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Classification shifting in quarterly reports

Researching earnings management through classification shifting

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Abstract

In a time where it gets more and more difficult for management to perform earnings management due to increased attention by auditors and standard setters, there might be a new form of earnings management used by management. Managers classify some of the core expenses as special items in order to increase core earnings. Given that the attention of auditors is higher in the fourth quarter, I expect that there is more classification shifting in the fourth quarter.

In this study I investigate if management uses classification shifting, by using two types of test models. The two types I use are: level test models and change test models. I will investigate which of those models has the strongest predictive value.

Both types of models are two-step models. In step 1 a regression is performed on certain variables with the core earnings. The coefficients derived from this regression are used to calculate expected core earnings respectively the expected change in core earnings. The difference between the expected core earnings, respectively expected change in core earnings, and the core earnings, respectively the change in core earnings, are called unexpected core earnings, respectively unexpected change in core earnings.

In step 2 on the unexpected core earnings a regression is performed with special items as explanatory variable. If special items are associated with unexpected core earnings I conclude that management classifies some core expenses as special items.

In this study I found evidence for classification shifting and therefore I conclude that management uses classification shifting as a form of earnings management. When tested separately the evidence found in the fourth quarter is less strong than the evidence found in other quarters. I conclude that there is not more classification shifting in the fourth quarter. The level test models produce much stronger predictors in step 1 of the investigation. I conclude that level test models are stronger models in predicting core earnings.

Key words: Classification shifting, Special items, level test models, change test models, McVay, Fan et al., Quarterly research.

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Outline

1. Introduction

Earnings management is a subject that has been covered a lot in research. Somehow the "bad boys" character of earnings management speaks to the imagination.

Research performed to the subject of earnings management makes it more difficult for management to perform earnings management nowadays. Standard setters focused on reducing the possibilities of earnings management. There are several methods of earnings management; most forms of earnings management are shifting earnings in time. The problem with those forms of earnings management is that this period the earnings look better, but next period the earnings look for the same amount less better.

The third chapter of this thesis proves that analysts and investors are more focused on core earnings nowadays. The trend of focusing on core earnings brings up new opportunities to the management of companies in performing earnings management. Management classifying core expenses as special items, remove some of the core expenses from the core earnings and in this way raise the core earnings that are reported.

Because the term special items is not used in the International Financial Reporting Standards (IFRS) and has changed over time under US-GAAP, I will define special items as follows. The items that are recognized as special items are the following items if reported before taxes: Adjustments applicable to prior years, any significant nonrecurring items, current year's results of discontinued operations and operations to be discontinued, losses from flood, fire, and other natural disasters, nonrecurring loss on the sale of assets, investments, and securities, loss on the reproaches of debt, write-downs or write-offs of receivables, and intangibles. This definition I will use throughout the research and in all periods investigated. This definition is the same definition as used in the Compustat database.

Core earnings are not reported in financial statements. Core earnings are still being used by investors and analysts. The definition that I use throughout this research is: core earnings are sales – costs of goods sold (COGS) – selling, general, and administrative expenses (SG&A). If I use the term "reported" core earnings I mean in this research the reported sales – reported COGS – reported SG&A. Because core earnings are not reported in the financial statements, they are a form of non-GAAP financial measures.

This thesis will focus on researching if management uses special items in the reporting to shift expenses down the profit and loss account in order to raise the "reported" core earnings. The investigation will be done by researching quarterly data and there will be a focus on the difference between the fourth quarter and the other quarters.

There has been a lot of research on earnings management in different forms, but the research on classification shifting is relatively new and therefore there is not very much research on this topic. Because of the relevance of earnings management, it is interesting to investigate new forms of earnings management. The relevance of this research lies in the fact that there has not been a lot of research on the topic. The aim of this thesis is to investigate whether it is possible to find earnings management through classification shifting in a US sample.

In the second chapter I will discuss what earnings management is and which forms of earnings management there are. After that the research will focus on the focus on core earnings. Important for the research on classification shifting is, in case the conclusion is that there is no focus on core earnings, further research on classification shifting would be useless. The third chapter I will use to explain and prove that there is a focus on core earnings by investors and analysts.

The fourth chapter describes the prior research on the part of classification shifting. In this chapter I investigate how to perform research on the topic of classification shifting. I will discuss which models can be used to perform research in the field of classification shifting. Also I will discuss results in prior research on the topic of classification shifting. The conclusions drawn from this literature review will be used to form hypotheses and to conduct a model which is used to research classification shifting.

In the fifth chapter you will find the research design of the research that is conducted. In this chapter the hypotheses are formulated and also the samples and the research models that are used will be defined.

In the sixth chapter the results of a research on selection bias of the sample compared to the entire population will be discussed. This chapter will start with a short explanation on how the sample is investigated. After that the results of the investigation on selection bias in the sample will be discussed and the potential influence on the outcomes of the research will be discussed.

The results of the research will be shown in chapter seven. This chapter will show the results of the research. For the analysis on the results I refer to the next chapter.

In chapter eight the results, as found in chapter seven, will be discussed and the meaning of the results will be discussed. Also the topic of the explanatory power of the results from the research will be discussed in this chapter.

Chapter nine will include the conclusions. In this chapter I will discuss what kind of conclusions can be conducted from the results and the analysis of those results. In this chapter the answers to the main questions of the research will be discussed and compared to the predictions based on the hypotheses. After that, I will discuss the limitations of the research, conducted from the outcomes of chapter six and the analysis of chapter eight. At last I will show some recommendations for future research in the research field of earnings management through classification shifting.

2. What is earnings management?

Using classification shifting as a form of earnings management is the main topic of this thesis. Before the research on classification shifting as a form of earnings management can begin, earnings management should be defined in order to conclude what earnings management is and what it is not.

Earnings management can be defined in many ways, earnings management can be split in three categories. The first one is the white category: “Earnings management is taking advantage of the flexibility in the choice of accounting treatment to signal the manager’s private information on future cash flows” (Ronen and Yaari, 2008). The second category is the grey category: “Earnings management is choosing an accounting treatment that is either opportunistic (maximizing the utility of management only) or economically efficient” (Ronen and Yaari, 2008). The last category is the black category: “Earnings management is the practice of using tricks to misrepresent or reduce transparency of the financial reports” (Ronen and Yaari, 2008). Considering these three definitions defining earnings management is very difficult. From these three definitions and the discussions in the literature Ronen and Yaari (2008) conclude that the best definition of earnings management in the literature is:

“Earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers” (Healy and Wahlen, 1999).

Ronen and Yaari (2008) conclude that this is the best definition on earnings management, because it embraces the three categories of earnings management. Next to that there are given a lot of definitions on earnings management in prior literature and the definition of Healy and Wahlen is the one that summarizes the best all the other definitions.

Ronen and Yaari (2008) describe several forms of earnings management:

- Choosing between several treatments of accounting items within the standards.
- Management can choose in the timing of the adoption of new accounting standards.

- Using estimates within the general accepted accounting principles (GAAP). Under GAAP there are some accounting items that need to be estimated by management, management can use these estimates to influence earnings.
- Manipulation of real economic activities:
  - Structuring transactions
  - Timing the recognition of revenues and expenses, by actually timing the transactions.
  - A real production and investment decision.
- Managing the transparency of the presentation of earnings.
- Managing how clear information comes to the user by various means, such as presenting information at another place then related information. This can influence how users interpret certain information (Lee et al., 2006).
- A classification of items as above or below the line of operating earnings in order to separate persistent earnings from transitory earnings.

All forms described above can be categorized in all the three categories of Ronen and Yaari (2008) white, grey, black. The intention behind the definition of Earnings management is what defines in which category it falls. All the above forms fall in the definition of Healy and Wahlen (1999) and therefore Ronen and Yaari (2008) choose to define all the above forms as earnings management.

Resulting from the forms described by Ronen and Yaari I come to the conclusion that there are three types of earnings management. All forms described by Ronen and Yaari can be placed under one of these types. The first type of earnings management is earnings management which is based on managing the accounting numbers. These forms of earnings management have no cash flow effect. The forms that can be categorized under this type are the first three: Choosing between several treatments of accounting items within the standards, management can choose in the timing of the adoption of new accounting standards, Using estimates within the general accepted accounting principles (GAAP). Under GAAP there are some accounting items that need to be estimated by management, management can use these estimates to influence earnings. The second type of earnings management can be best described as earnings management by influencing real transactions. These forms do have a cash flow effect. The forms of earnings management that can be categorized under this type of earnings management are: Structuring transactions, timing the recognition of revenues and expenses, by actually timing the transactions, a real production and investment decision. The third type of earnings management can best be described as perceptional earnings management. This type of earnings management is focused on the perception of the user of the financial statements. The accounting numbers are not actually changed and also there is no influence on real transactions but management tries to influence the perception of the user by stating the information in a way that influences the perception of the user. The forms that can be categorized under this type are: Managing the transparency of the presentation of earnings, managing how clear information comes to the user by various means, such as presenting information at another place then related information. This can influence the way users interpret certain information, a classification of items as above or below the line of operating earnings in order to separate persistent earnings from transitory earnings.

As explained in the introduction this paper will focus on the last category: perceptional earnings management and then specifically classification shifting. Therefore the other forms of earnings management as described by Ronen and Yaari (2008) will not be discussed further in this paper. First I will now discuss the incentives for earnings management, after that I will elaborate somewhat more on classification shifting.

In describing incentives for earnings management we can distinguish three types of motives for earnings management: capital market expectations and valuation, contracts written in terms of accounting numbers, and antitrust and other government regulation. Investors and financial analyst use accounting numbers to value stocks. Therefore there is an incentive for management to manage the earnings in order to influence the short-term stock price performance. In many contracts accounting numbers are used, management compensation contracts are used to align the incentives of management and external stakeholders. To protect creditors lending contracts are written. Both of these forms of contracts lead to incentives for management to perform earnings management. Some industries are tied to regulations that are specifically based on accounting numbers (for instance: banking industry, insurance industry). This leads to the incentive for management to manage variables of the balance sheet which are subject to regulation (Healy and Wahlen, 1999).

Nowadays companies report in press releases more and more “core” or “street earnings” instead of GAAP earnings. The terms “street” and “core” earnings can be used interchangeably (Ciccone 2002, Frankel et al. 2010, Gu and Chen 2004.) The term GAAP earnings refers to earnings reported in the profit and loss account in the annual report, subject to GAAP. In the rest of this paper the term core earnings will be used, even if in prior research the term street earnings was used. Companies choose to report those core earnings because of the fact that analysts and investors are more and more focusing on those core earnings than on the GAAP earnings. Because the reporting of non-GAAP financial measures in press releases is subject to regulation G of the SEC:

'*Regulation G dictates that a person acting on its behalf, shall not make public a non-GAAP financial measure that, taken together with the information accompanying that measure, contains an untrue statement of a material fact or omits to state a material fact necessary in order to make the presentation of the non-GAAP financial measure, in light of the circumstances under which it is presented, not misleading. Whenever a company that is subject to Regulation G, or a person acting on its behalf, publicly discloses any material information that includes a non-GAAP financial measure, Regulation G requires the registrant to provide the following information as part of the disclosure or release of the non-GAAP financial measure:*

- *a presentation of the most directly comparable financial measure calculated and presented in accordance with GAAP and;*
- *a reconciliation (by schedule or other clearly understandable method), which shall be quantitative for historic measures and quantitative, to the extent available without unreasonable efforts, for prospective measures, of the differences between the non-GAAP financial measure presented and the most directly comparable financial measure or measures calculated and presented in accordance with GAAP*'.

Companies might be prudent with reporting non-GAAP financial measures. In the annual report it is not allowed to report non-GAAP financial measures, because of the fact that analysts and investors are focused on core earnings they calculate them themselves from the annual reports. More on the focus on core earnings by investors and analysts can be found in the next section. In the rest of this section I explain how the fixation on core earnings can be used to manage earnings. For the literature review on prior research to the subject of earnings management by classification shifting I refer to chapter four.

Because investors and analysts tend to be more interested in core earnings than in GAAP earnings it is possible for management to classify earnings in a different class. This shifting of classification can change the core earnings, but will not influence net income. This is because core earnings are defined as Sales minus COGS, and minus SG&A. The reclassification shifts some expenses from those classes towards classes that are not in the calculation of core earnings. In table 1 I will show how classification shifting in a profit and loss account works.

Table 1 (Example P&L)

Account	**Amount**	**Total**	**Shifted**	**Total**
Sales	10.000		10.000	
COGS	- 4.000		-3.000	
SG&A	- 3.000		-3.000	
Core Earnings		**3.000**		**4.000**
Other operating income	-2.000		-3.000	
Net interest Expense (income)	1.000		1.000	
Investment income	1.000		1.000	
Tax expense	-1.000		-1.000	
Net profit/Loss		**2.000**		**2.000**

In table 1 I show at the left side the way it should be. On the right side I show how the profit and loss account looks like after the shifting has taken place. Under other operating income special items can be classified. For instance let us say that this year the company has restructuring charges (which can be classified under other operating income (Palepu et al., 2010) of 2.000. Then management can classify also some core expenses, for instance depreciation on manufacturing facilities as restructuring charges. If management classifies 1.000 as restructuring charges the core earnings will raise to 4.000 while the net income stays 2.000. Please note that the core earnings are not represented in the financial statements, I only show them in this example P&L to show the influence of classification shifting.

Management can decide to classify costs that have occurred during a year or a quarter as a special item. In this way those costs will end up below the core earnings of the profit and loss account. These costs will still lower net income and in this way the shifting of the costs does not influence net income. Still this classification shifting can be considered a way of earnings management. Because of the focus on core earnings by investors and analysts, analysts and investors calculate the core earnings from the numbers of the financial statement. The shifting therefore causes higher core earnings.

Most forms of earnings management shift earnings from one to another period. One of the negative aspects of shifting earnings in time is that this leads to lower earnings in another period. The big advantage of classification shifting is that management does not have to settle up for the earnings reported because the earnings are reported in the GAAP earnings and "only" shifted up or down the profit and loss account.

To conclude on the matter of earnings management and classification shifting; earnings management occurs when the management uses judgment in the financial reporting to achieve a goal. In classification shifting, management uses the focus on core earnings to show better earnings by shifting gains up the profit and loss account and shifting costs down the profit and loss account.

3. Focus on core earnings

There are several ways of measuring the performance of companies. In companies there are several definitions of earnings. The “old” normal manner of defining earnings is net income. Net income is defined as the earnings produced according to “generally accepted accounting principles” (GAAP) (Bradshaw and Sloan, 2002). Another definition of earnings is core earnings. These are the earnings often announced by companies in their press releases and tracked by analysts. Bradshaw and Sloan (2002) state: “Core earnings are different from GAAP earnings in the way that they often exclude certain nonrecurring or unusual items.” Nonrecurring items are defined by Heflin et al. (2008) stated: “In the literature is stated that nonrecurring items have not occurred or will occur in the previous or coming 2 years.” Because of the nonrecurring character of nonrecurring items, they should be classified as special items, instead of, as operating items. Gu and Chen (2004) state: “An unusual item is often included in the earnings for one firm but excluded for another firm.” Gu and Chen (2004) investigated this for the years 1990 until 2003. Gu and Chen (2004) state: “The difference between core earnings and net income is increasing over the years”. Unusual items can be defined as items that do not happen often, therefore unusual items are like nonrecurring items.

Also investors price the stocks of companies more on the core earning numbers than on net income (Bradshaw and Sloan, 2002). Bradshaw and Sloan (2002) provide two interpretations of this phenomenon; first the managers try to get a higher valuation for the firm by presenting the core numbers. Second management tries to remove transitory components from the earnings number in order to improve the quality of reporting, because reported numbers better represent the future cash flows and therefore the value of the firm, if transitory components are removed. Although Bradshaw and Sloan (2002) provide evidence for the rising importance of core earnings they are unable to provide evidence for the interpretations they give on management incentives. It is impossible to define every accounting item as absolutely recurring or nonrecurring. This comes down to the fact that there is a lot of professional judgment needed in categorizing accounting items. Therefore it is justifiable to exclude certain accounting items from the core earnings, because the excluded items are proven to be valued lower than the items included in the core earnings (Gu and Chen, 2004).

Special items and discontinued operations have a very low predictive value for future returns on equity. Net income (including special items) has a very low predictive value for future returns on equity excluding special items (Fairfield, 1996). Analysts and investors are interested in future returns on equity before special items. Therefore special items are rated as not important information by investors and analysts. When predicting the future returns on investment after special items it seems that the special items have a predictive value. I conclude that the predictive value of special items on future returns including special items, implies that the special items are recurring in some way.

Bradshaw and Sloan (2002) state that value relevance of earnings research showed a decline of the association between GAAP earnings and stock prices. And therefore this study concludes a decline of the value relevance of GAAP earnings. Bradshaw and Sloan (2002) found an increase on the association between core earnings and stock prices. So there might still be value relevance of earnings, but no longer the relevance of GAAP earnings but more and more the relevance of core earnings.

Davis (2002) published a study on the value relevance of revenue instead of profit. She found that analysts and investors believe revenue to be much more relevant than net profit. The study was conducted amongst internet-firms, the results might be applicable to other industries, but there is no guarantee that it also holds for other sectors.

Important in understanding the focus on core earnings is that individual line items in a report should be correct and that all line items are to be valued by analysts and investors. The higher on the profit and loss account the item stands, the more recurring the item is (Fairfield, 1996). Investors do recognize this fact and therefore are much more focused on items which are reported higher on the profit and loss account than on the net income. When valuing a company with the multiples method, core earnings receive much higher valuation multiples than net income (Lipe, 1986).

Looking at the available literature the conclusion is that when management, analysts, and investors are valuing a company there is much more focus on core earnings than on net income. The conclusion can be drawn that analysts and investors interpret the core earning of a much higher predictive value to predict future earnings than the value the predictive value of

GAAP earnings. The focus in valuing companies on the core earnings gives incentives to management to manage the core earnings.

4. Classification shifting

In this chapter prior empirical research on classification shifting in financial reports will be reviewed. The chapter before showed that managers can use classification shifting to manage earnings, because of the focus on core earnings by both investors and analysts. In this chapter I show what the outcomes are of prior empirical research on classification shifting.

Although there was some empirical research on the focus on core earnings, there was no empirical research on classification shifting between the core earnings and special items before McVay (2006). From prior studies on the focus on core earnings by analysts and investors, resulting in possibilities for management to influence the perceived value of the company, McVay (2006) conducted two hypotheses: "Managers classify core expenses as special" and "Managers classify more core expenses as special items when the net benefits to classification shifting are expected to be greater" (McVay, 2006). Because of the use of special items to boost the core earnings, McVay (2006) compares the overstatement of the core earnings ("reported" core earnings minus expected core earnings) with the special items reported in a year. McVay (2006) controls for real economic changes in her study. She performs her study in the year next to the year, where the company had special items. In the year next to the year, the special items were reported she investigates the relation in the opposite direction. "The normal course of business as a result of special items would be lower core earnings in the year special items reported and higher core earnings in the year next to reported special items" (McVay, 2006).

McVay (2006) predicts the core earnings, using some economic drivers for core earnings. For the exact calculation used to predict core earnings I refer to section 5.4. McVay (2006) calls the calculated (predicted) core earnings: "expected core earnings". McVay (2006) also predicts the change in core earnings. For the exact calculation I refer to section 5.4. McVay (2006) calls the calculated (predicted) change in core earnings: "expected change in core earnings".

With the expected core earnings and the expected change in core earnings McVay (2006) calculates the difference between the expected core earnings and the reported core earnings, and also the difference between the expected changes in core earnings and the reported change in core earnings. These differences are called unexpected core earnings respectively unexpected change in core earnings. McVay (2006) performs a regression on both those unexpected items in order to test her first hypothesis. She made the following regressions:

$$UE{\sim}CE_t = \alpha_0 + \alpha_1 \%SI_t + \varepsilon_t$$
$$UE{\sim}\Delta CE_{t+1} = \eta_0 + \eta_1 \%SI_t + v_{t+1}$$

Where UE~CEt stands for: Unexpected core earnings, %SIt stands for: Income decreasing special items scaled down by sales, and UE~ΔCEt+1 stand for: Unexpected changes in core earnings year t+1.

Regarding hypothesis 1 this means that α_1 is predicted positive and η_1 is predicted negative. McVay (2006) performs the regressions on three samples:

1. the whole Compustat population,
2. the firms from the population that do not have income decreasing special items,
3. the firms from the population that have income decreasing items for at least five percent of sales.

The results of McVay (2006) show that special items are positively associated with unexpected core earnings, whilst special items in year t are negatively associated with the change in core earnings in the year after t (t+1).

McVay (2006) controlled for different categories of special items and investigated the relation between companies which just meet the expectations. The conclusions drawn by McVay (2006) are: unexpected core earnings are increasing with special items in year t and the improvement in core earnings reverses in the next year, but only when there are no special items in year t+1. The results only hold for items that are possible to shift and the results are stronger for firms that just met analyst forecast.

Lin et al. (2006) use the McVay (2006) model to investigate if managers use classification shifting to perform earnings management. They find that companies that are near to meeting or beating certain benchmarks are more likely to use classification shifting. They also find that companies that use classification shifting are using this as a substitute for positive discretionary accruals. Lin et al. (2006) use the McVay (2006) model without making moderations to it. Hereby they implicitly underscribe the value of the model.

Athanasouka et al. (2009) investigated whether UK firms engage in earnings management to meet or beat analyst expectations. They focused on positive abnormal working capital accruals and on classification shifting. I will only discuss the results on classification shifting. For researching the use of classification shifting to perform earnings management in UK companies they used the McVay (2006) model. They used the McVay (2006) model exactly the same as McVay (2006), hereby they also implicitly underscribe the power of the model. Athanasouka et al. (2009) found in their research the same results for UK companies as already found by McVay (2006) for US companies. They come to the conclusion that reported non-recurring items raise core earnings and lower core earnings in the following year. They also find these outcomes are stronger for firms that just meet analyst forecasts. They investigated non-recurring items; non-recurring items are closely related to special items as defined in this study. Special items are always non-recurring, but non-recurring items are not always special items. Therefore the definition used by Athanasouka et al. (2009) is somewhat broader.

Fan et al. (2010) investigated the McVay (2006) model and found a bias in the regression itself which can influence the outcomes. In the calculation core earnings are influenced by special items. This means that if there are special items the expected core earnings will decline. Because unexpected core earnings are calculated as: reported core earnings minus expected core earnings, a decline in expected core earnings results in higher unexpected core earnings. To delete this bias from the model Fan et al. (2010) exclude the current period accruals from the model. This can lead to including performance driven effects, but they look at the incentives of managers in certain periods to split these drivers for changes in core earnings. They concluded from results of prior research that earnings management in different ways is more difficult in the fourth quarter. Because earnings management in other (more traditional) ways is more difficult they expect management to use classification shifting more in the fourth quarter as a replacement for other forms of earnings management. They form the hypothesis: "Managers shift core expenses to special items more in the fourth quarter." Next to this hypothesis they also hypothesize that management uses classification shifting more when quarterly earnings just meet or beat earnings benchmarks. They used data for the years 1988 to 2007 from Compustat Industrial Quarterly File. Analysts' forecast data are obtained from the I/B/E/S Detail File. They took North-American firms as their population.

Using the quarterly data in the revised model they find that there is a significant difference between the fourth quarter and other quarters. Also they find that companies that just meet or beat earnings benchmarks have a bigger correspondence between special items and core earnings.

Fan et al. (2010) come to the following conclusions. They show that classification is more prevalent in the fourth quarter than in other quarters. They also find evidence that within samples of companies that just meet or beat analyst forecasts there is better evidence for classification shifting than in other samples. “These results are also consistent with managers having more incentive to shift income when investors are likely giving more weight to earnings performance” (Fan et al., 2010).

The objective of this chapter was to investigate how to perform research on classification shifting in reporting and also to investigate what the conclusions are of prior empirical research. Research to the topic of classification shifting in reports is done by using the McVay (2006) model. Some studies used the McVay (2006) model exactly as formulated in the study of McVay, but a recent study improved the McVay (2006) model. The imperfection of accruals influencing the expected core earnings is eliminated in the adapted McVay (2006) model by Fan et al. (2010). In this adapted model they eliminate the current period accruals. The prior empirical research shows us that every research performed finds evidence for classification shifting in reports. This holds for American companies as well for UK companies, also this holds for annual data as for quarterly data. Fan et al. (2010) found evidence that there is more classification shifting in the fourth quarter. Next to that several studies conclude that there is more evidence for classification shifting for companies that are just meeting or beating analyst forecasts. For a schematic overview on the prior empirical research I refer to appendix I.

5. Research design

5.1. Introduction

After examining prior empirical research on classification shifting through special items (in quarterly reporting) the conclusions are now that there is some evidence found that managers use special items to manage the core earnings. Research on classification shifting is relatively new and therefore there is not a lot of research on this topic.

The McVay (2006) model and the adapted McVay (2006) model are the only models used to investigate classification shifting through special items. Recent studies on classification shifting all used those models to conduct their research. Most of these studies used the exact McVay (2006) model. But recently Fan et al. (2010) published an article in which they conclude that there are certain imperfections in the McVay (2006) model. They therefore used an improved version of the McVay (2006) model, "the adapted McVay (2006) model"

Research performed on the topic of classification shifting through special items has been performed on US and UK companies. At this moment there is no research on the population of European companies.

The research that is performed in this thesis is a research on classification shifting through using special items. This research will focus on quarterly reports. The research will be performed on the US population. I expect to find that management uses classification shifting, and especially uses special items in order to perform classification shifting.

In order to investigate classification shifting through special items in quarterly reporting I use the McVay (2006) model. The McVay (2006) model has some imperfections; therefore I will implement the critics delivered by Fan et al. (2010).

McVay used for investigating classification shifting through special items a level test model and a change test model. In this research I re-perform the tests done by McVay (2006), after that I use two of the test models used by Fan et al. (2010). Fan et al. (2010) used level test models, in this research I use two of the level test models and also change them into change test models.

The added value of this study can be found in the fact that I investigate what kind of models, level test models or change test models, are better in predicting the expected (change in) core earnings. Also the use of multiple models has not been done before. I rewrite some of the first step level test estimation models into change test models. And I use all models on two different sub-samples in order to investigate the difference between quarter 4 and the quarters 1-3. Until now only Fan et al. (2010) performed a study onto two sub-samples and they used only one level test model to investigate the difference between the two sub-samples.

5.2. Hypotheses

The literature review showed several prior studies. One of the conclusions of the literature review was that there is evidence found in prior research that management is using classification shifting as a form of earnings management. These studies are performed in the US and the UK. The focus on core earnings of investors and analysts is something that is proven in several prior studies (see chapter three). Because of the focus on core earnings by analysts and investors, the use of classification shifting is attractive to management. Also all prior research on classification shifting concludes that management uses classification shifting. From this I conclude:

The first hypothesis is:

H1: Management classifies some core expenses as special items.

The models that I use to test this hypothesis will be described in chapter 5.4. Prior research concluded that there is a difference in the use of classification shifting between different quarters. Therefore this research will also focus on the difference between different quarters. As described by Fan et al. (2010) the incentives to use classification shifting as a form of earnings management are higher in the fourth quarter. Therefore is it thinkable that management uses classification shifting more in the fourth quarter than in other quarters. From this I conclude:

The second hypothesis is:

H2: There will be more classification shifting in the fourth quarter than in other quarters.

In order to test the difference between the quarters I will use more than one sample.

5.3. Sample

The sample that I use is a sample of US listed companies. For examining the first hypothesis the sample will consist of all quarterly reports of all US companies. To perform research on the second hypothesis then the sample will be split into two sub-samples. The first sample will consist of the fourth quarter reports of all listed US companies. And the second sample will consist of the quarterly reports of all listed US companies for the quarter's one, two, and three. The two different samples will be used to research if there is a difference between the strength of the evidence between the different samples for classification shifting.

The sample that I will use consists of quarterly data of US listed companies for the years 1990 until 2009. The data used by Fan et al. (2010) consisted of the quarterly data for US listed companies for the years 1988 until 2007. I choose to insert the most recent years, for which the data is available momentarily.

The sample consists of US listed companies, therefore the institutional setting between the different companies is the same and therefore there is no distortion between companies in the institutional settings. Classification shifting is shifting items between different lines in the financial statements under GAAP, differing from the lines described for certain items under US-GAAP. Investigating companies that all use the same GAAP will exclude noise in the results. As described in the introduction I use for all periods the same definition for special items. This form of earnings management is by nature related to the shifting between lines under GAAP, cultural influences between states will not be disturbing the results.

All accounting data will be acquired from the Compustat database. The information on returns needed in the models elaborated below will be conducted from Datastream. The reason I choose the Compustat database is that in this research quarterly data are investigated. Quarterly data are not available in other databases for all variables used in the research models that are going to be used.

All variables that consist of quarterly accounting data are available in Compustat. For a list with those variables and the Compustat codes I refer to appendix II. The prior research performed by McVay (2006) and Fan et al. (2010) also made use of the Compustat variables, therefore the comparability with this prior research can be strengthened. The data for the variable of the quarterly returns can be found in Datastream.

The dataset used by McVay (2006) consisted of 76.901 firm years. The dataset of Fan et al. (2010) consisted of 132.393 firm quarters. The total dataset available in Compustat for the years 1990 until 2009 consists of 892.237 firm quarters. The calculations for the expected core earnings and the expected change in core earnings consist of variables from different time periods. Therefore I choose to select only the firms that have all the variables available for the entire period of my sample. This selection results in 10.480 firm quarters for firms that have all Compustat variables available for the entire period. The selection on basis of Datastream variables excluded some more firm quarters. Therefore my final sample consists of 9.360 firm quarters. The difference between my sample and the sample of Fan et Al. (2010) is that I used the criterion that companies should have all data available for the total period of 80 quarters.

I show the descriptive statistics of my sample in Appendix III.

The amount of firm quarters in my sample is small compared to the entire Compustat population. Therefore I will investigate the selection bias of my sample. The research method, the results, and the conclusions drawn from this research will be explained in chapter six.

5.4. Research models

The research is performed by using the McVay (2006) level test model and the McVay (2006) change test model. Also improved forms of the McVay (2006) model are used. The improved forms consist of two level test models used by Fan et al. (2010) and two change test models derived from those two models. The level test models are called model 1A, 2A, and 3A, the change test models are called 1B, 2B, and 3B. The models 1B, 2B, and 3B are respectively the change test versions of model 1A, 2A, and 3A. Every model consists of two steps, in step 1 a regression is performed on the data to obtain coefficients, which are used to calculate the expected core earnings, respectively the expected change in core earnings. When the expected core earnings are calculated those are used to calculate the unexpected core earnings, respectively the unexpected change in core earnings. In step 2 I perform a second regression to find the association of special items with the unexpected core earnings, respectively the unexpected change in core earnings. The calculation of the unexpected core earnings and step 2 is for model 1A the same as for model 2A, and model 3A. The calculation of unexpected change in core earnings and step 2 is also the same for model 1B, 2B, and 3B. I will discuss the calculation of the unexpected core earnings, respectively the unexpected change in core earnings, and step 2 for the level test models, respectively step 2 for the change test models, only for model 1A respectively model 1B.

I use the six models on the total sample in order to test for the first hypothesis. After this the total sample is split into two sub-samples. On both sub-samples I perform the six tests again. I will compare the results on the six tests on the first sub-sample with the results of the six tests performed on the second sub-samples, to conclude on the second hypothesis.

5.4.1. McVay model

In this part the McVay (2006) model is explained in a more intensive way, in the literature review the focus was mainly on the results and outcomes of the McVay (2006) research, in this part I try to explain what the predicting variables are in the model and how these variables are defined. The first two models used (1A, 1B) are models which were also used by McVay (2006). The models are adjusted to investigate on a quarterly basis.

5.4.1.1. Model 1A (level test model McVay)

Step 1 derives the coefficients, of the variables used to predict the core earnings, with a regression.

In model 1A I use the following regression to obtain the coefficients for expected core earnings:

$$R{\sim}CE_q = \beta_0 + \beta_1 CE_{q-4} + \beta_2 ATO_q + \beta_3 Accruals_{q-4} + \beta_4 Accruals_q + \beta_5 \Delta Sales_q + \beta_6 Neg\_\Delta Sales_q + \varepsilon_q$$

$R\sim CE_q$ is defined as: Reported core earnings, core earnings are not reported but are calculated as sales – COGS –SG&A, based on reported data, see chapter 1.

CE_q is defined as: Core Earnings, calculated as (Sales - Cost of Goods Sold - Selling, General, and Administrative Expenses) where Cost of Goods Sold and Selling, General, and Administrative Expenses exclude Depreciation and Amortization, as determined by Compustat.

$\Delta SALES_q$ defined as: Percent Change in Sales, calculated as ($Sales_q$ – $Sales_{q-1}$) /$Sales_{q-1}$.

$NEG\_\Delta SALES_q$: Percent Change in Sales ($\Delta SALES_q$) if $\Delta SALES_q$ is less than 0, and 0 otherwise.

$ACCRUALS_q$: Operating Accruals, calculated as [Net Income before special Items - Cash From Operations]/Sales.

ATO_q defined as: Asset Turnover Ratio, defined as $Sales_q$)/((NOA_q + NOA_{q-1}) / 2), where NOA, or Net Operating Assets, is equal to the difference between Operating Assets - Operating Liabilities. Operating Assets is calculated as Total Assets less Cash and Short-Term Investments. Operating liabilities is calculated as Total Assets less Total Debt, less Book Value of Common and Preferred Equity, less Minority Interests. Average net operating assets is required to be positive.

The q in the regression and in the variables stands for quarters.

The beta’s found with this regression are used to calculate the expected core earnings. Calculating the expected core earnings is done by using the same equation as the regression and filling in the beta’s found for every observation.

After this I calculate with the expected core earnings the unexpected core earnings. The calculation for the unexpected core earnings is as follows (this calculation is the same for model 2A, and 3A):

$$UE{\sim}CE_q = E{\sim}CE_q - R{\sim}CE_q$$

$E{\sim}CE_q$ are the expected core earnings in quarter q
$R{\sim}CE_q$ are the reported core earnings in quarter q
$UE{\sim}CE_q$ are the unexpected core earnings in quarter q

In step 2 I investigate the association between the unexpected core earnings and the special items. The McVay (2006) model is based on a regression performed on the difference between the expected core earnings and the reported core earnings. In this regression the explaining variable is the percentage of special items divided by sales.

$$UE{\sim}CE_q = \alpha_0 + \alpha_1 \%SI_q + \varepsilon_q$$

The regression is performed between the unexpected core earnings and the percentage of the special items as a percentage of the sales. This step is the same for model 2A, and 3A.

$\%SI_q$ is defined as: Income-Decreasing Special Items as a Percentage of Sales, calculated as [Special $Items_q$ -1] /$Sales_q$ when Special Items are income-decreasing, and 0 otherwise.

The association found of special items with unexpected core earnings is the result where my conclusion is based on. If there is a positive relation between the special items and unexpected core earnings I conclude that management shift some core expenses to special items.

5.4.1.2. Model 1B (change test model McVay)

Step 1 derives the coefficients, of the variables used to predict the change in core earnings, with a regression. In Model 1B I use the following regression to obtain the coefficients for the expected change in core earnings:

$$\Delta R{\sim}CE_q = \varphi_0 + \varphi_1 CE_{q-1} + \varphi_2 \Delta CE_{q-1} + \varphi_3 \Delta ATO_q + \varphi_4 Accruals_{q-1} + \varphi_5 Accruals_q + \varphi_6 \Delta Sales_q + \varphi_7 Neg\_\Delta Sales_q + v_q$$

ΔCE_{q+1} is defined as: Change in Core Earnings, calculated as $CE_{q+1} - CE_q$.

ΔATO_q defined as: Change in Asset Turnover, calculated as $ATO_q - ATO_{q-1}$.

Te other variables are defined in the section about model 1A.

The beta's found with this regression are used to calculate the expected change in core earnings. The beta's are put in the calculation of ΔCE used for the regression. The outcome of this calculation is the expected change in core earnings.

I calculate the unexpected change in core earnings. The calculation of unexpected change in core earnings is as follows (this calculation is the same for model 2B, and 3B):

$$UE{\sim}\Delta CE_q = \Delta E{\sim}CE_q - \Delta R{\sim}CE_q$$

$\Delta E{\sim}CE_q$ is the expected change in core earnings for quarter q in comparison with quarter q-1
$\Delta R{\sim}CE_q$ is the reported change in core earnings for quarter q in comparison with quarter q-1
$\Delta UE{\sim}CE_q$ is the unexpected change in core earnings for quarter q

Step 2 investigates the association between special items and the unexpected change in core earnings. The McVay (2006) change test model investigates the change in core earnings. I perform a regression on the change in the unexpected core earnings and use the percentage of the special items to sales as the explaining variable. Step 2 is the same for the models 2B, and 3B.

$$UE{\sim}\Delta CE_{q+1} = \eta_0 + \eta_1 \%SI_q + v_{q+1}$$

The regression is performed between the unexpected change in core earnings and the percentage of the special items of the sales. ($\%SI_q$ is defined above)

I base my conclusions on the association found between the special items and the unexpected change in core earnings. If the results show a positive relation between special items and the unexpected change in core earnings I conclude that management uses the special items to classify some core expenses as special items.

5.4.2. Fan et al. (2010) models

In this section the other four models to be used in this research are explained. The two level test models used are designed by Fan et al. (2010). These two models are improved versions of the McVay (2006) model. The two change test models are based on the two level test models designed by Fan et al. (2010).

In order to investigate the classification shifting through special items Fan et al. (2010) changed the first model of McVay (2006) into a model which can be used to investigate quarterly reports. Like stated in section 5.3 these variables are all available at Compustat and the codes used to look them up in the Compustat global database can be found in appendix II. In the following sections I show step 1 of the models. The calculation of the unexpected core earnings, as well as step 2 is the same for model 2A and 3A as it is for model 1A. The calculation of unexpected change in core earnings, as well step 2 are the same for model 2B and 3B as it is for model 1B.

5.4.2.1. Model 2A (level test model Fan et al.)

Fan et al. (2010) tried to improve the McVay (2006) models. By adding the current quarter returns they compensate for the performance of the company in this quarter. The returns are believed to be good predictors for the performance in the current quarter. The current quarter returns and the previous quarter returns are build into the model to improve the strength of the prediction of the expected core earnings.

Fan et al (2010) states that parts of the special items can be in the accruals. If special items is partly driving the accruals and the accruals are driving the expected core earnings then indirectly special items are driving the unexpected core earnings. This causes that we would find evidence that the unexpected core earnings are associated with the special items. Therefore the current period accruals are removed from the regression.

Step one is deriving the coefficients, of the variables used to predict the core earnings. Model 2A uses the following regression to obtain the coefficients for expected core earnings:

$$R{\sim}CE_q = \beta 0 + \beta 1CE_{q-4} + \beta 2CE_{q-1} + \beta\, 3ATO_q + \beta\, 4Accruals_{q-4} + \beta 5\, 4Accruals_{q-1} + \beta\, 6\Delta Sales_q + \beta\, 7NEG\_\Delta Sales_q + \beta\, 8Returns_{q-1} + \beta\, 9Returns_q + \varepsilon_q$$

RETURNSq: Three-month market-adjusted return corresponding to the fiscal quarter.

The other variables are defined in the section about model 1A.

The beta's found with this regression are used to calculate the expected core earnings. The expected core earnings are calculated by fitting in the coefficients, found with the regression, in the same calculation as the regression.

From the found expected core earnings, the unexpected core earnings are calculated as described by model 1A and after that step 2 is performed on the unexpected core earnings and the special items, as described at model 1A.

5.4.2.2. Model 2B (change test model based on model 2A)

Step 1 is a regression used to find coefficients for the predictors. I use the following regression to derive the coefficients for the variables used to predict the expected change in core earnings:

$$\Delta R{\sim}CE_t = \varphi_0 + \varphi_1 CE_{q-1} + \varphi_2 \Delta CE_{q-1} + \varphi_3 \Delta ATO_q + \varphi_4 Accruals_{q-1} + \varphi_5 \Delta Sales_q + \varphi_6 Neg\_\Delta Sales_q + \varphi_7 Returns_{q-1} + \varphi_8 Returns_q + v_t$$

The variables are defined at model 1A, 1B, and 2A.

The coefficients found with this regression are used to calculate the expected change in core earnings.

The expected change in core earnings is used to calculate the unexpected change in core earnings. Step 2 is a regression on the unexpected change in core earnings and the special items. The calculation of the unexpected change in core earnings and step 2 are described at model 1B.

5.4.2.3. Model 3A (level test model Fan et al.)

Model 3A, a level test model, is based on model 1A. Fan et al. (2010) removed the current period accruals. Fan et al. (2010) used this model to compare their research with the research conducted by McVay (2006). Fan et al. (2010) wanted to perform the McVay (2006) model, but did not want to use the model exactly the same as McVay (2006), because of the problems with the current period Accruals mentioned in the description of model 2A.

Step 1 in these two-step models finds the coefficients for the variables that are used for calculating the expected core earnings. For finding the coefficients I use the following regression:

$$R{\sim}CE_q = \beta_0 + \beta_1 CE_{q-4} + \beta_2 ATO_q + \beta_3 Accruals_{q-4} + \beta_4 \Delta Sales_q + \beta_5 Neg\_\Delta Sales_q + \varepsilon_q$$

The variables are defined in model 1A.

The beta's found with this regression are used to calculate the expected core earnings.

The expected core earnings are used to calculate the unexpected core earnings. After that in step 2 the unexpected core earnings are investigated on their association with the special items. For the calculation of the unexpected core earnings and step 2 I refer to model 1A.

5.4.2.4. Model 3B (change test model based on model 3A)

Model 3B, a change test model, is based on model 3A.

Step 1 in this two-step model finds the coefficients for the variables that are used for calculating the expected change in core earnings. For finding the coefficients I use the following regression:

$$\Delta R{\sim}CE_q = \varphi_0 + \varphi_1 CE_{q-1} + \varphi_2 \Delta CE_{q-1} + \varphi_3 \Delta ATO_q + \varphi_4 Accruals_{q-1} + \varphi_5 \Delta Sales_q + \varphi_5 Neg\_\Delta Sales_q + v_q$$

The variables are defined in model 1A and model 1B

The beta’s found with this regression are used to calculate the expected change in core earnings.

The expected core earnings are used to calculate the unexpected change in core earnings. After that in step 2 the unexpected core earnings are investigated on their association with the special items. For the calculation of the unexpected core earnings and step 2 I refer to model 1B.

6. Selection bias

6.1. Introduction

As described in section 5.3 the total number of firm quarters in the sample is relatively low. The strict selection criteria for the sample results in a clean sample. There are no problems with missing values in the sample or other problems with the data in the sample. The fact that this results in a smaller sample can have some complications for the representativeness of the sample considering the total population. The small amount of data that made it to the sample can create some kind of selection bias. Therefore in chapter six I investigate if the total Compustat population and the sample are comparable and if a selection bias takes place.

6.2. Methods of testing for selection bias

In order to test whether the samples fits in the total population, and thereby represents the total population in a good manner, I compare the different groups (total Compustat population, Sample) on different factors. Important for comparing both groups are the mean, the variation in the groups (Field, 2005). Another test that can be performed to compare two groups is to test if both groups are within the same range. I compare the means of the different groups in order to investigate whether both groups are similar in that way. Also I compare the range of scores in both groups. At last I will look at runs of ranks in the both groups to investigate whether the variability is the same within both groups.

The total Compustat population and my sample are not normally distributed. Therefore a lot of tests used in order to compare means are not suitable for the investigation on my sample and the Compustat population. When data is not normally distributed it still is possible to test whether the two groups are the same in composition. The tests used to compare two groups which are not normally distributed, are called non-parametric tests (Field, 2005). In non-parametric tests the data is ranked on basis of the value of each entry. The data is ranked starting with the lowest score in the two groups being ranked 1, the second lowest score is ranked 2, and so on. The ranking is done without taking notice of the two groups. After the ranking is done, the non-parametric tests will test the difference between the two groups on basis of the ranks and not on the values of the data itself (Field, 2005).

For testing whether the means of both groups are the same I will use the Mann-Whitney U test. For this test the null hypothesis is that the means of both groups are the same. And therefore hypothesis one is that the means of both groups differ from each other. I will reject my null hypothesis when the test signals a difference with a significance of 0.05 or smaller. This test is developed to compare the means of two groups in a non-parametric way.

After the Mann-Whitney U test I will also investigate the range of the scores in both groups. In order to test the range of scores in both groups I will use the Moses test of extreme reaction. For this test the null hypothesis is that the range is the same within both groups. And therefore hypothesis one is that the range is different within both groups. I will reject the null hypothesis when the test signals a difference with a significance of 0.05 or smaller

At last I will test whether both groups have the same variability. If both the groups have the same variability I predict that the ranks are randomly distributed between both groups. If the variability of the groups differ from each other we will get runs of ranks in one and the other group. This can be tested by the Wald-Wolfowitz run test (Field, 2005). The null hypothesis is that both groups are the same. Hypothesis one is that both groups are not the same. I will reject the null hypothesis is the significance is below 0.05.

6.3. Results on testing for selection bias

First I will show the results on the Mann-Whitney U test for all variables. After that I will continue with the results on the Moses test of extreme reactions and at last I will show the results on the Wald-Wolfowitz run test.

6.3.1. Mann-Whitney U test

For the Mann-Whitney U test I will show in table 1 the results for the variables. The results of all variables will be discussed below. For the individual results on the Mann-Whitney U test I refer to appendix IV. I show the test results of the core earnings. Group 1 is the total compustat population, group 2 is the sample used in this population. From the total compustat population I take a random sample of the size of my sample. The difference in the number of observations between my sample and the total compustat random sample is explained by the missing values in the total compustat sample.

Table 1

Variable	U	Significance
Core Earnings q	31.188.786	.00
Core Earnings q-1	45.420.126	.00
Core Earnings q-4	45.507.051	.00
Accruals q	27.474.297	.00
Accruals q-1	33.279.278	.00
Accruals q-4	31.490.669	.00
Asset Turnover	25.418.853	.00
Delta_Sales	35.358.907	.00
Delta_Neg_Sales	34.697.263	.00
Special Items	46.695.045	.00

The test result shows us that the means of core earnings q differ from each other and this holds with a significance level of .000 this means that the significance is below 0.05. I set for a two-sided significance of 0.05, therefore I will reject my null hypothesis, which was that the means of both groups are the same. And embrace my hypothesis one which is that the means of both groups differ from each other.

For all the other variables the null hypothesis is both also rejected. The results of the Mann-Whitney U test have a significance level of .00 this is below the level of .05. I conclude that for all the variables the mean differs between the groups.

6.3.2. Moses Extreme Reactions test

For the Moses Extreme Reactions test I will show in table 2 the results for the variables. The results of al variables will be discussed below. For the individual results on the Moses Extreme Reactions test I refer to appendix V. In this appendix I show the results for the core earnings. The difference of number of observations between the two groups is here also explained by the missing values in the total compustat population.

Table 2

Variable	Test statistic	Significance
Core Earnings q	13.604	1.00
Core Earnings q-1	16.272	1.00
Core Earnings q-4	16.262	1.00
Accruals q	14.153	1.00
Accruals q-1	15.225	.97
Accruals q-4	14.951	.99
Asset Turnover	12.275	1.00
Delta_Sales	13.791	.00
Delta_Neg_Sales	10.830	.00
Special Items	16.416	1.00

For the Moses extreme reaction test the null hypothesis is that the range of the variable (core earnings q) is the same acrcos the two groups. Hypothesis one is that the range of the variables is different among the two groups. I choose 0.05 as the significance level for which I will reject the null hypothesis. The result of the moses extreme reactions test show a significance level for core earnings q of 1.00. This is higher than 0.05 and therefore I retain the null hypothesis. This means that the range of the both groups is the same.

The results for core earnings q-1 and core earnings q-4 are shown in table 2. For both this variables the significance level is 1.00, this means that for both variables the significance level is higher than 0.05, therefore I retain the null hypothesis. I conclude that the range for both variables is the same in both groups.

The results for the Moses extreme reactions test is for the variable Accruals q 1.00. For the variable Accruals q-1 the result is: a significance level of 0.97 and for the variable Accruals q-4 has a significance level of 0.99. For all three variables the significance leve is above the level of 0.05. Therefore I retain the null hypothesis on all three variables and this measn that the range within both groups is the same for all three variables.

The results for Delta_Sales and Delta_Neg_Sales are shown in table 2. For both this variables the significance level is .00, this means that for both variables the significance level is lower than 0.05, therefore I reject the null hypothesis. I conclude that the range for both variables is not the same in both groups for these two variables.

The Mosees extreme reactions test on the variable special items as also for the variable ATO shows a significance level of 1.00. This significance level means that the null hypothesis has to be retained. I conclude that the range of the variable special items and the variable ATO is the same wihin both groups.

6.3.3. Wald-Wolfowitz runs test

For the Wald-Wolfowitz runs test I will show in table 3 the results for the variables. The results of al variables will be discussed below. For the individual results on the Wald-Wolfowitz runs test I refer to appendix VI.

Table 3

Variable	Standardized test statistic	Significance
Core Earnings q	9,714	1.00
Core Earnings q-1	15,418	1.00
Core Earnings q-4	16,768	1.00
Accruals q	13,738	1.00
Accruals q-1	17,503	1.00
Accruals q-4	16,632	1.00
Asset Turnover	-12,596	.00
Delta_Sales	38,013	1.00
Delta_Neg_Sales	79,764	1.00
Special Items	69,133	1.00

For the Wald-Wolfowitz runs test the null hypothesis is that the runs of score of the variable (core earnings q) is evenly distributed across the two groups. Hypothesis one is that the distribution of score runs is different among the two groups. I choose 0.05 as the singnifcance level for which I will reject the null hypothesis. The result of the Wald-Wolfowitz runs test show a significance level for core earnings q of 1.00. This is higher than 0.05 and therefore I retain the null hypothesis. This means that the distribution of score runs of the both groups is the same and therefore the variability is the same.

The results for core earnings q-1 and core earnings q-4 are shown in table 3. For both these variables the significance level is 1.00, this means that for both variables the significance level is higher than 0.05, therefore I retain the null hypothesis. I conclude that the distribution of score runs for both variables is the same in both groups.

The results for the Wald-Wolfowitz runs test is for the variable Accruals q 1.00. For the variable Accruals q-1 the result is: a significance level of 0.97 and for the variable Accruals q-4 the significance level is 0.99. For all three variables the significance leve is above the level of 0.05. Therefore I retain the null hypothesis on all three variables and this means that the the distribution of score runs within both groups is the same for all three variables.

For the variable Asset Turnover the significance level is 0.00 this is also more than 0.05 and therefore I reject the null hypothesis. I conclude that the distribution of score runs within the two groups is not the same.

The Delta_Sales and the Delta_Neg_Sales variables both have a significance level of 1.00 this is below the significance level of 0.05. This means that in this case I retain reject the null hypothesis. From this I conclude that the the distribution of score runs within the groups of both variables are the same within both groups.

The Wald-Wolfowitz runs test on the variable special items shows a significance level of 1.00. This significance level means that the null hypothesis has to be retained. I conclude that the distribution of runs of the variable special items is the same wihin both groups.

6.4 Conclusion

In comparing different groups it is important to look at the mean, the range and the variability. The Mann-Whitney U test was used to compare the means of the total Compustat population and the sample. For all the variables the conclusion is that the means differ between both groups. From this we can conclude that there is some form of selection bias.

The Moses extreme reactions test was used to compare the range of the variables in the two groups. The variables Delta_Sales and Delta_Neg_Sales are not in the same range in both groups. The other variables are in the same range in the both groups. From this we can conclude that there is no selection bias for the other variables, but that there is some selection bias for Delta_Sales and Delta_Neg_Sales.

The Wald-Wolfowitz run test was used to compare the variability of the variables in both groups. The variable Asset turnover ratio has not the same variability in both groups. The other variables have the same variability in both groups. From this I conclude that there is some selection bias for Asset turnover ratio. I conclude that there is no selection bias for the other variables.

The different tests on the selection bias in the sample show different results. For most variables two out of three tests show no selection bias. For the variables Delta_Sales, Delta_Neg_Sales, and Asset turnover ratio two out of three tests find proof for selection bias. I conclude that if those variables show to be of a high explanatory power in the prediction models this can influence the generalizability of my results from the tests. For the other variables I conclude that there is no selection bias because two of the three selection bias tests conclude so.

7. Results of the research

7.1. Introduction

Both hypotheses are investigated using the same six test models. The models and how they work are already explained in section 5.4. Section 7.2 will show the results on the tests which are performed in the light of hypothesis one. Section 7.3 will show the results of the tests performed in order to investigate hypothesis two.

7.2. Tests on hypothesis one

There are 6 tests which are shown in this section: test 1A, 1B, 2A, 2B, 3A, and 3B. This section is build up as follows: Each and every subsection will start with step 1 of the described model. I will discuss the results of step 1 there. After that I will discuss the results of step 2 of the model.

7.2.1. Test 1A

I will start with the results on the estimators (step 1), and then show the regression of the special items (step 2).

7.2.1.1. Estimators of model 1A

The first step of testing in this research is predicting the Core earnings in the different models. In this section I will show the results on the regression to determine the estimators, or otherwise called, Beta's. The results are shown in Appendix VII (p.103)

I will start with discussing the strength of the model used and after that I will show the coefficients found with the regression on model 1A. The predictive strength of a regression is given by the R^2 or by the adjusted R^2. This is called the goodness of fit for a regression model, for this model both are .722. I conclude that the goodness of fit for this model is high. The F change reported in the results in Appendix VII shows the chance that the amount of variance explained by the model (Field, 2005). The F change for this model is 3785,314. A F-ratio of

3785,314 in a model with 6 degrees of freedom leads to a significance smaller then 0.001. The critical value for this model is 3,7469 and the F-value is much higher than the critical value.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. The results on the correlation test show that there are no variables that correlate at a ±0.9 lever or higher. Therefore there are no problems with multicollinnearity.

The regression for step 1 of model 1A is:

$$R{\sim}CE_q = \beta_0 + \beta_1 CE_{q-4} + \beta_2 ATO_q + \beta_3 Accruals_{q-4} + \beta_4 Accruals_q + \beta_5 \Delta Sales_q + \beta_6 Neg\_\Delta Sales_q + \varepsilon_q$$

The regression meets all the requirements to give a good prediction of the coefficients. The coefficients for the variables are:

Table 5

Variable	Beta	Sig.
(Constant)		,000
Core Earnings Q-4 (mln)	,717	,000
Asset turnover Ratio Q	-,009	,131
Accruals Q-4 (mln)	-,153	,000
Accruals Q (mln)	-,055	,000
Delta_Sales Q	,035	,000
Delta_Neg_Sales Q	-,094	,000

Asset turnover ratio has a significance level of .131 this is above the level of .05. Therefore the beta for this variable is not significant. The influence of the variable Asset turnover ratio is not very high, because the beta is just .009. Therefore the insignificance of this variable is not of great concern. All the other variables have a significance level of .000, this is below the .05 level, and therefore these beta's are good predictors.

The coefficients found in this test are used to calculate the unexpected core earnings as described in chapter five. The calculated unexpected core earnings are used in the regression with the special items. The results of this regression are shown in the next section.

7.2.1.2. Results of model 1A

The first step of testing in this research is predicting the Core earnings in the different models. With the coefficients derived from the regression made I predict the core earnings for each quarter. These predicted core earnings are used to calculate the unpredicted core earnings. The unexpected core earnings are the dependent variable in a regression with the special items. In this section the results on this regression are discussed. The results are shown in Appendix VII (p.105).

I will start with discussing the strength of the model used and after that I will show the coefficients found with the regression in model 1A. The R^2 and the adjusted R^2 both are .003. I conclude that the goodness of fit for this model is low. The F change for this model is 25,491. An F-ratio of 25,491 in a model with 1 degrees of freedom leads to a significance smaller then 0.001. The critical value for this model is 10,835 and the F-value is much higher than the critical value.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. In this regression there is only one independent variable, therefore there is no multicollinnearity.

The regression used in step 2 is:

$$UE\_CE_q = \alpha_0 + \alpha_1 \%SI_q + \varepsilon_q$$

Special items have a significance level of .000 this is below the level of .05, therefore the beta for special items is significant. The beta for special items is .054. I conclude that the coefficient for special items is a significant positive coefficient.

7.2.2. Test 1B

Section 7.2.2.1. will show the results on step 1 of model 1B, after that in section 7.2.2.2. the results of step 2 are shown.

7.2.2.1. Estimators of model 1B

The first step of testing in this research is predicting the Change in Core earnings in the different models. In this section I will show the results on the regression to determine the estimators, or otherwise called, Beta's. The results are shown in Appendix VII (p.106)

I will start with discussing the strength of the model used and after that I will show the coefficients found with the regression on model 1B. for this model the R^2 is .130 and the adjusted R^2 is .129. I conclude that the goodness of fit for this model is low. The F change for this model is 183,959. An F-ratio of 183,959 in a model with 7 degrees of freedom leads to a significance smaller then 0.001. The critical value for this model is 3,4785 and the F-value is much higher than the critical value. I conclude that the model is a significant model on a .001 level.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. The results on the correlation test show that there are no variables that correlate at a ±0.9 lever or higher. Therefore there are no problems with multicollinnearity.

The regression used in step 1 of model 1B is:

$$\Delta R{\sim}CE_q = \varphi_0 + \varphi_1 CE_{q-1} + \varphi_2 \Delta CE_{q-1} + \varphi_3 \Delta ATO_q + \varphi_4 Accruals_{q-1} + \varphi_5 Accruals_q + \varphi_6 \Delta Sales_q + \varphi_7 Neg\_\Delta Sales_q + v_q$$

The regression meets all the requirements to give a good prediction of the coefficients. The coefficients for the variables are:

Table 6

Variable	Beta	Sig.
(Constant)		,001
CoreEarningsQ1mln	-,299	,000
Delta_CE_Q_1	-,288	,000
Delta_Ato	,079	,000
AccruelsQ1mln	-,144	,000
Accruals_Qmln	-,263	,000
salesQ	-,013	,191
neg_Salesq	-,007	,479

Delta_Sales Q has a significance level of .191 this is above the level of .05. This means that the beta for this variable is not significant. The influence of Delta_Sales Q is not very high because the beta is only .013. Delta_Neg_Sales Q has a significance level of .479 this is also above the level of .05 and therefore this coefficient is also not significant. The effect is also low because the beta for Delta_Neg_Sales is only .007. The other coefficients have a significance of .000 which is below the level of .05 and therefore those coefficients are significant and therefore good predictors. The fact that two of the coefficients are insignificant, but are both not of great influence, leads to my conclusion that the prediction value of this model is of a medium strength.

The coefficients found in this test are being used to calculate the expected change in core earnings as described in chapter five. The expected change in core earnings is then used to calculate the unexpected change in core earnings. The calculated unexpected change in core earnings is used in the regression with the special items. The results of this regression are shown in the next section.

7.2.2.2. Results of model 1B

The first step of testing in this research is predicting the change in Core earnings with the different models. With the coefficients derived from the regression made I predict the change in core earnings for each quarter. This predicted change in core earnings is used to calculate the unpredicted change in core earnings. The unexpected change in core earnings is the dependent variable in a regression with the special items. In this section the results on this regression are discussed. The results are shown in Appendix VII (p.108).

I will start with discussing the strength of the model used and after that I will show the coefficient found with the regression on model 1B. For this model both R^2 and adjusted R^2 are .000. I conclude that the goodness of fit for this model is low. The F change for this model is ,668. An F-ratio of ,668 in a model with 1 degrees of freedom leads to a significance bigger then 0.001. The critical value for this model is 10,835 and the F-value is much lower than the critical value. The critical value with a significance of .05 is 3.842. The F value is also much lower than this critical value. Therefore I conclude that this model is not significant.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. In this regression there is only one independent variable, therefore there is no multicollinnearity.

The regression used in step 2 of model 1B is:

$$\mathrm{UE}{\sim}\Delta\mathrm{CE}_{q+1} = \eta_0 + \eta_1\%\mathrm{SI}_q + v_{q+1}$$

Special items have a significance level of .414 this is above the level of .05, therefore the beta for special items is not significant. The beta for special items is .009. I conclude that the coefficient for special items is an insignificant positive coefficient.

7.2.3. Test 2A

The discussion on the results of model 2A will start with discussing step 1 of the investigation and after that I will discuss step 2 of the model.

7.2.3.1. Estimators of model 2A

The first step of testing in this research is predicting the Core earnings in the different models. In this section I will show the results on the regression to determine the coefficients, or otherwise called, Beta's. The results are shown in Appendix VII (p.109)

I will start with discussing the strength of the model used and after that I will show the coefficients found with the regression on model 2A. For this model both R^2 and the adjusted R^2 are .829. I conclude that the goodness of fit for this model is high. The F change for this model is 4710,241. An F-ratio of 4710,241 in a model with 9 degrees of freedom leads to a significance smaller then 0.001. The critical value for this model is 3,1012 and the F-value is much higher than the critical value.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. The results on the correlation test show that Returns q and Returns q-1 correlate with each other on a .984 level. This means that Returns q predicts very much returns q-1 and vice versa. The fact that the returns of 1 period earlier predict the returns of this period is not disturbing. Because it is almost the same variable there is no problem with the high correlation between them. Both variables still can predict the core earnings in a period. Except of these two variables there are no variables that correlate at a ±0.9 lever or higher. Therefore there are no problems with multicollinnearity with those variables.

The regression of step 1 in model 2A is:

$$R{\sim}CE_q = \beta 0 + \beta 1CE_{q-4} + \beta 2CE_{q-1} + \beta\, 3ATO_q + \beta\, 4Accruals_{q-4} + \beta 5\; 4Accruals_{q-1} + \beta\, 6\Delta Sales_q + \beta\, 7NEG\_\Delta Sales_q + \beta\, 8Returns_{q-1} + \beta\, 9Returns_q + \varepsilon_q$$

The regression meets all the requirements to give a good prediction of the coefficients. The coefficients for the variables are:

Table 7

Variable	Beta	Sig.
(Constant)		,349
Core Earnings Q-4 (mln)	,324	,000
Core Earnings Q-1 (mln)	,534	,000
Accruals Q-4 (mln)	-,056	,000
Accruals Q-1 (mln)	-,091	,000
Asset turnover Ratio Q	-,005	,275
Delta_Sales Q	,028	,000
Delta_Neg_Sales Q	-,044	,000
Returns Q	,090	,000
Returns Q-1	-,095	,000

The coefficients found in this test are being used to calculate the unexpected core earnings as described in chapter five. The calculated unexpected core earnings are used in the regression with the special items. The results of this regression are shown in the next section.

7.2.3.2. Results of model 2A

The first step of testing in this research is predicting the Core earnings in the different models. With the coefficients derived from the regression made I predict the core earnings for each quarter. These predicted core earnings are used to calculate the unpredicted core earnings. The unexpected core earnings are the dependent variable in a regression with the special items. In this section the results on this regression are discussed. The results are shown in Appendix VII (p.112).

I will start with discussing the strength of the model used and after that I will show the coefficients found with the regression on model 2A. For this model both R^2 and the adjusted R^2 are .000. I conclude that the goodness of fit for this model is low. The F change for this model is ,105. An F-ratio of ,105 in a model with 1 degree of freedom leads to significance higher than .001. The critical value for this model is 10,835 and the F-value is much lower than the critical value. The critical value for this model with a significance of ,05 is 3,842. The F-value is much lower than this critical value too. I conclude that the results of the model are insignificant.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. In this regression there is only one independent variable, therefore there is no multicollinnearity.

The regression used in step 2 in model 2A is the same regression used as in model 1A.

Special items have a significance level of .746 this is above the level of .05, therefore the beta for special items is insignificant. The beta for special items is .003. I conclude that the coefficient for special items is an insignificant positive coefficient. The model is also insignificant.

7.2.4. Test 2B

I will start with the results on step 1. After that I will show and discuss the results of step 2.

7.2.4.1. Estimators of model 2B

The first step of testing in this research is predicting the Change in Core earnings in the different models. In this section I will show the results on the regression to determine the estimators, or otherwise called, Beta's. The results are shown in Appendix VII (p. 113).

I will start with discussing the strength of the model used and after that I will show the coefficients found with the regression on model 2B. For this model the R^2 is .094 and the adjusted R^2 is .095. I conclude that the goodness of fit for this model is low. The F change for this model is 111,278. An F-ratio of 111,278 in a model with 8 degrees of freedom leads to a significance smaller then 0.001. The critical value for this model is 3,2694 and the F-value is much higher than the critical value. I conclude that the model is a significant model on a .001 level.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. The results on the correlation test show that Returns q and Returns q-1 correlate with each other on a .983 level. This means that Returns q predicts very much returns q-1 and vice versa. The fact that the returns of 1 period earlier predict the returns of this period is not disturbing. Because it is almost the same variable there is no problem with the high correlation between them. Both variables still can predict the core earnings in a period. Except of these two variables there are no variables that correlate at a ±0.9 lever or higher. Therefore there are no problems with multicollinnearity with those variables.

The regression used in step 1 of model 2B is:

$$\Delta R{\sim}CE_t = \varphi_0 + \varphi_1 CE_{q-1} + \varphi_2 \Delta CE_{q-1} + \varphi_3 \Delta ATO_q + \varphi_4 Accruals_{q-1} + \varphi_5 \Delta Sales_q + \varphi_6 Neg\_\Delta Sales_q + \varphi_7 Returns_{q-1} + \varphi_8 Returns_q + v_t$$

The regression meets all the requirements to give a good prediction of the coefficients. The coefficients for the variables are:

Table 8

Variable	Beta	Sig.
(Constant)		,015
Delta_CE_Q_1	-,276	,000
CoreEarningsQ1mln	-,175	,000
AccruelsQ1mln	-,222	,000
Delta_Ato	,087	,000
SALESq	-,011	,289
neg_SALESq	,004	,734
RETURNSq	,194	,001
ReturnsQ1	-,195	,001

Delta_Sales Q has a significance level of .289 this is above the level of .05. This means that the beta for this variable is not significant. The influence of Delta_Sales Q is not very high because the beta is only .011. Delta_Neg_Sales Q has a significance level of .734 this is also above the level of .05 and therefore this coefficient is also not significant. The effect is also low because the beta for Delta_Neg_Sales is only .004. Returns Q and Returns Q-1 have a significance of .001. this is below the level of 0.05 and therefore these coefficients are significant. The other coefficients have a significance of .000 which is below the level of .05 and therefore those coefficients are significant and therefore good predictors. The fact that two of the coefficients are insignificant, but are both not of great influence leads to my conclusion that the prediction value of this model is of a medium strength.

The coefficients found in this test are being used to calculate the expected change in core earnings as described in chapter five. The expected change in core earnings is then used to calculate the unexpected change in core earnings. The calculated unexpected change in core earnings is used in the regression with the special items. The results of this regression are shown in the next section.

7.2.4.2. Results of model 2B

The first step of testing in this research is predicting the change in Core earnings with the different models. With the coefficients derived from the regression made I predict the change in core earnings for each quarter. This predicted change in core earnings is used to calculate the unpredicted change in core earnings. The unexpected change in core earnings is the dependent variable in a regression with the special items. In this section the results on this regression are discussed. The results are shown in Appendix VII (p. 116).

I will start with discussing the strength of the model used and after that I will show the coefficient found with the regression on model 2B. For this model both R^2 and the adjusted R^2 are .000. I conclude that the goodness of fit for this model is low. The F change for this model is ,742. An F-ratio of ,742 in a model with 1 degrees of freedom leads to a significance bigger then 0.001. The critical value for this model is 10,835 and the F-value is much lower than the critical value. The critical value with a significance of .05 is 3.842. The F value is also much lower than this critical value. Therefore I conclude that this model is not significant.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. In this regression there is only one independent variable, therefore there is no multicollinnearity.

The regression used in step 2 of model 2B is the same regression as used in step 2 of model 1B.

Special items have a significance level of .389 this is above the level of .05, therefore the beta for special items is not significant. The beta for special items is -.009. I conclude that the coefficient for special items is an insignificant negative coefficient.

7.2.5. Test 3A

In this section I will discuss the level test model, model 3A. I will start discussing step 1 in the next section and after that I will discuss step 2.

7.2.5.1. Estimators of model 3A

The first step of testing in this research is predicting the Core earnings in the different models. In this section I will show the results on the regression to determine the estimators, or otherwise called, Beta's. The results are shown in Appendix VII (p. 117).

I will start with discussing the strength of the model used and after that I will show the coefficients found with the regression on model 3A.For this model both R^2 and the adjusted R^2 are .721. I conclude that the goodness of fit for this model is high. The F change for this model is 4520,572. An F-ratio of 4520,572 in a model with 5 degrees of freedom leads to a significance smaller then 0.001. The critical value for this model is 4,1071 and the F-value is much higher than the critical value.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. The results on the correlation test show that there are no variables that correlate at a ±0.9 lever or higher. Therefore there are no problems with multicollinnearity.

The regression used in step 1 of model 3A is:

$$R{\sim}CE_q = \beta_0 + \beta_1 CE_{q-4} + \beta_2 ATO_q + \beta_3 Accruals_{q-4} + \beta_4 \Delta Sales_q + \beta_5 Neg\_\Delta Sales_q + \varepsilon_q$$

The regression meets all the requirements to give a good prediction of the coefficients. The coefficients for the variables are:

Table 9

Variable	Beta	Sig.
(Constant)		,000
Core Earnings Q-4 (mln)	,728	,000
Asset turnover Ratio Q	-,010	,083
Accruals Q-4 (mln)	-,192	,000
Delta_Sales Q	,036	,000
Delta_Neg_Sales Q	-,095	,000

Asset turnover ratio has a significance level of .083 this is above the level of .05. Therefore the beta for this variable is not significant. The insignificance of this variable is not very high, because in some researches the significance level of .10 is used. The influence of the variable Asset turnover ratio is not very high, because the beta is just .010. Therefore the insignificance of this variable is not of great concern. All the other variables have a significance level of .000, this is below the .05 level, and therefore these beta's are good predictors.

The coefficients found in this test are being used to calculate the unexpected core earnings as described in chapter five. The calculated unexpected core earnings are used in the regression with the special items. The results of this regression are shown in the next section.

7.2.5.2. Results of model 3A

The first step of testing in this research is predicting the Core earnings in the different models. With the coefficients derived from the regression made I predict the core earnings for each quarter. These predicted core earnings are used to calculate the unpredicted core earnings. The unexpected core earnings are the dependent variable in a regression with the special items. In this section the results on this regression are discussed. The results are shown in Appendix VII (p. 119)

I will start with discussing the strength of the model used and after that I will show the coefficients found with the regression on model 3A. For this model both R^2 and the adjusted R^2 are .001. I conclude that the goodness of fit for this model is low. The F change for this model is 13,373. An F-ratio of 13,373 in a model with 1 degrees of freedom leads to a significance lower than .001. The critical value for this model is 10,835 and the F-value is higher than the critical value. I conclude that the results of the model are significant.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. In this regression there is only one independent variable, therefore there is no multicollinnearity.

The regression used in step 2 of model 3A is the same regression as used in model 1A.

Special items have a significance level of .000 this is below the level of .05, therefore the beta for special items is significant. The beta for special items is .038. I conclude that the coefficient for special items is a significant positive coefficient.

7.2.6. Test 3B

I will show the estimators and then the results.

7.2.6.1. Estimators of model 3B

The first step of testing in this research is predicting the Change in Core earnings in the different models. In this section I will show the results on the regression to determine the estimators, or otherwise called, Beta's. The results are shown in Appendix VII (p.120).

I will start with discussing the strength of the model used and after that I will show the coefficients found with the regression on model 2B. For this model R^2 and the adjusted R^2 are both .092. I conclude that the goodness of fit for this model is low. The F change for this model is 146,214. An F-ratio of 146,214 in a model with 6 degrees of freedom leads to a significance smaller then 0.001. The critical value for this model is 3,7470 and the F-value is much higher than the critical value. I conclude that the model is a significant model on a .001 level.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. There are no variables that correlate at a ±0.9 lever or higher. Therefore there are no problems with multicollinnearity with those variables.

The regression used in step 1 of model 3B is:

$$\Delta R{\sim}CE_q = \varphi_0 + \varphi_1 CE_{q-1} + \varphi_2 \Delta CE_{q-1} + \varphi_3 \Delta ATO_q + \varphi_4 Accruals_{q-1} + \varphi_5 \Delta Sales_q + \varphi_5 Neg\_\Delta Sales_q + v_q$$

The regression meets all the requirements to give a good prediction of the coefficients. The coefficients for the variables are:

Table 10

Variable	**Beta**	**Sig.**
(Constant)		,013
Delta_CE_Q_1	-,275	,000
CoreEarningsQ1mln	-,175	,000
AccruelsQ1mln	-,222	,000
Delta_Ato	,087	,000
SALESq	-,010	,319
neg_SALESq	,003	,765

Delta_Sales Q has a significance level of .319 this is above the level of .05. This means that the beta for this variable is not significant. The influence of Delta_Sales Q is not very high because the beta is only .010. Delta_Neg_Sales Q has a significance level of .765 this is also above the level of .05 and therefore this coefficient is also not significant. The effect is also low because the beta for Delta_Neg_Sales is only .003. The other coefficients have a significance of .000 which is below the level of .05 and therefore those coefficients are significant and therefore good predictors. The fact that two of the coefficients are insignificant, but are both not of great influence leads to my conclusion that the prediction value of this model is of a medium strength.

The coefficients found in this test are being used to calculate the expected change in core earnings as described in chapter five. The expected change in core earnings is then used to calculate the unexpected change in core earnings. The calculated unexpected change in core earnings is used in the regression with the special items. The results of this regression are shown in the next section.

7.2.6.2. Results of model 3B

The first step of testing in this research is predicting the change in Core earnings with the different models. With the coefficients derived from the regression made I predict the change in core earnings for each quarter. This predicted change in core earnings is used to calculate the unpredicted change in core earnings. The unexpected change in core earnings is the dependent variable in a regression with the special items. In this section the results on this regression are discussed. The results are shown in Appendix VII (p.122)

I will start with discussing the strength of the model used and after that I will show the coefficient found with the regression on model 3B. For this model both R^2 and the adjusted R^2 are .000. I conclude that the goodness of fit for this model is low. The F change for this model is 1,767. An F-ratio of 1,767 in a model with 1 degrees of freedom leads to a significance bigger then 0.001. The critical value for this model is 10,835 and the F-value is much lower than the critical value. The critical value with a significance of .05 is 3.842. The F value is also lower than this critical value. Therefore I conclude that this model is not significant.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. In this regression there is only one independent variable, therefore there is no multicollinnearity.

The regression used in step 2 of model 3B is the same regression used in model 1B.

Special items have a significance level of .184 this is above the level of .05, therefore the beta for special items is not significant. The beta for special items is .014. I conclude that the coefficient for special items is an insignificant positive coefficient.

7.3. Tests on hypothesis two

There are 6 tests which are shown in this section: test 1A, 1B, 2A, 2B, 3A, and 3B.
As explained in section 5.4 I will perform all these tests both on the sub-sample quarters 1-3 as on the sub-sample quarter 4. I will first discuss all the results of all the tests (both step 1 and step 2) on both sub-samples. The differences in results between quarters 1-3 and quarter 4 will be discussed in chapter eight.

7.3.1. Test 1A

I will discuss the results on step 1 of quarter 1-3, and after that the results on step 1 of quarter 4. After that I will discuss the results on step 2 of quarter 1-3 and quarter 4.

7.3.1.1.1. Estimators of model 1A Quarters Q1-Q3

The first step of testing in this research is predicting the Core earnings in the different models. In this section I will show the results on the regression to determine the estimators, or otherwise called, Beta's. The results are shown in Appendix VIII (p.124).

I will start with discussing the strength of the model used and after that I will show the coefficients found with the regression on model 1A. For this model $R^{2\ is}$ .753 and the adjusted R^2 is .752. I conclude that the goodness of fit for this model is high. The F change for this model is 3320,655. An F-ratio of 3320,655 in a model with 6 degrees of freedom leads to a significance smaller then 0.001. The critical value for this model is 3,7482 and the F-value is much higher than the critical value. Based on the F change I conclude that the model is significant.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other.

The results on the correlation test show that there are no variables that correlate at a ±0.9 lever or higher. Therefore there are no problems with multicollinnearity.

The regression for step 1 of model 1A is:

$$R{\sim}CE_q = \beta_0 + \beta_1 CE_{q-4} + \beta_2 ATO_q + \beta_3 Accruals_{q-4} + \beta_4 Accruals_q + \beta_5 \Delta Sales_q + \beta_6 Neg\_\Delta Sales_q + \varepsilon_q$$

The regression meets all the requirements to give a good prediction of the coefficients. The coefficients for the variables are:

Table 11

Variable	Beta	Sig.
(Constant)		,000
Core Earnings Q-4 (mln)	,689	,000
Asset turnover Ratio Q	-,006	,323
Accruals Q	-,114	,000
Accruals Q-4 (mln)	-,170	,000
Delta_Sales Q	,032	,000
Delta_Neg_Sales Q	-,103	,000

Asset turnover ratio has a significance level of .323 this is above the level of .05. Therefore the beta for this variable is not significant. The influence of the variable Asset turnover ratio is not very high, because the beta is just .006. Therefore the insignificance of this variable is not of great concern. All the other variables have a significance level of .000, this is below the .05 level, and therefore these beta's are good predictors.

The coefficients found in this test are being used to calculate the unexpected core earnings as described in chapter five. The calculated unexpected core earnings are used in the regression with the special items. The results of this regression are shown in section 7.3.1.2.

7.3.1.1.2. Estimators of model 1A Quarters Q4

The first step of testing in this research is predicting the Core earnings in the different models. In this section I will show the results on the regression to determine the estimators, or otherwise called, Beta's. The results are shown in Appendix VIII (p.126).

I will start with discussing the strength of the model used and after that I will show the coefficients found with the regression on model 1A. For this model R^2 is .696 and the adjusted R^2 is .695. I conclude that the goodness of fit for this model is high. The F change for this model is 829,313. An F-ratio of 829,313 in a model with 6 degrees of freedom leads to a significance smaller then 0.001. The critical value for this model is 3,7589 and the F-value is much higher than the critical value. Based on the F change I conclude that the model is significant.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. The results on the correlation test show that there are no variables that correlate at a ±0.9 lever or higher. Therefore there are no problems with multicollinnearity.

The regression meets all the requirements to give a good prediction of the coefficients. The coefficients for the variables are:

Table 12

Variable	Beta	Sig.
(Constant)		,108
Core Earnings Q-4 (mln)	,893	,000
Asset turnover Ratio Q	-,032	,008
Accruals Q	,228	,000
Accruals Q-4 (mln)	-,242	,000
Delta_Sales Q	,045	,000
Delta_Neg_Sales Q	-,064	,000

Asset turnover ratio has a significance level of .008 this is below the level of .05. Therefore the beta for this variable is significant. All the other variables have a significance level of .000, this is below the .05 level, and therefore these beta's are good predictors.

The coefficients found in this test are being used to calculate the unexpected core earnings as described in chapter five. The calculated unexpected core earnings are used in the regression with the special items. The results of this regression are shown in section 7.3.1.2.

7.3.1.2.1 Results of model 1A Quarters 1-3

The first step of testing in this research is predicting the Core earnings in the different models. With the coefficients derived from the regression made I predict the core earnings for each quarter. These predicted core earnings are used to calculate the unpredicted core earnings. The unexpected core earnings are the dependent variable in a regression with the special items. In this section the results on this regression are discussed. The results are shown in Appendix VIII (p.128).

I will start with discussing the strength of the model used and after that I will show the coefficients found with the regression on model 1A. For this model both R^2 and the adjusted R^2 are .005. I conclude that the goodness of fit for this model is low. The F change for this model is 33,772. An F-ratio of 33,772 in a model with 1 degrees of freedom leads to a significance lower than .001. The critical value for this model is 10,837 and the F-value is much higher than the critical value. I conclude that the results of the model are significant.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. In this regression there is only one independent variable, therefore there is no multicollinnearity.

The regression used in step 2 is:

$$UE{\sim}CE_q = \alpha_0 + \alpha_1\%SI_q + \varepsilon_q$$

Special items have a significance level of .000 this is below the level of .05, therefore the beta for special items is significant. The beta for special items is .072. I conclude that the coefficient for special items is a significant positive coefficient.

7.3.1.2.2 Results of model 1A Quarter 4

The first step of testing in this research is predicting the Core earnings in the different models. With the coefficients derived from the regression made I predict the core earnings for each quarter. These predicted core earnings are used to calculate the unpredicted core earnings. The unexpected core earnings are the dependent variable in a regression with the special items. In this section the results on this regression are discussed. The results are shown in Appendix VIII (p.129).

I will start with discussing the strength of the model used and after that I will show the coefficients found with the regression on model 1A. For this model R^2 is .001 and the adjusted R^2 is.000. I conclude that the goodness of fit for this model is low. The F change for this model is 1,140. An F-ratio of 1,140 in a model with 1 degrees of freedom leads to a significance higher than .001. The critical value for this model is 10,857 and the F-value is much lower than the critical value. The critical value for this model with a significance lever of .05 is 3,846. The F value is even below this critical value. I conclude that the results of the model are not significant.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. In this regression there is only one independent variable, therefore there is no multicollinnearity.

Special items have a significance level of .286 this is above the level of .05, therefore the beta for special items is insignificant. The beta for special items is .023. I conclude that the coefficient for special items is an insignificant positive coefficient.

7.3.2. Test 1B

The results on test model 1B are going to be discussed in the following sections. It will start with discussing the results on step one of both sub-samples. After that I will discuss step 2 of both samples.

7.3.2.1.1. Estimators of model 1B Quarters Q1-Q3

The first step of testing in this research is predicting the Core earnings in the different models. In this section I will show the results on the regression to determine the estimators, or otherwise called, Beta's. The results are shown in Appendix VIII (p.130).

I will start with discussing the strength of the model used and after that I will show the coefficients found with the regression on model 1B. For this model the R^2 is .258 and the adjusted R^2 is .257. I conclude that the goodness of fit for this model is low. The F change for this model is 324,780. An F-ratio of 324,780 in a model with 7 degrees of freedom leads to a significance smaller then 0.001. The critical value for this model is 3,4797 and the F-value is much higher than the critical value. Based on the F change I conclude that the model is significant.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. The results on the correlation test show that there are no variables that correlate at a ±0.9 lever or higher. Therefore there are no problems with multicollinnearity.

The regression used in step 1 of model 1B is:

$$\Delta R\sim CE_q = \varphi_0 + \varphi_1 CE_{q-1} + \varphi_2 \Delta CE_{q-1} + \varphi_3 \Delta ATO_q + \varphi_4 Accruals_{q-1} + \varphi_5 Accruals_q + \varphi_6 \Delta Sales_q + \varphi_7 Neg\_\Delta Sales_q + v_q$$

The regression meets all the requirements to give a good prediction of the coefficients. The coefficients for the variables are:

Table 13

Variable	Beta	Sig.
(Constant)		,098
Delta_CE_Q_1	-,349	,000
CoreEarningsQ1mln	-,399	,000
Accruals_Qmln	-,421	,000
AccruelsQ1mln	-,255	,000
Delta_Ato	,092	,000
SALESq	-,010	,378
neg_SALESq	-,005	,655

Delta_Sales Q has a significance level of .378 this is above the level of .05. This means that the beta for this variable is not significant. The influence of Delta_Sales Q is not very high because the beta is only .010. Delta_Neg_Sales Q has a significance level of .655 this is also above the level of .05 and therefore this coefficient is also not significant. The effect is also low because the beta for Delta_Neg_Sales is only .005. The other coefficients have a significance of .000 which is below the level of .05 and therefore those coefficients are significant and therefore good predictors. The fact that two of the coefficients are insignificant, but are both not of great influence leads to my conclusion that the prediction value of this model is of a medium strength.

The coefficients found in this test are being used to calculate the expected change in core earnings as described in chapter five. The calculated expected change in core earnings is used to calculate the unexpected change in core earnings. The unexpected change in core earnings is used in the regression with the special items. The results of this regression are shown in section 7.3.2.2.

7.3.2.1.2. Estimators of model 1B Quarters Q4

The first step of testing in this research is predicting the Core earnings in the different models. In this section I will show the results on the regression to determine the estimators, or otherwise called, Beta's. The results are shown in Appendix VIII (p.133).

I will start with discussing the strength of the model used and after that I will show the coefficients found with the regression on model 1B. For this model the R^2 is .184 and the adjusted R^2 is .181. I conclude that the goodness of fit for this model is low. The F change for this model is 66,508. An F-ratio of 66,508 in a model with 7 degrees of freedom leads to a significance smaller then 0.001. The critical value for this model is 3,4909 and the F-value is much higher than the critical value. Based on the F change I conclude that the model is significant.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. The results on the correlation test show that there are no variables that correlate at a ±0.9 lever or higher. Therefore there are no problems with multicollinnearity.

The regression meets all the requirements to give a good prediction of the coefficients. The coefficients for the variables are:

Table 14

Variable	Beta	Sig.
(Constant)		,000
Delta_CE_Q_1	-,255	,000
CoreEarningsQ1mln	,250	,000
Accruals_Qmln	,339	,000
AccruelsQ1mln	,214	,000
Delta_Ato	,043	,037
SALESq	-,022	,285
neg_SALESq	,005	,802

Asset turnover ratio has a significance level of .037 this is below the level of .05. Therefore the beta for this variable is significant. Delta_Sales Q has a significance level of .285 this is above the level of .05. This means that the beta for this variable is not significant. The influence of Delta_Sales Q is not very high because the beta is only .022. Delta_Neg_Sales Q has a significance level of .802 this is also above the level of .05 and therefore this coefficient is also not significant. The effect is also low because the beta for Delta_Neg_Sales is only .005. The other coefficients have a significance of .000 which is below the level of .05 and therefore those coefficients are significant and therefore good predictors. The fact that two of the coefficients are insignificant, but are both not of great influence leads to my conclusion that the prediction value of this model is of a medium strength.

The coefficients found in this test are being used to calculate the expected change in core earnings as described in chapter five. The calculated expected change in core earnings is used to calculate the unexpected change in core earnings. The unexpected change in core earnings is used in the regression with the special items. The results of this regression are shown in section 7.3.2.2.

7.3.2.2.1 Results of model 1B Quarter 1-3

The first step of testing in this research is predicting the change in Core earnings with the different models. With the coefficients derived from the regression made I predict the change in core earnings for each quarter. This predicted change in core earnings is used to calculate the unpredicted change in core earnings. The unexpected change in core earnings is the dependent variable in a regression with the special items. In this section the results on this regression are discussed. The results are shown in Appendix VIII (p. 135).

I will start with discussing the strength of the model used and after that I will show the coefficient found with the regression on model 1B. For this model R^2 and the adjusted R^2 both are .001. I conclude that the goodness of fit for this model is low. The F change for this model is 5,062. An F-ratio of 5,062 in a model with 1 degrees of freedom leads to a significance bigger then 0.001. The critical value for this model is 10,837 and the F-value is lower than the critical value. The critical value with a significance of .05 is 3.843. The F value is higher than this critical value. Therefore I conclude that this model is significant on a .05 level.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. In this regression there is only one independent variable, therefore there is no multicollinnearity.

The regression used in step 2 of model 1B is:

$$UE{\sim}\Delta CE_{q+1} = \eta_0 + \eta_1 \%SI_q + v_{q+1}$$

Special items have a significance level of .024 this is below the level of .05, therefore the beta for special items is significant. The beta for special items is .027. I conclude that the coefficient for special items is a significant positive coefficient.

7.3.2.2.2 Results of model 1B Quarter 4

The first step of testing in this research is predicting the change in Core earnings with the different models. With the coefficients derived from the regression made I predict the change in core earnings for each quarter. This predicted change in core earnings is used to calculate the unpredicted change in core earnings. The unexpected change in core earnings is the dependent variable in a regression with the special items. In this section the results on this regression are discussed. The results are shown in Appendix VIII (p.136).

I will start with discussing the strength of the model used and after that I will show the coefficient found with the regression on model 1B. For this model both R^2 and the adjusted R^2 are .001. I conclude that the goodness of fit for this model is low. The F change for this model is 2,212. An F-ratio of 2,212 in a model with 1 degrees of freedom leads to a significance bigger then 0.001. The critical value for this model is 10,855 and the F-value is lower than the critical value. The critical value with a significance of .05 is 3.846. The F value is also higher than this critical value. Therefore I conclude that this model is not significant.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. In this regression there is only one independent variable, therefore there is no multicollinnearity.

Special items have a significance level of .137 this is above the level of .05, therefore the beta for special items is not significant. The beta for special items is -.031. I conclude that the coefficient for special items is an insignificant negative coefficient.

7.3.3. Test 2A

The following sections will contain: 7.3.3.1.1 step 1 results of sub-sample quarter 1-3, 7.3.3.1.2 step 1 results of sub-sample quarter 4, 7.3.3.2.1 step 2 results of sub-sample quarter 1-3, and 7.3.3.2.2. step 2 results of sub-sample quarter 4.

7.3.3.1.1. Estimators of model 2A Quarter Q1-Q3

The first step of testing in this research is predicting the Core earnings in the different models. In this section I will show the results on the regression to determine the estimators, or otherwise called, Beta's. The results are shown in Appendix VIII (p.137).

I will start with discussing the strength of the model used and after that I will show the coefficients found with the regression on model 2A. For this model R^2 is .865 and the adjuste R^2 is .864. I conclude that the goodness of fit for this model is high. The F change for this model is 4646,217. An F-ratio of 4646,217 in a model with 9 degrees of freedom leads to a significance smaller then 0.001. The critical value for this model is 3,1024 and the F-value is much higher than the critical value. Based on the F change I conclude that the model is significant.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. The results on the correlation test show that Returns q and Returns q-1 correlate with each other on a .986 level. This means that Returns q predicts very much returns q-1 and vice versa. The fact that the returns of 1 period earlier predict the returns of this period is not disturbing. Because it is almost the same variable there is no problem with the high correlation between them. Both variables still can predict the core earnings in a period. Except of these two variables there are no variables that correlate at a ±0.9 lever or higher. Therefore there are no problems with multicollinnearity with those variables.

The regression of step 1 in model 2A is:

$$R{\sim}CE_q = \beta 0 + \beta 1CE_{q-4} + \beta 2CE_{q-1} + \beta\ 3ATO_q + \beta\ 4Accruals_{q-4}$$
$$+ \beta 5\ 4Accruals_{q-1} + \beta\ 6\Delta Sales_q + \beta\ 7NEG_{\Delta Sales_q} + \beta\ 8Returns_{q-1}$$
$$+ \beta\ 9Returns_q + \varepsilon_q$$

The regression meets all the requirements to give a good prediction of the coefficients. The coefficients for the variables are:

Table 15

Variable	Beta	Sig.
(Constant)		,090
Core Earnings Q-4 (mln)	,343	,000
Core Earnings Q-1 (mln)	,556	,000
Accruals Q-4 (mln)	-,142	,000
Accruals Q-1 (mln)	,009	,099
Asset turnover Ratio Q	-,009	,061
Delta_Sales Q	,030	,000
Delta_Neg_Sales Q	-,040	,000
Returns Q	,042	,134
Returns Q-1	-,043	,122

Accruals Q-4 has a significance level of .099 this above the level of .05. The insignificance of this coefficient is not very high because it does not exceed the significance level of .1, which is used in some experiments. Asset turnover ratio has a significance level of .061 this is above the level of .05. Therefore the beta for this variable is not significant. The influence of the variable Asset turnover ratio is not very high, because the beta is just .009. Also the insignificance is not very high because is just exceeds the .05 level. Therefore the insignificance of this variable is not of great concern. Returns Q and returns Q-1 have a significance level of .134 and .122 this exceeds the .05 level. This also exceeds the .1 level. Therefore this insignificance is of great concern. All the other variables have a significance level of .000, this is below the .05 level, and therefore these beta's are good predictors. The insignificance of Returns Q and Returns q-1 are of a great concern. Also the fact that four out of nine variables are not significant on a .05 level is of great concern. Therefore I conclude that the prediction made with the coefficients derived from this regression is not totally reliable.

The coefficients found in this test are being used to calculate the unexpected core earnings as described in chapter five. The calculated unexpected core earnings are used in the regression with the special items. The results of this regression are shown in section 7.3.3.2.

7.3.3.1.2. Estimators of model 2A Quarter Q4

The first step of testing in this research is predicting the Core earnings in the different models. In this section I will show the results on the regression to determine the estimators, or otherwise called, Beta's. The results are shown in Appendix VIII (p.140).

I will start with discussing the strength of the model used and after that I will show the coefficients found with the regression on model 2A. For this model R^2 is .828 and the adjusted R^2 is .827. I conclude that the goodness of fit for this model is high. The F change for this model is 1163,146. An F-ratio of 1163,146 in a model with 9 degrees of freedom leads to a significance smaller then 0.001. The critical value for this model is 3,1124 and the F-value is much higher than the critical value. Based on the F change I conclude that the model is significant.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. The results on the correlation test show that Returns q and Returns q-1 correlate with each other on a .977 level. This means that Returns q predicts very much returns q-1 and vice versa. The fact that the returns of 1 period earlier predict the returns of this period is not disturbing. Because it is almost the same variable there is no problem with the high correlation between them. Both variables still can predict the core earnings in a period. Except of these two variables there are no variables that correlate at a ±0.9 lever or higher. Therefore there are no problems with multicollinnearity with those variables.

The regression meets all the requirements to give a good prediction of the coefficients. The coefficients for the variables are:

Table 16

Variable	Beta	Sig.
(Constant)		,024
Core Earnings Q-4 (mln)	,130	,000
Core Earnings Q-1 (mln)	,538	,000
Accruals Q-4 (mln)	,128	,000
Accruals Q-1 (mln)	-,396	,000
Asset turnover Ratio Q	-,015	,090
Delta_Sales Q	,015	,105
Delta_Neg_Sales Q	-,047	,000
Returns Q	,107	,012
Returns Q-1	-,111	,009

Asset turnover ratio has a significance level of .090 this is above the level of .05. Therefore the beta for this variable is not significant. The influence of the variable Asset turnover ratio is not very high, because the beta is just .015. The insignificance of this coefficient is not very high because it does not exceed the 0.1 level. Therefore the insignificance of this variable is not of great concern. Delta_Sales has a significance level of .105 this is above the level of .05. Therefore the beta for this variable is not significant. The influence of the variable Delta_Sales is not very high, because the beta is just .015. Therefore the insignificance of this variable is not of great concern. Returns Q and returns Q-1 have a significance level of .012 and .009 this below the .05 level. Therefore these variables are significant. All the other variables have a significance level of .000, this is below the .05 level, and therefore these beta's are good predictors.

The coefficients found in this test are being used to calculate the unexpected core earnings as described in chapter five. The calculated unexpected core earnings are used in the regression with the special items. The results of this regression are shown in section 7.3.3.2.

7.3.3.2.1 Results of model 2A Quarters 1-3

The first step of testing in this research is predicting the Core earnings in the different models. With the coefficients derived from the regression made I predict the core earnings for each quarter. These predicted core earnings are used to calculate the unpredicted core earnings. The unexpected core earnings are the dependent variable in a regression with the special items. In this section the results on this regression are discussed. The results are shown in Appendix VIII (p.143).

I will start with discussing the strength of the model used and after that I will show the coefficients found with the regression on model 2A. For this model R^2 and the adjusted R^2 are both .000. I conclude that the goodness of fit for this model is low. The F change for this model is 0,450. An F-ratio of 0,450 in a model with 1 degrees of freedom leads to a significance higher than .001. The critical value for this model is 10,837 and the F-value is much lower than the critical value. The critical value for this model with a significance lever of .05 is 3,843. The F value is even below this critical value. I conclude that the results of the model are not significant.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. In this regression there is only one independent variable, therefore there is no multicollinnearity.

The regression used in step 2 of model 2A is the same as used in model 1A.

Special items have a significance level of .286 this is above the level of .05, therefore the beta for special items is insignificant. The beta for special items is .023. I conclude that the coefficient for special items is an insignificant positive coefficient.

7.3.3.2.2 Results of model 2A Quarter 4

The first step of testing in this research is predicting the Core earnings in the different models. With the coefficients derived from the regression made I predict the core earnings for each quarter. These predicted core earnings are used to calculate the unpredicted core earnings. The unexpected core earnings are the dependent variable in a regression with the special items. In this section the results on this regression are discussed. The results are shown in Appendix VIII (p.144).

I will start with discussing the strength of the model used and after that I will show the coefficients found with the regression on model 2A. For this model both R^2 and the adjusted R^2 are .000. I conclude that the goodness of fit for this model is low. The F change for this model is 0,027. An F-ratio of 0,27 in a model with 1 degree of freedom leads to significance higher than .001. The critical value for this model is 10,857 and the F-value is much lower than the critical value. The critical value for this model with a significance lever of .05 is 3,846. The F value is even below this critical value. I conclude that the results of the model are not significant.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. In this regression there is only one independent variable, therefore there is no multicollinnearity.

Special items have a significance level of .870 this is above the level of .05, therefore the beta for special items is insignificant. The beta for special items is .004. I conclude that the coefficient for special items is an insignificant positive coefficient.

7.3.4. Test 2B

In this section both the results on step 1 of model 2B are discussed and the results on step 2 of model 2B are discussed.

7.3.4.1.1. Estimators of model 2B Quarters Q1-Q3

The first step of testing in this research is predicting the Core earnings in the different models. In this section I will show the results on the regression to determine the estimators, or otherwise called, Beta's. The results are shown in Appendix VIII (p.145).

I will start with discussing the strength of the model used and after that I will show the coefficients found with the regression on model 2B. For this model R^2 is .157 and the adjusted R^2 is .156. I conclude that the goodness of fit for this model is low. The F change for this model is 152,507. An F-ratio of 152,507 in a model with 8 degrees of freedom leads to a significance smaller then 0.001. The critical value for this model is 3,2706 and the F-value is much higher than the critical value. Based on the F change I conclude that the model is significant.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. The results on the correlation test show that Returns q and Returns q-1 correlate with each other on a .986 level. This means that Returns q predicts very much returns q-1 and vice versa. The fact that the returns of 1 period earlier predict the returns of this period is not disturbing. Because it is almost the same variable there is no problem with the high correlation between them. Both variables still can predict the core earnings in a period. Except of these two variables there are no variables that correlate at a ±0.9 lever or higher. Therefore there are no problems with multicollinnearity with those variables.

The regression used in step 1 of model 2B is:

$$\Delta R{\sim}CE_t = \varphi_0 + \varphi_1 CE_{q-1} + \varphi_2 \Delta CE_{q-1} + \varphi_3 \Delta ATO_q + \varphi_4 Accruals_{q-1} + \varphi_5 \Delta Sales_q + \varphi_6 Neg\_\Delta Sales_q + \varphi_7 Returns_{q-1} + \varphi_8 Returns_q + v_t$$

The regression meets all the requirements to give a good prediction of the coefficients. The coefficients for the variables are:

Table 17

Variable	Beta	Sig.
(Constant)		,820
Delta_CE_Q_1	-,257	,000
CoreEarningsQ1mln	-,215	,000
AccruelsQ1mln	-,376	,000
Delta_Ato	,106	,000
SALESq	-,008	,518
NEG_SALESq	,007	,551
ReturnsQ	,112	,108
ReturnsQ1	-,120	,085

Delta_Sales Q has a significance level of .518 this is above the level of .05. This means that the beta for this variable is not significant. The influence of Delta_Sales Q is not very high because the beta is only .008. Delta_Neg_Sales Q has a significance level of .551 this is also above the level of .05 and therefore this coefficient is also not significant. The effect is also low because the beta for Delta_Neg_Sales is only .007. Returns Q has a significance level of .108 this is above the level of .05. This means that the beta for this variable is not significant. Returns Q-1 has a significance level of .085 this is also above the level of .05 and therefore this coefficient is also not significant. The other coefficients have a significance of .000 which is below the level of .05 and therefore those coefficients are significant and therefore good predictors. Four of the coefficients are not significant. I conclude that the prediction value of this model is low.

The coefficients found in this test are being used to calculate the expected change in core earnings as described in chapter five. The calculated expected change in core earnings is used to calculate the unexpected change in core earnings. The unexpected change in core earnings is used in the regression with the special items. The results of this regression are shown in section 7.3.4.2.

7.3.4.1.2. Estimators of model 2B Quarters Q4

The first step of testing in this research is predicting the Core earnings in the different models. In this section I will show the results on the regression to determine the estimators, or otherwise called, Beta's. The results are shown in Appendix VIII (p.148).

I will start with discussing the strength of the model used and after that I will show the coefficients found with the regression on model 2B. For this model R^2 is .161 and the adjusted R^2 is .158. I conclude that the goodness of fit for this model is low. The F change for this model is 49,504. An F-ratio of 59,504 in a model with 8 degrees of freedom leads to a significance smaller then .001. The critical value for this model is 3,2816 and the F-value is much higher than the critical value. Based on the F change I conclude that the model is significant.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. The results on the correlation test show that Returns q and Returns q-1 correlate with each other on a .986 level. This means that Returns q predicts very much returns q-1 and vice versa. The fact that the returns of 1 period earlier predict the returns of this period is not disturbing. Because it is almost the same variable there is no problem with the high correlation between them. Both variables still can predict the core earnings in a period. Except of these two variables there are no variables that correlate at a ±0.9 lever or higher. Therefore there are no problems with multicollinnearity with those variables.

The regression meets all the requirements to give a good prediction of the coefficients. The coefficients for the variables are:

Table 18

Variable	Beta	Sig.
(Constant)		,000
Delta_CE_Q_1	-,160	,000
CoreEarningsQ1mln	,076	,015
AccruelsQ1mln	,343	,000
Delta_Ato	,043	,038
SALESq	-,025	,230
NEG_ΔSALESq	-,002	,905
RETURNSq	,295	,001
ReturnsQ1	-,283	,002

Core earnings Q-1 has a significance level of .015 this is below the level of .05 therefore this coefficient is significant. Asset turnover ratio has a significance level of .038 this is below the level of .05. Therefore the beta for this variable is significant. Delta_Sales Q has a significance level of .230 this is above the level of .05. This means that the beta for this variable is not significant. The influence of Delta_Sales Q is not very high because the beta is only .025. Delta_Neg_Sales Q has a significance level of .905 this is also above the level of .05 and therefore this coefficient is also not significant. The effect is also low because the beta for Delta_Neg_Sales is only .002. The coefficient Returns Q has a significance level of .001 this is below the level of .05 and therefore this coefficient is significant. The coefficient has a significance of .002 this is below .05 and is therefore significant. The other coefficients have a significance of .000 which is below the level of .05 and therefore those coefficients are significant and therefore good predictors. The fact that two of the coefficients are insignificant, but are both not of great influence leads to my conclusion that the prediction value of this model is of a medium strength.

The coefficients found in this test are being used to calculate the expected change in core earnings as described in chapter five. The calculated expected change in core earnings is used to calculate the unexpected change in core earnings. The unexpected change in core earnings is used in the regression with the special items. The results of this regression are shown in section 7.3.4.2.

7.3.4.2.1 Results of model 2B Quarter 1-3

The first step of testing in this research is predicting the change in Core earnings with the different models. With the coefficients derived from the regression made I predict the change in core earnings for each quarter. This predicted change in core earnings is used to calculate the unpredicted change in core earnings. The unexpected change in core earnings is the dependent variable in a regression with the special items. In this section the results on this regression are discussed. The results are shown in Appendix VIII (p.150).

I will start with discussing the strength of the model used and after that I will show the coefficient found with the regression on model 2B. For this model R^2 and the adjusted R^2 are both .000. I conclude that the goodness of fit for this model is low. The F change for this model is ,346. An F-ratio of ,346 in a model with 1 degrees of freedom leads to a significance bigger then 0.001. The critical value for this model is 10,837 and the F-value is lower than the critical value. The critical value with a significance of .05 is 3.843. The F value is also lower than this critical value. Therefore I conclude that this model is not significant.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. In this regression there is only one independent variable, therefore there is no multicollinnearity.

The regression used ins step 2 of model 2B is the same as used in model 1B.

Special items have a significance level of .556 this is above the level of .05, therefore the beta for special items is not significant. The beta for special items is -,007. I conclude that the coefficient for special items is an insignificant negative coefficient.

7.3.4.2.2 Results of model 2B Quarter 4

The first step of testing in this research is predicting the change in Core earnings with the different models. With the coefficients derived from the regression made I predict the change in core earnings for each quarter. This predicted change in core earnings is used to calculate the unpredicted change in core earnings. The unexpected change in core earnings is the dependent variable in a regression with the special items. In this section the results on this regression are discussed. The results are shown in Appendix VIII (p.151).

I will start with discussing the strength of the model used and after that I will show the coefficient found with the regression on model 2B. For this model both R^2 and the adjusted R^2 are .000. I conclude that the goodness of fit for this model is low. The F change for this model is ,069. An F-ratio of ,069 in a model with 1 degrees of freedom leads to a significance bigger then 0.001. The critical value for this model is 10,855 and the F-value is lower than the critical value. The critical value with a significance of .05 is 3.846. The F value is also lower than this critical value. Therefore I conclude that this model is not significant.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. In this regression there is only one independent variable, therefore there is no multicollinnearity.

Special items have a significance level of .793 this is above the level of .05, therefore the beta for special items is not significant. The beta for special items is -,005. I conclude that the coefficient for special items is an insignificant negative coefficient.

7.3.5. Test 3A

In this section I will show the step 1 results of both sub-samples. After that I show the results on step 2 of both sub-samples.

7.3.5.1.1 Estimators of model 3A Quarters Q1-Q3

The first step of testing in this research is predicting the Core earnings in the different models. In this section I will show the results on the regression to determine the estimators, or otherwise called, Beta's. The results are shown in Appendix VIII (p.152).

I will start with discussing the strength of the model used and after that I will show the coefficients found with the regression on model 3A. The R^2 for this model is .748 and the adjusted R^2 is .747. I conclude that the goodness of fit for this model is high. The F change for this model is 3878,528. An F-ratio of 3878,528 in a model with 5 degrees of freedom leads to a significance smaller then 0.001. The critical value for this model is 4,1085 and the F-value is much higher than the critical value. Based on the F change I conclude that the model is significant.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. The results on the correlation test show that there are no variables that correlate at a ±0.9 lever or higher. Therefore there are no problems with multicollinnearity.

The regression used in step 1 of model 3A is:

$$R{\sim}CE_q = \beta_0 + \beta_1 CE_{q-4} + \beta_2 ATO_q + \beta_3 Accruals_{q-4} + \beta_4 \Delta Sales_q + \beta_5 Neg\_\Delta Sales_q + \varepsilon_q$$

The regression meets all the requirements to give a good prediction of the coefficients. The coefficients for the variables are:

Table 19

Variable	Beta	Sig.
(Constant)		,000
Core Earnings Q-4 (mln)	,709	,000
Asset turnover Ratio Q	-,009	,139
Accruals Q-4 (mln)	-,247	,000
Delta_Sales Q	,034	,000
Delta_Neg_Sales Q	-,105	,000

Asset turnover ratio has a significance level of .139 this is above the level of .05. Therefore the beta for this variable is not significant. The influence of the variable Asset turnover ratio is not very high, because the beta is just .009. Therefore the insignificance of this variable is not of great concern. All the other variables have a significance level of .000, this is below the .05 level, and therefore these beta's are good predictors.

The coefficients found in this test are being used to calculate the unexpected core earnings as described in chapter five. The calculated unexpected core earnings are used in the regression with the special items. The results of this regression are shown in section 7.3.5.2.

7.3.5.1.2 Estimators of model 3A Quarters Q4

The first step of testing in this research is predicting the Core earnings in the different models. In this section I will show the results on the regression to determine the estimators, or otherwise called, Beta's. The results are shown in Appendix VIII (p. 154).

I will start with discussing the strength of the model used and after that I will show the coefficients found with the regression on model 3A. For this model R^2 is .687 and the adjusted R^2 is .686. I conclude that the goodness of fit for this model is high. The F change for this model is 955,158. An F-ratio of 955,158 in a model with 5 degrees of freedom leads to a significance smaller then 0.001. The critical value for this model is 4,1195 and the F-value is much higher than the critical value. Based on the F change I conclude that the model is significant.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. The results on the correlation test show that there are no variables that correlate at a ±0.9 lever or higher. Therefore there are no problems with multicollinnearity.

The regression meets all the requirements to give a good prediction of the coefficients. The coefficients for the variables are:

Table 20

Variable	Beta	Sig.
(Constant)		,105
Core Earnings Q-4 (mln)	,776	,000
Asset turnover Ratio Q	-,031	,010
Accruals Q-4 (mln)	-,078	,000
Delta_Sales Q	,041	,001
Delta_Neg_Sales Q	-,066	,000

Asset turnover ratio has a significance level of .010 this is below the level of .05. Therefore the beta for this variable is significant. Delta_Sales has a significance level of .001 this is below the level of .05. Therefore the beta for this variable is significant. All the other variables have a significance level of .000, this is below the .05 level, and therefore these beta's are good predictors.

The coefficients found in this test are being used to calculate the unexpected core earnings as described in chapter five. The calculated unexpected core earnings are used in the regression with the special items. The results of this regression are shown in section 7.3.5.2.

7.3.5.2.1 Results of model 3A Quarters 1-3

The first step of testing in this research is predicting the Core earnings in the different models. With the coefficients derived from the regression made I predict the core earnings for each quarter. These predicted core earnings are used to calculate the unpredicted core earnings. The unexpected core earnings are the dependent variable in a regression with the special items. In this section the results on this regression are discussed. The results are shown in Appendix VIII (p. 156).

I will start with discussing the strength of the model used and after that I will show the coefficients found with the regression on model 3A. For this model R^2 and the adjusted R^2 are both .001. I conclude that the goodness of fit for this model is low. The F change for this model is 5,069. An F-ratio of 5,069 in a model with 1 degrees of freedom leads to a significance lower than .001. The critical value for this model is 10,837 and the F-value is higher than the critical value. I conclude that the results of the model are significant.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. In this regression there is only one independent variable, therefore there is no multicollinnearity.

The regression used in step 2 of model 3A is the same as used in model 1A.

Special items have a significance level of .024 this is below the level of .05, therefore the beta for special items is significant. The beta for special items is .028. I conclude that the coefficient for special items is a significant positive coefficient.

7.3.5.2.2 Results of model 3A Quarter 4

The first step of testing in this research is predicting the Core earnings in the different models. With the coefficients derived from the regression made I predict the core earnings for each quarter. These predicted core earnings are used to calculate the unpredicted core earnings. The unexpected core earnings are the dependent variable in a regression with the special items. In this section the results on this regression are discussed. The results are shown in Appendix VIII (p. 157)

I will start with discussing the strength of the model used and after that I will show the coefficients found with the regression on model 3A. R^2 and the adjusted R^2 are for this model both .001. I conclude that the goodness of fit for this model is low. The F change for this model is 3,208. An F-ratio of 3,208 in a model with 1 degrees of freedom leads to a significance higher than .001. The critical value for this model is 10,857 and the F-value is lower than the critical value. If we set the significance to a .05 level the critical value is 3.846. The F value is lower than this critical value. I conclude that the results of the model are insignificant.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. In this regression there is only one independent variable, therefore there is no multicollinnearity.

Special items have a significance level of .073 this is above the level of .05, therefore the beta for special items is not significant. The beta for special items is .038. I conclude that the coefficient for special items is an insignificant positive coefficient.

7.3.6. Test 3B

I will start discussing the results on step 1 of the test model performed on both sub-samples. This will be followed by the results on step 2 of the test model, performed on both sub-samples.

7.3.6.1.1. Estimators of model 3B Quarters Q1-Q3

The first step of testing in this research is predicting the Core earnings in the different models. In this section I will show the results on the regression to determine the estimators, or otherwise called, Beta's. The results are shown in Appendix VIII (p. 158)

I will start with discussing the strength of the model used and after that I will show the coefficients found with the regression on model 3B. for this model R^2 is .157 and the adjusted R^2 is .156. I conclude that the goodness of fit for this model is low. The F change for this model is 202,751. An F-ratio of 202,751 in a model with 6 degrees of freedom leads to a significance smaller then 0.001. The critical value for this model is 3,7482 and the F-value is much higher than the critical value. Based on the F change I conclude that the model is significant.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. There are no variables that correlate at a ±0.9 lever or higher. Therefore there are no problems with multicollinnearity with those variables.

The regression used in step 1 of model 3B is:

$$\Delta R{\sim}CE_q = \varphi_0 + \varphi_1 CE_{q-1} + \varphi_2 \Delta CE_{q-1} + \varphi_3 \Delta ATO_q + \varphi_4 Accruals_{q-1} + \varphi_5 \Delta Sales_q + \varphi_5 Neg\_\Delta Sales_q + v_q$$

The regression meets all the requirements to give a good prediction of the coefficients. The coefficients for the variables are:

Table 21

Variable	Beta	Sig.
(Constant)		,939
Delta_CE_Q_1	-,258	,000
CoreEarningsQ1mln	-,216	,000
AccruelsQ1mln	-,376	,000
Delta_Ato	,106	,000
SALESq	-,007	,556
neg_SALESq	,007	,547

Delta_Sales Q has a significance level of .556 this is above the level of .05. This means that the beta for this variable is not significant. The influence of Delta_Sales Q is not very high because the beta is only .007. Delta_Neg_Sales Q has a significance level of .547 this is also above the level of .05 and therefore this coefficient is also not significant. The effect is also low because the beta for Delta_Neg_Sales is only .007. The other coefficients have a significance of .000 which is below the level of .05 and therefore those coefficients are significant and therefore good predictors. With two small coefficients which are not significant I conclude that the predictive value of this test is medium.

The coefficients found in this test are being used to calculate the expected change in core earnings as described in chapter five. The calculated expected change in core earnings is used to calculate the unexpected change in core earnings. The unexpected change in core earnings is used in the regression with the special items. The results of this regression are shown in section 7.3.6.2.

7.3.6.1.2. Estimators of model 3B Quarters Q4

The first step of testing in this research is predicting the Core earnings in the different models. In this section I will show the results on the regression to determine the estimators, or otherwise called, Beta's. The results are shown in Appendix VIII (p. 160).

I will start with discussing the strength of the model used and after that I will show the coefficients found with the regression on model 3B. For this model R^2 is .157 and the adjusted R^2 is .155. I conclude that the goodness of fit for this model is low. The F change for this model is 64,020. An F-ratio of 64,020 in a model with 6 degrees of freedom leads to a significance smaller then 0.001. The critical value for this model is 3,7598 and the F-value is much higher than the critical value. Based on the F change I conclude that the model is significant.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. There are no variables that correlate at a ±0.9 lever or higher. Therefore there are no problems with multicollinnearity with the variables.

The regression meets all the requirements to give a good prediction of the coefficients. The coefficients for the variables are:

Table 22

Variable	**Beta**	**Sig.**
(Constant)		,000
Delta_CE_Q_1	-,156	,000
CoreEarningsQ1mln	,074	,017
AccruelsQ1mln	,344	,000
Delta_Ato	,043	,038
SALESq	-,025	,226
NEG_ΔSALESq	-,005	,802

Core earnings Q-1 has a significance level of .017 this is below the level of .05 therefore this coefficient is significant. Asset turnover ratio has a significance level of .038 this is below the level of .05. Therefore the beta for this variable is significant. Delta_Sales Q has a significance level of .226 this is above the level of .05. This means that the beta for this variable is not significant. The influence of Delta_Sales Q is not very high because the beta is only .025. Delta_Neg_Sales Q has a significance level of .802 this is also above the level of .05 and therefore this coefficient is also not significant. The effect is also low because the beta for Delta_Neg_Sales is only .005. The other coefficients have a significance of .000 which is below the level of .05 and therefore those coefficients are significant and therefore good predictors. The fact that two of the coefficients are insignificant, but are both not of great influence leads to my conclusion that the prediction value of this model is of a medium strength.

The coefficients found in this test are being used to calculate the expected change in core earnings as described in chapter five. The calculated expected change in core earnings is used to calculate the unexpected change in core earnings. The unexpected change in core earnings is used in the regression with the special items. The results of this regression are shown in section 7.3.6.2.

7.3.6.2.1 Results of model 3B Quarter 1-3

The first step of testing in this research is predicting the change in Core earnings with the different models. With the coefficients derived from the regression made I predict the change in core earnings for each quarter. This predicted change in core earnings is used to calculate the unpredicted change in core earnings. The unexpected change in core earnings is the dependent variable in a regression with the special items. In this section the results on this regression are discussed. The results are shown in Appendix VIII (p. 162)

I will start with discussing the strength of the model used and after that I will show the coefficient found with the regression on model 3B. Both R^2 and the adjusted R^2 are for this model .000. I conclude that the goodness of fit for this model is low. The F change for this model is ,219. An F-ratio of ,219 in a model with 1 degrees of freedom leads to a significance bigger then 0.001. The critical value for this model is 10,837 and the F-value is lower than the critical value. The critical value with a significance of .05 is 3.843. The F value is also lower than this critical value. Therefore I conclude that this model is not significant.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. In this regression there is only one independent variable, therefore there is no multicollinnearity.

The regression used in step 2 of model 3B is the same as used in model 1B.

Special items have a significance level of .640 this is above the level of .05, therefore the beta for special items is not significant. The beta for special items is ,006. I conclude that the coefficient for special items is an insignificant positive coefficient.

7.3.6.2.2 Results of model 3B Quarter 4

The first step of testing in this research is predicting the change in Core earnings with the different models. With the coefficients derived from the regression made I predict the change in core earnings for each quarter. This predicted change in core earnings is used to calculate the unpredicted change in core earnings. The unexpected change in core earnings is the dependent variable in a regression with the special items. In this section the results on this regression are discussed. The results are shown in Appendix VIII (p. 163)

I will start with discussing the strength of the model used and after that I will show the coefficient found with the regression on model 3B. For this model both R^2 and the adjusted R^2 are .000. I conclude that the goodness of fit for this model is low. The F change for this model is ,724. An F-ratio of ,724 in a model with 1 degrees of freedom leads to a significance bigger then 0.001. The critical value for this model is 10,855 and the F-value is lower than the critical value. The critical value with a significance of .05 is 3.847. The F value is also lower than this critical value. Therefore I conclude that this model is not significant.

For a regression it is important to test if the variables do not correlate with each other. If predictors correlate with each other at ±>0.9 then they correlate too much with each other. In this regression there is only one independent variable, therefore there is no multicollinnearity.

Special items have a significance level of .395 this is above the level of .05, therefore the beta for special items is not significant. The beta for special items is ,018. I conclude that the coefficient for special items is an insignificant positive coefficient.

7.4. Overview of results

In this research I used a lot of tests. The tests are performed on a total sample to test the first hypothesis and after that the tests are re-performed on two sub-samples to test the second hypothesis. The tests with an A (1A, 2A, 3A) are level tests. The tests with a B (1B, 2B, 3B) are the same tests as the A tests but tested in a change model. Table 23 contains the essential information about all the tests performed.

In the column estimations you find the strength of the prediction made in step 1 of the model. I use the sign +/+ if the model creates strong predictors for the expected core earnings, respectively the expected change in core earnings. I use the sign +/- for medium strong predictors and the sign -/- for weak predictors. This is a summary of step 1 for the different models.

The column Goodness of fit and the column Sig. of model give an indication of the strength of the model itself in step 2. The sign +/+ means that the goodness of fit is high or that the model is significant. The sign +/- means that the model is not significant on a .001 level, but that it is significant on a .05 level. The sign -/- means that the goodness of fit is low or that the model is not significant.

The column Beta shows the sign of the beta found for the special items in the regression in step 2. The hypotheses state that I expect to find a positive beta. Here +/+ stands for a positive beta and -/- stands for a negative beta.

The column significance β shows the significance of the beta found for the special items in the step 2 regression of the model. If the significance level is below .05 I conclude that the beta found is significant.

Table 23

Sample	Model	Estimations	Goodness of Fit	Sig. Of Model	Beta	Significance β
Total	1A	+/+	-/-	+/+	+/+	.000
	1B	+/-	-/-	-/-	+/+	.414
	2A	+/+	-/-	-/-	+/+	.746
	2B	+/-	-/-	-/-	-/-	.389
	3A	+/+	-/-	+/+	+/+	.000
	3B	+/-	-/-	-/-	+/+	.184
Quarter 1-3	1A	+/+	-/-	+/+	+/+	.000
	1B	+/-	-/-	+/-	+/+	,024
	2A	-/-	-/-	-/-	+/+	.832
	2B	-/-	-/-	-/-	-/-	,556
	3A	+/+	-/-	+/+	+/+	.024
	3B	+/-	-/-	-/-	+/+	.640
Quarter 4	1A	+/+	-/-	-/-	+/+	.286
	1B	+/-	-/-	-/-	-/-	.137
	2A	+/+	-/-	-/-	+/+	.870
	2B	+/-	-/-	-/-	-/-	,793
	3A	+/+	-/-	-/-	+/+	.073
	3B	+/-	-/-	-/-	+/+	.395

8. Analysis of the results

In this chapter I analyse the results as shown in chapter seven. I will analyse the different tests performed in the light of hypothesis one in section 8.1. After that I will analyse the results of the models in the light of hypothesis two in section 8.2.

8.1. Hypothesis 1

8.1.1 Introduction

Several studies found classification shifting in financial reporting. The first hypothesis of this research is: Management classifies some core expenses as special items. For testing the first hypothesis I used the total sample (after excluding the observations with missing data). I performed the tests of the different models (1A, 1B, 2A, 2B, 3A, and 3B) on this total sample. Every model consists of a regression to find estimator coefficients. These coefficients are then used to calculate the expected core earnings (or expected change in core earnings), with those calculated expected (change in) core earnings I calculated the unexpected (change in) core earnings. On the unexpected (change in) core earnings I performed a regression with the special items to investigate whether they have an explanatory power on the unexpected (change in) core earnings in order to prove the use of classification shifting.

In the following sections I will analyze the outcomes of the different models in combination with hypothesis one. I discuss the meaning of the results in relation to hypothesis one.

8.1.2 Model 1A

Model 1A is the same model as used by McVay (2006). In this section I will also compare my results with the results of McVay (2006). As shown in table 23 the estimations of model 1A are significant. In section 7.2.1.1 I concluded that the coefficients derived from the regression give good predictors for the expected core earnings. The estimations of McVay (2006) on this model also lead to good predictors of core earnings. The results of the test in step 2 are found in a significant model. The beta for special items as an explanatory variable for the unexpected core earnings is a significant beta, the sign of the beta is positive. McVay (2006) finds in this model also a positive significant beta. Hypothesis one is that management classifies some core expenses as special items. With the positive significant beta that I found, I conclude that hypothesis one can be accepted by model 1A.

8.1.3 Model 1B

Model 1B is the same model as used by McVay (2006). In this section I will also compare my results with the results of McVay (2006).The estimates of Model 1B give a medium strong prediction model for the expected change in core earnings. The estimates of McVay (2006) give a weak prediction model. The difference here can be explained by the fact, that I used a sample with stronger selection criteria. The results of step 2 in model 1B are found with an insignificant model. The beta for special items found is an insignificant beta, the sign of the beta is positive. McVay (20060 found a negative beta which is significant. I conclude that the prediction model of McVay (2006) is a weak prediction model and therefore the results of step 2 are of less importance. Because of the insignificance of the model, the insignificance of the found beta, and the medium strength of the prediction model, I conclude that with this model the hypothesis cannot be accepted. The beta has a positive sign, but the results are insignificant.

8.1.4 Model 2A

Model 2A is the same as the model of Fan et al. (2010), I will compare my results with the results of Fan et al. (2010). The estimates made with model 2A lead to a strong prediction for the expected core earnings. Fan et al. (2010) do not show the regression on their coefficients. Therefore I cannot compare my estimates with their estimates. The results of step 2 of model 2A are found with an insignificant model. The beta found for the special items in step 2 is insignificant and has a positive sign. Fan et al. (2010) find a significant beta with a negative sign. I cannot analyze the differences in results between Fan et al. (2010) and my results, because Fan et al. do not show the regression of their estimates. Therefore I cannot conclude on the strength of the predictions. The difference in outcome in model 2A, compared to Fan et al. (2010) could be explained by the fact that possibly the estimates used in step 1 by Fan et al. (2010) are insignificant and therefore are not good predictors. Another possible explanation can be in the difference of sample size between my sample and the sample of Fan et al. (2010). The insignificance of model 2A and the insignificant positive beta on special items leads to the conclusion that hypothesis one cannot be accepted by this model.

8.1.5 Model 2B

Model 2B is the change variant of the level model 2A. Fan et al (2010) did not use the change variant of this model. Model 2B is the change variant of Fan et al. (2010) designed by myself, therefore there are no studies for which I can compare the results with my results. The estimates of model 2B give a medium strong prediction on the change of core earnings. The results of step 2 of model 2B are found with a not significant model. The beta for special items that is found with model 2B is not significant and has a negative sign. The model is not significant and the beta is not significant, therefore I conclude that hypothesis one cannot be accepted by the test with model 2B.

8.1.6 Model 3A

Model 3A is the same as a model of Fan et al. (2010). In this analysis I will compare my results with the results of Fan et al. (2010). The estimates of model 3A are good predictors for the expected core earnings. The estimates of Fan et al. (2010) are not shown in their paper. I cannot compare the estimates of my test and their test. The results from step 2 of my model are found in a significant model. I found a significant beta, the sign of the beta is positive. The beta found by Fan et al. (2010) is a significant beta, the sign of the beta is negative. The estimates of Fan et al. (2010) are not shown therefore I cannot conclude on their estimates. A possible explanation of the difference between my results and the results of Fan et al. (2010) can be in the strength of the predictors found in step 1. If the coefficients found by Fan et Al. (2010) are not significant this can explain the difference. Another explanation can be in the difference in sample size used by Fan et al. (2010). The estimates of my test with model 3 are strong predictors. The significance of the model is very high and the significance of the beta is very high, this beta has a positive sing. I conclude on base of my own results that the test performed with model 3A proves the first hypothesis.

8.1.7 Model 3B

Model 3B is the change variant of model 3A. This model (3B) cannot be compared with Fan et al. (2010), they only investigated level models. The estimates made with model 3B are medium strong predictors. The step 2 model is insignificant. The beta found for special items is insignificant and has a positive sign. I conclude that with the test performed with model 3B, the first hypothesis cannot be accepted.

8.1.8 Conclusion

I discussed the results and conclusions on hypothesis one by the tests. Test 1B, 2B, 3B all led to estimates with a medium strong predictive value. Test 1A, 2A, 3A all led to estimates with a strong predictive value. From these results I conclude that, there is an indication of the fact that the predictive value of level models is higher than the predictive value of change models.

The models 1B, 2B, 3B had in step 2 no significance in the model. Also the beta's from test 1B, 2B, 3B have no significance. Therefore I cannot prove that the unexpected change in core earnings can be explained by the special items. The results of this three change tests are not significant and therefore cannot contribute to the evidence found for hypothesis one.

Model 2A is also an insignificant model in step 2. The beta derived from this test is also not significant. The result for the beta of this test therefore is not significant and cannot contribute to the conclusion on hypothesis one.

Model 1A and 3A have strong estimations on the predictors. In step 2 the models are both significant. The beta's derived from these tests are highly significant. Both beta's have a positive sign. These results contribute to accept hypothesis one.

In order to investigate hypothesis one I used six tests, three level tests and three change tests, four of the tests I used are not significant and do not lead to significant results. Two of the tests are significant and lead to significant results. Both the significant tests provide evidence that contributes to accepting hypothesis one.

8.2 Hypothesis 2

8.2.1 Introduction

The second hypothesis is, there can be found stronger evidence for classification shifting in quarter 4 than in other quarters. The tests used to investigate hypothesis two are the same tests used, investigating hypothesis one. The total sample is divided in two sub-samples where one consists of all the quarters 1 to 3 and the other sub-sample consists of quarter 4 data. I will analyze the difference in the result on both samples to investigate if hypothesis two is true. Investigating classification shifting, using sub-samples is only performed before by Fan et Al. (2010) and they investigated it only, using one model. I compare the results of the tests on hypothesis two only for model 2A with the results found by Fan et al. (2010). The level test models are strong predictors for the expected core earnings five out of six times. The change models are only medium strong models on predicting the change in core earnings five out of six times.

8.2.2 Model 1A

The estimates derived from step one in model 1A give strong predictors for unexpected core earnings in both sub-samples. This test is not performed on sub-samples by McVay (2006). Model 1a is a significant model for quarters 1-3 and an insignificant model for quarter 4. The beta's of special items derived from model 1A are for quarter 1-3 significant and positive and for quarter 4 insignificant and positive. I conclude that the sample of quarters 1-3 provide evidence for classification shifting, while the sample of quarter 4 cannot provide evidence for classification shifting. Hypothesis two is that quarter 4 can provide stronger evidence for classification shifting. The tests performed with model 1A can give an indication that hypothesis two should be rejected.

8.2.3 Model 1B

The estimations made with the first step of model 1B leads to medium strong predictors for both quarters 1-3 and for quarter 4. McVay (2006) did not investigate sub-samples and therefore I cannot compare the results of both investigations. The significance of model 1B on quarters 1-3 is significant on a .05 level and on quarter 4 is not significant. The beta for special items as an explanatory variable for unexpected change in core earnings is significant for quarters 1-3 and a positive beta. This means that in quarters 1-3 there is evidence for classification shifting. The insignificance of model 1B for quarter 4 and the insignificance of the beta found in quarter 4, lead to the fact that model 1B in quarter 4 cannot find evidence for classification shifting. I conclude that the tests performed with model 1B give an indication that hypothesis two should be rejected.

8.2.4 Model 2A

The estimates made with model 2A lead to weak predictors for quarter 1-3. For quarter 4 the estimations lead to strong predictors for unexpected core earnings. Fan et al. (2010) did not show the results on the estimations of this model. Therefore I cannot compare the strength of the predictors used in this model for expected core earnings. In step 2 the model for the quarters 1-3 is not significant. The model for quarter 4 is also not significant. The beta's found in both sub-samples are not significant. I conclude that the model in both samples cannot provide evidence. Fan et al. (2010) found for both sub-samples significant beta's and found evidence that quarter 4 provides stronger evidence than quarters 1-3. The estimations where this regression is based on are not shown in their paper. Therefore I cannot explain why they find significant results on this test, where I do not find significant results. The fact that I cannot find any evidence for classification shifting in both sub-samples leads to the conclusion that this test cannot provide evidence on hypothesis two.

8.2.5 Model 2B

The estimations found in step 1 of model 2B provide weak predictors for change in expected core earnings for the sub-sample quarter 1-3 and medium strong predictors in sub-sample quarter 4. For quarters 1-3 the model in step 2 is insignificant and produces an insignificant beta. The model in step 2 for quarter 4 is insignificant and produces an insignificant beta. I conclude that in both samples there is no evidence found for classification shifting. Because both models are insignificant and cannot provide evidence what so ever, I conclude that model 2B cannot provide evidence on hypothesis two.

8.2.6 Model 3A

Fan et al. (2010) performed only one test on the different sub-samples. The test they used was what I call model 2A. Therefore I cannot compare my results on model 3A (and 3B). The estimations made in step one with model 3A produce strong predictors for expected core earnings in both sub-samples. Step 2 of model 3A leads in sub-sample quarters 1-3 to a significant model. The beta produced from this model is a significant positive beta, therefore model 3A provides evidence of classification shifting in sub-sample quarters 1-3. For quarter 4 the step 2 model is not significant. This model also produces an insignificant positive beta.

Therefore in quarter 4 model 3A cannot provide evidence for classification shifting. I conclude that model 3A gives an indication that hypothesis two should be rejected.

8.2.7 Model 3B

The estimations made with model 3B lead to medium strong predictors for both sub-samples. In step 2 both sub-samples provide insignificant models. The beta's produced by both models are insignificant. There cannot be found evidence for classification shifting in both sub-samples. I conclude that model 3B cannot provide evidence on hypothesis two.

8.2.8 Conclusion

The change models produced medium strong predictors for expected change in core earnings, five out of six times and produced weak predictors one out of six times. The level models produced strong predictors for expected core earnings five out of six times and produced weak predictors one out of six times. I conclude that there is some indication that change models are not very strong in predicting change in core earnings, level models are strong in predicting expected core earnings, when using sub samples for quarters 1-3 and quarter 4.

Three out of six models cannot provide evidence for classification shifting in both sub-samples and therefore cannot provide evidence on hypothesis two. Three out of six models provided stronger evidence for classification shifting in quarter 1-3 than in quarter 4. Therefore I reject hypothesis two.

9. Conclusions, limitations and recommendations on future research

9.1. Conclusions

There are two goals in this research. First and most important is to investigate if management uses classification shifting as a manner of earnings management. In order to investigate this I introduced two hypotheses which are being tested in this research. Next to the investigation of classification shifting, the other goal was to investigate whether in investigating classification shifting in combination with special items and core earnings, the use of level test models, or the use of change test models is more accurate.

9.1.1. Hypothesis 1

Hypothesis one was investigated by performing six tests. Those tests were performed on the total sample. Hypothesis one predicted that I would find classification shifting. Management classifies some core expenses as special items. If management would do so this would lead to greater unexpected core earnings if the special items are bigger. Therefore I investigated by predicting the core earnings and calculating the unexpected core earnings with them. After that I performed a regression with the unexpected core earnings as the dependent variable and the special items as the independent variable.

Four of the six tests I performed are not significant. Three out of the four not significant models are change test models. The change test models did not provide strong predictions on the expected change in core earnings. Therefore in my conclusion on hypothesis one I do not take those tests into account. Two of the six tests are significant. The two tests that are significant find an indication of classification shifting. Therefore I conclude that hypothesis one is accepted. And therefore I conclude that management classifies some core expenses as special items. As seen in the literature analysts and investors focus on the core earnings. Therefore I conclude that management classifies some of the core expenses as special items in order to higher the core earnings.

9.1.2. Hypothesis 2

Hypothesis two was investigated by performing the same six tests, but now on two (sub) samples. The total sample of hypothesis one was split into a sample with all the quarters 1, 2, and 3 and another sample containing all the quarters 4. Hypothesis two predicts that I would find more evidence for classification shifting in the sample with quarter 4 than in the sample containing the quarters 1, 2, and three. I tested both the samples and after that I compared the results of both samples.

Three out of the six tests could not find any evidence for classification shifting in one of the two tests. Three out of the six tests found stronger evidence for classification shifting in the sample containing quarters 1, 2, and 3 than in the sample containing the quarters 4. Hypothesis two predicted stronger evidence in quarter 4 than in the quarters 1, 2, and 3, therefore I reject hypothesis two.

9.1.2. Level test models and change test models

Next to the two hypotheses I use this research to investigate which kind of models can give stronger predictions on the expected core earnings. If the predictions used to predict the expected core earnings are not strong (enough) than the rest of the research is useless because we cannot tell if the calculated variables our step 2 research is based on are correct numbers.

The level models were able to find coefficients for the expected core earnings which have strong predictive value. This holds for the total sample three out of three times and for the sub-samples it holds for five out of six tests. The change test models led for the totals sample to medium strong predictors three out of three times. In the sub-samples it led to medium strong predictors five out of six times and to weak predictors one out of six times. I conclude that the level test models lead to stronger estimators.

9.2. Limitations

Considering this research there are some limitations to the research. There are some limitations regarding the models used, regarding the availability of the data, and regarding the explanatory strength regarding the sample for the total population.

In order to prove hypothesis one I investigated the data by performing six different tests. It was only possible to obtain significant results, two out of six times. The other four tests can be considered as bad tests, or the amount of classification shifting is too low to be found in those models. The last possibility is that there is no classification shifting in those samples and therefore the models cannot come to significant results. I concluded on basis off the two significant tests that hypothesis one is true. The fact that I found evidence in the total sample with these two tests proves that hypothesis one is true for this sample, but the fact that I did not find the same results with the other four tests should be considered a warning in generalizing my results.

In selecting my sample I choose to be very strict in selecting data. To be part of the sample a company should have all the data available for all the 80 quarters in the period. This means that the sample that I used is pretty small compared to the Compustat population it was derived from. Therefore generalizing my results could be dangerous.

The different tests on the selection bias in the sample show different results. For most variables two out of three tests show no selection bias. The selection bias tests did not show one result. Different tests showed different results, the fact that for almost all variables two out of three tests showed no selection bias, made me choose to continue the research with this sample. Still it might be wise considering this information before generalizing my conclusions on basis of this sample.

9.3. Recommendations for future research

In future research a bigger sample could be used. The problem with selecting a smaller sample like I did is that my conclusions can be generalized a lot more difficult. If in future research bigger samples can be used then the results can be generalized more easily.

My research showed that the prediction strength of the change models is not very strong. Therefore in future research there should be the focus on level test models. Next to that is could be possible to investigate how the change level models should be adapted in order to give them more prediction strength.

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Appendix I (table of prior research)

Model	Author(s)	Objective	sample	Methodology	Outcome
McVay	McVay	Testing whether there is a relation between special items and core earnings.	Data are obtained for the years 1988 to 2003 from the 2003 Annual Compustat File, I/B/E/S Split-Unadjusted File, and CRSP Daily Return Tapes.	Regression on unexpected core earnings and unexpected change in core earnings also split between firms that just met analyst forecast and other firms.	Unexpected core earnings are increasing with special items in year t and the improvement in core earnings reverses in the next year, but only when there are no special items in year t +1. The results only hold for items that are possible to shift. And the results are stronger for firms that just met analyst forecast.
McVay	Lin, Radhakrishnan, and Su	examine a comprehensive set of earnings management tools and forecast guidance to gain insights into the tools used by firms to meet or beat analysts' earnings forecast.	All firm-quarters from 1993 to 2004 with required data from the 15 I/B/E/S, Compustat, and CRSP databases.	Regression on unexpected core earnings	Companies that are near to meeting or beating certain benchmarks are more likely to use classification shifting. Companies that use classification shifting are using this as a substitute for positive discretionary accruals.
McVay	Athanasakou, Strong, and Walker	Examine whether UK companies reclassify core expenses as non-recurring items.	UK (dead and live) listed firms from Datastream for the period 1994 to 2002.	Regression on unexpected core earnings and unexpected change in core earnings also split between firms that just met analyst forecast and other firms.	Other non-recurring items are associated with an abnormal rise in core profits in the current period, an abnormal decline in core earnings in the subsequent period and operating cash outflows three years ahead
Adapted McVay	Fan, Barua, Cready and Thomas 2010	Testing whether there is a relation between special items and core earnings. And research wether there is more evidence for classification shifting in the fourth quarter	They used data for the years 1988 to 2007 from Compustat Industrial Quarterly File. Analysts' forecast data are obtained from the I/B/E/S Detail File.	Regression on unexpected core earnings and unexpected change in core earnings also split between firms that just met analyst forecast and other firms. Using quarterly data and an adapted expected CE model	Classification is more prevalent in the fourth quarter than in other quarters. There is evidence that within samples of companies who just meet or beat analyst forecasts there is better evidence for classification shifting than in other samples.

Appendix II (variable codes of COMPUSTAT)

Special Items	SPIQ
Sales/Turnover (Net)	SALEQ
Cost of Goods Sold	COGSQ
Selling, General and Administrative Expenses	XSGAQ
Operating Activities - Net Cash Flow	OANCFY
Assets - Total	ATQ
Cash and Short-Term Investments	CHEQ
Long-Term Debt - Total	DLTTQ
Debt in Current Liabilities	DLCQ
Shareholders' Equity – Total	SEQQ
Minority Interest - Balance Sheet	MIBQ
Income Before Extraordinary Items	IBQ

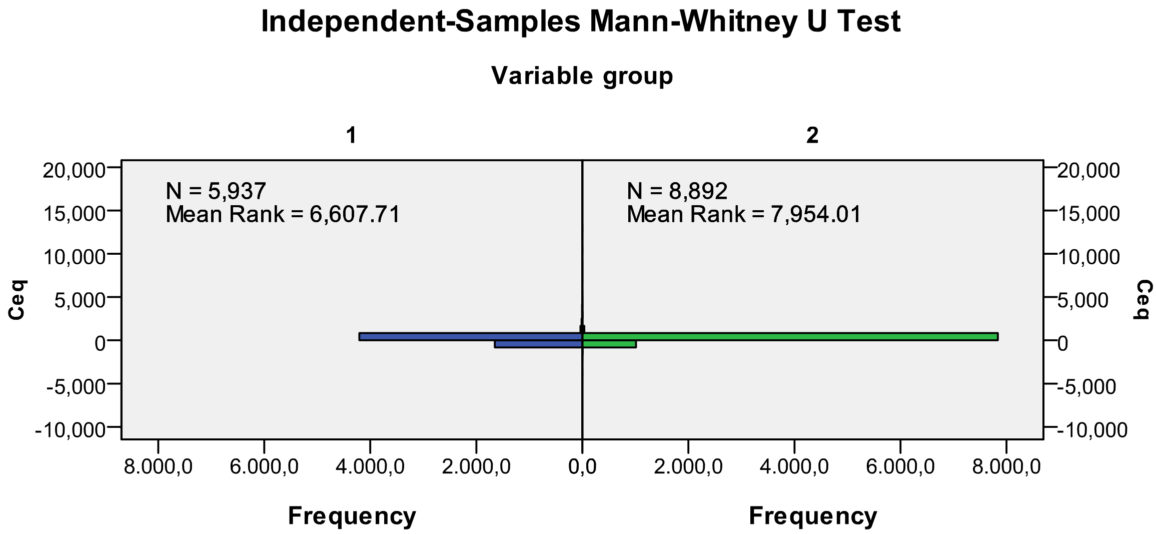
Appendix III (descriptive statistics of the sample)

Statistics

	N		Mean	Median	Std. Deviation	Percentiles		
	Valid	Missing				25	50	75
Core earnings calculated from reported (mln)	9360	0	40,101236	3,888500	149,3064704	,557250	3,888500	21,266000
Core Earnngs Q-4 (mln)	8892	468	38,355315	3,854500	128,7299682	,572250	3,854500	20,981250
Core Earnings Q-1 (mln)	9243	117	39,393851	3,844000	140,6862278	,556000	3,844000	21,046000
Accruals Q (mln)	9360	0	-46,022928	-2,140000	258,8505872	-18,332250	-2,140000	,243000
Accruels Q-4 (mln)	8892	468	-41,984218	-1,970000	235,3780110	-17,193250	-1,970000	,277500
Accruels Q-1 (mln)	9243	117	-44,617078	-2,068000	255,4457666	-18,043000	-2,068000	,251000
Asset turnover Ratio Q	9243	117	,83339132074	,50416790000	5,163925567490	,33172560000	,50416790000	,76380086000
delta_Sales Q	8739	621	,163902362081	,075223766000	,3451020038618	,000000000000	,075223766000	,196257840000
delta_Neg_sales Q	8739	621	,046589408763	,000000000000	,1101649487950	,000000000000	,000000000000	,031974840000
Returns Q	9360	0	3077,2731	419,7550	12087,15238	100,1125	419,7550	1718,3350
Returns Q-1	9243	117	3045,7425	417,5500	12003,78321	100,1000	417,5500	1705,4800
Special items as a percentage of Sales	9211	149	,0147643644122	,0000000000000	,11368640650297	,0000000000000	,0000000000000	,0000000000000

Appendix IV (Results on Mann-Whitney U test)

Core Earnings q:

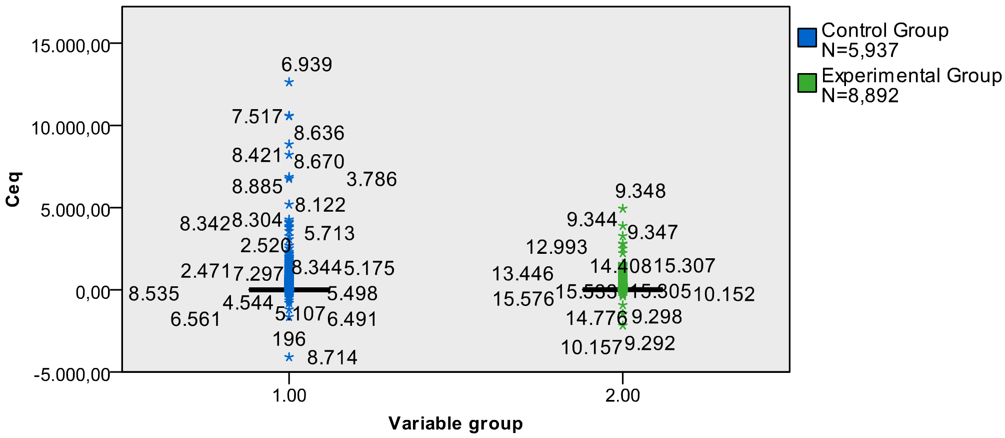


Total N	14,829
Mann-Whitney U	31,188,786.000
Wilcoxon W	70,727,064.000
Test Statistic	31,188,786.000
Standard Error	255,424.878
Standardized Test Statistic	18.764
Asymptotic Sig. (2-sided test)	.000

Appendix V (Results on Moses extreme reactions test)

Core earnings q:

Independent-Samples Moses Test of Extreme Reaction

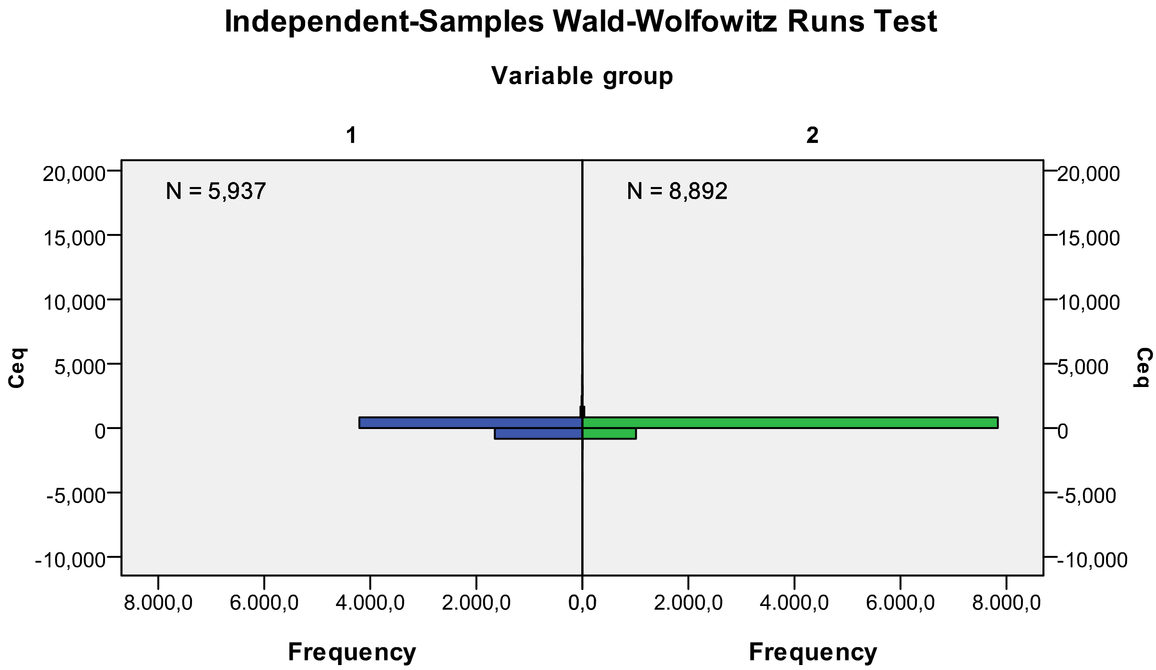


Total N		14,829
Observed Control Group	**Test Statistic**[1]	14,829.000
	Exact Sig. (1-sided test)	1.000
Trimmed Control Group	**Test Statistic**[1]	13,604.000
	Exact Sig. (1-sided test)	1.000
Outliers Trimmed from each End		296.000

[1] The test statistic is the span.

Appendix VI (results on the Wald-Wolfowitz runs test)

Core Earnings q:



Total N		14,829
Minimum Possible	Test Statistic[1]	5,497.000
	Standard Error	58.467
	Standardized Test Statistic	-27.778
	Asymptotic Sig. (2-sided test)	.000
Maximum Possible	Test Statistic[1]	7,689.000
	Standard Error	58.467
	Standardized Test Statistic	9.714
	Asymptotic Sig. (2-sided test)	1.000

[1] The test statistic is the number of runs.

1. There are 1,460 inter-group ties involving 4,570 records.

Appendix VII (Results on hypothesis one)

Result on estimations of test 1A:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,850[a]	,722	,722	81,0019016

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,722	3785,314	6	8732	,000

a. Predictors: (Constant), delta_Neg_sales Q, Asset turnover Ratio Q, Core Earnngs Q-4 (mln), delta_Sales Q, Accruels Q-4 (mln), Accruals Q (mln)

Coefficients[a]

Model		Standardized Coefficients	t	Sig.	Correlations	
		Beta			Zero-order	Partial
1	(Constant)		6,227	,000		
	Core Earnngs Q-4 (mln)	,717	103,096	,000	,827	,741
	Asset turnover Ratio Q	-,009	-1,512	,131	,009	-,016
	Accruels Q-4 (mln)	-,153	-15,910	,000	-,575	-,168
	Accruals Q (mln)	-,055	-5,577	,000	-,588	-,060
	delta_Sales Q	,035	6,093	,000	,030	,065
	delta_Neg_sales Q	-,094	-16,407	,000	-,083	-,173

a. Dependent Variable: Core earnings calculated from reported (mln)

Coefficient Correlations[a]

Model			delta_Neg_sales Q	Asset turnover Ratio Q	Core Earnngs Q-4 (mln)
1	Correlations	delta_Neg_sales Q	1,000	-,013	-,006
		Asset turnover Ratio Q	-,013	1,000	,015
		Core Earnngs Q-4 (mln)	-,006	,015	1,000
		delta_Sales Q	,201	-,093	,043
		Accruels Q-4 (mln)	,023	,074	,143
		Accruals Q (mln)	-,015	-,040	,290

Coefficient Correlations[a]

Model			delta_Sales Q	Accruels Q-4 (mln)	Accruals Q (mln)
1	Correlations	delta_Neg_sales Q	,201	,023	-,015
		Asset turnover Ratio Q	-,093	,074	-,040
		Core Earnngs Q-4 (mln)	,043	,143	,290
		delta_Sales Q	1,000	-,008	,029
		Accruels Q-4 (mln)	-,008	1,000	-,720
		Accruals Q (mln)	,029	-,720	1,000

a. Dependent Variable: Core earnings calculated from reported (mln)

Results on test 1A:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,054[a]	,003	,003	84,1295635

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,003	25,491	1	8731	,000

a. Predictors: (Constant), SI

Coefficients[a]

Model		Standardized Coefficients	t	Sig.	Correlations		
		Beta			Zero-order	Partial	Part
1	(Constant)		-5,964	,000			
	SI	,054	5,049	,000	,054	,054	,054

a. Dependent Variable: unexpected

Results on estimations of test 1B:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,361[a]	,130	,129	69,6132165

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,130	183,959	7	8614	,000

a. Predictors: (Constant), neg_salesQ, Accruals_Qmln, Delta_CE_Q_1, Delta_Ato, salesQ, AccruelsQ1mln, CoreEarningsQ1mln

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,098	,955		3,244	,001
	CoreEarningsQ1mln	-,163	,008	-,299	-21,106	,000
	Delta_CE_Q_1	-,291	,011	-,288	-27,091	,000
	Delta_Ato	1,012	,129	,079	7,860	,000
	AccruelsQ1mln	-,043	,004	-,144	-10,977	,000
	Accruals_Qmln	-,075	,004	-,263	-19,303	,000
	salesQ	-2,887	2,209	-,013	-1,307	,191
	neg_salesQ	-5,000	7,062	-,007	-,708	,479

Coefficient Correlations[a]

Model			neg_salesQ	Accruals_Qmln	Delta_CE_Q_1
1	Correlations	neg_salesQ	1,000	,052	,048
		Accruals_Qmln	,052	1,000	,065
		Delta_CE_Q_1	,048	,065	1,000
		Delta_Ato	,004	,042	,071
		salesQ	,200	,015	-,041
		AccruelsQ1mln	,082	-,308	,224
		CoreEarningsQ1mln	,141	,452	,287

Coefficient Correlations[a]

Model			Delta_Ato	salesQ	AccruelsQ1mln	CoreEarningsQ 1mln
1	Correlations	neg_salesQ	,004	,200	,082	,141
		Accruals_Qmln	,042	,015	-,308	,452
		Delta_CE_Q_1	,071	-,041	,224	,287
		Delta_Ato	1,000	-,023	-,032	,016
		salesQ	-,023	1,000	,008	,016
		AccruelsQ1mln	-,032	,008	1,000	,356
		CoreEarningsQ1mln	,016	,016	,356	1,000

a. Dependent Variable: Delta_R_CE

Results on test 1B:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,009[a]	,000	,000	73,2971660

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,000	,668	1	9209	,414

a. Predictors: (Constant), SI

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,622	,770		,807	,419
	SI	5,489	6,718	,009	,817	,414

a. Dependent Variable: Un expec_Del_Ce

Results on estimations of test 2A:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,911[a]	,829	,829	63,5276661

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,829	4710,241	9	8729	,000

a. Predictors: (Constant), Returns Q-1, Asset turnover Ratio Q, delta_Neg_sales Q, Accruels Q-1 (mln), delta_Sales Q, Accruels Q-4 (mln), Core Earnngs Q-4 (mln), Core Earnings Q-1 (mln), Returns Q

Coefficients[a]

Model		Standardized Coefficients	t	Sig.	Correlations	
		Beta			Zero-order	Partial
1	(Constant)		,937	,349		
	Core Earnngs Q-4 (mln)	,324	42,512	,000	,827	,414
	Core Earnings Q-1 (mln)	,534	68,630	,000	,878	,592
	Accruels Q-4 (mln)	-,056	-10,006	,000	-,575	-,106
	Accruels Q-1 (mln)	-,091	-15,544	,000	-,629	-,164
	Asset turnover Ratio Q	-,005	-1,092	,275	,009	-,012
	delta_Sales Q	,028	6,089	,000	,030	,065
	delta_Neg_sales Q	-,044	-9,595	,000	-,083	-,102
	Returns Q	,090	3,628	,000	,102	,039
	Returns Q-1	-,095	-3,845	,000	,100	-,041

a. Dependent Variable: Core earnings calculated from reported (mln)

Coefficient Correlations[a]

Model			Returns Q-1	Asset turnover Ratio Q	delta_Neg_sales Q
1	Correlations	Returns Q-1	1,000	,000	-,010
		Asset turnover Ratio Q	,000	1,000	-,014
		delta_Neg_sales Q	-,010	-,014	1,000
		Accruels Q-1 (mln)	-,011	-,033	,055
		delta_Sales Q	,021	-,093	,197
		Accruels Q-4 (mln)	,020	,070	,058
		Core Earnngs Q-4 (mln)	-,002	,005	-,100
		Core Earnings Q-1 (mln)	-,004	,002	,171
		Returns Q	-,984	-,001	,015

Model			Accruels Q-1 (mln)	delta_Sales Q	Accruels Q-4 (mln)
1	Correlations	Returns Q-1	-,011	,021	,020
		Asset turnover Ratio Q	-,033	-,093	,070
		delta_Neg_sales Q	,055	,197	,058
		Accruels Q-1 (mln)	1,000	,037	-,160
		delta_Sales Q	,037	1,000	,007
		Accruels Q-4 (mln)	-,160	,007	1,000
		Core Earnngs Q-4 (mln)	,264	,044	,094
		Core Earnings Q-1 (mln)	,177	-,010	,270
		Returns Q	,007	-,017	-,020

Coefficient Correlations[a]

Model			Core Earnngs Q-4 (mln)	Core Earnings Q-1 (mln)	Returns Q
1	Correlations	Returns Q-1	-,002	-,004	-,984
		Asset turnover Ratio Q	,005	,002	-,001
		delta_Neg_sales Q	-,100	,171	,015
		Accruels Q-1 (mln)	,264	,177	,007
		delta_Sales Q	,044	-,010	-,017
		Accruels Q-4 (mln)	,094	,270	-,020
		Core Earnngs Q-4 (mln)	1,000	-,618	-,009
		Core Earnings Q-1 (mln)	-,618	1,000	,000
		Returns Q	-,009	,000	1,000

a. Dependent Variable: Core earnings calculated from reported (mln)

Results on test 2A

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,003[a]	,000	,000	214,1212468

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,000	,105	1	9192	,746

a. Predictors: (Constant), SI

Coefficients[a]

Model		Standardized Coefficients	t	Sig.	Correlations		
		Beta			Zero-order	Partial	Part
1	(Constant)		-6,844	,000			
	SI	,003	,324	,746	,003	,003	,003

a. Dependent Variable: unexpec CE

Results on estimations of test 2B:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,306[a]	,094	,093	71,0577591

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,094	111,278	8	8613	,000

a. Predictors: (Constant), ReturnsQ1, Delta_Ato, salesQ, AccruelsQ1mln, Delta_CE_Q_1, neg_salesQ, CoreEarningsQ1mln, ReturnsQ

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2,423	,992		2,441	,015
	Delta_CE_Q_1	-,279	,011	-,276	-25,456	,000
	CoreEarningsQ1mln	-,095	,007	-,175	-13,526	,000
	AccruelsQ1mln	-,067	,004	-,222	-17,444	,000
	Delta_Ato	1,115	,131	,087	8,492	,000
	salesQ	-2,394	2,256	-,011	-1,061	,289
	neg_salesQ	2,451	7,201	,004	,340	,734
	ReturnsQ	,001	,000	,194	3,423	,001
	ReturnsQ1	-,001	,000	-,195	-3,450	,001

Coefficient Correlations[a]

Model			ReturnsQ1	Delta_Ato	salesQ	AccruelsQ1mln
1	Correlations	ReturnsQ1	1,000	,001	,020	,004
		Delta_Ato	,001	1,000	-,024	-,020
		salesQ	,020	-,024	1,000	,013
		AccruelsQ1mln	,004	-,020	,013	1,000
		Delta_CE_Q_1	,033	,068	-,042	,257
		neg_salesQ	-,011	,002	,199	,103
		CoreEarningsQ1mln	-,009	-,004	,009	,582
		ReturnsQ	-,983	-,001	-,016	-,004

Coefficient Correlations[a]

Model			Delta_CE_Q_1	neg_salesQ
1	Correlations	ReturnsQ1	,033	-,011
		Delta_Ato	,068	,002
		salesQ	-,042	,199
		AccruelsQ1mln	,257	,103
		Delta_CE_Q_1	1,000	,044
		neg_salesQ	,044	1,000
		CoreEarningsQ1mln	,290	,128
		ReturnsQ	-,036	,015

Coefficient Correlations[a]

Model			CoreEarningsQ 1mln	ReturnsQ
1	Correlations	ReturnsQ1	-,009	-,983
		Delta_Ato	-,004	-,001
		salesQ	,009	-,016
		AccruelsQ1mln	,582	-,004
		Delta_CE_Q_1	,290	-,036
		neg_salesQ	,128	,015
		CoreEarningsQ1mln	1,000	-,009
		ReturnsQ	-,009	1,000

a. Dependent Variable: Delta_R_CE

Results on test 2B:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,009[a]	,000	,000	428,1843474

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,000	,742	1	9192	,389

a. Predictors: (Constant), SI

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4,181	4,503		,929	,353
	SI	-33,984	39,446	-,009	-,862	,389

a. Dependent Variable: Unexpec_del_CE

Results on estimations of test 3A:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,849[a]	,721	,721	81,1413940

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,721	4520,572	5	8733	,000

a. Predictors: (Constant), delta_Neg_sales Q, Asset turnover Ratio Q, Core Earnngs Q-4 (mln), delta_Sales Q, Accruels Q-4 (mln)

Coefficients[a]

Model		Standardized Coefficients	t	Sig.	Correlations
		Beta			Zero-order
1	(Constant)		6,176	,000	
	Core Earnngs Q-4 (mln)	,728	109,229	,000	,827
	Accruels Q-4 (mln)	-,192	-28,683	,000	-,575
	Asset turnover Ratio Q	-,010	-1,732	,083	,009
	delta_Sales Q	,036	6,249	,000	,030
	delta_Neg_sales Q	-,095	-16,464	,000	-,083

a. Dependent Variable: Core earnings calculated from reported (mln)

Coefficient Correlations[a]

Model			delta_Neg_sales Q	Asset turnover Ratio Q	Core Earnngs Q-4 (mln)
1	Correlations	delta_Neg_sales Q	1,000	-,014	-,002
		Asset turnover Ratio Q	-,014	1,000	,028
		Core Earnngs Q-4 (mln)	-,002	,028	1,000
		delta_Sales Q	,201	-,092	,036
		Accruels Q-4 (mln)	,018	,066	,531

Coefficient Correlations[a]

Model			delta_Sales Q	Accruels Q-4 (mln)
1	Correlations	delta_Neg_sales Q	,201	,018
		Asset turnover Ratio Q	-,092	,066
		Core Earnngs Q-4 (mln)	,036	,531
		delta_Sales Q	1,000	,019
		Accruels Q-4 (mln)	,019	1,000

a. Dependent Variable: Core earnings calculated from reported (mln)

Results on test 3A:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,038[a]	,001	,001	84,7603204

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,001	13,373	1	9192	,000

a. Predictors: (Constant), SI

Coefficients[a]

Model		Standardized Coefficients	t	Sig.	Correlations		
		Beta			Zero-order	Partial	Part
1	(Constant)		-11,849	,000			
	SI	,038	3,657	,000	,038	,038	,038

a. Dependent Variable: unexpected CE

Results on estimations of test 3B:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,304[a]	,092	,092	71,0986948

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,092	146,214	6	8615	,000

a. Predictors: (Constant), neg_salesQ, Delta_Ato, AccruelsQ1mln, Delta_CE_Q_1, salesQ, CoreEarningsQ1mln

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2,414	,975		2,476	,013
	Delta_CE_Q_1	-,278	,011	-,275	-25,345	,000
	CoreEarningsQ1mln	-,095	,007	-,175	-13,594	,000
	AccruelsQ1mln	-,067	,004	-,222	-17,421	,000
	Delta_Ato	1,116	,131	,087	8,491	,000
	salesQ	-2,250	2,256	-,010	-,997	,319
	neg_salesQ	2,151	7,203	,003	,299	,765

a. Dependent Variable: Delta_R_CE

Coefficient Correlations[a]

Model			neg_salesQ	Delta_Ato	AccruelsQ1mln
1	Correlations	neg_salesQ	1,000	,002	,103
		Delta_Ato	,002	1,000	-,020
		AccruelsQ1mln	,103	-,020	1,000
		Delta_CE_Q_1	,045	,068	,257
		salesQ	,199	-,024	,013
		CoreEarningsQ1mln	,131	-,004	,584

Coefficient Correlations[a]

Model			Delta_CE_Q_1	salesQ	CoreEarningsQ1mln
1	Correlations	neg_salesQ	,045	,199	,131
		Delta_Ato	,068	-,024	-,004
		AccruelsQ1mln	,257	,013	,584
		Delta_CE_Q_1	1,000	-,042	,290
		salesQ	-,042	1,000	,011
		CoreEarningsQ1mln	,290	,011	1,000

a. Dependent Variable: Delta_R_CE

Results on test 3B

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,014[a]	,000	,000	80,3516542

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,000	1,767	1	9192	,184

a. Predictors: (Constant), SI

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-4,888	,845		-5,785	,000
	SI	9,840	7,402	,014	1,329	,184

a. Dependent Variable: Unexpec_del_CE

Appendix VIII (results on hypothesis two)

Results on estimations of test 1A:

Quarter 1-3:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,868[a]	,753	,752	71,7892416

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,753	3320,655	6	6547	,000

a. Predictors: (Constant), delta_Neg_sales Q, Accruals Q (mln), Asset turnover Ratio Q, delta_Sales Q, Core Earnngs Q-4 (mln), Accruels Q-4 (mln)

Coefficients[a]

Model		Standardized Coefficients	t	Sig.
		Beta		
1	(Constant)		7,771	,000
	Core Earnngs Q-4 (mln)	,689	93,440	,000
	Asset turnover Ratio Q	-,006	-,989	,323
	Accruals Q (mln)	-,114	-11,613	,000
	Accruels Q-4 (mln)	-,170	-17,422	,000
	delta_Sales Q	,032	5,081	,000
	delta_Neg_sales Q	-,103	-16,439	,000

a. Dependent Variable: Core earnings calculated from reported (mln)

Coefficient Correlationsa

Model			delta_Neg_sales Q	Accruals Q (mln)	Asset turnover Ratio Q
1	Correlations	delta_Neg_sales Q	1,000	-,021	-,008
		Accruals Q (mln)	-,021	1,000	-,043
		Asset turnover Ratio Q	-,008	-,043	1,000
		delta_Sales Q	,195	,025	-,089
		Core Earnngs Q-4 (mln)	-,023	,234	,018
		Accruels Q-4 (mln)	,017	-,676	,098

Coefficient Correlations[a]

Model			delta_Sales Q	Core Earnngs Q-4 (mln)	Accruels Q-4 (mln)
1	Correlations	delta_Neg_sales Q	,195	-,023	,017
		Accruals Q (mln)	,025	,234	-,676
		Asset turnover Ratio Q	-,089	,018	,098
		delta_Sales Q	1,000	,048	,002
		Core Earnngs Q-4 (mln)	,048	1,000	,209
		Accruels Q-4 (mln)	,002	,209	1,000

a. Dependent Variable: Core earnings calculated from reported (mln)

Quarter 4:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,834[a]	,696	,695	98,8397547

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,696	829,313	6	2178	,000

a. Predictors: (Constant), delta_Neg_sales Q, Core Earnngs Q-4 (mln), Asset turnover Ratio Q, delta_Sales Q, Accruels Q-4 (mln), Accruals Q (mln)

Coefficients[a]

Model		Standardized Coefficients	t	Sig.
		Beta		
1	(Constant)		1,610	,108
	Core Earnngs Q-4 (mln)	,839	50,764	,000
	Asset turnover Ratio Q	-,032	-2,671	,008
	Accruels Q-4 (mln)	-,242	-9,598	,000
	Accruals Q (mln)	,228	7,961	,000
	delta_Sales Q	,045	3,685	,000
	delta_Neg_sales Q	-,064	-5,270	,000

a. Dependent Variable: Core earnings calculated from reported (mln)

Coefficient Correlations[a]

Model			delta_Neg_sales Q	Core Earnngs Q-4 (mln)	Asset turnover Ratio Q
1	Correlations	delta_Neg_sales Q	1,000	,048	-,038
		Core Earnngs Q-4 (mln)	,048	1,000	,021
		Asset turnover Ratio Q	-,038	,021	1,000
		delta_Sales Q	,218	,034	-,111
		Accruels Q-4 (mln)	,019	-,103	,002
		Accruals Q (mln)	,017	,481	-,009

Coefficient Correlations[a]

Model			delta_Sales Q	Accruels Q-4 (mln)	Accruals Q (mln)
1	Correlations	delta_Neg_sales Q	,218	,019	,017
		Core Earnngs Q-4 (mln)	,034	-,103	,481
		Asset turnover Ratio Q	-,111	,002	-,009
		delta_Sales Q	1,000	-,034	,043
		Accruels Q-4 (mln)	-,034	1,000	-,819
		Accruals Q (mln)	,043	-,819	1,000

a. Dependent Variable: Core earnings calculated from reported (mln)

Results on test 1A:

Quarter 1-3:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,072[a]	,005	,005	75,8575863

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,005	33,772	1	6546	,000

a. Predictors: (Constant), SI

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-5,671	,944		-6,005	,000
	SI	56,683	9,754	,072	5,811	,000

a. Dependent Variable: unexpec CE

Quarter 4:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,023[a]	,001	,000	106,7149282

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,001	1,140	1	2183	,286

a. Predictors: (Constant), SI

Coefficientsa

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	-11,133	2,310		-4,820	,000
	SI	15,948	14,934	,023	1,068	,286

a. Dependent Variable: Unexpec CE

Results on estimations of test 1B:

Quarter 1-3:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,508[a]	,258	,257	64,5598999

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,258	324,780	7	6545	,000

a. Predictors: (Constant), neg_salesQ, Accruals_Qmln, Delta_Ato, Delta_CE_Q_1, salesQ, AccruelsQ1mln, CoreEarningsQ1mln

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,674	1,012		1,653	,098
	Delta_CE_Q_1	-,393	,013	-,349	-30,811	,000
	CoreEarningsQ1mln	-,216	,008	-,399	-28,009	,000
	Accruals_Qmln	-,125	,004	-,421	-29,858	,000
	AccruelsQ1mln	-,082	,004	-,255	-19,186	,000
	Delta_Ato	1,416	,165	,092	8,574	,000
	salesQ	-2,057	2,332	-,010	-,882	,378
	neg_salesQ	-3,311	7,410	-,005	-,447	,655

a. Dependent Variable: Delta_R_CE

Coefficient Correlations[a]

Model			neg_salesQ	Accruals_Qmln	Delta_Ato
1	Correlations	neg_salesQ	1,000	,036	,004
		Accruals_Qmln	,036	1,000	,046
		Delta_Ato	,004	,046	1,000
		Delta_CE_Q_1	,018	,271	,012
		salesQ	,197	,009	-,022
		AccruelsQ1mln	,087	-,306	-,018
		CoreEarningsQ1mln	,135	,431	-,027

Coefficient Correlations[a]

Model			Delta_CE_Q_1	salesQ
1	Correlations	neg_salesQ	,018	,197
		Accruals_Qmln	,271	,009
		Delta_Ato	,012	-,022
		Delta_CE_Q_1	1,000	-,044
		salesQ	-,044	1,000
		AccruelsQ1mln	,050	,011
		CoreEarningsQ1mln	,298	,015

Coefficient Correlations[a]

Model			AccruelsQ1mln	CoreEarningsQ1mln
1	Correlations	neg_salesQ	,087	,135
		Accruals_Qmln	-,306	,431
		Delta_Ato	-,018	-,027
		Delta_CE_Q_1	,050	,298
		salesQ	,011	,015
		AccruelsQ1mln	1,000	,330
		CoreEarningsQ1mln	,330	1,000

a. Dependent Variable: Delta_R_CE

Quarter 4:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,429[a]	,184	,181	66,5755204

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,184	66,508	7	2061	,000

a. Predictors: (Constant), neg_salesQ, Delta_Ato, Accruals_Qmln, salesQ, Delta_CE_Q_1, AccruelsQ1mln, CoreEarningsQ1mln

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7,629	1,896		4,025	,000
	Delta_CE_Q_1	-,202	,022	-,255	-9,258	,000
	CoreEarningsQ1mln	,138	,021	,250	6,722	,000
	Accruals_Qmln	,086	,010	,339	8,295	,000
	AccruelsQ1mln	,055	,009	,214	6,244	,000
	Delta_Ato	,380	,182	,043	2,085	,037
	salesQ	-4,739	4,428	-,022	-1,070	,285
	neg_salesQ	3,641	14,502	,005	,251	,802

a. Dependent Variable: Delta_R_CE

Coefficient Correlations[a]

Model			neg_salesQ	Delta_Ato	Accruals_Qmln	salesQ
1	Correlations	neg_salesQ	1,000	,019	,061	,208
		Delta_Ato	,019	1,000	-,003	-,024
		Accruals_Qmln	,061	-,003	1,000	,019
		salesQ	,208	-,024	,019	1,000
		Delta_CE_Q_1	,098	,172	-,434	-,032
		AccruelsQ1mln	,087	,040	-,458	,003
		CoreEarningsQ1mln	,153	,107	,569	,019

Coefficient Correlations[a]

Model			Delta_CE_Q_1	AccruelsQ1mln	CoreEarningsQ1mln
1	Correlations	neg_salesQ	,098	,087	,153
		Delta_Ato	,172	,040	,107
		Accruals_Qmln	-,434	-,458	,569
		salesQ	-,032	,003	,019
		Delta_CE_Q_1	1,000	,627	,152
		AccruelsQ1mln	,627	1,000	,277
		CoreEarningsQ1mln	,152	,277	1,000

a. Dependent Variable: Delta_R_CE

Results on test 1B:

Quarter 1-3:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,027[a]	,001	,001	460,4835690

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,001	5,062	1	6892	,024

a. Predictors: (Constant), SI

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-131,494	5,586		-23,540	,000
	SI	127,380	56,615	,027	2,250	,024

a. Dependent Variable: Unexpec_del_CE

Quarter 4:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,031[a]	,001	,001	112,2782191

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,001	2,212	1	2298	,137

a. Predictors: (Constant), SI

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-35,335	2,369		-14,916	,000
	SI	-23,279	15,652	-,031	-1,487	,137

a. Dependent Variable: uunexpec del Ce

Results on estimations of test 2A:

Quarter 1-3:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,930[a]	,865	,864	53,1130258

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,865	4646,217	9	6544	,000

a. Predictors: (Constant), Returns Q-1, Asset turnover Ratio Q, delta_Neg_sales Q, Accruels Q-1 (mln), delta_Sales Q, Accruels Q-4 (mln), Core Earnngs Q-4 (mln), Core Earnings Q-1 (mln), Returns Q

coefficients[a]

Model		Standardized Coefficients Beta	t	Sig.
1	(Constant)		1,694	,090
	Core Earnngs Q-4 (mln)	,343	46,446	,000
	Core Earnings Q-1 (mln)	,556	74,188	,000
	Accruels Q-4 (mln)	-,142	-25,459	,000
	Accruels Q-1 (mln)	,009	1,652	,099
	Asset turnover Ratio Q	-,009	-1,872	,061
	delta_Sales Q	,030	6,351	,000
	delta_Neg_sales Q	-,040	-8,390	,000
	Returns Q	,042	1,499	,134
	Returns Q-1	-,043	-1,545	,122

a. Dependent Variable: Core earnings calculated from reported (mln)

Coefficient Correlations[a]

Model			Returns Q-1	Asset turnover Ratio Q	delta_Neg_sales Q
1	Correlations	Returns Q-1	1,000	-,002	-,001
		Asset turnover Ratio Q	-,002	1,000	-,010
		delta_Neg_sales Q	-,001	-,010	1,000
		Accruels Q-1 (mln)	-,008	-,028	,063
		delta_Sales Q	,028	-,089	,192
		Accruels Q-4 (mln)	,002	,094	,039
		Core Earnngs Q-4 (mln)	-,015	,014	-,123
		Core Earnings Q-1 (mln)	,015	-,003	,189
		Returns Q	-,986	,001	,006

Coefficient Correlations[a]

Model			Accruels Q-1 (mln)	delta_Sales Q	Accruels Q-4 (mln)
1	Correlations	Returns Q-1	-,008	,028	,002
		Asset turnover Ratio Q	-,028	-,089	,094
		delta_Neg_sales Q	,063	,192	,039
		Accruels Q-1 (mln)	1,000	,029	-,157
		delta_Sales Q	,029	1,000	,017
		Accruels Q-4 (mln)	-,157	,017	1,000
		Core Earnngs Q-4 (mln)	,198	,043	,153
		Core Earnings Q-1 (mln)	,184	-,006	,220
		Returns Q	,007	-,025	-,004

Coefficient Correlations[a]

Model			Core Earnngs Q-4 (mln)	Core Earnings Q-1 (mln)	Returns Q
1	Correlations	Returns Q-1	-,015	,015	-,986
		Asset turnover Ratio Q	,014	-,003	,001
		delta_Neg_sales Q	-,123	,189	,006
		Accruels Q-1 (mln)	,198	,184	,007
		delta_Sales Q	,043	-,006	-,025
		Accruels Q-4 (mln)	,153	,220	-,004
		Core Earnngs Q-4 (mln)	1,000	-,614	,003
		Core Earnings Q-1 (mln)	-,614	1,000	-,018
		Returns Q	,003	-,018	1,000

a. Dependent Variable: Core earnings calculated from reported (mln)

Quarter 4:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,910[a]	,828	,827	74,3484461

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,828	1163,146	9	2175	,000

a. Predictors: (Constant), Returns Q-1, Asset turnover Ratio Q, delta_Neg_sales Q, Accruels Q-1 (mln), delta_Sales Q, Accruels Q-4 (mln), Core Earnngs Q-4 (mln), Core Earnings Q-1 (mln), Returns Q

Coefficients[a]

Model		Standardized Coefficients Beta	t	Sig.
1	(Constant)		2,255	,024
	Core Earnngs Q-4 (mln)	,130	6,850	,000
	Core Earnings Q-1 (mln)	,538	27,984	,000
	Accruels Q-4 (mln)	,128	10,541	,000
	Accruels Q-1 (mln)	-,396	-27,407	,000
	Asset turnover Ratio Q	-,015	-1,696	,090
	delta_Sales Q	,015	1,621	,105
	delta_Neg_sales Q	-,047	-5,155	,000
	Returns Q	,107	2,521	,012
	Returns Q-1	-,111	-2,611	,009

a. Dependent Variable: Core earnings calculated from reported (mln)

Coefficient Correlations[a]

Model			Returns Q-1	Asset turnover Ratio Q	delta_Neg_sales Q
1	Correlations	Returns Q-1	1,000	-,003	-,029
		Asset turnover Ratio Q	-,003	1,000	-,038
		delta_Neg_sales Q	-,029	-,038	1,000
		Accruels Q-1 (mln)	-,032	-,037	,052
		delta_Sales Q	,005	-,113	,216
		Accruels Q-4 (mln)	,021	,005	,090
		Core Earnngs Q-4 (mln)	,009	-,015	-,027
		Core Earnings Q-1 (mln)	-,045	,018	,111
		Returns Q	-,977	,000	,035

Coefficient Correlations[a]

Model			Accruels Q-1 (mln)	delta_Sales Q	Accruels Q-4 (mln)
1	Correlations	Returns Q-1	-,032	,005	,021
		Asset turnover Ratio Q	-,037	-,113	,005
		delta_Neg_sales Q	,052	,216	,090
		Accruels Q-1 (mln)	1,000	,058	-,130
		delta_Sales Q	,058	1,000	-,021
		Accruels Q-4 (mln)	-,130	-,021	1,000
		Core Earnngs Q-4 (mln)	,421	,058	-,053
		Core Earnings Q-1 (mln)	,139	-,029	,398
		Returns Q	,024	,000	-,014

Coefficient Correlations[a]

Model			Core Earnngs Q-4 (mln)	Core Earnings Q-1 (mln)	Returns Q
1	Correlations	Returns Q-1	,009	-,045	-,977
		Asset turnover Ratio Q	-,015	,018	,000
		delta_Neg_sales Q	-,027	,111	,035
		Accruels Q-1 (mln)	,421	,139	,024
		delta_Sales Q	,058	-,029	,000
		Accruels Q-4 (mln)	-,053	,398	-,014
		Core Earnngs Q-4 (mln)	1,000	-,636	-,016
		Core Earnings Q-1 (mln)	-,636	1,000	,038
		Returns Q	-,016	,038	1,000

a. Dependent Variable: Core earnings calculated from reported (mln)

Results on test 2A:

Quarter 1-3:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,003[a]	,000	,000	100,3159517

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,000	,045	1	6546	,832

a. Predictors: (Constant), SI

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1,184	1,249		-,948	,343
	SI	2,734	12,899	,003	,212	,832

a. Dependent Variable: Unexpec CE

Quarter 4:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,004[a]	,000	,000	318,4343732

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,000	,027	1	2183	,870

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-17,960	6,892		-2,606	,009
	SI	7,318	44,563	,004	,164	,870

a. Dependent Variable: Unexpec CE

a. Predictors: (Constant), SI

Results on estimations of test 2B:

Quarter 1-3:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,396[a]	,157	,156	68,8041665

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,157	152,507	8	6544	,000

a. Predictors: (Constant), ReturnsQ1, Delta_Ato, Delta_CE_Q_1, neg_salesQ, AccruelsQ1mln, salesQ, CoreEarningsQ1mln, ReturnsQ

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,250	1,098		,228	,820
	Delta_CE_Q_1	-,290	,013	-,257	-22,123	,000
	CoreEarningsQ1mln	-,117	,007	-,215	-15,632	,000
	AccruelsQ1mln	-,120	,004	-,376	-27,897	,000
	Delta_Ato	1,641	,176	,106	9,330	,000
	salesQ	-1,609	2,487	-,008	-,647	,518
	neg_salesQ	4,711	7,894	,007	,597	,551
	ReturnsQ	,001	,000	,112	1,605	,108
	ReturnsQ1	-,001	,000	-,120	-1,724	,085

a. Dependent Variable: Delta_R_CE

Coefficient Correlations[a]

Model			ReturnsQ1	Delta_Ato	Delta_CE_Q_1	neg_salesQ
1	Correlations	ReturnsQ1	1,000	-,001	,007	-,004
		Delta_Ato	-,001	1,000	-,001	,002
		Delta_CE_Q_1	,007	-,001	1,000	,007
		neg_salesQ	-,004	,002	,007	1,000
		AccruelsQ1mln	-,003	-,004	,144	,103
		salesQ	,028	-,023	-,048	,197
		CoreEarningsQ1mln	,006	-,052	,211	,130
		ReturnsQ	-,986	,002	-,012	,007

Coefficient Correlations[a]

Model			AccruelsQ1mln	salesQ	CoreEarningsQ1mln	ReturnsQ
1	Correlations	ReturnsQ1	-,003	,028	,006	-,986
		Delta_Ato	-,004	-,023	-,052	,002
		Delta_CE_Q_1	,144	-,048	,211	-,012
		neg_salesQ	,103	,197	,130	,007
		AccruelsQ1mln	1,000	,014	,534	,003
		salesQ	,014	1,000	,011	-,024
		CoreEarningsQ1mln	,534	,011	1,000	-,021
		ReturnsQ	,003	-,024	-,021	1,000

a. Dependent Variable: Delta_R_CE

Quarter 4:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,402[a]	,161	,158	67,5245990

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,161	49,504	8	2060	,000

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7,236	1,959		3,693	,000
	Delta_CE_Q_1	-,127	,020	-,160	-6,347	,000
	CoreEarningsQ1mln	,042	,017	,076	2,429	,015
	AccruelsQ1mln	,089	,008	,343	11,103	,000
	Delta_Ato	,383	,185	,043	2,072	,038
	salesQ	-5,396	4,491	-,025	-1,201	,230
	neg_salesQ	-1,754	14,700	-,002	-,119	,905
	ReturnsQ	,002	,001	,295	3,208	,001
	ReturnsQ1	-,002	,001	-,283	-3,072	,002

a. Dependent Variable: Delta_R_CE

Coefficient Correlations[a]

Model			ReturnsQ1	Delta_Ato	salesQ	AccruelsQ1mln
1	Correlations	ReturnsQ1	1,000	-,001	,004	,002
		Delta_Ato	-,001	1,000	-,025	,043
		salesQ	,004	-,025	1,000	,013
		AccruelsQ1mln	,002	,043	,013	1,000
		neg_salesQ	-,030	,019	,208	,128
		Delta_CE_Q_1	,047	,189	-,027	,535
		CoreEarningsQ1mln	-,044	,133	,007	,733
		ReturnsQ	-,975	-,002	,002	-,008

Coefficient Correlations[a]

Model			neg_salesQ	Delta_CE_Q_1
1	Correlations	ReturnsQ1	-,030	,047
		Delta_Ato	,019	,189
		salesQ	,208	-,027
		AccruelsQ1mln	,128	,535
		neg_salesQ	1,000	,135
		Delta_CE_Q_1	,135	1,000
		CoreEarningsQ1mln	,140	,534
		ReturnsQ	,038	-,050

Coefficient Correlations[a]

Model			CoreEarningsQ1mln	ReturnsQ
1	Correlations	ReturnsQ1	-,044	-,975
		Delta_Ato	,133	-,002
		salesQ	,007	,002
		AccruelsQ1mln	,733	-,008
		neg_salesQ	,140	,038
		Delta_CE_Q_1	,534	-,050
		CoreEarningsQ1mln	1,000	,021
		ReturnsQ	,021	1,000

a. Dependent Variable: Delta_R_CE

Results on test 2B:

Quarter 1-3:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,007[a]	,000	,000	248,2175130

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,000	,346	1	6892	,556

a. Predictors: (Constant), SI

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-10,915	3,011		-3,625	,000
	SI	-17,957	30,517	-,007	-,588	,556

a. Dependent Variable: Unexpec_del_CE

Quarter 4:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,005[a]	,000	,000	759,9911849

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,000	,069	1	2298	,793

a. Predictors: (Constant), SI

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-6,888	16,035		-,430	,668
	SI	-27,867	105,949	-,005	-,263	,793

a. Dependent Variable: Unexpec_del_CE

Results on estimations of test 3A:

Quarter 1-3:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,865[a]	,748	,747	72,5193009

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,748	3878,528	5	6548	,000

a. Predictors: (Constant), delta_Neg_sales Q, Asset turnover Ratio Q, Core Earnngs Q-4 (mln), delta_Sales Q, Accruels Q-4 (mln)

Coefficients[a]

Model		Standardized Coefficients	t	Sig.
		Beta		
1	(Constant)		7,634	,000
	Core Earnngs Q-4 (mln)	,709	97,894	,000
	Asset turnover Ratio Q	-,009	-1,479	,139
	Accruels Q-4 (mln)	-,247	-33,953	,000
	delta_Sales Q	,034	5,318	,000
	delta_Neg_sales Q	-,105	-16,520	,000

a. Dependent Variable: Core earnings calculated from reported (mln)

Coefficient Correlations[a]

Model			delta_Neg_sales Q	Asset turnover Ratio Q	Core Earnngs Q-4 (mln)
1	Correlations	delta_Neg_sales Q	1,000	-,009	-,019
		Asset turnover Ratio Q	-,009	1,000	,029
		Core Earnngs Q-4 (mln)	-,019	,029	1,000
		delta_Sales Q	,196	-,088	,043
		Accruels Q-4 (mln)	,004	,093	,512

Coefficient Correlations[a]

Model			delta_Sales Q	Accruels Q-4 (mln)
1	Correlations	delta_Neg_sales Q	,196	,004
		Asset turnover Ratio Q	-,088	,093
		Core Earnngs Q-4 (mln)	,043	,512
		delta_Sales Q	1,000	,026
		Accruels Q-4 (mln)	,026	1,000

a. Dependent Variable: Core earnings calculated from reported (mln)

Quarter 4:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,829[a]	,687	,686	100,2444659

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,687	955,158	5	2179	,000

a. Predictors: (Constant), delta_Neg_sales Q, Core Earnngs Q-4 (mln), Asset turnover Ratio Q, delta_Sales Q, Accruels Q-4 (mln)

Coefficients[a]

Model		Standardized Coefficients	t	Sig.
		Beta		
1	(Constant)		1,624	,105
	Core Earnngs Q-4 (mln)	,776	52,781	,000
	Asset turnover Ratio Q	-,031	-2,563	,010
	Accruels Q-4 (mln)	-,078	-5,289	,000
	delta_Sales Q	,041	3,299	,001
	delta_Neg_sales Q	-,066	-5,334	,000

a. Dependent Variable: Core earnings calculated from reported (mln)

Coefficient Correlations[a]

Model			delta_Neg_sales Q	Core Earnngs Q-4 (mln)	Asset turnover Ratio Q
1	Correlations	delta_Neg_sales Q	1,000	,045	-,038
		Core Earnngs Q-4 (mln)	,045	1,000	,029
		Asset turnover Ratio Q	-,038	,029	1,000
		delta_Sales Q	,218	,015	-,110
		Accruels Q-4 (mln)	,059	,577	-,009

Coefficient Correlations[a]

Model			delta_Sales Q	Accruels Q-4 (mln)
1	Correlations	delta_Neg_sales Q	,218	,059
		Core Earnngs Q-4 (mln)	,015	,577
		Asset turnover Ratio Q	-,110	-,009
		delta_Sales Q	1,000	,001
		Accruels Q-4 (mln)	,001	1,000

a. Dependent Variable: Core earnings calculated from reported (mln)

Results on test 3A:

Quarter 1-3:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,028[a]	,001	,001	76,0647273

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,001	5,069	1	6546	,024

a. Predictors: (Constant), SI

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-6,298	,947		-6,650	,000
	SI	22,019	9,780	,028	2,251	,024

a. Dependent Variable: Unexpec CE

Quarter 4:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,038[a]	,001	,001	104,2128431

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,001	3,208	1	2183	,073

a. Predictors: (Constant), SI

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-7,492	2,256		-3,321	,001
	SI	26,122	14,584	,038	1,791	,073

a. Dependent Variable: Unexpec CE

Results on estimations of test 3B:

Quarter 1-3:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,396[a]	,157	,156	68,8110647

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,157	202,751	6	6546	,000

a. Predictors: (Constant), neg_salesQ, Delta_CE_Q_1, Delta_Ato, AccruelsQ1mln, salesQ, CoreEarningsQ1mln

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,082	1,078		,076	,939
	Delta_CE_Q_1	-,290	,013	-,258	-22,138	,000
	CoreEarningsQ1mln	-,117	,007	-,216	-15,743	,000
	AccruelsQ1mln	-,121	,004	-,376	-27,897	,000
	Delta_Ato	1,641	,176	,106	9,332	,000
	salesQ	-1,462	2,485	-,007	-,588	,556
	neg_salesQ	4,755	7,893	,007	,602	,547

a. Dependent Variable: Delta_R_CE

Coefficient Correlations[a]

Model			neg_salesQ	Delta_CE_Q_1	Delta_Ato
1	Correlations	neg_salesQ	1,000	,008	,002
		Delta_CE_Q_1	,008	1,000	-,001
		Delta_Ato	,002	-,001	1,000
		AccruelsQ1mln	,103	,145	-,004
		salesQ	,197	-,048	-,023
		CoreEarningsQ1mln	,133	,209	-,052

Coefficient Correlations[a]

Model			AccruelsQ1mln	salesQ	CoreEarningsQ1mln
1	Correlations	neg_salesQ	,103	,197	,133
		Delta_CE_Q_1	,145	-,048	,209
		Delta_Ato	-,004	-,023	-,052
		AccruelsQ1mln	1,000	,014	,537
		salesQ	,014	1,000	,013
		CoreEarningsQ1mln	,537	,013	1,000

a. Dependent Variable: Delta_R_CE

Quarter 4:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,396[a]	,157	,155	67,6613141

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,157	64,020	6	2062	,000

a. Predictors: (Constant), neg_salesQ, Delta_Ato, CoreEarningsQ1mln, salesQ, Delta_CE_Q_1, AccruelsQ1mln

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7,716	1,927		4,005	,000
	Delta_CE_Q_1	-,123	,020	-,156	-6,181	,000
	CoreEarningsQ1mln	,041	,017	,074	2,398	,017
	AccruelsQ1mln	,089	,008	,344	11,116	,000
	Delta_Ato	,385	,185	,043	2,079	,038
	salesQ	-5,451	4,499	-,025	-1,211	,226
	neg_salesQ	-3,689	14,711	-,005	-,251	,802

a. Dependent Variable: Delta_R_CE

Coefficient Correlations[a]

Model			neg_salesQ	Delta_Ato	CoreEarningsQ1mln	salesQ
1	Correlations	neg_salesQ	1,000	,019	,144	,207
		Delta_Ato	,019	1,000	,132	-,024
		CoreEarningsQ1mln	,144	,132	1,000	,010
		salesQ	,207	-,024	,010	1,000
		Delta_CE_Q_1	,138	,189	,538	-,026
		AccruelsQ1mln	,130	,043	,735	,014

Coefficient Correlations[a]

Model			Delta_CE_Q_1	AccruelsQ1mln
1	Correlations	neg_salesQ	,138	,130
		Delta_Ato	,189	,043
		CoreEarningsQ1mln	,538	,735
		salesQ	-,026	,014
		Delta_CE_Q_1	1,000	,535
		AccruelsQ1mln	,535	1,000

a. Dependent Variable: Delta_R_CE

Results on test 3B:

Quarter 1-3:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,006[a]	,000	,000	88,7106595

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,000	,219	1	6892	,640

a. Predictors: (Constant), SI

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,689	1,076		1,569	,117
	SI	5,103	10,907	,006	,468	,640

a. Dependent Variable: Unexpec Del Ce

Quarter 4:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,018[a]	,000	,000	96,0720643

Model Summary

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	,000	,724	1	2298	,395

a. Predictors: (Constant), SI

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-26,294	2,027		-12,972	,000
	SI	11,392	13,393	,018	,851	,395

a. Dependent Variable: Unexpec_del_CE