definitions exist in the literature, there are certain points that are agreed upon by most researchers. Chua et al. (1999) and Miller et al. (2007) review the definitions of family firms and conclude that a family firm is typically defined as a business owned and managed by multiple family members. Three combinations of family ownership and management patterns are described by Chua et al. (1999). Some researchers consider a firm family business if owned and managed by family while others see

---

<sup>11</sup> The minimum of 2 years' historical data is required to calculate changes in accruals and perform the cross-sectional models for detection of earnings management.

<sup>12</sup> If we exclude public to private buyouts our sample coverage is well above 30%.

<sup>13</sup> One third of our final sample firms have disclosed deal value. Similar data issues are reported for other commercially available buyout databases (e.g. SDC M&A, Capital IQ, etc). For example Stromberg (2008) reports that Capital IQ database is missing data on buy-out value in 58% of cases. For more on discussion on data issues in buyout literature see Jelic and Wright (2011).

<sup>14</sup> Unreported results suggest 100% of family ownership in 26 sample firms. In 30 family firms, LFO holds more than 50% of shares. LFOs sit on the boards in 29 out of 30 cases.

it sufficient to have family involvement in either ownership or management alone. Differences also arise as to how much ownership is required to consider a firm as family owned and what exactly qualifies a firm as family controlled. Notably, different family definitions with varying degrees of family ownership and managerial involvement are adopted in private and public firms. In publicly listed firms, where dispersed ownership is more pronounced than privately held firms it is a common practice to consider less than 50% family ownership sufficient to qualify as family business provided that the founder is still in the management team, CEO or top members of management are family members (Anderson and Reeb, 2003; Gomez-Mejia et al., 2003; Ali et al., 2007; Achleitner et al., 2014). In this definition, family control is exerted through strategic managerial positions even though only a minority of shares is held by family. Other researchers consider controlling majority voting rights as a means to assume family control over firm (Barontini and Caprio, 2006). On the other hand, in private firms a family network is often required to hold majority ownership to qualify as family business without necessarily family involvement in management (Westhead and Howorth, 2006; Scholes et al., 2008; Stockmans et al., 2010).

Based on the prior literature and our research question, we adopt a strict, at the same time inclusive family definition for our private firm sample. The following conditions are imposed to qualify a firm as family business: i) more than 50% of ordinary shares are held by multiple individuals who are linked by blood or marriage, ii) at least one member of family serves on board of directors. Firms which explicitly report to be family business in company annual accounts are also classified as family firms.<sup>1516</sup> Our definition captures families' controlling role not only in term of concentrated ownership but also in management of the family firms (i.e. the family representation on the boards). Furthermore, we capture the amenity (i.e. socioemotional) potential of family firms by the firms' explicit acknowledgement in annual reports that they see themselves as a family firm. We believe that our criteria regarding the family status relate closely to families' amenity potential.

---

<sup>15</sup> Our definition is consistent with Wilson et al. (2013) for UK family firms. Our definition is however different from prior earnings management studies by Prencipe et al. (2008) and Stockmans et al. (2010), which do not require family members to hold managerial positions to qualify as family business.

<sup>16</sup> In unreported tests, we also conduct tests excluding firms that explicitly acknowledged to be a family business but do not meet these two conditions and find consistent results.

### 3.3 Accruals measurement and descriptive statistics

We follow the balance sheet approach where total accruals are computed as non-cash working capital minus depreciation expense.<sup>17</sup> This definition is the same as in Perry and Williams (1994), Dechow et al. (1995) and Burgstahler et al. (2006). We also compute discretionary working capital accruals since some studies suggest that current accruals are more relevant when measuring year-to-year discretion and at the time of major corporate events (e.g. Jones, 1991; Teoh et al., 1998).<sup>18</sup>

Table 2 provides descriptive statistics for sample family and non-family companies with respect to changes in total accruals, working capital accruals, sales and earnings. The variables are obtained as first differences scaled by lagged total assets. The changes in total accruals and working capital accruals are generally small in the years prior to MBO year. The results suggest absence of significant changes until the first year before buyout. The majority of firms have small and negative changes in total accruals two years prior to buyouts. These negative changes in year -2 transform into predominantly positive and significant changes in year -1, which is the year of earnings management. Breakdown of sample into family and non-family MBOs reveals that changes in accruals remain small and insignificant for family firms, while substantial significant increases are recorded for non-family firms. Summary statistics suggest significant differences in the accounting practices of family and non-family firms in the year preceding MBO. We do not, however, interpret these positive changes a sign of upward earnings management due to repeated cautions in the literature that changes in earnings and total accruals may represent other underlying forces.<sup>19</sup>

[Insert Table 2 about here]

Table 3 reports summary characteristics of sample MBO firms in the earnings management year. Family and non-family firms share similar proportions of size and growth prior to MBO transaction. The profitability metric ROA is, however, significantly higher in non-family firms relative to family firms. Since the performance difference between family and non-

---

<sup>17</sup> Total accruals are computed as follows (Fame data items are indicated in parentheses):  $Total\ Accruals_t = [\Delta Current\ Assets_t (48) - \Delta Cash_t (42)] - [\Delta Current\ Liabilities_t (66) - \Delta Short\ term\ debt_t (52)] - Depreciation_t (21)$ . Items displayed by Fame with a negative sign (e.g. current liabilities and short term debt) are multiplied by -1 prior to calculating total accruals.

<sup>18</sup> Working capital accruals are computed as follows (Fame data items are indicated in parentheses):  $Working\ Capital\ Accruals_t = [\Delta Current\ Assets_t (48) - \Delta Cash_t (42)] - [\Delta Current\ Liabilities_t (66) - \Delta Short\ term\ debt_t (52)]$ .

<sup>19</sup> Accruals changes are used as discretionary accruals model in DeAngelo (1986), resting on the assumption that past discretionary accruals equal to zero absent earnings management motives. This model, however, suffers from several issues and likely to result in misleading conclusions, as noted by Perry and Williams (1994) and Defond and Jiambalvo (1994).

family firms could be related to buyout event and might have implications for earnings management, a performance adjustment is applied to accruals models to correct potential misspecifications.

[Insert Table 3 about here]

### **3.4 Methodology**

#### **3.4.1 Control firms and estimation portfolios**

A control sample is created by matching each MBO firm on industry and year with private non-buyout firms. The non-buyout private firm sample is collected from Fame as 160,000 active and inactive UK companies with available data. From this population, we construct groups of firms in the same year and 2-digit SIC code, which are called industry/year portfolios or estimation portfolios to estimate parameters of discretionary accruals models. Our matching procedure relies on the standard assumptions that firms in the same sector/groups are subject to similar economic and market forces. One drawback of such method is noted by McNichols (2000) who argues that firms are more likely to manage earnings if their competitors engage in such practice. In our private firm case, however, the flow of information among market players is weaker than in public markets, which makes detecting and mimicking a particular behaviour more difficult. Our industry portfolios also contain considerably large number of firms, with a mean of 1,288 and median of 665 firms in each portfolio.<sup>20</sup> Hypothesising a homogenous mimicking behaviour for so many firms would not be a realistic assumption. Finally our buyout firm managers have distinct incentives for earnings management stemming from the occurrence of the buyouts, a major event that other private firm managers do not face.

#### **3.4.2 Model selection**

We employ three cross-sectional models to identify earnings management: i) Total Accruals Model (TA); ii) Working Capital Accruals Model (WCA); and iii) Performance Adjusted Accruals Model (PAA). First two models are variants of Jones (1991) time series regressions. Third model is based on Kothari et al. (2005) and is especially useful to correct model misspecification when the sample tested has extreme performance.

---

<sup>20</sup> Descriptive statistics for estimation portfolios are presented in Annex 1.

All three models use a measure of aggregate accruals as dependent variable and explanatory variables to estimate model parameters. The models then require partition of total accruals into discretionary and non-discretionary portions and estimating the unobservable discretionary accruals based on expected value of non-discretionary part. Recently there has been increasing use of models that examine specific accruals or statistical properties of earnings distributions to detect manipulative behaviour, both of which make a number of assumptions and impose different data requirements that constrain their area of application. As discussed in McNichols (2000), specific accruals models have a particular emphasis on unique industry settings where a single accrual is judged to be vulnerable to manipulation due to industry-specific circumstances. On the contrary, our study does not have a particular interest in a single accrual or industry, rather it incorporates different industries measured by 2-digit SIC code. The strict data requirements would also make application of this approach impossible in our private firm setting. Distributional approaches (e.g. Burgstahler and Dichev, 1997) examine frequency and statistical properties of earnings around manipulative event. Although these models do not require many data items, their use in MBO context will be flawed since substantial restructuring is carried out following buyout. In addition, managers might continue to manage earnings after buyout. Therefore, post-buyout earnings may not represent the real performance and may not contain as much information as we would like. In the light of these concerns related to specific accruals and distributional approaches, our choice of cross-sectional discretionary accruals models is justified.

i) Total Accruals Model (TA)

In this model, total accruals are a function of inverse lagged assets, revenues and tangible assets.

$$\frac{TA_{ij}}{Assets_{ij}} = \beta_{1j} \left( \frac{1}{Assets_{ij}} \right) + \beta_{2j} \left( \frac{\Delta REV_{ij}}{Assets_{ij}} \right) + \beta_{3j} \left( \frac{PPE_{ij}}{Assets_{ij}} \right) + \varepsilon_{ij} \quad (1)$$

where  $TA_{ij}$  = total accruals for estimation portfolio firm  $i$  matched with buyout firm  $j$ ;  $\Delta REV_{ij}$  = changes in turnover for estimation portfolio firm  $i$  matched with buyout firm  $j$ ;  $PPE_{ij}$  = tangible assets for estimation portfolio firm  $i$  matched with buyout firm  $j$ ;  $\varepsilon_{ij}$  = error term for estimation portfolio  $i$  matched with buyout firm  $j$ ;  $i = 1, \dots, I$ , estimation portfolio firm index;  $j = 1, \dots, 227$ , buyout firm index.

All variables in the regression are scaled by lagged total assets. The parameters of the model are estimated with OLS regressions and obtained coefficients are used to compute discretionary accruals for buyout firm  $j$ . Discretionary total accruals are obtained as actual total accruals minus computed (non-discretionary) total accruals:

$$DA_j = \frac{TA_j}{Assets_j} - \left[ \beta_{1j} \left( \frac{1}{Assets_j} \right) + \beta_{2j} \left( \frac{\Delta REV_j}{Assets_j} \right) + \beta_{3j} \left( \frac{PPE_j}{Assets_j} \right) \right] \quad (2)$$

where  $DA_j$  = discretionary accruals, or prediction error for buyout firm  $j$ ;  $TA_j$  = total accruals for buyout firm  $j$ ;  $1/Assets_j$  is the inverse value of lagged total assets for buyout firm  $j$ ;  $\Delta REV_j$  = changes in turnover for MBO firm  $j$ ;  $PPE_j$  = tangible assets for buyout firm  $j$ ; and  $\beta_{1j}$ ,  $\beta_{2j}$ ,  $\beta_{3j}$  are estimated parameters obtained from model (1).

ii) Working Capital Accruals Model (WCA)

We also estimate cross-sectional regressions with working capital accruals (WCA) to examine the management of short term accruals. The model used to estimate WCA model parameters is as follows:

$$\frac{WCA_j}{Assets_j} = \beta_{1j} \left( \frac{1}{Assets_j} \right) + \beta_{2j} \left( \frac{\Delta REV_j}{Assets_j} \right) + \varepsilon_j \quad (3)$$

Discretionary accruals are obtained as actual working capital accruals minus estimated (non-discretionary) working capital accruals:

$$DA_j = \frac{WCA_j}{Assets_j} - \left[ \beta_{1j} \left( \frac{1}{Assets_j} \right) + \beta_{2j} \left( \frac{\Delta REV_j}{Assets_j} \right) \right] \quad (4)$$

iii) Performance Adjusted Accruals Model (PAA)

Kothari et al. (2005) suggest two ways of performance adjustment. The first one involves matching each MBO on a firm with the same industry and nearest profitability. The second one is carried out by augmenting the original regression by an additional profitability (return on assets – ROA) variable. Matching on closest ROA could be appropriate in cases where the number of control firms is not too large, for example in publicly listed firm samples. In the light of these concerns we carry out performance adjustment by augmenting the cross-sectional regression in equation (1) with ROA. The model is as follows:

$$\frac{TA_{ij}}{Assets_{ij}} = \beta_{1j} \left( \frac{1}{Assets_{ij}} \right) + \beta_{2j} \left( \frac{\Delta REV}{Assets_{ij}} \right) + \beta_{3j} \left( \frac{PPE}{Assets_{ij}} \right) + \beta_{4j} ROA \quad (5)$$

Discretionary accruals are obtained as actual total accruals minus computed (non-discretionary) performance adjusted accruals:

$$DA_j = \frac{TA_j}{Assets_j} - \left[ \beta_{1j} \left( \frac{1}{Assets_j} \right) + \beta_{2j} \left( \frac{\Delta REV}{Assets_j} \right) + \beta_{3j} \left( \frac{PPE}{Assets_j} \right) + \beta_{4j} ROA \right] \quad (6)$$

## 4. Results

### 4.1 Main results

In this section we discuss results of discretionary accruals obtained from three cross-sectional model estimations. Mean and median discretionary accruals for whole sample, family and non-family subsamples are presented in Table 4. Tests of significance for differences in discretionary accruals between family and non-family firms are also presented.

The results for the whole sample show positive discretionary accruals in all models, suggesting that MBOs, in general, tend to manage earnings upwards. The tendency is particularly strong in the TA model, which records higher levels of significance and larger percentage of discretionary accruals relative to WCA and PAA models. Both mean and median for TA model are significant at 1%, while only median is significant in WCA and PAA models. Breakdown of the sample into family and non-family firms shows significant differences in the direction and significance of earning management between two subsamples. Family firms tend to report small and negative discretionary accruals, with the exception of mean TA, and their discretionary accruals lack significance in all models. Non-family firms, on the other hand, report large and positive discretionary accruals, all of which are significant at 1% and 5% level. The notable drop in the mean and median discretionary accruals in PAA model can be attributed to the correction of type II errors due to performance adjustment as explained in Kothari et al. (2005). The results strongly suggest that non-family firms overstate earnings prior to MBO transaction and family firms avoid such practice. Differences in mean and medians between family and non-family firms are significant in all models, indicating that earnings management is limited to non-family firms only. Both H<sub>1</sub> and H<sub>2</sub> are, therefore, supported.

[Insert Table 4 about here]

The results are consistent with a scenario where family firms are unaffected by managerial moral hazard induced by MBO transaction, since buyout is initiated to ensure smooth transition of family ownership to a trusted management team. In this scenario, family culture and socioemotional wealth concerns (i.e. long term value of the firm) dominate MBO process and manipulative incentives are suppressed or stay minimal. In contrast, non-family firms are more exposed to moral hazard and opportunistic practice, since leaving owner/managers possess wealth incentives to extract maximum value from the deal absent such pervasive family culture. The findings are consistent with Ali et al. (2007) and Achleitner et al. (2014), who report that family firms tend to display more negative discretionary accruals than non-family firms, and Cascino et al. (2010) and Jiraporn and Dadalt (2009) who document higher earnings quality in family firms and that family firms are less likely to manage earnings. The results are also in line with the past buyout literature, highlighting that substantial moral hazard and earnings management practice exist in the MBO process, although earnings management is confined to non-family firms and the direction of earnings management is reversed due to shifting manager and owner relations in private firms.

While the number of firms in our matching portfolios is very high (see Annex A1) it is plausible that a significant number of portfolios may have too few observations to warrant the estimation of a regression. For robustness checks, we repeated the estimations for all three models after removing portfolios with less than 50 observations and excluding bottom and top portfolio deciles.<sup>21</sup> The unreported results remain economically and statistically consistent with the above reported results. For example, when bottom and top deciles are excluded, the median performance adjusted discretionary accruals become significant at 1% (improvement from 5%) and mean working capital accruals become significant at 5% (no change). Overall, our results concerning management buyouts follow a different pattern than those found in previous earnings management studies and are consistent with our hypotheses H<sub>1</sub> and H<sub>2</sub>.

---

<sup>21</sup> We thank an anonymous referee for this suggestion. The unreported results are available from authors upon request.



## 4.2 Leading family and non-family owners

We conduct additional tests in subsamples of family and non-family firms controlled by leading owners, defined as a person holding at least 50% of shares, and firms with dispersed ownership. The importance of separately treating leading family owners (LFO) and non-family owners (LNFO) is highlighted by Miller et al. (2007). LFOs may have stronger incentives to preserve special family features of their business which may result in different earnings management practices. In these closely held firms, intra-family conflicts are expected to be minimal and family culture most pervasive. Moreover, MBOs in these type of family firms are often initiated to replace the LFO, who has more interest in leaving his business in safe hands than making personal gains. On the contrary, leading owners in non-family firms would have stronger incentives to manipulate earnings since wealth gains from MBO deal are proportionate to their majority shareholding. Therefore family firms with LFOs would exhibit smaller discretionary accruals whereas non-family firms with LNFOs display larger discretionary accruals. Separate examination of earnings management in family firms with and without LFOs also contributes to the family firm heterogeneity debate (Corbetta and Salvato, 2004; Stockmans et al., 2010).

The above discussion produces following hypotheses:

H<sub>3</sub>: Presence of LFO in family firms is negatively associated with discretionary accruals.

H<sub>4</sub>: Presence of LNFO in non-family firms is positively associated with discretionary accruals.

[Insert Table 5 about here]

The results are presented in Table 5. Consistent with our hypotheses H<sub>3</sub> and H<sub>4</sub> family firms with LFOs record lower discretionary accruals relative to family firms without LFOs and non-family firms with LNFOs exhibit larger discretionary accruals than those without LNFO. The differences in mean and median discretionary accruals between family LFO and non-family LNFO samples are significant, indicating that family identity suppresses manipulative incentives accompanying MBO transactions.

Overall, the results support family succession (Howorth et al., 2004; Scholes et al., 2008), stewardship (Davis et al., 1997) and socioemotional wealth (Stockmans et al. 2010) explanations in the sense that the interests of family owners and managers are aligned when dealing parties identify with the firm culture and committed to the business.

## **5.6 Conclusion**

Based on a unique sample of 227 non-listed UK firms, we examine earnings management prior to MBO transactions. Non-listed buyouts are peculiar transactions since they facilitate change and/or succession in ownership whilst firms remain private. By examining this type of buyouts we shed light on an important question as why private firms in general, and private family firms in particular, engage in earnings management. We also contribute to the private firms' heterogeneity debate by comparing earnings management practices in family and non-family owned private firms. In this study, we apply a strict definition for family businesses thus capturing families' representation on the boards and families' socioemotional potential.

We hypothesised that private non-family firms overstate earnings due to wealth concerns associated with outgoing owner/managers and family firms do not manage earnings due to pervasive family culture and transition of family ownership. In line with the hypotheses, we find no evidence of earnings management in private family owned firms. In subsample of non-family firms we, however, report statistically significant income-increasing earnings management preceding buyout transactions. The above findings remain consistent across different estimation models and are robust to the choice of accruals. For many private firms, financial statements are the only source of public information. The results of our study contribute to a better understanding of the quality of this information and are therefore important for investors in private equity, creditors, and regulators.

## References

- Achleitner, A.K. and Figge, C. (2014) Private equity lemons? Evidence on value creation in secondary buyouts. *European Financial Management*, 20 (2): 406-433.
- Achleitner, A.K., Gunther, N., Kaserer, C. and Siciliano, G. (2014). Real earnings management and accrual based earnings management in family firms. *European Accounting Review*, 23(3): 431-461.
- Ali, A., Chen, T.Y. and Radhakrishnan, S. (2007) Corporate disclosures by family firms. *Journal of Accounting and Economics*, 44 (1-2): 238-286.
- Anderson, R.C. and Reeb, D.M. (2003) Founding-family ownership and firm performance: evidence from the S&P 500. *Journal of Finance*, 58 (3): 1301-1327.
- Anderson, R.C., Mansi, S.A and Reeb, D.M. (2003) Founding family ownership and the agency cost of debt. *Journal of Financial Economics*, 68 (2): 263-285.
- Ansari, I.F., Goergen, M. and Mira, S. (2014) The determinants of the CEO successor choice in family firms. *Journal of Corporate Finance*, 28, 6-25.
- Athanasakou, V., Strong, N.C. and Walker, M., 2009. Earnings management or forecast guidance to meet analyst expectations? *Accounting and Business Research*, 39 (1), 3-35.
- Athanasakou, V., Strong, N.C. and Walker, M., 2011. The market reward for achieving analyst earnings expectation: does managing expectations or earnings matter? *Journal of Business Finance and Accounting*, 38 (1) & (2), 58-94.
- Barontini, R. and Caprio, L. (2006) The effect of family control on firm value and performance: evidence from Continental Europe. *European Financial Management*, 12 (5): 689-723.
- Burgstahler, D. and Dichev, I. (1997) Earnings management to avoid earnings decreases and losses. *Journal of Accounting and Economics*, 24 (1): 99-126.
- Burgstahler, D.C., Hail, L. and Leuz, C. (2006) The importance of reporting incentives: Earnings management in European private and public firms. *The Accounting Review*, 81 (5): 983-1016.
- Burkart, M., Panunzi, F. and Shleifer, A. (2003) Family firms. *Journal of Finance*, 58 (5): 2167-2201.
- Cascino, S., Pugliese, A., Mussolino, D. and Sansone, C. (2010) The influence of family ownership on the quality of accounting information, *Family Business Review*, 23, 246-265.
- Che, L. and Langli, J.C. (2014) Family involvement and firm performance in private family firms. Working Paper, Social Science Research Network.
- Chen, S., Chen, X. and Cheng, Q. (2008) Do family firms provide more or less voluntary disclosure? *Journal of Accounting Research*, 46, 499-536.

- Cheng, Q. and Warfield, T. (2005) Equity incentives and earnings management. *The Accounting Review*, 80, 441-476.
- Chrisman, J.J., Chua, J.H. and Litz, R.A. (2004) Comparing the agency costs of family and non-family firms: Conceptual issues and exploratory evidence. *Entrepreneurship Theory and Practice*, 28 (4): 335-354.
- Chua, J. H., Chrisman, J. J. and Sharma, P. (1999) Defining the family business by behavior. *Entrepreneurship Theory and Practice*, 23 (4): 19-39.
- Coppens, L. and E. Peek. (2005) An analysis of earnings management by European private firms. *Journal of International Accounting, Auditing and Taxation*, 14 (1): 1-17.
- Corbetta, G. and Salvato, C. (2004) Self-serving or selfactualizing? Models of man and agency costs in different types of family firms. *Entrepreneurship Theory and Practice*, 28 (4): 355-362.
- Daske, H., Gebhardt, G. and McLeay, S. (2006) The distribution of earnings relative to targets in the European Union. *Accounting and Business Research*, 36 (3): 137–167.
- Davis, J.H., Schoorman, F.D. and Donaldson, L. (1997) Toward a stewardship theory of management. *Academy of Management Review*, 22 (1): 20-47.
- DeAngelo, L. (1986) Accounting numbers as market valuation substitutes: A study of management buyouts of public stockholders. *The Accounting Review*, 61 (3): 400-420.
- Dechow, M.P., Sloan, R.G. and Sweeney, A.P. (1995) Detecting earnings management. *The Accounting Review*, 70 (2): 193-225.
- DeFond, M.L. and Jiambalvo, J. (1994) Debt covenant violation and manipulation of accruals. *Journal of Accounting and Economics*, 17 (1-2): 145-176.
- Demsetz, H. and Lehn, K. (1985) The structure of corporate ownership: Causes and consequences. *Journal of Political Economy*, 93 (6): 1155-1177.
- Demsetz, H. and Villalonga, B. (2001) Ownership structure and corporate performance. *Journal of Corporate Finance*, 7 (1): 209-233.
- Eisenhardt, K.M. (1989) Agency theory: An assessment and review. *Academy of Management Review*, 14 (1): 57-74.
- Fama, E. and Jensen, M. (1983) Separation of ownership and control. *Journal of Law and Economics*, 26 (2): 321-325.
- Fischer, P.E. and Louis, H. (2008) Financial reporting and conflicting managerial incentives: The case of management buyouts. *Management Science*, 54 (10): 1700-1714.

- Gabrielsen, G., Gramlich, J. and Plenborg, T. (2002) Managerial ownership, information content of earnings, and discretionary accruals in a non-U.S. setting. *Journal of Business, Finance and Accounting*, 29, 967-988.
- Gomez-Mejia, L.R., Larraza-Kintana, M. and Makri, M. (2003) The determinants of executive compensation in family controlled public corporations. *Academy of Management Journal*, 46 (2): 226-237.
- Gore, J.P.O., Pope, P.F. and Singh, A. (2007) Earnings management and the distribution of earnings relative to targets: UK evidence. *Accounting and Business Research*, 37 (2): 123-150.
- Howorth, C., Westhead, P. and Wright, M. (2004) Buyouts, information asymmetry and family management dyad. *Journal of Business Venturing*, 19 (4): 509-534.
- Hutton, A. P., 2007. A discussion of “Corporate disclosure by family firms.” *Journal of Accounting and Economics*, 44 (1-2): 287-297.
- International Family Enterprise Research Academy (IFERA). (2003) Family businesses dominate. *Family Business Review*, 16, 235-240.
- Jelic, R. and Wright, M. (2011) Exits, performance and late stage private equity: The case of UK MBOs. *European Financial Management*, 17 (3): 560-593.
- Jiraporn, P. and Dadalt, P. J. (2009) Does founding family control affect earnings management? *Applied Economics Letters*, 16, 113-119.
- Jones, J.J. (1991) Earnings management during relief investigations. *Journal of Accounting Research*, 29 (2): 193-228.
- Kaplan, S. (1989) Management buyouts: Evidence on taxes as a source of value. *The Journal of Finance*, 44 (3): 611-632.
- Kothari, S.P., Leone, A.J. and Wasley, C.E. (2005) Performance matched discretionary accrual measures. *Journal of Accounting and Economics*, 39 (1): 163-197.
- Lang, L., Poulsen, A. and Stulz, R. (1995) Asset sales, firm performance, and the agency costs of managerial discretion. *Journal of Financial Economics*, 37 (1): 3-37.
- Lansberg, I. (1983) Managing human resources in family firms: The problem of institutional overlap. *Organizational Dynamics*, 12 (1): 39-46.
- Mao, Y. and Renneboog, L. (2013) Do managers manipulate earnings prior to management buyouts? ECGI Working Paper Series in Finance.
- Miller, D., Le Breton-Miller, I., Lester, R. H., et al. (2007) Are family firms really superior performers? *Journal of Corporate Finance*, 13 (5): 829-858.
- Perry, S. and Williams, T. (1994) Earnings management preceding management buyout offers. *Journal of Accounting and Economics*, 18 (2): 157-179.

- Prencipe, A., Markarian, G. and Pozza, L. (2008) Earnings management in family firms: Evidence from R&D cost capitalization in Italy. *Family Business Review*, 21 (1): 71-88.
- Salvato, C. and Moores, K. (2010) Research on accounting in family firms: Past accomplishments and future challenges. *Family Business Review*, 23 (3): 193-215.
- Scholes, L., Westhead, P. and Burrows, A. (2008) Family firm succession: the management buy-out and buy-in routes. *Journal of Small Business and Enterprise Development*, 15 (1): 8-30.
- Schulze, W.S., Lubatkin, M. and Dino, R.N. (2003) Exploring the agency consequences of ownership dispersion among the directors of private family firms. *Academy of Management Journal*, 45 (2): 179-194.
- Stockmans, A., Lybaert, N. and Voordeckers, W. (2010) Socioemotional wealth and earnings management in private family firms. *Family Business Review*, 23 (3): 280-294.
- Strömberg, P. (2008) The new demography of private equity. *The Global Impact of Private Equity Report 2008*, 3-26.
- Teoh, S.H., Welch, I. and Wong, T.J. (1998) Earnings management and the long run performance of initial public offerings. *Journal of Finance*, 53 (6): 1935-1974.
- Tong, Y.H. (2007). Financial reporting practices of family firms. *Advances in Accounting*, 23, 231-261.
- Walker, M. (2013) How far can we trust earnings numbers? What research tells us about earnings management. *Accounting and Business Research*, 43 (4): 445-481.
- Wang, D. (2006). Founding family ownership and earnings quality. *Journal of Accounting Research*, 44 (3): 619-656.
- Warfield, T., Wild, J. and Wild, K. (1995) Managerial ownership, accounting choices and informativeness of earnings. *Journal of Accounting and Economics*, 20, 61-91.
- Westhead, P. (1997) Ambitions, external environment and strategic factor differences between family and non-family companies. *Entrepreneurship and Regional Development*, 9 (2): 127-157.
- Westhead, P. and Howorth, C. (2006) Ownership and management issues associated with family firm performance and company objectives. *Family Business Review*, 19 (4): 301-316.
- Wilson, N., Wright, M. and Scholes, L. (2013) Family business survival and the role of boards. *Entrepreneurship Theory and Practice*, 37 (6): 1369-1389.
- Wright, M., Thompson, S. and Robbie, K. (1992) Venture capital and management-led, leveraged buy-outs: An European perspective. *Journal of Business Venturing*, 7(1): 47-71.

Wu, W.Y. (1997) Management buyouts and earnings management. *Journal of Accounting, Auditing & Finance*, 12 (4): 373-389.

Zahra, S.A. (2005) Entrepreneurial risk taking in family firms. *Family Business Review*, 18 (1): 23-40.

Zhou, D., Jelic, R. and Wright, M. (2014) SMBOs: buying time or improving performance? *Managerial and Decision Economics*, 35 (2): 88-102.

Table 1- Sample Descriptive Statistics

Panel A: Sample Time Distribution					
Year	Population	Sample	Sample coverage %	Family	Non-Family
2004	147	18	12	6	12
2005	150	44	29	14	30
2006	154	52	34	14	38
2007	128	43	34	13	30
2008	101	24	24	9	15
2009	51	6	12	4	2
2010	52	15	29	3	12
2011	40	10	25	3	7
2012	37	15	40	5	10
Total	860	227	26	71	156

Table 5-1 Panel B: Family Firms' Ownership and Boards

Mean and median statistics for family firms in the year prior to MBO. LFO (lead family owner) represents percentage ownership held by a single controlling family member where explicitly reported in annual accounts.

	Family ownership	Non-Family ownership	LFO	Board size	Family directors on board
Mean	88.3%	11.6%	73.8%	4.6	1.8
Median	94%	6%	72.5%	5	2
N	63	63	30	66	66



Table 2- Summary statistics for changes in family and non-family MBOs

This table presents changes in total accruals, sales and earnings in the 4 years preceding MBO. Year 0 is MBO year. Total accruals are defined as:  $[(\Delta\text{Current Assets} - \Delta\text{Cash}) - (\Delta\text{Current Liabilities} - \Delta\text{Short term debt}) - \text{Depreciation}]$ . Working Capital Accruals are defined as:  $(\Delta\text{Current Assets} - \Delta\text{Cash}) - (\Delta\text{Current Liabilities} - \Delta\text{Short term debt})$ . Earnings are net income. The variables are obtained as first differences scaled by lagged assets. Significance of means and medians is tested by 2-tailed T-test and Wilcoxon test (mean and median change = 0 vs. mean and median change  $\neq$  0).

	All MBOs (n=227)				Family (n=71)				Non-family (n=156)			
	Year -1	Year -2	Year -3	Year -4	Year -1	Year -2	Year -3	Year -4	Year -1	Year -2	Year -3	Year -4
<i>ΔTotal Accruals</i>												
Mean	0.041**	-0.007	-0.014	0.012	0.003	-0.022	-0.018	0.029	0.058***	0.001	-0.011	0.001
Median	0.031***	-0.021	0.008	-0.015	0.021	-0.014	0.008	-0.032	0.042***	-0.022	0.013	0.001
<i>ΔWorking Capital Accruals</i>												
Mean	0.041**	-0.002	0.059	0.016	0.003	-0.018	-0.015	0.033	0.059***	0.006	0.101	0.006
Median	0.034***	-0.015	0.012	-0.008	0.017	-0.012	0.006	-0.031	0.041***	-0.021	0.015	0.014
<i>ΔSales</i>												
Mean	0.361***	0.411***	0.669***	0.287***	0.303***	0.267***	0.498***	0.426***	0.388***	0.478***	0.753***	0.211***
Median	0.170***	0.215***	0.169***	0.125***	0.170***	0.133***	0.183***	0.138***	0.171***	0.227***	0.169***	0.116***
<i>ΔEarnings</i>												
Mean	0.029***	0.036***	0.022**	0.026	0.022**	0.007	-0.001	0.006	0.031***	0.049***	0.048	0.038
Median	0.021***	0.013***	0.011***	0.004	0.013**	0.004	0.002	0.003	0.027***	0.031***	0.021***	0.004

Table 3- Summary statistics for family and non-family MBOs

This table presents summary statistics for 227 family and non-family MBOs one year before buyout transaction. Assets and Sales are inflation adjusted total assets and gross sales. SIZE is natural logarithm of total assets. GROWTH is change in sales divided by lagged sales. ROA is net income divided by total assets. Significance of differences in means and medians is assessed by T-test and Mann-Whitney test. \*\* and \*\*\* show significance at 5% and 1%. n.s. stands for not significant.

	All (n=227)			Family (n=71)			Non-family (n=156)			Family vs. non-family	
	Mean	Median	St. dev.	Mean	Median	St. dev.	Mean	Median	St. dev.	Mean	Median
Assets (£ th)	20,785	9,764	30,912	22,048	8,867	37,329	20,210	10,472	27,621	n.s.	n.s.
Sales (£ th)	44,516	18,824	73,893	50,872	17,466	88,698	41,624	18,864	66,192	n.s.	n.s.
SIZE	9.312	9.186	1.074	9.18	9.09	1.227	9.372	9.256	0.995	n.s.	n.s.
GROWTH	0.298	0.098	1.793	0.127	0.096	0.258	0.376	0.104	2.154	n.s.	n.s.
ROA	0.077	0.081	0.176	0.034	0.061	0.228	0.097	0.091	0.143	**	***

Table 4- Discretionary accruals for family and non-family management buyouts

This table shows discretionary accruals (DA) for 227 sample management buyouts. DA is computed from Total Accruals (TA), Performance Adjusted Accruals (PAA), Working Capital Accruals (WCA), and Propensity Score Matched Total Accruals (PSMA) models, one year prior to buyout transactions. DA from TA model is computed using equations 1 and 2; DA for WCA model is computed using equation 3 and 4. DA for PAA model is computed using equations 5 and 6. DA for PSMA is computed as discretionary total accruals minus discretionary total accruals for propensity score matched private firms. Reported statistics are for accruals winsorised at 1% and 99% percentiles. Significance of means and medians is tested by 2-tailed T-test and Wilcoxon/Mann-Whitney tests. \*\*\*, \*\* and \* represent significance at 1%, 5% and 10% level respectively. '<' indicates that non-family buyouts display greater earnings management.

Model	All buyouts (N=227)		Family (N=71)		Non-family (N=156)		Family vs. non-family	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
TA	0.431***	0.047***	0.048	-0.012	0.604***	0.073***	< ***	< ***
WCA	0.026	0.016*	-0.043	-0.007	0.057**	0.036***	< **	< ***
PAA	0.021	0.012*	-0.015	-0.005	0.037**	0.025**	< **	< *

Table 5- Discretionary accruals by leading family and non-family owners

This table presents discretionary accruals based on their ownership characteristics. Leading family owner (LFO) is a dummy variable that equals to 1 if a member of the family holds at least 50% of shares in the family firm, 0 otherwise. Leading non-family owner (LNFO) is a dummy variable that equals to 1 a shareholder holds at least 50% of the shares in the non-family firm, 0 otherwise. Statistical significance of mean and medians is tested by 2-tailed t-test and Wilcoxon/Mann Whitney tests. \*\*\*, \*\* and \* show significance at 1%, 5% and 10% level respectively.

	Family (n=71)				Non-Family (N=156)				LFO vs. LNFO	
	LFO (n=30)		Non-LFO (n=41)		LNFO (n=64)		Non-LNFO (n=92)			
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
TA	-0.088	-0.060	0.148	0.001	0.865***	0.133***	0.424***	0.055***	***	**
WCA	-0.097*	-0.051	-0.003	-0.000	0.091*	0.052**	0.033	0.024	**	***
PAA	-0.048	0.005	0.011	-0.006	0.054**	0.032**	0.026	0.015	**	*

