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The Influence of Large Shareholders on Earnings Management in the pre- and post IFRS periods

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This study examines the relation between large shareholders and earnings management for public firms in Europe, in the pre- and post IFRS periods. Large shareholders are often considered as sophisticated investors. Sophisticated investors may play an important role in mitigating stock mispricing due to earnings management. Following the association between the ownership level of all large shareholders and earnings management, the relation between the ownership level of five types of large shareholders and earnings management will be examined. These types are: banks, pension funds, insurance companies, mutual funds, and family firms. This study will also try to shed some light on whether mandatory adoption of International Financial Reporting Standards (IFRS) is associated with lower earnings management among firms with large shareholders.

Preface

This thesis is the final product of the master program Accounting, Auditing and Control at the Erasmus University of Rotterdam. At the beginning of my university studies the writing of my thesis seemed as an impossible task. Now that I have successfully accomplished this thesis I want to thank all those people who have supported me one way or another.

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1. Introduction

1.1 Introduction

This study examines the relation between large shareholders and earnings management for public firms in Europe, in the pre- and post IFRS periods. Large shareholders own a large percentage of the equity capital market in Europe (Thomsen et al., 2005). Large shareholders are often considered as sophisticated investors (Balsam et al., 2002; Jiambalvo et al., 2002; Collins et al., 2003). Sophisticated investors may play an important role in mitigating stock mispricing due to earnings management (Collins et al., 2003). Two competing views concerning the effect of large shareholders on earnings management will be examined. First, large shareholders, have the ability to play a more active role in monitoring and disciplining management than small shareholders, which might mitigate earnings management (Jensen and Meckling 1976; Shleifer and Vishny 1986). Second, large shareholders require a higher return from their investment and may intervene the firm's management, and can increase managers' incentives to conduct income increasing earnings management (Shleifer and Vishny 1986, Holderness and Sheehan 1988, and Barclay and Holderness 1991). The large shareholders can pursue in this way their own goals, which can be different from the goals of the minority shareholders. When small shareholders are not satisfied with the performance of the management, they can sell their stock. For large shareholders this situation is different. The large shareholders have to adopt a long term strategy, since selling a large block of stock often means a decrease of the stock price. Monitoring the management is thus more beneficial for large shareholders than for small shareholders. Large shareholders, who own at least 5 percent of a firm's outstanding common stocks, can play an important external mechanism to govern managers (Shleifer and Vishny, 1986)¹.

Following the association between the ownership level of all large shareholders and earnings management, the relation between the ownership level of five types of large shareholders and earnings management will be examined. These types are: banks, pension funds, insurance companies, mutual funds, and family firms. According to Black and Coffee (1994) each type of large shareholder participates in a different degree in the corporate governance of firms. A study of Bushee (2001) and Del Geurcio (1996) shows that banks have a high incentive in monitoring their equity stakes. They have a long term orientation. Koh (2003) argues that

¹ Shareholders' interests in Dutch listed public companies are disclosed under the Dutch Act on the Disclosure of Major Holdings in Listed Companies (Wet melding zeggenschap en kapitaalbelang in effectenuitgevende instellingen (Wmz 2006)). Shareholders owning 5 percent or more will be denoted as large shareholders.

large shareholders who are long-term oriented are likely to reduce earnings management, which means that bank ownership in firms is negatively related with earnings management. Pension funds are long-term oriented investors and may efficiently contribute in monitoring management²; this could imply that a high level of pension fund ownership in firms is negatively related with earnings management. Insurance companies invest their received premiums in equity stakes (Bushee, 2001). Insurance companies are in general also seen as long-term oriented investors (Black and Coffee, 1994; Bushee, 2001). For insurance companies also a negative relation between the level of ownership and earnings management may exist. For mutual funds no prediction is made about the direction of the relation between the ownership level and earnings management, because mutual funds have both a long- and short-term characteristic (Black and Coffee, 1994). For family firms a positive relation between the level of ownership and earnings management is predicted, because managers with high equity stakes are likely to report earnings to meet the forecasts of analysts or might even try to beat the forecasts. (Cheng and Warfield, 2005).

This study will also try to shed some light on whether mandatory adoption of International Financial Reporting Standards (IFRS) is associated with lower earnings management among firms with large shareholders. The influence of large shareholders on accrual-based earnings management in the period leading to the passage of IFRS and in the period following the IFRS will be investigated. Prior research has not extensively researched the link between earnings management, IFRS and large shareholders. Prior research however has shown us different view about the association of IFRS and earnings management. The transition of IFRS could result in a positive (Armstrong et al. 2008), negative (van Beest, 2008) or could have no effect (van Tenderloo and Vanstraelen, 2008) on earnings management.

1.2 Research questions

The research question of this study is as follows:

‘What is the effect of large shareholders on earnings management in the pre- and post IFRS periods in Europe?’

1.2.1 Research sub questions

The following sub questions are formulated to answer the research question:

² Gertrude Tumpel-Gugerell, Member of the Executive Board of the ECB, Euro Finance Week. Frankfurt am Main, 18 November 2008

‘What is earnings management?’

‘Which incentives do managers have to use earnings management?’

‘How can earnings management be detected?’

‘Is there a relationship between the ownership level of five types of large shareholders and earnings management?’

‘Is there a relationship between earnings management, large shareholders and IFRS?’

‘What do the analyses of the results show us?’

1.3 Relevance

The paper is aimed at a broad spectrum of students, researchers, investors, debt holders, and auditors interested in learning more about the influence of large shareholders and earnings management, and whether the adoption of high quality standards means more high quality information, and would lead to lower earnings management. For these parties it is interesting to know what influence large shareholders have on earnings management. Especially investors might learn more about companies where large shareholders serve as monitors and might reduce earnings management; or they may learn more about companies reporting under IFRS and see if more high quality financial reporting might lead to less earnings management. Reporting under IFRS does not always have to lead to more high quality information, since local GAAP could also be of high quality.

Prior studies suggest that large shareholders serve as monitors, and reduce earnings management (DeFond and Jiambalvo, 1991, Dechow et al., 1996). Another study finds no relationship between large shareholders and earnings management (Beasley, 1996). This paper contributes to the broader literature on large shareholders and earnings management. The purpose of this paper is to review the influence of large shareholders on earnings management in a more recent study, and whether the adoption of IFRS has resulted in a reduction in earnings management. Prior research does not specifically examine the influence of banks, pension funds, insurance companies, mutual funds, and family ownership on earnings management altogether. Also the link between earnings management, IFRS and large shareholders has not been researched. The purpose of IFRS is to increase the transparency and quality of financial reporting through the protection of individual shareholders (Hope et al., 2006). The prediction is that IFRS has a negative impact on large shareholders, since the minority shareholders will be protected more in the period following IFRS; due to the increased transparency of financial reporting. The minority shareholders face in a lesser extent the possibility of being expropriated by large shareholders.

1.4 Sample

The sample of this study consists of public firms in the countries France, Germany, the Netherlands, and the United Kingdom. The focus will lie on these countries, because (1) these countries have a well-developed capital market; (2) high data availability; and (3) institutional differences between these countries are representative of the institutional differences in Europe (Coppens and Peek, 2004). This study wants to draw conclusions for Europe as a whole, and since these four countries are comparable with other countries in the European Union, it is expected that these countries are a suited sample for the European Union.

1.5 Methodology

The study will be carried out by dividing the sample period into two time periods: the period prior to the passage of IFRS, from 2002 through 2004, and the period after the passage of IFRS, from 2005 through 2007. Data will be collected using the databases Thomson One Banker and Amadeus. The use of databases is useful since this paper will examine discretionary accruals, instead of real activity accruals. Based on (Dechow et al., 1995; and Cheng and Reitenga, 2001, Ronen and Yaari, 2008) the Modified Jones Model will be used to estimate discretionary accruals. The Modified Jones model will be estimated cross-sectionally (as in DeFond and Jiambalvo, 1994). Subramanyam (1996) and Bartov et al. (2000) show that this approach is to be preferred over time-series estimation of the models. The discretionary accruals will be regressed against the variables of large shareholders, five different types of large shareholders and IFRS to test their effect on managers' discretionary accounting decisions, after controlling for debt, size, growth, loss, and liquidity. Each of these control variables will be described.

1.6 Outline

In the next chapter earnings management will be described. Here different definitions will be provided and also the following topics will be addressed; the incentives to manage earnings, the earnings management techniques, how to detect earnings management. Chapter three will describe large shareholders and provides the first hypotheses related to large shareholders and earnings management. Chapter four will address IFRS and will also provide a hypothesis which will be related to IFRS, earnings management and large shareholders. In chapter five the research design will be discussed and chapter six will describe the research results. Finally, in chapter seven the conclusion, limitations and future research will be addressed.

2. Earnings Management

2.1 Defining Earnings Management

Earnings management has a lot to do with accrual accounting. Dechow and Skinner (2000), note that the border between earnings management and accrual accounting has become blurred. It deals with managers choosing accounting policies and accounting accruals, most likely for personal gain. Managers are responsible for the performance of their firm; they also have the most power to influence the financial numbers in the short run to achieve their objectives. The actions of the managers that have consequences on the reported earnings numbers and key figures can be summarized under the term 'earnings management'. Accounting regulations do not constrain managers' choices of accounting policies and procedures completely (Scott, 2006); this makes it possible for earnings management to take place. Laws and regulation have some flexibility in the way of determining earnings and the manner of presentation and explanation in the financial statements. Between the boundaries of the accounting policies, managers are given some considerable ways to choose a policy that best fit their private purposes. Earnings management thus takes place without violating accounting regulation. By having certain choices in policy, management are giving the possibility to influence the financial information it publishes. This means that management is able to manage earnings. Earnings are an important object for managers to manipulate, since earnings are the ultimate performance measure. Many parties, such as investors, banks, employees, and other parties are interested in the financial information that is provided by the management to build their decisions on. The outcomes of the financial information thus, have an impact on the decisions of different stakeholders. Management is aware of this and will want to choose the best policy at that moment.

What does earnings management really mean? Defining the term earnings management is not an easy task, because there is no single description of earnings management. In the literature different definitions can be found, which may be positive, neutral or negative. A frequently used description is given by Healy and Wahlen (1999):

“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) give a negative view on earnings management; managers do not present the financial information of the firm in a fair manner, and mislead the stakeholders in this way. Management that intervenes in the accounting process is not presenting a true view on the financial information they provide and will have influence on the decision made by the users of the financial information. These decisions will be different when no intervention had taken place.

Another negative approach of earnings management can be defined through the information perspective, which means that managers have the opportunity to reveal their private information. Such a definition is given by Schipper (1989):

“Disclosure management in the sense of a purposeful intervention in the external financial reporting process, with the extent of obtaining some private gain, as opposed to merely facilitating the neutral operation of the process.”

Earnings management can also have a positive value. Beneish (2001) state that earnings management is a way for managers to disclose their private expectations about the firm’s future cash flows to investors.

According to Fields, Lys, and Vincent (2001), earnings management will occur, because managers have the flexibility to choose accounting treatment, whereby they can maximize their own utility. In contrast to the definition of Healy and Wahlen (1999), the consequence of earnings management will not harm the stakeholders. This is a neutral approach on earnings management. Ronen and Yaari (2008) have also investigated the different definitions of earnings management. They classify the definition of earnings management as white, gray and black. Where white is earnings management that improves the transparency of the statements, where the manager’s private information on future cash flows is signaled. Black earnings management involves the reduction of transparency on the financial reports. Grey earnings management involves choosing an accounting method that is either opportunistic or economically efficient.

In this paper all views will be taken into consideration, since no distinction can be made between the different intentions behind earnings management. Earnings management could however have a negative impact; this makes it interesting to investigate. The negative view shows that managers take actions with the intention to mislead some stakeholders to try to reach certain objections. Management can have a number of incentives to mislead

stakeholders by manipulating reported earnings number. The management and large shareholders can both have incentives to mislead stakeholders.

2.2 Incentives to manage earnings

Managers have different incentives to apply earnings management. Management may provide financial statements that do not provide a true and fair view of the firm's value. The reason why they behave in this way are diverse: they include pressure to satisfy analyst expectations, or to maintain a competitive position in the market. A study of Burgstahler and Dichev (1997) conclude that firms manage earnings to avoid low net gains and losses. They show that there are low frequencies of small decreases in earnings (and small income) and unusually high frequencies of small increases in earnings (and small positive income). Burgstahler and Dichev (1997) have based their research on more than 64,000 U.S. companies. They found that 30 - 44% of loss-making companies and 8 - 12% of the companies with a low net profit have manipulated the earnings. In the next sections various intentions that influence accounting principles that managers choose are discussed.

2.2.1 Political motives

Taxes, tariff regulations and investigations by regulators may give incentive to manage earnings (Watts and Zimmerman, 1986). The reason is that large profitable firms are more subject to the scrutiny of regulatory authorities. The political cost hypothesis predicts that larger firms are more likely to choose to manage earnings downward because otherwise they may face 'political cost'. The larger the company, the more political attention the company may receives. Regulators can impose e.g. corporate taxes and subsidies to effect the wealth distribution of firms. A study of Han and Wang (1998) during the Persian Gulf crisis shows that government raised tax rates on oil to benefit from higher profits. The Persian Gulf crisis was a period that was characterized by low oil production and rising fuel prices. The managers of these oil companies felt compelled to use the LIFO method. Firms using the LIFO method can reduce their reported profits by purchasing extra inventory (Frankel and Trezevant 1994). The cost would increase and ultimately the net profits will decrease. The oil companies wanted to avoid that the tax rates would increase again. Jones (1991) has analyzed whether companies that would benefit from import relief attempt to decrease earnings through earnings management during an investigation by the United States International Trade Commission (ITC). Import relief is defined as: 'several measures taken by the government to

temporarily restrict import of a product or goods to protect domestic products from competition'. Protection can be in the form of providing subsidies, offering loans with low interest rates and providing tax exemption. Jones (1991) concluded that managers of companies who can benefit from import relief could act in their own self-interest. The suited companies reduced net income using discretionary accruals during import relief investigation by the ITC. These companies attempted to convince the government that their earnings were under pressure.

2.2.2 Bonus Contract motives

According to Watts and Zimmerman (1990) managers use income-increasing accounting methods if bonus contracts are in place. Healy (1995) concludes that managers use earnings management to create a maximum bonus value. On the basis of positive accounting theory Healy (1985) introduces three scenarios in which managers try to steer profits. Healy (1985) bases the bonus on net income and uses a lower (bogey) and an upper (cap) bound. If the profit is below the lower bound the managers receives no bonus. When the profit is equal or higher than the upper bound the mangers will receive the maximum bonus. The bonus increases linearly between the lower bound and the cap.

- In scenario 1, the profit is below the lower bound and the manager will not receive a bonus. The manager intention is to use accruals to reduce net income. This to increase the probability of receiving a bonus in the future. Part of the profit in period 1 will be shift to period 2.
- If net income is between the lower and upper bound, the managers' intention is than to use income-increasing accruals. The reason behind this is to increase profit to eventually receive a maximum bonus.
- If net income exceeds the cap, the highest threshold, the manager tends to reduce net income there where the maximum bonus has been reached. The profits are shifted to the future, so the bonus for the coming years will be positive.

A study of Guidry, Leone en Rock (1999) has tested the bonus-maximization hypothesis of Healy (1985), by using a few innovations. They analyze whether management is likely to maximize short-term bonuses by the use of discretionary accruals. The analysis is carried out by using business unit-level data and the bonus paid to the management are based only on business unit earnings. The evidence is consistent with the findings of Healy (1985).

Holthausen, Larcker and Sloan (1995) have as well extended the work of Healy (1985). Like Healy, they find evidence consistent that management use income-decreasing accruals when their bonuses are at their maximum. However, no evidence is found that management manipulate the earnings downwards when earnings are below the lower bound.

2.2.3 Debt Agreements motives

A risk neutral lender can make a choice of investing in a business or in government bonds. When investing in a company the lender will run some risk. There is a chance that the company will go bankrupt. This risk will be offset by a higher interest rate on the loan. A company has two options regarding the distribution of profits to shareholders as compensation for the capital they provide. That is distributing dividends or not. If the company pays excessive dividends it could be detrimental to the continuity of the company (Scott, 2006). The lender runs the risk that his deposit will not be refunded. To reduce the risk, contracts will be drawn up to ensure that the company will not distribute special dividend payment or attract additional loans. Contracts do not always prescribe which accounting principles to choose, so managers could manage earnings within the boundaries of GAAP. They may, for example, switch to another inventory valuation method. This will ensure managers that contracts are not violated. A breach on the conditions will affect the freedom of the managers.

DeAngelo, DeAngelo and Skinner (1992), have examined 76 companies during a period from 1980 to 1985 that have recorded poor results. They found that about half of those companies with positive profits have adjusted the dividend downwards in the first loss-making year, for at least ten years. The study also showed that only 1% of all the profitable companies lowered the dividend to be paid. According to Dichev and Skinner (2001) there are only a few companies that violate the debt contracts. There are many companies that reach the conditions of the contract exactly. These companies use discretionary accruals to ensure that the contract will be met. Defond et al. (1994) have examined that companies that are close to the border of contract violation use more discretionary accruals in the current and the past year than other companies.

2.2.4 Capital market motives

Another reason to use earnings management can be found on the capital market. Investors and financial analysts use accounting information to determine the value of shares. For managers this can be a motive to influence the stock in the short term to make them seem more valuable

than they actually are. This may lead to investors be more willing to invest extra in the company (Healy & Wahlen, 1999).

Several studies have shown that the way that earnings management is applied, depends on the specific situation. DeAngelo (1988) did research on earnings management around 'management buyout'. Her conclusion was that managers of 'buyout' companies have an incentive to manage earnings downward in order to obtain the shares at a lower price. In the study of Teoh, Welch and Wong (1998), they show that there is a high information asymmetry between investors of companies that go public for the first time (IPO) and the managers of these companies. These companies issue shares to raise capital. It is a difficult task to assess the value of these IPO shares. The net profit is often an important tool to determine the value of these shares (Scott 2006). According to Teoh et al (1998), Friedlan (1994), managers of the IPO companies have the intent to set profits as high as possible, because this will lead to a higher price per share.

If the reported earnings are ultimately lower than the forecasts of analyst, the share price would decline; according to Dechow and Skinner (2000). This is because investors anticipate news. If there is good news (bad news) the price per share increases (decreases). If a company, for some period of time, continues to report 'poor' results, the company will hit financial problems. Once stakeholders recognize that the company is in difficulty, they will show defensive behavior, such as insisting on a faster payment of claims, or to provide additional collateral to the bank.

2.3 Earnings management techniques

The earnings management incentives described above resulted in a manipulation of the income number. In this paragraph the techniques of earnings management discerned by Levitt (1998) will be discussed. The former SEC chairman Arthur Levitt addressed five earnings management techniques in which companies were managing their earnings. These five are: 'big bath' accounting, creative acquisition accounting, 'cookie jar reserves', the materiality concept, and early recognition of revenue.

The first technique described by Levitt (1998) is 'taking a bath'. These charges appear mostly in case of organizational stress or in case of companies' reorganizations. It is essential for companies to operate efficiently and profitably. Problems may arise, because reorganizations are often associated with high restructuring costs. To clean up the balance sheet, the company will take a "Big Bath". This means the company will exaggerate the restructuring costs. Managers reason that if a company must report a loss, they might as well report a large loss.

The reason of this action is because the stock market will look beyond a one-time loss and focus on future earnings.

Levitt (1998) also discusses creative acquisition accounting. This type of earnings management takes place around acquisitions. For a long time it was possible to use one of the two accounting methods during a merger or acquisition: the pooling of interest method or the purchase accounting method. The pooling of interest method combines the balance sheet of two firm where no goodwill will be created. With the purchase accounting method the difference between the purchase price (at book value) of an acquisition and the fair value recorded as goodwill (Bois Evan & Kuipers, 2005³). The pooling of interest method is however no longer allowed; since no goodwill is created managers could pay large sums for an acquisition with little accountability on the balance sheet.

Levitt (1998) stressed in his speech that the purchase accounting method can lead to lower future profits. Companies are not willing to admit this outcome, thus they pretend that a portion of the acquisition price as “in process” research and development costs. Then the companies can directly expense these costs to the profit and loss account.

With cookie jar reserves’ companies will build up reserves during the good times, to limit the losses in bad times. In a bad year the company can use this reserve for paying expenses. In this way the underlying economic performances of the company are looking better. Cookie jar reserves can lead to income smoothing. Incomes are then spread over the years to improve the volatility of the firm (Levitt, 1998). IFRS has limited the opportunity for taking provisions (IAS 37). A provision should be recognized when and only when⁴:

- (a) An entity has a present obligation (legal or constructive) as a result of a past event;
- (b) It is probable (i.e. more likely than not) that an outflow of resources is required to settle the liability.
- (c) A sound estimate can be made of the amount of the liability.

Levitt (1998) also discussed ‘the materiality concept’. In this form of earnings management the term materiality is the key. The International Accounting Standards Board (IASB) Framework for the preparation and presentation of Financial Statements" defines materiality as follows:

“Information is material if its omission or misstatement could influence the economic decisions of users taken on the basis of the financial statements.”

³ fusie & overname april 2005 Realiseerbare waarde als grondslag

⁴ International Financial Reporting Standards, IASC Foundation Education

Applying materiality creates more flexibility in the accounting standards, due to the fact that determining whether something is material or not, is subjective in nature. Managers have the choice not to act objectively. Managers have the incentive to report only those figures, which are material. They will not report the immaterial facts, but these figures may be useful. The users of the financial information could be misled in this way (Levitt, 1998).

The last technique that Levitt (1998) mention is, improper revenue recognition. Revenues are already recognized, even if the sale has not been completed yet. Think about products that have not been delivered to the customers yet, or when the customer can still cancel the order. In this manner, the company can increase the revenue in that particular year.

2.4 Detecting earnings management

It is very difficult to detect earnings management, since managers are using the flexibility in the accounting standards to manage the earnings. It is common to use accrual models to detect earnings management. Accruals are best defined as the difference between the results and the cash flow (Ronen and Yaari, 2008). The cash flow that a company generates is the basis of every company. For small companies the cash flows are often easy to oversee. Large companies, however, requires more information than cash based information. Stakeholders of large companies often want more information on the overall situation of the company and want to know what the future will hold. Accrual-based accounting is introduced to help create this information. Accrual-based accounting is the most accepted way of accounting, and is required by IFRS, US GAAP and other standards.

Accruals occur when revenues and expenses are recognized when they are accrued. Managers can manipulate accruals at the end of the financial year. Manipulations in accruals are a suitable form of earnings management, because it will not directly affect the cash flow. In contrast to the accrual manipulation, real activity manipulation has influence on both cash flows and accruals (Roychowdhury, 2003). With real earnings management the underlying operations of the firms are changed (Gunny, 2005). An example of real earnings management is to cut prices toward the end of a year to speed up sales from the next fiscal year into the current year. Real earnings management is harder to detect than accrual management, because it is more difficult to distinguish real earnings management activities from business activities, which is why this study will focus on accrual management. Accruals are normally divided in two groups, non-discretionary accruals and discretionary accruals (or abnormal accruals). Non-discretionary accruals are accruals where normally a manager is not able to manipulate

it. Discretionary accruals, in contrast, are possible to be controllable for the manager. An example of a discretionary accrual is the account provision for bad debtors, since the assessment of this account is very subjective. In the literature several models are developed to separate the discretionary and the non-discretionary accruals. With the accrual models earnings management can be defined as the activity between the estimated discretionary accruals, based on the information of last year, and the actual discretionary accruals. Because discretionary accruals are not directly observable, proxies are used for discretionary accruals. In the literature several models are discussed to detect earnings management through discretionary accruals. The discretionary accruals models look at the differences that exist between the cash flow of a company and its net income. To measure the discretionary accruals, first the total accruals (the sum of the discretionary and the non-discretionary accruals) need to be determined. Then the discretionary accruals are separated from the non-discretionary accruals. In 1995 Dechow, Sloan and Sweeney published an article that discussed several models used to detect earnings management through accruals and also created a model with more power than the models tested. In their study they discussed the following five accruals models; Healy (1985), DeAngelo model (1986), Jones model (1991), the modified Jones model, and the Industry model (1991).

Healy (1985) and DeAngelo (1986) were the first in measuring earnings management with use of total accruals and the change in total accruals; they also measured management's judgment over earnings. The Jones model is using a regression approach to measure non-discretionary accruals. According to the Jones model there is a linear relation between the total accruals and the change in sales and property, plant and equipment (PPE). Dechow et al. (1995) developed a modified version of the Jones Model. According to the modified Jones model the changes in revenues are adjusted for the change in receivables in the event period. The industry model (1991) focus on a specific industry and use internal knowledge from companies within the industry to determine how the discretionary and non-discretionary components behave.

In the next paragraphs the five accruals models of Healy, DeAngelo, Jones, Modified Jones, and the industry model will be addressed shortly; but also a two recent models; one from Peasnell et al., the margin model (2000), and the other from Kothari et al. (2005), the performance-matched model, will be discussed.

2.4.1 The Healy model (1985)

Healy (1985) was one of the first researchers in trying to detect earnings management, by estimating deviations from the average. This model was different because it assumes that systematic earnings management takes place in every period. Healy (1985) starts with total working-capital accruals. Total accruals (TA_t) are defined by:

$$ACR_t = \frac{(\Delta CA_t - \Delta CL_t - \Delta CASH_t + \Delta STD_t - \Delta DEP_t)}{A_{t-1}}$$

Where,

ACR	= total working capital accruals
ΔCA	= change in current assets
ΔCL	= change in current liabilities
$\Delta CASH$	= change in cash and cash equivalents
ΔSTD	= change in debt included in current liabilities
DEP	= depreciation and amortization expense
A	= total assets

Healy parts his sample by comparing three groups. In one group earnings management is presumed to be managed upwards and in the other two groups' earnings are presumed to be managed downwards. The group of observation where it is presumed that earnings are to be managed upwards are treated as the estimation period and the group of observations where it is presumed that earnings are to be managed downwards are treated as the event period. The mean total accruals from the estimation period then represent the measure of nondiscretionary accruals (NDA). This leads to the following model for determining NDA (Dechow et al., 1995).

$$NDA_t = \frac{\sum_t TA_t}{T}$$

Where:

NDA	= estimated nondiscretionary accruals;
TA	= total accruals scaled by total assets;
T	= 1, 2, ... T is a year subscript for years included in the estimation period; and
τ	= a year subscript indicating a year in the event period.

Discretionary accruals are the result of deducting the nondiscretionary accruals from the total accruals. Earnings management is seen as any deviation from the average (Praag, van; 2001).

2.4.2 DeAngelo (1986)

The DeAngelo (1986) model does not differ much from the Healy model. In the DeAngelo model the period of estimation for non discretionary accruals is focused on the prior year observation. The total accruals of the previous year are the measure of non discretionary accruals. This means that non-discretionary are equal to the total accruals of the last period (Bartov et al., 2000).

$$NDA_t = TA_{t-1}$$

The changes between this period and the previous period are seen as discretionary accruals. Both the Healy and the DeAngelo model assume that nondiscretionary accruals are constant over time, and that changes can only be discretionary. If nondiscretionary accruals are constant over time and discretionary accruals have a mean of zero in the estimation period then the model will measure nondiscretionary accruals without error (Bartov et al., 2000). If nondiscretionary accrual will vary over time, then the both models will measure nondiscretionary accruals with error. (Dechow et al., 1995).

2.4.3 The Jones (1991)

The Jones model (1991) improves the models of Healy and DeAngelo by controlling the effects of changes in a firm's economic circumstances on nondiscretionary accruals. Jones abandoned the assumption that non-discretionary accruals remain constant. The Jones model takes the change in revenues (thus also the growth of the firm) into account and adds the total amount of property, plant and equipment. The Jones model includes the change in revenue and the total amount of property, plant and equipment; because Jones recognized that accruals depend on the business activities of a firm. The Jones model for determining non discretionary accruals is:

$$NDA_t = \alpha_1 \left(\frac{1}{A_{t-1}} \right) + \alpha_2 (\Delta REV_t) + \alpha_3 (PPE_t)$$

Where,

- NDA_t = the nondiscretionary accruals in the event period
- ΔREV_t = revenues in year t less revenues in year t-1 scaled by total assets at t-1
- PPE_t = gross property plant and equipment in year t scaled by total assets at t-1
- A_{t-1} = total assets at t - 1
- α1, α2, α3 = firm-specific parameters

Estimates of the α_1 , α_2 , and α_3 are generated using the following model in the estimation period:

$$TA_t = \alpha_1 \left(\frac{1}{A_{t-1}} \right) + \alpha_2 (\Delta REV_t) + \alpha_3 (PPE_t) + \varepsilon_t$$

Where TA stands for total accruals scaled by lagged total assets, while, α_1 , α_2 , and α_3 denote the ordinary least squared estimates of α_1 , α_2 , and α_3 . In the Jones model the predicted value of the regression is the normal level of accruals and is referred to as non discretionary accruals (NDA). Discretionary accruals (DA) are the residual of TA and NDA. In this way, earnings management activities can be found.

A limitation of the Jones model is the fact that earnings could be managed through influencing revenues, e.g. by adding revenue at the end of the year that are not earned yet and for which no cash has been received. The Jones model will then be biased to zero and will make an incorrect assumption that there is no case of earnings management. (Dechow et al., 1995).

2.4.4 Modified Jones Model (1995)

Dechow, Sloan and Sweeney (1995) adjusted the Jones Model to eliminate the limitation of the original Jones model. The modified Jones model estimates nondiscretionary accruals during the period in which earnings management is assumed as:

$$NDA_t = \alpha_1 \left(\frac{1}{A_{t-1}} \right) + \alpha_2 (\Delta REV_t - \Delta REC_t) + \alpha_3 (PPE_t)$$

In this formula the variable ΔREC is added, which stands for net receivables in year t less receivables in year t-1 scaled by total assets at year t-1.

Estimates of the α_1 , α_2 , and α_3 are generated in the same way as in the original Jones model. The modified Jones model assumes that all variations in the credit sales in the event period are a sequence from earnings management. The reason behind this is that it is easier to manage earnings over the recognition of revenue on cash sales. If this adjustment in the Jones

model is a success, than the detection of earnings management should no longer be biased towards zero as it was in the original Jones model. (Dechow et al., 1995).

2.4.5. The industry model (1991)

The industry model (1991) developed by Dechow and Sloan assume like the Jones model that non discretionary accruals change over time. They assume, however, that the change is industry dependent. They eliminate the amount of change that is common within the industry and leave in this way the firm-specific change in accruals as a result. The Industry model for non discretionary accruals is:

$$NDA_t = \gamma_1 + \gamma_2 median_1(TA_t)$$

Where,

Median₁(TA_t) = the median value of total accruals scaled by lagged assets for all non-sample firms.

The firm-specific parameters γ_1 and γ_2 are estimated using ordinary least square on the observation in the estimation period.

2.4.6 The Margin Model (2000)

Peasnell et al. (2000) examines a new cross-sectional model to estimate abnormal accruals. In comparison to the Jones model and the modified Jones model, they estimate abnormal accruals using a two-stage procedure. Abnormal accruals are being estimated by regressing the accruals on a vector of explanatory variables to capture the accruals that are unmanaged (Peasnell et al., 2000). The explanatory variables are the same as used in the model of Dechow et al. (1995) linking sales, accruals and earnings. This model is based on working capital accruals; depreciation is locked out as the measure of accruals, because they assume that depreciation is unlikely to represent systematic earnings management (Peasnell et al., 2000). The margin model is presented as follow:

$$WCA_i = \lambda_0 + \lambda_1 REV_i + \lambda_2 CR_i + \eta_i$$

REV_i = total sales representing the proxy revenue from credit sales

CR_i = total sales minus the change in trade debtors representing cash receipts from creditors

$\lambda_0, \lambda_1, \lambda_2$ = regression coefficients

η_i = regression residuals

Comparing the Jones model and the modified Jones model with the margin model, Peasnell et al. (2000) and Alcarria Jaime & Albornoz Noguera (2003) found that the margin model is powerful in detecting non-bad debt expense manipulation. However, Peasnell et al. (2000) and Alcarria Jaime & Albornoz Noguera (2003) also show that the Jones model and the modified Jones model are superior at detecting revenue and bad debt manipulation.

2.4.7 The Performance-Matched Jones Model (2005)

The performance-matched model developed by Kothari et al. (2005) is actually an adjustment to the modified Jones model. To measure the discretionary accruals an additional variable Return On Asset (ROA) has been added to the modified Jones model. ROA is included because ROA can control the effect of performance on accruals (Kothari et al., 2005). To estimate the discretionary accrual models, they define total accruals (TA) as the change in non-cash current assets minus the change in current liabilities ruling out portion of long-term debt, minus depreciation and amortization, scaled by lagged total assets (Kothari et al., 2005). According to Kothari et al. (2005) the performance-matched model is powerful, although some errors can be observed. Kothari et al. (2005) conclude that the performance-matched model is useful in mitigating type one errors (reject the null hypothesis when the null hypothesis is true). However, their approach may increase the type two errors (fail to reject the null hypothesis when the null hypothesis is false). However, Kothari et al. indicate that the major concern lies with the type one error; which assumes that earnings management has occurred, when in fact it has not. Kothari et al. (2005) also mention that their study face three limitations. The first limitation is that they ignore the consequences of the errors enclosed in the total accruals. This means that it will possibly reduce the power in detecting earnings management. A second limitation is that their results may not be generalized to other research settings. A last limitation is that they cannot tell for sure that the performance-matched tests are always well specified.

2.4.8 Choosing the right model

After discussing the models above, it is important to choose the right model to use for this study. All the models described above have some limitations. Criticism given on the Healy model is that the changes in nondiscretionary accruals should not be equal to zero, because nondiscretionary accruals can be sensitive to performance (Ronen and Yaari, 2008). Just like

the Healy model, the DeAngelo model assumes that nondiscretionary accruals are constant, which is also a limitation of this model. The Jones model assumes that revenues are nondiscretionary; when earnings are managed through discretionary accruals the Jones model will then be biased towards zero and will make an incorrect assumption that there is no case of earnings management, since the part of the managed earnings will be removed from the discretionary accrual proxy (Dechow et. al., 1995). A problem with the industry model is that earnings management will not be detected if earnings management is common within the industry. The accruals will be seen as non-discretionary accruals in this way (Dechow et. al., 1995). The margin model may be more powerful in detecting non-bad debt expense manipulation, but is not superior in detecting revenue and bad debt manipulation (Peasnell et al., 2000). Their results do not show a significant difference in detecting earnings management than the modified Jones model. With the performance-matched model also some misspecification can be observed. One of them is that their approach may increase the type two errors (Kothari et al., 2005).

Dechow et al. (1995) have evaluated the five accrual models (the Healy model, the DeAngelo model, the Jones model, the modified Jones model, and the industry model) they concluded that the modified Jones model is the most powerful to detect earnings management, using 32 firms that are alleged to have overstated earnings published by the SEC. In another research of Guay et al. (1996) they also conclude that the modified Jones model presents the best in measuring earnings management. Guay et al. (1996) have evaluated five discretionary accruals models, these models are Healy (1985); DeAngelo (1986); Jones (1991); Modified Jones model; and the industry model. They use a sample of 31,372 firm-year observations New York and American Stock Exchange. Their evidence denote that the Healy, DeAngelo, and the industry models are not effectual in assessing discretionary accruals resulting from management opportunism or accruals improving earnings as a performance measure (Guay et al., 1996).

The modified Jones model has been used widely in the other studies, such as the study of Klein (2002) and Becker et al. (1998). The models by Kothari and Peasnell may be better, but these models have not proven there self yet. By using the modified Jones model in this study a comparison can be made with other studies that have used the modified Jones model to detect earnings management, since this model have been widely used. Therefore in this research the modified Jones model will be used. This model will be further explained in chapter five.

3. Large Shareholders

3.1 Ownership Structure

The corporate ownership problem compares two structures. The first structure is the dispersed ownership, where no shareholder has a significant stake. The second is the concentrated ownership structure; here a large shareholder effectively controls the firm.

The dispersed ownership problem is well known in the scientific literature. In 1776, Adam Smith published his legendary work “The Wealth of Nations”. Adam Smith writes about the case when control is separated from ownership in stock firms:

“The directors of such companies, however, being the managers rather of people’s money than of their own, it cannot be well expected, that they should watch over it with the same anxious vigilance with which the partners in private copartnery frequently watch over their own.”

More than a century and a half later, Berle and Means (1932) devoted an entire book on the effects of separation of ownership and control. Their classic book “The Modern Corporation and Private Property”, called attention to the prevalence of widely held corporations in the United States. Earlier organizations were small and the owners were also the managers. This changed during the Industrial Revolutions. The technological changes increased the size of many firms where no individual or family had sufficient wealth to own the entire firm (Holderness, 2003). Berle and Means (1932) claimed that investors are urged to be concerned towards separation of ownership, since it can have damaging effects on economic performance. Exactly two centuries after Adam Smith, the foundation for the agency prospective was provided. Jensen and Meckling (1976) stated that when management is separated from ownership, the management will not always act in the best interest of the owners. This can lead to unfavorable situations, where the management has greater incentives to manage earnings.

Demsetz and Lehn (1985) have casted their doubt on this discussion, and argued that no significant relation exist between ownership structure and company performance. After the discussion of separation of ownership and control, academics discovered that public corporations had large-percentage shareholders (Holderness, 2003). Demsetz (1983), Demsetz and Lehn (1985), Shleifer and Vishny (1986), and Morck, Shleifer and Vishny (1988) have shown that even at large American firms a discreet concentration of ownership may exist.

Holderness and Sheehan (1988) address whether the decisions of large firms are different when a firm has large shareholders. They found several hundred publicly traded firms with large shareholders in the United States. Holderness, Kroszner and Sheehan (1999) compared 1,500 public U.S. firms in 1935 with more than 4,200 listed firms in 1995. They found that management ownership in the United States is higher than it was when Berle and Means (1932) wrote their study. Studies in continental Europe (Franks and Mayer, 1994; and Barca, 1995), in Japan (Prowse, 1992), seven OECD countries (European Corporate Governance Network, 1997), and the developing economies (La Porta et al., 1998a), discovered significant concentrated ownership. According to Shleifer and Vishny (1986), concentrated ownership can overcome free rider problems that affect firms with dispersed ownership. They argue that concentrated ownership can be associated with more active corporate governance. According to Bebchuk (1999), however, concentrated ownership can be affected by private benefits and can negatively affect corporate efficiency. Ownership concentrations are, according to Bebchuk (1999), with weak corporate governance.

In this paper the focus will lie on the influence of large shareholders and earnings management. The next paragraphs will describe the different characteristics of large shareholders, and the relation of large shareholders and earnings management. First, a definition of large shareholders will be given. A large shareholder is defined as an owner holding at least 5 percent of the firm's outstanding common stock. Prior research may also use other definition of large shareholders. The motivation for using the 5 percent threshold in this study is that large shareholders who own at least 5 percent of a firm's outstanding common stock can play an important external mechanism to govern managers (Shleifer and Vishny, 1986).

3.2 Specific Features of Large Shareholders

Small, dispersed shareholders may find it costly to control and coordinate managers, which can lead to a severe agency problem. Large shareholders differ from small shareholders, since they have the power and the ability to play an active role in monitoring and disciplining management. Thus, large shareholders can play a role in mitigating these agency problems. As pointed out in the previous paragraph, Berle and Means (1932), argued that it is difficult for owners to control management, since public corporations tend to be owned by a large number of small shareholders. A fundamental problem with small, dispersed owners is that no shareholder has a large enough incentive to take action to ensure that the management is

acting in their best interest (Grossman and Hart, 1980). Large shareholders can mitigate these agency problems, because owning a large block may provide sufficient financial incentive to incur monitoring costs (Shleifer and Vishny (1986). Brickley et al. (1988) argue that the effectiveness of large shareholders as monitors is influenced by investor type. They find that certain types of large shareholders are more willing to challenge the management, and have the power to monitor the management, which makes it harder for management to manipulate accruals. Their results, however, suggest that only active institutional shareholders, such as mutual funds and public pension funds, will exercise this power. Cheng and Reitenga (2001), found evidence that non-active institutional shareholders, because of their relatively smaller stake in the firm, are more interested in the short-run performance. This will create pressure to increase earnings. They also found evidence that active institutional shareholders are more interested in the long-term performance, and have the power to monitor the management.

Large shareholders are oftentimes seen as sophisticated investors (Balsam et al., 2002; Jiambalvo et al., 2002; Collins et al., 2003). Balsam et al. (2002) assert that sophisticated investors may more easily and quickly recognize earnings management than unsophisticated investors. This because sophisticated investor are more well informed and they posses of more timely sources of information. Sophisticated investors can have access to information through private conversation with the management or use conference calls, in contrast to unsophisticated investors. Balsam et al. (2002) results are also consistent with their argument that sophisticated investors are better informed and that it is reflected in the stock prices of firms with large institutional shareholders.

Jiambalvo et al. (2002) argue that sophisticated investors are less likely to be fooled by management, because management recognize that large shareholders have better information gathering and processing resources than other investors. Their results are consistent with their view that large shareholders are sophisticated investors and are less likely to be mislead by manipulation of earnings. Jiambalvo et al. (2002) also provide evidence that as the extent of large shareholders increases, more information on feature earnings will be provided in the stock prices. This entails that that large shareholders are sophisticated investors and are better informed to predict future earnings. Collins et al. (2003) provide evidence that accrual mispricing is relatively less for firms with a high level of large shareholders. According to Collins et al. (2003) sophisticated investors can play an important role in mitigating stock mispricing due to earnings management.

Another theory, also known as the agency-problem II (Jara Bertin and López Iturriaga, 2008), describes the problem between large shareholders and minority shareholders. The minority

shareholders face the possibility of being expropriated by large shareholders. The main risk is that large shareholders can pursue their own goals, which can be different than that of the minority shareholders. Large shareholders may harm corporate value. La Porta et al. (1999) described that large shareholders have the power to monitor management, but at the same time they have the power, and the interest to expropriate the minority shareholders. Shleifer and Vishny (1997) argued that large investors can use their control rights to maximize their own welfare, by redistributing wealth from others. Large shareholders and managers can also collude to keep minority shareholders at bay (Hellwig, 2000). Because the interest of large shareholders and minority shareholders are not perfectly aligned, the large shareholders can expropriate minority shareholders via targeted issues and repurchases of securities, transfer of assets, and exploitation of a business relationship with affiliated companies through transfer pricing (Volpin, 2002). Large shareholders can also put more pressure on management to report favorable financial information; this will put extra pressure for management to engage in income increasing earnings management (Shleifer and Vishny 1986; Barclay and Holderness 1991).

Existing literature tell us, thus, that there are certain costs and benefits of having large shareholders in control. The risk that large shareholders pursue their own goals, can differ a great deal from profit maximization, and can even come at the expense of the small shareholders. Ownership of concentration can also be beneficial for small shareholders when the gains for monitoring outweigh the costs of managerial incentives (Burkart et al., 1997). When small shareholders are not satisfied with the performance of the management, they can sell their stock. For large shareholders this situation is different. The large shareholders have to adopt a long term strategy, since selling a large block of stock often means a decrease of the stock price. Monitoring the management is thus more beneficial for large shareholders than for small shareholders.

In this paper, we examine the effect of large shareholders on earnings management. The next paragraph will set out how these two competing views on large shareholders effect earnings management.

3.3 Large Shareholders and Earnings Management

Prior research provides empirical evidences that management (i.e. management who are also large shareholders) can use accruals to influence the accounting procedure decisions and adjust their income-reporting incentives (Healy, 1985). Like Healy, Holthausen et al. (1995) found evidence that managers manipulate earnings to adjust their income-reporting incentives.

Research of DeFond and Park (1997) shows that concern about job security creates an incentive for managers to consider anticipated future relative performance. They found that when current earnings are poor and expected future earnings are good, managers make income-increasing discretionary accruals in the current period. Conversely, when current earnings are good and expected future earnings are poor, managers make income-decreasing discretionary accruals in the current period.

Cheng and Warfield (2005), argue that high ownership concentration can lead to incentives for management to increase the value in the shares, and that earnings management behavior likely increases managers' wealth at the expense of outside shareholders. Cheng and Warfield (2005) investigate in their paper the connection between the equity incentives of managers from stock-based compensation and stock ownership and earnings management. Their sample consists of all firms from the Standard & Poor's database, for the period 1993-2000. The cross-sectional Jones model (1991) has been used to estimate discretionary accruals. Their hypothesis was that management with high equity incentives may use earnings management to increase the value of the shares, since the likelihood of selling the shares in the future is present. They indeed found as argued above that high ownership concentration can lead to incentives for management to increase the value in the shares.

Bushee (1998) examined whether institutional investors influence the decision for management to reduce the investment in R&D to meet short term targets. Their sample consist of all firm-years covering the period 1983 and 1994 with available R&D data, by U.S. corporate managers. Bushee (1998) classifies institutional investors into the following three groups: transient, dedicated, and quasi-indexer. This approach is based on their past investment patters. In this study transient investors are owners who hold small stakes in various firms and trade frequently. They are considered as short-term investors and are most likely to sell their stock when the firm reports disappointing earnings news, which creates an incentive for the management to avoid earnings disappointment (Bushee, 1998). Dedicated investors are owners who have a low portfolio turnover, long-term holdings, and are concentrated only in a few firms. The dedicated investors provide an incentive to monitor the management (Bushee, 1998). The third group is the quasi-indexers. The quasi-indexers are characterized by a high portfolio diversification and a low portfolio turnover. The fragmented ownership may lead to little incentive to monitor managers (Bushee, 1998).

A number of studies provide evidence that transient investors are likely to increase earnings management. Bushee (1998) finds that investors with the characteristics of transient owners, significantly increases the probability that managers reduce R&D to increase earnings.

Yue Liu and Peng (2008) examined the effect of transient and dedicated institutional investors on accrual quality. Using a sample of 24,005 firm-year observations over the period 1985-2003. Accrual quality has been measured by using the absolute value of accrual estimation errors. When the values of the accrual estimation error are large, this signifies lower accruals quality. Liu and Peng (2005) found evidence that a high ownership by transient institutional investor is associated with a significant higher likelihood of misstating earnings by management.

Matsumoto (2002) investigates whether certain firm characteristics are linked with the incentive to evade negative earnings surprises. The result suggest that firms with high transient investors manage earnings upward and guide analysts' forecasts downward to evade negative surprises. The study of Koh (2003) investigates the role of institutional investors in earnings management strategies, in Australia. The sample consists of 836 Australian firms covering the period between 1993 and 1997. Information is collected using the Compustat database. Discretionary accruals are used as a proxy of earnings management. The discretionary accruals are being estimated using the cross-sectional Jones model (1991). Koh (2003) finds a positive relation between transient investors and earnings management, i.e. transient investors can create incentives for management to manipulate earnings upwards.

When institutional investors own a large portion of stock they may reduce the probability of earnings management. Bushee (1998) finds evidence that managers are less likely to reverse a small earnings decline by cutting R&D expenses when institutional investors own a large part of a firm. According to Bushee (1998), large sophisticated investors monitor and discipline management, ensuring to maximize long-term value. Koh (2003) also found a negative relation between long-term oriented investors and earnings management, i.e. large long-term oriented investors monitors management and limits in this way the manipulation of earnings.

The previous paragraph described the two competing views on how large shareholders can affect management. The first view is that large shareholders have the power and the ability to play a more active role in monitoring and disciplining management than small shareholders. Second, the minority shareholders face the possibility of being expropriated by large shareholders. The main risk is that large shareholders can pursue their own goals, which can be different than that of the minority shareholders. In other words, large shareholders can influence earnings management in two, opposing directions. On the one hand, large shareholders can have a positive influence on earnings management due to the power and the ability of the large shareholders to effectively control and disciplining management, thus, earnings will be managed less. On the other hand, large shareholders can expropriate small

shareholders. Large shareholders require a higher return from their investment and may intervene the firm's management, and can increase managers' incentives to conduct income increasing earnings management.

Therefore, the influence of large shareholders on earnings management will be examined. The role of large shareholders who have the power to act as monitors and to challenge the management will be investigated. Further the problem between large shareholders and minority shareholders will be analyzed. The minority shareholders face the possibility of being expropriated by large shareholders. Hence, the following hypothesis will be tested:

H1: The presence of large shareholders in firms is negatively related to discretionary accruals (i.e. large shareholders mitigate earnings management behavior)

Following the association between the ownership level of all large shareholders and earnings management, the relation between the ownership level of five types of large shareholders and earnings management will be analyzed. These types are: banks, insurance companies, pension funds, mutual funds, and family ownership. According to Black and Coffee (1994) each type of large shareholder participates in a different degree in the corporate governance of firms. This classification brings out significant differences in preferences for firm characteristics and earnings news (Bushee, 2001; Del Guercio, 1996). According to Bushee (2001); banks, insurance companies, pension funds, and mutual funds can be seen as dedicated or quasi-index institutional investors. These two groups of institutional investors have a long-term investment horizon.

In Europe it is very common for banks to hold large blocks of equity in financial or nonfinancial firms, to which they also lend capital (Mayer, 1990; Casasola Martínez and Tribó Giné, 2004). Bank laws in Europe do not restrict banks from holding large blocks of equity in firms. Banks could serve as corporate monitors and may mitigate problems of asymmetric information (Diamond, 1984). Banks invest and manage equity of their clients, and banks are also the institutional investor type that faces the most strict prudence standards (Bushee, 2001; Del Guercio, 1996). The threat of legal actions provides banks a strong incentive to invest in equities that are perceived as prudent (Del Guercio, 1996). A study of Bushee (2001) and Del Geurcio (1996) shows that banks have a high incentive in monitoring their equity stakes. Banks usually invest for a longer period in firms (Bushee, 2001). Koh (2003) argues that large shareholders who are long-term oriented are likely to reduce earnings

management, which means that bank ownership in firms is negatively related with earnings management. This leads to the following hypothesis:

H2: Bank ownership in firms is negatively related to discretionary accruals.

Pension funds are a group of institutional investors who hold world-wide the largest block of assets before any other category of investors⁵. Pension funds are, according to Black and Coffee (1994) and Bushee (2001), long-term investors. Pension funds also face strict prudence standards, although the standards for pension funds are not as strict as for banks (Del Guercio, 1996). Since pension funds are long-term oriented investors they may also contribute to the efficient monitoring of listed firms⁶, this could imply that a high level of pension fund ownership in firms is negatively related with earnings management. This leads to the following hypothesis:

H3: Pension fund ownership in firms is negatively related to discretionary accruals.

Insurance companies invest their received premiums in equity stakes (Bushee, 2001). Insurance companies are in general also seen as long-term oriented investors (Black and Coffee, 1994; Bushee, 2001). They face in contrast to banks and pension funds less restrictive constraints (Bushee, 2001). For insurance companies also a negative relation between the level of ownership and earnings management is hypothesized. This leads to the following hypothesis:

H4: Insurer ownership in firms is negatively related to discretionary accruals.

Managers of mutual fund assets face, in contrast to other institutional investors, far less restrictive legal standards. Mutual fund managers are expected not to invest a large amount of their equity in high quality stocks. This in comparison with banks and pension fund managers; who are subject to strict laws. Thus, mutual fund managers are less inclined to invest in prudent stocks (Del Guercio, 1996). According to Del Guercio (1996), banks and pension funds will outperform mutual funds when prudent stock outperforms imprudent stock.

⁵ The Economist Jan 17, 2008

⁶ Gertrude Tumpel-Gugerell, Member of the Executive Board of the ECB, Euro Finance Week. Frankfurt am Main, 18 November 2008

For mutual funds no prediction is made about the direction of the relation between the ownership level and earnings management, because mutual funds have both a long- and short-term characteristic (Del Guercio, 1996; Bushee, 2001). This results in the following hypothesis:

H5: Mutual fund ownership in firms is related to discretionary accruals.

Family controlling shareholders are mostly passive investors. In Europe family controlling firm play a significant role. According to Jara Bertin and López Iturriaga (2008) firms with family controlling shareholders are more affected by the agency problem II and less severely by the agency problem I. The management in family firms usually has large equity incentives. This may stimulate the management to procure in earnings management (Cheng and Warfield, 2005). Cheng and Warfield (2005) find that managers with high equity stakes are more likely to report earnings that meet or beat the forecasts of the analysts. Wang (2006) finds that when family firms exceed a certain ownership level, the firms may report earnings of lower quality than non-family firms. Since family firms may report lower quality earnings, a positive relation with earnings management is expected. This leads to the following hypothesis:

H6: Family ownership in firms is positively related to discretionary accruals.

4. IFRS

4.1 History of IFRS

IFRS is the successor of the International Accounting Standards (IAS) and is developed by the International Accounting Standard Board (IASB). The IASB arose from the International Accounting Standards Committee (IASC) in 1973, primarily to promote the harmonization of accounting standards. The objective of the IASC is to develop in the public interest, a qualitative international accounting system that should result in transparent and comparable financial statements (Camfferman and Zeff, 2007). IASC was originally an international organization founded by accountancy bodies of nine different countries: Australia, Canada, France, Japan, Mexico, the Netherlands, the United Kingdom (including Ireland), the United States, and West Germany (Nobes and Parker, 2008). This led to some criticism, because only accountants working on the standards would take to little the interest into account of both the users of the financial statements and the regulators. Measures were taken to change this, by extending the IASC with members as: financial analyst, observers of the FASB, the European Commission, and the International Organization of Securities Commissions (IOSCO) (Helleman and Klaassen 1999).

In 1995, the IASC agreed with the International Organization of Securities Commission (IOSCO) the completion of a set of core standards. IASC announced a commitment to complete these set of core standards in 1999. Two years later, IASC informed that the standards are expected to be completed in 1998. In 1998, the standards were completed are supplemented with IAS 39 (recognition and measurement of Financial Instruments). Once the standards were designed, they tried to reduce the differences between local GAAP and the designed standards, so that the transition will be smooth (IAS PLUS).

In 2001, IASC was restructured and replaced by the IASB. The standards were called IFRS henceforth. The objectives of IASB where still to develop a set of accounting standards with high quality information, which should be understandable and enforceable for a large audience. In addition, IOSCO encourages the IASB to participate actively with national standard setters to continue to work cooperatively to achieve convergence of accounting standards (IAS PLUS, 2010).

In 2002, the decision of the EU Council of Ministers required by the year 2005 that all European stock listed companies comply with the accounting standard IFRS. The European Commission has given a few reasons to adopt IFRS (Jeanjean and Stolowy, 2008). First at all, the Commission wants to create a single set of high quality financial

reporting standards, which are international accepted. Secondly, the Commission wants to protect the investors and increase the trust in the financial market by increasing the transparency of the information. Third, the adoption of IFRS is to increase competitiveness of the overall EU economy globally (Capkun et al., 2007).

Street et al. (1999), on the basis of Sharpe (1998), described benefits related to international accounting standards. The benefits include a reduction of investment risk and the cost of capital. Another advantage is that the cost will be lower, since reporting under multiple criteria will fall. Third, confusion on using different measures of financial position and performance will be eliminated. Finally, international accounting standards should result in an efficient allocation of savings across the world. Despite the benefits there are also some disadvantages. The most important disadvantage is the costs. Compared to a national accounting standard, there are some higher costs associated with IFRS, as more information should be collected and monitored.

4.2 The Impact of IFRS on Large Shareholders

Before discussing the impact of IFRS on large shareholders, a distinction between Anglo-American and Continental European Countries has to be made. First at all, Anglo-American countries have a lower concentration of shareholders than in the Continental European Countries. (Franks and Mayer, 1994; Ooghe and De Langhe, 2002).

Secondly, the continental European countries have governance regimes, which are stakeholder-based. These regimes have a legal framework that protects stakeholders instead of stockholders (La Porta, Silanes and Sheifer, 1999).

This study examines the effect of large shareholders on earnings management for the pre- and post IFRS period in France, Germany, the Netherlands, and the United Kingdom. The reasons to examine these four countries are because (1) these countries have a well-developed capital market; (2) high data availability; and (3) institutional differences between these countries are representative of the institutional differences in Europe (Coppens and Peek, 2004). The argument for examining Germany and the U.K. are that they are the originators of the two primary accounting systems worldwide, namely the Anglo-Saxon and Continental models. France and the Netherlands are more an intermediate example of these two approaches. France was closer to the continental model, but seems to have shifted to the Anglo-Saxon model (Joos and Lang, 2004). The Netherlands, however, is the only country that does not show whether it is closer to the Anglo-Saxon or the Continental model (Nobes and Parker,

2008). This study wants to draw conclusions for Europe as a whole, and since these four countries are comparable with other countries in the European Union, it is expected that these countries are a suited sample for the European Union.

Prior research (Hope et al., 2006) investigates the factors, which might have influence on the decision to adopt IFRS. Hope et al. (2006) expect that countries which have relatively soft investor protection may voluntarily adopt internationally standards that are stronger to lower the expropriation risk by large shareholders. Countries however that already have relatively sound investor protection find benefit from adopting IFRS marginal, hence are less likely to adopt IFRS voluntarily. Their findings are consistent with the expectations; that countries with relatively soft investor protection bond themselves to superior accounting standards in order to access international investors.

The purpose of IFRS is increase the transparency and quality of financial reporting through the protection of individual and institutional shareholders. Shareholders and prospective investors need accurate and timely information to make economic decisions (OECD, 2005). The prediction is that IFRS has a negative impact on large shareholders, since the minority shareholders will be protected by adopting IFRS. The large shareholders than have less opportunity to control the management.

4.3 The Impact of IFRS on Earnings Management

In 2005, all European stock listed companies have to comply with the accounting standard IFRS. According to prior research of Capkun et al. (2007), firms with low (and/or weak) Local GAAP are more likely to use IFRS accounting choices to increase the firm's earnings after the adoption of IFRS. The research sample constituted 1,964 firms for a period of 2004-2005 in 7 European countries, where early adoption of IFRS was not allowed.

A recent study of van Beest (2008) investigates the relation between the adoption of IFRS and the quality of financial statements. The study of van Beest (2008) wants to investigate whether the quality of the reports has actually increased with the introduction of IFRS for listed companies. For this study he used the database Amadeus, to collect data for the Netherlands, Germany, and England for the period 2003 and 2007; i.e. for the period before and after the introduction of IFRS. His findings conclude that the introduction of IFRS has lead to an increase in earnings management. The quality of the financial statements in the

Netherlands, Germany and England has declined after the introduction of IFRS. This means there is a positive relation between IFRS and earnings management.

Van Tenderloo and Vanstraelen (2008) investigate whether German firms that have adopted IFRS are presenting less earnings management than firms that are reporting conform the German GAAP. Their sample consists of 636 firm-year observations, from the period 1999-2001, collected using the Osiris database. All firms are listed companies. The firms have been fully complaint since 1999. The modified Jones model has been used to estimate discretionary accruals. Their result is that there is no significant difference between firms that have adopted IFRS and firms that report in accordance with German GAAP.

Also Jeanjean and Stolowy (2008) have examined the effect of the mandatory introduction of IFRS on earnings quality, and specifically concentrating on earnings management. The objective of their study is to analyze whether the transition to IFRS has resulted to a decline of earnings management. They focus on three countries: Australia, France and UK. The reason they selected these three countries is first, Australia is non European country that adopted IFRS in 2005. The second reason is that France and the UK represent both different traditions. France represents the continental code law tradition and the UK represents the Anglo-American common law tradition (La Porta et al., 1998). DataStream has been used to collect the data for the period 2002 to 2006. The sample consists of 1,146 firms: 422 firms for Australia, 321 firms for France and 403 firms for the UK. The result of their study is that earnings management did not decline in Australia and the UK. France, however, shows an increase in earnings management. The authors focused on countries, where early adoption of IFRS is not permitted before the transition date. Since early adoption of IFRS may overestimate the expected benefits of the switch to IFRS (Jeanjean and Stolowy, 2008).

An opposite effect of IFRS on earning management in Europe has been found by Armstrong et al. (2008). This study analyzes the European stock market reaction to the introduction of IFRS. This research is investigating whether the application of IFRS is associated with higher accounting quality with regards to earnings management, loss recognition, and value relevance. Data has been obtained between 2002 and 2005 from DataStream through Thomson one banker. Their sample consists of 1200 largest firms of the Dow Jones STOXX Global 1800 Index, who are resident in America and Asia. They find that investors anticipate that the adoption of IFRS in Europe is affiliated with an increase in information quality, a

decrease in information asymmetry, and stronger enforcement of the standards (Armstrong et al., 2008).

Due to the prior researchers above, the transition of IFRS could result in a positive, negative or no effect on earnings management. To test the impact of IFRS on earnings management, the following hypothesis is formulated:

H7: The adoption of IFRS is related to earnings management.

In the next section the research design will be developed. In the research design the sample and data will be described and the regression models will be formulated.

5. Research Design

5.1 Accrual-based Earnings Management

The methodology will be divided into two stages. First, the discretionary accruals will be estimated. Second, the discretionary accruals will be regressed against the variables of large shareholders and IFRS to test their effect on managers' discretionary accounting decisions.

The discretionary accruals will be estimated with use of the Modified Jones Model (Dechow et al., 1995). The Modified Jones model will be estimated cross-sectionally (as in DeFond and Jiambalvo, 1994; Subramanyam, 1996; and Bartov et al., 2000). The reason in choosing the cross-sectional approach over time series, is that time series estimation base the future events on known past events. With the cross-sectional approach groups can be compared with each other. Another reason why choosing the cross-section over time series is that is has been widely used in prior research to estimate Modified Jones model. The model will therefore be estimated cross-sectionally per year and per 2-digit Industry Classification Benchmark code (ICB) as follows.

Step 1: Determining total Accruals for each firm-year.

$$TA_t = (\Delta CA_t - \Delta CL_t - \Delta CASH_t + \Delta STD_t - DEP_t) / (A_{t-1})$$

Where,

TA_{it}	= total accruals in year t,
ΔCA_t	= change in current assets,
ΔCL_t	= change in current liabilities,
$\Delta CASH_t$	= change in cash and cash equivalents,
ΔSTD_t	= change in debt included in current liabilities,
DEP_t	= depreciation and amortization expense,
A_{t-1}	= net total assets in year t-1

Step 2: Estimate the parameters: a_1 , a_2 and a_3 . The estimates of industry specific parameters will be used to calculate the non-discretionary accruals.

$$TA_t = a_1 \left(\frac{1}{A_{t-1}} \right) + a_2 \left[\frac{(\Delta REV_t - \Delta REC_t)}{A_{t-1}} \right] + a_3 \left(\frac{PPE_t}{A_{t-1}} \right) + \epsilon_t$$

Where:

- A_{t-1} = total assets at $t-1$
 ΔREV_t = revenues in year t less revenues in year $t-1$
 ΔREC_t = net receivables in year t less net receivables in year $t-1$
 PPE_t = gross property, plant and equipment in year t
 a_1, a_2 and a_3 = industry specific parameters

Step 3: Determining the amount of non-discretionary accruals for each firm-year

$$NDA_t = \alpha_1 \left(\frac{1}{A_{t-1}} \right) + \alpha_2 \left(\frac{(\Delta REV_t - \Delta REC_t)}{A_{t-1}} \right) + \alpha_3 \left(\frac{PPE_t}{A_{t-1}} \right)$$

where,

- A_{t-1} = net total assets in year $t-1$,
 ΔREV_t = change in revenue from year $t-1$ to year t ,
 ΔAR_t = change in accounts receivable from year $t-1$ to year t ,
 PPE_t = gross property plant and equipment in year t , and
 ϵ_{it} = error term in year t .
 $\alpha_1, \alpha_2, \alpha_3$ = firm-specific parameters

The variables above have all been scaled by lagged total assets to reduce heteroscedasticity. Estimates of the α_1, α_2 , and α_3 are generated using the following model in the estimation period:

$$\frac{TA_{it}}{A_{it-1}} = \frac{\alpha}{A_{it-1}} + \alpha_1 \left(\frac{(\Delta REV_{it} - \Delta AR_{it})}{A_{it-1}} \right) + \alpha_2 \left(\frac{PPE_{it}}{A_{it-1}} \right) + \alpha_3 \left(\frac{TA_{it-1}}{A_{it-1}} \right) + \epsilon_{it}$$

Step 4: Calculating the amount of Discretionary Accruals

When total accruals (TAt) and non-discretionary accruals (NDA_t) have been estimated, discretionary accruals (DA_t) will be determined by subtracting NDA_t from TAt.

$$DA_t = TA_t - NDA_t$$

In the second stage of the study, the effect of large shareholders and the implementation of IFRS on earnings management will be examined. The relationship between discretionary accruals, large shareholders and IFRS will be investigated using ordinary least square (OLS) regression analysis (see: paragraph 5.4).

5.2 Sample and Data

The research sample of this paper is established by investigating the public companies in the countries France, Germany, the Netherland, and the United Kingdom. The focus will lie on these countries, because (1) these countries have a well-developed capital market; (2) high data availability; and (3) institutional differences between these countries are representative of the institutional differences in Europe (Coppens and Peek, 2004). This study wants to draw conclusions for Europe as a whole, and since these four countries are comparable with other countries in the European Union, it is expect that these countries are a suited sample for the European Union.

Using the databank Thomson one banker and Amadeus the research sample will be established. Firms with no available consolidated accounts are deleted from the sample. Financial institutions (SIC 60-69) and utility companies (SIC 40-49) have also been eliminated using the filter-function in Microsoft excel with the Thomson one Banker add-in tool. The early-adopters of IFRS will furthermore be eliminated (only firms which have adopted IFRS before 2005 will be removed). Early adopters may overestimate the expected benefits of the switch to IFRS. These firms have found their benefits to adopt IFRS, before IFRS is mandatory (Van Tenderloo and Vanstraelen, 2008). The behavior of early-adopters of IFRS may differ from those companies, which will adopt IFRS mandatory. Firms with a broken year and firms with low recorded ownership will also be excluded from the sample. The final sample consists of in total 718 firms.

All the data are from year 2002 till 2007, since this study investigates the change in revenue and the change in receivables, the data of 2001 will be added too. Table 1 in the appendix provides the sample selection by country and table 2 in the appendix provides an overview of all variables.

5.3 Control variables

Prior research has shown that there are many other factors that influence earnings management. The following control variables will be included, to better isolate the impact of large shareholders and IFRS on earnings management: debt, size, growth, loss, and liquidity. Each of these control variables will be described.

Debt ($DEBT_t$) will be used to proxy for a firm's proximity to debt covenant violation (Koh, 2003). Managers may have incentive to manipulate reported earnings when they are closer to default on debt covenants (Press and Weintrop, 1990). The expectation is that a firm, who approaches their debt covenants, is more likely to use earnings management techniques to prevent violation of these debt covenants (Watts and Zimmerman, 1986). Warfield et al. (1995) and Klein (2002) found a significant positive relation between debt and abnormal returns. Debt ($DEBT_t$) is measured as the ratio of debt to total assets (Bushee, 1998; Sharma, 2004; Warfield et al., 1995).

Firm size is included according to the political cost hypothesis, which states that managers of large firms have a higher incentive than small firms to decrease reported earnings in order to reduce political attentions (Watts and Zimmerman, 1978). The relation between firm size and discretionary accruals is unclear, since they may have incentives to reduce reported earnings; they also have higher disclosure level than small firms (Koh, 2003; Lang and Lundholm, 1993). No prediction can be made between the relation of size and discretionary accruals, because of the ambiguous relationship. The variable size ($SIZE_t$) is measured as the natural logarithm of a firm's market value (Jiambalvo et al., 2002; Warfield et al., 1995).

According to the study of Matsumoto (2002), firms with high long-term growth forecast manage earnings upward to meet the expectations of analysts, to avoid negative earnings surprises. Wang (2006) finds that high growth firms have greater abnormal accruals than low growth firms. The expectation is that a positive relation exists between growth and discretionary accruals. Growth ($GROWTH_t$) is measured as the yearly sales growth rate (Wang, 2006).

A dummy ($LOSS_t$) will be included which takes the value of one if net income is negative, and zero otherwise. The dummy variable is included because firms might increase reported earnings to avoid losses (Burgstahler and Dichev, 1997). A study of Wang (2006) also finds that loss-making firms have higher discretionary accruals. Therefore, a positive relation is predicted between loss and discretionary accruals.

Finally, a control variable for liquidity is included. Firms with liquidity issues may try to hide their bad condition to prevent breaking debt covenants (Sweeney, 1994). To control for liquidity the current ratio (CR_t) is included. A positive relationship is expected between liquidity and discretionary accruals.

5.4 Regression models

This paragraph will link the hypotheses with the regression models. First the connection of the Modified Jones model and the regression models will be described. The dependent variable of the regression models used below to test the hypotheses is estimated with use of the Modified Jones model. In paragraph 5.1 four steps were described. In the last step the non-discretionary accruals (NDA) are subtracted from the total accruals (TA). Leaving the part of discretionary accruals (DA).

$$DA_t = TA_t - NDA_t$$

The discretionary accruals are then used as the dependent variable in the regression models, as earnings management.

The first hypothesis (H1) predicts a negative relation between large shareholders and discretionary accruals. This means that large shareholders mitigate the behavior on earnings management. The following regression model will be used to assess this relation:

$$EM = \beta_0 + \beta_1 LSH_t + \beta_2 (DEBT_t) + \beta_3 (SIZE_t) + \beta_4 (GROWTH_t) + \beta_5 (LOSS_t) + \beta_6 (CR_t) + \varepsilon_t$$

Model 1

Where, EM is the dependent variable estimated with use of the Modified Jones model used as the measure of earnings management. The variable LSH stands for large shareholders, and should test the effect of large shareholders on earnings management. The proxy for large shareholders (LSH) is the percentage of voting shares held by all large shareholders. $DEBT_t$,

will be measured by the ratio of short- and long-term debt to total assets at the end of year t. $SIZE_t$ will be measured by the natural logarithm of market value of equity at the end of year t. $GROWTH_t$ will be measured by the sales growth in year t. $LOSS_t$ is a dummy variable which takes the value of one if net income is negative, and zero otherwise. CR_t is the current ratio to control for liquidity. The ε_t is the error term in year t.

The following regression model is used to test the relation between the ownership level of active and passive shareholders and earnings management.

$$EM = \beta_0 + \beta_1 BANK_t + \beta_2 PEN_t + \beta_3 INS_t + \beta_4 MUT_t + \beta_5 FAM_t + \beta_5 (DEBT_t) + \beta_6 (SIZE_t) + \beta_7 (GROWTH_t) + \beta_8 (LOSS_t) + \beta_9 (CR_t) + \varepsilon_t$$

Model 2

Where:

- $BANK_t$ = percentage of voting shares held by banks at the end of year t.
- PEN_t = percentage of voting shares held by pension funds at the end of year t.
- INS_t = percentage of voting shares held by insurers at the end of year t.
- MUT_t = percentage of voting shares held by mutual funds at the end of year t.
- FAM_t = percentage of voting shares held by families at the end of year t.

Hypothesis two, three and four predict a negative coefficient for respectively $BANK_t$ ($\beta_1 < 0$), PEN_t ($\beta_2 < 0$), and INS_t ($\beta_3 < 0$). Hypothesis five does not predict a sign for the coefficient mutual fund (MUT_t). Hypothesis six predicts a positive coefficient for FAM_t ($\beta_5 > 0$).

The last regression model is used to test the relation between large shareholders, IFRS and earnings management.

$$EM = \beta_0 + \beta_1 LSH_t + \beta_2 IFRS_t + \beta_3 (DEBT_t) + \beta_4 (SIZE_t) + \beta_5 (GROWTH_t) + \beta_6 (LOSS_t) + \beta_7 (CR_t) + \varepsilon_t$$

Model 3

Where, IFRS is a dummy variable that equals one for the years 2005-2007, and zero otherwise. Hypothesis seven predicts a negative relation between IFRS and discretionary accruals. This means a negative coefficient IFRS ($\beta_2 < 0$).

6. Research Results

In this section the results of the various tests performed will be discussed.

6.1 Descriptive Statistics

Table 3 presents the descriptive statistics for the dependent and independent variables. What we can notice is that the mean and median of the earnings management measure are more downward than upward. The mean (median) for the discretionary accruals scaled by lagged total assets (EM) is -1,35% (-3,87%). In the table you can also see that negative discretionary accruals are larger than positive discretionary accruals.

The mean (median) for large shareholder ownership (LSH) is 41,50% (41,30%). These percentages are slightly higher than ownership reported in other studies over the period 1980-1995 in the U.S. Walther (1997) reported a mean (median) of institutional ownership of 39,3% (38,3%). Rajgopal. et al. (1999) reported a mean (median) of 35,5% (35,2%) for their study. Balsam et al. (2000), however, reported a higher mean (median) of 49,9% (52,5%) over a period of 1996-1998. Black and Coffee (1994), reported for their sample in the UK as at 1992 a mean of 60,5%. Koh (2003) found an average institutional ownership level of 47,13% for his sample in Australia over the years 1993-1997. The percentage found in this study in terms of shareholders ownership may be quite representative of the average firm.

Banks have a mean (median) ownership of 2,15% (1,12%). These percentages are lower when compared to the sample of Bushee (2001) of U.S. firms over the period 1980-1992. He found an average bank ownership of 8,0%. When comparing the percentage found in this study with the percentage found by Black and Coffee (1994) as at 1992 it is slightly higher. Black and Coffee (1994) found an average percentage of bank ownership in the U.K. of 0,2%.

The mean (median) of insurer ownership is 2,09% (0,00%). These percentage is lower compared to what Bushee (2001) found for a sample of U.S. firms over a period 1980-1992. The average percentage of insurer ownership found by Bushee (2001) is 3,7%. Black and Coffee (1994) report a much higher (20,7%) insurer ownership percentage in the U.K. as at 1992.

Pension funds have a mean (median) ownership of 8,91% (4,26%). These percentages are lower when compared to the sample of Bushee (2001) of U.S. firms over the period 1980-1992. He found an average pension fund ownership of 12,4%. The percentage of pension fund ownership (31,1%) reported by Black and Coffee (1994) in the U.K. as at 1 January 1992 are much higher.

The mean (median) of mutual fund ownership is 9,34% (3,25%). These percentages are comparable to the average mutual fund ownership reported by Bushee (2001) for a sample of U.S. firms over a period 1980-1992. The average percentage of insurer ownership found by Bushee (2001) is 9,50%. Black and Coffee (1994) report a lower (5,7%) mutual fund ownership percentage in the U.K. as at 1 January 1992.

Family ownership has a mean (median) ownership of 19,28% (17,82%). Villalonga and Amit (2004) found an average ownership of 16,00% in their study. This percentage is lower than the percentage found in this study.

6.2 Regression Results

6.2.1 Discretionary accruals and large shareholders

Model 1 examines the relationship of large shareholders and earnings management. The regression results are presented in table 4. The adjusted R^2 value for the relationship of large shareholders and earnings management is 0.311. The coefficient large shareholder is positive (0.049) and significant at the 5% significance level. Hypothesis one predicted that large shareholders will be negatively related to discretionary accruals, hence large shareholders will mitigate earnings management behavior.

H1: The presence of large shareholders in firms is negatively related to discretionary accruals (i.e. large shareholders mitigate earnings management behavior).

The result does not support the hypothesis that earnings management is negatively related to large shareholders. The results suggest that earnings management increases with the level of large shareholders. This means that large shareholders could be expropriating small shareholders. Large shareholders may require a higher return from their investments and may intervene firm's management, and can increase managers' incentives to conduct income increasing earnings management.

There are some explanations that can support this finding. An explanation could be that managers manage earnings to satisfy or beat the expectations of analyst and send a signal of good future performance. Large shareholders will probably not sell their stake in a firm with a high current and future performance. Another explanation for the positive relationship between large shareholders and earnings management could be that profitable firms will attract more large shareholders, since some large shareholders face some strict prudence

standards (Bushee, 2001; Del Guercio, 1996). The threat of legal actions provides some large shareholders a strong incentive to invest in firms with good future performance. But this explanation assumes that large shareholders are not able to detect earnings management while it is assumed that large shareholders are sophisticated investors (Balsam et al., 2002; Jiambalvo et al., 2002; Collins et al., 2003). A third explanation could be that on average large shareholders act as transient investors. Transient investors are investors who trade frequently. These investors are likely to sell their stock when the firm reports disappointing earnings news, which creates an incentive for the management to avoid earnings disappointment (Bushee, 1998). A number of studies provide evidence that transient investors are likely to increase earnings management. Bushee (1998) finds that investors with the characteristics of transient owners, increases the likelihood that managers reduce R&D to increase earnings. Yue Liu (2005) also evidence that a high ownership by transient institutional is associated with a significant higher likelihood of misstating earnings by management. Matsumoto (2002) results suggest that firms with high transient investors manage earnings upward and guide analysts' forecasts downward to avoid negative surprises. Koh (2003) finds a positive relation between transient investors and earnings management, i.e. transient investors can create incentives for management to manipulate earnings upwards.

The coefficient of the control variable Debt (-0.069) is significantly negative. This suggests that firms with high levels of debt have low earnings management. This finding is not in line with the theory provided in the prior literature (Warfield et al. (1995) and Klein (2002)). The coefficient Growth (0.067) is significant and positive. The result is in line with the prediction that high growth firms have greater earnings management than low growth firms (Matsumoto (2002) and Wang (2006)). The coefficients of SIZE, LOSS and Liquidity are as predicted, but not significant.

Altogether no evidence is found that supports H1. The findings suggest that large shareholders are positively related to earnings management.

6.2.2 Discretionary accruals and different types of large shareholders

Model 2 examines the relationship between the ownership level of five types of large shareholders and earnings management. The regression results are presented in table 5. The adjusted R² value for the relationship between the ownership level of five types of large shareholders and earnings management is 0.302. The sign and significance of the control variables are consistent with model 1.

H2: Bank ownership in firms is negatively related to discretionary accruals.

The coefficient for BANK (-0.078) is negative, which is in line with the prediction. Theory told us that banks have a high incentive in monitoring their equity stakes (Bushee, 2001 and Del Geurcio, 1996). Since banks have a long-term orientation, they are likely to reduce earnings management. The finding does support H2; however the coefficient is not significant. Zouari and Rebaï (2009) have examined institutional ownership differences and earnings management in the U.S., and found evidence that banks indeed limit earnings management. The study of Brickley et al. (1988) however denote that banks are more likely to support the decisions of the management. This could indicate that bank ownership may be positively related to discretionary accruals. Bushee (2001) also found evidence that bank ownership in firms is related with preferences for short-term earnings, since these firms seems to be a safer investment options than firms with earnings in the long term. Since banks may have preferences for short-term earnings the argument could be given that large shareholders who are short-term oriented are likely to increase earnings management. This argument is in contrast with the argument provided earlier in the prior research. Here the argument was made that banks ownership will likely reduce earnings management.

H3: Pension fund ownership in firms is negatively related to discretionary accruals.

The coefficient PEN (- 0.034) is also negative and not significant. Since pension funds are also long-term oriented investors they may also reduce earnings management. The finding does support H3; however the coefficient is not significant. According to Zouari and Rebaï (2009) they found evidence that pension funds may also play a significant role in reducing earnings management. Park and Shin (2004) examined board compensation and earnings management in Canada. They found that large pension funds have a significant influence to reduce earnings management. Earnings management may in the long-term have a negative effect on the performance of pension funds, according to Park and Shin (2004). Furthermore they also found evidence that having an independent member from pension funds in the board will have a negative effect on earnings management. Rubach and Seborá (2009) hypothesized that pension funds ownership can actively monitor management since pension funds are seen as pressure resistant owners and are more capable in pressuring the management of their

preferences. This could imply that pension funds serve as good monitors of the management. However they also found no significant evidence that pension funds are actively involved in the firm's management.

H4: Insurer ownership in firms is negatively related to discretionary accruals.

The coefficient INS (0.125) is positive but also not significant. This indicates that firms with insurer ownership have higher earnings management. This finding does not support H4, which predicted that insurer ownership is negatively related to earnings management. Brickley et al. (1988) found that insurance companies are less effective in monitoring the management, since insurance companies are seen as pressure sensitive shareholders. These sensitive shareholders could have a possible business relationship with the firm. The finding that insurance companies are less effective in monitoring the management, could indicate that the presence of insurance companies will not lead to a reduction of earnings management, since they lack the power to serve as effective monitors. This is in contrast with hypothesis four where it was assumed that insurer ownership in firms will be negatively related to earnings management. The result in this study was unfortunately not significant, but the direction of the coefficient indicated that insurer ownership in firm is positive related with earnings management; which would have supported the argument that insurance companies will not lead to a reduction of earnings management, since they lack the power to serve as effective monitors.

H5: Mutual fund ownership in firms is related to discretionary accruals.

The coefficient MUT (- 0.089) is negative. For mutual funds no prediction is made about the direction of the relation between the ownership level and earnings management, because mutual funds have both a long- and short-term characteristic (Del Guercio, 1996; Bushee, 2001). The finding indicated that mutual ownership have lower earnings management, however the coefficient is not significant.

Zouari and Rubai (2009), found evidence that mutual fund ownership is positively related to earnings management. This because mutual funds are short-term oriented. Bushee (1998) argues that mutual fund investors are chosen because they promise short-term liquidity. This might suggest that mutual fund ownership is positively related to earnings management, since they are very short-term focused. However Bushee (1998) found evidence that mutual funds

are less sensitive to pressure from the management than other large shareholders and are more likely to resist management. This however could imply a negative relation between mutual fund ownership and earnings management. As hypothesized mutual ownership could have a positive or negative effect on earnings management.

H6: Family ownership in firms is positively related to discretionary accruals.

The coefficient FAM (0.152) is positive and significant, which indicates a positive relation between the family ownership and earnings management. Cheng and Warfield (2005) found that management in family firms usually have a large equity incentives, which may stimulate the management to procure in earnings management. Wang (2006) found that when family firms exceed a certain ownership level, the firms may report earnings of lower quality than non-family firms. This implies that high family ownership has an entrenchment effect (Wang, 2006). Entrenchment effect is when managers make decisions that are more valuable to themselves than they are valuable to other stakeholders.

It can be concluded that the hypotheses with regard to banks, pension funds, insurers and mutual funds are not supported. The finding suggests that there is no relationship between the types of investors and earnings management, except for family ownership. It may be the case that large shareholders only have significant influence on earnings management when they have a high collective ownership in the firm. This mean that the different types of shareholders can have influence on earnings management only when they participate as one only when they have

6.2.3 Discretionary accruals, large shareholders and IFRS

Model 3 examines the relationship between large shareholders, the mandatory adoption of IFRS and earnings management. The reason to take the large shareholders as a whole and not also break them done into the five different types of large shareholders is that in the paragraphs above it has been shown that large shareholders only have significant influence on earnings management when they have a high collective ownership in the firm.

The regression results are presented in table 6. The adjusted R^2 value for the relationship between the ownership level of large shareholders, the mandatory adoption of IFRS and earnings management is 0.336.

H7: The adoption of IFRS is related to earnings management.

Prior research has shown that the transition of IFRS could result in a positive, negative or have no effect on earnings management. The regression result shows that the relationship between IFRS (0.032), large shareholders and earnings management is slight positive and significant. Based on the result the implementation of IFRS does not constrain earnings management, this means that companies reporting under IFRS report more earnings management. The result is consistent with the findings of Tendeloo and Van Straelen (2005) and Jeanjean and Stolowy, 2008.

Consistent with the results of regression model 1, the coefficients Debt and Growth are significant.

Van Tenderloo and Vanstraelen (2008) investigate whether German firms that have adopted IFRS are presenting less earnings management than firms that are reporting conform the German GAAP. They indeed found that there are no significant differences between firms that have adopted IFRS and firms that report in accordance with German GAAP. Also Jeanjean and Stolowy (2008) have examined the effect of the mandatory introduction of IFRS on earnings quality, and specifically concentrating on earnings management. They focus on three countries: Australia, France and UK. The results of this study are that earnings management did not decline in Australia and the UK. France, however, shows an increase in earnings management. The authors focused on countries, where early adoption of IFRS is not permitted before the transition date. Since early adoption of IFRS may overestimate the expected benefits of the switch to IFRS (Jeanjean and Stolowy, 2008).

7. Conclusion, Limitations and Future Research

The objective of this research was to gain insight into the relation of large shareholders and earnings management in the pre- and post IFRS periods. Based on prior researches seven hypotheses have been developed to answer the research question: “*What is the effect of large shareholders on earnings management in the pre- and post IFRS periods in Europe?*”

In this chapter the conclusion for each hypotheses will be discussed and the limitations of the study will be described. Furthermore, recommendations for future research will be provided.

7.1 Conclusion on the different hypotheses

The first hypothesis that has been tested was: *The presence of large shareholders in firms is negatively related to discretionary accruals.* This hypothesis predicts thus that large shareholders will be negatively related to discretionary accruals; hence large shareholders will mitigate earnings management behavior. The result does not support the hypothesis that earnings management is negatively related to large shareholders. The results suggest that earnings management increases with the level of large shareholders. This means that large shareholders could be expropriating small shareholders. This means that no evidence is found that supports H1. The findings suggest that large shareholders are positively related to earnings management.

The hypotheses two until six that have been tested examined the relationship between the ownership level of five types of large shareholders and earnings management. These five types of large shareholders are: banks, pension funds, insurance companies, mutual funds, and family firms.

Hypothesis two has tested the relation between bank ownership and earnings management: *Bank ownership in firms is negatively related to discretionary accruals.* Theory told us that banks have a long-term orientation; they were likely to reduce earnings management. The findings do not support H2. The coefficient is negative, which is in line with the prediction; however not significant.

Hypothesis three has tested the relation between pension fund ownership and earnings management: *Pension fund ownership in firms is negatively related to discretionary accruals.* The coefficient for pension funds is also negative and not significant. Since pension funds are also long-term oriented investors they may also reduce earnings management. The findings do

not support H3. The coefficient is negative, which is in line with the prediction; however not significant.

Hypothesis four has tested the relation between insurer ownership and earnings management: *Insurer ownership in firms is negatively related to discretionary accruals*. The coefficient for insurer ownership is positive. This indicates that firms with insurer ownership have higher earnings management. This finding does not support H4, which predicted that insurer ownership is negatively related to earnings management. The findings, however, are not significant.

Hypothesis five has tested the relation between mutual fund ownership and earnings management: *Mutual fund ownership in firms is related to discretionary accruals*. For mutual funds no prediction is made about the direction of the relation between the ownership level and earnings management, because mutual funds have both a long- and short-term characteristic (Del Guercio, 1996; Bushee, 2001). The finding indicated that the coefficient for mutual ownership is negative, implying that mutual fund ownership will lead to a reduction of earnings management, however the coefficient is not significant.

Hypothesis six has tested the relation between family ownership and earnings management: *Family ownership in firms is positively related to discretionary accruals*. The coefficient for family ownership is positive and significant, which indicates a positive relation between the family ownership and earnings management. The finding does support the hypothesis.

It can be concluded that the hypotheses with regard to banks, pension funds, insurers and mutual funds are not supported. The finding suggests that there is no relationship between the types of investors and earnings management, except for family ownership. It may be the case that large shareholders only have significant influence on earnings management when they have a high collective ownership in the firm.

The last hypothesis that has been tested is related to IFRS and earnings management: *The adoption of IFRS is related to earnings management*. Prior research has shown that the transition of IFRS could result in a positive, negative or have no effect on earnings management. The regression result shows that the relationship between IFRS and earnings management is slight positive and significant. Based on the result the implementation of IFRS does not constrain earnings management, this means that companies reporting under IFRS report more earnings management. The result is consistent with the findings of Tendeloo and Van Straelen (2005) and Jeanjean and Stolowy, 2008.

7.2 Limitations

As with any study on earnings management, this study also faces some limitations. The main limitation relates to the use of the Modified-Jones model to estimate discretionary accruals. Although the Modified-Jones model has been widely used in other studies and it is sometimes presented as the best in measuring earnings management, it has also been subject to criticism. Another limitation is the use of the various selected proxies. Although the proxies that were used in this study were defended theoretically and empirically, they remain theoretical approaches and thus may not perfectly represent determinants. However, this is a common problem in empirical studies.

The findings of this study only apply to public firms in Europe. The findings may not hold for private firms and financial institutions and utility companies, since these companies have been removed from the sample. Furthermore, this study has only taken on companies who have adopted IFRS on 1 January 2005. Early adopters have been removed from the sample since they may overestimate the expected benefits to switch to IFRS. The behavior of early-adopters of IFRS may differ from those companies, which will adopt IFRS mandatory.

Finally, this study has not addressed the influence of corporate governance principles on the results. Corporate governance principles have been developed in different countries, the purpose of these principles is also to increase the transparency; this might also limit the manager behavior towards earnings management.

7.3 Future Research

Based on the results and the limitations of this study, some suggestion for future research can be given. Future research could explore the relation between the level of institutional ownership and earnings management for public firms and for private firms. Future research could also address the influence of corporate governance principles on earnings management. Another suggestion could be to test if the results of this study hold when using other proxies for earnings management or by using another model to estimate discretionary accruals, instead of the Modified-Jones model.

8. References

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Appendix I: Overview of prior empirical literature on Earnings Management

Author	Title	Object of Research	Sample of Research	Outcome of Research
Armstrong et. al (2008)	Market Reaction to Events Surrounding the Adoption of IFRS in Europe.	European stock market reaction to events affiliated with the adoption of IFRS in Europe.	3,265 European firms over the period 2002 and 2005.	Overall findings; Investors in European firms notice benefits associated with IFRS adoption.
Balsam et al. (2002)	Accruals Management, Investor Sophistication, and Equity Valuation: Evidence from 10-Q Filings.	Does information that is disclosed in quarterly reports already incorporated.	This study extends prior research by examining the stock price reaction to the release of accounting information for a sample of firms for which there is ex post evidence of earnings management.	Negative association between discretionary accruals and abnormal return around the disclosure of quarterly reports.
Barth et. Al (2008)	International Accounting Standards and Accounting Quality	Is IAS affiliated with higher quality?	Sample of 21 countries over a period 1994 and 2003.	Companies that apply IAS are of higher quality than non US companies that do not.
Beasley, (1996)	An Empirical Analysis of the Relation Between Board of Director Composition and Financial Statement Fraud	Prediction is outside members on the board of directors reduces the probability of fraud in the financial statements.	Beasley uses a sample of 75 fraud and 75 no-fraud firms.	Probability that fraud will indeed decrease.
Beest (2008)	Kwaliteit jaarverslagen na invoering IFRS niet altijd verbeterd: Invoering IFRS leidt tot meer winststuring	Will earnings management decrease due the adopting of IFRS	Public companies in Netherlands, England and Germany for the year 2003 and 2007	There is a negative relation between earnings management and IFRS, in Germany the effect is stronger than in England.
Black and Coffee, (1994)	HAIL BRITANNIA?: Institutional Investor Behavior Under limited Regulation	This paper analyzes the role of financial institutions in corporate governance in the United Kingdom.	This study investigated 4 types of institutions; insurers, banks, pension funds, and mutual funds.	For most British institutions, the large insurance firms are actively monitoring and can have the power to change the governance of the firm. The rate of shareholder interventions to replace management appears to have risen in the last few years.
Brickley et. al (1988)	Ownership structure and voting on Antitakeover Amendments.	Do large shareholders have a strong incentive to vote on corporate issues.	Sample consists of 201 firms in 1984.	Significant differences are found between the different types of investors. Mutual funds and pension funds are more likely to counteract management that banks and insurance companies.
Bushee (1998)	The Influence of Institutional Investors on Myopic R&D Investment Behavior	Do investors have influence on management to reduce R&D investments to meet short term goals.	Quarterly R&D disclosures for the years after 1989.	Large investors have the influence on managers to reduce R&D to turn an earnings decline.

Capkun et. al (2007)	Transition to IFRS: Value relevance and Earnings management	Analyze the transition of Local GAAP to IFRS.	Sample of 1,964 firms from 7 European countries over the period 2004-2005.	Firms with low Local GAAP earnings are more likely to use IFRS to increase earnings.
Cheng and Reitenga (2001)	Characteristics of Institutional Investors and Discretionary Accruals	Effect of nonblockholders and active blockholders on earnings management.	Using a sample of 71 S&P 500 manufacturing firms from 1987 to 1996.	Intuitonal stocks of nonblockholder are affiliated with income-increasing accruals.
Cheng, and Warfield (2005)	Equity Incentives and Earnings Management	Equity incentives and earnings management are being investigated.	Stock compensation and stock ownership data over the 1993–2000.	Management with high equity incentives are plausible to report earnings to meet forecasts of analysts.
Collins et. al (2003)	Investor Sophistication and the mispricing of Accruals.	The role of institutional investors in the pricing of accruals.	Data obtained from 13-f filings to the SEC over the period 1988 to 1997.	Companies with a high level of large shareholders have stock prices that that reflect the perseverance of earnings management.
DeFond and Jiambalvo, (1991)	Incidence and circumstances of accounting errors	Accounting errors revealed by prior period adjustments.	Sample of 41 firms in comparison with a control group of another 41 firms.	They find that the earnings overstatements are negatively correlated with the growth in earnings.
DeFond, and Park (1997)	Smoothing income in anticipation of future earnings	The effect of premanaged earnings and expected future earnings on discretionary accruals.	Sample consists of 13,297 Firm-year observations.	Management lend earnings in the current period in poor current earnings and good future performance. And vice versa.
Del Guercio, (1996)	The distorting effect of the prudent-man laws on institutional equity investments	Prudentman laws on the conduct of institutional investors.	Data obtained from 13F forms and 946 institutional managers from the year 1988.	Differences in sectors tillings are observed between different manager types.
Demsetz and Lehn (1985)	The structure of Corporate Ownership: Causes and Consequences	Influence on the structure of corporate ownership.	The sample consists of 511 firms in the US.	Structure of corporate ownership vary in consistency with value maximization.
Healy, (1985)	The effect of Bonus Schemes on Accounting Decisions	Accounting effect on bonus contracts.	Sample consists of 250 large US firms in 1980.	Changes in accounting procedures by the management are associated with the adoption of their bonus plan.
Holderness and Sheenan. (1988)	THE ROLE OF MAJORITY SHAREHOLDERS IN PUBLICLY HELD CORPORATIONS	The authors want to learn more about the substantial number of publicly held corporations with concentrated ownership.	114 NYSE- or AMEX-listed corporations over the period 1979-1984.	No evidence is found that large shareholders use their power to expropriate small shareholders. Large shareholders do not only monitor shareholders, but also direct them.

Holderness, Kroszner, Sheehan (1999)	Were the good old days that good? Changes in managerial stock ownership since the Great Depression.	Management stock ownership after the Great Depression.	1500 U.S. firms in 1935 and 4,200 listed firms in 1995.	Managers ownership in the US is higher than when Berle and Means (1932) wrote their study.
Holthausen et al. (1995)	Annual bonus schemes and the manipulation of earnings	Manipulation of earnings by executives to max. bonus plans.	Confidential data of bonus plans.	Managers might manipulate earnings downward when bonuses are at the max.
Jeanjean and Stolowy (2008)	Do accounting standards matter? An exploratory analysis of earnings management before and after IFRS adoption.	The effect of IFRS on earnings management.	Sample are three countries; Australia, France and the UK.	Earnings management have not declined after the passage of IFRS, and even increased in France.
Jiambalvo, Rajgopal, Venkatachalam (2002)	Institutional ownership and the extent to which stock prices reflect future earnings	Do stock prices reflect future earnings?	Sample consists of 9,840 firm-year observations, for the period 1989-95.	Positive relation between stock prices and the percentage of institutional ownership.
Klein (2001)	Committee, Board of Director Characteristics, and Earnings Management	Characteristics of audit committee and the board on earnings management.	Sample of 692 U.S firm-years over the period 1992 and 1993.	Negative relation between the audit committee and accruals. A negative relation is also found between board independence and accruals.
Koh, (2003)	On the association between institutional ownership and aggressive corporate earnings management in Australia	The affiliation between institutional ownership earnings management among Australian companies.	836 firms over the period 1993 and 1997.	Positive relation between lower institutional ownership and earnings management. A negative relation between higher institutional ownership and earnings management.
La Porta et al., (1998a)	Law and Finance	Quality of the rules that protected shareholders and creditors are investigated.	49 countries from Europe, North and South America, Africa, Asia, and Australia in 1993.	Common law countries have strong legal protection of investors. French law countries have the weakest. German and Scandinavian law countries are in the middle.
La Porta et al., (1999)	Corporate Ownership around the World.	Identify the controlling shareholders of their sample.	Data on ownership of 27 wealthy economies in 1995.	Few firms are held widely, most firms are controlled by families or the state.
Morck, Shleifer and Vishny (1988)	Management ownership and market valuation	Relationship between management ownership and market valuation, measured with the use of Tobin's Q.	Total sample of 371 fortune 500 firms in 1980.	Tobin's Q first increases, then declines, and rises again when the ownership by the board of directors climbs.

Peck (2004)	Do outside block holders influence corporate governance practices?	Do block acq. lead to changes in the character of the board and the CEO?	252 firms from 1989-1990 in the US.	Block acquisitions to not lead to an improvement of the effectiveness of the board and also does not lead to a bigger compensation for the CEO.
Prowse (1992)	The Structure of Corporate Ownership in Japan	Structure of corporate ownership in Japan.	Sample of 734 Japanese firms in the mid 1980s.	Corporate governance in Japanese firms rely more on direct monitoring by the shareholders.
Shleifer and Vishny (1986)	Large Shareholders and Corporate Control	The presence of a large shareholders and the free-rider problem.	Total sample of 456 of the Fortune 500 Firms in 1980.	Large shareholder raise expected profits.
Shleifer and Vishny (1997)	A Survey of Corporate Governance	How do investors get the management to give them back their money.	Paper survey research on corporate governance.	Large shareholders can play an effective role in solving the agency problem, but might also be inefficient when redistributing wealth to their selves.
Van Tendeloo and Vanstraelen (2005)	Earnings management under German GAAP versus IFRS	Voluntary adoption of IFRS and earnings management.	German listed firms, 636 firm year observations in the period 1999–2001.	Adoption of IFRS does not lead to a different behavior concerning earnings management when comparing these with firms reporting under German GAAP.

Table 1 Sample Selection

Sample Selection	
Total sample France	828
Eliminations	554
Sample France	274
Total Sample Germany	999
Eliminations	830
Sample Germany	169
Total sample The Netherlands	185
Eliminations	103
Sample The Netherlands	82
Total sample UK	2072
Eliminations	1879
Sample UK	193
Final sample	718

Table 2 Variables

This table provides an overview of all variables.

Variable	Description	Measure	Expected Sign
Dependent variables:			
EM	Measure of earnings management	Discretionary accruals scaled by total assets	
Hypotheses:			
LSH _t (H1)	Large shareholders ownership	Percentage of shares hold by all large shareholders at the end of year t	-
BANK _t (H2)	Bank ownership	Percentages of shares hold by banks at the end of year t; Strategic Entities, Banks.	-
PEN _t (H3)	Pension fund ownership	Percentage of shares hold by pension funds at the end of year t; Strategic Entities, Pension funds.	-
INS _t (H4)	Insurer ownership	Percentage of shares hold by insurers at the end of year t; Strategic Entities, Insurer.	-
MUT _t (H5)	Mutual fund ownership	Percentage of shares hold by mutual funds at the end of year t; Mutual funds/Hedge funds.	?
FAM _t (H6)	Family ownership	Percentage of shares hold by families and individuals at the end of year t; Individual shareholder.	+
IFRS _t (H7)	IFRS	IFRS is a dummy variable that equals one for the years 2005-2008, and zero otherwise	?
Control variables:			
DEBT _t	Debt	Ratio of short- and long-term debt to total assets at the end of year t	+
SIZE _t	Size	Natural logarithm of market value of equity at the end of year t	?
GROWTH _t	Growth	Sales growth in year t	+
LOSS _t	Loss	Dummy variable which takes the value of one if net income is negative, and zero otherwise	+
CR _t	current ratio	current ratio to control for liquidity	+

Table 3 Descriptive Statistics Earnings Management

This table provides the descriptive statistics for dependent and independent variables. Variables definition: EM, Earnings Management; LSH_t, Large shareholders ownership at the end of year t; BANK_t, Bank ownership at the end of year t; PEN_t, Pension fund ownership at the end of year t; INS_t, Insurer ownership at the end of year t; MUT_t, Mutual fund ownership at the end of year t. FAM_t, Family ownership at the end of year t.

Variables	Mean	Median
EM	-0.0135	-0.0387
LSH _t	0,4150	0,4130
BANK _t	0,0215	0,0112
PEN _t	0,0891	0,0426
INS _t	0,0209	0,0000
MUT _t	0,0934	0,0325
FAM _t	0,1928	0,1782
IFRSt		

Table 4 Multivariate regression of discretionary accruals on large shareholders ownership

This table provides the regression result over a period of 2002-2007. The dependent variable is EM, which is the measure for earnings management. The independent variables are: LSH_t, Large shareholders ownership at the end of year t; DEBT_t, Ratio of short- and long-term debt to total assets at the end of year t; SIZE_t, Natural logarithm of market value of equity at the end of year t; GROWTH_t, Sales growth in year t; LOSS_t, Dummy variable which takes the value of one if net income is negative, and zero otherwise; CR_t, current ratio to control for liquidity.

Variables	Coefficient	P-value
Intercept	- 0.003	0.854
LSH _t	0.049	0.008
DEBT _t	- 0.069	0.044
SIZE _t	0.021	0.324
GROWTH _t	0.067	0.011
LOSS _t	0,020	0.687
CR _t	0.034	0.413
Adjusted R²	0.311	

Table 5 Multivariate regression of discretionary accruals on types of large shareholders ownership

This table provides the regression result over a period of 2002-2007. The dependent variable is EM, which is the measure for earnings management. The independent variables are: BANK_t, Bank ownership at the end of year t; PEN_t, Pension fund ownership at the end of year t; INST_t, Insurer ownership at the end of year t; MUT_t, Mutual fund ownership at the end of year t. FAM_t, Family ownership at the end of year t; DEBT_t, Ratio of short- and long-term debt to total assets at the end of year t; SIZE_t, Natural logarithm of market value of equity at the end of year t; GROWTH_t, Sales growth in year t; LOSS_t, Dummy variable which takes the value of one if net income is negative, and zero otherwise; CR_t, current ratio to control for liquidity.

Variables	Coefficient	P-value
Intercept	- 0.001	0.879
BANK _t	- 0.078	0.216
PEN _t	0.034	0.329
INS _t	0.125	0.154
MUT _t	- 0.089	0.224
FAM _t	0.152	0.016
DEBT _t	- 0.073	0.024
SIZE _t	0.022	0.319
GROWTH _t	0.062	0.010
LOSS _t	0,017	0.547
CR _t	0.030	0.426
Adjusted R²	0.302	

Table 6 Multivariate regression of discretionary accruals on large shareholders ownership and IFRS

This table provides the regression result over a period of 2002-2007. The dependent variable is EM, which is the measure for earnings management. The independent variables are: LSH_t, Large shareholders ownership at the end of year t; IFRS_t, IFRS is a dummy variable that equals one for the years 2005-2008, and zero otherwise; DEBT_t, Ratio of short- and long-term debt to total assets at the end of year t; SIZE_t, Natural logarithm of market value of equity at the end of year t; GROWTH_t, Sales growth in year t; LOSS_t, Dummy variable which takes the value of one if net income is negative, and zero otherwise; CR_t, current ratio to control for liquidity.

Variables	Coefficient	P-value
Intercept	- 0.014	0.816
LSH _t	0.070	0.019
IFRS _t	0.032	0.028
DEBT _t	- 0.055	0.043
SIZE _t	0.032	0.354
GROWTH _t	0.071	0.026
LOSS _t	0,027	0.587
CR _t	0.029	0.400
Adjusted R²	0.336	