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Earnings management and institutional ownership: Evidence in the UK

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Abstract

This study examines whether the level of institutional ownership is correlated with managerial discretionary accounting choices in the UK. Prior studies examined the institutional ownership as a stand-alone factor for earnings management. This study examines how the managerial acrobatics over the reported results vary according to the different levels of institutional ownership.

The purpose of this study is to shed light on the association of institutional ownership and earnings management, not only from discretionary accruals perspective but as well from real activities perspective. It is crucial to understand the underlying factors that enhance or undermine the transparency of reported earnings and more specifically how the ownership structure exerts positive or negative influence on the credibility of financial results. Analysts, investors, auditors, public policers and managers should be interested in this kind of analysis because it provides insight how the level of institutional ownership can be a determinant factor of earnings quality in the UK.

Our findings suggest that the different levels of institutional investors' participation correspond to different levels of earnings management exerting a quadratic influence.

Keywords: institutional ownership, earnings management, real activities manipulation, income – increasing discretionary accruals

Tsivgouli Sofia

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Preface

I would like to thank Dr Stergios Leventis and Dr Alexandros Sikalidis for their valuable guidance throughout my dissertation. Their advice and assistance contributed to the throughput of this dissertation. I am as well grateful to my family and friends for their continuous support and patience that galvanized me to complete this study.

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Introduction

Institutional ownership is the determinant factor in the UK investor landscape (Ferreira and Matos, 2007), with prominent influence over the corporate performance. Their presence and involvement in the corporate governance are highlighted in the Stewardship Code. The Code provides a clear understanding of institutional owners' responsibilities and their fundamental role in the growth momentum of UK listed companies. Institutional shareholders[1] are expected to be active through their voting and other rights and exert control over the managing directors. Their role is to safeguard that boards act in the shareholders' best interest and they are willing to serve as informed and engaged owners. Enhanced accountability of institutional shareholders acts as trust injections in the UK and wider financial system.

Within this investor setting, this study examines how the presence of institutional owners impacts on managerial discretionary accounting choices. In order to obtain a more holistic view, there will be an examination of the divergent views regarding the stewardship role of institutional shareholders and if their role is a driving force for lesser/greater earnings management.

Prior studies suggest that there is evidence both for a positive and a negative association. In this study, I examine whether companies with a high or low presence of institutional ownership display a negative or positive correlation with earnings management and how this association is actually incarnated in abnormal accruals and real activities manipulation. The institutional ownership and their association with earnings management actually challenge the linear relationship of previous studies. Koh (2003) find that the levels of institutional ownership and earnings management are associated following a concave (inverted – U) relation.

Two different proxies are used for earnings management: 1) discretionary accruals and 2) real activities manipulation, so as to monitor the association of the institutional ownership with the earnings management.

In the next section, there will be a discussion on the related literature. Section 3 describes the research design and Section 4 reports the results and the corresponding findings. Section 5 presents the conclusions of the study.

[1] In the Code the term "institutional investor" includes institutional shareholders such as pension funds, insurance companies, and investment trusts and other collective investment vehicles and any agents appointed to act on their behalf.

2. Literature review

There is evidence that accounting irregularities are stemming from controversial managerial behaviour (Shleifer and Vishny, 1986). There is a breadth of evidence that managers perform accounting acrobatics in order to alter reported earnings. Healy and Wahlen (1999) stipulate that *"earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers."* (Healy and Wahlen 1999, pp 368)

There is a wealth of motives that incentivize an over-emphasis on short-term accounting returns and discourage long-term investment. Managers have motives to manipulate earnings in part so as to increase their revenue streams, a common phenomenon especially when their remuneration is interwoven with the share price (Bergstresser and Philippon, 2006; Conyon, 2006). Sweeney (1994) provides evidence that managers of firms close to default are more inclined to use income – increasing changes. In addition, Beneish (2001) has identified that possible motives for earnings manipulation are debt contracts; compensation agreements; equity offerings; insider trading. Furthermore, the constant pressure to meet the pre-defined earnings benchmarks due to analysts' forecasts pressure (Bartov et al., 2002; Graham et al., 2005) or the fear of dismissal indulge managers to employ accounting malpractice (Peasnell et al, 2005; Graham et al., 2005). Dechow et al. (2000) show that managers are reluctant to report early the bad news. Thus, the possibility to employ upward earnings management and avoid reporting losses becomes increasing (Burgstahler and Dichev, 1997; Roychowdhurry, 2006; Graham et al., 2005). The managerial discretion eventually hurts the credibility of the financial results, which is translated into a type of agency cost (Davidson et al., 2005; Wang, 2014).

Earnings management is commonly realized through accruals manipulation (Bergstresser and Philippon, 2006; Dechow et al., 1995) and real activities manipulation (Roychowdhurry, 2006; Kim et al., 2011). Accruals provide a springboard for manipulation since the financial reports do not depict always the components of discretionary accruals and the changes in firm's value which are included in the earnings (Bergstresser and Philippon, 2006). There are accruals components, such as R & D expenses treatment, early sales recognition, depreciation, which create a vast "terrain" for managers to exert discretionary accounting practices (Bergstresser

and Philippon, 2006). Roychowdhurry (2006) adds to the endless list the delayed write – offs and under – provisioning for bad debts that lead to abnormal accruals. Roychowdhurry (2006) outlines how earnings management is realized through real activities manipulation as well. There is evidence that real activities manipulation is led by discounted prices and decreased discretionary expenses to improve the reported earnings (Roychowdhurry, 2006). Operational activities, such as over – production to decrease the production costs, provide loopholes for manipulation due to the difficulty of the auditors to track down the corresponding irregularities (Roychowdhurry, 2006).

There are several studies which investigate the possible association of earnings management and institutional ownership. There is evidence that firms with institutional ownership affect the earnings quality (Charitou et al., 2007). There are two contradictory views regarding the above-described association. One school of thought, Bushee (2001) and Porter (1992) view large blockholders as myopic and passive investors focused on short – term benefits. According to Coffee (2010), the passivity of institutional investors has been long-standing. The promotion of trading and short-term returns lead institutional shareholders to flawed decisions, deviating from the long -term success of the corporate business model or being even destructive (Bushee, 2001). The asset managers exert great pressure on managers to focus on short – term goals (Jacobs, 2011; Bolton et al., 2012).

Contrary to the above view, there is evidence that institutional ownership leads to less income – increasing or income – decreasing practices (Shleifer and Vishny, 1986), which lead to enhanced earnings quality and credibility of reported earnings (Dechow et al., 1995). Empirical studies have supported that large blockholders are incentivized to actively engage in the monitoring of the management (Stiglitz, 1985). Roychowdhurry (2006) suggests that the presence of sophisticated investors contributes to the earnings management containment. Mitra and Cready (2005) find evidence that active institutional stewardship may constrain the managerial flexibility to employ accounting malpractice in part.

Furthermore, there has been also evidence that the actual association of earnings management and institutional ownership should be investigated under the lens of their investment orientation. Long–term focused investors are associated negatively with upwards or downwards earnings management (Koh, 2003). Consequently, the association is non-linear, alleging that a higher

participation of institutional investors acts as a mechanism of mitigation of earnings management and an effective corporate governance mechanism (Koh, 2003).
It is worthwhile to mention that Wang (2014) provides credence that institutional investors with a long investment horizon have a trivial impact on earnings management, which imposes that the long-term orientation as stand-alone is not the touchstone for the mitigation of the earnings management.

2.1 Short – term oriented institutional investors and earnings management

The institutional investor sentiment and attitude vary, based on the objectives for near – term or long – term earnings. As mentioned in the Final Report of Hampel Committee in 1991, typically institutions are disengaged in corporate governance. They usually neglect their voting rights and employ mechanisms such as short – selling and exit options, instead of giving support to their investments over the long haul.
In the institutional passivity realm, the institutional investors remain passive when it comes to coalition actions, because investors are difficultly induced in shouldering agency costs (Black and Coffee, 1994; Coffee, 2010; Bratton and Cahery, 2015), but as well there are rivalries among them (Black and Coffee, 1994). The fear of losing liquidity or containing their portfolio diversification thwarts institutional investors from being actually involved (Black and Coffee, 1994; Coffee, 2010; Tilba et al., 2013). Besides, most institutional funds (i.e. mutual funds) exert their rights by employing money managers and outside advisors, unwilling to delve into corporate governance issues (Coffee, 2010; Bolton et al., 2012; Bratton and Cahery, 2015).
Furthermore, there is evidence that using accruals accounting to inflate the reported earnings and meet analysts' forecasts is rewarded by institutional investors (Bartov et al., 2002; Graham et al., 2012). There is an established premium for meeting analysts' expectations, even if it derives from earnings management (Bartov et al., 2002). This short – termism has been historically destructive, as the major crashes and bubbles have proven (Bolton et al., 2012). Focus on the stock price and short – term price movements as the main corporate performance criterion contributes to careless business decisions that benefit only "hit and go" investors. Besides, all the shareholders reap the benefits of the activism, even If they had not shouldered the costs of it. This leads to further disengagement (Becht et al., 2008).

Adding to the above list, it has been argued that institutional investors exert undue pressure on asset managers to achieve short-term earnings (Jacobs, 2011; Bolton et al., 2012). The incentivization of asset managers is justifiable, since their compensation is benchmarked against market indexes (Bolton et al., 2012). Black (1991) justifies that money managers have monitoring and incentive problems due to the fact that they gain a small portion of the corporate gains. Bushee (2001) and Burns et al. (2006) allege shortsighted investors prod managers to falsification of financial results. Jiang and Anandarajan (2009) argue that transient investors urge management to boost artificially the reported earnings. According to the McKinsey Quarterly survey panel of more than 1,000 C-suite executives and board members in late 2015 and early 2016 in USA, they found corroboratory evidence that managers were pressured to implement managerial discretion. Koh (2003) argues that the short investment horizon leads to earnings management paths.

The above suggests the disengagement of institutional investors from the effective monitoring and the favouritism of short-termism.

2.2 Long– term oriented institutional investors and earnings management

Institutional investors can contribute to the corporate value realization (McConnell and Servaes, 1990). Large institutional investors have the resources to monitor and constrain managerial behaviour. The arsenal of institutional investors in case of controversy with management includes: "exit", "voice" and "loyalty" (Hirschman, 1970). "Voice" is the expression of dissatisfaction with the management and it is actually an act of engagement. Hartzell and Starks (2003) affirm that the institutional investors' interests are in conjunction with the containment of managerial absurd behaviour.

Maug (1998) identifies that liquid stock market induces institutional investors to actively participate in the monitoring because it reduces the monitoring costs through informed trading. Market applauds and reacts positively towards to the investor activism (Brav et al, 2008).

Chung et al. (2002) find evidence that the presence of institutional shareholders impedes managers from managing earnings towards their targets. As mentioned in Goranova & Ryan (2014), managers are more intent to complying with the investment structures proposed by institutional investors or coordinated groups, rather than individual shareholders. Jiambalvo et al.

(2002) argue that the presence of institutional investors is positively associated with the salience of stock prices to depict current – period information and their predictability force to depict future – period information.

Black and Coffee (1994) have purported that an institutional closed – doors oversight takes place, far away from public feuds. Institutional owners seem to be on the sidelines, but there is an active presence behind the scenes (Ball, 1990; Black and Coffee, 1994; McCahery et al., 2016). Prior studies (Williams and Conley, 2005; Aguilera et al., 2006) suggest that institutional investors in the UK engage with the management (meetings with the boards and top managers) to stipulate the corporate strategy. Levit (2014) claims that institutional activism through communication and the behind the scenes construction of the relationship with the managers can be more effective as a corporate governance mechanism.

Graham et al. (2005) assert that farsighted investors, with long-term investment horizons, are actively engaged in the success of their investment portfolios. Rajgopal and Venkatachalam (1997) find evidence that owners with a substantial holding in a company affect positively the containment of earnings management, through their shareholder activism. Their active engagement is a deterrent factor for practices that lead to abnormal returns (Rajgopal and Venkatachalam, 1997). The mitigation of information asymmetries constrains income – inflating managerial choices (Rajgopal et Venkatachalam, 1997).

A key consideration is that institutional investors should be viewed as an amalgam of different groups with different embedded investing culture (Black, 1991; Black and Coffee, 1994; Del Guercio and Hawkins, 1999; Koh, 2003; Goranova & Ryan, 2014; Wang, 2014). Hsu and Koh (2005), who examine both income-increasing and income-decreasing earnings management, find that short-term and long-term institutional investors co-exist and exert different promptings on earnings manipulation. Cheng and Reitenga (2009) suggest that the institutional profile is a leading factor to examine the association between institutional investors and earnings management. The divergence on the investing profile and the investment horizon between mutual funds, pension funds and insurance funds is a catalyst. Black and Coffee (1994) list insurers as more long-term investors than pension funds. Pension funds are considered to keep a distance from the active involvement in corporate governance, while mutual funds are chiefly passive (Black & Coffee, 1994). Goranova & Ryan (2014) argue that public pension funds are forced into constrained engagement due to political goalposts exerted by their managers.

Contrary to the above view, Del Guercio and Hawkins (1999) argue that pension – funds strategies are oriented toward to the value creation for the firm. The recent rise of hedge funds imbued firms with the activist monitoring through their influence on corporate boards and management (Brav et al., 2008). Hedge funds presence act as a bellwether for active engagement and market reacts accordingly with upwards stock prices (Brav et al., 2008). The role of hedge funds though persists to be questionable due to their tactics.

Rajgopal and Venkatachalam (1997), Koh (2003) display corroboratory evidence that the leading standpoint to criticize the role of institutional investors is the level of their participation. Cheng and Reitenga (2009) assert that activist investors can mitigate the effect of earnings pressure. Koh (2003) argues that long-term investors can be the countervailing power to managerial discretion. Burns et al. (2006) report that "dedicated" investors act as a credible mechanism of discretionary accruals decrease. As mentioned in Burns et al. (2006), it is crucial to understand that one of the most significant determinants of corporate value creation is the investment horizon of institutional investors.

2.3 Testable hypothesis in the UK investor landscape

The UK is a dynamic capital market, with a strong legislative framework, strong investor rights and low ownership concentration (Faccio et al., 2002; Leuz et al., 2003; Armour et al., 2009). According to the Global Competitiveness Index 2016–2017, the UK ranks as the seventh more competitive country among the 138 countries under the scope, with a score of 5.49[2] (Schwab, 2016). It effectively protects outside investors meaning that the legislative framework reduces insiders' need to exert earnings management (Leuz et al., 2003). According to the Global Competitiveness Index, the UK ranks eighth for the protection of minority shareholders' interests with a score of 5.4[2] and demonstrates a 7.8[3] score of investor protection (Schwab, 2016). According to Investment Association, the size of the asset management industry was 373% of the UK's GDP in 2016 asserting that the asset managers in the UK play an influential role as institutional investors.

[2] Scale ranges from 1 to 7.
[3] Scale ranges from 1 to 10.

Black and Coffee (1994) assert that the dynamics of the UK market and the judiciary facilitate the shareholder engagement compared to the United States. There is evidence that civil enforcement against directors of public companies in the UK is nearly non – existent (Armour et al., 2009). The above phenomenon is attributable to the potent shareholder governance rights, which serve as a substitute for private enforcement (Armour et al., 2009). The U.K. regulatory regime places great emphasis on proactive screening, so as to discourage directors to breach their duties (Armour et al., 2009).

Delving into the legislative framework, the London Stock Exchange has specific Listing Rules that force the obligation of public companies to comply with the Combined Code (Wang, 2014). Besides, the publishing of the UK Stewardship Code in 2010 evolved to be a powerful tool that exhorts institutional investors' engagement to effective monitoring. The Stewardship Code (2010) engages institutional investors to the firm's monitoring and encourages them all to report about their adherence to the Code. This adherence to the Code is in alignment with investors' interest in the long-term viability of the firm.

During 2016, the Investment Association[4] launched a Productivity Action Plan emphasizing the productivity as an enabler of UK economy through far – sighted investing and effective stewardship (The Investment Association, 2017). Among the initiatives of the Plan was the disengagement from short-termism, by halting the issuance of short – term earnings guidance and quarterly reporting, while introducing the Long Term Reporting Guidance (the "Guidance"). The Guidance mandates the distinct articulation of capital allocation decisions and its alignment to the success of the corporate sustainability. The Association completed the issuance of a Stewardship Reporting Framework to assist members to their role fulfilment as effective monitors. One of the initiatives to be completed is the implementation of specific methodologies so as to calculate the average holding periods and align the investment horizons with long-term value creation.

All the above suggest that in the UK apply all the conditions that incentivize institutional owners to be involved; exert active stewardship and keep constrained the managerial discretion. Effective stewardship results in more transparent and enhanced quality reported earnings (UK Stewardship Code, 2010).

[4] The Investment Association is the trade body that represents UK investment managers.

Notwithstanding, the UK investor environment is an amalgam of short-term and long-term investors. The Final Report on Corporate Governance of the Hampel Committee argues that UK institutional owners are a heterogeneous group with different investment objectives. Unbundling the investor profile of institutional investors will provide insight about their objectives and their investment horizons (Wang, 2014).

2.3.1 UK ownership environment

The rise of institutional investors during the past decades (from the 1960s to 1990s) has entrenched their dominance in the UK investment landscape. Since the 1960s, controlling blockholders were incentivized to dilute their shares, combined with a vast dissemination of shares from private into public hands (Franks et al., 2004; Coffee, 2010). The primordial role of institutions - pension funds, insurance companies, unit and investment trusts – is emphasized in the Final Report on Corporate Governance of the Hampel Committee, dated back in 1991. Black and Coffee (1994) allege that two-thirds of the UK listed companies are dominated by institutions and point out that the lesser legal barriers merit the institutional involvement in corporate governance. Monks (2005) points out that 10% of shareholder have the legislative power to oust any or even all the directors of any company at any time.

As a consequence of the market turbulence during 2007 – 2009 and the struggle of the economy to claw its way back to viability, the shareholder passivity in the UK declined after 2007 (Wang, 2014). The financial turmoil in the UK gave new birth to the stewardship role of institutional investors (Tilba et al., 2013). The UK Corporate Governance Code (introduced in 2010 and renamed in Combined Code) dwells on the importance of the dialogue with shareholders based on the mutual understanding of shareholders' objectives. The current investor landscape stipulates that the institutional groups hold the responsibility to involve in the monitoring of directors and reassure the transparency of corporate accounts (Stewardship Code, 2010).

The Stewardship Code (Provision E.2.2, 2014) requires companies to justify how the engagement with the shareholders takes place, especially in cases that a significant proportion of the shareholders were opposed to a resolution. The above provision aims to assess how the concerns of institutional investors are being answered by the agents. Further to the above, the

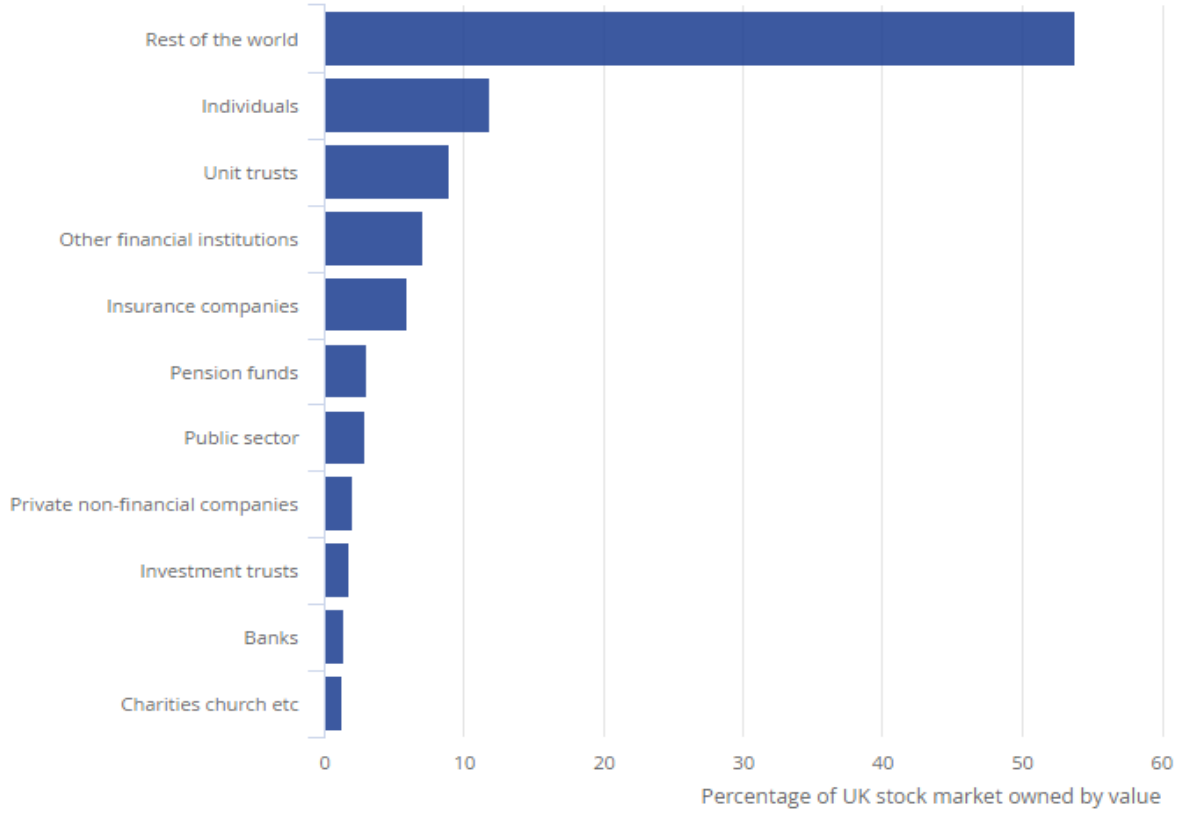
Financial Reporting Council (FRC) has made amendments in the above regulatory frameworks to assert the quality of financial reporting and attribute a higher level of quality to the relationship of shareholders and agents (Developments in Corporate Governance and Stewardship, 2017). Through a Tiering Exercise, there is an elaboration of how institutional investors are cultivating a more profound stewardship role (Developments in Corporate Governance and Stewardship, 2017). The FRC pointed out the increase of the quality of transparency and the higher compliance with the principles of the Code.

Sir Win Bischoff, chairman of the FRC, said:

"Over the past few years, the FRC has taken a series of actions to deal with the outcomes of the global economic crisis. In 2014 we amended the UK Corporate Governance Code to improve the management and reporting of risk and encourage companies and investors to take a long-term view. In order to help companies focus on implementing and benefitting from these changes, we will not substantially revise the Code for at least the next three years, but rather focus on market-led and collaborative initiatives on succession planning and corporate culture."

Contradictory to the above, it is argued that the aforementioned codes have not resulted in incentivizing institutional shareholders to be actively involved in the governance of their investee companies (Keasey et al., 2005). The compliance with the Code is criticized as a superficial "box – ticking" process (Arcot et al., 2010). The non – compliance explanations are inefficient and impede the purposeful compliance with the Code (Arcot et al., 2010). Cheffins (2010) find evidence that the incentives for responsible stewardship are weak. It is arguable that the shareholders are inadequate monitors, due to lack of incentives alignment and high stewardship costs (Arcot et al., 2010). In the Myners Report, it is stated that pension funds are unwilling to engage actively with investee companies (Myners, 2001). Tilba et al. (2013) provide evidence about the pension funds and argue that the primordial focus is placed to their liquidity rather than a conscious involvement in corporate affairs. Short, Zhang and Keasey (2002) portray that the applicable tax – exempt regime for pensions funds forge their orientation towards dividends payouts and their indifference to corporate affairs.

Furthermore, Cheffins (2010) reports that foreign investors are the majoritarian player in the UK environment, indicating the detachment from the domestic entities. The UK Office for National Statistics released information on the UK stock market ownership[5] scheme at 31 December 2014. According to the statistics, UK individuals hold an estimated 12% of listed shares by value on London Stock Exchange, while institutional owners (unit trusts, other financial institutions, insurance companies, pension funds, investment trusts and banks) own in aggregate a 28%. The majority of UK shares are owned by the rest of the world.



Source: Office for National Statistics

The statistical bulletin indicates that the largest holding group is the "Rest of World" with a 54% in which the largest blockholders are institutional owners (approx. 70% in North America and 34% in the rest countries). North American investors have increasingly invested directly in the ordinary shares of UK companies listed on the London Stock Exchange. European holdings

[5] The statistical bulletin is based on companies domiciled in the UK.

stood at 26%. Investors that reside in Asia held 16% of quoted UK shares (Office for National Statistics, 2014). Approximately half (50%) of the UK quoted shares held by investors in North America are held in unit trusts, with other financial institutions accounting for around a quarter (25%) and pension funds for a fifth (20%) (Statistical bulletin Ownership of UK Quoted Shares, 2014).

Benificial owners	North America		Other RoW	
	Per cent	£ billion	Per cent	£ billion
Unit trusts	49.7	211.1	23.7	119.4
Other financial institutions	25.4	107.8	26.8	135.0
Pension funds	19.7	83.7	9.6	48.6
Insurance companies	1.4	5.8	0.7	3.5
Individuals	1.3	5.4	1.3	6.7
Public Sector	0.9	3.9	23.4	118.1
Charities	0.8	3.2	0.1	0.4
Banks	0.6	2.7	8.6	43.4
Private non-financial companies	0.2	0.8	5.8	29.1
Investment trusts	0.0	0.0	0.0	0.0
Total[1]	100.0	424.4	100.0	504.2

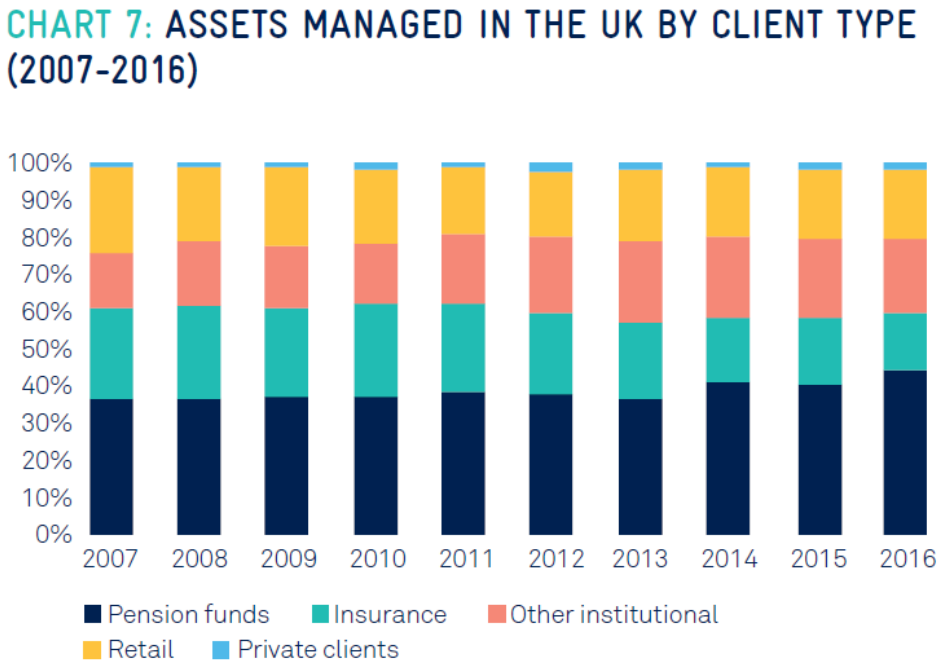
Source: Office for National Statistics

Adam Palin points out the causality of the aforementioned shift in the UK institutional investors' attitude and their lesser presence as holding group of the UK ordinary shares:

> "Following both the 2000 crash and the most recent financial crisis of 2008-9, insurers and pension groups were prompted to reduce risk in their portfolio, replacing equities with bonds." (Financial Times, 2015).

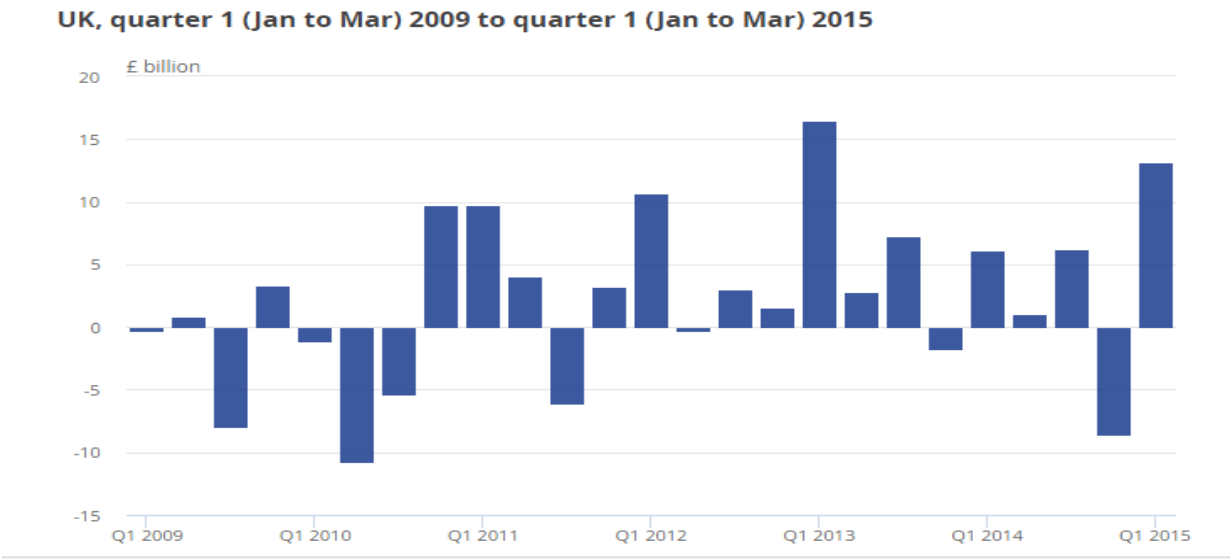
The Kay Report (2012) presents corroboratory evidence that the pension fund schemes were urged to swift towards bonds.

Although, according to the Investment Association, during 2016 the pension funds in the UK remain the major and more influential institutional shareholder, holding a 44% of the UK assets (Asset Management Survey 2016-2017, 2016).



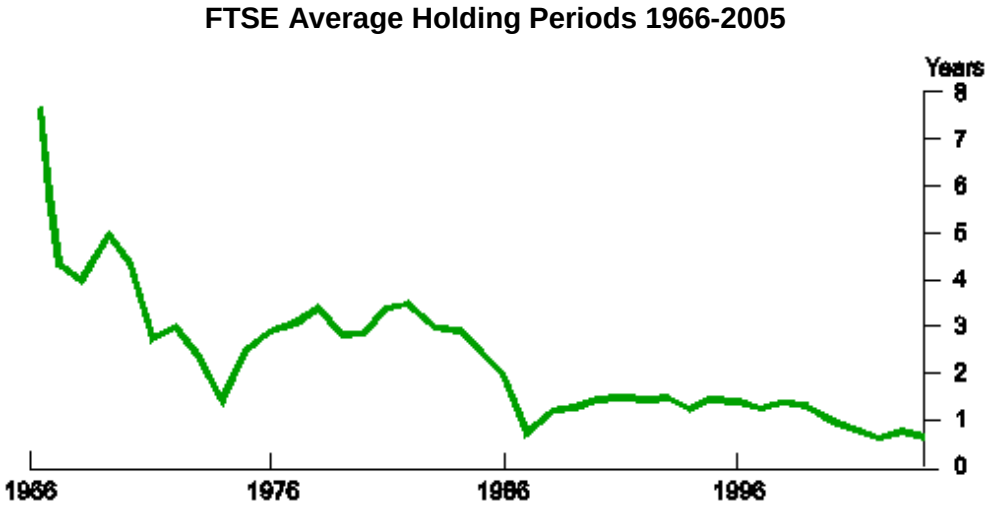
Source: The Investment Association Annual Survey

All the above bring into sharp focus the investigation of the role of institutional owners in the UK investor environment. A key consideration to examine is the orientation of these institutional owners. The studies suggest that in Q1 2015 there was a net investment of £13 billion in short-term assets. This propensity for short investment horizons might illustrate the investment landscape. Investors are strategizing to position themselves on short-term investments instead to guide their investments to success over the long haul.



Source: Office for National Statistics

The Kay Review highlights the disengagement of institutional investors and their short-termism. Below, the chart displays the sharp shortfall in average holding periods for UK equities since the mid-60s from a period of almost 8 years to just 7½ months in 2007:



Source: Office for National Statistics

Neil Woodford, Head of UK equities at Invesco Perpetual, has pointed out that shareholder engagement requires a “successful reform that would be achieved only when shareholders voted with their voices and not with their feet, by acting like 'owners' not 'traders'”.

Additional to the above, the Investment Association provides corroboratory evidence that there is a swift towards passive investment. The report states that around 66% of assets are actively managed in comparison with 83% a decade ago.

Unbundling the dominance of overseas shareowners, it is observable that the current trend results in a further disengagement of the shareholders from the long-term success of the investee companies. The holding of immensely diversified portfolios worldwide, the difficulty to attend meetings, the impediments of information flow may result in distant and disengaged investing culture (Cheffins, 2010).

The perplexity of the relationships is never-ending due to the fact that many funds are subject to fund management. Fund managers are not induced in active monitoring, due to the high monitoring costs and their disassociation with the increased profits from an active involvement (Keasay et al., 2005).

2.3.2. Testable hypothesis

This study will investigate if the high or low level of institutional ownership in the UK acts actually as a filter for lesser or more earnings management. The focus will be placed on discretionary accruals and real activities manipulation and if there is a significant negative or positive relation with high or lower level of institutional ownership.

The association between abnormal accruals and the level of institutional ownership may be nonlinear (Koh, 2003; Wang, 2014). A low proportion of institutional ownership level is translated into feeble influence on managerial discretion and it is disjointed with the abnormal accruals (Wang, 2014). Nonetheless, a high proportion of institutional investors with immensely influential control rights should display a positive relationship with the attenuation of managerial discretion (Koh, 2003; Wang, 2014).

The assumption of a non-linear relationship between the level of institutional ownership and the earnings management is worthwhile to be tested in the UK environment (Wang, 2014)

H1: The institutional ownership and income – increasing discretionary accruals are associated following a non-linear relation. A concave (inverter – U) relation will be more specifically investigated.

H2: The institutional ownership and real activities management are associated following a non-linear relation. A concave (inverter – U) relation will be more specifically investigated.

3. Research design

3. 1 Data and Sample Selection

This study includes the UK listed non - financial firms during the time period between 2012 and 2016. The data are collected from the AMADEUS database. Regarding the ownership data, information was gathered from the Thomson financial database. The selected firms belong to the top 250 by market capitalization, so as to reassure an ample sample with efficient corporate information and active governance mechanisms. The sample excludes financial institutions, regulated firms and mining companies due to the specific rules applied for their reporting. The sample to be tested is 122 companies.

There will be primarily reliance on the proxies of Koh (2003), but as well the ones developed by Roychowdhurry (2003) and used as well by Kim et al. (2011).

The focus on a single-country provides with a better understanding of the regulatory and the legislative environment, while the UK is the ideal setting since it provides a slew of dispersedly – owned companies.

3.2 Measuring Institutional Ownership

The above suggests that institutional ownership impacts on discretionary decisions and real activities manipulation. To examine the influence of institutional ownership on the earnings management, a proxy, hereafter INSTIT, is employed (Koh, 2003). INSTIT is calculated as the total shares owned by institutional investors divided by the total shares outstanding (Koh, 2003).

Following Gugler, Mueller and Yurtoglu (2008), there will be the inclusion of institutional shareholders with shareholding above 1%.

3.3 Measuring Earnings Management

Teoh et al. (1998) find that the firms with high earnings management tend to under – deliver in the long-term. The above highlights the importance to measure the earnings management with proxies.

Dechow et al. (1995) show that abnormal accruals are used as an empirical indicator of earnings management. Many studies have developed proxies to measure the discretionary accruals (Healy, 1985; DeAngelo, 1986; Jones, 1991). One of the most sophisticated tools to measure discretionary accruals is the modified Jones model (Dechow et al., 1995). Regarding the real activities manipulation, Roychowdhurry (2006) develops different models that synthesize the proxy for real activities manipulation.

The selection of accruals-based earnings management and the real activities manipulation provides a more holistic view of the most widely-used methods for earnings management.

3.3.1 Measuring Discretionary Accruals

Dechow et al. (1995) employ the modified Jones model, which enhances the detection of earnings management. To compare it with the Jones model (1991), the approach followed is the deviation from the assumption that total revenues are non-discretionary. In the modified Jones model, the total accruals are regressed on gross property, plant, and equipment and the change in revenues are adjusted for changes in receivables. Dechow et al. (1995) assume that sales are not managed, but that the entire change in accounts receivable represents earnings management. The above implicates that the changes in the credit sales derive from earnings management (Peasnell et al., 2000; 2005). The residuals from the modified Jones model are considered to be the abnormal accruals (Dechow et al., 1995). Contrary to the above, Francis et al., (2005) support that the modified Jones model is not an effective tool to detect abnormal accruals since the total accruals are regressed on a narrow set of variables.

Prior studies (DeFond and Subramanyam 1998) have developed a cross-sectional model of the Jones model (Jones, 1991) to obtain a proxy for discretionary accruals. The model is estimated by industry and fiscal year, so as to control for industry-wide changes (DeFond and Jiambalvo, 1994).All variables (with the exception of the intercept) are scaled by lagged total assets to reduce heteroskedasticity (Peasnell et al., 2000).

Bartov et al. (2001) find that the cross – sectional modified Jones model outperform the time-series model in the detection of earnings management. In this study, the aforementioned cross – sectional model will be applied so as to avoid specification problems, survivorship bias problems and wrong assumptions of stationarity regarding the ΔREV and PPE (Peasnell et al., 2000; Koh, 2003).

The modified Jones model parameters are estimated based on the below cross – sectional OLS regression:

$$\frac{TACC_{i,t}}{TA_{j,t-1}} = \alpha_1 \left(\frac{1}{TA_{i,t-1}}\right) + \alpha_2 \left(\frac{\Delta REV_{i,t} - \Delta REC_{i,t}}{TA_{i,t-1}}\right) + \alpha_3 \left(\frac{PPE_{i,t}}{TA_{i,t-1}}\right) + \varepsilon_{i,t} \qquad (1)$$

TACCi,t =	total accruals of firm i for period t, measured as the difference between net income and cash flow from operations.
TAi,t =	lagged total assets.
ΔREVi,t =	change in revenues.
ΔRECi,t =	change in accounts receivable.
PPEi,t =	gross property, plant and equipment.
i,t =	firm and time subscripts.
εi,t =	residual term.

Industries with less than 5 observations have been subtracted from the sample.

Table 1: Selection Criteria

Active	20,139,449
Main stock exchange: London Stock Exchange	1,478
Very large & large companies, active with recent detailed financials	1,442
US SIC (exclusion of financial institutions, mining companies and regulated firms)	887
Institutional ownership (Banks and Financial companies, Insurance companies, Hedge funds, Mutual & Pension Funds/Nominees/Trusts/Trustees, owning together between 5% and 100%)	796
Annual market capitalization: Top 250, 2016, 2015, 2014, 2013, for all the selected periods, exclusion of companies with no recent or limited financial data	212
Years with available accounts: 2016, 2015, 2014, 2013, 2012	196
Less: companies with missing data	(10)
Less: companies with US SIC industry code with less than 5 observations	(64)
Total	122

3.3.2 Measuring real activities manipulation

Managers manipulate discretionary accruals so as to distort the real financial results. Zang (2007) has demonstrated that management uses interchangeably, meaning as substitutes, the accrual manipulations and real earnings management.

Roychowdhury (2006) sheds light on real activities manipulations, which he defines as managerial actions that deviate from normal business practices, so as to meet predefined earnings thresholds. His findings suggest that firms tend to (1) increase sales providing price discounts or less constraining credit terms; (2) increase the production, so as to inflate the inventory value and lead to lower cost of goods sold; (3) manipulate the discretionary expenses,

meaning the decrease of R&D, advertising and SG&A expenses, to demonstrate higher operating margins.

Based on the proxies developed by Kim et al. (2011), there will be estimation of the real activities manipulation using: 1) abnormal levels of operating cash flows (AB_CFO), 2) abnormal production costs (AB_PROD), 3) abnormal discretionary expenses (AB_EXP), and (4) a combined measure of real activities manipulation (hereafter COMBINED_RAM). The first three proxies are measured as the residual from the corresponding industry – year models. The COMBINED_RAM is calculated based on the expected directions of the first three variables: AB_CFO - AB_PROD + AB_EXP. The methodology followed for real activities manipulation is outlined in the Appendix.

The results from the above metrics will show if there is consistency between the institutional ownership and the real activities manipulation. If there is consistency, the high (low) level of institutional presence will be positively (negatively) interwoven with AB_CFO, AB_EXP, COMBINED_RAM and negatively (positively) with AB_PROD.

3.4 Empirical models

We evaluate the relationship between ownership structure and earnings management by calculating the following OLS regressions:

$$DACCR_t^+ = \alpha_0 + \alpha_1 INSTIT_t + \alpha_2 INSTIT_t^2 + \alpha_3 COMB\_RAM_t + \alpha_4 PB_t + \alpha_5 SIZE_t + \alpha_6 LEV_t + \alpha_7 ROA_t + \alpha_8 BIG4_t + \varepsilon_t$$

$$COMB\_RAM_t = \alpha_0 + \alpha_1 INSTIT_t + \alpha_2 INSTIT_t^2 + \alpha_3 DACCR_t^+ + \alpha_4 PB_t + \alpha_5 SIZE + \alpha_6 LEV_t + \alpha_7 ROA_t + \alpha_8 BIG4_t + \varepsilon_t$$

Where,

$DACCR^{+}$	: the value of income – increasing discretionary accruals, where discretionary accruals are calculated according to the cross-sectional modified Jones model.
COMB_RAM	: ABN_CFO - ABN_PROD + ABN_DISEXP.
ABN_CFO	: the abnormal operating cash flows.
ABN_PROD	: the abnormal production costs, where production costs are interpreted as the sum of the cost of goods sold and change in inventory.
ABN_DISEXP	: the abnormal discretionary expenses, where discretionary expenses are the sum of Advertising, Research and Development, and Selling General and Administrative Expenses.
INSTIT	: the proportion of firm's stocks owned by institutional investors who possess at least 1% of common stock.
$INSTIT^{2}$	: the square value of institutional ownership.
PB	: the price – to – book value ratio.
SIZE	: the natural logarithm of total assets.
LEV	: the ratio of long-term debt to total assets.
ROA	: the net income to total assets ratio.
BIG4	: the dummy variable: 1 if the auditor is one of the big 4 companies and 0 otherwise.
ε_t	: the residual term.
α_0	: the constant.
$\alpha_1 \; to \; \alpha_7$	: the coefficients.

3.5 Control Variables

There will be also inclusion of control variables, such as the price – to – book value ratio (PB), to capture the growth effect, the size, the leverage of the companies, so as to capture the capital structure, the return on assets ratio (ROA) that captures the financial performance, but as well the auditing by Big 4 firms that is an indicator of the quality of the financial reports (Koh, 2003; Kothari et al., 2005; Cohen & Zarowin, 2010; Kim et al., 2011).

The above variables are selected due to their complementary role in decomposing the earnings manipulation. The price – to – book value ratio introduces the growth effect as a control variable. The growth rate captures the earnings management incentives and it is a financial performance measure (Kothari et al., 2005; Cohen & Zarowin, 2010; Kim et al., 2011). Roychowdhurry (2006) delineates that the growth opportunities, but as well the size of the firms, are the primordial independent variables that interpret earnings management. The growth is captured by the price – to – book ratio (PB) and it is associated with large accruals (McNichols, 2002; Larcker et al., 2007).

Watts and Zimmerman (1990) delineate that the firm size is associated with accounting malfeasance. According to the principal – agent literature, agency problems arise between shareholders and managers of large firms where ownership is widely dispersed (Berle and Means, 1932). Large firms exert additional pressure on their management to report earnings according to the projections (Carlson & Bathala, 1997; Pincus and Rajgopal, 2002). Consequently, managers are being pressured to achieve the above demand (Lo, 2008). Following a slew of prior studies, the applied proxy SIZE is estimated as a natural logarithm of totals assets.

The leverage of a firm is an indicator of how well the company fulfils its debt and contractual obligations. Close to default on debt covenants, there is a higher possibility for maltreatment of financial results (Watts and Zimmerman, 1986; 1990; Sweeney, 1994). The proxy for leverage, hereafter LEV, is calculated as the ratio of long-term debt to total assets (Cotter, 1998; Ramsay and Sidhu, 1998).

There will be the inclusion of ROA as well, which captures the firm performance and how efficiently a firm manages its assets so as to deliver profitability (Kothari et al., 2005; Kim et al., 2011).

The large auditing firms are perceived to bring a breadth of quality into the financial statements (Becker et al., 1998). Regarding the inclusion of the audit firm size as a proxy for audit quality, there are several studies that use a dummy variable for Big Four/non-Big Four membership (DeAngelo, 1981; Becker et al., 1998, DeFond 1992; DeFond and Jiambalvo, 1994). BIG4 will be the proxy for the audit quality, so as to estimate if the dominance of reputable auditing firms contributes to financial reporting integrity. DeAngelo (1981) argues that large auditing firms provide more transparency and credibility over the financial statements due to their independence. Following Becker et al. (1998), auditor quality is anticipated to have a negative association with discretionary accruals. Big auditing firms scrutinize their clients so as to reassure the absence of stains on their reputation. The fear of reputation loss is a driving force for the emphasis placed on the financial statements trustworthiness.

4. Results

Proceeding with the regression, the observations are narrowed in 318 because I have chosen to examine the income - increasing discretionary accruals. In case that the study was entrenched in unsigned discretionary accruals there will reduction in the power of the tests (Wang, 2014). The dispersion over the years and the different industries follows:

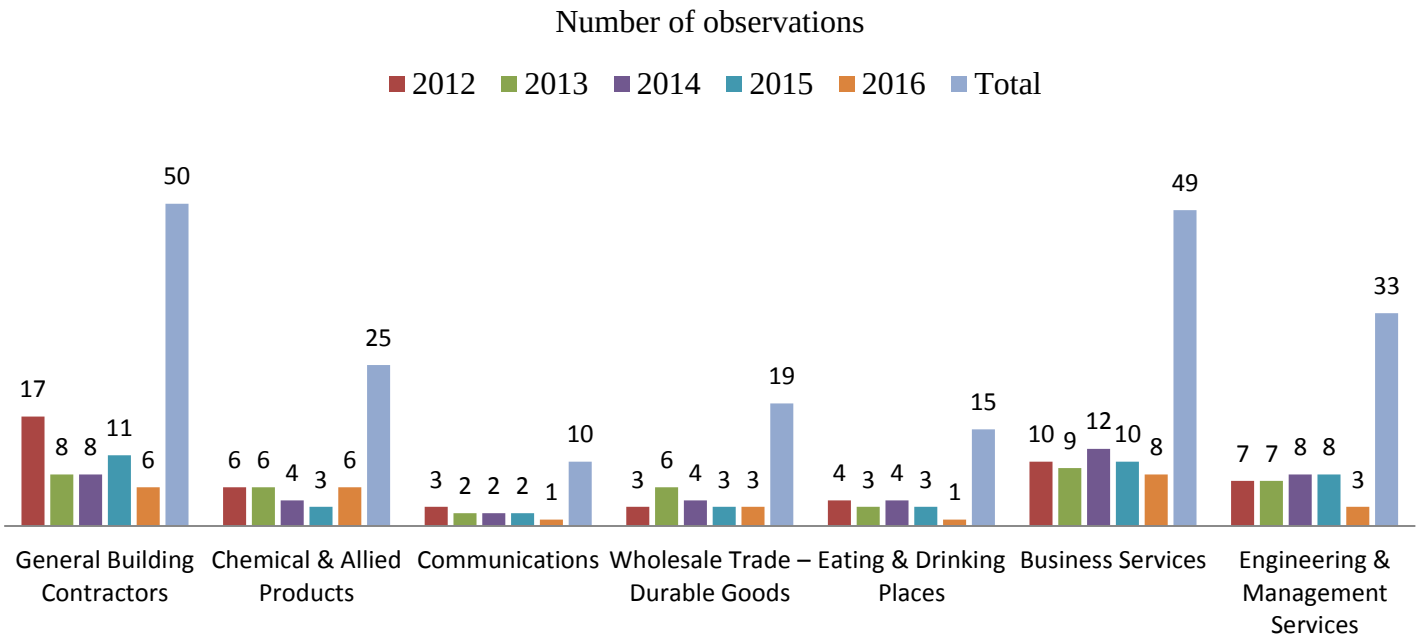


Table 2 presents the summary of the descriptive statistics. The mean for the income – increasing discretionary accruals is approximately 4% and its median is 2%. The institutional ownership is determined with the proxy INSTIT. The institutional investors hold, on average, approximately 25% of total shares outstanding of the sample firms. The above finding concerns the top ten holders who exert the more influential role. The above result is consistent with Farinha (2003) in which he identifies that the mean for the institutional ownership in British firms is approximately 24%. The variable COMB_RAM reflects the real activities manipulation and its mean is – 6%. The negative sign is consistent with the perception that discretionary accruals and real activities manipulation act as surrogates (Wang, 2014). Additionally, the PB ratio indicates that more than the half sample firms are considered to be attractive investment choices. Regarding the profitability of the sample firms, the findings suggest that the assets are

being efficiently invested and yield profits. The results suggest that the leverage, LEV, is quite low with a mean of 18.16%. It is worthwhile to mention that the 75% of the sample firms have a leverage ratio of less than 29%. Farinha and Foronda (2009) find evidence that in Common Law countries the leverage has a median less than 30%. An 8.4% mean for the ROA delineates the profitability of the firms, which is consistent with the 7% of Farinha and Foronda (2009). Concerning the audit quality, the results demonstrate that the majority of the sample firms are being audited by a big 4 auditor (mean 97.17%).

Table 2: Summary of Descriptive Statistics

Variable	Mean	Std. Deviation	Min	Max	p25	Median	p75
$DACC^{+}$	0.03627	0.04062	0.00001	0.19378	0.00495	0.02093	0.05322
INSTIT	0.24817	0.15600	0.05000	0.90720	0.14270	0.21310	0.31180
$INSTIT^{2}$	0.08585	0.12124	0.00250	0.82301	0.02036	0.04541	0.09722
COMB_RAM	-0.06207	0.40661	-2.28361	1.06446	-0.28458	-0.01093	0.16479
Control variables							
SIZE	7.49743	1.47007	4.44265	10.90614	6.41346	7.45408	8.41936
PB	3.54192	4.43959	-14.68000	31.87000	1.42000	2.54500	4.29000
LEV	0.18159	0.15603	0.00000	0.64687	0.04242	0.15845	0.28811
ROA	0.08428	0.06213	-0.07000	0.29000	0.04000	0.07000	0.12000
Dummy variable							
BIG4	0.97170	0.16610	0.00000	1.00000	1.00000	1.00000	1.00000

$DACC^{+}$, discretionary accruals; COMB_RAM, real activities manipulation; INSTIT, percentage of institutional ownership; $INSTIT^{2}$*, square of percentage institutional ownership (INSTIT); PB, price – to – book value ratio; SIZE, natural logarithm of total assets; LEV, ratio of long-term debt to total liabilities; ROA, return on assets; BIG4, auditor dummy variable (1 if a firm is audited by Big 4 auditors, 0 otherwise), number of observations: 318; years: 2012 – 2016.*

The Spearman correlation matrix follows and defines the correlations among the income-increasing discretionary accruals, real activities manipulation, the institutional ownership and the rest control variables. The results are displayed in Table 3.

Income – increasing discretionary accruals are positively associated with ROA, consistent with the results in Jiang & Anandarajan (2009) and negatively associated with PB, LEV and SIZE. The findings coincide with the results of Kim et al. (2011). Watts and Zimmerman's (1990), Mitra and Cready (2005) have claimed that due to political costs large firms display greater vigilance regarding the discretionary accruals so as to confront the analysts and the shareholders. The low leverage (18%) in alignment with the negative association with the discretionary accruals finds further support in DeAngelo et al. (1994). Their study provides evidence that firms are anchored in low leverage to avoid violation of debt covenants.

The institutional ownership is negatively associated with SIZE and ROA. Besides, it is negatively associated with the LEV variable, which is consistent with Carlson and Bathala (1997), Koh (2003), Hsu and Koh (2005). The COMB_RAM variable as an explanatory variable is positively correlated with PB and ROA. Roychowdhurry (2006) points out that firms with high growth are more pressured to meet earnings targets, thus they tend to employ earnings management practices. Regarding the positive correlation with ROA, the finding is consistent with Kim et al. (2011). SIZE proxy is negatively associated with the PB ratio, suggesting that large firms may have a smaller growth. The aforementioned variable is positively associated with the leverage, which is consistent with the bibliography that larger firms have less restrictive covenants for leverage (Cotter, 1998; Koh, 2003; Hsu & Koh, 2005; Kim et al., 2011). The PB ratio is positively associated with ROA, which coincides with the findings of Kim et al. (2011).

Table 3: Spearman correlation matrix among positive DACC, real activities manipulation, institutional ownership and other control variables

	$DACC^{+}$	INSTIT	$INSTIT^{2}$	COMB_RAM	SIZE	PB	LEV	ROA	BIG4
$DACC^{+}$	1.0000								
p-value	–								
INSTIT	-0.1067	1.0000							
p-value	0.0573	–							
$INSTIT^{2}$	-0.1067	1.0000	1.0000						
p-value	0.0573	0.0000	–						
COMB_RAM	-0.0226	-0.0229	-0.0229	1.0000					
p-value	0.6881	0.6841	0.6841	–					
SIZE	-0.1373	-0.2419	-0.2419	0.0664	1.0000				
p-value	0.0143	0.0000	0.0000	0.2376	–				
PB	-0.1097	0.0256	0.0256	0.1415	-0.2663	1.0000			
p-value	0.0507	0.6495	0.6495	0.0115	0.0000	–			
LEV	-0.0550	-0.1597	-0.1597	0.0781	0.5783	-0.0676	1.0000		
p-value	0.3281	0.0043	0.0043	0.1648	0.0000	0.2292	–		
ROA	0.3133	-0.1153	-0.1153	0.2254	-0.2529	0.2526	-0.2859	1.0000	
p-value	0.0000	0.0400	0.0400	0.0000	0.0000	0.0000	0.0000	–	
BIG4	-0.0561	0.2454	0.2454	0.0478	0.0310	0.0241	0.0399	-0.0900	1.0000
p-value	0.3188	0.0000	0.0000	0.3954	0.5820	0.6690	0.4787	0.1091	–

All p – values are two – tailed. $DACC^{+}$, income – increasing discretionary accruals; INSTIT, percentage of institutional ownership;$INSTIT^{2}$, square of percentage institutional ownership (INSTIT); COMB_RAM, real activities manipulation (ABNCFO-ABNPROD+ABNDISEXP); PB, price – to – book value ratio; SIZE, natural logarithm of total assets; LEV, ratio of long-term debt to total liabilities; ROA, return on assets; BIG4, auditor dummy variable (1 if a firm is audited by Big 4 auditors, 0 otherwise).

4.1 Regression analysis

The results have spawned considerable interest due to the fact that the variables INSTIT and $INSTIT^{2}$ have negative and positive sign respectively. Both coefficients of the above variables are statistically significant. Their signs (negative for INSTIT and positive for $INSTIT^{2}$) imply that the relation is quadratic.

Table 4: OLS Regression Results - Discretionary accruals

Variable	Coefficient	t-statistic (p-value)
INSTIT	-0.081673	-2.04000
		(0.04200)**
$INSTIT^2$	0.1672832	3.29000
		(0.00100)***
DACC	-0.0118559	-2.18000
		(0.03000)**
SIZE	-0.0017944	-1.00000
		(0.31900)
PB	-0.0012948	-2.58000
		(0.01000)***
LEV	0.044722	2.73000
		(0.00700)***
ROA	0.2413691	6.45000
		(0.00000)***
BIG4	0.0004521	0.04000
		(0.97200)
_CONS	0.0305828	1.49000
		(0.13800)
Adjusted R^2		0.15040

$DACC^+$, discretionary accruals; COMB_RAM, real activities manipulation; INSTIT, percentage of institutional ownership; $INSTIT^2$, square of percentage institutional ownership (INSTIT); PB, price – to – book value ratio; SIZE, natural logarithm of total assets; LEV, ratio of long-termdebt to total liabilities; ROA, return on assets; BIG4, auditor dummy variable (1 if a firm is audited by Big 4 auditors, 0 otherwise), number of observations: 318; years: 2012 – 2016.

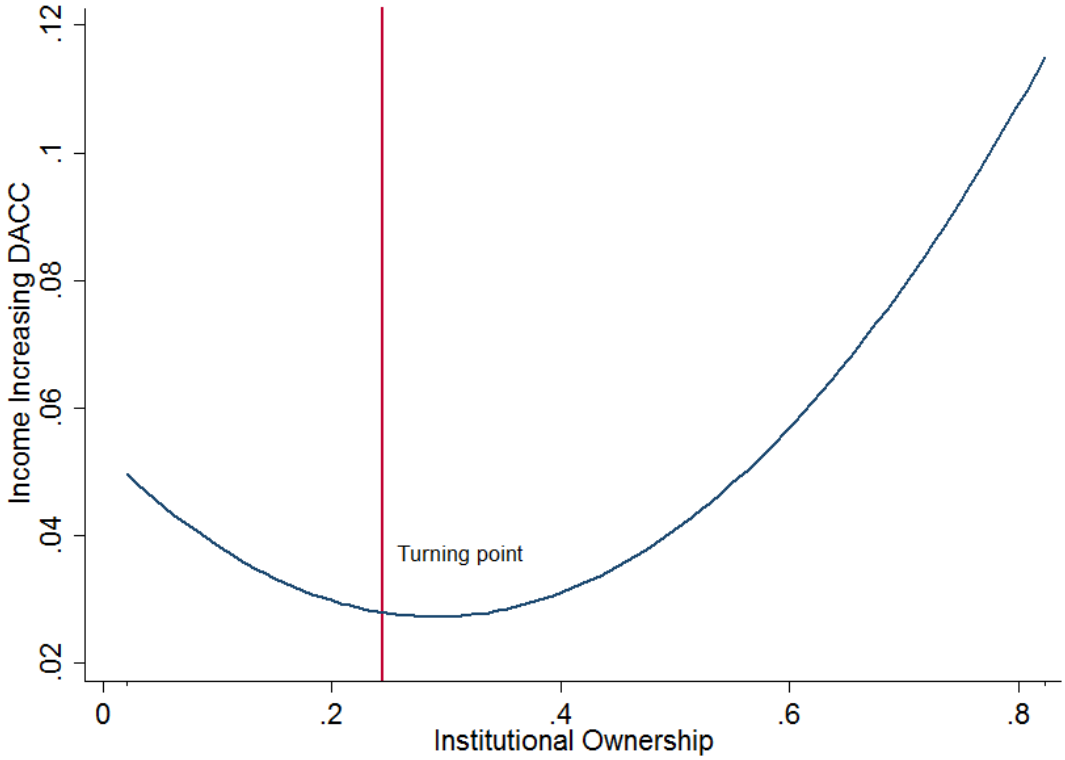
****, **, * indicate statistical significance levels at 1%, 5% and 10% respectively, having applied a two – tailed test*

The institutional variable is statistically significant at 5% and it is negatively associated with the discretionary accruals. Consequently, the above signs explain that the income – increasing discretionary accruals in association with INSTIT and $INSTIT^2$ follow a non – linear relation. The above finding implies that a higher concentration of ownership puts impetus to income-increasing discretionary accruals. Jara-Bertin, López-Iturriaga & Foronda (2012) found that higher stakes of institutional investors (captured as $INSTIT^2$) imply a higher concentration of power and control, which may be detrimental for the benefits of the rest shareholders. Simultaneously, a smaller percentage of institutional investors are a catalyst in constraining earnings management. Jara-Bertin, López-Iturriaga & Foronda, (2012) find evidence that a lower institutional involvement is an effective mechanism for corporate governance.

Following the studies of Utama and Cready (1997), Koh (2003), Farinha and Foronda (2009) there will be the calculation of the "turning point". The "turning point" in this case will be the minimization point between the discretionary accruals and the institutional ownership:

$$\text{Minimization point} = -b_2/(2*b_3) = - (-.081673)/(2*.1672832) = 24.41\%$$

A non-linear relation between institutional ownership and income-increasing discretionary accruals is identified where the institutional ownership exerts a quadratic influence to discretionary accruals. The above result might be an extension of the quadratic relation between the active institutional owners and the firm value (Navissi and Naiker, 2006). Navissi and Naiker (2006) find evidence in New Zealand, a common law country, that the impact of active institutional investors above the threshold of 30% shareholding might be detrimental for the firm value. Earnings smoothing could distort the market's assessment of the corporate value and its access to fundraising from the external capital markets (Burns et al., 2006).



A further analysis should be performed to understand the dynamics of this relation. The findings suggest that below the threshold of 24.41% there will be a curtailment of earnings management and consequently a higher transparency of the financial reports. Above the turning point there will be upwards earnings management as long as the institutional ownership increases. Based on prior studies, the possible reasons behind the above result might be: 1) the institutional investors may be aligned with the management and its preference for self – serving behaviour and 2) the institutional investors at high level of shareholding act as insiders. McColgan (2001) finds that as the shareholding increases, the propensity for self – serving behaviour is higher. When there are close business ties between the managers and the shareholders, managers forge the institutional blockholders to vote in alignment with their recommendations (Cvijanović, Dasgupta & Zachariadis, 2016). This might render the institutional investors more pressure sensitive (Brickley et al., 1988) so as to consent to management decisions. Long-term institutional investors may favour the entrenched management as their relationship may evolve into a mutually beneficial one (Pound, 1988). Jara-Bertin, López-Iturriaga & Foronda (2012) purport that institutional owners such as banks or insurance companies due to their expertise

and their involvement in the corporate performance and in the investment decisions urge the formation of “controlling coalitions” with the managers that galvanize firm misconduct. Zhong, Gribbin and Zheng (2007) find evidence that outside blockholders might be induced in higher returns and exert pressure to the management resulting in accruals manipulation.

Wang (2014) states that a high level of institutional ownership could be associated with the tendency of institutional investors to pursue their own interests and be less engaged in monitoring. Claessens et al. (2002) provide evidence that ownership concentration by blockholders exert negative impact on the residual of minority shareholders. Jiang & Anandarajan (2009) suggest that high levels of transient investors have a negative impact on the protection of shareholders rights and the management curtailment. Leuz et al. (2003) contend that controlling shareholders may follow their private benefits and be enticed to earnings smoothing at the expense of the non – controlling shareholders. Jara-Bertin, López-Iturriaga & Foronda (2012) demonstrate that low institutional ownership in common law countries gears up the corporate performance, while when it is high, there is a possibility of performance deterioration. The above finding is consistent with the relation between firm quality decrease and the institutional ownership (Jennings, 2005).

A higher concentration of institutional ownership, above 25%, might be regarded as transforming institutional investors to insiders. Though the existence of pure insiders in Common Law countries is considered to be low (Farinha and Foronda, 2009; Jara-Bertin, López-Iturriaga & Foronda, 2012). Bushee (2004) classifies investors as transient, quasi – indexers and dedicated investors. He states that dedicated investors, who are considered to be farsighted, are not sensitive to the high level of disclosure. The above finding is attributable to their high ownership stake which delegates them an insider role. Actually, Farinha and Foronda (2009) measure insider ownership as the percentage of managerial ownership, but as well the ownership with all the shareholders with a holding above 5% of total shares. Consequently, Farinha and Foronda (2009) claim that in Common Law countries institutional and insider ownership is interlinked. Bushee and Goodman (2007) show that institutional investors are better informed than individual investors, a role mostly attributable to insiders. Fan and Wong (2002) demonstrate that concentrated ownership is linked with private benefits with respect to the insider knowledge. The UK, belonging to common law countries, has potent mechanisms to protect investors (LaPorta et al., 1998), nevertheless in case that the high ownership of stakes by institutional investors is

translated as insider ownership, this might be associated with earnings management. Insiders are positively associated with more opaque financial statements (Gopalan & Jayaraman, 2012). Leuz et al. (2003) find corroboratory evidence that insiders are more inclined to misspecification of the reported earnings. Viewed in this light, as insider ownership increases, insiders (managers and investors with over a 5% stake in a firm) tend to pursue their own interests and they consent to increased dividend payouts so as to shadow their prolific profile (Farinha & Foronda, 2009). The turning point at the 24.41% is in accordance with the study of Farinha (2003) who finds a turning point in the U-shape relation between the insider ownership and the dividend payouts at the 30% level. Complimentary to the above, Matsumoto (2002) finds a positive association between higher institutional ownership and earnings management. Earnings management practices are followed so as to influence earnings forecasts and eliminate negative earnings surprises (Matsumoto, 2002).

It follows the presentation of the OLS results for the real activities manipulation. Table 5 reports the results of the regression. The findings show that the institutional ownership is not associated with the real activities manipulation.

Zang (2007), Cohen et al. (2008) Kim et al. (2011) point out that discretionary accruals and real activities manipulation act as surrogates. The below findings show a negative association between income- increasing discretionary accruals and real activities manipulation. In the case of the UK landscape, the institutional investors are associated with the income - increasing discretionary accruals but there is no evidence for such an association with the real activities manipulation. Consequently, institutional investors are not involved with managerial discretion regarding the operations of the firm. This might be attributable to the fact that the engagement in real activities manipulation, even if it is a less detectable falsification (Kothari et al., 2005), is a costly procedure and detrimental for firm's value which stems from its future cash flows (Roychowdhurry, 2006; Zhao et al., 2012). Cohen and Zarowin (2010) associate real earnings management with the poor investment decision- making which could pose in danger the corporate performance. Gunny (2005) contends that real earnings management hinders the long-term operating performance of a firm. It should be highlighted that the above findings are framed within this specific sample of firm.

It is noticeable that the discretionary accruals are statistically significant and negatively associated with REM, which coincides with the wider literature (Graham et al., 2005; Zang, 2007; Cohen et al., 2008; Kim et al., 2011). More specifically, the negative relation stems from the strong association with the abnormal CFO. Besides, COMB_RAM is associated positively with leverage and ROA. The above results demonstrate that firms with higher leverage and more profitability are more likely to be engaged in earning management through real activities manipulation.

At this point, the attention should be drawn on the abnormal cash flow from operations (ABN_CFO) due to the high explanatory power of the model (41%). There is a positive association between ABN_CFO with the SIZE and ROA, meaning that larger and more profitable firms are more engaged in distortion of the real operations. Consistent with the literature, REM have a negative association with the BIG4 auditing firms.

Regarding ABN_PROD, the findings suggest a negative relation with SIZE, PB and ROA. Consequently, large and profitable firms, with high growth opportunities, do not implement manipulation regarding the production costs which could jeopardize the firm's long-term viability.

Concerning ABN_EXP, there is a positive association with the leverage, meaning that higher leverage might invoke the increase of the abnormal expenses. There is as well a positive association with ROA and BIG4, which suggests that more profitable firms exert manipulation of the expenses.

Table 5: OLS Regression Results - Real Activities Manipulation

	ABN_CFO	ABN_PROD	ABN_EXP	COMB_RAM
Variable	Coefficient (t-stat)	Coefficient (t-stat)	Coefficient (t-stat)	Coefficient (t-stat)
$DACC^{+}$	-0.71943	0.0804	0.53404	-1.13635
	(-11.27000)***	0.1700	1.24000	(-1.93000)*
INSTIT	-0.11451	-0.2315	-0.41754	0.33915
	-1.44000	-0.4700	-0.92000	0.46000
$INSTIT^2$	0.13119	0.0369	-0.37999	-0.05483
	1.57000	0.1000	-1.10000	-0.07000
SIZE	0.00579	-0.0280	-0.00621	0.02763
	(2.86000)***	(-2.3300)**	-0.57000	1.48000
PB	0.00084	-0.0086	-0.00271	0.00675
	1.46000	(-2.5200)**	-0.87000	1.27000
LEV	-0.00913	-0.0898	0.33061	0.41126
	-0.49000	-0.8100	(3.27000)***	(2.39000)***
ROA	0.45412	-0.6479	0.60230	1.70433
	(10.43000)***	(-2.5000)**	(2.55000)**	(4.24000)***
BIG4	-0.02988	-0.0168	0.15423	0.14112
	(-1.97000)**	-0.1900	(1.88000)**	1.01000
_CONS	-0.02385	0.3520	-0.35622	-0.73207
	-0.91000	2.2500	-2.50000	-3.02000
Adjusted R^2	0.41320	0.06050	0.04210	0.06840

DACC, discretionary accruals; COMB_RAM, real activities manipulation; INSTIT, percentage of institutional ownership; INSTIT^2, square of percentage institutional ownership (INSTIT); PB, price – to – book value ratio; SIZE, natural logarithm of total assets; LEV, ratio of long-term debt to total liabilities; ROA, return on assets; BIG4, auditor dummy variable (1 if a firm is audited by Big 4 auditors, 0 otherwise), number of observations: 318; years: 2012 – 2016.

****, **, * indicate statistical significance levels at 1%, 5% and 10% respectively, having applied a two – tailed test*

4.2 Sensitivity analysis

A further sensitivity analysis has been performed to delve into the robustness of the above findings. For this reason, a second regression was run which incorporates the institutional ownership with a holding of above the 5% threshold, following Wang (2014). According to the results, there is no significant difference with the aforementioned findings and signs for the lower and higher institutional ownership. A decrease in the explanatory power of the model is observable. Jiang and Anandarajan (2009) found that the decrease of the percentage of institutional ownership impacts on the explanatory power of the model.

An additional regression analysis was run taking into consideration the absolute value of discretionary accruals. The sample observations rise to 610. The signs regarding the institutional ownership remain the same as well, with no significant difference. In order to perform a further analysis, a performance-matched model, as developed in Kothari et al. (2005), was applied and the regression analysis provided similar results. The variables INSTIT and INSTIT^2 were statistically significant at a 1% level and their signs were negative and positive respectively.

Likewise, the calculation of the real activities manipulation, taking into account an institutional ownership of above 5% and income-increasing discretionary accruals, showed no association with the institutional ownership. It is interesting that above the 5% holding, institutional ownership and negative- increasing discretionary accruals render the INSTIT variable significant at a 10% level, while the INSTIT^2 is marginally non – significant at an 11.20% level. The signs are negative and positive respectively implying a quadratic relation with real activities manipulation.

The performance -matched model for real activities manipulation displayed similar results with the cross-sectional modified Jones model. There is no association between real activities manipulation and institutional ownership. The above findings remain unchangeable even if there is estimation of the model with a holding of the 5% institutional ownership.

5. Conclusions

The countervailing views regarding the role of the institutional investors highlight the distance from a point of convergence. It is conceivable that a problem with high possible nonlinearities and interactions among the independent variables leads to the aforementioned results. The findings of this study highlight the positive association between the institutional ownership and the earnings management. More specifically, the institutional ownership above the 24% level tends to adhere to income – increasing discretionary practices. The self-serving behaviour and the alignment with managerial interest-based behaviour are identified as the potential causes. Regarding the association between the institutional ownership and the real activities manipulation, the results suggest the existence of no relation. The inclusion of more variables would provide more evidence about the levers for real activities manipulation (Graham et al., 2005; Zang, 2007; Cohen et al., 2008).

The findings of this study can be an impetus for further research, which is going to include further variables to capture the multi-dimensionality of institutional ownership and the earnings management employing a wider sample of firms. Chen and Reitenga (2009) assert that the relation between institutional ownership and earnings management is efficiently captured only if there is an inclusion of the characteristics of the institutional investors. Actually, as mentioned in Leuz et al. (2003), institutional ownership is a difficult variable to be decomposed due to the existing endogenous relations. According to Wang (2014) and Jiang & Anandarajan (2009), the institutional ownership can be stipulated in a threefold way: 1) the percentage of holding, 2) the investment horizon and 3) the strategy implementation. Jiang and Anandarajan (2009) point out the difficulty to distinguish the transient and not – transient investors on a percentage basis. Besides, the model itself entails amendments, as mentioned in Kothari et al. (2005).

Nevertheless, the role of the institutional investors is an obvious catalyst for the financial performance and the longevity of a public firm. Overall, the extant literature on earnings management suggests that institutional ownership influences the financial reporting integrity.

The existence of articulate corporate governance rules proves that the wheels for a better stewardship scheme are already in motion (Developments in Corporate Governance and Stewardship, 2017). Though, the substantiality of their role is defied, if there is not the appropriate enforcement of the existing rules (Cheffins, 2010). It is pivotal to scrutinize the enforcement of the rules, so as to reassure that reforms start to bear fruits. The different interests and divergent investment thinking of institutional shareholders dictate their investing behaviour (Bushee, 2001). Not all of them are on the same page; at the one end there are the ones with more incentives to be active, whilst at the other end, there are the shadowy figures (Bushee, 2001). Initiatives from various organizations, such as the Investment Association, have been organized so as to help investors to make more – informed investment decisions and encourage their involvement and accountability.

Identifying further areas of improvement, there should be reassurance that all the interfering parts, i.e. money managers and corporate managers act in the best interest of the shareholders (Developments in Corporate Governance and Stewardship, 2016). Institutional owners should act as effective stewards that guarantee the informativeness of the earnings and increase the confidence in financial reporting. Institutional investors should close gaps in a systemic way and treat their stewardship role not as a sideshow but as an integral of their investing behaviour (Correia, 2010).

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APPENDIX

MEASUREMENT OF EARNINGS MANAGEMENT PROXIES

Real Activities Manipulation

Further to the studies of Roychowdhury (2006) and Cohen et al. (2008), it is anticipated that operating cash flows are decreased due to sales manipulations. To estimate the operating cash flows, the model developed in Roychowdhury's study (2006) will be employed:

$$\frac{CFO_t}{TA_{t-1}} = a_0 + a_1\left(\frac{1}{TA_{t-1}}\right) + \beta_1\left(\frac{S_t}{TA_{t-1}}\right) + \beta_2\left(\frac{\Delta S_t}{TA_{t-1}}\right) + \varepsilon_t$$

CFO_t	= cash flow from operations in year t
TA	= total assets
S	= net sales
ΔS	= $S_t - S_{t-1}$

For every firm-year, abnormal cash flow from operations (AB_CFO) is the residual (i.e. ε_t) from the relevant industry-year model and the firm-year's sales and lagged assets.

Another measure of real activities manipulation is abnormal production costs. Prior studies (Roychowdhury, 2006; Cohen et al., 2008; Zang, 2011) define production costs as the sum of COGS and change in inventory during the year, and they express expenses as a linear function of contemporaneous sales:

$$\frac{COGS_t}{TA_{t-1}} = a_0 + a_1\left(\frac{1}{TA_{t-1}}\right) + \beta\left(\frac{S_t}{TA_{t-1}}\right) + \varepsilon_t$$

$COGS_t$ = The cost of goods sold in year t

The model for inventory normal growth:

$$\frac{\Delta INV_t}{TA_{t-1}} = a_0 + a_1\left(\frac{1}{TA_{t-1}}\right) + \beta_1\left(\frac{\Delta S_t}{TA_{t-1}}\right) + \beta_2\left(\frac{\Delta S_{t-1}}{TA_{t-1}}\right) + \varepsilon_t$$

$\Delta \mathrm{INV}t$ = the change in inventory in year t

Prior studies (Roychowdhury , 2006; Cohen et al., 2008; Badertscher , 2011 and Zang, 2011) provide the roadmap for the definition of the production costs (PROD = COGS + ΔINV):

$$\frac{PROD_t}{TA_{t-1}} = a_0 + a_1\left(\frac{1}{TA_{t-1}}\right) + \beta_1\left(\frac{S_t}{TA_{t-1}}\right) + \beta_2\left(\frac{\Delta S_t}{TA_{t-1}}\right) + \beta_3\left(\frac{\Delta S_{t-1}}{TA_{t-1}}\right) + \varepsilon_t$$

The third component of real activities manipulation is the abnormal discretionary expenses. Following Roychowdhury (2006), Cohen et al. (2008), and Zang (2011), the estimate of the normal level of discretionary expenses is calculated by using the following equation:

$$\frac{DISEXP_t}{TA_{t-1}} = a_0 + a_1\left(\frac{1}{TA_{t-1}}\right) + \beta\left(\frac{S_t}{TA_{t-1}}\right) + \varepsilon_t$$

$DISEXP_t$ = the discretionary expenses in year t, defined as the sum of R&D, Advertising, and SG&A expenses.

For every firm-year, abnormal discretionary expenditure (AB_EXP) is the residual from the model.

Following Cohen et al. (2008), there will be the construction of a combined measure of real activities manipulation. By aggregating the three individual real activities manipulation proxies, AB_CFO, AB_PROD, and AB_EXP. Considering the direction of each real activities manipulation components, the combined measure, COMBINED_RAM, is calculated as AB_CFO - AB_PROD + AB_EXP.