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Private and Public Ownership's effect on Earnings Management

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Abstract:

Using accrual-based estimation models of discretionary accruals, we examine the effect on earnings management levels in Swedish firms that change ownership form from private to public in the period between 2002 and 2011. Our findings are contradictory, preventing us from concluding whether firms engage in more earnings management when they are private or public. As such, the results indicate support for both the demand hypothesis and the opportunistic behaviour theory. However, the results should be interpreted carefully due to the weaknesses in our statistical results. Our study is unique in the sense that it compares the level of earnings management within firms at different points in time, and not different companies at one point in time. The study provides inspiration for future research to further examine the development of earnings management within firms, allowing for interesting findings for both current and potential shareholders as well as firms' stakeholders.

Keywords: Earnings management, private versus public ownership

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1. Introduction

1.1 Background

Accounting constitutes an important mean of transferring information between firms and its stakeholders. A central phenomenon affecting the usefulness of this information is earnings management. By engaging in earnings management, managers can alter the relevance and reliability of accounting information. As such, the practice of earnings management should be of interest to all the users of firms' accounting information.

The level of earnings management has been shown to be related with a range of factors. One of these factors is ownership form. However, our conclusions regarding the relationship between ownership form and earnings management has failed to provide unanimous findings. Numerous studies argue that private companies engage in more earnings management, while others claim the complete opposite that public firms engage in more earnings management. Two theories regarding this relationship have been presented from earlier research, namely the demand hypothesis and the opportunistic behaviour hypothesis. The demand hypothesis states that public companies engage in less earnings management, because the demand for more qualitative accounting information is higher for public firms. In contrast, the opportunistic behaviour hypothesis claims that private firms engage in less earnings management since public firms have greater incentives to manage earnings in order to satisfy their owners.

As earlier research on earnings management differences between private and public firms focuses on comparing different companies at a specific moment in time, we find it interesting to apply the abovementioned theories on the development of earnings management within the same firms. In this study, we examine any potential changes in the level of earnings management in firms that are undergoing a change in ownership form by comparing the level of earnings management before an IPO with the corresponding level after the IPO. We hope to contribute with valuable empirical findings on how firms' earnings management practices changes when firms change from private to public ownership. Several proxies exist for earnings management. To measure earnings management, models that try to capture the extent of these proxies have been developed. One of these proxies is discretionary accruals. This study seeks to answer our research questions by estimating the levels of discretionary accruals.

1.2 Contribution to Literature

To our knowledge, this study is the first to examine how the level of earnings management develops in connection with a change in ownership form in a Swedish setting. Our sample consists of 31 Swedish firms that have changed ownership form between 2002 and 2011. The findings in this study will be useful for users of accounting information, particularly for those that deal with companies that are considering a change in ownership type. Also, our findings will hopefully provide regulators with useful information that can be of help in the designing of accounting standards. Because of the narrow geographic scope of our sample and the fact that earnings management has been proved to differ between geographies, this study's ability to make generalizable conclusions is limited.

2. Theory

The following presents a theoretical background of accounting frameworks, earnings management as well as public and private ownership.

2.1 Purpose of accounting

Accounting has many functions. One important feature is to enable the transfer of information to firms' contractors (Ball, 1989). As a result of the information asymmetry between firms' management and their external stakeholders, means of transferring information of a firm's financial performance is vital (Dechow, 1994). The Swedish Redovisningsrådet state that the financial reports aim to provide information about a company's financial situation, result and cash flows to different users by functioning as a foundation for decision-making (Redovisningsrådet, 2001).

In an academic setting, studies argue for the accounting function of providing information about a company's economic and financial situation (Thomasson, 2008). Accounting information is described as a credible and cost-effective system through which management communicates with its external stakeholders (Healy & Wahlen, 1999). Credit holders and equity investors are two major group of stakeholders that are fully dependent on reported financial information in their daily decision-making to forecast companies' future cash flows as well as assessing the risk of these cash flows (Ronen & Yaari, 2008). Ideally, from an equity investor's perspective, accounting allows attractive companies to be separated from

less attractive peers, in turn enabling efficient capital resource allocation (Healy & Wahlen, 1999). This is achieved when the accounting succeeds in reflecting the company's financial situation in a true and fair way.

2.2 Management judgment

In Sweden, among all regulation that covers the accounting practices of firms, one of the main principles within accounting standards is to give a true picture of companies' financial situation and performance (Årsredovisningslagen 1995:1554, 3§). To enable a true and fair basis of information, accounting standard setters and regulators must allow management to use its own discretion and judgment in the financial reporting (Healy & Wahlen, 1999). Management can thus use the internally-available company knowledge and consider firm-specific circumstances to maximize the information usefulness communicated through the accounting figures (Healy & Wahlen, 1999). Accounting regulations gives management a limited freedom to choose between various accounting methods, for instance depreciation and asset-valuation methods, when reporting economic transactions (Healy & Wahlen, 1999). Thus, companies can be said to have the ability to affect the depiction of their financial situation (Thomasson, 2008).

2.3 Relevance and reliability

Given this freedom however, determining the extent of to which management should be allowed to employ their own subjective judgment is a difficult challenge for standard setters and regulators (Healy & Wahlen, 1999). Reduced limitations and increased freedom can increase the relevance of accounting reports at the expense of the financial information's reliability. Relevant accounting information is considered as recording a firm's transactions at the right time and allowing for forecasting future financial performance. Reliable accounting on the other hand is characterized as information that manages to reflect transactions accurately and possible to be verified. Thus, accounting standards that put too much emphasis on ensuring reliability risk making the information about the firm's performance less relevant, and vice-versa.

2.4 Cash and accrual accounting

There are two main accounting methods that can be used to present firms' financial standing and performance, namely cash accounting and accrual accounting. They both contribute with

different benefits and limitations in terms of relevance and reliability. Accrual accounting has been introduced to complement pure cash accounting and allow for the financial reporting to capture a firm's true economic conditions in a more comprehensive way. By understanding the concepts behind the cash and accrual accounting systems respectively, the trade-off between reliability and relevance becomes more distinct.

A firm's ability to generate cash inflows in excess of disbursements is an important determinant of its financial performance. However, using cash flows as a method for measuring financial performance would not be informative (Dechow, 1994). Cash flows suffer from timing and matching problems, making them inappropriate metrics for performance (Dechow, 1994).

When cash accounting is used as a method for measuring firm performance, the financial reports only record transactions that affect the firm's cash balance (Robinson, 2009). Since this method purely serves to records cash inflows/outflows as transactions have been completed, in turn resulting in a specific figure that can be measured objectively, cash accounting could be considered reliable. However, financial accounting based solely on cash transactions is unstable, making the concept less relevant and a bad indicator of future performance (Dechow, 1994; Ball, 1989).

Accruals

In an attempt to create a more appropriate way for firms to report their financial performance that addresses the timing and matching issues associated with cash flows, as well as create a more efficient and informative basis for contracting, generally accepted accounting principles allow firms to use accrual based accounting (Dechow, 1994; Ball, 1989). In essence, accrual accounting is a method that allows firms to alter the timing of cash flows by matching and allocating these cash flows into revenues and costs across the time period to which they apply (Dechow, 1994; Ball, 1989).

The accrual process is based on rules of the timing of cash flow recognition in order for earnings to more accurately reflect firm performance (Dechow, 1994). Numerous studies find that accrual accounting is superior to cash accounting as earnings serve as a more useful measure of performance compared to cash flows (e.g., Dechow, 1994; Dechow et al. 1998; Sloan, 1996).

Accrual Accounting

Unlike cash accounting, cash flows are not the basis for when revenues and expenses are reported under an accrual accounting system (Robinson, 2009). To create a more accurate and relevant picture of firms' economic circumstances, accrual accounting uses the concept of periodicity. Periodicity implies that accrual items are used in the financial reporting to allow for every transaction to be assigned to a particular period and, if covering several periods, be allotted to each of these periods (Dechow & Dichev, 2002). An important feature of accrual accounting is the matching rule that matches the timing of revenue and expense recognition in order to create a measure of firm performance of higher relevance (Dechow, 1994; Dechow & Dichev, 2002; Dechow et al. 1998). Thus, in accrual accounting, revenues are recorded when a good or service has been provided to the customer and not when the cash is collected (Robinson, 2009). This feature of accrual accounting creates more timely specified and relevant information (Robinson, 2009). Companies that have a significant share of credit sales will not be able to give a timely and relevant indication through its accounting if it only records a transaction when it receives cash inflows. Therefore, accrual accounting allows firms to accrue revenue when the actual good or service is delivered (Robinson, 2009). Using accruals to adjust cash inflows/outflows, the framework serves to reflect the firms' underlying business condition more accurately (Teoh et al. 1998).

A cornerstone in the accrual accounting system is to provide a possibility for management to use its own judgment (with certain limitations) when reporting the firm's underlying economic conditions. As opposed to cash accounting, accrual accounting thus allows for management to use their own discretion in the reporting of earnings (Hope et al. 2011). In essence, accrual accounting builds upon management's own assumptions and estimates of future cash flows (Dechow & Dichev, 2002). Hence, management is able to use its internal understanding and knowledge of the firm to communicate important information to stakeholders, thereby making the accounting more relevant (Dechow, 1994; Holthausen, 1990; Healy & Palepu, 1993).

However, allowing management to use their discretion when reporting earnings does not only bring benefits in the form of higher relevance. It also produces the risk of jeopardizing the reliability of the accounting figures as users of the accounting information are unaware of whether management's forecasts are reliable, making estimation errors a significant limitation

of accrual accounting (Teoh et al. 1998; Dechow & Dichev, 2002). Moreover, the users of firms' accounting information cannot know whether management uses their discretion to mislead them intentionally (Hope et al. 2011; Teoh et al. 1998). This illustrates the trade-off between relevance and reliability in accrual accounting (Richardson, 2005).

While accrual accounting enables management to signal their understanding of the business through the information inherent in accounting and thereby increasing its relevance, it also allows management to manipulate the information and thereby reducing its reliability. Therefore, the most significant disadvantage with accrual accounting is the relatively lower reliability compared to cash earnings. In summary, if management is able to reduce the timing and matching problems associated with cash flows through the accrual accounting, this accounting method will produce information with higher relevance. On the other hand, if management's judgment is wrong or misleading, then the information will be less relevant (Dechow, 1994).

2.5 Earnings management

The accounting framework's flexibility to report transactions differently allows company management the opportunity to use its internal knowledge about the firm in portraying its performance in the most accurate way. Unfortunately, despite the good intention of the accounting framework, this flexibility can be exploited by management to alter the firms reported performance, i.e. earnings, for other reasons than portraying the performance as correctly as possible e.g. misleading users of the accounting information (Ahmed Riahi-Belkaoui, 2003). The concept of using this flexibility to manipulate earnings is called *earnings management*. The term has attracted considerable interest in academia with numerous definitions (Givoly et al. 2010).

One definition is that earnings management is a purposeful intervention in firms' financial reporting with the intent of gaining private benefits (Schipper, 1989). Qintao Fan (2007) define earnings management as:

"…firms' inflating reported earnings by (1) the use of the flexibility allowed in the Generally Accepted Accounting Principles (GAAP) to change reported earnings without changing the underlying cash flows, which could be labeled as misreporting, and/or (2) constructing

economic events to change the underlying cash flows itself, which could be labeled as real earnings management."

Earnings management could also be described as management using its discretion to influence reported earnings to shift income between periods (Degeorge et al. 1999). Healy & Wahlen (1999) state that earnings management occurs when management either alters financial reports or structures economic transactions with the objective to change the financial reports to mislead stakeholders about the true performance of the firm or to affect contractual outcomes that are dependent on these financial reports. Inspired by Healy & Wahlen (1999), Leuz et al. (2003) define earnings management as the alteration of firms' reported economic performance by insiders to either mislead some stakeholders or to influence contractual outcomes.

Synonymous with earnings management is *Earnings Quality (EQ)*. Similar to Earnings Management, Earnings Quality has managed to receive a variety of definitions. Dechow et al. (2010) examines earlier studies and literature on earnings quality, and concludes that the variety of definitions are attributable to the fact that quality is dependent on which decision context it is put into. The difficulty to reach a common definition on earnings quality is also emphasized by Penman & Zhang (2002) as they define high quality earnings as sustainable earnings, arguing that the earnings figure in a given year constitute a good indicator of subsequently reported earnings.

Motives behind earnings management

Numerous reasons for management to engage in earnings management have been researched. Healy & Wahlen (1999) divide these reasons into three different categories. Firstly, concerning market expectations, as equity capital market investors use accounting information to value firms, management may be tempted to distort the earnings figures to improve the share price in the short-run. Also, hoping at avoid negative market reactions as a result of negative earnings news, Matsumoto (2002) argue that high growth firms have greater incentives for earnings management. Accounting information can also be used to arrange compensation packages for managers and induce incentives to realize bonuses (Rahman et al. 2013). Secondly, abiding by contractual terms may motivate management to engage in earnings management. For instance, accounting information is often used to monitor debt covenants and other contracts between firms and their external credit holders and other

stakeholders. Lastly, antitrust and government regulation are presented as potential motives for management to manipulate earnings. This involves earnings management to circumvent regulation.

Earnings Management - Earnings Quality proxies

The range of definitions of EQ has limited academics to decide upon the most superior method for measuring earnings manipulation (Dechow et al. 2010). In a broad review of earnings management proxies applied in the field literature, Dechow et al. (2010) argue for three categories of earnings quality proxies, namely properties of earnings, investor responsiveness to earnings and external indicators of earnings management. Most commonly applied by research on private versus public ownership, the category of properties of earnings consists in turn of earnings persistence, earnings smoothness, target beating, abnormal accruals as well as asymmetric timeliness and timely loss recognition (Beatty et al. 2002, Burgstahler et al. 2006)

Earnings Persistence

Earnings persistence refers to the idea that more persistent earnings are more useful in equity valuation models and therefore they can be considered as of higher quality (Dechow et al. 2010) Because of its relatively narrow field of application of equity valuation, within which exists the maintained assumption that more persistent earnings are more decision useful, this proxy for earnings quality is not particularly common (Dechow et al. 2010).

Earnings Smoothening

Reminiscent of earnings persistence is earnings smoothness. As argued by Skinner and Myers (1999), earnings smoothening does not correctly demonstrate a firm's underlying economic performance. The proxy originates from the concept of accrual accounting with the intentions of improving the decision usefulness of accounting by smoothing fluctuations associated with the timing of cash payments and cash receipts (Dechow et al. 2010).

Target beating

Referred to as target beating, earlier research has found a suspicious frequency pattern of small loss avoidance to report earnings just above zero (Hayn, 1995; Burgstahler & Dichev, 1997). Meanwhile, this manipulation around zero can be the result of asymmetric taxes, rather than opportunistic choices (Beaver et al. 2007). The measurement has additionally been used

to understand the extent of manipulating earnings to beat analyst forecasts (Degeorge et al. 1999) as well as understanding the effect of equity-based incentive compensation programs (Cheng & Warfield, 2005) Literature findings using small changes in profits to measure EM are however mixed and as such, the proxy is deemed unsubstantial for accurate measurement (Dichew et al. 2010).

Timely loss recognition

Proxies of timely loss recognition refers to asymmetric timeliness in recognizing losses versus gains as a dimension of earnings quality. Often based on the work of Basu (1997), studies have used the proxy for accruals manipulation in aims to capture reporting conservatism as a dimension of earnings quality.

Accruals

A significant area of earning management measurement approaches is based on separating the non-discretionary or normal component of accruals (NDA) from the discretionary abnormal component (DA) (Defond & Jiambalvo, 1994; Teoh et al. 1998a & 1998b; Dechow et al. 2011 and Kothari, 2001 among others). The effects of exogenous economic conditions and the firm's underlying performance are captured by the non-discretionary accruals component (Kaplan, 1985; Teoh et al. 1998). Abnormal accruals (interchangeably referred to as discretionary accruals) result from applying accounting rules in a way that misleads the users of the accounting information. Abnormal accruals as a component of total accruals thus serve as metric to demonstrate management's manipulation of reported earnings (Jones, 1991).

2.6 Accrual-based earnings management measures

Accrual-based models serves to model the NDA component of TA in the aim of then extracting the DA component indicating lower earnings quality (Dechow et al. 1995; Hribar & Nichols, 2007). The residual from regressing total accruals based on their economic drivers (considered as NDA) serves as a proxy for DA and thus represent management discretion (Dechow et al. 2010). Residuals from accrual models has become a generally accepted methodology to identify earnings manipulation management (Dechow et al. 2010). It is assumed that the estimate of the DA component is dependent on the degree of accuracy of the NDA component's measurements. Extensive research has thus focused on establishing accurate measures of NDA.

Jones (1991)

Widely applied accrual-quality measurement models in literature originate from the methodology developed by Jones (1991). Her work builds upon the previous works of the DeAngelo (1986) and the Healey (1985) and measures the accruals process as a function sales growth and property, plant and equipment (PPE). While these variables are drivers of firm value and are proved to correlate with accruals, the explanatory value of the model is considered low, explaining only 10% of the variation of accruals (Dechow et al. 2010). Although this may be explained by manager's considerable discretion over the accrual process, the model is known to classify accruals as normal when they are not (Dechow et al. 2010)

Modified Jones – Dechow et al. (1995)

As the Jones (1991) model classifies revenue as non-discretionary, it has been widely modified to enhance its explanatory value and avoid the misclassification of accruals. The Modified Jones Model by Dechow et al. (1995) adjusts for credit sales as they are frequently manipulated and increases the methodology's explanatory value reflecting revenue manipulation (Dechow et al. 2010). While the model has been widely accepted in earnings management literature (Kothari et al. 2005), Dechow et al. (1995) finds that accruals models are misspecified when applied to firms experiencing extreme financial performance, classifying accruals as abnormal when they are the result of underlying performance.

Kothari et al. 2005

To enhance earning quality measurement additional research develops accruals models as a function of performance (Guay et al., 1996; Dechow et al. 1998; Peasnell et al. 2000, amongst others) Kothari et al. (2005) argues for testing earnings management with respect to company performance matching by normalizing the level of NDA based on industry-peer firms of similar return on assets (ROA). As such, the model is best applied in the perspective of when correlated performance is an important concern (Dechow et al. 2010)

Dechow & Dichew 2002

Taking a different approach to explaining accruals through working capital changes, Dechow & Dichew (2002) model accruals as a function of past, present and future cash flows as accruals anticipate future cash inflows and outflows. With a higher explanatory value of their model than that of the modified Jones models, the standard deviation of the models residuals

serves as a proxy for earnings management (Dechow et al. 2010). By only measuring short-term discretionary accruals, its application is limited as impairments of PPE and goodwill are part of long-term accruals and important components for measuring earnings quality.

2.7 Demand hypothesis / Opportunistic hypothesis

Often applied to study the financial reporting of private and public firms, Givoly et al. 2010 have formed two contradicting theories on the relationship between ownership form and earnings quality. These are the "demand hypothesis" and "opportunistic hypothesis".

The **demand hypothesis** assumes that a set of differing characterizing attributes between private and public companies should cause the private ownership form to be associated with lower earnings quality and the demand for quality of reporting to be stronger for public firms (Givoly et al. 2010). This results from public firms' accounting information being the main source of information for equity holders. According to Skinner (1997), public firms face stronger incentives to mitigate potential lawsuits by improving their disclosure policies and enhancing reporting transparency. On the other hand, Givoly et al. (2010) argue that private firms face less litigation risks and consequently have greater latitude to manage earnings.

Studying differences in earnings quality across countries, Ball & Shivakumar (2010) develop the demand hypothesis reasoning further. They argue that private companies use more private forms of communication with shareholders, creditors, employees, suppliers, customers among others. This reduces the need for qualitative reporting. With a significantly higher number of shareholders that can continuously change on a listed exchange, public firms cannot use the same private communication channels to improve the informational quality provided by the accounting. Moreover, public firms are more restricted from using private communication channels (Hope et al. 2013).

Private firms also have more concentrated and permanent owners that engage more actively in managing the firm, thus lowering owner-manager separation. This reduces owner's dependence on the financial information provided by the accounting since they often already have insider information (Ball & Shivakumar, 2010; Chen et al. 2011). Moreover, a more concentrated ownership of private firms enables the possibility for management to engage in earnings manipulation, while simultaneously being subject to closer surveillance by

shareholders, thereby reducing the incentives for earnings management (Givoly et al. 2010). The relationship between ownership concentration and earnings management is ambiguous. However, earlier research argues for a positive correlation between ownership concentration and earnings management (Leuz et al. 2003; Haw et al. 2004), implying that public firms should have higher earnings quality.

In contrast to the demand hypothesis, the **opportunistic behavior** hypothesis argues that public firms engage in more earnings management and thus have lower earnings quality than privately owned firms. Primarily, managers in public firms face a constant pressure from investors to perform well (Givoly et al. 2010). Consequently, they often have strong incentives to manage earnings in order to avoid reporting losses (Hayn 1995; Burgstahler & Dichev, 1997), reduced earnings results (Burgstahler & Dichev, 1997; Barth et al. 1999), in addition to meeting analyst estimates (Degeorge et al. 1999; Givoly & Hayn, 2002). DeAngelo and Skinner (1996) argue that public firms are punished with a substantial share price decline when they fail to continue reporting consistent earnings increases. Ownership shares in private firms on the other hand are relatively less traded amongst owners which reduces incentives to continuously manage earnings for higher valuations (Beatty et al. 2002). In addition, shareholders of private firms are generally more long-term owners, reducing the incentive to manage earnings in individual short-run periods (Beatty & Harris, 1998).

Secondly, in contrast to private firms, public firms more often resort to external financing (Penno & Simon, 1996). To attract financing at a lower cost has been shown to incentivize managers to engage in earnings management (Dechow et al. 1995). Attracting investors to purchase shares has proved to be important reasons behind fraud and manipulation in firms' accounting (Kellogg & Kellogg, 1991).

Lastly, managers of both private and public firms sometimes have their compensation tied to the share price. However, the value of this compensation in public firms faces stronger pressure from capital markets (Hope et al. 2013).

2.8 Public versus private ownership

Most of the research covering privately and publicly owned companies' accounting practices concentrate on comparisons between these two groups. Interestingly, these studies don't succeed in deriving uniform conclusions.

Studies by Beatty and Harris (1998), Givoly et al. (2010), and Penno & Simon (1986) all share in their findings that public companies engage in more earnings management. However, it must be mentioned that these authors study different types of companies and use different proxies for earnings management. For example, Givoly et al. (2010) compare public equity firms with private firms, although these still have publicly traded debt. Beatty et al. (1998) and Ball et al. (2005) study private versus public banks and Hope et al. (2011, 2013) look at completely private and public firms from several industries. This study follows the approach of Hope et al. (2011, 2013) by only comparing firms once publicly traded that have not held publicly traded debt as privately owned.

2.9 Earnings quality

The concept of earnings quality is elusive. The literature on "earnings quality" does not provide a clear definition of that "quality." It does, however, identify different attributes that are associated with or reflective of earnings quality (Givoly et al. 2010) While recognizing the lack of consensus on the definition of earnings quality, Penman & Zhang (2002) define the term to mean that "reported earnings ... is a good indicator of future earnings." Ball and Shivakumar (2005) define reporting quality in general terms as "the usefulness of financial statements to investors, creditors, managers, and all other parties contracting with the firm." They view accounting conservatism in the form of asymmetric timeliness in recognizing losses versus gains as a dimension of earnings quality. However, as discussed later, equating conservative reporting with earnings quality is not universally accepted.

Not necessarily bad

If the predominant effect of earnings management is to circumvent contracts designed to mitigate agency costs, then we expect accounting earnings to be less reflective of future performance. Such a finding would be consistent with the findings of Warfield et al. (1995) and with the remarks made by Arthur Levitt, Chairman of the Securities and Exchange Commission (1998), where he criticized current earnings management practices, and characterized earnings management as "…an erosion in the quality of earnings." In contrast,

if the earnings management's predominant effect is to reduce information asymmetry, then we expect reported accounting earnings to be more reflective of future performance. This result would be consistent with earnings management leading to higher quality earnings reports, consistent with the Statement of Financial Accounting Concepts No. 2, wherein a primary quality of earnings reports is relevance and a primary characteristic of relevance is predictive value.

2.10 Hypothesis formulation

Firstly, on the basis of the two contradicting theories, we hypothesize that the level of earnings management two and three years after a company has become public differs from the level of earnings management three years before the IPO when the company was privately owned.

Secondly, in accordance with the opportunistic behavior hypothesis and the alleged capital market pressure on public firms to report consistent earnings increases, we examine whether IPO firms engage in more upwards earnings management once they have become public by comparing the level of upward earnings management two and three years after the IPO, with the corresponding level two years prior to the IPO.

Thirdly, to examine the demand and opportunistic behavior further, we look for evidence of any potential increasing or decreasing trends in earnings management once the firms have become public by comparing the level of earnings management two years after the IPO to the level three years after the IPO.

Fourth, similar to hypothesis 2, we examine if the level of upward earnings management remains at the same level when the firm is publicly held by comparing the level of upwards earnings management two years after the IPO to the level three years after the IPO.

3. Method

This section presents our methodological approach to measuring earnings quality.

3.1 Reason for using two models

The methodology developed by Dechow et al. (1995) is applied to initially to determine the level of discretionary accruals within the sample firms when privately versus publicly owned. Due to the model's documented criticism of classifying accruals as abnormal when they are in fact the result of performance, the methodology developed by Kothari et al. (2005) is then included capture additional measures of earnings manipulation. Applying two models allows us to:

(1) ensure more complete measure of accruals proxies and avoid individual model's deficiencies in proxy measurements, and

(2) work around the lack of a generally excepted and complete model for measuring earnings quality, as explained by Dechow et al. (2011) and Hope et al. (2011).

3.2 Event windows

Event windows have been selected to avoid earnings management influence of the IPO period in the study's focus to isolate the difference in earnings quality when completely privately and publicly owned. This follows the uncertainties involved in measuring discretionary accruals around large events, for instance IPOs, as they have been documented to be more susceptible to greater earnings management (Ball & Shivakumar, 2008). To capture the degree of earnings quality when privately owned, the first event window is placed 2 years before IPO year t. The second and third event windows are placed 2 to 3 years post IPO year t.

3.3 Cross-sectional and time-series normalization

Accruals-based earnings quality measurement methods can either be cross-sectional or time-series-based. With the research question's aim of comparing the accrual quality of the same company as privately owned and consecutively publically owned in separate event periods, cross-sectional accruals measurement approach is applied. As described by Teoh et al. (1998), the cross-sectional approach automatically adjusts for the effects of fluctuating industry-wide economic conditions that can influence accruals. Subramanyam (1996) and Defond (1994) additionally show that cross-sectional models are the main application in the methodologies of earnings management measures. Time-series analysis implies tracing the change in earnings quality over time which, as a results, can include financial data influenced by the

IPO event that are beyond the scope of the study. The cross-sectional method has however received criticism for resulting in both over- and underestimations of non-discretionary accruals. This is because natural fluctuations exist for certain accrual items, causes accrual items to be interpreted as discretionary accruals when they are not (McNichols, 2002).

3.4 Empirical approach

The level of firms' total accruals is primarily calculated, followed by the estimation of industry wide non-discretionary accruals (NDA) through the methodologies developed by Dechow et al. (1995) and Kothari et al. (2005). This allows the estimation of firm-level discretionary accruals (DA), upon which we will perform a matched pair t-test and a non-parametric Wilcoxon signed rank test testing.

3.5 Accruals based measurements

Total accruals (TA) reported by a firm i in year t consist of non-discretionary accruals (NDA) and discretionary accruals (DA):

$$TA_{i,t} = DA_{i,t} + NDA_{i,t}$$

Previous studies (Leuz et al. 2003) have used the balance sheet approach to calculate total accruals, which is based on the prior research of Healy (1985) and Jones (1991). To avoid the potential accountancy effects of mergers and acquisitions as well as discontinued operations, total accruals are calculated through the cash flow approach developed by Hribar & Collins (2002):

$$TA_{i,t} = NI_{i,t} - CFO_{i,t}$$

where:

$NI_{i,t}$: Net income of firm i in year t

$CFO_{i,t}$: Cash flow from operations of firm i in year t

Non-discretionary accruals are firstly calculated through Dechow et al. (1995), followed by Kothari et al. (2005).

Dechow et al 1995

The methodology applied by Dechow et al. (1995) calculates NDA at time t for firm i through:

$$NDA_{i,t} = \alpha_1(1/A_{i,t-1}) + \alpha_2(\Delta REV_{i,t} - \Delta REC_{i,t}) + \alpha_3(PPE_{i,t})$$

where:

NDA = Non-discretionary accruals by firm i, scaled by lagged by total assets

A_{it-1} = Assets of firm i in year t-1

$\Delta REC_{i,t}$: Change in revenue in year t, scaled by lagged total assets

$\Delta REV_{i,t}$: Change in receivables for firm i in year t, scaled by lagged total assets

PPE_{it}: Net property, plant and equipment of firm i in year t, scaled by lagged total assets

The discretionary accruals component is calculated as the error component $\varepsilon_{i,t}$ in the regression:

$$TA_{i,t} = \alpha_0 + \alpha_1(1/A_{it-1}) + \alpha_2(\Delta REV_{it} - \Delta REC_{it}) + \alpha_3(PPE_{it}) + \varepsilon_{i,t}$$

Modified Jones - Kothari et al. (2005)

In the model derived by Kothari et al. (2005), the residual from the regression ($\varepsilon_{i,t}$) is used as a proxy for the DA. Total accruals (TA) are calculated on a firm basis through the cash flow approach and are regressed whilst components that may affect NDA are adjusted for. The model avoids the correlation between company performance and the residuals by controlling for the normal level of accruals conditional on ROA.

$$TA_{i,t} = \alpha_0 + \alpha_1(1/A_{i,t-1}) + \alpha_2\Delta REV_{i,t} + \alpha_3 PPE_{i,t} + \alpha_4 ROA_{i,t} + \varepsilon_{i,t}$$

where:

$\Delta Rev_{i,t}$: Change in total revenue, scaled by lagged total assets

$PPE_{i,t}$: Property, Plant and Equipment for firm i at time t, scaled by lagged total assets

$ROA_{i,t}$: return on lagged total assets

3.6 Performance-matched peer groups

The performance-matched accrual measurement methods require industry and performance matched peers to normalize the level of non-discretionary accruals. Peer groups have been matched based on the Global Industry Classification Standard (GICS). This is the sector classification used by OMX Stockholm main list and is thus assumed to ensure to most accurate basis of matching firms' operations and financial reporting practices.

3.7 Statistical methods used for testing research questions

In order to find answers to our research questions, appropriate statistical tests are necessary. Since the sample of IPO firms can be considered as a random sample of 31 matched pairs, we choose to use a parametric matched pair t-test and a non-parametric Wilcoxon signed rank test.

4. Empirical Data Sampling

The sample consists of Swedish firms that have gone from private ownership to publicly traded ownership on Nasdaq OMX's main list between 2002 and 2011. Below follows a review of the sampling process and steps taken to ensure a homogenous sample.

4.1 Sources of Data

Company financial data has been sourced from Capital IQ and Retreiver. If any financial data is publicly available, Capital IQ has proved to maintain a thorough coverage of firms' financial reports when cross-referenced with annual reports issued to the Swedish Companies Registration Office (Bolagsverket) and accessed thought the online-based platform Retriever. Individual financial results from these annual reports extracted from Retriever have supplemented and completed missing data from Capital IQ and has been necessary to complete the information coverage of event windows when a firm was private.

4.2 Sample structure

Our initial data set comprises all newly listed firms on NASDAQ OMX Stockholm small, middle and large capital groups. Leuz et al. (2003) find significant systematic differences in earnings management across different countries largely due to differences in legal systems. As such, this study will be based on a Swedish-only firms. Additionally, methodological approaches by previous research, notably Boumediene et al. (2010) and Leuz et al. (2003), have excluded firms that are subject to sector-based accounting rules. We have thus chosen to exclude financial institutions and real estate firms from our sample. To conclude our final sample of 31 IPOs between 2002 and 2011, the following modifications have been made:

New entries on the OMX Stockholm Mainlist between 2002-2016	**174**
a. Transfers from First North, Aktietorget or NGM	-67
b. Transfers from foreign markets	-3
c. Secondary Listing	-13
d. Unavailable financials, dissimilar sectors & unavailability of peers	-60
Sample of IPOs on OMX Stockholm Mainlist between 2002-2011	**31**

(a) Aktietorget, First North, and NGM are unregulated markets for smaller growth firms. Compared to the main OMX market, the jurisdiction for these markets is limited and does not entail the same detail of financial reporting disclosure. In addition, the 67 firms have previously been publicly traded and can thus not be classified as entirely private prior to entry on the OMX main market.

(b) Three firms have previously been listed on foreign markets and cannot be classified as private prior to entry on the OMX main market.

(c) Firms with a large proportion of Swedish-based shareholders have been listed on the OMX main list parallel to their primary market listing. Due to their public ownership prior to entry on OMX Stockholm, they have been excluded from the sample.

(d) For the selected event windows of this study, annual financial data is necessary 3 years prior and post the IPO year, thus eliminating firms entering the public market between 2013-2016. This has also required the exclusion of firms undergoing IPOs prior to 2002 due to the unavailability of currently public firms' financial reports prior to 1999. In the event that data needed for the accruals measurements methods used in this study is unpublished, the relevant firms has been excluded. To assemble adequately large groups of at least 10 peers (Ronen 2007) used for the accruals measurement methods, peer firms are required to be publicly listed throughout the measurement period. Due to the limited amount of firms listed on the OMX main market within specific sectors, IPOs of telecom and utilities firms have been excluded.

4.3 Descriptive statistics

Table A and B below provide an overview of the final sample used structured by IPO year and industry.

Table A: Sample of IPOs ordered by year.

Year	IPOs	% of Sample	Sectors
2011	4	12,9%	Consumer Goods (1), Healthcare (3)
2010	2	6,5%	Consumer Services (2)
2007	5	16,1%	Indsutrials (2), Technology (1), Healthcare (1), Consumer Goods (1)
2006	6	19,4%	Consumer Services (2), Healthcare (2), Industrials (1), Materials (1)
2005	6	19,4%	Consumer Services (3), Healthcare (1), Industrials (1), Technology (1)
2004	2	6,5%	Consumer Goods (1), Industrials (1)
2003	1	3,2%	Healthcare (1)
2002	5	16,1%	Consumer Goods (2), Healthcare (2), Industrials (1)

Table B: Sample of IPOs ordered by Industry

Industry	Number of IPOs	% of Sample	Years of IPOs
Healthcare	10	32,3%	'02, '03, '05, '06, '11
Consumer Services	7	22,6%	'10, '06, '05
Industrials	6	19,4%	'02, '04, '05, '06, '07
Consumer Goods	5	16,1%	'02, '04, '07, '11
Technology	2	6,5%	'05, '06
Materials	1	3,2%	'6

4.4 IFRS

An important event that occurred during our research period was the introduction of IFRS in 2005, with some companies adopting the system at an earlier stage. It is not possible to claim with certainty how this has affected the existence of earnings management within firms. Callao & Jarne (2010) argue that earnings management increased within Europe as a result of the adaptation. In contrast, in their examination of 21 countries, Barth et al. (2008) find that firms applying IFRS in general show less evidence of earnings management. To be listed on the OMX Stockholm main list, firms must publish IFRS-structured financial statements three years prior to listing. As the financial statements of our sample have been restated according to Capital IQ, we assume financial reports of firms being listed prior to 2005 follow IFRS. In conclusion, all private company financial reports our firm year observations prior to listing are thus assumed to follow IFRS.

5. Results

The following section presents the results from our methodology.

Hypothesis 1

To test the first hypothesis, that firms engage in more earnings management whether it is upward or downward earnings management, we use the absolute values of our estimations on discretionary accruals in both our statistical tests.

For the WSRT, none of our two measures (DSS and Kothari) indicate any significant difference in the level of earnings management between the private measurement point and our two different public measurement points, i.e. 2 and 3 years after the IPO, showing p-values significantly higher than both 5% and 10%. Thus, we are not able to reject the null hypothesis that the level of earnings management from the private measurement point equals the corresponding level either 2 or 3 years after the IPO with the WSRT. In 3 out of 4 tests, the negative rank sum is greater than the negative rank sum, indicating that EM is lower after the IPO when the firms are public.

Similarly, the t-test fails to support the hypothesis that the level of earnings management when the firms are private is different from the level of earnings management both two and three years after the IPO at a significance level of 5%. However, one of the measures, DSS three years after the IPO, manages to reject the null hypothesis at a 10% significance level with a two-tailed p-value of 6.29%. The t statistic is -1.93, meaning that this test gives statistically significant support to the demand hypothesis at a 10% level. All other insignificant results also show negative t statistics, similar to the WSRT statistics, again indicating that EM is higher when the firms are privately owned.

Altogether, both the t-test and the WSRT fail to reject the null hypothesis at a 5% significance level and show no evidence of either a higher or lower level of earnings management both two and three years after the IPO compared to when they were private. However, the recurring results of both the negative rank sums and the t-statistic indicate that the demand hypothesis may dominate the opportunistic behaviour hypothesis.

Hypothesis 2

The second hypothesis examines whether firms engage in more upwards earnings management when they are public compared to when they are private by using the normal values from our estimations on discretionary accruals.

The WSRT fails to reject the null hypothesis that the level of upwards earnings management is equal two years before the IPO to the corresponding level both two and three after the IPO for both measures. However, one measure, Kothari three years after the IPO, has a p-value of 7.64%, thus rejecting the null hypothesis at a significance level of 10%. Three out of four positive rank sums are positive, indicating that firms engage in more upwards earnings management when they are public compared to when they are private.

The t-test also fails to reject the null hypothesis that the level of upwards earnings management is the same 2 years prior to the IPO as both 2 and 3 years after the IPO with both measures. The t-statistic vary between the different tests, giving no clear suggestion whether the level of upward management is higher when the firms are private or when they are public.

None of the measures contribute with sufficiently strong evidence to support the view that firms engage in more or less upwards earnings management when they are public compared to when they are private. Thus, we find no support that the capital market pressure on public firms, as proposed by the opportunistic behaviour hypothesis, force them to manage their earnings upwards more than they did when they were privately held.

Hypothesis 3

To examine the third hypothesis, if firms engage in more or less earnings management three years after the IPO compared to the prior year whether it is upward or downward earnings management, we compare our estimations of absolute discretionary accruals two years after the IPO with the level three years after the IPO.

The WSRT fails to reject the null hypothesis stating that the level of earnings management between two years and three years after the IPO is the same for both measures at both a 5% and a 10% significance level. For one measure, DSS, the positive rank sum exceeds the negative rank sum sign while the second measure shows the opposite. Thus, no clear

indication of more or less earnings management three years after the IPO compared to the year before is observed.

The t-test also fails to reject the null hypothesis of an unchanged level of earnings management three years after the IPO compared to two years after the IPO at a 5% significance level. One measure, Kothari, manages to reject the null hypothesis at a 10% significance level with a p-value of 9.29%, while the other measure, DSS, does not. Both t-statistics are negative, meaning that we find some evidence of less earnings management three years after the IPO compared to two the years after the IPO, thus supporting a downwards trend.

All in all, none of our measures manages to support the view of more or less earnings management three years after the IPO compared to two years after the IPO at a 5% significance level. However, we identify one indication of a downward trend from the t-test result with the Kothari measure at a 10% significance level.

Hypothesis 4

The fourth hypothesis examines if the level of upward earnings management increases or decreases between the second and third year after the IPO by using our normal estimation values of discretionary accruals.

The WSRT fails to reject the null hypothesis that the level of upward earnings management is the same two years after the IPO as three years after the IPO for both measures at both a 5% and 10% significance level. However, the positive rank sums are greater than the negative for both measures, indicating more upwards earnings management three years after the IPO compared to two years after.

The t-test fails to reject the null hypothesis that the level of upward earnings management is the same two years after the IPO as three years after the IPO for both measures at both a 5%. At a 10% significance level, the Kothari measure manages to reject the null hypothesis, with a two-tailed p-value of 7.34%, while the DSS measure does not. Both measures show positive t-statistics, indicating that the level of upward earnings management increases between the second and third year after the IPO.

Altogether, the results for our two measures from both tests show no support of more upward earnings management three years after the IPO compared to the preceding year at a 5% significance level. The positive rank sums and the t-statistic are positive for both measures, indicating that firms engage in more upward earnings management three years after the IPO compared to two years after the IPO.

6. Analysis

6.1 Data selection

Exclusion of First North IPOs

To derive our final sample of IPO firms, i.e. the firms that go from private ownership to public ownership, a number of firms have been filtered away. First of all, we have chosen to look at listings at OMX's main market and thus excluded all listings on OMX First North. This choice is based on the notion that the IPO firms on First North differ from the IPO firms on main market in several important respects. First of all, there is a significant difference in terms of size between these companies, with First North being smaller than their Main Market counterparts. Larger companies are more strictly regulated by auditors and more monitored by financial analysts, potentially making firms' size negatively correlated with earnings management (Meek et al. 2007; Hribar & Nichols, 2007).

Relatedly, as our industry peer groups only constitute of firms that have been listed since 1999 and appertain to some of the largest companies in their industries, the normalized levels in our accrual models may have been set at a lower level than what had been if we would have included smaller private firms. If smaller firms had been included in the peer groups, they would have contributed to a higher normalized level given that they engage in more earnings management. In our case though, it means that our estimations of non-discretionary accruals are lower than would have been otherwise, implying that the discretionary part would risk being overestimated in our results. By comparing our figures to the results of Hope et al. (2013) (see Table 2 in Appendix), we can conclude that our levels of discretionary accruals are not remarkably high, rather the opposite. Furthermore, since this issue affects both our measurements of discretionary accruals when the firms are private as well as when they are

public, it should not alter the conclusions from our hypothesis tests. If it had been only the measure of the private discretionary accruals level that was distorted, then it would have distorted our comparisons and conclusions.

Secondly, First North is an exchange aimed at growth firms. Growth is a parameter that has been shown to have a positive relationship with the level of earnings management (Ashbaugh et al. 2008). Thus, our sample is potentially biased towards firms with relatively lower growth rates that in general engage in less earnings management.

Moreover, First North does not have the legal status as a EU-regulated market. Firms at First North are not subject to the legal requirements for admission to trading on a regulated market, why the risk associated with an investment in First North companies may be higher than on the main market. Leuz et al. (2003) conclude that the level of earnings management is negatively correlated with the extent of investor protection. Because the investor protection is considered to be lower for investors on First North, the exclusion of these firms implies that our sample is biased towards firms with lower levels of earnings management.

Additional exclusion of IPO firms

Furthermore, we choose to exclude financial firms from our sample based on the reasons described in Method section 3, which limits our ability to draw general conclusions for firms becoming public on the OMX Stockholm exchange.

By doing this, we risk omitting relevant data and therefore also results that could have been of help in answering our research questions. Earlier studies have reported differences between private and public banks. For example, Beatty et al. (2002) find that public banks engage in more earnings management compared to their private peers. Therefore, our decision to exclude banks and other firms in OMX's Financials sector classification as they risk distorting our findings. If we would have included banks and other firms in OMX's Financials sector classification, we may have derived different results.

We exclude financial companies for two reasons. First, their business models differ significantly from other industries. Their unique business models make us question the ability of our two accruals-based models to capture the existence of earnings management. No

studies examining earnings management in banks that we have encountered use accrual-based regression models to measure earnings management.

Secondly, financial companies are controlled by more extensive regulation than most other industries, which could affect the level of earnings management. Similar to Leuz et al. (2003) and Burgstahler & Dichev (1997), we therefore exclude firms IPOs in OMX's Financials sector.

Finally, as described section 3. Data we have excluded IPOs in the Oil & Gas and Telecom sector on OMX Stockholm, as the number of listed firms in these sectors is too small to allow us to make estimations through regression models of the normalized level of non-discretionary accruals.

As with the exclusion of IPOs in the Financials sector, this may create a bias in our results towards certain industries. However, these interventions were inevitable.

Limited ability to draw general conclusions

All exclusions make the results in this study less representative for the OMX Stockholm exchange as a whole. Consequently, one limitation with this study is the restricted ability to make general conclusions based on the findings about firms that have gone public on OMX Stockholm.

Moreover, the focus on Swedish firms limits this study's ability to contribute with conclusions for international firms, since earnings management practices have been shown to have a relation with the geography that is examined.

Sample critique and skewed selection

Our sample of IPO firms mainly consists of small and mid cap firms, constituting more than 80% of our firms. This distribution is important since smaller firms have been proved to engage in more earnings management.

However, among the peer companies in every industry that are used to find a normalized level of non-discretionary accruals, large cap companies represent on average 40%, mid cap 25% and large cap 35%. Because of the relatively large share represented by large cap companies, the normalized level may have been set at an unfairly low level. This in turn would mean that

our measures of discretionary accruals are unfairly high. However, we don't see any indication of this as all of our measures resulted in low levels compared to Hope et al. (2013).

Table 3A shows how many IPOs that occurred during each year. 80% of our sample consists of firms that have gone public during the period between 2002 and 2007. No IPOs occurred during 2008 and 2009. The remaining 20% of IPOs occurred in 2010 and 2011. We want to highlight the fact that our sample is skewed towards the bull market that started in early 2003 and ended in the middle of 2007 and the possibility that our results are distorted by prevailing market conditions.

Survivorship bias

The decision to solely include firms that have been listed at least since 1999 in our peer groups implies that there is a risk for survivorship bias in our estimation of the normalized level of non-discretionary accruals. Survivorship bias typically skews the sample towards larger and more mature firms. Again, as described above, larger firms have been shown to engage in less earnings management, which means that our normalized level of non-discretionary accruals may be set at a too low level.

Net PPE instead of gross PPE

As described in data, we use net PPE in our regression models when estimating the normalized level of non-discretionary accruals due to data reasons. Because the sign of the coefficient is mostly negative and net PPE is less than gross PPE, the regressions overestimate non-discretionary accruals and thus underestimate discretionary accruals.

6.2 Research Method

Cross-sectional estimation method vs. time-series method and peer group definition

We have chosen to use a cross-sectional approach when establishing a normalized level of earnings management. This decision was based on two main reasons. Firstly, the difficulty in finding historical financial data far enough back in time and over a sufficiently long time horizon to run our regression models when estimating a normalized level for non-discretionary accruals prevent us from using the time-series method. Secondly, this decision was based on our belief that comparable companies in the same industry form a better benchmark for establishing a normalized level of non-discretionary accruals than firms' financial performance over time. Without doubt, using the time-series method would have

given us different estimations of non-discretionary accruals and thus measures of discretionary accruals. It is hard to reason if the time-series approach would have resulted in higher or lower levels of discretionary accruals and thus earnings management. Research has shown that the cross-sectional approach can lead to both over- and underestimation of discretionary accruals (McNichols, 2002). Nonetheless, there is a possibility that we would have received different results from our hypothesis tests if we had used the time-series method.

Working with the cross-sectional approach also implies an inevitable trade-off between the accuracy of your estimations and the number of peers used in the regression models. Narrow industry definitions strengthen the accuracy of the estimates, as all companies' business will be more similar to each other and therefore also more likely to have similar accrual patterns. On the other hand, the narrower the industry definition, the lesser the number of firms that can be used in the industry regressions will be, which makes the OLS estimations less accurate.
This issue is illustrated by the OMX industry classifications that this study uses as a basis for each industry regressions. Therefore they are worth questioning. For example, a remarkable observation is that Consumer Services includes companies such as H&M, Skistar and SAS. These companies' operations differ significantly, which makes it uncertain how accurate the normalization levels are. An illustration of this is that their profit margin ranges between 10 to 20%, and their capital turnovers vary between 0.5 and 2. Similarly, Industrials also includes companies with very different types of activities such as Autoliv, Electrolux and Haldex. It is questionable how similar these accrual patterns should be, which is a central assumption in the cross-sectional method.

Critique on accrual based models

One limitation with this study is the limited ability to measure earnings management accurately. This study employs accrual-based models to estimate earnings management. The use of other measures is likely to have resulted in different estimations of earnings management and therefore also different results in our hypothesis tests.

Accrual based models, such as the Dechow et al. (1995) (DSS) model and Kothari et al. (2005) (Kothari) models that are employed in this essay have both strengths and weaknesses. Jeter & Shivakumar, (1999) show that the power in the accrual-based tests is low, making large sample sizes necessary to identify non-discretionary accruals accurately. Unfortunately,

we are limited in determining our sample size. Some industries in our sample, such as Materials and Consumer Services only include eleven peers. This results in high p-values on our industry regressions' coefficients, which implies that our estimated normalized levels are not completely reliable.

One alternative to improve the results from our accrual-based regressions would have been to exclude even more industries and only analyse those industries with a relatively large sample. However, doing this would limit our ability to draw general conclusions about the OMX Stockholm even more. As mentioned before, we already exclude 3 out of 9 industries. Another alternative to address the issue with too small samples would have been to broaden our geographical focus instead. Doing this though would not only provide us with the benefit of more observations, but would introduce other disturbing factors to our measurements, mainly caused by potential geographical differences.

Normal distribution of data

For the results from the Matched Pair t-test to be accurate, a necessary condition is that the data is normally distributed. However, our data does not seem to follow a normal distribution in all cases. This means that the reliability of the results from this test is questionable.

6.3 Analysis of results

Hypothesis 1

Our first hypothesis examines whether firms that have gone public engage in earnings management to a greater extent, regardless of upward or downward manipulation, when they are public compared to when they were private.

None of our Wilcoxon Signed Rank tests gave significant support for either the demand or the opportunistic behaviour hypothesis. Failing to reject the null hypotheses should not necessarily be interpreted as that none of the theories apply. Even though our findings were not statistically significant, the results still indicated that earnings management is higher when the firms are private, thus supporting the demand hypothesis.

Our second test, the Matched pair t-test also failed to provide any support for both theories on a 5% significance level. On a 10% however, the test found one statistically significant support

for the demand hypothesis. The remaining insignificant results also indicated that the demand hypothesis dominates the opportunistic behaviour hypothesis.

Despite the generally low level of significance in our tests of hypothesis 1, the results point in the same direction, indicating that the demand hypothesis dominates the opportunistic behaviour hypothesis. However, with statistically significant support from only one test, it is hard to make a definite conclusion that the demand hypothesis dominates the opportunistic behaviour hypothesis in this case. Also, not managing to reject the null hypothesis that firms earnings management practice remains unchanged does not mean that it is true.

Therefore, the final answer to hypothesis 1 is that we do not find enough evidence to prove that the level of earnings management changes two years before the IPO compared to two and three years after. Thus, we find no evidence that the demand or opportunistic behaviour hypothesis applies on our sample.

Hypothesis 2

The second hypothesis examines whether the level of upwards earnings management when firms are public remains at the same level as when they were private. If the level were to change, depending on the direction, it would either support the demand or the opportunistic behaviour hypothesis.

Our Wilcoxon Signed Rank tests only shows one statistically significant difference in the level of upward earnings management when a firm is public compared to when it is private. This difference supports the opportunistic behaviour hypothesis. Similarly, all other insignificant results from the WRST also indicate that firms engage in more upward earnings management when they are public, thus supporting the opportunistic behaviour hypothesis.

The t-test also fails to prove any significant difference in the level of upward earnings management at both a 5% and 10% level. The results from the t-test point in different directions, providing no indication of whether the level of upward earnings management increases or decreases when the firm is public, and thus no suggestion whether the demand or the opportunistic behaviour dominates the other.

Taken together, the tests on hypothesis 2 provide no coherent evidence that either the demand or the opportunistic behaviour hypothesis dominates the other and that upward earnings management increases or decreases between two years before the IPO and two and three years after the IPO. The only observation we can do is that the data give a weak hint of the opportunistic behaviour hypothesis dominating the demand hypothesis.

Hypothesis 3

Hypothesis 3 examines if our sample engages in more or less earnings management three years after the IPO compared to the second year after the IPO. The intuition is that an increase in earnings management would illustrate that the public ownership form forces firms to engage in more earnings management, thus supporting the opportunistic behaviour hypothesis, while a decrease would support the demand hypothesis.

The WSRT show no statistically significant difference between the level of earnings management two and three years after the IPO. As mentioned, the rank sums provide no clear indication, making it hard to conclude if the demand or the opportunistic behaviour hypothesis dominates the other.

The t-test fails to reject the null hypothesis of no change in the level of earnings management between the second and third year as a public company for all measures except one, indicating a statistically significant difference at a 10% level. This measure (Kothari) provides support for the demand hypothesis. The other insignificant measure is also slightly negative, also indicating that the demand hypothesis dominates the opportunistic behaviour hypothesis.

With only one statistically significant difference, and the remaining results contradicting each other, it is hard to decide if any of the theories dominates the other. However, as described, one test showed a statistical significant support for the demand hypothesis.

Hypothesis 4

Like the third hypothesis, the fourth hypothesis investigates how the level of earnings management changes between the second and third year as a public company. However, the

fourth hypothesis uses normal values, and thus examines whether the level of upward earnings management remains unchanged during this period.

The WSRT provides no statistical support for a difference based on any of the two measures. Despite this, both measures point in the same direction and indicate that the level of upward earnings management increases as the firm is public, i.e. an increase between the second and the third year after an IPO, consistent with the opportunistic behavior hypothesis.

The t-tests give no statistical significant proof of any difference between the level of upward earnings management between the second and third year as a private company at a 5% significance level. At a 10% level however, one measure (Kothari) manages to reject the null hypothesis of no difference between year two and year three after the IPO, providing support for the opportunistic behavior hypothesis. Similarly, the other insignificant measure also indicates that firms engage in more upwards earnings management the third year after the IPO compared to the second year.

The fourth and final hypothesis test provides some support for the opportunistic behavior hypothesis.

Summary of results

Among our hypothesis tests, some provide evidence of a changed earnings management practice for firms from the period when they are private compared to the period when they are public, while others do not. Unfortunately, the conclusions from the different hypothesis tests often contradict each other with some supporting the demand hypothesis, while others supporting the opportunistic demand hypothesis, thus failing to provide which of the theories that apply on our sample. Thus, we can not conclude that firm's earnings management practice changes when they go from private ownership form to public.

IFRS

Because our data consists of financial reports from both the period before and after the introduction of IFRS, there is a risk that our findings are distorted by the changes in accounting associated with this change. Since earlier studies contribute with different conclusions whether the adoption of IFRS caused increased or decreased earnings management, it is difficult to tell how this has affected our results. If the adoption of IFRS caused firms to engage in less earnings management, then this might be an explanation to

why our tests find relatively few increased between private and public levels of earnings management.

However, the opposite could just as well apply, meaning that IFRS caused earnings management to increase and that without it, we would have found a decrease in the level of earnings management when firms become public.

Defining the measurement occasions

In the study of our first two hypothesizes that intend to examine whether firms change their earnings management practice when they change ownership form, determining when to measure the private level and the public level of earnings management is of great importance as these measures form the basis of our comparison. To derive results that give as fair a representation as possible, it is desirable that we measure earnings management during periods that reflect the private and public ownership form in the most accurate way.

Logically, the longer before the IPO the measurement takes place, the likelier it will reflect the private ownership form. When firms come closer to the public ownership form, they are likely to adjust their reporting practices to the public ownership form. Previous research has failed to agree on the direction of this adjustment. Teoh et al. (1998) show that firms approaching an IPO engage in more earnings management compared to non-issuing firms, while Ball & Shivakumar (2008) prove that IPO firms engage in less earnings management.

Because we want to include as many IPO firms as possible in our sample and the difficulty in finding financial data before year 2000, combined with our desire to avoid that our measurements of the level of earnings management when our firms are private are affected by an approaching IPO, we decide to make the calculations representing earnings management during the private ownership form based on financial data two and three years before the IPO. If we would have set this measurement point earlier, then there would be a greater likelihood that our measures would reflect the private ownership form even more. However, it would force us to exclude some additional firms that don't have financial data for those earlier years. At this point in time, two and three years before the IPO, some firms are likely to already have decided to go public, while others may have started contemplating the idea and the rest have not.

If the IPO firms in our sample in general have decided to go public, then this could help explain the absence of statistically significant differences between private and public earnings

management levels in our results. As Teoh et al. (1998) describe, the incentives to manage earnings are likely to be particularly strong in connection to the sale of shares since firms prefer to sell their shares as expensive as possible.

Another potential explanation for the difficulty in finding differences between firms' private and public earnings management practices is that our measurement periods occur too close each to other, providing the firms too little time to change their reporting behaviour and thus their earnings management practice. However, expanding the interval between our measurement occasions introduces the risk of letting other factors affect the level of earnings management as well.

Restated financial data

Moreover, our data was gathered from the database Capital IQ. In this database, about 75% of all the IPO firms have restated their financial data for the private measurement period that we use, i.e. two and three years prior to all firms' IPO. These restatements could be adjustments that the firms do in connection to their IPOs. This implies that the data that we use may not correctly reflect the private ownership form.

Swedish scope

One explanation to why we observe relatively low levels of discretionary accruals in all of our measures could be related to the geographic scope of this study. In their examination of earnings management differences across 31 countries, Leuz et al. (2003) rank Sweden at 7th place, meaning that Sweden is one of the countries where companies engage in least earnings management. Thus, there is a possibility that our tests had shown different results if they were performed at countries were earnings management is more widespread.

Additionally, public markets in different countries do not necessarily function in the same way. The pressure from the capital market may be higher in one country compared to another (Hope et al. 2013). This also makes it reasonable to assume that the results would be different if this study was performed on firms in other countries.

7. Conclusion

Accounting constitutes an important mean for transferring information between firms and their stakeholders. Optimally, this information is both reliable and relevant. This allows for the accounting information to be used as a useful foundation for decision-making.

Related to the usefulness of this information is earnings management. By engaging in earnings management, managers have the possibility to alter the relevance and reliability of the accounting information, and thus its usefulness. Previous studies on earnings management have primarily centered on comparisons of different companies at one occasion. The development of earnings management within firms seems to have been forgotten. Therefore, we have intended to make a contribution to this void by examining the development of earnings management in Swedish firms that decide to change from private to public ownership between 2002 and 2012. First, we examine if the level of earnings management for our sample of IPO firms changes from two years before the IPO compared with two and three years after. Second, we examine whether the level of upward earnings management changes from two years before the IPO compared with two and three years after. Thirdly, we examine if the level of earnings management changes between the second and third year as a public company. Finally, we examine if the level of upward earnings management changes between the second and third year as a public company. Our results indicate both decreases and increases in relation to the change in ownership form, which means that we find support for the opportunistic behavior as well as the demand hypothesis.

Consequently, due to the contradicting findings in our four different research questions and the weak statistical results, we are unable to conclude whether the change in ownership form causes the level of earnings management to increase, decrease or remain unchanged. Thus, we cannot conclude whether the demand or the opportunistic behavior hypothesis applies best to our Swedish context. We interpret our contradictory results as to suggest that internal factors constitute an important determinant of the level of earnings management. Therefore, we propose factors such as ownership concentration and corporate governance for future research. Mainly due to our data selection, this study's findings have limited application. However, we hope that our study contributes to the relatively undiscovered research area investigating the development of earnings management over time, and by doing so, providing

different stakeholders such as investors and regulators with informative findings and valuable information for their decision-making.

8. Appendix

	Wilcoxon Signed Rank Test			T-Test	
	Positive Rank Sum	Negative Rank Sum	Z-value	t-Statistic	p-value (two-tailed)
DSS 2 years after the IPO					
Normal Values	242	254	-0,118	-0,275	0,785
Absolute Values	167	329	-1,587	-1,525	0,138
Kothari 2 years after the IPO					
Normal Values	259	237	0,216	-0,291	0,773
Absolute Values	254	242	0,118	-0,055	0,957
DSS 3 years after the IPO					
Normal Values	276	220	0,549	0,469	0,643
Absolute Values	149	347	-1,940	-1,932	0,063
Kothari 3 years after the IPO					
Normal Values	321	175	1,431	1,525	0,138
Absolute Values	203	293	-0,882	-1,245	0,223
DSS 2 years after the IPO compared to 3 years after the IPO					
Normal Values	275	221	0,529	0,995	0,327
Absolute Values	264	232	0,314	-0,106	0,916
Kothari 2 years after the IPO compared to 3 years after the IPO					
Normal Values	322	174	1,450	1,855	0,073
Absolute Values	177	319	-1,391	-1,354	0,186

Table 1: Statistical results

Terminology:

DSS: The methodology developed by Dechow et al. 1995

Kothari: The methodology developed by Kothari et al. 2005

Measures of:	Discretionary	Discretionary Working Cap.	**Our**	Kothari et	Kothari et	Kothari et	Dechow et	Dechow et	Dechow et
Hope, Thomas & Vyas (2013)	Tot. Accruals	Accruals	**measures**	al. 2005	al. 2005	al. 2005	al. 1995	al. 1995	al. 1995
Private firm sample									
Mean	-0.108	-0.067							
Median	-0.072	-0.046							
Public firm sample			**Years t (+/-)**	**-3 to -2**	**+1 to +2**	**+2 to +3**	**-3 to -2**	**+1 to +2**	**+2 to +3**
Mean	-0.062	-0.044	**Mean**	-0.0141	-0.0201	0.0167	-0.0047	-0.0102	0.0060
Median	-0.039	-0.027	**Median**	-0.0114	-0.0028	0.0130	-0.0005	-0.0032	0.0031

Table 2: Comparative results

9. Bibliography

Ahmed Riahi-Belkaoui, A., 2003. Intellectual capital and firm performance of US multinational firms: a study of the resource-based and stakeholder views. Journal of Intellectual capital, 4(2), pp.215-226.

Ashbaugh-Skaife, H., Collins, D.W., Kinney Jr, W.R. and LaFond, R., 2008. The effect of SOX internal control deficiencies and their remediation on accrual quality. The accounting review, 83(1), pp.217-250.

Aussenegg, W., Inwinkl, P. and Schneider, G.T., 2008. Earnings management and local vs. international accounting standards of European public firms.International Accounting Standards of European Public Firms (September 1, 2008).

Ball, R. & Shivakumar, L. 2006, "The role of accruals in asymmetrically timely gain and loss recognition", Journal of accounting research, vol. 44, no. 2, pp. 207-242.

Ball, R. and Shivakumar, L., 2005. Earnings quality in UK private firms: comparative loss recognition timeliness. Journal of accounting and economics, 39(1), pp.83-128.

Ball, Raymond, 1989, The firm as a specialist contracting intermediary: Application to accounting and auditing, Working paper (University of Rochester, Rochester, NY).

Barth, M. E., W.R. Landsman, and M.H. Lang (2008) "International Accounting Standards and Accounting Quality" Journal of Accounting Research, 46(3), 467-498.

Basu, S. 1997. The conservatism principle and the asymmetric timeliness of earnings. Journal of Accounting and Economics 24 (1): 3-37.

Beatty, A.L., Ke, B. & Petroni, K.R. 2002, "Earnings management to avoid earnings declines across publicly and privately held banks", The Accounting Review, vol. 77, no. 3, pp. 547-570.

Boumediene, E., Boumediene. S., & Nafti, O. 2014, "Impact Of Adopting IAS-IFRS On The Handling Of Accounting Data: The Case Of France", The Journal of Applied Business Research, Vol. 30, no. 4. Pp. 1239 – 1252

Burgstahler, D., and I. Dichev. 1997. Earnings management to avoid earnings decreases and losses. Journal of Accounting and Economics 24 (1): 99-126.

Burgstahler, D.C., Hail, L. & Leuz, C. 2006, "The Importance of Reporting Incentives: Earnings Management in European Private and Public Firms", The Accounting Review, vol. 81, no. 5, pp. 983-1016.

Callao, S. and Jarne, J.I., 2010. Have IFRS affected earnings management in the European Union?. Accounting in Europe, 7(2), pp.159-189.

Chen, F., Hope, O., Li, Q. & Wang, X. 2011, "Financial reporting quality and investment efficiency of private firms in emerging markets", The Accounting Review, vol. 86, no. 4, pp. 1255-1288.

Cheng, Q. and Warfield, T. 2005, ‘‘Equity incentives and Earnings Management’’, The Accounting Review, vol. 80, pp. 441-76.

DeAngelo, L., 1986. Accounting numbers as market valuation substitutes: a study of management buyouts of public stockholders. The Accounting Review 61, 400–420.

DeAngelo, H., DeAngelo, L. and Skinner, D.J. 1994, “Accounting choice in troubled companies”, Journal of Accounting and Economics, vol. 3, no. 1-2, pp. 113-143.

Dechow, P.M. & Dichev, I.D. 2002, "The quality of accruals and earnings: The role of accrual estimation errors", The accounting review, vol. 77, no. s-1, pp. 35-59.

Dechow, P., Ge, W. & Schrand, C. 2010, "Understanding earnings quality: A review of the proxies, their determinants and their consequences", Journal of Accounting and Economics, vol. 50, no. 2–3, pp. 344-401.

Dechow, P.M., Sloan, R.G. & Sweeney, A.P. 1996, "Causes and consequences of earnings manipulation: An analysis of firms subject to enforcement actions by the sec*", Contemporary accounting research, vol. 13, no. 1, pp. 1-36.

Dechow, P.M., Sloan, R.G. & Sweeney, A.P. 1995, "Detecting earnings management", Accounting review, pp. 193-225.

Dechow, P.M. 1994, "Accounting earnings and cash flows as measures of firm performance: The role of accounting accruals", Journal of Accounting and Economics, vol. 18, no. 1, pp. 3-42.

Dechow, P.M., Kothari, S.P. & Watts, R.L. 1998, "The relation between earnings and cash flows", Journal of Accounting and Economics, vol. 25, no. 2, pp. 133-168.

Dechow, P.M., Ge, W. and Schrand, C. 2010, "Understanding earnings quality: A review of the proxies, their determinants and their consequences", Journal of Accounting and Economics, vol. 50, no. 2-3, pp. 344-401.

DeFond, M.L. & Jiambalvo, J. 1994, "Debt covenant violation and manipulation of accruals", Journal of Accounting and Economics, vol. 17, no. 1, pp. 145-176.

Degeorge, F., J. Patel, and R. Zeckhauser. 1999. Earnings management to exceed thresholds. The Journal of Business 12 (1): 1-33.

Bartov, E., Givoly, D. and Hayn, C., 2002. The rewards to meeting or beating earnings expectations. Journal of Accounting and Economics, 33(2), pp.173-204.

Givoly, D., Hayn, C.K. & Katz, S.P. 2010, "Does public ownership of equity improve earnings quality?", The Accounting Review, vol. 85, no. 1, pp. 195-225.

Guay, W.R., Kothari, S. & Watts, R.L. 1996, "A market-based evaluation of discretionary accrual models", Journal of accounting research, pp. 83-105.

Haw, I.M., Hu, B., Hwang, L.S. and Wu, W., 2004. Ultimate ownership, income management, and legal and extra-legal institutions. Journal of accounting research, 42(2), pp.423-462.

Hayn, C. 1995. The information content of losses. Journal of Accounting and Economics 20 (2): p. 125- 153.

Healy, P.M. 1985, "The effect of bonus schemes on accounting decisions", Journal of Accounting and Economics, vol. 7, no. 1-3, pp. 85-107.

Healy, P.M. & Wahlen, J.M. 1999, "A review of the earnings management literature and its implications for standard setting", Accounting Horizons, vol. 13, no. 4, pp. 365-383.

Healy, Paul M. and Krishna G. Palepu, 1993, The effect of firms' financial disclosure strategies on stock prices, Accounting Horizons 7, l-11.

Henriksson, J., Litz, M. & Handelshögskolan i Stockholm Institutionen för redovisning och finansiering 2015, " Do public and private firms show different reporting behaviour", Handelshögskolan i Stockholm, Stockholm.

Holthausen, Robert W., 1990, Accounting method choice: Opportunistic behavior, efficient contracting and information perspectives, Journal of Accounting and Economics 12, 207-218

Chen, F., Hope, O.K., Li, Q. and Wang, X., 2011. Financial reporting quality and investment efficiency of private firms in emerging markets. The accounting review, 86(4), pp.1255-1288.

Hope, O., Thomas, W.B. & Vyas, D. 2013, "Financial Reporting Quality of U.S. Private and Public Firms", Accounting Review, vol. 88, no. 5, pp. 1715-1742.

Hribar, P., Collins, D.W., 2002. Errors in estimating accruals: implications for empirical research. Journal of Accounting Research 40, 105–134.

Hribar, P. & Craig Nichols, D. 2007, "The use of unsigned earnings quality measures in tests of earnings management", Journal of Accounting Research, vol. 45, no. 5, pp. 1017- 1053.

Jeter, D.C. and Shivakumar, L., 1999. Cross-sectional estimation of abnormal accruals using quarterly and annual data: Effectiveness in detecting event-specific earnings management. Accounting and Business Research, 29(4), pp.299-319.

Jones, J.J. 1991, "Earnings management during import relief investigations", Journal of accounting research, , pp. 193-228.

Kaplan, Robert. (1985). "Comments on Paul Healy: Evidence on the Effect of Bonus Schemes on Accounting Procedure and Accrual Decisions." Journal of Accounting and Economics 7, 109–113.

Dechow, P.M., Kothari, S.P. and Watts, R.L., 1998. The relation between earnings and cash flows. Journal of accounting and Economics, 25(2), pp.133-168.

Kothari, S.P., Leone, A.J. & Wasley, C.E. 2005, "Performance matched discretionary accrual

measures", Journal of Accounting and Economics, vol. 39, no. 1, pp. 163-197.

Kothari, S.P., 2001. Capital markets research in accounting. Journal of accounting and economics, 31(1), pp.105-231.

Leuz, C., Nanda, D. & Wysocki, P.D. 2003, "Earnings management and investor protection: an international comparison", Journal of Financial Economics, vol. 69, no. 3, pp. 505- 527.

Matsumoto, D.A., 2002. Management's incentives to avoid negative earnings surprises. The Accounting Review, 77(3), pp.483-514.

NASDAQ OMX Stockholm. (2012). Regelverk för emittenter. http://www.nasdaqomx.com/digitalAssets/96/96154_nasdaq-stockholms-regelverk-f--remittenter---2015-01-01.pdf (Hämtad: 2016-05-14).

McNichols, M.F. & Stubben, S.R. 2008, "Does earnings management affect firms' investment decisions?", The Accounting Review, vol. 83, no. 6, pp. 1571-1603.

McNichols, M. 2002, ‘‘Discussion of the quality of accruals and earnings: the role of accrual estimation errors’’, The Accounting Review, vol. 77, pp. 61-9.

Meek G., Rao, R. and Skousen, C. 2007, ‘‘Evidence on factors affecting the relationship between CEO stock option compensation and Earnings Management’’, Review of Accountingand Finance, vol. 6, no. 3, pp. 304-323.

PEASNELL, K.V., POPE, P.F. and YOUNG, S., (2000). Detecting earnings management using cross-sectional abnormal accruals models. Accounting and Business research, 30(4), pp.313- 326.

Penman, S. H., and X J. Zhang. 2002. Accounting conservatism, the quality of earnings, and stock returns. The Accounting Review 11 (2): 237-264.

Penno, M, and D. T. Simon. 1986. Accounting choices: Public versus private firms. Journal of Business Finance & Accounting 86 (13): 561-570.

Fan, Qintao 2007 – “Earnings Management and Ownership Retention for Initial Public Offering Firms: Theory and Evidence”. The Accounting Review, vol. 82, no. 1 pp. 27–64.

Rahman, M.M. and Kumaraswamy, M.M., 2008. Relational contracting and teambuilding: assessing potential contractual and noncontractual incentives. Journal of Management in Engineering, 24(1), pp.48-63.

Redovisningsrådet (2001). Utformning av Finansiella Rapporter. http://www.bfn.se/upload/sv/redovisningsregler/redovisningsradetsrekommendationer/RR/RR22.pdf (Hämtad: 2016-05-15).

Schipper, K. 1989, "Commentary on Earnings Management", Accounting Horizons, vol. 3, no. 4, pp. 91-102.

Skinner, D.J., 1997. Earnings disclosures and stockholder lawsuits. Journal of Accounting

and Economics, 23(3), pp.249-282.

Myers, J., Myers, L., Skinner, D., 2007. Earnings momentum and earnings management. Journal of Accounting, Auditing, and Finance 22, 249–284.

Sloan, R. G., (1996). Do stock prices fully reflect information in accruals and cash flows about future earnings? Accounting Review, 71(3), pp. 289-315.

Subramanyam, K.R., 1996. The pricing of discretionary accruals. Journal of accounting and economics, 22(1), pp.249-281.

Teoh, S.H., Welch, I. and Wong, T.J., 1998. Earnings management and the long-run market performance of initial public offerings. The Journal of Finance, 53(6), pp.1935-1974.

Teoh, S.H., Welch, I. and Wong, T.J., 1998. Earnings management and the underperformance of seasoned equity offerings. Journal of Financial economics, 50(1), pp.63-99.

The Swedish Parliament 1995, Årsredovisningslag (1995:1554), Ministry of Justice L1, Stockholm.

Thomasson, J., (2008). Extern redovisning och finansiell analys efter övergången till IFRS, före K3. 12:2 uppl.. Enskede: TPB.

Warfield, T.; Wild, J; and Wild, K. “Managerial Ownership, Accounting Choices, and Informativeness of Earnings.” Journal of Accounting and Economics 20 (1995): 61–91.

Capital IQ

Retriever

Books

Kellogg, I. & Kellogg, L.B. 1991, Fraud, window dressing, and negligence in financial statements, Shepards/McGraw-Hill.

Robinsson, T.R, Henry, E. and van Greung, H, Brorhahn, M. 2009, "International Financial Statement Analysis", Wiley.

Ronen, J. and Yaari, V., 2008. Earnings management. Springer US.