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## DIPLOMARBEIT

### **Earnings Management: Incentives and Circumstances leading to Performance Manipulation**

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# **Abstract**

In firms that do not have their owner responsible for administration of business, but instead a chief executive officer, a gap arises between information the shareholders get from the CEO and the actual generated information. This so-called information asymmetry is a prime reason for earnings management. This thesis examines the motivations and circumstances a chief executive officer has to manipulate his firm's performance. By analyzing the work of different authors, the main influences these managers have are identified. The accounting standard used by a firm as well as bonus plans, retirement of a CEO and auditing are identified as reporting related incentives that are main factors for a manager's decision to manage earnings towards a target. Continental-European GAAP, British-American GAAP and International Financial Reporting Standards are looked on closer and their effects on earnings management is analyzed. Stock market related incentives, such as benchmarks, CEO stock options and speculators influence are also identified as factors that influence earnings management.

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**Remarks on linguistic usage**

For easier readability only one gender was used in the following text. Under the designation of persons both genders are meant, except female or male gender is stated explicitly or it is alluded in the particular context. With occupational titles, e.g. chief executive officer, always both genders are meant.

**Anmerkung zum Sprachgebrauch**

Im Weiteren erfolgen die allgemeinen Bezeichnungen von Personen aus Gründen der Lesbarkeit und Übersichtlichkeit in konventioneller Sprachform. Mit allen verwendeten Personenbezeichnungen sind stets beide Geschlechter gemeint, außer es wird ausdrücklich auf weibliche oder männliche Personen hingewiesen bzw. geht entsprechendes aus dem jeweiligen Kontext eindeutig hervor.

**Table of Abbreviations**

%	Percent
CEO	Chief Executive Officer
et al.	et alteri
e.g.	exempli gratia
GAAP	Generally Accepted Accounting Principle
HGB	Handelsgesetzbuch
IAS	International Accounting Standards
IASB	International Accounting Standards Board
IASC	International Accounting Standards Committee
IFRS	International Financial Reporting Standards
p.	page
pp.	pages
R&D	Research and Development
SEC	United States Securities and Exchange Commission
US	United States

# 1 Introduction

The events of the past years and the worldwide economic crisis have drawn the world's attention to the economic sector. Questions arose how this crisis could happen and if it was possible to avoid another breakdown in the following years. A lot of factors did play a role in this worldwide event; the global connections between all these factors are complex and it is difficult to find the trigger for all these happenings. Certainly false earnings reports and manipulated performances of firms were one of many reasons that led to the worldwide breakdown of so many firms and did even affect some countries severely, as recently seen in the case of Greece.

In this thesis it is tried to find the motivations the chief executive officer of a firm has to manipulate the performance of his firm and what his incentives are to manage earnings towards a specific target. These factors play a role in the breakdown of some firms and in the spotlight of the current crisis investors are eager to see reported accounting statements and stock prices that reflect the actual position of a firm in a market and not the numbers made up by a manager that acts in his own interest. Acting in the interest of the shareholders and investors should always be the main goal and if this is achieved properly, then financial statements can be trusted more again.

The research question, which is tried to answer in this thesis, is:

*“What factors and circumstances cause and influence managers’ decisions to manipulate the performance of their firm?”*

Identifying these influences may help investors and shareholders in their decision making process what firms to trust when considering future investments and when it is better to find more information on a firm, e.g. the actual position of this firm in the market. By reducing information asymmetry the managers of firms can be trusted more and reporting will be again more relevant for the decision making process of investors.

It is tried to detect the motivations of these managers as well as the surrounding factors that lead chief executive officers to the point where they decide to manipulate earnings. The influences a manager has from outside the firm as well as the influences that come from the

structure of the firm itself and its reporting will be discussed and their impact on the managers' decisions will be ascertained. The auditing and audit committee of a firm will also be looked on more closely.

By processing the present literature and the work of other authors these influences and factors will be detected and sorted by their kind of influence on the firm and market.

The thesis sequencing this chapter is structured as following:

Crucial main terms and their definition that will be used throughout the whole thesis are described in the second part in order to obtain an insight to the subject.

The third chapter will describe the methods used by chief executive officers to manipulate performances and manage their firm's earnings. The mathematical definitions for earnings management will be stated and described.

The influence of the reporting system will be discussed in the fourth chapter, as it plays a great role in the decision process of managers and to understand the external influences on earnings management.

Afterwards, in the fifth chapter, the factors that encourage managers to engage in performance manipulation that affects a firm internally and the effects that these manipulations have on the financial reporting will be outlined.

In the sixth chapter the factors and kinds of earnings management done by a manager that effect the stock market as a whole and therefore the shareholders as well will be described and the implications for the market will be identified and specified.

The last part will give concluding thoughts on the subject and a summarization of all factors discussed in the previous chapters. Suggestions for future research topics that would be interesting to study will also be mentioned at the very end.

## 2 Explanation of terms

As an introduction to this thesis and for the further understanding as well as for the avoidance of misunderstandings the following part will provide clear definitions of the main terms that will be used.

With an increasing number of authors that delve into the subject of earnings management different definitions for often used functional terms occur. In general it can be said that most of the terms have the same or nearly the same meaning, nevertheless a clear definition of these main terms is of great importance for this topic. The following definitions will be used throughout the whole thesis.

### 2.1 Earnings management

*“A purposeful intervention in the external financial reporting process, with the intention of obtaining some private gain“*

Schipper, 1989, p.92

The increasing importance of reporting good performance drives companies' chief executive officers (CEOs)<sup>1</sup> to a point where they will make a more creative use of the given accounting standards in order to give the market, the economy and the shareholders what they want to see. Whatever the reason for this may be, by taking this step manipulation of a firm's performance is done. In the literature this deliberate manipulation became known as earnings management. In this thesis by earnings management the wilfully intervention in the reporting system and the deliberate manipulation of performance by people with the power to manipulate, e.g. CEOs, will be meant.

According to Austrian HGB the annual financial report has to be as accurate as possible regarding the condition of assets, finance and revenue of a firm. (§§195, 222, Abs 2 HGB)

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<sup>1</sup> Chief executive officer is the highest officer who is in charge of the management



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Every action that is taken that not gives an accurate point of view of the actual financial situation is against the law.

In the United States of America managers who knowingly make misleading or false forecasts are subject to liability under both the SEC (Securities and Exchange Commission) Act of 1934 via Rule 10b-5 and the principles of common law. (Brown and Higgins, 2001, p.377)

Earnings management, as described in this thesis would be subject to prosecution under both laws.

These two passages are only examples of text of a law. Other countries may have different legal foundations, but generally it can be said, that law in any country of the world prohibits manipulation of performance.

Income smoothing, which means that CEOs try to keep their earnings stable over the years instead of reporting exceptionally good and bad years as it would naturally occur, is not included in this thesis as part of earnings management. This line is drawn, because it depends on the accounting standard and the country if earnings smoothing can be seen as manipulation or not and what exactly is prohibited by law or requested. Earnings smoothing would be welcomed under Austrian HGB, since the tax system and reporting system are linked to each other and taxation would be easier if earnings were smoothened over the years.

## **2.2 Information asymmetry**

One person being able to have an advantage in information, to know more about something than another person, is called information asymmetry. Asymmetric Information, also known as Principal-Agent-Problem, describes a situation in which the principal, in this thesis mainly the stakeholders of a firm, has less information than the agent, the CEO of that firm, has. The agent is assumed to always act in his own interest first.

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According to Simon (1959) three different types of asymmetric information can be described:

- Hidden characteristics
- Hidden action and hidden information
- Hidden intention

Hidden characteristics are attributes a principal does not know about when hiring an agent, therefore his choice may not be as well chosen as if he had had all information regarding the agent.

Hidden actions can be taken by the agent and cannot be supervised by the principal.

Hidden information is information an agent has and the principal has not, due to lack of expertise. The principal can never be sure if the agent has done everything according to his will.

Hidden intentions the agent may have prior to signing the contract are not known by the principal and can lead to sunk costs<sup>2</sup>. Simon (1959) argues that then the principal is dependant on the agent.

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The size of a firm can be an indicator for information asymmetry. The larger a firm, the more information is generated and also communicated to others, which leads to lower information asymmetry. Greater analyst coverage and institutional interest also comes along with a growing firm and influences the generated information and proper communication of this information in a positive way. This is the reason why growing firms can be associated with low information asymmetry. (Meek et al., 2007, p.308)

The shareholders are well aware of the information asymmetry, but they can never know to which extent it is exercised and what can be done to eliminate the asymmetry. They cannot see the long-term effects this asymmetry causes and are forced to pay more attention to the current term results than they would like to.

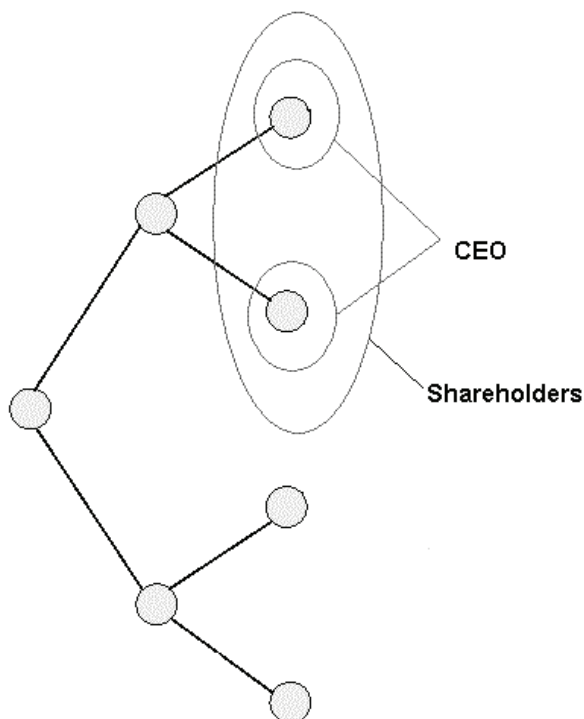
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<sup>2</sup> sunk costs are costs that have already arisen and cannot be retrieved

It would be possible for the CEO to communicate all of his information at any time without extra costs, but for whatever reasons, not all information is passed on to the principals, possibly to gain some private profit out of it.

Contracts can be designed and used to encourage the agent to communicate all information, by giving bonus schemes, fringe benefits or other incentives. But again, the principals can never be sure if everything of importance and in their best interest is passed on to them. Only the CEO knows all relevant information regarding the firm.

A widely dispersed ownership also leads to high information asymmetry between principals and agents, here stockholders and managers. Firms in the United States of America have a very widely dispersed ownership, which in this case leads to a high information asymmetry in US companies, one of the highest rates worldwide.



**Figure 1: information asymmetry between CEO and shareholders**

The CEO has the advantage of seeing the entire information in all its details. He has the information about everything going on in a firm and all its financial details, but he imparts the information only in one big piece to the shareholders. This happens in the annual financial statement, which is made after the rules of national or international standards. The shareholders can only see the information altogether and are not able to itemize this whole information, therefore they have to trust the CEO in his decisions.

### **2.3 Accounting standards**

Nearly every country in the world has a different generally accepted accounting principle (GAAP). These principles are sets of rules and standards for reporting financial information and the preparation of financial statements prescribed by the regulations. However, accounting systems of different countries often do not differ too much from each other. Therefore some of them can be drawn together into bigger groups that share major similarities.

For the purpose of this thesis, following Brown and Higgins (2001), Australia, Hong Kong, The Netherlands, South Africa and the United Kingdom will be summarized under the so-called “British-American GAAP”. These countries represent some of the bigger countries using a relatively alike accounting standard. As the name says the United States of America are also part of this group but were not studied by the authors. Countries not mentioned can also have similar standards, but may be due to their size and lack of information not included in their studies.

The objective of the British-American GAAP is to provide useful information to shareholders. The tax reporting is unrelated to the reporting system.

France, Germany, Italy, Japan, Spain, Sweden and Switzerland will be summarized in the group “Continental-European GAAP”. Brown and Higgins (2001) did not test for earnings surprises and performance manipulation in Austria, but Austria, due to the fact, that most accounting principles are very similar to the principles of German law can be added as well to the Continental-European GAAP group.

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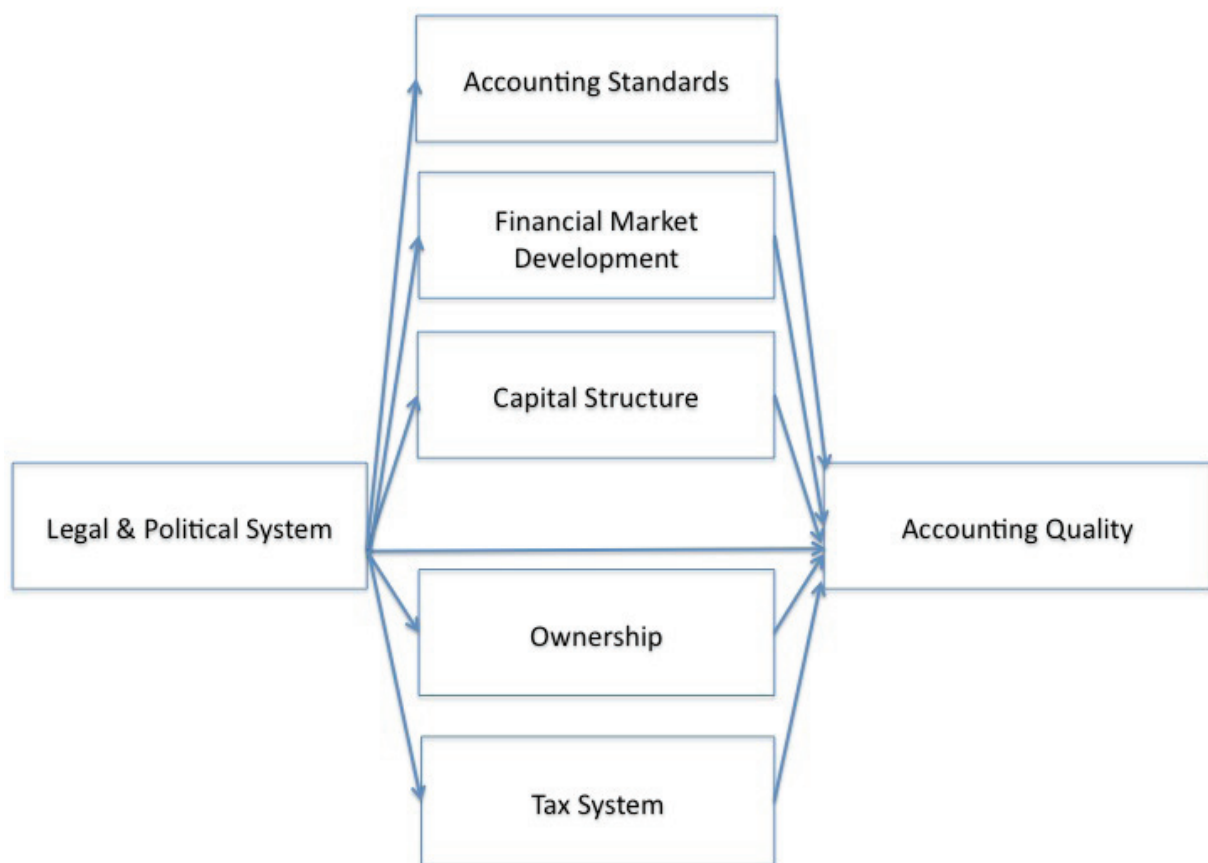
In most Continental-European GAAP countries the tax reporting system is related to the accounting standard and focuses on the debt holders more than on the shareholders. (Soderstrom and Sun, 2007, p.678)

Independent from these national accounting standards acts the International Financial Reporting Standard (IFRS) previously also known as International Accounting Standard (IAS). IFRS is a set of accounting standards released by the International Accounting Standards Committee (IASC) that can be used by every company in the world regardless of the country the company is domiciled, assuming IFRS is procurable by law.

The goal of the introduction of IFRS is to make financial reporting more comparable, by eliminating the differences in accounting between various countries, therefore having a possibility to compare countries from around the world directly to each other. It is an accrual based accounting system, contrary to cash basis accounting. In accrual-based systems income is reported when earned and expenses when incurred. Cash basis accounting means that cash is recorded when it is received and expenses are recorded when cash is paid for them. Generally cash basis accounting systems are considered not as good as accrual based accounting systems, since it leaves a time gap between a sale/purchase and the receipt/payment of the money for it.

In Europe mostly firms listed on the stock exchange use IFRS, for two reasons: first, because specifications of the stock market require international standards, second, because firms listed on the stock market do not need to make a annual statement following HGB if they use IFRS instead. (§292a HGB)

Regardless which accounting system is chosen or used by a firm, the main purpose of reporting financial statements is to serve as information for the shareholders and the market. By releasing these financial statements annually information asymmetry between the principal and the agent should be lessened. Always given that the CEO responsible for financial reporting does not manipulate the information that is communicated in these statements.



**Figure 2: Determinants of Accounting Quality**  
According to: Soderstrom and Sun, 2007, p.688, Figure 1

The extent of earnings management is dependent on the accounting quality, which is in return dependent on different factors influenced by the legal and political system of each country, such as accounting standards, financial market development, capital structure, ownership and tax system. Because of the difference of these factors from country to country earnings management can have different faces, always depending on the country observed. But generally it can be said that the better the accounting quality, the lower earnings management will be.

### 3 Manipulating Performance

*“Earnings management hides the „true“ performance of the firm from shareholders and others, such that earnings become a less reliable measure of firm performance.”*

Meek et al., 2007, p.306

Earnings management can be described as timing of investments to alter reported earnings in order to obtain certain goals that are unknown by others than the initiating person. Earnings management distorts a firm's performance and earnings reports cannot be trusted completely if earnings management is involved.

Earnings management can be seen as a response to environmental conditions that are generated by the economy, shareholders or analysts. The CEO does not initiate earnings manipulation completely on his own, it can rather be seen as complex dependency between these persons and factors.

#### 3.1 Goals of earnings management

Due to the fact, that very few managers were convicted of manipulating reported earnings, it is still unknown what goals these people want to achieve and what the determining factors that cause their decision to manipulate earnings are. But when testing for earnings manipulations with empirical methods a lot of different factors, aside from the personal integrity of each executive, are found. All of these factors seem to be involved in the decision making process of a CEO who decides to manipulate earnings.

The CEO of a firm, has the intention of doing something to increase the own private wealth, his reputation or the reputation of the firm and he does not communicate his plans to the shareholders. Within the limits of the law this seems unattainable, which leads the CEO to make a more creative use of the given accounting systems.

As loophole to this dilemma and to achieve their goal of private wealth and higher reputation earnings management seems a perfect way out, although the CEO always knows that he is

acting against the law, it is often seen as peccadillo by the CEO and the possibility of being caught does not seem to stop them from manipulating.

Using earnings management the CEO tries to gain as much as possible out of his given contracts, mostly including bonus or performance plans tied to good performance, stock options or stocks. He tries to exploit these bonus plans or other benefits as much as possible and to time investments in order to alter reported earnings with the objective to obtain certain benefits, that could not be attained otherwise.

A manipulating CEO can deter the comparability of a firm in the market and the shareholders are misled about a firm's actual position in the market.

The CEO will only choose to engage in earnings manipulation if the benefits are higher than the costs of manipulating reports and performances, so that he can derive some benefit from the expenses

### **3.2 Earnings management through accruals**

*„Earnings management occurs when managers use judgement in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported numbers“*

Healy and Wahlen, 1999, p.368

Accruals are accounts on a balance sheet that represent liabilities and non-cash based assets.

Among others these accounts include:

- Accounts payable
- Accounts receivable
- Goodwill
- Future tax liability
- Future interest expense



By using accruals a manager has the possibilities to increase or reduce the reported income of his firm. Both scenarios are common and used. Depending on the situation, the reporting standards the CEO has to follow and the incentives he has, income increasing or decreasing accruals will be chosen by the CEO.

When using accruals a firm is able to measure what it owes in the future and what cash revenues they will receive. If for example invoices for goods or other things are not received at the end of the fiscal year, accruals need to be built in order to match the balance sheet with the profit and loss account.



**Figure 3: Average accrual ratios, size weighted**  
**Source: Bergstresser, Philippon (2006), p.512, Figure 1**

Bergstresser and Philippon (2006) observed firms for a time period of 20 years and an extraordinary rapid growth of accruals in the years following 1995 can clearly be seen in this figure.

Using accruals to control earnings can be done with little effort, because accruals are components of earnings that are not directly reflected in the current cash flow, as well a great amount of managerial discretion goes into their construction. (Bergstresser and Philippon, 2006, p.512)

While one only can be sure that earnings have been managed if a court convicts a firm or CEO of doing so, it is likely that earnings are more often managed than known and earnings management is a widespread technique among public firms.

### 3.3 Discretionary accruals

Discretionary accruals are often used as proxy for earnings management and will for this matter also be used as indicator for manipulations in this thesis.

Discretionary accruals can be estimated in different ways, one of them for example is that discretionary accruals are the total accruals for a firm year divided by the difference between total accruals and normal accruals. (Davidson III et al., 2007, p.51f)

Normal accruals are an estimated measure of the firm's accruals and total accruals are earnings before extraordinary items and discontinued operations, the operating cash flow.

#### Formula 1

$$DA = ACCR_t / (TA_t - NA)$$

DA = discretionary accruals

ACCR<sub>t</sub> = total accruals in year t for a firm

TA<sub>t</sub> = total accruals

NA = normal accruals

Discretionary accruals are adjustments to cash flows and can be selected by the CEO. The CEO can choose them out of an opportunity set of generally accepted procedures.

By using discretionary accruals a manager has the possibility to shift earnings from one period to another period. It is assumed that discretionary accruals sum to zero over the time period a CEO stays with a firm. (Healy, 1985, p.89)

Discretionary accruals can be either used to hide bad performance of the current period or to save current earnings for later use. The first scenario would be the use of income increasing discretionary accruals, the second one the use of income decreasing.

Long term asset depreciation, acceleration or delay of delivery of inventory at the end of a fiscal year and allocation of fixed factory overheads between cost of goods sold and inventory are only a few possibilities for a CEO to choose from, if discretionary accruals according to their need have to be created.

### **3.4 The Jones Model**

In 1991 Jennifer J. Jones developed an accrual expectations model that is used frequently to test for earnings management using accruals. (Jones, 1991, p.211) This model is up to the current date the most used and most important model and is used by various authors when they try to detect earnings management through accruals. Many of these authors modify the so-called “Jones Model” for their purpose and in many cases new factors that measure total accruals more accurately and better for the specific purpose of an author are introduced to the existing model. Depending on what an author is looking for, these factors are added to the different terms of the equation.

The model developed by Jones in 1991 measures the change in revenue from period  $t-1$  to period  $t$  and gross plant, property and equipment in period  $t$  to predict total accruals as accurately as possible.

**Formula 2**

$$TA_{it}/A_{it-1} = \alpha_i (1 / A_{it-1}) + \beta_{1i} (\Delta REV_{it} / A_{it-1}) + \beta_{2i} (PPE_{it} / A_{it-1}) + e_{it}$$

$TA_{it}$  = total accruals in year t for firm i

$\Delta REV_{it}$  = revenues in year t less revenues in year t-1 for firm i

$PPE_{it}$  = gross property, plant and equipment in year t for firm i

$A_{it-1}$  = total asset in year t-1 for firm i

$e_{it}$  = Error term in year t for firm i

i = 1,.....,N firm index

t = 1,.....,T<sub>i</sub> year index

$\alpha_i, \beta_{1i}, \beta_{2i}$  = industry specific estimated coefficients

## 4 Reporting standards and their influence on manipulation

*„Accounting standards can provide a relatively low-cost and credible means for corporate managers to report information on their firm’ performance to external capital providers and other stakeholders“*

Healy and Wahlen, 1999, p.366

Our planet having hundreds of countries, it is natural that a lot of different reporting systems exist. Having that much different standards earnings management can have a lot of different faces. Some reporting standards may encourage CEOs to manipulate in one specific direction; others may not have the exact same opportunities of manipulation.

One of the main factors for the presence of earnings management is the reporting system a firm uses as well as the legal system and legal control system present in the state.

The change from national accounting standards to international accounting standards can also influence the presence and the areas of implementation of earnings management.

Generally it can be said, that the weaker a legal control system of a country is, the more earnings management can be demonstrated, independent of the standard settings used. (Burgstahler et al., 2006, p.1013) Later on the influence of auditing will be discussed more precisely.

Reporting systems are the surrounding that makes manipulation even possible. Without reporting the need that managers feel to have to manipulate their performance would not be present and the relevance of financial reports would disappear. However, by having the legal obligation to report financial statements in every country, manipulation will always accompany this financial reporting. In some standards manipulation may not occur as often as in others, always depending on the legal foundations present in different states and the control system of these countries.

As mentioned previously due to bearing a likeness to each other some national generally accepted accounting principles are gathered in the passage “continental European GAAP”,

here the connection between tax and reporting system is the major similarity. Others are summarised in the section “British-American GAAP”, main factor here is that the tax system does not play a role in earnings reports. (Brown and Higgins, 2001, p.382)

Almost all countries observed by other authors are within Europe and Northern America, which draws the main focus of attention to these regions. Exact data and reported earnings are easier to attain in these countries and empirical tests are more reliable if data from a lot of firms in one country is available. If data is available over a long period of time this also makes the findings more exact and reliable.

In the following section the main characteristics of the most important accounting standards are described and it is tried to detect the influences of the respective reporting system on earnings management decisions. It is tried to identify if a change in accounting standards from national GAAP to IFRS increases, decreases or does not change the amount of earnings management at all. A look onto the different accounting standards will also be made and it will be tried to detect the differences, if there are any at all, in the structure of earnings management under different national GAAP and IFRS.

It should always be kept in mind, that all reporting standards serve the same interest, which is to supply information to those who provide capital. (Joos and Lang, 1994, p.144)

## 4.1 IFRS

*„Under a common accounting method, investors can easily compare different assumptions of pension accounting between firms and countries to evaluate the quality of financial reporting, which will put pressure on management to report truthfully.“*

Soderstrom and Sun, 2007, p.688

IFRS is a set of accounting standards released by the International Accounting Standards Committee (IASC). It developed over the time since the first introduction in 1975 and has undergone substantial changes until becoming the standard we know today.

The goal of its introduction was and still is the development of an internationally acceptable set of reporting standards that generates more comparable financial information across national boundaries by minimizing, maybe even eliminating, differences in countries' domestic generally accepted accounting principles. (FASB, 1996) Firms can be compared more easily and cross-country listed firms have facilitated requirements regarding financial statements. These goals are tried to achieve by giving the firms less alternatives in accounting and limit the managers' discretion in determining the size and amount of specific accounting positions.

IFRS like US GAAP has a framework, the Framework for the Preparation and Presentation of Financial Statements, which was introduced to resolve accounting issues that are not directly mentioned in a standard. This framework has basic principles that need to be followed by adopters. IAS 8 requires that in absence of a standard the management needs to consider the definitions, recognition criteria and measurement concepts for assets, liabilities, income and expense that are stated in the framework. With this paragraph the framework assures that all decisions are made according to IFRS rules.

In IFRS, just as in British-American GAAP, the asset/liability approach is commanding. Realised and not yet realised assets are not differentiated and correct time weighting of these positions is of great importance. The different structuring in the statement is also of great importance, so that the higher uncertainty of some positions can be taken into account and be seen immediately when looking at the report. (Antonakopoulos, 2007, p.50)

If a firm follows IFRS and the framework with true and fair view IFRS claims that the report will give a nearly accurate view of a firm's position (IAS 1.17). In other words, by following the IFRS framework keenly earnings management should not occur and the financial report should give a very accurate view of a firm's actual state of affairs. IFRS should be the reporting standard with the lowest chance of earnings management among all standards.

Firms using IFRS generally have a higher accounting quality than firms that do not use international standards and still use their national GAAP. (Barth et al., 2008, p.497) Barth et al. (2008) compared the pre-IFRS-adoption period to the post-IFRS-adoption period of 21 countries to come to these findings. Higher accounting quality in this case means that less earnings management occurs under IFRS. They show in their studies, that correlation between accruals and cash flow for IFRS firms is less negative than for non-IFRS firms, which can be

associated with earnings management. (Barth et al., 2008, p. 491)

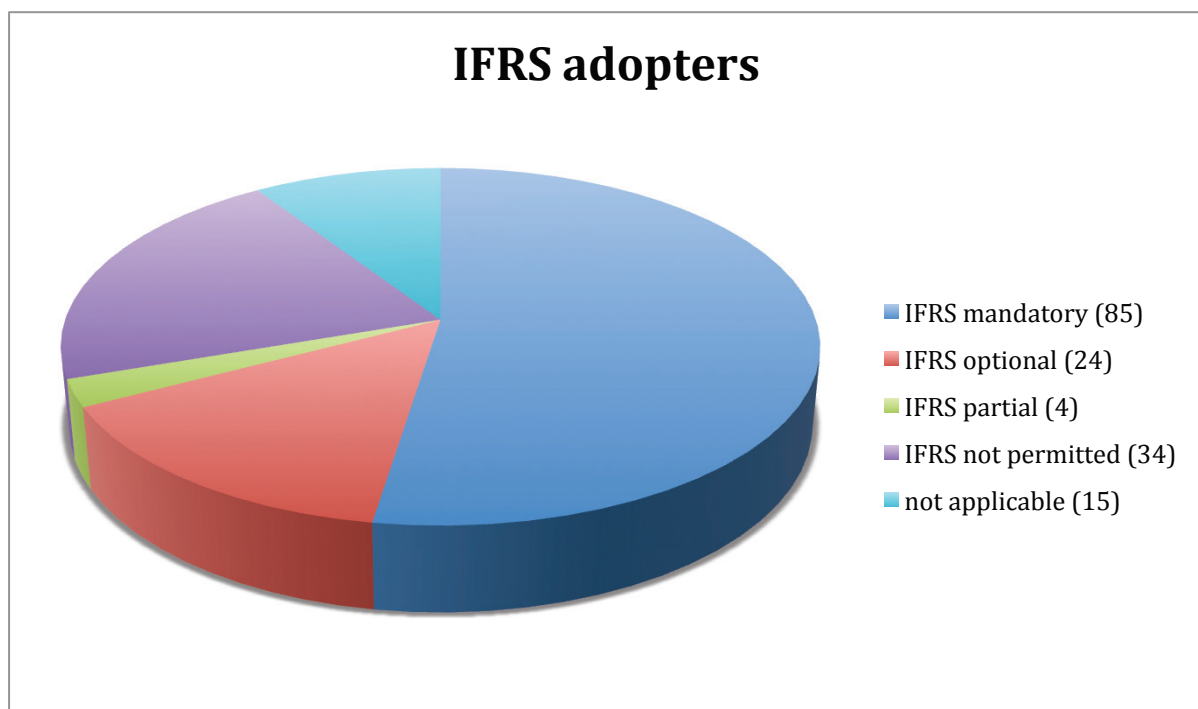
In general earnings quality does include more factors than only earnings management, but for the purpose of this thesis only earnings management is taken into account, since it is the most relevant for this case.

The US were not included in this study, since their national standard is very similar to IFRS.

The use of IFRS as a universal accounting method makes it easier and less costly for investors to identify earnings management. (Soderstrom and Sun, 2007, p.688)

As of March 2009, 113 countries<sup>3</sup> around the world, including all European countries, require or permit IFRS reporting. (U.S. Securities and Exchange Commission)

Following an allocation of 162 countries<sup>4</sup> of the world and their application of IFRS can be seen.



**Figure 4: IFRS application at a total of 162 countries**

<sup>3</sup> list of countries see appendix

<sup>4</sup> currently data from 162 countries of the world is available



IFRS is mandatory in 85 countries of the world, which means, that all domestic listed companies require the usage of IFRS.

24 countries allow firms to use IFRS optional. This means IFRS is permitted, but firms do not need to apply it if they do not want to.

4 countries only require the use of IFRS partially, which in most cases means, that only banks need to follow IFRS all other companies have the option of using IFRS as reporting standard but do not need to.

IFRS is not permitted in 34 countries of the world. Firms in these countries still follow the national GAAPs. In some of these countries IFRS will be introduced in the near future, but in bigger countries the introduction of IFRS is naturally more complicated than in smaller ones and takes more time.

Countries that do not have a stock market exchange cannot apply IFRS, which is the case in 15 observed countries.

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Since 2005 almost all publicly listed European firms require IFRS when preparing financial statements. Goal of this introduction was to reduce the amount of earnings management, including earnings smoothing as well as managing earnings towards a target.

The effects of this introduction on firms are different, depending on the accounting standard used prior to IFRS. Generally it can be said, that earnings management still is done, and simply the application area of it has shifted from one place to another, which may make it harder to detect.

Firms using IFRS have to explicitly point out that their financial statement is built following IFRS rules. (IAS 1.14)

IFRS does not follow a specific structure; therefore firms can prepare their IFRS statement looking nearly exactly as a HGB statement if they prefer to do so.

## 4.2 Continental-European GAAP – HGB

*“Managers are given a large number of options regarding inclusion and valuation of items in the balance sheet and the opportunity to control net income.”*

Van Tendeloo and Vanstraelen, 2005, p.160

In this chapter German and Austrian HGB will be used as representatives of the Continental-European GAAP. Both of these HGBs are very similar to each other, because they both emerged from the same set of rules from former times.

The tax system and the accounting system are strongly linked to each other in Continental-European GAAP countries and as a consequence of this, tax rules are often used for financial reporting as well. For example, depreciation is largely determined by tax rules. (Othman and Zeghal, 2006, p.412) Tax-deductible expenses need to be included in commercial accounts, which shows that tax law does indeed determine accounting and influences the financial statements of firms.

The Continental-European GAAP follows Code Law, which has many laws that should in the best-case cover all possible scenarios. Protection of creditors and the prudence principle are the highest goals of it's accounting. (Grabe, 2004, p.5) It demands that assets and liabilities are stated in their least favourable value.

The prudence principle is enforced by the realisation principle and the imparity principle. The realisation principle does not allow firms to show not yet realised assets. However, not yet realised losses need to be shown according to the imparity principle.

The HGB follows the revenue/expense approach, which again follows the rules of the realisation principle. Period adjustments play a big role in this approach.

With these principles being the basis of creating the balance sheet, information asymmetry naturally emerges more in HGB compared to IFRS or US-GAAP reports, since there is a gap between the actual state of assets and the assets reported in the balance sheet.

The HGBs of Germany and Austria are a bigger generator for information asymmetry than British-American GAAP or IFRS are and as a consequence of this earnings management can

occur more easily under these standards, which is the motive for many firms to change their accounting standard to IFRS voluntarily. They want to show their commitment to a more understandable and better financial statement by using IFRS.

Hidden reserves are an often-discussed item that is allowed in Continental-European GAAPs and clearly forbidden under IFRS or British-American GAAP. Hidden reserves or “silent reserves” are often used to undervalue assets or overvalue liabilities in order to show a lower income that is used for tax estimation. Hidden reserves are restricted to a maximum and it is not allowed to exceed this specific value.

A typical hidden reserve can for example be a stock portfolio, which is dependent on the stock market, and the ups and downs it has; it could be possible that the value of this portfolio exceeds the initial costs at some point. According to Continental-European GAAP this overvalue cannot be displayed and hidden reserves need to be activated to compensate this overvalue of the portfolio. The construction of this hidden reserve is only possible in Continental-European GAAP.

Continental-European GAAP tends to report low earnings in order to satisfy the conservative nature of its bank lending policy. (Soderstrom and Sun, 2007, p.678) Traditionally firms get their capital from a few banks with concentrated equity ownership. Continental-European GAAP is known for its conservatism and its focus on debt holders, which is no surprise looking at its origins. In the past conservative accounting should assure that enough resources were maintained to pay back the debts. (Joos and Lang, 1994, p.144) Income should be with low volatility in these accounting standards. The Toronto Stock Exchange Index TSX300 for example shows higher volatility than the “Bourse de Paris” Stock Exchange Index CAC40. (Othman and Zeghal, 2006, p.410) This is typical for both accounting standards regarding their origins.

Othman and Zeghal (2006, p.408) suggest that incentives for earnings management among French companies are linked to contractual debt loss and the effective tax rate. Because of the relationship between tax and financial reporting, income decreasing earnings management will be chosen more in Continental-European GAAP in order to decrease taxes.

In Continental-European GAAP countries style and extensiveness of the statement is depending on the size of the company issuing the statement. Size ranges are for example defined in German HGB § 267.

### 4.3 British-American GAAP – US GAAP

*“Financial reporting is based on a conceptual framework that has the priority of satisfying shareholders' needs for accounting information.”*

Othman and Zeghal, 2006, p.410

In this chapter US GAAP will be used as representative for British-American GAAP countries. US GAAP shares a lot of similarities with IFRS in contrary to any European GAAP.

The British-American GAAP typically has Common Law or Case Law. Common Law contrary to Code Law has only some laws that cover a limited amount of code of rights. Tolerance in accounting does hardly exist and goal of the financial statement is to serve as objective accounting. (Grabe, 2004, p.5)

Common Law was developed in the 11<sup>th</sup> century in Great Britain to diminish the influence of the royalty on the juridical system. This separation of the judicial system and the executive led to the tradition, that accounting standards in Common Law countries are set by private organizations, such as the FASB in the United States. The highest goal and main purpose of these standards is to serve the investor and satisfy his need for information. (Soderstrom and Sun, 2007,p.689)

The providing of useful information that serves the shareholders is one of the main goals of British-American GAAP and for this reason it is the complete opposite of the Continental-European GAAP and its goals. That's why it is assumed that countries using British-American GAAP have a higher correlation with stock prices and reflect the actual economic results in their reports better than Continental-European GAAP countries do. (Joos and Lang, 1994, p.144)

In Common Law countries tax reports are generated outside of the accounting framework, tax reporting and accounting is completely separated, in contrary to Continental-European GAAP countries with Code Law as mentioned above. This causes that the main incentive for manipulating performances under Continental-European GAAP does not exist under British-American GAAP.

Compared to the incentives under Continental-European GAAP Othman and Zeghal (2006, p.410) suggest that Canadian firms, as representative for British-American GAAP, show earnings management incentives that are strongly linked with a dynamic capital market. Canadian managers show a more discretionary attitude to avoid pressure coming from the capital market and analysts.

#### **4.4 Change in accounting standard from GAAP to IFRS**

*“Financial reporting quality is dependent on both the quality of accounting standards and their implementation.”*

Van Tendeloo and Vanstraelen, 2005, p.162

Since in most European countries national law demands the application of IFRS, more and more firms, especially public companies had to change from their national accounting standards to IFRS in the last years.

With this change in accounting standards to IFRS a change in quality, to the better, can be assumed, since this is one of the prescribed goals of IFRS. Earnings management should be lessened with the enhanced quality of IFRS.

Looking at this subject the case of Germany is of great interest, because Germany is a representative of the Continental European GAAP, which has not as many similarities to IFRS as the British-American GAAP countries have. Further more, German firms adopting IFRS had to reconcile their GAAP statements one year before IFRS, therefore a lot of data is available that allows to compare German GAAP and IFRS.

A large number of German firms did voluntarily adopt IFRS previous to 2005, when it became mandatory. This may have different causes, for example the attraction of more international investors. Cross-listed firms<sup>5</sup> that use IFRS can save costs and time by only using one reporting standard than various from different countries. Using IFRS also helps to allocate savings worldwide more efficiently.

With German accounting standards being criticised a lot in the investor community, due to its use of hidden reserves many firms changed to IFRS because they wanted to signal dedication to a more transparent financial reporting.

With the adoption of IFRS book-tax conformity for Continental-European GAAP countries was eliminated and this increased deferred tax and depreciation expenses on income statements. The accumulated depreciation is also an example of a change on the balance sheet. (Soderstrom and Sun, 2007, p.680)

Swiss data suggests likewise that IFRS adopting firms have a higher percentage of foreign sales and a higher number of foreign exchange listings. (Murphy, 1999, p.126)

The controversial hidden reserves, that are common in Continental-European GAAP, are not allowed in IFRS accounting, which again is interesting for the case of German GAAP, and therefore just as well for the very similar Austrian GAAP and most of Continental-European GAAP.

In the HGB of Germany the use of hidden reserves is allowed and firms preparing their accounting reports often use them to smooth or even manipulate their earnings. With the introduction of IFRS this possibility vanished and firms transformed their hidden reserves mostly into discretionary accruals under the new accounting system. Not considering this change it appears that German firms engaged more in earnings management, due to their increase in discretionary accruals, after the adoption of IFRS, but with a closer look on the reports this assumption can be proven wrong, earnings management is not more common under IFRS than under German HGB. (Van Tendeloo and Vanstraelen, 2005, p.175)

It appears that discretionary accruals changed significantly from the pre-IFRS-adoption period to the post-IFRS-adoption period. But this only seems because the hidden reserve had to be

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<sup>5</sup> firms that list their shares on the stock exchange of one or more other countries in addition to their domestic stock exchange

released and in the new accounting system, mostly IFRS, formally also US-GAAP, discretionary accruals were used as an equivalent for them.

Taken the hidden reserves into account a look on the post-IFRS-adoption period and observations from over 1200 firm years of this period make it clear that the amount of earnings management did not change at all after adopting IFRS for firms previously using German GAAP. Therefore firms using German GAAP cannot be associated with higher or lower earnings management after adopting international accounting standards. (Van Tendeloo and Vanstraelen, 2005, p.175)

Van Tendeloo and Vanstraelen (2005) tested for discretionary accruals through the following modified Jones model:

### Formula 3

$$ACC_t = \alpha_{tk0} (1 / A_{t-1}) + \alpha_{tk1} \Delta REV_t + \alpha_{tk2} GPPE_t + \mu_t$$

$ACC_t$  = accruals in year t, scaled by lagged total assets, where accruals equal the year-to-year change in non-cash current assets minus current liabilities (excluding short-term debt and income taxes payable) minus depreciation

$A_{t-1}$  = total assets in year t-1 or lagged total assets

$\Delta REV_t$  = change in revenues in year t, scaled by lagged total assets

$GPPE_t$  = gross property, plant and equipment in year t, scaled by lagged total assets

These findings can also be assumed for Austria, since the GAAPs of Germany and Austria are very similar to each other.

The findings of Van Tendeloo and Vanstraelen (2005) proof that in this particular setting, looking at a short period of time, the hidden reserves were transformed into discretionary accruals and the magnitude of earnings management did not change. But it also has to be considered that with the newly adopted standard the motivations and incentives may also change and the magnitude of earnings management may change due to these new motivations.

It is difficult to make a differentiation between hidden reserves that came from earnings manipulation and the ones that did not and with transforming these hidden reserves into discretionary accruals it becomes more difficult to distinguish them and allocate them. The study made by Van Tendeloo and Vanstraelen (2005) only covers a short period of time, the pre- and post-adoption period, and therefore only provides results that are suitable with limits.



## 5 Reporting related incentives

On what source executives manage earnings can never be known exactly and without doubt, but general predictions about the incentives a manager has to manipulate earnings can be made and it can be speculated about the prime reasons a manager has.

The main focus of attention in this part of the thesis will be drawn to the incentives a manager has to manipulate earnings that influence the reporting; always assuming information asymmetry is present. This asymmetric information is the main reason a manipulation of performance is even possible to an extent that affects a firm. The incentives a CEO has can be

- financial
- non-financial.

Financial incentives include earnings management under the presence of bonus schemes or performance plans, which can increase the private wealth of the CEO if promoted well.

Non-financial incentives can be the enhancing of the firm's or the CEO's reputation. Certain positions like board seats that are aimed by the CEO may also only be offered if good performance is shown in the years active as chief executive officer. Often the further employment as executive does directly depend on reported numbers.

Fringe Benefits included in bonus plans can also be mentioned when considering incentives; they can be a financial incentive for a CEO if they are including extra pay on top of the basic wage or a non-financial incentive if they include social security benefits, such as health insurance or retirement insurance.

Whatever the benefits from earnings management may be, whenever thinking of manipulating earnings through accruals a benefit-cost analysis made by the manipulating CEO shows whether the actual costs of manipulating earnings does not exceed the benefits from it. It is assumed that only if the costs are lower than the benefits earnings manipulation is done.

In the following part the incentives that influence only the firm itself and its reporting will be discussed. These manipulations may not affect as many people as influence on the stock market does, but still, these kinds of earnings management can have effects that reverse years after their exercise at times that can not be influenced by a manager anymore. They are not less harmful than other manipulations that have more obvious effects on people and the market.

## 5.1 Bonus schemes and performance plans

*“Bonus schemes create incentives for managers to select accounting procedures and accruals to maximize the value of their bonus awards.”*

Healy, 1985, p.106

For an ever-growing number of firms that do not have the owner responsible for acting in the firm's best interest, the need for an incentive for the responsible CEO arises. Bonus plans seem to be the answer for this dilemma. Bonus pay is awarded in addition to a fixed salary if predetermined goals are achieved. The bonus pay is bound to an earnings target; usually these targets are described in

- earnings per share
- return on total assets
- return on equity.

By using bonus plans it is tried to encourage the CEO to communicate all relevant information to the shareholders by offering compensation in return. With using bonus plans information asymmetry should be kept to a tolerable minimum.

Bonus plans can add an incentive and help to reach the goals a company's shareholders want. They are constructed to grant the CEO some extra pay if specific targets are met and show

appreciation for good work and help to keep the CEO encouraged. Typically bonus plans are granted annually. Performance plans have the same structure as bonus plans, the only difference is, that they are granted for long-term performance, usually three to five years. Most firms only use one of these two bonus options. Awards are usually made in cash, shares, stock options or dividend equivalents. (Healy, 1985, p.87)

In a study conducted by Davidson III et al. (2007, p.53) the bonus awards made by average 19.08% of total salaries.<sup>6</sup>

US companies are more interested in short-term performance, which stems from their governmental system that generates high information asymmetry and makes it necessary to rely more in the short-term results. Therefore bonus plans are typically more common in British-American GAAP countries, and performance plans are more used in Continental-European GAAP countries.

Since their construction is nearly the same and only the time period is different in the following scenarios when discussing bonus plans performance plans are also meant.

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Healy (1985) describes three possible scenarios that a manager chooses from when bonus plans influence his decision on earnings management and therefore the construction of discretionary accruals.

He examined total accruals for the purpose of this study.

The firm years examined reach from the 1930s up to the 1980s. The sample consists of 94 different companies with 1527 company years observed. 447 firm years have an upper bound, 30 firms have contracts that specify both, an upper and a lower bound.

He measured total accruals with the following formula and discretionary accruals with the above-mentioned difference between total accruals and non-discretionary accruals. The expected level of non-discretionary accruals is zero.

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<sup>6</sup> 597 firms were observed, 85% of these firms had bonus pay for their CEO

**Formula 4**

$$ACC_t = -DEP_t - XI_t \cdot D_1 + \Delta AR_t + \Delta INV_t - \Delta AP_t - (\Delta TP_t + D_t) \cdot D_2$$

$DEP_t$  = depreciation in year t

$XI_t$  = extraordinary items in year t

$\Delta AR_t$  = accounts receivable in year t less accounts receivable in year t-1

$\Delta INV_t$  = inventory in year t less inventory in year t-1

$\Delta AP_t$  = accounts payable in year t less accounts payable in year t-1

$\Delta TP_t$  = income taxes payable in year t less income taxes payable in year t-1

$D_t$  = deferred income tax expense (credit) for year t

$D_1$  = 1 if bonus plan earnings are defined after extraordinary items,  
0 if bonus plan earnings are defined before extraordinary items

$D_2$  = 1 if bonus plan earnings are defined after income taxes,  
0 if bonus plan earnings are defined before income taxes

**Scenario 1**

Not only do CEOs increase income by using discretionary accruals, but also sometimes they are more incentivised to decrease reported income. This is the case in scenario 1; if bonus plans with upper or/and lower bounds are involved. If a manager does not see a chance to reach the lower bound of this bonus plan, then he will probably make the decision to “take a bath”, which means, that discretionary accruals will be reduced further more and reported income is decreased. In the following period his bonus pay will be maximized by the discretionary accruals of the previous period. This will only happen if the CEO does not see a chance to reach the bounds by looking at earnings before discretionary accruals. The present value is traded off against the prospective bonus pay of the following period.

The lower bound is often defined as a percentage of some definition of invested capital, such as common equity, total equity or total equity plus long-term debt. Sometimes it is described as absolute monetary amount or as an increase over prior years' earnings.

The upper bound in most cases is defined as a part of executive salary; sometimes cash dividends or absolute dollar amounts are used too. (Gaver et al., 1995, pp.10)

### **Scenario 2**

In the second scenario the CEO chooses income increasing discretionary accruals, because the earnings before discretionary accruals exceed the lower bound. If an upper bound is involved, which means, that above this bound no further bonus pay will be awarded, the manager tries to bring the reported earnings including discretionary accruals as near to this bound as possible, to gain the maximum out of his bonus pay.

If no upper bound is present discretionary accruals will be maximized, since the bonus pay gets higher, the higher the reported earnings are.

### **Scenario 3**

The third scenario does again involve income-decreasing discretionary accruals. This time the reported income is above the upper bound and the CEO tries to decrease discretionary accruals, because everything reported above the upper bound does not pay him extra money. The minimized accruals of period one can be beneficial in the following period if needed there.

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If the CEO's bonus plan does not have any binding bounds discretionary accruals will always be chosen to increase reported income, because the higher the reported income is, the higher the bonus pay will be, and therefore the private wealth of the CEO increases.

Discretionary accruals are assumed to sum to zero over the period of time a CEO stays in one and the same firm. (Healy, 1985, p.89) For most scenarios this seems likely, with only the exception of a retiring CEO that has other motivations, but these motivations will be described in the subsequent chapter.

Earnings management and performance manipulation will have slightly different faces if the manipulations are made over a longer period of time, such as needed for performance plans, than if the manipulation is needed for good short-term performance. Regardless of the time frame discretionary accruals are the main part that is used to achieve these goals, may they be long- or short-term.

10 years after Healy (1985) Gaver et al. (1995) tested Healy's findings. They used a modified Jones model to test for total accruals and through those for discretionary accruals. Discretionary accruals are defined here as the prediction error from the expectations model at time  $t$ .

A difference to the model proposed by Healy (1985) is that in this model non-discretionary accruals are not assumed to be zero over time.

The modified Jones model used by Gaver et al. (1995):

#### Formula 5

$$TA_{it} = a_i + b_{1i} (\Delta REV_{it} - \Delta REC_{it}) + b_{2i} PPE_{it} + e_{it}$$

$TA_{it}$  = total accruals in year  $t$  for firm  $i$

$\Delta REV_{it}$  = revenues in year  $t$  less revenues in year  $t - 1$  for firm  $i$

$\Delta REC_{it}$  = receivables in year  $t$  less receivables in year  $t - 1$  for firm  $i$

$PPE_{it}$  = gross property, plant, and equipment at the end of year  $t$  for firm  $i$

$e_{it}$  = error term for firm  $i$

$i$  = 1 ..... 102 firm index

$t$  = 1 .....  $T_i$  year index for the years included in the estimation period for firm  $i$

$a_i, b_{1i}, b_{2i}$  = industry specific estimated coefficients

Gaver et al. (1995) had a sample consisting of 102 firms and 837 firm years in the period from 1980 to 1990.

The result of Gaver et al. (1995) did not support the bath-taking scenario explained by Healy, the inconsistent use of discretionary accruals are described by them as result of income smoothing over the years.

Both results seem feasible; the bath-taking scenario would explain the incentive a CEO personally has to increase his or her private wealth. Income smoothing over the years would not increase the CEO's private wealth but it would be possible to maintain a reputation when reported income is stable over the years.

It is suggested that the results based on discretionary accruals measured with the Jones model are more reliable than those from the Healy model. (Dechow et al., 1996) This leads to the assumption, that a CEO will always choose income increasing discretionary accruals over income decreasing, regardless of the bounds of his bonus plan or performance plan.

The observed difference in discretionary accruals over the years could be traced back to income smoothing, which is not seen as part of earnings management for the purpose of this thesis and thus is not looked on more closely.

Bonus plans have been proven to affect the magnitude of earnings management and have been identified as one of the causes of performance manipulation. If a CEO chooses to build discretionary accruals to manipulate a firm's earnings, this does not only influence his bonus contracts but the cash flow of the firm as well. Still bonus plans are the most used contracts among CEOs. Board committees feel the need to provide incentives to their CEOs in order to assure that they act in their best interest.

Regardless how much work goes into the construction of these bonus schemes, earnings management can never entirely be excluded. If bonus plans include all possible scenarios and take care of every loophole, their construction would become more expensive than the benefits that come from the bonus contract. Therefore most bonus plans follow similar simple construction and do not go into such great detail, as would be possible and necessary to avoid earnings management. But when constructing them it is always kept in mind, that the more a CEO gets incentivised by a bonus plan, the bigger the chance is that he engages in earnings management in order to get the maximum out of his given bonus plan.

## 5.2 Change and retirement of a CEO

*“For a CEO nearing retirement, the lack of concern for the long-run may be supplemented with incentives to increase their firm’s short-run performance to enhance their own wealth.”*

Davidson III et al., 2007, p.46

Among other factors, the age of a firm’s CEO and the years remaining to his retirement play a role in engaging in earnings management. At the beginning of a CEO’s career his main focus will be drawn to serving the shareholders interests as well as building and maintaining his career, since he has many working years ahead of himself. With approaching the final stage of his career short-term decisions become more important than long-term, since the CEO will probably not be working anymore when the effects of a long-term decision are revealed. Therefore younger CEOs do not engage as much in earnings management as older CEOs do. They may still be in position when the earnings management decisions reverse, which keeps them from manipulating earnings in their beginning years as CEO.

Besides the problem, that CEOs near their retirement lessen their R&D as well as their advertising in the last years before retirement (Dechow and Sloan, 1991, p.52), which both boost the profitability of a firm immediately; they engage more in earnings management in their last years. Their goal is to boost the firm’s profit, in their final years as CEO, as well as they try to increase their private wealth by exploiting their bonus plans, shortly before retiring.

Often desired board seats in other companies depend on the performance in the final years as a firm’s CEO. These last years’ performance influences their retirement pay and also their option values, which mostly are exercised at the CEO’s retire.

Long term earnings management decisions made by the retiring CEO mostly show their effects when the successor is already in charge. In the first one or two years following the takeover the successor may also be interested in keeping the earnings low as he can blame the poor performance of these periods on his precursor. Both CEOs, the retiring and the successor take actions that will keep the earnings low in the first years of the successor. In the following



years the performance of the new CEO would be extraordinary high. These up- and downturns of performance by the different CEOs can be achieved by using income increasing and decreasing discretionary accruals.

Davidson III et al. (2007) tested for discretionary accruals for firms with bonus plans in comparison to those without. They looked at the years prior to the retirement of a CEO.

Using a modified Jones model they can estimate discretionary accruals as described previously by the difference of total accruals and non-discretionary accruals.

The Jones Model was modified as following:

#### Formula 6

$$ACCR_t / TA_t = a_1 (1 / TA_t) + a_2 (\Delta REV_t / TA_t) + a_3 (PPE_t / TA_t) + e_t$$

$ACCR_t$  = total accruals for firm in year t

$TA_t$  = average total assets in year t

$\Delta REV_t$  = change in sales revenues in year t

$PPE_t$  = gross property, plant, and equipment in year t

$e_t$  = error term

$a_1, a_2, a_3$  = industry specific estimated coefficients

They find that in the very year prior to retirement and the year of the actual retirement the discretionary accruals are significantly higher when there is a profit based bonus plan involved. The discretionary accruals are also larger for firms where the bonus pay is relatively large compared to those of other firms.

The mean increase in discretionary accruals (relative to assets) for CEOs older than 62 was 1.40% in the year before retirement, which lead to an increase in bonus pay of 2.1% in this year. (Davidson III et al., 2007, p.57) With the CEO trying to increase his bonus pay in two years prior to his retirement the financial benefits from earnings management in this time period can be clearly seen.

Both results are consistent with the assumption that earnings management is more likely in the years near retirement and especially when bonus schemes are involved. It can be demonstrated, that the earnings management begins at least two years prior to the retirement. (Davidson III et al., 2007, p.56)

### 5.3 Auditing

*“high-quality auditing acts as an effective deterrent to earnings management because management’s reputation is likely to be damaged and firm value reduced if misreporting is detected and revealed”*

Becker et al., 1998, p.6

Earnings management can be done more easily if the auditing of the CEO is weak, whether it is the auditing done by a board of directors, the auditing done by companies or monitoring by the government. The more a CEO is controlled and observed by these institutions the more demanding and expensive earnings management will get.

In firms where a board is assigned with the auditing of the CEOs, the level of earnings management does not only depend on the extent a CEO manipulates the earnings, but also on the quality of the auditing done by the responsible board.

This connection shows that it is not only the CEO, who actively takes part in earnings management, who affects earnings manipulation, but that also other factors from outside the CEO’s sphere of influence are involved.

Auditing by one of the Big Four<sup>7</sup> auditing companies

- PricewaterhouseCoopers
- Deloitte Touche Tohmatsu
- Ernst & Young
- KPMG

is also connected to the extensiveness of earnings management.

A low level of governance monitoring and governance auditing can also lead to an increase in earnings management. But the influence of the government will always be hard to measure since every country has different monitoring authorities and different available capacities to detect and prosecute cheating firms and their CEOs. As mentioned above the number of firms convicted of cheating is negligible small.

### 5.3.1 Audit committee

*“The term “audit committee” means*

*(A) a committee (or equivalent body) established by and amongst the board of directors of an issuer for the purpose of overseeing the accounting and financial reporting processes of the issuer and audits of the financial statements of the issuer; and*

*(B) if no such committee exists with respect to an issuer, the entire board of directors of the issuer.”*

Public Law 107-204, 2002 – Sarbanes-Oxley Act

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<sup>7</sup> Big Eight until 1989, Arthur Andersen, Arthur Young, Coopers & Lybrand, Ernst & Whinney, Deloitte Haskings & Sells, Peat Marwick International, Price Waterhouse, Touche Ross  
Big Six 1989-1998, Ernst & Whinney and Arthur Young merge to Ernst & Young and Deloitte Haskings & Sells merge with Touche Ross to Deloitte & Touche  
Big Five 1998-2002, Price Waterhouse merge with Coopers & Lynbrand to PricewaterhouseCoopers  
Big Four 2002-now, Arthur Anderson merge with different companies ([www.icaew.com](http://www.icaew.com))

Public corporations need to separate the role of ownership and managerial control, which dismembers the CEO from the board. The primary duty of a board is to control, but they also provide advice and counsel to a CEO. The board needs to ensure that CEOs carry out their managerial duties in the best interest of the shareholders and control the managerial union.

Naturally a main goal of the board will be to ensure that the firm's long-term value does not decrease.

Most firms do not only have one board, but they have separated the functions of this board into setting CEO's pay and monitoring of the reporting process, in order to escape conflicts of interest among one board. The board members responsible for setting the CEO's pay will naturally want to raise the pay to achieve good performance and grant bonus schemes and stock options if the requested performances are met. With concluding these deals, the need for better auditing by another board increases. The auditing board is responsible to overhaul the CEO in all his actions. If the auditing board fails to oversee the CEO properly, the chance that earnings management can be done increases.

The likelihood of earnings manipulation is systematically related to the weaknesses in the oversight of the management by the responsible board. In a sample of firms, earnings manipulators are less likely to have an auditing committee than non-manipulating managers, as well as it is more likely, that the CEO, who is suspected of manipulating, himself is serving as a chairman in the supervising board. A lower percentage of outside directors on the board of directors also seems to play a role in the magnitude of earnings management, as does the number of stockholdings by inside directors, which is positively related to earnings management, in the company. (Dechow et al., 1996, p. 21)

Short-term stock options held by committee members are also positively related to the magnitude of earnings management. These stock options intend to converge the interests of shareholders and committee members, but along this come an incentive to favour short-term performance over long-term performance. (Chtourou and Bédard, 2001, p.4)

The level of auditing by the board and external auditing companies is dependent on the industry a firm is in. Financial institutions for example have more audit board meetings than other industries, which do not necessarily lower the chance of manipulated earnings. But the more often a board meets per year the more earnings management is lowered. (Beasley et al., 2000, p.451)

The magnitude of earnings manipulation was tested in three different industries: Technology, Health Care and Financial sector. Which makes this study more reliable than studies that pool all industries together for their research.

They used instances of fraudulent financial reporting alleged by the SEC during January 1987 and December 1997. Their search identified nearly 300 instances in this time period of 11 years and for their study they used 66 firms from the above-mentioned three sectors.

The mean number of audit meetings among fraud companies in the Financial sector is 2.8 compared to 4.3 meetings a year in non-fraud companies in the same sector. In the Health Care sector the mean average of audit meetings was only 1.0 in fraud and 2.2 in non-fraud companies. (Beasley et al., 2000, p.451)

Out of these three sectors, the financial one is the one with the lowest earnings management rate, if the auditing board consists entirely of outside directors; the technology sector here has the highest numbers.

Financial institutions are naturally audited more precisely and the auditing board is composed more exactly, as they are responsible for a substantial amount of money. But it can be seen that with more board meetings per year the chance of earnings management can be decreased over all three sectors. A higher frequency of board meetings therefore can be assumed to lower earnings management in all firms of all sectors, not just these observed.

All these factors play a complicated role in the engagement in earnings management and the influence of these factors can only be grasped by these facts. The quality of auditing is also dependant on the individual people that are responsible for auditing. Some may be highly accurate when it comes to their position in the auditing board, others may not be so meticulous.

Dechow et al. (1996) find that firms that were subject to enforcement by the SEC were less likely to have an audit committee; their boards were more often dominated by insiders or had a CEO as chairman of the board. In general firms that were caught by the SEC manipulating earnings had weaker government structures, which in this case is linked with a higher chance of the CEO engaging in manipulations.

This relationship between CEO, board auditing and earnings management should not be underestimated. When looking at the cause of earning management the main factor still is the

CEO and his hidden intentions, but with proper counselling and controlling by an auditing authority the uncertainty if the CEO acts in the best interest of the shareholders could be lowered to a passable minimum.

### 5.3.2 Big 4 auditing

Big Four auditing companies are associated with higher quality services than smaller auditing companies are. They are put down to provide better work; they are more competent and independent than smaller auditors are. Therefore the magnitude of earnings management should be lower in firms that are audited by one of the Big Four than in firms audited by others. Discretionary accruals should be lower under better auditing, which in return is an indicator for lower earnings management.

78% of the big U.S. companies are audited by one of the Big Four. Technical skills, reputation and audit capacity were some of the mentioned reasons for choosing one of the Big Four instead of smaller firms. (Accountancy, 2010)

Auditing reduces the information asymmetry in a firm by allowing auditing companies that come from outside to look at their reports and verify their validity. Certainly, auditing companies are more interested in finding income increasing earnings management than income decreasing, since managers are more likely to increase their earnings and the effects of income increasing manipulations seem more relevant than the ones of decreasing manipulations. (Becker et al., 1998, pp.6)

In their studies Becker et al. (1998) find that firms audited by non-Big Six<sup>8</sup> companies had reported discretionary accruals that were on average 2.1% of assets higher than discretionary accruals reported by Big Six audited companies.<sup>9</sup>

To estimate the discretionary accruals they used a cross-sectional modified Jones model. Discretionary accruals are defined as the error term from the following regression.

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<sup>8</sup> When conducting their study in 1998 the present Big Four were still the Big Six

<sup>9</sup> 9035 firm years of Big Six audited firms and 1846 firm years of non-Big Six audited firms were used and tested with a modified cross sectional Jones model

**Formula 7**

$$TA_{ijt} / A_{ijt-1} = \alpha_{jt} (1 / A_{ijt-1}) + \beta_{1jt} (\Delta REV_{ijt} / A_{ijt-1}) + \beta_{2jt} (PPE_{ijt} / A_{ijt-1}) + e_{ijt}$$

$TA_{ijt}$  = total accruals for sample firm i in industry j for year t

$A_{ijt-1}$  = total assets for sample firm i in industry j for year t-1

$\Delta REV_{ijt}$  = change in net revenues for sample firm i in industry j for year t

$PPE_{ijt}$  = gross property plant and equipment for sample firm i in industry j for year t

$e_{ijt}$  = error term for sample firm i in industry j for year t

As discretionary accruals can be taken as indicator for earnings management, these findings suggest that firms audited by one of the Big Six auditing companies have lower earnings management than firms audited by others than the Big Six.

Firms seem to engage more in performance manipulation when they are observed by smaller auditing companies or they want to be observed by non-Big Four auditing companies, because they are manipulating and do not want to get caught in doing so. The findings demonstrate a direct relation between auditing and earnings management.

Summarizing the findings of Becker et al. (1998), Big Four auditing groups can be associated with higher quality auditing and on that account with lower earnings management in firms that are audited by them.

## 6 Stock market related incentives

*„CEOs with higher exposure to their firms' equity lead firms where earnings management is more pronounced.“*

Bergstresser et al., 2006, p. 524

In the previous chapter the effects of managers' decisions to manipulate performance on the internal financial accounting of a firm and the reporting related incentives were described. In the following chapter managers' decisions and their impact on the stock market will be discussed.

The motivations, incentives and goals of the managers may be the same in both cases, but by taking certain paths to achieve these goals, e.g. private wealth through stock options, impacts on the economic environment can be more severe and therefore affect a lot more people. Other firms or whole sectors of industry, depending on the gravity of the manipulation as well as the influence of the firm on the market can be affected by a manipulation involving the stock market.

Benchmarks and the benefits from meeting or beating a certain benchmark can be a great incentive for a CEO to engage in expectations and earnings management. With beating a benchmark a positive signal is sent to the market and to send this signal CEOs will even manipulate performances.

Stock options held by a firm's manager could influence the market if the manager decides to manipulate his firm's earnings in order to gain a maximum out of these stock options, which may be granted to him through bonus or performance plans. The benefits of earnings management only serve one or a few, but the negative consequences can have effects on people all over the world.

Investors speculation as will be discussed later, cannot be ascribed to asymmetrical information, or at least not exactly in the same way as it is described in the previous chapters,



but it influences the decisions of a manager in the same way as personal benefits such as e.g. bonus plans do.

The effects of the manipulations, whether they arise from asymmetrical information or not, are the same and can be detected with the same methods, e.g. the measurement of discretionary accruals.

## 6.1 Benchmarks

*"Managers that always promise to "make the numbers" will at some point be tempted to make up the numbers"*

Warren Buffett, investor and businessman

The meeting or beating of analyst's forecasts is often important for the reputation of a firm and its CEO. With using earnings management the CEO is no longer passive in this process, but can influence the accounting to meet or even beat the predicted performance.

Meeting or beating analysts' forecasts in this thesis are defined as cases with a zero or positive earnings surprise. Earnings surprise is the difference between the actual earnings and an analyst's latest forecast of a quarter. Forecast error is the difference between the actual earnings and an analyst's earliest forecast of a quarter.

The motivations a CEO has for meeting or beating the benchmarks are to maximize the share price, to boost management's credibility for being able to meet the expectations of the company's shareholders and to avoid the litigation costs, possibly arising with unfavourable earnings surprises. (Bartov et al., 2002, p.174)

With managing earnings to a target only short-term decisions are made and the long-term effects of these actions are not considered, or maybe considered, but not paid attention to by the CEO. To end a quarter with earnings surprises earnings management has to be used on short terms and also very often in one year.

Looking at a sample of nearly 65 000 firm quarters observed between the years 1983 and

1997, Bartov et al. (2002) find that instances in which companies meet or beat analysts' forecasts have increased notably over the years. This trend is independent from firm size, as it occurs in all companies, from small to large.

Looking at the whole sample of observed firms the instances in which negative earnings surprises occurred were 39.50%, which is significantly smaller at the 1% confidence level (using the test of proportions) than the percentage of negative forecast errors, which were 48.65%. (Bartov et al., 2002, p.192)

Analysts' forecasts seem to be dampened on purpose, which leads to revisions, to then end the period with a positive earnings surprise, which otherwise would not have been the case. The initial forecasts that are made by analysts are adjusted downwards and then these new forecasts can be beaten more easily.

These results suggest further that there is an incentive in beating the benchmark. By ending the period with a positive earnings surprise the CEOs are rewarded with higher stock prices. (Bartov et al., 2002, p.175) This is the case even if before the revision the period would have ended with a negative forecast error. Earnings surprises are therefore important for firms and to gain benefits from these surprises the CEO will eventually influence the market's perceptions. The signal that is given at the end of a period seems to be more important than how it was achieved to give this signal.

These earnings surprises do not necessarily all come from earnings management. But a possible way to influence analysts and their forecasts as well as forecast revisions could be to manage earnings upwards and downwards in order to affect an analyst in favour of ones firm. Giving only bad news instead of good news to the analysts is a possible way to influence the analysts in ones favour.

High stock prices, as will be discussed following, are a great incentive for managers to influence the stock market. Often the longing for high stock prices leads to earnings management, because the CEO wants to increase his private wealth.

In the following tables it can be seen, that events with positive earnings surprises, which arise through dampened expectations and downward revisions by analysts, occur more often than negative earnings surprises that were positive forecast errors before the revision.

The managers of firms seem to clearly be able to influence analysts in their favour.

Cases where the revision turns a negative forecast error into a positive or zero surprise

Period	N	Percentage of all cases with a negative forecast error
All Years	10,977	34.80%
1983-1993	5,171	28.94%
1994-1997	5,806	42.39%

**Figure 5: Negative forecast error**  
According to: Bartov et al., 2002, p.194 Table 6

These cases are more likely to be affected by expectations management, since the forecast was adjusted downwards and then lead to a positive surprise at the end of the period.

Cases where the revision turns a positive or zero-forecast error into a negative surprise

Period	N	Percentage of all cases with a positive or zero-forecast error
All Years	5,037	15.12%
1983-1993	3,168	19.61%
1994-1997	1,869	11.02%

**Figure 6: Positive or zero-forecast error**  
According to: Bartov et al., 2002, p.194, Table 6

These cases are more likely to not be affected by expectations management. The initial positive surprise was turned into a negative surprise by the new forecast.

The difference between the percentages in those two tables is high and suggests that expectations management as well as earnings management is involved to achieve a positive outcome for a firm.

Considering the previously mentioned increase of accruals over the years these findings are consistent with the assumption that earnings management became more prominent in recent years.

These accruals used properly help the CEO to influence the analysts and shareholders and show the results that are expected or even surprise with extraordinary good performance that exceeds the forecasts.

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Brown and Higgins (2001) find evidence that earnings management in order to meet or beat analysts' forecasts is more common in the US than in all other countries of the world. Besides the US they tested 12 other countries, including France and Germany, among other representatives for the Continental European GAAP system and Australia and Great Britain among others as representatives for the British-American system.

Managing profit surprises was more evident in the US than in any other examined country in the years from 1994 to 1999<sup>10</sup>. The profit surprise ratio of US firms did increase monotonically from 1.20 (1988-1990) to 1.34 (1991-1993) to 1.92 (1994-1996) to 2.40 (1997-1999). (Brown and Higgins, 2001, p.381)

US managers achieved these surprises by shifting surprises from the negative to the positive quadrant. (Burgstahler and Eames, 1998, pp.19) Consistent with these findings the loss surprise ratio decreased for these periods. Therefore loss surprise management can be proven to be more evident in the US than in any other country.

Because Brown and Higgins (2001) find earnings management used to meet or beat forecasts more present in the US, subsequently a comparison between British-American GAAP and Continental-European GAAP is interesting to find the determinant for this.

The finding, that US managers use earnings management to meet or beat earnings forecasts more frequently than other managers, could result from the different accounting systems used in the tested countries. But as mentioned above the US can be pooled together with Australia,

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<sup>10</sup> Brown and Higgins tested in this case for the years 1988-1999

Hong Kong, the Netherlands, South Africa and the United Kingdom in the British-American accounting system. Which should lead to likewise results for these countries as well. But the results for the US are not only higher than the results of the Continental Europe data; they are also higher than the results of the other countries grouped together with them in the British-American system. This leads to the assumption, that US managers have other motivations than only the accounting system to manage earnings.

The high earnings surprises can be the results from the importance of the short-term performance and information asymmetry in the United States, which is higher than in other country of the world. Due to different ownership and government factors short-term performance plays a bigger role in the US than in other countries.

Both factors follow from the US corporate governance system, which generates high information asymmetry and therefore leads shareholders and analysts to rely more on short-term performances than on long-term.

In Continental European GAAP countries, which have higher protection of creditors, the long-term performances are more relevant than the short-term are. With the long-term performance in mind short-term performances cannot be manipulated to such a big extent as they could be when disregarding long-term decisions.

When managing performances to a very large extent, with not thinking about the long-term effects, future reporting could be exceptionally bad, because all the discretionary accruals would reverse. This is not in the economic sense of managers of Continental-European GAAP firms and therefore their benchmark beating behaviour is less than the one of countries using British-American GAAP, herein the US having the highest benchmark beating behaviour.

In continental European GAAP countries managers that report negative earnings surprises, in this case managers that do not beat the benchmark, face fewer, less severe legal liabilities, than US managers. (Brown and Higgins, 2001, p.378)

Which also contributes to the assumption that US managers have higher incentives to manipulate earnings in order to beat benchmarks than non-US managers have. With creating more long-term incentives for US managers and trying to lower information asymmetry the results could be drawn nearer to the data from Continental-European GAAP firms.

It is suggested that investors, who see how firms and managers create value are likely to place less emphasis on current-term results. This would put less pressure on the CEOs, analysts and auditors in the US to manage earnings. (Eccles et al., 2001, pp.95)

## 6.2 CEO-stock options

*„A manager whose personal financial stake is unaffected by the value of the company he or she manages may act in ways that, while privately beneficial, reduce the value of the investors' claims.“*

Bergstresser and Philippon 2006, p. 527

CEO stock options became a popular compensation in the 1990s. The goal was to encourage the management to take actions that made the shareholders better off. By making the managers partly owners of the companies they are in charge of they feel encouraged to boost the share prices. The underlying thought was that by making operating and investing decisions that maximize the shareholders' wealth they also gain private benefit and for this reason feel encouraged to do so. But some decisions that help the CEO to gain private benefit may not be so beneficial for the shareholders.

The awarding of stock options as compensation for CEOs is mostly determined by a committee of the board of directors and is nearly made once per year, just as bonus plans are, generally with an exercise price equal to the share price on the award date. (Baker et al., 2003, p.559)

But with information asymmetry on their side, the CEOs have the advantage to actively take part in accounting and financing. With boosting the stock prices by taking short-term earnings management actions they can increase their private wealth directly, not considering the long-term effects resulting from their actions for their firm.

The general goal is to increase the value of their awards as much as possible, which increases their granted stock options to a possible maximum for their private benefit.

In order to get a maximum profit out of their stock options managers try to reduce the prices of these stock options in the periods before they are granted them and increase the stock prices shortly before their options are exercised. If these actions are timed right they guarantee the managers a high return on their investment.

With influencing the stock options on purpose the shareholders benefits do not rank first and the firm's value may be damaged if this kind of earnings management is not done carefully.

On the one hand decreasing stock options can be done by managers through consciously holding back good news and only giving bad news to the media, on the other hand it is shown that there is a connection between high stock option compensation and income-decreasing discretionary accruals in periods that lead up to option awarding dates. (Baker et al., 2003, p.561)

For estimation of the discretionary component of total accruals they used the following modified Jones model:

#### Formula 8

$$TA_{i,t} / A_{i,t-1} = \alpha / A_{i,t-1} + \lambda_1 ((\Delta REV_{i,t-1,t} - \Delta AR_{i,t-1,t}) / A_{i,t-1}) + \lambda_2 (PPE_{i,t} / A_{i,t-1}) + \varepsilon_{i,t}$$

$TA_{i,t}$  = total accruals for firm i for year t

$A_{i,t-1}$  = assets for firm i for year t-1

$REV_{i,t-1,t}$  = revenue for firm i for year t-1,t

$AR_{i,t-1,t}$  = accounts receivable for firm i for year t-1,t

$PPE_{i,t}$  = property plant and equipment for firm i for year t

For estimation of discretionary accruals the following formula was used by Baker et al. (2003):

**Formula 9**

$$DA_{i,t} = \alpha + \beta_1 SMOOTH_{i,t} + \beta_2 LEVER_{i,t} + \beta_3 ASSET_{i,t} + \beta_4 STOCK_{i,t} + \beta_5 FIRSTYR_{i,t} + \beta_6 OPTRATIO_{i,t} + \varepsilon_{i,t}$$

DA	= discretionary accruals, which by construction are scaled by lagged assets
SMOOTH	= (target earnings - premanaged earnings) scaled by assets
LEVER	= current maturities of long-term debt / current assets
ASSET	= total assets at year-end (\$billions)
STOCK	= CEO stock and option holdings (\$millions)
FIRSTYR	= 1 if the CEO is in first year, 0 otherwise
OPTRATIO	= If option award is made in first four months following year-end, options <sub>t+1</sub> / (salary <sub>t</sub> + bonus <sub>t</sub> + payoff from options exercised <sub>t+1</sub> ) otherwise: options <sub>t</sub> / (salary <sub>t</sub> + bonus <sub>t</sub> + payoff from options exercised <sub>t</sub> )

Even firms that would have needed to demonstrate increased reported earnings to the market show these results. The effects on the market and the shareholders seem not to be a concern for the CEOs if they have the possibility to gain private wealth through earnings management.

Managers seem to not care about the long-term effects their decision to increase their private wealth has on the reputation and performance of their firm and the effects on the market. According to Safdar (2003) the artificially high discretionary accruals reverse in the periods following the awarding dates, which can be up to one year afterwards. In this time the performance of the firm will be unusually low, which could lead to bad press or even worse consequences, since the managers cannot know in advance how the performance of their firm will be in the following year.

Accruals are used more likely at firms where the CEO's compensation is closely linked to the value of stock. Thus highly incentivized executives are more likely to manipulate reported



earnings and cash in their equity when these earnings are artificially high. (Bergstresser and Philippon, 2006, p.528)

In years that have a high part of reported earnings being accruals it can be observed that unusually large quantities of stock options are sold by CEO's of these firms. (Bergstresser and Philippon, 2006, p.513)

CEOs that are compensated with higher shares of options relative to other forms of compensation, such as fixed bonus pay or fringe benefits appear to use discretionary accruals more often. The decrease of current earnings prior to option awarding dates is their main goal. (Baker et al., 2003, p.559) This negative relation between options and accruals is proven to be even stronger if the firm makes a public earnings announcement in advance of the stock option award date. (Baker et al., 2003, p.578)

The CEOs want to maximize the profit they can get out of their bonus plans involving stock options. If the price is low when they are granted the stock options and high when they sell it they can increase their private wealth specifically. By manipulating the performance of their firm they become in some way independent from the market and emerge to active market makers.

### **6.3 Investor speculation**

*"... speculation relies on inconsistent plans and is ruled out by rational expectations."*

Tirole, 1982, p.1163

Information asymmetry as described above does not play a role in the influence of investors and their speculation on the stock market. In this chapter the speculators may be aware of the manipulated earnings and think that they can filter all the relevant information out of the financial statement, which would leave them without information asymmetry, fully informed about everything going on in a firm. The investors, or speculators, believe that they know exactly as much as the CEO does. It may be that the CEO still has more information and still has information asymmetry on his side, but the investors believe differently.

Thus this part stands separate from the other incentives that all share being ascribed to asymmetrical information, in the way that the CEO knows more than the investors. However, the influences on the stock market are the same as in the cases where earnings management stems from asymmetrical information. The effects can be just the same and the extent of earnings management can also be the same as in the examples previously discussed.

A manager's incentive to manipulate earnings has often to do with the firm's actual value. In most cases, by manipulating earnings managers intentionally give the market makers and analysts the impression that the firm is better off than it actually is. Investors and speculators rely on this information given to them by the management, but they want to know as much as possible about a firm's actual position in the market. The more they know about the true potential a firm has or the position of a firm, the more they can maximize their profit with speculation on the firm's stock.

Therefore investors' information and earnings management are intertwined. Both sides, the investor and the CEO, want to profit as much as possible from a firm, its reported earnings and the stock prices.

If a speculator takes his position in the market before the earnings reports are issued he influences the CEO's decision whether to engage in earnings management or not. The CEO may feel the pressure of fulfilling expectations and taking actions that he would not have made or taken if the speculators had taken other positions in the market.

Mutual and hedge funds often speculate on the market to gain a maximum profit out of a firm's stock, they speculate on forthcoming earnings announcements and influence a manager and his decisions by doing so. However, the speculators will never be able to filter all of the information given to them and detect the exact magnitude of earnings management out of the announcements, even if they believe they can do so. The speculator will always have a little bit less information than the management, although he may think that he has all the information necessary for his actions.

These are the reasons why speculators can influence earnings management in both ways. Earnings management will be increased if the speculators' information is primarily about the extent of earnings management, since this leads to a vicious circle the CEO is caught in, the more the speculators think that he manipulates, the more he will manipulate. On the other

hand if the speculators have mainly information about fundamental earnings<sup>11</sup>, earnings management is lessened. (Fischer and Stocken, 2004, p.844)

At any point the manager is able to manipulate the earnings and the speculators are uncertain of his incentives to do so. (Fischer and Stocken, 2004, p.863) The extent to which earnings management is done also remains secret to the shareholders, and only the management that is involved knows the exact numbers. Even if the investors tend to think that they know everything relevant.

The speculator takes his position in the market before the CEO does. This leaves the CEO with the pressure of reporting earnings that give the speculators what they expected when taking their position. If the speculators had high expectations the CEO might need to manipulate his performance on a higher level than he might have done without the high expectations coming from them. The CEO then issues a financial report after observing his fundamental earnings and maybe manipulates the performance in order to satisfy the market makers. After this report the speculator may unwind his initial position in the market. (Fischer and Stocken, 2004, p. 851)

Feroz et al. (1991) describe the effects of earnings management on the market if it is detected and enforced by law through the SEC. The stock market shows strong reactions to these enforcements, for example did the average stock price decline by -13% after the announcement that earnings management was observed.

Firms that are associated with earnings management by the SEC show an increase in bid-ask spreads, a decline in analyst following, an increase in short interest and an increase in the dispersion of analyst forecast errors. (Dechow et al., 1996, p.3)

These findings show that the investors and analysts have a strong reaction to earnings management after it is revealed and punished by the SEC. After a manipulation of earnings is detected, the investors and analysts cannot rely on the data given to them by the management anymore and the credibility of the firm caught manipulating decreases. These reactions can cause a firm to struggle or even, as seen in recent cases, end in the bankruptcy of certain firms.

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<sup>11</sup> Fundamental earnings are the earnings that are observed when a generally accepted set of accounting policies is implemented and communicated to others, regarding the outcome of events affecting a firm

## 7 Conclusion

This thesis shows that earnings management can have a lot of different faces. Incentives to manipulate earnings are miscellaneous and can stem from a lot of different channels.

This thesis contributes to the work of other authors by listing different incentives that influence the performance manipulation behaviour of chief executive officers. It is tried to identify the main causes and circumstances for earnings management and the surroundings that make these manipulations possible.

Regarding the different accounting standards it is questionable if International Financial Reporting Standards, IFRS, can be associated with lower earnings management. In the case of Germany, the change from German HGB to IFRS, and the connected disappearance of hidden reserves does provide results that suggest that earnings management does not change under IFRS. However, these findings are limited to Germany, and only to a short period of time. The dissolution of hidden reserves makes it difficult to detect earnings management clearly after the change from German HGB to IFRS, and further research in this area would help to better understand the problem that hidden reserves and their transformation under IFRS cause. The consequences of a change from national GAAP to IFRS could be different in other countries of the Continental-European GAAP and the effects of IFRS on British-American GAAP countries could be different too.

As for the influences on reporting related incentives, bonus and performance plans can be identified as incentive for earnings management. They influence the construction of mostly income increasing discretionary accruals over either a short or a long period of time, depending on the time frame of the contract. Still, as long as there are no other alternatives to bonus plans to incite CEOs bonus plans will be present, although they can be linked to earnings management. But with knowing how they influence earnings management they can be paid more regard to and they can be constructed more carefully in the future.

An association between earnings management and a CEO's age is also found. The older the CEO is and the nearer he is to his retirement date, the more he will engage in earnings management and not think about the long-term effects his manipulations have. Here a connection between CEOs near their retirement and bonus plans can also be shown. The

better the bonus plan for the CEO the more he will manage earnings to gain a maximum out of his bonus plan a last time before retiring.

CEOs near their retirement are more likely to manipulate their firm's performance and should therefore be observed more carefully by the auditing board. The auditing board has great influence on the extent of earnings management, if their monitoring is good and board meetings are held frequently they can help to lessen earnings management.

Auditing by one of the Big Four auditing groups is also found to reduce earnings management. If firms are audited by non-Big Four companies the chance that earnings are managed their is significantly higher than with a Big Four auditor.

Benchmarks are also related to earnings management. CEOs will always try to beat benchmarks in order to give the shareholders a good impression of their firm's position. If the firm's performance cannot meet or beat the benchmark some CEOs will use earnings management to manipulate their earnings upwards to beat the benchmark and give the market a good impression of their firm's position.

This benchmark beating behaviour seems to have become a problem in recent years, since it is shown that the number of earnings surprises, in other words beaten benchmarks, and the amount of accruals have grown significantly over time. The problem here does not only involve earnings management, but also expectations management, which influences analysts to make forecast revisions in a firm's favour.

The managers in the United States of America show a higher tendency to try to meet or beat the benchmark, than managers from other countries of the world, which can be ascribed to the high importance of short-term performance in the US. With meeting or beating of benchmarks a positive signal can be given to the market.

When looking at earnings management that involves stock market related incentives the findings show a connection between CEO stock options and performance manipulation. In periods leading up to stock granting dates earnings management is used to lower the stock prices and in periods that lead up to stock exercising the stock prices are managed upwards to guarantee the manager a maximum profit with his stock options.

When looking at speculators and their influence on earnings management it becomes clear that they definitely have an influence on CEOs. On the one hand if the speculators

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information is mainly about the extent of earnings management done by a CEO, or at least if this is what the speculator thinks, earnings management increases. If their information is about fundamental earnings, earnings management is lessened when speculators are present. These findings show, that whenever speculators are involved in the decision making process of a CEO the magnitude of earnings management changes. Either it is lessened or it increases. Subsequently speculators are linked to earnings management.

The financial crisis that captivates the whole world clearly at the moment is an incentive to make further research in the area of earnings management. To identify the influences of all the different accounting standards on earnings management behaviour and if the change to International Financial Reporting Standards benefits financial reporting would be an interesting topic for further research in this field.

## 8 References

**Accountancy**, [www.accountancy.com.pk](http://www.accountancy.com.pk) - 02/2010

**Antonakopoulos Nadine 2007**, *Gewinnkonzeptionen und Erfolgsdarstellung nach IFRS* – Gabler Edition Wissenschaft

**Baker Terry, Collins Denton, Reitenga Austin 2003**, *Stock Compensation and Earnings Management Incentives* - Conference Paper

**Barth Mary E., Landsman Wayne R., Lang Mark H. 2008**, *International Accounting Standards and Accounting Quality* – Journal of Accounting Research Vol. 46 No.3

**Bartov Eli, Givoly Dan, Hayn Carla 2002**, *The rewards to meeting or beating earnings expectations* - Journal of Accounting and Economics 33

**Beasley Mark S., Carcello Joseph V., Hermanson Dana R., Lapedes Paul D. 2000**, *Fraudulent Financial Reporting: Consideration of Industry Traits and Corporate Governance Mechanisms* – American Accounting Association Vol. 14 No. 4

**Becker Connie L., Defond Mark L., Vo James Jiambal, Subramanyam K.R., 1998**, *The effect of Audit Quality on Earnings Management* – Contemporary Accounting Research 15

**Bergstresser Daniel, Philippon Thomas 2006**, *CEO incentives and earnings management* – Journal of Financial Economics 80

**Brown Lawrence, Higgins Huong Ngo 2001**, *Managing earnings surprises in the US versus 12 other countries* – Journal of Accounting and Public Policy 20

**Burgstahler David C., Eames M. 1998**, *Management of earnings and analysts' forecasts* - University of Washington - Working Paper

**Burgstahler David C., Hail Luzi, Leuz Christian 2006**, *The importance of reporting Incentives: Earnings Management in European Private and Public Firms* – The accounting review Vol. 81 No. 5

**Chtourou Sonda Marrakchi, Bédard Jean 2001**, *Corporate Governance and Earnings Management* – Social Science Research Network (SSRN)

**Davidson Wallace N. III, Xie Biao, Wihong Xu, Ning Yixi 2007**, *The influence of executive age, career horizon and incentives on pre-turnover earnings management* – Journal Manage Governance 11

**Dechow Patricia M., Sloan Richard G. 1991**, *Executive incentive and the horizon problem* – Elsevier Science publishers B.V. (North Holland)

**Dechow Patricia M., Sloan Richard G., Sweeney Amy P. 1996**, *Causes and Consequences of Earnings Manipulation: An Analysis of Firms Subject to Enforcement Actions by the SEC* – Contemporary Accounting Research

**Deloitte 2009**, *IFRSs in your pocket – An IAS Plus guide*

- Eccles R.G., Herz R.H., Keegan E.M., Phillips D.M.H. 2001**, *The Value Reporting Revolution: Moving Beyond the Earnings Game* – John Wiley, New York
- Feroz E.H., Park K. and Pastena V.S. 1991**, *The financial and market effects of the SEC's accounting and auditing enforcement releases* – Journal of Accounting Research 29 (supplement)
- Financial Accounting Standards Board (FASB) 1996**, *The IASC–U.S. Comparison Project: A Report on the Similarities and Differences Between IASC Standards and U.S. GAAP*
- Fischer Paul E., Stocken Philipp C. 2004**, *Effect of investor speculation on earnings management* – Journal of Accounting Research Vol. 42 No. 5
- Gaver Jennifer J., Gaver Kenneth M., Austin Jeffrey R. 1995**, *Additional evidence on bonus plans and income management* – Journal of Accounting and Economics 19
- Grabe Jürgen, 2004**, *FAQ IAS/IFRS/US-GAAP und Konzernbilanzen* - Bildungsverlag EINS GmbH
- Healy Paul M. 1985**, *The effect of bonus schemes on accounting decisions* – Journal of Accounting and Economics 7
- Healy Paul M., Wahlen James M. 1999**, *A Review of the Earnings Management Literature and its implications for Standard Setting* – Accounting Horizons Vol.13 No.4
- ICAEW** – [www.icaew.com](http://www.icaew.com) - 02/2010 -  
[http://www.icaew.com/index.cfm/route/155959/icaew\\_ga/en/Home/About\\_us/History\\_of\\_accounting/What\\_s\\_in\\_a\\_name\\_Firms\\_simplified\\_family\\_trees\\_on\\_the\\_web#k](http://www.icaew.com/index.cfm/route/155959/icaew_ga/en/Home/About_us/History_of_accounting/What_s_in_a_name_Firms_simplified_family_trees_on_the_web#k)
- Jones Jennifer J. 1991**, *Earnings Management during Import Relief Investigations* – Journal of Accounting Research Vol.29 No.2
- Joos Peter, Lang Mark 1994**, *The Effects of Accounting Diversity: Evidence from the European Union* – Journal of Accounting Research Vol.32
- Meek Gary K., Rao Ramesh P., Skousen Christopher J. 2007**, *Evidence on factors affecting the relationship between CEO stock option compensation and earnings management* – Review of Accounting and Finance Vol.6 No.3
- Murphy Ann B. 1999**, *Firm characteristics of Swiss companies that Utilize International accounting standards* – The International Journal of Accounting Vol.34 No.1
- Othman Hakim B., Zeghal Daniel 2006**, *A study of earnings-management motives in the Anglo-American and Euro-Continental accounting models: The Canadian and French case* – The International Journal of Accounting 41
- Safdar Irfan, 2003**, *Executive stock option exercise, earnings management, and stock returns* - Working paper, University of Rochester
- Schipper Katherine 1989**, *Commentary on Earnings Management* – Accounting Horizons, 3(4)



---

**Simon Herbert, 1959**, *Theories of decision making in economics and behavioural science* - American Economic Review, Vol. 49, No. 3, p. 253 - 283

**Soderstrom Naomi S., Sun Kevin Jialin 2007**, *IFRS adoption and accounting Quality: A Review* – European Accounting Review Vol. 16 No. 4

**Tirole Jean 1982**, *On the possibility of speculation under rational expectations* – Econometrica Vol. 50, No. 5

**U.S. Securities and Exchange Commission 2008**, *SEC proposes roadmap toward global accounting standards to help investors compare financial information more easily*

**Van Tendeloo Brenda and Vanstraelen Ann 2005**, *Earnings Management under German GAAP versus IFRS* – European Accounting Review Vol. 14 No. 1

## Appendix

List of all 113 countries that require or permit IFRS, as of March 2009. (Deloitte, 2009, pp.16)

Abu Dhabi	Czech Republik	Iraq	Morocco
Anguilla	Denmark	Ireland	Mozambique
Antigua and Barbuda	Dominica	Israel	Myanmar
Armenia	Dominican Republic	Italy	Namibia
Aruba	Dubai (UAE)	Jamaica	Netherlands
Austria	El Salvador	Jordan	NL Antilles
Australia	Estonia	Kazakhstan	Nepal
Azerbaijan	Fiji	Kenya	New Zealand
Bahamas	Finland	Kuwait	Nicaragua
Bahrain	France	Kyrgyzstan	Norway
Barbados	Germany	Laos	Oman
Belarus	Georgia	Latvia	Panama
Belgium	Ghana	Lebanon	Papua New Guinea
Bermuda	Gibraltar	Lichtenstein	Paraguay
Bolivia	Greece	Lesotho	Peru
Bosnia and Herzegovina	Grenada	Lithuania	Poland
Botswana	Guatemala	Luxembourg	Portugal
Bulgaria	Guyana	Macedonia	Qatar
Cayman Islands	Haiti	Malawi	Romania
Chile	Honduras	Maldives	Russian Federation
Costa Rica	Hong Kong	Malta	Serbia
Croatia	Hungary	Mauritius	Slovak Republic
Cyprus	Iceland	Mongolia	Slovenia
		Montenegro	

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South Africa

Spain

Sri Lanka

St. Kitts & Nevis

Suriname

Swaziland

Sweden

Switzerland

Tajikistan

Tanzania

Trinidad and  
Tobago

Turkey

Uganda

Ukraine

United Kingdom

Venezuela

Virgin Islands  
(British)

West Bank/Gaza

Zambia

Zimbabwe