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Professional Football Organizations & Earnings Management: Master thesis

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1 Introduction

1.1 General Introduction

Recently, there has been a lot of turmoil for European Professional Football Organizations that has already led some of these clubs into financial distress and due to declining revenues from broadcasting, ticket sale, sponsorship, inactive transfer markets, a lack of sportive successes and together with high amounts of debt on the books of the league teams the outlook for many Professional Football Organizations doesn't seem to get any better soon. For instance, the Dutch Premier League posted a loss of 89,5 million euro's in the season 2009/2010. Never before the loss has been this big. Two seasons earlier, the clubs were still profitable with a total profit of 64 million euro's. Ajax (-22,8 million), PSV (-17,5 million), Heerenveen (-14,9 million) and Feyenoord (-14 million) are responsible for the biggest part of the accumulated loss. The situation by other clubs isn't any better. But in absolute terms less money is involved, but relatively the losses are at least as bad as the above mentioned.¹

The KNVB is now working as a controlling authority for the clubs to force them to cut budgets to make them profitable in the future. To do this they make use of a categorization system. The categorization is part of the licensing of the KNVB. The financial situation of the club is judged by a point system. The more points a club scores, the better. Based on the score clubs will be divided into three categories. The healthiest clubs are present in Category 3, the unhealthiest clubs will be found in Category 1.

Categorie 1 exists of the following clubs: AGOVV, Almere City FC, Cambuur Leeuwarden, Excelsior, Feyenoord, Fortuna Sittard, MVV, N.E.C, RBC Roosendaal, Roda JC, RKC Waalwijk, BV Veendam, Willem II.

Categorie 2 exists of the following clubs: ADO Den Haag, AFC Ajax, AZ, FC Den Bosch, FC Dordrecht, FC Eindhoven, FC Emmen, De Graafschap, FC Groningen, Helmond Sport, Heracles Almelo, NAC Breda, PSV, Sparta Rotterdam, SC Heerenveen, FC Utrecht, bv Vitesse, VVV–Venlo, FC Zwolle.

¹ http://www.volkskrant.nl/vk/nl/2698/Sport/article/detail/1062741/2010/11/24/Eredivisie-leed-vorig-seizoenrecordverlies.dhtml

Categorie 3 exists of the following clubs: Go Ahead Eagles, FC Twente, Telstar, FC Volendam.²

In 2013 the UEFA Financial Fair Play regulation will take effect. The regulations are aimed at bringing an end to excessive spending, inflated transfer fees and exorbitant player salaries. The rules call for greater budgeting discipline and a more rational financial behavior of clubs. They also encourage the clubs to operate responsible by not spending more than they earn, while deleveraging.³ The measures are designed to keep European football healthy and viable for the long-term. In addition, the measures serve as protection for the integrity and proper functioning of competitions and to encourage long term investment in youth development and sport facilities.⁴ The development and implementation of the rules didn't came as a surprise. In 2008 the aggregate loss of Europe's top clubs was €578 million. Some 65% of income was spent on average on salaries, and 47% of clubs reported losses. 35% of clubs reported negative equity (assets less liabilities) in their balance sheet.⁵

Furthermore the discussion of 'debt' in football has never been as prominent as it has been in the last 3 years. For instance, English football authorities have expressed concerns about more than \notin 3,8 billion of debt on the books of Premier League teams. Liverpool alone can already account for \notin 600 million of debt. In Spain, the debt of Real Madrid is \notin 327 million and Barcelona has a \notin 205 million pressing debt.⁶

In economic circumstances like this earnings management can arise. According to Healy and Wahlen (1999, p. 6): "earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholder about the underlying economic performance of the company, or to influence contractual outcomes that depend on reported accounting numbers". Earnings management consists of accounting policy choice and real actions (Scott, 2009, p. 403). Accounting policy choice can be separated into two categories. The first category relates to accounting policies per se, such as straight-line versus declining-balance amortization, or policies for revenue recognition. The second category concerns discretionary accruals, such as provisions for credit losses, warranty costs, inventory values, and timing and amounts of

² http://www.knvb.nl/nieuws/6977/categorie-indeling-clubs-door-de-knvb

 $^{^{3}\} http://www.uefa.com/uefa/footballfirst/protectingthegame/financialfairplay/news/newsid=1494481.html$

 $^{^{4}\} http://www.uefa.com/uefa/footballfirst/protectingthegame/financialfairplay/news/newsid=1585317.html$

⁵ The European Club Footballing Landscape 2009

⁶ http://www.forbes.com/2009/04/08/most-valuable-soccer-teams-business-sportsmoney-soccer-values-09-intro.html

non-recurring and extraordinary items such as write-offs and provisions for reorganization (Scott, 2009, p. 403). Furthermore, earnings management occurs by means of real actions such as, timing of purchases and disposals of capital assets, timing advertising, R&D and maintenance (Scott, 2009, p. 404).

As already said earnings management occurs to influence contractual outcomes. Specifically earnings management for covenant purposes could arise because the high amounts of debt can impose heavy costs for Professional Football Organizations (PFO's). PFO's may have accepted debt contractual terms, for instance accounting based debt covenants that bounds the PFO's freedom to take certain actions when violation occurs. This raises questions about incentives for PFO managers to avoid covenant violation by managing earnings.

1.2 Research question

The present economic circumstances house a good opportunity to focus this study on earnings management. More specifically this study wonders if, due to the probability of covenant violation in debt contracts, managers of football clubs have an incentive to act opportunistic. As a result the research question is as follows:

What is the effect on earnings management by Professional Football Organizations due to possible closeness to covenant violation in the period 2004/2005 till 2008/2009?

This research question is partly subtracted from the debt covenant hypothesis from Positive Accounting Theory. This hypothesis predicts that when a firm is closer to violation of debt covenants, based on accounting numbers, the more likely the manager of the firm is to use income increasing accounting methods (Watts and Zimmerman, 1990). Positive Accounting Theory is concerned with predicting the choices of accounting policies by firm managers. (Scott, 2009, p. 284)

Using financial statements from Dutch & English Premier League clubs from the season 2004/2005 till 2008/2009, the primary objective is to find evidence in favor of the debt covenant hypothesis from Positive Accounting Theory. In addition, this research investigates earnings management in one specific industry, the football industry.

1.3 Sub questions

To find an answer, the main research question is split up into six sub questions, which will be discussed in the following chapters:

- What is the relevant law and regulation to become a PFO and regarding financial accounting for PFO's ? (chapter 2)
- Who are the stakeholders of a PFO? (chapter 3)
- What is earnings management and which economic background theories can explain the existence of earnings management? (chapter 4)
- What are the results of prior research concerning earnings management? (chapter 5)
- Which hypotheses will be tested and how will this research be executed? (chapter 6)
- What are the results of this research? (chapter 7)

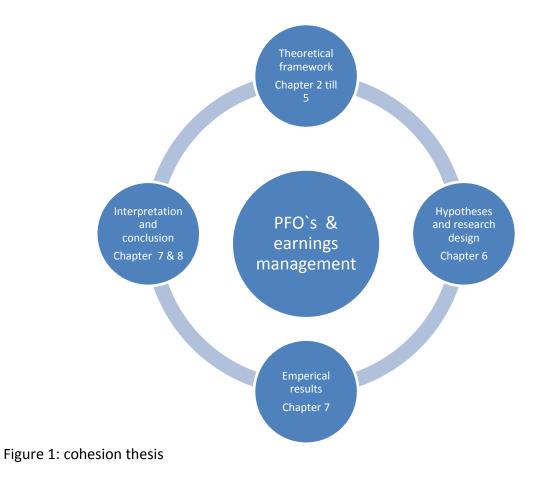
1.4 Relevance

To date no research (from what I know) has tested hypotheses concerning predictions from Positive Accounting Theory about debt covenant violation in the football industry. Furthermore, this research is a response to a call by Watts and Zimmerman that it is important to lay foundations for "major breakthroughs from viewing accounting as a choice that is endogenous with the choice of organization, contracting and financial structures by stressing the linkage between the theory and the empirical tests and by investigating interand intra-industry variations in accounting methods and other organizational choices" (Watts and Zimmerman, 1990, p. 152).

1.5 Structure

The remainder of this proposal is organized as follows. In chapter 2 relevant law and regulations to become a PFO and regarding accounting for PFO's will be elaborated. Chapter 3 elaborates stakeholder theory and identifies stakeholders of a PFO that can affect or be affected by the PFO's activities. Chapter 4 explores several existing and frequently applied definitions on earnings management, discusses methods and patterns to manage earnings and covers theoretical background on earnings management, at last it concerns methodology to detect earnings management. Chapter 5 reviews empirical research on earnings management. Chapter 6 enumerates the research design for this research. First, the hypotheses will be developed. Second, the methodology to measure earnings management

at PFO's is elaborated followed by a model for the regression analysis. The analysis and interpretation of the empirical research results will be presented in chapter 7. In chapter 8 the final conclusion, limitations and recommendations for future research are discussed.



2 Law and regulation regarding PFO's

2.1 Introduction

This chapter elaborates requirements to become a PFO and law and regulations regarding financial reporting. In paragraph 2.2 the requirements to become a PFO will be explained. Paragraph 2.3 discusses financial reporting from a theoretical perspective. Paragraph 2.4 covers accounting standards applicable for PFO's (IFRS, Dutch GAAP, UK GAAP and KNVB GAAP). At last, paragraph 2.5 examines possible conflicts between IFRS and KNVB GAAP.

2.2 License requirements

In The Netherlands a football club has to meet several requirements to become a PFO. This process is called licensing and is monitored by the KNVB. The aim of licensing is to ensure the continuity of PFO's and competitions. The KNVB pursues this objective by making the health status of individual professional clubs as transparent as possible in the field of finance, safety and organization. The application for a license shall at the latest be filed by 1 May preceding the year in which the applicant intends to participate in professional football. At the application a PFO has to add a business plan, an accommodation plan and a safety plan. The business plan consist of a technical, commercial and financial plan. In the financial plan, the opening balance sheet and a comprehensive multi-year operating budget and cash flow forecast are included, it should also be reviewed by an auditor and their statement should also be sent. The documents will be examined by the licensing commission and in this process they will check if the content meets the licensing requirements. The licensing requirements are arranged as follows: a sportive framework, an organization and a financial framework. An overview of the licensing requirements can be found in appendix 1.⁷

2.3 Financial Reporting

The objective of financial reporting according to Deegan and Unerman (2006, p. 171) is "to provide information about the financial position, performance and changes in financial position of an entity that is useful to a wide range of users in making economic decisions". The information demands and needs of many external parties is not homogenous, making it impossible to generate a single report which satisfies all interested parties (Deegan and Unerman, 2006). As such, Deegan and Unerman (2006, p. 32) state that "the process of

⁷ KNVB, Reglementen Seizoen 2010/11, Betaald voetbal

financial reporting leads to the generation of reports deemed to be general purpose financial reports". Deegan and Unerman (2006, p. 32) further state that "financial reporting tends to be heavily regulated in most countries, with many accounting standards and other regulations governing how particular transactions and events are to be recognized, measured and disclosed. The reports generated, such as the balance sheet, the income statement, statement of cashflows, operating and financial review, and supporting notes, are directly impacted by the various accounting regulations in place". Therefore, the next paragraphs cover relevant financial accounting law and regulation (accounting standards) regarding PFO's from The Netherlands and England.

2.4 Accounting Standards

According to Stolowy and Lebas (2006, p. 13): "Accounting standards are authoritative statements of how particular types of transaction and other events should be reflected in the financial statements. These standards include specific principles, bases, conventions, rules and practices necessary to prepare the financial statements". Accounting standards are regulated and developed by accounting-standard setting bodies in the form of Generally Accepted Accounting Principles, or GAAP. Such regulation primarily exists to protect individuals who have an information disadvantage (Scott, 2009, p. 444). Scott states that "this points up the fact that information asymmetry underlies the regulation of information production. If there was no information asymmetry there would be no need to protect individuals from the consequences of information disadvantage. In addition, to protect ordinary investors, such regulations are also intended to improve the operation of capital markets by enhancing public confidence in their fairness".

The development of accounting standards is called "standard setting". According to Scott (2009, p. 445): "Standard setting is the regulation of firms' external information production decisions by some central authority, this authority to set standards is allowed by government". Generally, accounting standards are developed through the so called "due process", which involves interested individuals and organizations from around the world. The due process comprises six stages: Setting the agenda, Planning the project, Developing

and publishing the discussion paper, Developing and publishing the exposure draft, Developing and publishing the standard and After the standard is issued.⁸

For the purpose of this research IFRS, Dutch GAAP, UK GAAP and KNVB GAAP will be discussed. IFRS and these GAAPs` are applicable for PFO`s.

2.4.1 IFRS

The International Accounting Standards Board is the central authority that is responsible for "developing, in the public interest, a single set of high quality, understandable and enforceable global accounting standards that require high quality, transparent and comparable information in financial statements and other financial reporting to help participants in the world's capital markets and other users make economic decisions"9. The IASB has developed accounting standards that are called International Financial Reporting Standards (IFRSs). IFRS consists of the IAS-norms (International Accounting Standards), extended with several additional requirements which are presented as IFRS-norms. The purpose of IFRS is that it will ultimately become a global standard for financial reporting. Currently, IFRS based financial reports are accepted on almost all stock exchanges (including London, Tokio, Frankfurt and Amsterdam). Major exchanges where this isn't possible yet, are the U.S. stock exchanges. The adoption of IFRS in the consolidated accounts is mandatory since the financial year beginning on or after January 1, 2005 for all companies, on which the national legislation of a EU member applies and whose securities are listed at an official regulated market at one of the member states of the European Union (Handboek jaarrekening, Ernst & Young, 2010). Several PFO's in The Netherlands and England are mandatory reporting conform IFRS because they are listed on a stock exchange.

2.4.2 Dutch GAAP

Law regarding Dutch companies is part of the Dutch Civil Code Titel 9 Boek 2 BW; including: The General Administrative Order on model formats and The Resolution on fair value. Regulation regarding Dutch companies is developed by the Dutch Accounting Standards Board (RJ). In The Netherlands legal provisions relating to all legal persons and firms are covered in Titel 9 Boek 2 BW. The financial reporting regulatory framework is based on relevant elements of the Dutch Civil Code, and is expanded by the Dutch Accounting

⁸ http://www.ifrs.org/How+we+develop+standards/How+we+develop+standards.htm

⁹ http://www.iasplus.com/standard/preface.htm

Standards, judicial precedence ('de Ondernemingskamer') and more recently, International Financial Reporting Standards and the Authority for Financial Markets (AFM). The Dutch Accounting Standards Board (RJ) provides further guidance on the interpretation of the law and in points of interest not specifically covered by Titel 9 BW 2. The Dutch Accounting Standards form an important part of the Generally Accepted Accounting Principles. However, the Dutch Accounting Standards Board has no legality (PWC, 2009, A comparison between IFRS for SMEs, Dutch GAAP and IFRS, p. 3).

Titel 9 Boek 2 BW applies to "cooperaties", "onderlinge waarborgmaatschappijen", "BV's", "NV's", "vennootschappen onder firma", "commanditaire vennootschappen", and to "commerciële stichtingen" en "commerciële verenigingen" (Handboek jaarrekening, Ernst & Young, 2010). The most common legal forms among PFOs are the Public Limited Company (Naamloze vennootschap) or the Private Limited Company (Besloten vennootschap). However, two clubs in the Dutch premier league operate as a foundation. The provisions with respect to the financial statements, annual report and the "overige gegevens" of Titel 9 Boek 2 BW apply to the these foundations if they meet three conditions: managing one or more enterprises, these enterprise have a minimum net revenue of € 4.400.000 and the foundation or association is not subject to special regulations. Enterprise is defined "in de beleidsregel van de staatssecretaris van Economische Zaken van 23 juni 2008", this document states: "an independent administrative authority from one or more persons by which through sufficient input of labor or capital on behalf of third parties services or goods are established with the intent to obtain material benefits". The foundations, F.C. Twente and Vitessse (till 2008) apply to the definition and to the other above mentioned conditions and are therefore to be regarded as commercial.

2.4.3 UK GAAP¹⁰

Accounting standards in the UK are issued by the Accounting Standards Board (ASB), these standards together with UK company law are informally called Generally Accepted Accounting Principles in the United Kingdom (UK), or UK GAAP. This is the framework of regulation that establishes how company accounts must be prepared. Accounting standards developed by the Accounting Standards Boards are documented in 'Financial Reporting Standards'. UK company law is laid down in the Companies Act 2006. Minimum reporting

¹⁰ http://www.frc.org.uk/asb/about/

requirements for companies are implemented in The Companies Act, for example, limited companies are required to file their accounts with the Companies House. All PFO's in the premier league are a public or private limited company, this means they are mandatory to report conform UK GAAP.

2.4.4KNVB GAAP and FA GAAP

PFO's in The Netherlands have to file their accounts from the previous year ending June 30 with the KNVB at the latest on 1 October. PFO's are mandatory to report their annual accounts to the KNVB conform the "Richtlijn Verslaggeving KNVB Modelstaten", or KNVB GAAP. These guidelines are based on Titel 9 BW 2, the law concerning accounting for Dutch companies. Some examples are given hereafter¹¹:

- Transfer fees have to be capitalized at historical cost and amortization should be in equal installments.
- A description and carrying amount of individually material intangible assets.
- If a licensee reports a deferred tax asset, then this must be elaborated in the notes on the financial statements. The licensing committee may correct the latency.
- Income recognized as revenue only consists of the benefits arising from the normal activities of the licensee. Transfer activities of a licensee have to be separated from the normal activities.
- Licensees must prepare a cash flow statement.

In The FA Handbook 2010/11, under Rule I: Financial Records, the FA elaborates their demands concerning financial reporting for PFO's in England. The most important parts will be cited in this section. Rule I states: "A Club shall keep accounting records for recording the fact and nature off all payments and receipts so as to disclose with reasonable accuracy, at any time, the financial position including the assets and liabilities of the Club" (FA, The Rules of The Association and Laws of the Game, Season 2010-2011, 2010, p. 120). "A Club which is formed and registered under the Companies Act shall, on demand, forward to The Association a copy of its annual accounts most recently approved by its Board of Directors. Such accounts must be prepared in accordance with the requirements of the Act and any other applicable regulatory requirements; and have attached either an accountant's

¹¹ http://www.accountancynieuws.nl/actueel/accountancymarkt/de-betaald-voetbalsector-wil-eenstevige.92948.lynkx?PostedField[keyword]=voetbal&Confirmed=Zoeken

compilation report or an audit report prepared by an independent Appropriately Qualified Accountant" (FA, The Rules of The Association and Laws of the Game, Season 2010-2011, 2010, p. 120). "All loans extended to a Club should be documented. Copies should be retained by the club. The loan document should include the following information: (i) the value of the loan; (ii) the length of the loan; (iii) the interest rate charged, (iv) repayment terms, (v) the full names of the individual or corporate body extending the loan, (vi) the terms in the event of a default on the loan" (FA, The Rules of The Association and Laws of the Game, Season 2010-2011, 2010, p. 120).

2.5 Comparison of IFRS, UK GAAP, Dutch GAAP^{12 13}

This overview of differences and similarities is applicable for PFO's with respect to comparability of Dutch and English, listed and non-listed PFO's. The accounting standards that will be discussed are based on the financial statements of a PFO. This overview is based on similarities and differences with regard to recognition and measurement. Specifically, accounting standards will be elaborated with regard to the accrual model that will be used to detect earnings management (chapter 6.3).

Players' Registrations (Intangible Assets)

IFRS carries Intangible assets, like player registrations or extended contracts, at cost less any accumulated amortization and any accumulated impairment losses (cost model). Cost includes the purchase price; and any costs directly attributable to preparing the assets for its intended use. The revaluation model is an option if fair value can be determined by reference to an active market. The player transfer market is not an active one therefore al clubs in England and The Netherlands reporting conform IFRS use the cost model. The useful life of an intangible asset that arises from contractual rights should not exceed the period of the contractual rights but may be shorter depending on the period over which the asset is expected to be used. Intangible assets are tested for impairment when there is an indication that the asset may be impaired. Existence of impairment indicators is assessed at each reporting date. **Dutch GAAP** standards with regard to intangible assets (Players' Registrations) are similar to IFRS. In **UK GAAP** there is no explanation of what cost includes and **UK GAAP** requires an impairment review of all intangibles at the end of the first full year

¹² PWC, 2009, A comparison between IFRS for SMEs, Dutch GAAP and IFRS

¹³ PWC, 2009, A comparison of UK GAAP, IFRS for SMEs and IFRS

following their acquisition (PWC, 2009, A comparison between IFRS for SMEs, UK GAAP/Dutch GAAP and IFRS).

Property, plant and equipment (Tangible Assets)

According to IFRS, Dutch GAAP and UK GAAP PPE is measured initially at cost. Cost includes: (i) purchase price, (ii) any directly attributable costs to bring the asset to the location and condition necessary for it to be capable of operating in the manner intended by management, (iii) the initial estimate of costs of dismantling and removing the item and restoring the site on which it is located (iv) borrowing costs that are directly attributable to the acquisition, construction or production of a qualifying asset are required to be capitalized as part of the cost of that asset (UK GAAP: There is an accounting policy choice regarding borrowing costs if certain recognition criteria are met). In addition to the cost model, the revaluation model is an option, in which classes of PPE are carried at a revalued amount less any accumulated depreciation and subsequent accumulated impairment losses. Dutch GAAP requires a revaluation reserve that is recognized for the difference between the cost price and the revalued amount. Conform IFRS, Dutch GAAP and UK GAAP the depreciation charge for each period is recognized in the profit or loss unless it is included in the carrying amount of another asset. The depreciable amount of an asset is allocated over its useful life. According to IFRS and UK GAAP the residual value and the useful life of an asset are reviewed at least at each annual reporting date and amended if expectations differ from previous estimates. According to Dutch GAAP the residual value and the useful life of an asset are reviewed if there is an indication of change since the last reporting date and amended if expectations differ from previous estimates. IFRS, Dutch GAAP and UK GAAP require that PPE is tested for impairment when there is an indication that the asset may be impaired. Existence of impairment indicators is assessed at each reporting date (PWC, 2009, A comparison between IFRS for SMEs, UK GAAP/Dutch GAAP and IFRS).

Investments in associates

According to **IFRS**, **UK GAAP** the investments in associates with significant influence are accounted for using the equity method. **Dutch GAAP** accounts for its 'participating interest' with significant influence using one of the following: (i) the net asset value method, (ii) visible equity value , (iii) the cost method. The net asset value is applicable for investments in associates. Unlike the equity method, goodwill is recognized as a separate intangible asset;

therefore subject to amortization and a separate impairment test if triggering events are applicable (PWC, 2009, A comparison between IFRS for SMEs, UK GAAP/Dutch GAAP and IFRS).

Deferred taxes

According to IFRS and Dutch GAAP deferred tax is provided for all temporary differences and the carry-forward of unused tax losses, with a few exceptions such as the initial recognition of goodwill. 'Temporary difference' is not a defined term in UK GAAP. Instead UK GAAP uses the term 'timing difference'. UK GAAP requires recognition of a provision for deferred tax using an 'incremental liability approach on the basis of timing differences that have been originated but not reversed at the balance sheet date. According to IFRS, Dutch GAAP and UK GAAP a deferred tax asset is only recognized to the extent that is probable that there will be sufficient future taxable profit to enable recovery of the deferred tax asset. Furthermore Dutch GAAP strongly recommends the recognition of a deferred tax liability related to revaluation of property, plant and equipment. Deferred tax assets and liabilities are measured using tax rates (and tax laws) that apply or have been enacted by the reporting date. According to IFRS deferred tax assets and liabilities are not discounted. Under Dutch GAAP and UK GAAP deferred taxes are allowed to be discounted (PWC, 2009, A comparison between IFRS for SMEs, UK GAAP/Dutch GAAP and IFRS).

Current tax

According to IFRS, Dutch GAAP and UK GAAP unpaid current tax for current and prior periods is recognized as a liability. If the amount already paid exceeds the amount due for those periods the excess is recognized as an asset. The benefit relating to a tax loss that can be carried back to recover current tax of a previous period is recognized as an asset. Current tax liabilities (assets) for the current and prior periods and related tax expense (income) are measured at the amount expected to be paid to (recovered from) the taxation authorities, using the tax rates that have been enacted or substantively enacted by the reporting date (PWC, 2009, A comparison between IFRS for SMEs, UK GAAP/Dutch GAAP and IFRS)

Inventories

According to **IFRS**, **Dutch GAAP** and **UK GAAP** inventories are initially recognized at cost. The cost of inventories includes all costs of purchase, costs of conversion and other costs incurred in bringing the inventories to their present location and conditions. Inventories are

subsequently valued at the lower of cost and selling price less cost and selling price less costs to complete and sell. Inventories are assessed for impairment at each reporting date. **Dutch GAAP** allows inventories to be measured at replacement value. In case of measurement at replacement value a revaluation reserve is recognized. According to IFRS the cost of inventories used is assigned by using either the FIFO or weighted average formula. LIFO is not permitted. Under **Dutch GAAP** and **UK GAAP** LIFO is allowed but not recommended (PWC, 2009, A comparison between IFRS for SMEs, UK GAAP/Dutch GAAP and IFRS).

Revenue/Debtors/Deferred income

According to IFRS, Dutch GAAP and UK GAAP measurement of revenue at the fair value of the consideration received, receivable or deferred income (current liability) is required. Revenue recognition criteria for each of these categories include the probability that the economic benefits associated with the transaction will flow to the entity and that the revenue and costs can measured reliably. The sale of players is recognized as income because it does not arise from the entity's ordinary activities (PWC, 2009, A comparison between IFRS for SMEs, UK GAAP/Dutch GAAP and IFRS).

Expense/ Creditors/ Deferred expense

According to **IFRS**, **Dutch GAAP** and **UK GAAP** the recognition of expenses results directly from the recognition and measurement of assets and liabilities. Expenses are recognized in the statement of comprehensive income / the income statement when decrease in future economic benefits related to a decrease in an asset or an increase of a liability has arisen than can be measured reliably (PWC, 2009, A comparison between IFRS for SMEs, UK GAAP/Dutch GAAP and IFRS).

Provisions

According to IFRS, Dutch GAAP and UK GAAP the amount recognized as a provision is the best estimate of the amount required to settle the obligation at the reporting date. Where material, the amount of the provision is the present value of the amount expected to be required to settle the obligation. Under Dutch GAAP it is allowed to measure a provision, either at present value or nominal value (PWC, 2009, A comparison between IFRS for SMEs, UK GAAP/Dutch GAAP and IFRS).

Long-term debt (loans, bonds)

According to **IFRS**, **Dutch GAAP** and **UK GAAP** debt is measured initially at fair value at the date of acquisition. Transaction costs that are directly attributable to the debt are included in the fair value. After the initial recognition the debt is measured at amortized costs (PWC, 2009, A comparison between IFRS for SMEs, UK GAAP/Dutch GAAP and IFRS).

2.5.1 Conflicts between KNVB GAAP and IFRS

The KNVB has guidelines for PFO's concerning their financial statements. These guidelines are based on Titel 9 BW 2, the law concerning accounting for Dutch companies. In paragraph 2.4.1 IFRS is discussed, IFRS is mandatory for listed companies. In The Netherlands there is one listed PFO, Ajax. A question that arises is if there is a conflict between proposed accounting standards conform IFRS and the guidelines proposed by the KNVB. The guidelines presented in paragraph 2.4.4 will be discussed with respect to IFRS and Ajax.

KNVB GAAP recommends player registrations to be capitalized at historical cost and amortization should be in equal installments. IFRS carries player registrations, at cost less any accumulated amortization and any accumulated impairment losses (cost model). KNVB GAAP doesn't mention impairments. AJAX capitalizes costs associated with acquiring players' registrations. Amortization proceeds, in equal installments, over the period of the respective players' contracts. Each contract is tested for impairment at reporting date. KNVB GAAP requires a description and carrying amount of individually material intangible player registrations. IFRS also requires a disclosed description and carrying amount of individually material intangible assets. AJAX disclosed in the annual report of 2009/2010 the carrying amounts of Luis Suarez and Miralem Sulejmani. According to KNVB GAAP a deferred tax asset must be elaborated in the notes on the financial statements. IFRS requires several details being disclosed. AJAX disclosed several details concerning their deferred tax asset. KNVB GAAP requires that income recognized as revenue only consists of the benefits arising from normal activities of the licensee. Transfer activities of a licensee have to be separated from the normal activities. IFRS defines income as increases in economic benefits during the reporting period in the form of inflows or enhancements of assets. Revenue is defined as income that arises in the course of an entity's ordinary activities. AJAX doesn't recognize the benefits of players traded in the revenue, they are recognized separately as profit on disposals of player registrations. At last, KNVB GAAP requires a cash flow statement.

According to IFRS a cash flow statement is mandatory. AJAX has a cash flow statement in their annual report.

2.6 Conclusion

This chapter investigated requirements to become a PFO and relevant law and regulation with regard to financial reporting for PFO's. For PFO's in the Netherlands and England this includes the accounting standards IFRS for listed PFO's, Dutch GAAP for non-listed Dutch PFO's, and UK GAAP for non-listed English PFO's. In addition, The football associations KNVB and FA have elaborated guidelines, these guidelines are based on Dutch and UK GAAP or require some additional disclosure. A question that has arisen is about the comparability between IFRS, UK GAAP, Dutch GAAP and KNVB GAAP with regard to several relevant accounting standards. Although, there are some differences a conclusion is that the regulation generally is harmonized. Therefore, a comparison between PFO's that report conform IFRS, UK GAAP, Dutch GAAP and KNVB is possible without significant measurement error.

3 Identifying stakeholders from a PFO

3.1 Introduction

Every organization has to deal with stakeholders. The term stakeholder itself raises questions. What is a stakeholder and who are stakeholders of a organization? There are many definitions of stakeholders. A definition for a stakeholder is given by Freeman (1984, p. 46): "A stakeholder in an organization is any group or individual who can affect or is affected by the achievement of the organization's objectives". This chapter elaborates stakeholder theory in paragraph 4.2. The subsequent paragraph identifies stakeholders of a PFO with regard to the purpose of this research.

3.2 Stakeholder theory

Stakeholder theory provide explanations about what drives an organization to make particular disclosure (Deegan and Unerman, 2006, p. 258). Deegan and Unerman (2006, p. 289) state that "it is considered that the expectations of the various stakeholder groups will impact on the operating and disclosure policies of the organizations. The organization will not respond to all stakeholders equally, but rather, will respond to those that are deemed to be powerful". In the scientific literature stakeholder theory has been justified and advanced on the basis of its descriptive accuracy, instrumental power and normative validity (Donaldson and Preston, 1995, p. 65). Donaldson and Preston have examined these three aspects of the theory. First, descriptive, "The theory is used to describe, and sometimes to explain, specific corporate characteristics and behaviors. For example, stakeholder theory has been used to describe (a) the nature of the firm, (b) the way managers think about managing, (c) how board members think about the interests of corporate constituencies, and (d) how some corporations are actually managed" (Donaldson and Preston, 1995, p. 71). Second, Instrumental, "The theory, in conjunction with descriptive data where available, is used to identify the connections, or lack of connections, between stakeholder management and the achievement of traditional corporate objectives" (Donaldson and Preston, 1995, p. 71). Finally, Normative, "The theory is used to interpret the function of the corporation, including the identification of moral philosophical guidelines for operation and management of corporations" (Donaldson and Preston, 1995, p. 71).

Other research has focused on attributes of stakeholders to find out how important stakeholders are in relation to an organization. Research by Mitchell, Agle and Wood (1997,

p. 854) "proposes that classes of stakeholders can be identified by their possession or attributed possession of one, two, or all three of the following attributes. (1) the stakeholder's power to influence the firm, (2) the legitimacy of the stakeholder's relationship with the firm, and (3) the urgency of the stakeholder's claim on the firm". These attributes are defined in literature as follows. Agle, Mitchell and Sonnenfeld (1999, p. 508) state "that power exist where one social actor, A, can get another social actor, B, to do something that B would not have otherwise done. Legitimacy is a generalized assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions. Urgency is a multidimensional notion that includes both critically and temporality". Mitchell et al. (1997, p. 854) further propose a theory of stakeholder salience. They produce an extensive typology based on the attributes power, legitimacy, urgency and stakeholder salience. The typology of stakeholders is as follows: The low salience stakeholders that possess only one of the three attributes are called latent stakeholders and include dormant, discretionary, and demanding stakeholders. The moderately salient stakeholders that possess two attributes are called expectant stakeholders and include dominant, dependant, and dangerous stakeholders. The highly salient stakeholders that possess all three attributes are called definitive stakeholders. It depends on how much power, legitimacy and urgency a stakeholder has to be classified as dormant, discretionary, demanding, dominant, dependant, dangerous or definitive (Mitchell et al, 1997, p. 872-879).

3.3 Identifying stakeholders from a PFO

Football is a sport with a great economic and social significance. In this research stakeholder theory will be used to identify stakeholders of a PFO. Specifically, the theory from Mitchell et al. based on the attributes power, legitimacy and urgency will be used to identify stakeholders and to determine their importance. With respect to earnings management only stakeholders will be identified who are economically significant and the role of financial statements will be weighed. The relevant stakeholders for a PFO are: Shareholders, Banks, The Football Association, Sponsors, Supporters, other Investors and the Tax Authority.

Shareholders, individuals or organizations who own shares of a PFO. They have the power to influence the company. During shareholders' meetings they can take decisions which force a PFO to change. They can have influence on PFO policies by enforcing an executive position.

Shareholders posses legitimacy because they own shares of the PFO. Shareholder can also have urgency. This happens when a major shareholder disagrees with the policies of the PFO and asks for an explanation. The role of the financial statements are important. Shareholders could make economic decisions based on accounting information. For instance, by selling a stake of the company.

Banks, lender of the PFO. They have the power to influence the company. When a bank grants a loan to a professional club several accounting based covenants will be registered in a debt contract. If a PFO doesn't comply to the agreements due to financial distress they will face negative consequences, in worst case scenario this could mean they can file for bankruptcy. Banks have legitimacy because the agreements between the club and a bank are registered in a debt contract. Banks can also have urgency. When a PFO is in financial distress negotiation between the bank and the PFO should be arranged quickly. The role of the financial statements is important. Banks rely heavily on accounting information. The covenants are based on ratios that can be derived from the financial statements. For instance, the interest coverage ratio, the debt/equity ratio, etc.

The Football Association, the associations KNVB, FA, UEFA. These associations are able to influence the PFO by withdrawing the football license, handing out fines or points deduction if a club does not meet certain conditions concerning security and finances. In addition, a club can be suspended or excluded from participation in lucrative tournaments through misbehavior of its supporters. In all the above cases this leads to reduced revenues. When a PFO is successes full this will result in additional revenue through profit premiums. The KNVB has legitimacy. They possess authority and therefore a PFO has to conform to the rules imposed by the KNVB. The KNVB has urgency. They are able to withdraw a club's license, it requires a quick operation of the club to prevent this from happening. The role of the financial statements is important. As discussed in chapter 3, the KNVB has formulated KNVB GAAP. PFO's are mandatory to report to the KNVB conform the "Richtlijn Verslaggeving KNVB Modelstaten". Partly based on the presented financial position, the KNVB takes decisions regarding the license and the category in which the PFO is classified.

Sponsors, resulting in sponsorship income and similar commercial income. Sponsorship income is of major importance to a club. For instance, revenue generated by AJAX in 2009/2010 from their sponsor Aegon is \in 11,400,000 i.e. 16,4% from their total net revenue. Sponsors are able to influence the company. In the case of disturbances a sponsor is automatically associated. This may result in the withdrawal of a sponsor and thus the income. In addition, a sponsor has influence when results are bad or good. This could lead to an increase or decrease of income. This indicates a sponsor possesses the attributes power and urgency. Sponsors have legitimacy because the arrangements between the club and a sponsor are registered in a contract. Despite their major contribution to the income of a PFO the role of the financial statements is limited. The choice of a sponsorship probably depends mainly on its contribution to their image, potential customers and their social network.

Supporters, people who are emotionally but also economically connected to the club. PFO's generate revenue through gate receipts (business seats, season cards, other tickets), merchandising and other match day revenue. Supporters posses power because they are able to directly influence these revenues by not buying tickets for matches or by not buying merchandising, etc. Supporters posses legitimacy because they expect a save environment when visiting the stadium for a match. Supporters could demonstrate heavily due to a lack of sportive success, when demonstrations occur a PFO has to respond urgently. Nowadays some PFO's give supporters the opportunity to invest in their club. For instance, The "Vrienden van Feyenoord" (VvF) own 30% of Feyenoord NV. Through investments from supporters and other participants the VvF are able to obtain 49% of Feyenoord NV. Therefore the role of the financial statements will increase in its importance when supporters invest in their club.

Other investors, people who invest in a PFO through loans, bonds and other investment vehicles. These investors possess power because they provide a PFO with necessary funds to buy better players and/or to continue operations. Investors have legitimacy because the arrangements between the club and an investor are registered in a contract. When mismanagement occurs investors demand an explanation, therefore they possess urgency. The financial statements are of great importance to investors because debt agreements like interest rates, coupon rates and repayment terms will be based on the risks associated with

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the investment. These risk are partly subtracted from the financial statements. In addition, the financial statements will be used to hold the management of the PFO responsible for spending the investors money.

Tax authority. Every PFO is subject to tax laws therefore the tax authority possess power, legitimacy and urgency. The tax authority is an important stakeholder because of amounts of income taxes payable (potentially recoverable) in future in respect of taxable (deductable) temporary differences (and the carry-forward of unused tax losses and tax credit) the tax authority is indirectly funding a PFO. The role of the financial statements is limited because the financial statements are based on Dutch GAAP, IFRS and UK GAAP instead of tax laws.

3.4 Conclusion

This chapter investigated Stakeholder theory and identified stakeholders of a PFO with respect to the purpose of this research. A stakeholder in an organization is any group or individual who can effect or is affected by the achievements of the organization's objectives. Expectations of various stakeholder groups will impact on the operating and disclosure policies of the PFO. A PFO will not respond to all stakeholders equally, but rather, will respond to those that are deemed to be 'powerful'. To identify their importance the theory from Mitchell et al. based on the attributes power, legitimacy and urgency is used. In addition, with respect to earnings management the importance of the financial statements has been weighed for stakeholder. This theory identified the following relevant stakeholders from a PFO: Shareholders, Banks, The Football Association, Sponsors, Supporters, other Investors and the Tax Authority. As a conclusion the most important stakeholders with regard to these attributes and the financial statements are Banks, other Investors and the Football Association.

4 Earnings management

4.1 Introduction

Earnings management can be approached from both a financial reporting and a contracting perspective. Managers meeting analysts' earnings forecasts due to earnings management is an example from a financial reporting perspective. When contracts are incomplete and inflexible earnings management can be applied to protect the firm from adverse consequences. This is an example from a contracting perspective (Scott, 2009, p. 403). What is earnings management? In the literature a lot of definitions can be found. In paragraph 4.2 several definitions will be discussed. The purpose of the introduction of these definitions is to understand what earnings management is about. In the paragraphs that are following respectively methods and patterns to manage earnings, background theory and methodology to detect earnings management will be discussed.

4.2 Earnings management definitions

Scott (2009, p. 403) states: "Earnings management is the choice by a manager of accounting policies, or actions affecting earnings, so as to achieve some specific reported earnings objective." Ronen and Yaari (2008, p. 25) state different definitions of earnings management, classifying them as white, gray, or black:

White definition: "Earnings management is taking advantage of the flexibility in the choice of accounting treatment to signal the manager's private information of future cash flows."

Gray definition: "Earnings management is choosing an accounting treatment that is either opportunistic (maximizing the utility of management only) or economically efficient."

Black definition: "Earnings management is the practice of using tricks to misrepresent or reduce transparency of the financial reports."

According to Ronen and Yaari the following definition by Healy and Wahlen (1999, p. 6) that best describes earnings management is: "Earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholder about the underlying economic performance of the company, or to influence contractual outcomes that depend on reported accounting numbers." Another definition they mention is a definition by Schipper (1989, p. 92): "a purposeful intervention in the external financial reporting process, with the intent of obtaining some private gain (as opposed to, say, merely facilitating the neutral operation of the process)."

In this paper the earnings management definition by Healy and Wahlen will be used. This definition is carrying all relevant aspects of earnings management. However, a critical note has to be made because earnings management with respect to contractual outcomes can be predicted by Positive Accounting Theory (chapter 4.4) but misleading stakeholders can't. An economic decision based on the underlying economic performance from a stakeholder can only be made once. Therefore, ex ante, a stakeholder is never aware of being mislead. Ex post, alternative decisions can of course be measured.

4.3 Methods and patterns to manage earnings

According to the definitions of Scott and Healy & Wahlen, earnings management includes both accounting policy choice and real actions. There is an extensive list of literature on different methods used to manage earnings. For the purpose of this thesis i have considered it not useful to fully cover these methods. Ronen and Yaari provide a brief description about several methods used to manage earnings. Based on literature Ronen and Yaari (2008, p. 31) state that earnings are known to be managed through the following:

- "A choice from a menu of treatments that are accepted under GAAP,
- A decision on the timing of the adoption of a new standard,
- A judgment call when GAAP requires estimates,
- A classification of items as above or below the line of operating earnings in order to separate persistent earnings from transitory earnings,
- Structuring transactions to achieve desired accounting outcomes,
- Timing the recognition of revenues and expenses through,
- A real production and investment expenses,
- Managing the transparency of the presentation,
- Managing the informativeness of earnings through various means"

The above mentioned methods could be applied by managers to manage earnings. In addition this managing fits a purpose. Scott states that managers may engage in several patterns of earnings management, being income maximization, taking a bath, income minimization and income smoothing. Scott (2009, p. 405) describes income maximization as "from Positive Accounting Theory, managers may engage in a pattern of maximization of reported net income for bonus purposes, providing this does not put them above the cap. Firms that are close to debt covenant violations may also maximize income."

Scott (2009, p. 405) describes taking a bath as "This can take place during periods of organizational stress or reorganization. If a firm must report a loss, management may feel it might as well report a large one – it has little to lose at this point. Consequently, it will write-off assets, provide for expected future costs, and generally "clear the decks." Because of accrual reversal, this enhances the probability of future reported profits. In effect, the recording of large write-offs puts future earnings "in the bank."

Scott (2009, p. 405) describes income minimization as "this is similar as taking a bath, but less extreme. Such a pattern may be chosen by a politically visible firm during periods of high profitability. Policies that suggest income minimization include rapid write-offs of capital assets and intangibles, expensing of advertising and R&D expenditures, successful-efforts accounting for oil and gas exploration costs, and so on."

Scott (2009, p. 405) describes income smoothing as "From a contracting perspective, riskaverse managers prefer a less variable bonus stream, other things equal. Consequently, managers may smooth reported earnings over time so as to receive relatively constant compensation. Efficient compensation contracting may exploit this effect, and condone some income smoothing as a low-cost way to attain the manager's reservation utility." About covenants in long-term lending agreements Scott says the following: "The more volatile the stream of reported net income, the higher the probability that covenant violation will occur. This provides another smoothing incentive to reduce volatility of reported net income, the higher the probability that covenant violation will occur."

4.4 Contracting costs

Before this chapter continues with a description of Positive Accounting Theory it is important that we understand why managers choose specific accounting methods to present the outcome of the firm's economic activities. In a perfect world, according to the finance theory, incentives for firms' managers to change accounting methods would not exist because accounting choice per se could not affect firm value (Watts and Zimmerman, 1990). This assumption is based on the efficient market theory, that predicts no price reaction to accounting policy changes that do not impact underlying profitability and cash flows (Scott, 2009, p. 283). However, in the real world firms face contracting costs resulting from the contracts that firms have with stakeholders, like transaction costs, agency costs, information costs, renegotiation costs and bankruptcy costs (Watts and Zimmerman, 1990). Many of these contracts involve accounting variables. Scott (2009, p. 285) states several examples of the involvement of accounting variables "For example, employee promotion and remuneration may be based on accounting-based performance measures such as net income, or the meeting of pre-set individual targets, such as cost control. Contracts with suppliers may depend on liquidity and financing variables. Lenders may demand protection in the form of maintenance of certain financial ratios such as debt-to-equity or interest coverage, or minimum levels of working capital or equity."

4.4.1 Positive Accounting Theory

Watts and Zimmerman (1978, 1990) have created a positive theory that is often used to explain the decisions of managers as a response to accounting choice. Scott (2009, p. 284) gives the following description of this Positive Accounting Theory: "The Positive Accounting Theory is concerned with predicting the choices of accounting policies by firm managers and how managers will respond to proposed new accounting standards".

Watts and Zimmerman (1990, p. 138) state that most accounting choice studies use combinations of three sets of variables: "variables representing the manager's incentives to choose accounting methods under bonus plans, debt contracts, and the political process". These variables have led to three hypotheses concerning the choice of accounting policies by firm managers:

The bonus plan hypothesis: "The bonus plan hypothesis is that managers of firms with bonus plans are more likely to use accounting methods that increase current period reported income. Such selection will presumably increase the present value of bonuses if the compensation committee of the board of directors does not adjust for the method chosen" (Watts and Zimmerman, 1990, p. 138)

The debt/equity hypothesis: "The debt/equity hypothesis predicts the higher the firm's debt/equity ratio, the more likely manager's use accounting methods that increase income. The higher the debt/equity ratio, the closer the firm is to constraints in the debt covenant. The tighter the covenant constraint, the greater the probability of a covenant violation and incurring cost from technical default. Managers exercising discretion by choosing income increasing accounting methods relax debt constraints and reduce cost of technical default" (Watts and Zimmerman, 1990, p. 138)

The political cost hypothesis: "The political cost hypothesis predicts that large firms rather than small firms are more likely to use accounting choices that reduce reported profits. Size is a proxy variable for political attention. Underlying this hypothesis is the assumption that it is costly for individuals to become informed about whether accounting profits represent monopoly profits and to "contract" with other in the political process to enact laws and regulations that enhance welfare. Thus, rational individuals are less than fully informed. The political process is no different from the market process in that respect. Given the cost of information and monitoring, managers have incentive to exercise discretion over accounting profits and the parties in the political process settle for a rational amount of expost opportunism" (Watts and Zimmerman, 1990, p. 138).

4.5 Methodology to detect earnings management

Managers are using the flexibility in the accounting standards to manage earnings. In literature accrual models are often used to detect this form of earnings management. Accruals are a result of the application of Generally Accepted Accounting Principles (Guay, Kothari and Watts, 1996, p. 104). Earnings management includes both accounting policy choice and real actions (Scott, 2009, p. 403). As already discussed, accounting policy choice could be divided into two categories. One is the choice of accounting policies per se. The other category is discretionary accruals. Another way to manage earnings is by means of real variables (Scott, 2009, p. 403). Real earnings management is difficult to detect, therefore this study will focus on accounting policy choice, specifically on discretionary accruals earnings management. In this paragraph several accrual models, used to detect earnings management, will be presented.

4.5.1 Accrual-based models

Several studies examine whether earnings management exists and how the presence can be detected. An article written by Dechow, Sloan and Sweeney (1995) provides a review on accrual-based models for detecting earnings management. In their paper they cover the following five accruals models; Healy (1985), DeAngelo (1986), Jones Model (1991), The modified Jones Model, and the Industry Model (1991). In this section these five accrual models will be discussed.

Generally, to measure discretionary accruals the usual starting point is total accruals. To generate the nondiscretionary accruals, the unmanaged component of total accruals, a particular model is developed. This enables a decomposition of total accruals into a nondiscretionary and discretionary component. Most of the models require an "estimation period" to estimate at least one parameter. The estimation period is a period during which no systematic earnings management is presumed (Dechow et al., 1995, p. 197).

The **Healy** model tests for earnings management by comparing mean total accruals across the earnings management variable. His variable separates the sample into three groups. In one of the groups earnings are predicted to be managed upwards and in the other two groups downwards. The group where earnings are predicted to be managed upwards is treated as the estimation period. The other groups as the event period. The mean total accruals from the estimation period then account for the measure of nondiscretionary accruals. The following model for nondiscretionary accruals can be formulated (Dechow et al., 1995, p. 197):

$$NDA_{\tau} = \frac{\sum_{t} TA_{t}}{T}$$

Where:

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

In the **DeAngelo** model the nondiscretionary accrual estimation period is limited to the prior year's observation. The previous period's total accruals is used as the measure of nondiscretionary accruals. This implies the following model (Dechow et al., 1995, p. 198):

$$NDA_{\tau} = TA_{\tau-1}$$

A common feature of the Healy and DeAngelo model is the assumption that nondiscretionary accruals are constant over time. The **Jones Model** eases the assumption that nondiscretionary accruals are constant. With her model she tries to control for the effect of changes in a firm's economic circumstances on nondiscretionary accruals. The Jones Model is as follows (Dechow et al, 1995, p. 198):

$$NDA_{\tau} = \alpha_1 \left(\frac{1}{A_{\tau-1}}\right) + \alpha_2(\Delta REV_{\tau}) + \alpha_3(PPE_{\tau}),$$

Where

 $\begin{array}{ll} \Delta REV_{\tau} & = \text{revenues in year } \tau \text{ less revenues in year } \tau \text{ -1 scaled by total assets at } \tau \text{ -1}; \\ PPE_{\tau} & = \text{gross property plant and equipment in year } \tau \text{ scaled by total assets at } \tau \text{ -1}; \\ A_{\tau-1} & = \text{total assets at } \tau \text{ -1}; \text{ and} \\ \alpha_1, \alpha_2, \alpha_3 & = \text{firm specific parameters.} \end{array}$

Estimates of the firm-specific parameters, α_1 , α_2 , α_3 are generated using the following model in the estimation period:

$$TA_1 = a_1\left(\frac{1}{A_{\tau-1}}\right) + a_2(\Delta REV_t) + a_3(PPE_t) + \epsilon_t$$

Where, **TA** is total accruals scaled by lagged total assets and a_1 , a_2 , a_3 , denote Ordinary Least Squares estimates of α_1 , α_2 and α_3 (Dechow et al, 1995, p. 198,199).

Dechow et al. considered a **modified** version of the **Jones Model**. According to Dechow et al. (1995, p. 199) "The Modified Jones Model is designed to eliminate the conjectured tendency of the Jones Model to measure discretionary accruals with error when discretion is exercised over revenues. In the modified model, nondiscretionary accruals are estimated during the event period as":

$$NDA_{\tau} = \alpha_1 \left(\frac{1}{A_{\tau-1}}\right) + \alpha_2 (\Delta REV_{\tau} - \Delta REC_{\tau}) + \alpha_3 (PPE_{\tau}),$$

Where

 ΔREC_{τ} = net receivables in year τ less net receivables in year $\tau - 1$ scaled by total assets at $\tau - 1$.

The **Industry Model** used by Dechow and Sloan eases, similar to the Jones Model, the assumption that nondiscretionary accruals are constant over time. An assumption in the Industry Model is that variation in the determinants of nondiscretionary accruals are common across firms in the same industry. The Industry Model for nondiscretionary accruals is as follows (Dechow et al., 1995, p. 199):

$$NDA_{\tau} = \gamma_1 + \gamma_2 median_I(TA_{\tau})$$

Where

 $median_I(TA_{\tau})$ = the median value of total accruals scaled by lagged assets for all non-sample firms The firm specific parameters γ_1 and γ_2 are estimated using ordinary least square on the observation in the estimation period.

All of the above mentioned models are subject to criticism. To choose the right model for this research the criticism in the literature is briefly discussed. Evidence by Guay, Kothari and Watts (1996) denotes that only the Jones and modified Jones models find discretionary accruals that have the properties of accruals resulting from management opportunism or accruals influencing earnings as a performance measure. Results from the Healy, DeAngelo, and Industry models suggest that the interpretation of managements` use of accruals due to opportunism and/or performance measure should be exercised cautiously (Guay et al., 1996, p. 104). The Jones model implicitly assumes that revenues are nondiscretionary. When earnings are managed by means of discretionary revenues, then the Jones model removes a component of the managed earnings from the discretionary variable. The discretionary accruals proxy according to the Jones model will then be biased toward zero (no earnings management). Jones is aware of this limitation of her model (Dechow et al., 1995, p. 199). The Industry Model poorly mitigates measurement error in discretionary accruals. Variation in nondiscretionary accruals is removed that is common through firms in the same industry. However, variation in nondiscretionary accruals due to changes in firm-specific circumstances will not fully extract all nondiscretionary accruals from the discretionary accrual variable (Dechow et al., 1995, p. 200).

On the basis of the above mentioned the Healy, DeAngelo, Jones and Industry model will not be used in this research. This means this study continues with the modified Jones Model because research from Guay et al. (1996) and Dechow et al. (1995) concludes that the modified Jones Model is the best method to detect earnings management.

4.6 Conclusion

This chapter investigated earnings management. First, earnings management has been defined as "managers' use of judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholder about the underlying economic performance of the company, or to influence contractual outcomes that depend on reported accounting numbers" (Healy and Wahlen, 1999, p. 6). Second, several methods and patterns to manage earnings have been discussed. In literature earnings are known to be managed through various ways, such as a choice from a menu of treatments that are accepted under GAAP and a decision on the timing of the adoption of a new standard, etc (Ronen and Yaari, 2008). With these methods firm managers could engage in an earnings management pattern, such as income maximization, taking a bath, income minimization and income smoothing. Third, incentives to manage earnings have been covered. A conclusion, with regard to this research, is that according to Positive Accounting Theory managers of firms that are close to debt covenant violation have incentives to use income increasing accounting choices to avoid contracting costs. Finally, several accrual models have been discussed that are able to detect earnings management. In literature the modified Jones model is described as the best model to detect earnings management. Therefore, this research will measure the presence of earnings management by means of the modified Jones model.

5 Empirical Research on Earnings Management

5.1 Introduction

In this section several empirical findings on earnings management will be discussed. The number of empirical articles on earnings management is very extensive. It goes beyond the purpose of this research to discuss all of these articles. Therefore, to develop hypotheses related to the research question prior research on earnings management with regard to the debt covenant hypothesis will be discussed. According to Positive Accounting Theory this hypothesis predicts the closer a firm is to debt covenant violation, the more likely manager's use income increasing accounting methods (Watts and Zimmerman, 1990, p. 138). To determine whether PFO's are close to possible debt covenant violation a proxy variable is needed because actual debt covenant violation cannot be measured. Prior research on this proxy will be discussed. Furthermore, prior research on earnings management in publicly traded and privately held firms will be discussed because the most common legal forms among PFOs are the public limited company and the private limited company. Avoiding debt covenant violation could be an incentive for both public and private PFO's.

5.2 Empirical research on the debt covenant hypothesis

Firms may accept many debt contractual terms, such as encompassing security, seniority of the claim, and covenants that bounds the firm's freedom to take certain investment and financing actions (Ronen and Yaari, 2008). There is a distinction between public and private debt, for the purpose of this research only private debt will be covered. Private debt is acquired generally from banks. They inclined to be shorter term, with extensive covenants, and are renegotiable (Ronen and Yaari, 2008). According to Ronen and Yaari (2008, p. 157): "All debt contracts involve a constituency of management, creditors, and shareholders. Admitting creditors into the accounting scene triples the conflicting interest, as there are conflicts between creditors and shareholders, and between creditors and management. Shareholders are aware that creditors have a senior claim on the firm's assets in case of liquidation; part of the security for the debt is the owners' equity in the firm. Shareholders therefore prefer to collect dividends before the debt matures. In return, creditors are concerned that shareholders' withdrawals might jeopardize the firm's ability to pay them back".

Earnings management for covenant purposes is predicted by the debt covenant hypothesis from Positive Accounting Theory (Scott, 2009, p. 412). This hypothesis predicts that when a firm is closer to violation of debt covenants, based on accounting numbers, the more likely the manager of the firm is to use income increasing accounting methods to avoid covenant violation (Watts and Zimmerman, 1990). According to Dichev and Skinner (2002) accounting research, on this area, has developed in two ways. First, researchers have examined if managers make accounting choices to avoid the violation of debt covenants, for example, Healy and Palepu (1990), Defond and Jiambalvo (1994), DeAngelo, DeAngelo and Skinner (1994), Sweeny (1994), Dichev and Skinner (2002) and Peltier-Rivest and Swirksy (2000). Second, some studies examined the consequences with regard to actual debt covenant violations, for example, Beneish and Press (1993) and Chen and Wei (1993). The studies that are discussed investigate samples of healthy or financially distressed firms or a combination of both.

Healy and Palepu (1990) investigate firms' accounting and dividend responses due to an increase in the tightness of dividend covenant constraint to appraise if these covenants are succeeding in protecting bondholders' interests. On a sample of 126 firms which were close to violation, they find in the year of the near-violation an increase in dividend cuts. Their results indicate the near violation is not surrounded by significant changes in firms' accounting choices. Therefore, they conclude accounting based dividend covenants are succeeding in protecting bondholders by constraining dividends. Another research on earnings management with regard to debt covenant constraints is performed by DeAngelo et al. (1994). The authors find on a sample of 76 troubled firms that managers` accounting choices primarily reflect recognition of their firms' financial difficulties, instead of attempts to increase earnings to avoid debt covenant violations. Defond and Jiambalvo (1994) also examined earnings management with respect to debt covenant violation. They find that, in the year prior to the covenant violation, there is evidence of positive earnings manipulation. In the year of violation after controlling for going concern qualifications and management changes there is evidence of positive earnings manipulation. Sweeney (1994) investigated earnings management due to accounting choice per se in a debt covenant context. She finds evidence in support of the debt covenant hypothesis. Managers of firms that are close to technical default respond with income increasing accounting changes. Furthermore, she finds evidence that managers' changes in accounting methods depend on whether default costs are imposed by creditors, whether managers have accounting flexibility, and whether significant tax costs are associated with the available accounting changes. Dichev and Skinner (2002) find that managers take actions to avoid debt covenant violations, specifically they find an unusually small number of firm/quarters with financial measures just below covenant thresholds and an unusually large number of firm/quarters that just meet or beat covenant thresholds. The authors also find that debt covenants in private lending agreements are set relatively tightly, that debt covenant violations are not exceptional, and financial distress is not related to violation of debt covenants for most firms. Peltier-Rivest (1999) examine the incentives of discretionary accrual accounting choices by managers` of 127 troubled firms. The author defines troubled firms as those that experience three years of consecutive losses. Based on the results this research suggests that financially distressed firms have incentives to adopt income decreasing accounting choices. Peltier-Rivest and Swirksy (2000) examine the incentives of discretionary accruals accounting choices by managers' of 161 healthy firms. The author defines healthy firms as those that did not experience a loss for five years in a row. Based on the results this research indicates that closeness to debt covenant violation by a healthy firm is an incentive for managers to make income increasing accounting choices.

Beneish and Press (1993) and Chen and Wei (1993) investigate samples of firms that include covenant violations in their financial report. Beneish and Press examine the costs associated with respect to violation of accounting-based debt covenants. The authors find evidence of refinancing and restructuring costs by investigating changes in terms of debt agreements, and changes in investing and financing decisions. Chen and Wei examine the consequences of covenant violation from the perspective of creditors. The authors find that creditors waive the violations or demand certain conditions such as early payment, increase of interest rate or reduction of borrowing base. Because this research focuses on managers that make accounting choices to avoid the violation of accounting-based debt covenant violation.

5.2.1 Proxies for tightness of constraints

According to Defond and Jiambalvo (1994) accessing actual debt covenant information is very costly, therefore other prior research related to debt covenants has commonly used a

proxy for the existence of and closeness to accounting based-covenants. The debt/equity ratio (leverage) is a frequently applied proxy. Research that covers the validity of the debt/equity ratio as a measure of closeness to debt covenants is provided by Duke and Hunt (1990) and Press and Weintrop (1990). Duke and Hunt investigate for a random sample of U.S. firms the relation between actual debt covenant restrictions and the debt/equity ratio. They find that several versions of the debt/equity ratio capture the existence and tightness of three common debt covenant restrictions but is unrelated to four other covenant restrictions. Press and Weintrop find for a sample of 83 firms with accounting constraints, measures of proximity to leverage, net worth, and working capital constraints that those are associated significantly to leverage. Both a leverage constraint and leverage are correlated significantly with accounting choice. Objection to the use of debt/equity ratio as a proxy for the existence of and tightness to accounting based-covenants is provided by Mohrman (1993) she states that a leverage variable does not provide an adequate proxy for the probability of debt covenant violation. Research by Dichev and Skinner (2002) allows them to directly calculate the correlation between leverage and covenant slack for loans. In their research covenant slack is defined as: "the actual realization of the covenant variable minus the covenant threshold of that variable". Based on their data they find that leverage is a noisy proxy for actual closeness to covenants.

High leverage (technical default) tends to be associated with financial distress. Beneish and Press (1995) examine the valuation effects from announcements of technical default, debt service default, and bankruptcy and their interrelatedness. Their sample consists of 134 firms traded on the New York and American Stock Exchanges with 159 known incidents of default. The authors find that those announcements are value relevant and they show that firms violating debt covenants (in technical default) are more likely to be exposed to future distress than nonviolaters. Ohlson (1980) provides empirical results of a study predicting corporate failure by means of bankruptcies. Their sample exists of firms that filed for bankruptcy in the seventies (1970-1976). The authors found four statistically significant basic factors that influence the probability of failure. These are: (i) the size of the company, (ii) the financial structure reflected by a measure of leverage, (iii) a measure of performance; (iv) a measure of current liquidity.

5.3 Emperical research on earnings management in public and private firms The most common legal forms among PFO's are the Public Limited Company (Naamloze vennootschap) or the Private Limited Company (Besloten vennootschap). Therfore, this paragraph examines specific characteristics of publicly traded and privately held firms and covers earnings management in publicly traded and privately held firms. According to Beatty, Ke and Petroni (2002) owner ship of privately held firms is concentrated. Privately held firms are usually held by a few shareholders and participation of shareholders in the management, directions, and operations of the firm is substantial. Burgstahler, Hail and Leuz (2006) examine the reported earnings of privately traded and publicly held firms in the European Union. They state that private limited companies and public limited companies are generally subject to the same accounting standards but face very different capital market forces. This gives the authors the opportunity to study the degree of earnings management due to reporting incentives at privately held companies and publicly traded companies. They find that earnings management is applied more in private firms than in public firms.

Beatty and Harris (1999) argue that earnings management may occur from information asymmetry and agency problems. They compare privately held and publicly traded banks' realization of securities gains and losses to determine how their earnings management differs. The authors provide evidence that publicly traded banks engage more in earnings management than privately held banks. Beatty et al. (2002) examine samples of publicly traded and privately held bank holding companies to investigate whether the high frequency of small earnings increases relative to small earnings decreases reported by publicly traded firms is ascribable to earnings management. The authors find, compared with private banks, that public banks: (1) report fewer small earnings declines, (2) are more likely to use the loan provision and security gain realization to eliminate small earnings decreases, and (3) report longer strings of consecutive earnings increases.

Vander Bauwhede, Willekens and Gaeremynck (2003) formulate and test the Income Smoothing Hypothesis for Belgian firms. The authors hypothesize that Belgian firms, irrespective of whether they are publicly traded or privately held, avoid large volatility in earnings numbers and involve in income smoothing. They find evidence that Belgian firms, both private and public, involve in income smoothing and manage earnings to meet targets. Research by Coppens and Peek (2005) questions if private firms in absence of capital market pressures engage in earnings management, and if so, whether this is due to tax incentives. They explore firms from eight Western European countries, namely Belgium, Denmark, France, Germany, Italy, The Netherlands, Spain, and the United Kingdom. They find that privately held firms still have incentives to manage earnings as capital market pressures are absent. Specifically, they find that privately held firms avoid reporting small losses. With regard to tax incentives they find that in countries where tax regulation strongly influences financial accounting privately held firms don't manage earnings to avoid small losses. Arnedo, Lizarraga and Sanchez (2007) study difference in earnings quality between publicly traded and privately held firms in Spain. The authors find no significant difference for income smoothers and income increasers between publicly traded and privately held firms. However, for privately held firms higher levels of income decreasing are found.

5.4 Summarizing table

Table 1 shows a summary of prior research with regard to earnings management.

Author(s)	Sample	Financially distressed	EM methodology	Results
Studies on earni	ngs management due t	to (possible) o	lebt covenant violatio	ons
Healy and Palepu (1990)	A sample of 126 firms close to violating their dividend covenant restriction during the period 1981- 1985.	Yes	Accounting choice	In the year of the near- violation there is a substantial increase in the frequency of dividend cuts. This indicates there is no significant change in firms` accounting methods surrounding the increased tightness of dividend constraint.
Defond and Jiambalvo (1994)	A sample of 94 firms that reported debt covenant violations in annual reports.	Yes	Discretionary accruals	They find that, in the year prior to the covenant violation, there is evidence of positive manipulation. In the year of violation after controlling for going concern qualifications and management changes there is evidence of positive manipulation.
DeAngelo, DeAngelo and	A sample of 76 NYSE firms with	Yes	Discretionary accruals	The results indicate that troubled firms

Skinner (1994)	persistent losses an dividend reductions. 29 troubled firms have binding debt constraints and 47 have not.			primarily reflect recognition of their firms' financial difficulties, rather than systematic attempts to inflate earnings to avoid debt covenant violations or to otherwise portray the firm as less troubled.
Sweeny (1994)	A sample of 130 firms reporting violations in annual reports.	Yes	Accounting choice	The results find evidence in support of the debt/equity hypothesis that managers of firms approaching technical default respond with income increasing accounting changes.
Dichev and Skinner (2002)	A sample of 8.004 loans, from which 114.330 loan/quarters of data are available from Compustat.	No	Distribution of difference between accounting measures and the relevant covenant treshhold.	An unusually large (small) number of loan/quarters with financial measures just above covenant thresholds.
Peltier-Rivest (1999)	A sample of 127 troubled firms.	Yes	Discretionary accruals	The results suggest that firms in financial distress have incentives to adopt income decreasing accounting choices.
Peltier-Rivest and Swirksy (2000)	A sample of 161 healthy firms.	No	Discretionary accruals	The results indicate that the closer a healthy firm is to violating its debt covenant restrictions, the more likely its manager will make income-increasing accounting choices.
Beneish and Press (1993)	A sample of 91 firms that violated accounting-based covenants in debt agreements between 1983- 1987.	Yes	N/A	The results provide direct evidence of refinancing and restructuring costs by examining changes in terms of debt agreements, and changes in investing

				and financing decisions.
Chen and Wei (1993)	A sample of 128 violators.	Mixed	N/A	They find that creditors waive the violations or demand certain conditions such as early payment, increase of interest rate or reduction of borrowing base.
Studies on proxi	es for tightness to and	existence o	of debt covenant	restrictions
Duke and Hunt (1990)	A sample of 187 firms with private debt agreements.	Mixed	N/A	Results provide evidence for using leverage as a proxy for the existence and tightness of debt covenant restrictions
Press and Weintrop (1990)	A sample of 83 firms with public and private debt agreements.	Mixed	N/A	The results suggest that both a leverage constraint and leverage are significantly associated with accounting choice.
Mohrman (1993)	A sample of 83 debt contracts	Mixed	N/A	The results indicate that a leverage variable does not provide an adequate proxy for the probability of debt covenant violation.
Dichev and Skinner (2002)	A sample of 8.004 loans, from which 114.330 loan/quarters of data are available from Compustat.	No	N/A	They find that leverage is a noisy proxy for actual closeness to covenants.
Beneish and Press (1995)	A sample of 134 firms traded on the NYSE.	Yes	N/A	They find that firms in technical default are more likely to suffer serious future distress than nondefaulters.
Ohlson 1980	A sample based on 105 bankrupt firms and 2.058 nonbankrupt firms.	Yes	N/A	The research identifies four basic factors as being significant in affecting the probability of failure. These are: (i) the size of the company, (ii) the financial structure

Studies on earnin	ngs management in pu	blic and priv	vate firms	reflected by a measure of leverage, (iii) a measure of performance; (iv) a measure of current liquidity.
Burgstahler, Hail and Leuz (2006)	A sample of 378.122 firm-year observations from private and publicly traded firms between 1997- 2003.	N/A	Discretionary accruals	They find that earnings management is applied more in private firms than in public firms.
Beatty and Harris (1999)	A sample of 850 firm-year observations of which 297 are public and 553 are privat.	N/A	The use of securities gains and losses to manage earnings.	The results provide evidence that public banks engage more in earnings management than private banks.
Beatty, Ke and Petroni (2002)	A sample of 707 publicly and 1.160 privately held banks between 1988 and 1998.	N/A	Distribution of change in return on assets and discretionary accruals.	They find that relative to private banks, public banks: (1) report fewer small earnings declines, (2) are more likely to use the loan provision and security gain realization to eliminate small earnings decreases, and (3) report longer strings of consecutive earnings increases.
Vander Bauwhede et al. (2003)	A sample of 352 firm-year observations.	N/A	Discretionary accruals	They find evidence that Belgian Companies, both private and public, engage in income smoothing and manage earnings to meet targets.
Coppens and Peek (2005)	A large sample of public and private European firms between 1993 and 1999.	N/A	Distribution of earnings level and earnings changes.	They find that in absence of capital market pressures, firms still have incentives to manage earnings as they find that private firms avoid reporting small losses. They further find that private firms

				in some countries where tax regulation strongly influences financial accounting do not avoid reporting small losses.
Arnedo, Lizarraga and Sanchez (2007)	A sample of 46.131 firm-year observations.	N/A	Discretionary Accruals.	They find no significant difference for income smoothers and increasers between public and private firms. However, higher levels of income decreasing are found for private companies.

Table 1: Summarizing table prior research

5.5 Conclusion

The results of prior research on earnings management with respect to the debt covenant hypothesis and publicly and privately held firms have been discussed. Furthermore, research related to proxies for the existence and tightness of debt covenant restrictions has been covered because for this research accessing actual debt covenant information is very costly. The empirical results for these three streams of literature are mixed. For example, Defond and Jiambalvo (1994), Sweeny (1994), Peltier-Rivest and Swirksy (2000) and Dichev and Skinner (2002) found evidence in favor of the debt covenant hypothesis. However, Healy and Palepu (1990), DeAngelo, DeAngelo and Skinner (1994) have not found support for the debt covenant restrictions several papers have questioned the construct validity of leverage. Evidence is found in favor of the use of leverage but also evidence is found against the use of leverage as a proxy. The most important studies are included in table 1.

6 Hypotheses and research design

6.1 Introduction

In this chapter the hypotheses and research design are discussed. The hypotheses are developed in the next paragraph using prior research described in the previous chapter. In paragraph 6.3 the research design is discussed. Primarily, the research in this study consists out of two steps. First, the methodology to measure discretionary accruals using the cross-sectional modified Jones model will be discussed. Second, the regression model is presented which regresses discretionary accruals against potential explanatory variables. Furthermore, the control variables and the sample selection are discussed.

6.2 Hypotheses development

The debt covenant hypothesis according to Positive Accounting Theory predicts the higher the firm's debt/equity ratio, the more likely manager's use income increasing accounting methods (Watts and Zimmerman, 1990, p. 138). Prior research on the debt covenant hypothesis examines the accounting choices of managers of firms that actually violated debt covenants (technical default) e.g., DeAngelo et al. (1994), DeFond and Jiambalvo (1994), Sweeney (1994). In contrast with other studies, this research is industry-specific, the football industry. PFO's from the Dutch and English premier league will be investigated. Detailed information about football clubs that reported covenant violations is not available but many football clubs are nowadays associated with consecutive losses, negative equity and negative cash flows. For instance, the Dutch Premier League posted a loss of 89,5 million euro's in the season 2009/2010. Never before the loss has been this big. Two seasons earlier, the PFO's were still profitable with a total profit of 64 million euro's. Ajax (-22,8 million), PSV (-17,5 million), Heerenveen (-14,9 million) and Feyenoord (-14 million) are responsible for the biggest part of the accumulated loss. The situation by other clubs isn't any better. But in absolute terms less money involved, but relatively the losses are at least as bad as the above mentioned¹⁴.

In 2008 the aggregate loss of Europe's top clubs was € 578 million. Some 65% of income was spent on average on salaries, and 47% of clubs reported losses. 35% of clubs reported negative equity (assets less liabilities) in their balance¹⁵. Furthermore the discussion of 'debt'

¹⁴ http://www.volkskrant.nl/vk/nl/2698/Sport/article/detail/1062741/2010/11/24/Eredivisie-leed-vorig-seizoen-

¹⁵ The European Club Footballing Landscape 2009

in football has never been as prominent as it has been in the last 3 years. For instance, English football authorities, in particular, have sounded alarms about more than \leq 3,8 billion of debt on the books of Premier League teams. Liverpool alone can already account for \leq 600 million of debt¹⁶. Therefore, this research assumes that PFO's in The Netherlands and England are close to violation or have violated their debt covenants and debt covenants are accounting based. This could mean that PFO's in good financial health are in the sample. For these managers, violations are likely to be relatively low-cost events involving lender review and an agreement to reset covenant term. Dichev and Skinner state: "However, managers of healthy firms still have incentives to avoid covenant violation. Any review of the firm's operations by outsiders is likely to be costly-in terms of managerial time, the need to generate updated financial reports, and the need for management to explain and justify its forecasts and strategy- and something managers prefer to avoid. As a result, it is likely that even managers of firms with good performance seek to avoid violations, especially if they can do so at relatively low cost" (Dichev and Skinner, 2002, p. 1096).

6.2.1 Hypotheses H1, H2 and H3

Several studies have investigated if managers make income increasing accounting choices to avoid the violation of accounting-based debt covenants. Studies by DeFond and Jiambalvo (1994); Sweeney (1994); Peltier-Rivest and Swirsky (2000); and Dichev and Skinner (2002) have managed to find an association between the use of income increasing accounting choices by managers when firms are approaching debt covenant violation. DeAngelo et al. (1994) and Healy and Palepu (1990) have reported however no relationship between the two variables in their study. Hence, the evidence remains largely mixed. PFO's are nowadays associated with consecutive losses, negative equity, negative cash flows and relatively high amounts of debt. As football clubs become financially derailed it is more likely than not that covenant violation occurs. To measure closeness to and existence of accounting based debt covenants the proxy leverage will be used. However, high leverage is also associated with financial distress (Beneish and Press, 1995; Ohlson, 1980). Studies on companies in financial distress found firms adopt income decreasing accruals (Peltier-Rivest, 1999; DeAngelo, DeAngelo and Skinner, 1994). In the Netherlands and England many clubs are financially distressed or close to. In The Netherlands these clubs are classified in "Category 1" as

¹⁶ http://www.forbes.com/2009/04/08/most-valuable-soccer-teams-business-sportsmoney-soccer-values-09-intro.html

discussed in chapter 1. Being present in "Category 1" for three years could result in a loss of their license. Therefore, with regard to the central question, I expect managers of Dutch and English PFO's to make income increasing accounting choices to avoid violation of debt covenants. However, due to financial distress possible debt covenant violation may not be the primary incentive to manage earnings but creates incentives for managers of PFO's to make income decreasing accounting choices. Furthermore, because this research investigates Dutch and English PFO's a comparison can be made. This comparison will primarily focus on managers using discretion over accruals in both countries. Hypotheses are developed as follows:

H1: Managers of PFO's close to debt covenant violation engage in earnings management.

H2: Managers of Dutch PFO's engage in earnings management.

H3: Managers of English PFO's engage in earnings management.

6.2.2 Hypothesis H4

Prior research indicated significant differences between publicly traded firms and privately held firms. In contrast with publicly traded firms, ownership of privately held firms is concentrated, privately held firms are usually held by a few shareholders and participation of shareholders in the management, directions, and operations of the firm is substantial (Beatty et al., 2002). In addition, some studies have found evidence that public firms (banks) engage more in earnings management than private firms (Beatty and Haris 1999; Beatty et al. 2002). This evidence doesn't suggest that earnings management is absent at private companies, they may want to manage earnings to avoid debt covenant violation or bank intervention. Other studies found no significant difference with regard to earnings management between private and public firms (Van der Bauwhede, 2003; Coppens and Peek, 2005 and Arnedo, 2007). With regard to the research question this research creates an opportunity to compare private and public firms (PFO's) because the most common legal forms among PFO's are the Public Limited Company (Naamloze vennootschap) or the Private Limited Company (Besloten vennootschap). However, this comparison will primarily focus on managers using discretion over accruals, but due to the possibility of debt covenant violation I expect managers of publicly and privately held PFO's to manage earnings. The following hypothesis is developed:

H4: Managers of PFO's engage in earnings management irrespective of whether they are publicly or privately held.

All Hypotheses state that PFO's are positively related to earnings management. However, only hypothesis 1 is directly related to the research question because of the actual investigation of the effect on earnings management due to possible debt covenant violation. Hypotheses 2 till 4 are indirectly related to the research question because they only investigate if managers use discretion over accruals. If, when present, opportunistic behavior occurs due to possible debt covenant violation is difficult to investigate because the sample size based on 4 populations being Dutch PFO's, English PFO's, Private PFO's and Public PFO's is too small. Inference based on the results could lead to type 1 errors or type 2 errors. An erroneous conclusion that managers' income increasing or decreasing accounting choices are associated with closeness to debt covenant violation, when in fact it isn't, is an example of a type 1 error. An erroneous conclusion that managers' accounting choices are not associated with closeness to debt covenant violation, when in fact it is, is an example of a type 2 error (Field, 2005).

6.3 Research Design

Prior research indicated that debt covenant violation and the use of income increasing and income decreasing accounting choice has been found to be associated with discretionary accrual choice (Defond and Jiambalvo, 1994; Peltier-Rivets, 1999; and Pelter-Rivest and Swirksy, 2000). As already discussed this research measures discretionary accruals by means of the modified Jones model. The data that is available is from several firms in the same industry for a one time period. Therefore, this research will be regressing accrual data cross sectional. In prior research cross sectional (modified) Jones models have been used by Bartov, Gul and Tsui (2000) and Defond and Jiambalvo (1994). According to Bartov et al. (2000) and Subramanyam (1996) this model is better in detecting earnings management than the time series model. The time series approach requires eight years of data prior to the event period in order to have enough degrees of freedom to compute the Z statistic for significance tests. In addition, the cross sectional model doesn't require eight years of data to estimate the parameters. The parameter estimates from the cross-sectional version of the modified Jones model are industry and year specific. Because this research is football industry-specific this distinction is not possible therefore the parameter estimates, α_1 , α_2 ,

and α_3 remain firm specific, otherwise the coefficients would be the same for all firms in the industry without considering differences between PFO's.

Consistent with prior studies total accruals (TA_{it}) are calculated as follows for each firm and year:

$$TA_{it} = (\Delta CA_{it} - \Delta CL_{it} - \Delta Cash_{it} + \Delta STD_{it} - Dep_{it})/(A_{it-1})$$

Where:

$\Delta \boldsymbol{C} \boldsymbol{A}_{it}$	= Change in current assets for firm i in year t ¹⁷
$\Delta \boldsymbol{C} \boldsymbol{L}_{it}$	= Change in current liabilities for firm i in year t ¹⁸
∆Cash _{it}	= Change in cash and cash equivalents for firm i in year t
ΔSTD_{it}	= Change in debt included in current liabilities for firm i in year t
Dep _{it}	= Depreciation and amortization expense for firm i in year t
A_{it-1}	= Total Assets for firm i in year t - 1

Inconsistent with prior studies nondiscretionary accruals (NDA_{it}) are calculated as follows for each firm and year:

$$NDA_{i\tau} = \alpha_1 \left(\frac{1}{A_{i\tau-1}}\right) + \alpha_2 (\Delta REV_{i\tau} - \Delta REC_{i\tau}) + \alpha_3 (PPE_{i\tau}) + \alpha_4 (PLAY_{i\tau})$$

Where:

$\Delta REV_{i\tau}$	= Revenues for firm i in year τ less revenues in year τ -1 scaled by total assets at τ -1;
$\Delta REC_{i\tau}$	= Net receivables for firm i in year $ au$ less net receivables in year $ au-1$ scaled by total
	assets at $ au - 1$.
ΡΡΕ _{ίτ}	= Property plant and equipment for firm i in year $ au$ scaled by total assets at $ au$ -1;
PLAY _{it}	= Player registrations for firm i in year $ au$ scaled by total assets at $ au$ -1;
$A_{i\tau-1}$	= Total assets for firm i at $ au$ -1; and
$\alpha_1, \alpha_2, \alpha_3, \alpha_4$	= Firm specific parameters

Estimates of the firm-specific parameters, α_1 , α_2 , α_3 , α_4 are generated using the following Model:

$$TA_{it} = a_1\left(\frac{1}{A_{it-1}}\right) + a_2(\Delta REV_{it} - \Delta REC_{it}) + a_3(PPE_{it}) + \alpha_4(PLAY_{it}) + \epsilon_{it}$$

where a_1 , a_2 , a_3 , α_4 denote OLS estimates of α_1 , α_2 , α_3 and α_4 and TA is total accruals scaled by **lagged** total assets. ϵ_{it} is the residual, which represents the firm-specific discretionary portion of total accruals.

¹⁷ Accounts receivables with regard to player registrations are excluded

¹⁸ Accounts payable with regard to player registrations are excluded

The choice of the nondiscretionary accruals in the (adjusted) modified Jones model is sound. Accruals are related to changes in "Revenues", "Property, Plant, and Equipment" and "Player registrations" (intangible assets). Revenues determine changes in working-capital accruals, such as accounts receivable, inventory, and accounts payable. Property, Plant, and Equipment and Player registrations determine the accrual of the depreciation and amortisation expense (Ronen & Yaari, 2008). In contrast with prior research the variable **PLAY**_{ir} has been included because besides property, plant, and equipment, the player registrations also determine the accrual of the depreciation expense largely. However, income from transfers is not recognized as revenue because it does not arise from the entity's ordinary activities. Therefore, accounts receivable and accounts payable with regard to player registrations/transfers are excluded. This is applicable for the following proxies: REC_{ir} , ΔCA_{it} , and ΔCL_{it} . In the modified Jones model the initial value of PPE_{ir} is used, in this research the carrying amount is used because several observations are missing the initial value.

The discretionary accruals (DA_{it}) can then be calculated when the nondiscretionary accruals are subtracted from the total accruals:

$$DA_{it} = TA_{it} - NDA_{it}$$

The discretionary accruals will be regressed against leverage to test their effect on managers' discretionary accounting decisions. The multivariate regression model will be as follows:

$$DA_{it} = \beta_0 + \beta_1 LEV_{it} + \beta_2 SIZE_{it} + \beta_3 EXTFIN_{it} + \beta_4 CF_{it} + \beta_5 WAG_TURN_{it} + \epsilon_{it}$$

To measure closeness to debt covenant restrictions for PFO's the ratio of short and long term debt over total assets for firm i in year t is used (LEV_{it}). Detailed information about football clubs that reported covenant violations is not available but many football clubs are nowadays associated with high amounts of debt and consecutive losses. Therefore, statistical results are more reliable using a debt/equity proxy. Empirical evidence that addresses the construct validity of the debt/equity ratio as a measure of existence and tightness of debt covenant restrictions is provided by Duke and Hunt (1990) and Press and Weintrop (1990). I expect that the coefficient on this variable will be positive.

6.3.1 Control variables

Prior research indicated many other factors as incentives to manage earnings. Therefore this study has to control for these factors to avoid a type 1 error; an erroneous conclusion that managers' income increasing or decreasing accounting choices are associated with closeness to debt covenant violation. The following confounding variables will be included: SIZE, EXTFIN, CF and WAG_TURN.

In chapter 5.4.1 the political cost hypothesis has been discussed. This hypothesis predicts that large firms rather than small firms are more likely to use income decreasing accounting choices. This hypothesis assumes that larger firms are firms with more political visibility. Therefore, size is a proxy variable for political attention (Watts and Zimmerman, 1990). The natural logarithm of total assets is used to measure the variable "**SIZE**". I expect, because of the use of income decreasing accounting choices, that the coefficient on this variable will be positive.

Research by Dechow, Sloan, and Sweeney (1996) find that an important motivation for income increasing earnings management is the desire to raise external financing at low cost. As already discussed in paragraph 6.2 there is a conflict of interest between creditors, management and shareholders. Information asymmetries and agency problems imply, as a part of this conflict, that the need to raise external financing may be an incentive for earnings management (Vander Bauwhede, Willekens and Gaeremynck, 2003). Therefore, a dummy variable "**EXTFIN**" is included to control for the possible impact of external financing. If there is, in the succeeding year with respect to the year in which earnings are reported, an increase in external financing the value of the dummy variable is 1; otherwise it takes the value 0. I expect, because of the use of income increasing accounting choices, that the coefficient on this variable will be positive.

Vander Bauwhede et al. (2003) state that extreme financial performance can lead to measurement error in the discretionary accruals, and hence, misspecified tests for earnings management. Cash flow from operations (**CF**) will be included to control for this potential error. Cash flow from operations is scaled by lagged total asset to allow for any size effects. Prior research expects that the coefficient on this variable will be negative.

Westham United reported an actual covenant violation in their 2007/2008 annual report. At 28 May 2008 the group was in default of certain financial covenants, specifically in relation to interest cover and the ratio of wages to turnover. The wages to turnover covenant has, from what I know, not been tested in prior research. As mentioned earlier, in 2008 65% of income from PFO's was spent on average on salaries. Because of this high percentage I assume that this covenant is used in more debt contracts concerning PFO's. Therefore, the variable "WAG_TURN" is included to measure the use of income increasing or decreasing accounting choices to avoid debt covenant violation. I expect that the coefficient on this variable will be positive.

6.3.2 Sample

The research sample of this paper is established by investigating PFO's from the Dutch and English premier league. The financial statements from the period 2004/2005 till 2008/2009 will be used because it is likely that clubs violated their debt covenants or became financially distressed due to the financial crisis that started in 2007. This study investigates Dutch and English data because of the availability of necessary data. The Companies Act, in the United Kingdom, requires limited companies to file their accounts with the Registrar of Companies who makes them available to the general public. In The Netherlands data is obtained from The Chamber of Commerce, where Dutch companies have to file their accounts.

Because this research examines premier league clubs, promotion to and delegation from the secondary league has to be taken into account. PFO's that have been playing for at least three years in the premier league in the sample period are included in the sample. All data required to estimate the nondiscretionary accruals models and conduct the empirical analysis are originally obtained from hard copies of the firms' annual reports. Annual reports/clubs that do not provide sufficient data, due to exemptions on publication requirements, are deleted from the sample. As a result the sample exists of 122 firm-years of data. The sample and relevant data are enclosed in Appendix II.

6.4 Summary

In this chapter the hypotheses and research design are discussed. Four hypotheses are developed regarding the use of income increasing accounting choices to avoid covenant violation. However, only hypothesis 1 is directly related to the research question because of the actual investigation of the effect on earnings management due to possible debt

covenant violation. Hypotheses 2 til 4 are indirectly related to the research question because they only investigate if managers use discretion over accruals. The cross sectional modified Jones model is used to obtain discretionary accruals from PFO's in The Netherlands and England. Furthermore, a multivariate regression model is developed to regress leverage as a proxy for tightness and existence of debt covenant restrictions and several control variables against discretionary accruals. This chapter concludes with the sample selection.

7. Research results

7.1 Introduction

This chapter analyzes and interprets the results of the empirical research. The variables used in the regression analysis will be analyzed in paragraph 7.2 by examining the data. Specifically, assumptions a regression model has to meet are discussed. In paragraph 7.3 the dependent variable discretionary accruals and the explanatory variable leverage are further analyzed. Furthermore, the regression model is executed and the pre developed hypotheses are tested.

7.2 Descriptive statistics

Before a regression model can be generalized several assumptions must be met. Field (2005, p. 169) argues that (1) all predictor variables must be quantitative or categorical (with two categories), and the outcome variable must be quantitative, continuous and unbounded. (2) An objective test whether or not a distribution is normal should be executed. Tests should be performed to judge whether distribution problems of skewness, kurtosis and outliers have a serious impact on the data. (3) There should be no multicollinearity between two or more of the predictors. (4) The variance of the residual terms should have the same variance (homoscedasticity). (5) Errors are assumed to be independent. For any two observations the residual terms should be uncorrelated.

The variables in the regression model meet the first assumption. All predictor variables are quantitative or categorical (with two categories). The outcome variable is quantitative, continuous and unbounded. To test for non-normality the Kolmogorov-Smirnov test is used. This test is executed for "Discretionary", "Leverage", "LN_Size", "Cashflow" and "Wages/Turnover". The results show significance for the variables Discretionary, Leverage and Cashflow. Therefore, the natural logarithm is used to transform these variables. The transformation to the natural logarithm reduces the problems of skewness, kurtosis and the outliers. In table 2 the descriptive statistics of the dependent and independent variables, as well as the transformed variables are presented.

Variable	Ν	Min.	Max.	Mean	S.D.	Normality	Skewness	Kurtosis	Outliers
Dependant quanti	tative	continue	ous unbo	ounded va	<u>riable</u>				
Discretionary	122	-0,29	0,26	-0,019	0,1167	No	-0,097	0,271	6
LN_Discretionary	122	-0,35	0,23	-0,026	0,122	Yes	-0,497	0,460	4
Independent quar	ntitativ	e variab	le						
Leverage	122	0,00	1,91	0,493	0,367	No	1,150	1,841	5
LN_Leverage	122	0,00	1,07	0,3738	0,231	Yes	0,442	0,065	2
LN_Size	122	14,68	20,32	17,68	1,424	Yes	-0,322	-0,679	0
Cashflow	122	-0,31	0,56	0,112	0,189	No	0,387	0,035	2
LN_Cashflow	122	-0,37	0,45	0,091	0,170	Yes	-0,134	0,282	2
Wag/Turn	122	0,34	1,24	0,638	0,147	Yes	0,767	1,641	2
Independent cates	gorical	variable	<u>!</u>						
Fin	122	0	1	0,544	0,500				

Table 2: Descriptive statistics of the dependent and independent variables

To test for multicollinearity between two or more of the predictors the VIF values are used. If the largest VIF is greater than 10 then there is a cause for concern and a tolerance below 0.1 indicates a serious problem (Field, 2005, p. 196). The VIF values, as given in table 6, are within this range, this indicates no significant effect of multicollinearity. To test homoscedasticity a scatterplot of the regression standardized residual and regression standardized predicted value is used (for the scatterplot, see the SPSS output in Appendix III). Visual inspection of the scatterplot confirmed homoscedasticity. To test the assumption of independent errors, the Durbin-Watson statistic is used. According to Field (2005, p. 170) a value greater than 2 indicates a negative correlation between adjacent residuals, whereas a value below 2 indicates a positive correlation. The Durbin-Watson statistic, as given in table 5, is 0,326; this is indicating positive correlation. Generally, the assumptions covered indicate that conclusions could be drawn about a population based on the regression analysis on a sample.

7.3 Regression output

Table 3 presents the descriptive statistics for discretionary accruals. The mean for the earnings management measure is more income decreasing than income increasing. The mean for the natural logarithm discretionary accruals scaled by lagged total assets is -0,0263. This indicates that the negative discretionary accruals are larger than the positive discretionary accruals. Table 3 confirms that the amount of negative discretionary accruals are larger than the positive discretionary accruals. However, this results indicate that managers of PFO's use both income increasing accruals and income decreasing accruals. Table 4 provides descriptives for the explanatory variable leverage where LN_Lev_Pos and LN_Lev_Pos are the mean and standard deviation of leverage related to the natural logarithm of the positive and negative discretionary accruals. The regression results are presented in table 5 and 6.

Discretionary accrual	Ν	Mean	S.D.
LN_DA	122	-0,026	0,122
LN_DA_Pos	57	0,070	0,064
LN_DA_Neg	65	-0,111	0,094

Table 3: Discretionary accruals

Leverage	Ν	Mean	S.D.
LN_Leverage	122	0,378	0,231
LN_Lev_Pos	57	0,439	0,242
LN_Lev_Neg	65	0,317	0,207

Table 4: Leverage

Regression analysis	
Model summary	
R	0,403
R Square	0,163
Adjusted R Square	0,127
Durbin-Watson	0,326
<u>Anova</u>	

F-ratio 4,511*** (p=0,001

Table 5: Model summary regression analysis ***significant at the 1% level.

Variable	B Coefficient	t-statistic	p-value	Tolerance	VIF
Intercept	-0,370	-2,463	0,015**	N/A	N/A
LN_LEV	0,099	1,963	0,052*	0,793	1,261
LN_SIZE	0,017	2,187	0,031**	0,929	1,077
LN_CF	-0,154	-2,395	0,018**	0,891	1,122
EXTFIN	0,004	0,205	0,838	0,979	1,022
WAG_TURN	0,041	0,517	0,606	0,778	1,285

Tabel 6: Regression output

** = significant at the 5% level, * = significant at the 10% level

Because the sample size is small a 10% significance level is used. The regression model examines the relationship between closeness to covenant violation and earnings management. The R square value for the regression model is 0,163. According to Field (2005, p. 172) the R square value tells us how much of the variance in earnings management is accounted for by the regression model from this sample. This indicates that 16,3% of the variation in earnings management is explained by the regression model. The adjusted Rsquare value for the regression model is 0,127. Field (2005, p. 172) argues that the adjusted value tells us how much variance in earnings management would be accounted for if the model had been derived from the population from which the sample was taken. This indicates that 12,7% of the variation in earnings management is explained by the regression model. The low numbers for the R-square and the adjusted R-square raises question about how well the model is explaining the variance in earnings management. There must be other variables that explain variance. Conclusions about the coefficients should therefore be carefully drawn. The Anova F-ratio indicates whether the model, overall, results in a significantly good degree of prediction of the dependent variable (Field, 2005, p. 154). For these data, F is 4,511, which is significant at the 1% level, more specifically p < 0,001. This indicates that the chance this F-ratio would happen by chance alone is less than 0,1%. Therefore, a conclusion is that this regression model results in significantly good predictions of discretionary accruals (Field, 2005, p. 154). The B coefficient represents the change in the dependent variable from a unit change in the independent variable. If this coefficient is positive, this means that there is a positive relationship between the dependent and independent variable. If a independent variable has a significant impact on the dependant variable then the B coefficient should be different from 0. The t-statistic provides an indication whether the B-value is different from 0. The exact probability (p-value) that the observed value of t would occur if the value of B where 0 is provided by SPSS (Field, 2005, p. 156). The B coefficients, t-statistic and the p-value are discussed hereafter.

7.4 Hypotheses testing

Hypothesis one predicted that managers of Professional Football Organizations close to debt covenant violation engage in earnings management. The regression results (appendix II) indicate that PFO's with high levels of debt are managing earnings upwards to avoid covenant violation or/and financially distressed PFO's manage earnings downwards. The coefficient for Leverage (0,099) is positive, which is in line with the prediction, and significant. Unfortunately the sample size is too small to execute a regression using only the positive discretionary accruals as dependent variable or the negative discretionary accruals as a dependent variable. However, the mean from leverage matched with discretionary accruals indicates that leverage at PFO's with positive discretionary accruals is higher than leverage at PFO's with negative accruals. To test the significance a one sample t-test is executed with a test value 0,378. This is the mean from the natural logarithm of leverage from the complete sample. The results are presented in the following SPSS output.

One-Sample Statistics					
	N	Mean	Std. Deviation	Std. Error Mean	
LN_Lev_Pos	57	,4378	,24247	,03212	
LN_Lev_Neg	65	,3177	,20695	,02567	

	Test Value = 0.378						
					95% Confidence	e Interval of the	
				Mean	Differ	ence	
	Т	Df	Sig. (2-tailed)	Difference	Lower	Upper	
LN_Lev_Pos	1,863	56	,068*	,05985	-,0045	,1242	
LN_Lev_Neg	-2,350	64	,022**	-,06033	-,1116	-,0090	

One-Sample Test

** = significant at the 5% level, * = significant at the 10% level

The results provide evidence that high leverage as an indication for existence of and tightness to debt covenant restrictions is associated with the use of income increasing accounting choices to avoid debt covenant violation. The critical value of a t-distribution with 60 degrees of freedom is 1,671, the t-statistic is significantly different from 0,378 at a 10% significance level if it exceeds this value. On the other hand, no evidence is provided that high leverage is associated with income decreasing accounting choice. The critical value of a t-distribution with 80 degrees of freedom is -1,664, the t-statistic is significantly different from 0,378 at a 10% significance level if it exceeds the decreasing accounting choice. The critical value of a t-distribution with 80 degrees of freedom is -1,664, the t-statistic is significantly different from 0,378 at a 10% significance level if it exceeds this value. Therefore, Hypothesis 1, stating that managers of PFO's close to debt covenant violation engage in earnings management, can be accepted with regard to the use of income increasing accounting choices to avoid debt covenant violation. This confirms earlier findings of DeFond and Jiambalvo (1994); Sweeney (1994); Peltier-Rivest and Swirsky (2000); and Dichev and Skinner (2002).

The coefficient of the control variable LN_Size (0,017) is significantly positive. This indicates that large PFO's rather than small PFO's are more likely to use income decreasing accounting choices. This finding supports the political cost hypothesis from Positive Accounting Theory. The coefficient of the control variable LN_CASHFLOW (-0,154) is significantly negative. This indicates that that PFO's extreme financial performance can lead to measurement error in the discretionary accruals, and hence, misspecified tests for earnings management. The coefficients of EXTFIN (0,004) and WAG/TURN (0,041) are as predicted, but not significant.

In addition, hypotheses two and three predicted that managers of Dutch and English PFO's engage in earnings management. To test the hypotheses a one sample t-statistic is calculated for both Dutch and English PFO's. The significance of the discretionary accruals is tested with a test value 0. When earnings management is absent the discretionary accruals are equal to zero. The discretionary accruals in this test are absolute because the samples consist out of positive and negative discretionary accruals. The results are presented in the following SPSS output.

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
ABS_Disc_Dutch	53	,1090	,09148	,01257
ABS_Disc_Eng	69	,0791	,07564	,00911

One-Sample Test								
		Test Value = 0						
					95% Confidence	e Interval of the		
				Mean	Differ	ence		
	Т	Df	Sig. (2-tailed)	Difference	Lower	Upper		
ABS_Disc_Dutch	8,674	52	,000***	,10900	,0838	,1342		
ABS_Disc_Eng	8,691	68	,000***	,07914	,0610	,0973		

*** = significant at the 1% level

At a 1% significance level the Dutch PFO's sample shows significant evidence of earnings management. The critical value of a t-distribution with 60 degrees of freedom is 2,660, the t-statistic is significantly different from 0 at a 1% significance level if it exceeds this value. Hypothesis 2, stating that managers of Dutch PFO's engage in earnings management, can be accepted. At a 1% significance level the English PFO's sample also shows significant evidence of earnings management. The critical value of a t-distribution with 80 degrees of freedom is 2,639, the t-statistic is significantly different from 0 at a 1% significance level if it exceeds this value. Hypothesis 3, stating that managers of English PFO's engage in earnings management, can be accepted.

Hypothesis 4 predicted that managers of PFO's engage in earnings management irrespective of whether they are publicly or privately held. To test the hypotheses a one sample t-statistic is calculated for both Private and Public PFO's. The significance of the discretionary accruals is also tested with a test value 0. When earnings management is absent the discretionary accruals are equal to zero. The discretionary accruals in this test are absolute because the samples consist out of positive and negative discretionary accruals. The results are presented in the following SPSS output.

	N	Mean	Std. Deviation	Std. Error Mean	
ABS_Disc_Private	68	,0959	,08051	,00976	
ABS_Disc_Public	54	,0874	,08844	,01203	

One-Sample Test							
		Test Value = 0					
		95% Confidence Interval of t				e Interval of the	
				Mean	Differ	ence	
	Т	Df	Sig. (2-tailed)	Difference	Lower	Upper	
ABS_Disc_Private	9,820	67	,000***	,09587	,0764	,1154	
ABS_Disc_Public	7,260	53	,000***	,08737	,0632	,1115	

*** = Significant at the 1% level

At a 1% significance level the private PFO's sample shows significant evidence of earnings management. The critical value of a t-distribution with 80 degrees of freedom is 2,639, the t-statistic is significantly different from 0 at a 1% significance level if it exceeds this value. At a 1% significance level the public PFO's sample also shows significant evidence of earnings management. The critical value of a t-distribution with 60 degrees of freedom is 2,660, the t-statistic is significantly different from 0 at a 1% significance level if it exceeds this value. Hypothesis 4, stating that managers of PFO's engage in earnings management irrespective of whether they are publicly or privately held, can be accepted. This confirms earlier findings of Van der Bauwhede, 2003; Coppens and Peek, 2005 and Arnedo, 2007.

Hypothesis	Result	Accept/Reject
H1: Managers of PFO's close to debt	PFO's with high leverage are positively	Accept
covenant violation engage in earnings	related to the use of income increasing	
management.	accruals.	
H2: Managers of Dutch PFO's engage in	Earnings management is found for Dutch	Accept
earnings management.	PFO`s	
H3: Managers of English PFO's engage in	Earnings management is found for English	Accept
earnings management.	PFO`s	
H4: Managers of PFO's engage in earnings	Earnings management is found for publicly	Accept
management irrespective of whether they	and privately held PFO`s	
are publicly or privately held.		
Tabel 7: hypotheses		

Tabel 7: hypotheses

7.5 Interpretation

Regarding the first hypothesis, evidence is found that high leverage tends to be associated with the use of income increasing accounting choices. In paragraph 5.3 this research argued that leverage is the most often used proxy as a measure of closeness to debt covenant restrictions. The construct validity of the proxy is addressed by Duke and Hunt (1990) and Press and Weintrop (1990). This proxy is used because this research is not aware of actual debt covenant violations but because of the high amounts of debt PFO's are facing and consecutive losses this research assumes closeness to debt covenant violation. The evidence found indicates that PFO's with high leverage are managing earnings upwards to avoid covenant violation. On behalf of this evidence hypothesis 1 has been accepted. This result confirms earlier findings of DeFond and Jiambalvo (1994); Sweeney (1994); Peltier-Rivest and Swirsky (2000); and Dichev and Skinner (2002). However, their results are based on known covenant violations except those from Peltier-Rivest and Swirksy (2000). Furthermore, Dichev and Skinner (2002) provide large-sample evidence that leverage is a noisy proxy for actual closeness to covenants. As a conclusion this result should therefore be interpreted cautiously.

In addition, no evidence is found that high leverage is associated with the use of income decreasing accounting choices. In paragraph 5.3 this research argued that leverage is also associated with financial distress (Beneish and Press, 1995; Ohlson, 1980) and argued that studies on companies in financial distress found firms that adopted income decreasing accruals (Peltier-Rivest, 1999; DeAngelo, DeAngelo and Skinner, 1994). The results indicate that the leverage proxy isn't an indicator for financially distressed PFO's. However, this result doesn't indicate that financially distressed PFO's don't manage earnings downwards. Evidence is provided that PFO's use discretion over accruals both upwards and more importantly downwards. Therefore, future research is needed to test the association between financially distressed PFO's and the use of income decreasing accounting choices.

Regarding hypothesis two and three, evidence is found that managers of Dutch and English PFO's use income increasing and income decreasing accruals. Therefore, the interpretation of the results with respect to hypothesis one are effective for Dutch and English PFO's.

Regarding hypothesis four, evidence is found that managers of public and private PFO's use discretion over accruals. In paragraph 5.4 this research argued that, some studies have found evidence that public firms engage more in earnings management than private firms (Beatty and Haris 1999; Beatty et al. 2002). However, other studies found no significant difference with regard to earnings management between private and public firms (Van der Bauwhede, 2003; Coppens and Peek, 2005 and Arnedo, 2007). The hypothesis tested stated that public and private PFO's both engage in earnings management. In contrast with prior research from Beatty and Haris (1999) and Beaty et al (2002) this research assumes that private and public companies may want to manage earnings to avoid debt covenant violation or bank intervention. On behalf of the evidence the hypothesis is accepted. Furthermore, the interpretation of the results with respect to hypothesis one are effective for Private and Public PFO's.

7.6 Summary

In this chapter the empirical research is executed and the results are analyzed and interpreted. First, assumptions are tested whether the regression model can be generalized. The tests indicate that conclusions from the regression model sample can be drawn on a population. Second, several descriptive statistics have been discussed concerning the discretionary accruals, the leverage proxy and regression model descriptives, such as the R square, adjusted R square, the ANOVA F-ratio, the B coefficient, the t-statistic and the p-value. Third, the pre developed hypotheses have been tested and the results indicate that al hypotheses can be accepted. Finally, the interpretation of the results finds that PFO's with high leverage are managing earnings upwards to avoid covenant violation. In addition, no evidence is found that high leverage is associated with the use of income decreasing accounting choices. Furthermore, evidence is found that managers of Dutch, English, publicly traded and privately held PFO's engage in earnings management.

8. Conclusion and Limitations

8.1 Introduction

In this chapter the main conclusion from this research is presented and limitations are given. Furthermore, recommendations for future research are provided.

8.2 Conclusion

Recently, there has been a lot of turmoil for European football clubs that has already led some of these clubs into financial troubles and due to declining revenues from broadcasting, ticket sale, sponsorship, inactive transfer markets, a lack of sportive successes and together with high amounts of debt on the books of the league teams the outlook for many football clubs doesn't seem to get any better soon. In economic circumstances like this earnings management can arise. Specifically earnings management for covenant purposes could arise because the high amounts of debt can impose heavy costs for football club managers. Professional Football Organizations (PFO) may have accepted debt contractual terms, for instance accounting based debt covenants that bounds the PFO's freedom to take certain actions when violation occurs. This raises questions about incentives for football club managers to avoid covenant violation by managing earnings. This study wonders if, due to the probability of covenant violation in debt contracts, managers of football clubs have an incentive to act opportunistic. As a result the following research question has been formulated:

What is the effect on earnings management by Professional Football Organizations due to possible closeness to covenant violation in the period 2004/2005 till 2008/2009?

Before the empirical research, first the relevant law and regulations to become a PFO and regarding accounting for PFO's has been elaborated. The stakeholder theory with regard to PFO's has been discussed. Frequently applied definitions on earnings management and methods, patterns and incentives to manage earnings have been covered. At last methodology to detect earnings management has been elaborated.

A literature review on earnings management has been presented and discussed. Based on prior research hypotheses have been formulated. To test the hypotheses the research has been separated into two parts. The first part of the empirical research consisted of measuring discretionary accruals using the cross-sectional modified Jones model. The discretionary accruals were measured by calculating the total accruals minus the nondiscretionary accruals from 122 PFO firm-year observations between 2004/2005 till 2008/2009 from The Netherlands and England. The discretionary accruals measure showed managers of PFO's use of discretion over accruals. More specifically, the study shows that managers of PFO's use both income increasing accruals and income decreasing accruals.

The second part of the empirical research regressed discretionary accruals against leverage and several control variables to test their effect on managers' discretionary accounting decisions. A multivariate ordinary least squares regression analysis is used. Despite that the model is weak in explaining variance in earnings management (discretionary accruals) the independent variable leverage is significantly positive. More specifically, the results provide evidence that high leverage tends to be associated with the use of income increasing accounting choices. But provides no evidence that that high leverage is associated with the use of income decreasing accounting choices. The evidence indicates that PFO's with high leverage are managing earnings upwards to avoid covenant violation. The significance of the leverage variable confirms findings from previous research. Additionally, evidence is found that managers of Dutch and English PFO's use income increasing and income decreasing accruals. Finally, evidence is found that managers of public and private PFO's use discretion over accruals.

8.3 Limitations

An important limitation of this research is the use of the (cross-sectional) modified Jones model to estimate the discretionary accruals. Although research from Guay et al. (1996) and Dechow et al. (1995) concludes that the modified Jones Model is the best method to detect earnings management, it has been criticized. For example, Dechow, Sloan and Sweeney state that measures of accounting choice such as discretionary accruals are of low power. Another limitation is the construct validity of the proxy leverage to determine the existence and tightness of debt covenant restrictions. Empirical evidence on the construct validity of this variable remains largely mixed. A limitation of the multivariate regression model in this research are the low numbers for the R-square and the adjusted R-square. This raises question about how well the model is explaining the variance in earnings management. There must be other variables that explain variance.

8.4 Recommendation for future research

The results presented provide some opportunities for future research. First, a distinction between healthy PFO's and financially distressed PFO's would be useful to continue research to the use of income increasing accounting choices to avoid debt covenant violation. Second, another opportunity for future research is to explore the association between financially distressed PFO's and the use of income decreasing accounting choices. Finally, lending agreements of PFO's could be obtained (probably this is very costly) to calculate a distribution of differences between accounting measures and the relevant covenant threshold.

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Appendix I

Overzicht nieuw en/of gewijzigde li o No:	centie-eisen per november 2009 Categorie:	Omschrijving:						
Sportief kader Licentie-eisen die betrekking hebben op KNVB en UEFA licentiesysteem								
S.01	A	Goedgekeurd Jeugdopleidingsprogramma						
S.02	A	Jeugdteams						
S.03	A	Medische controle A-selectie						
S.04	A	Registratie spelers						
S.05	A	Aantal contractspelers en						
0.00	D	schriftelijke contracten						
S.06	B	Refereeing matters and Laws of the Game						
S.07	В	Anti-racismebeleid						
3.07	D	Anti-Tacismebeleid						
Organisatie en Administratief ka								
	en op KNVB en UEFA licentiesyste							
P.01	A	Clubsecretariaat						
P.02	A	Directie / management						
P.03	A	Financieel directeur / Financieel						
D 04	٨	manager						
P.04 P.05	A A	Veiligheidscoördinator Persvoorlichter						
P.06	A	Arts						
P.07	A	Fysiotherapeut						
P.08	A	Technische staf - trainer-coach						
P.09	A	Technische staf - hoofd						
1.00		jeugdopleidingen						
P.10	A	Technische staf - jeugdcoach						
P.11	A	Stewarding						
P.12	A	Stewardcoördinator						
P.13	A	Supporterscoördinator						
P.14	В	Technische staf - assistent						
		hoofdcoach						
P.15	В	Rechten en plichten van						
		functionarissen P.01 - P.14						
P.16	В	Meldingsplicht significante						
D 47	5	wijzigingen arbeidsorganisatie						
P.17	В	Verplichting vacante posities						
Er gelden geen additionele LIEEA	licentie-eisen	(P.01 - P.14)						

Er gelden geen additionele UEFA licentie-eisen

Juridisch kader

Licentie-eisen die betrekking hebben op KNVB en UEFA licentiesysteem .

Licentie-eisen die betrekk	ling hebben op KNVB en UE	FA licentiesysteem
L.01	A	Deelname aan KNVB/UEFA competities
L.02	A	Overige verplichtingen van juridische aard
L.03	A	Uittreksel uit het KvK-register
L.04	A	Waarborgen
Er gelden geen additionel	e UEFA licentie-eisen	-

Infrastructureel kader

Licentie-eisen die b	petrekking hebben op KNVB en UE	EFA licentiesysteem
I.01	A	Veiligheidsverklaring
1.02	A	Commandoruimte
1.03	A	Beschikbaarheid stadion

1.04	А	Beschikbaarheid trainingsfaciliteit
1.05	A	Capaciteit stadion
1.06	A	Zitplaatsen
1.07	A	Bedrijfswaarde lichtinstallatie
1.08	A	Sectorindeling
1.09	A	Eerste hulp ruimte
1.10	A	Speelveld: specificaties en afmetingen
l.11	A	Automatische toegangscontrole
l.12	A	Omroepinstallatie
l.13	A	Video-installatie

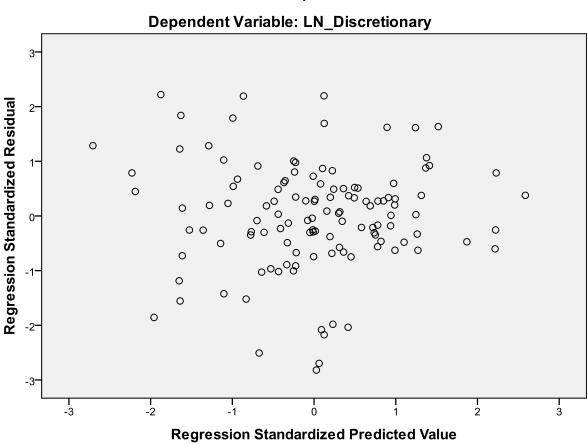
Appendix II

Club	Total	NonDisc	Disc	LEV	SIZE	EXTFIN	CF	WAG_TUR
	Accrua Is	Accruals	Accruals					N
Feyenoord	,20	-,06	,26	,56	17,49	,0	-,31	,70
Tottanham	,20 -,02	-,28	,20 ,26	,30 ,26	19,02	,0 1,00	-,51 ,06	,70 ,42
Hull City	-,02 -,18	-,28 -,42	,20 ,24	,20 1,18	16,75	,0	,00 ,0	,42 1,24
Middlesbrough	-,18 ,02	-,42 -,20	,24 ,22	1,08	17,93	,0 1,00	,0 ,05	,55
Willem II	,02 ,04	-,20 -,15	,22 ,20	,16	15,44	1,00	,05 -,05	,33 ,48
Chelsea	,04 -,05	-,24	,20 ,19	,10 1,50	19,83	1,00	-,03 -,01	, 4 8 ,70
Everton	-,03 -,23	-,24 -,41	,19 ,19	,64	17,96	1,00 ,0	-,01 ,15	,70 ,62
Bolton	-,23 -,07	-,41 -,25	,19 ,18	,04 ,64	18,36	,0 1,00	,13 -,14	,02 ,75
Newcastle	-,07 -,10	-,25 -,26	,18 ,16	,04 ,83	18,30	1,00	-,14 -,05	,75 ,75
Chelsea	-,10 -,06	-,20 -,21	,10 ,15	,85 1,91	19,75	1,00 ,0	-,03 -,04	,75 ,80
Middlesbrough	-,00 ,00	-,21 -,15	,15 ,15	1,26	18,02	,0 ,0	-,04 -,01	,80 ,75
Hull City	,00 -,43	-,13 -,57	,13 ,14	,16	18,02 15,37	,0 1,00	-,01 ,36	,73 ,62
Hull City	-,43 -,36	-,57 -,50	,14 ,14	,10 ,52	17,22	1,00 ,0	,30 ,46	,02 ,66
SC Heerenveen	-,30 -,07	-,50 -,17	,14 ,11	,52 ,01	17,22	,0 1,00	,40 ,35	,00 ,46
Manchester City	-,07 -,16	-,17 -,25	,11 ,09	,01 ,59	17,27	1,00 1,00	,35 ,03	,46 ,66
Arsenal	-,10 -,12	-,25 -,21	,09 ,08	,59 ,64	20,29	1,00 ,0		,00 ,46
Stoke City			,08 ,08		20,29 16,86	,0 1,00	-,03	,40 1,06
Tottanham	-,20	-,28	,08 ,08	,33 20			,0 14	
PSV	-,22	-,30 17		,28 42	19,49 19 79	,0 0	,14 20	,54 24
	-,09	-,17 25	,08 08	,42 20	18,78	,0 1.00	,20 15	,34
Blackburn	-,17	-,25	,08 06	,29	17,88	1,00	,15	,70 72
Middlesbrough	-,14	-,20	,06	1,10	18,26	,0	,08 02	,73
WestHam	-,20	-,26	,06	,35	18,71	,0 1.00	,03	,88
Newcastle	-,08	-,14	,06	,47 70	18,82	1,00	,08	,63 CF
RODA JC	,04	-,02	,06 06	,70	17,32	,0 0	-,14 20	,65 CF
N.E.C.	-,47	-,53	,06	,49 70	15,15	,0	,26	,65
NAC	-,14	-,20	,06	,76	15,51	,0 1.00	-,02	,66
Chelsea	-,17	-,22	,06	1,61	19,89	1,00	,05 28	,81 59
Liverpool	-,29	-,35	,06	,34	18,94	1,00	,28	<i>,</i> 58
Liverpool	-,16	-,21	,05 05	,51	19,42	,0 1.00	,14	,50 50
Manchester City	-,05	-,10	,05 05	,57	19,02	1,00	,00,	,56 55
Vitesse	-,01	-,06	,05 05	,87 20	14,89	1,00	-,31	,55
Stoke City	,00,	-,04 52	,05 04	,39 26	16,34 16.00	1,00	-,09 22	,65 02
Aston Villa WestHam	-,47 - 14	-,52 - 18	,04 ,04	,36 42	16,99 18 80	1,00	,33 - 03	,93 ,77
PSV	-,14 -,04	-,18 - 08	,04 ,04	,43 ,60	18,80 18 74	,0 0	-,03 14	
RKC		-,08 - 36	,04 ,04	,60 1,48	18,74 14 88	,0 1,00	,14 - 18	,49 82
Blackburn	-,32 - 12	-,36 - 16			14,88 17.02		-,18 - 03	,82 85
Aston Villa	-,12 - 76	-,16 - 79	,04 ,04	,33 42	17,92 17.28	,0 1.00	-,03 52	,85 74
	-,76 - 14	-,79 - 17	,04 ,04	,42 21	17,28 16.02	1,00	,53 - 21	,74 88
Stoke City Bolton	-,14 -,10	-,17 -,13	,04 ,04	,31 ,71	16,02 18.02	1,00 1,00	-,21 ,06	,88 70
FC Groningen	-,10 -,14	-,13 -,18	,04 ,03	,71 ,19	18,02 16,57	1,00 ,0	,06 ,42	,70 63
Liverpool	-,14 -,25	-,18 -,28	,03 ,03	,19 ,13	16,57	,0 1,00	,42 ,15	,63 ,53
WestHam								
	-,18	-,21 12	,03 02	,29 1 16	18,85 15 21	1,00	-,03 21	,79 67
NAC	-,09	-,12	,03 02	1,16 61	15,21 17 27	,0 0	,21 04	,67 24
RODA JC	-,06 11	-,08 12	,02 02	,61 50	17,37	,0 1.00	-,04	,34 61
Arsenal	-,11	-,13	,02	,50	20,22	1,00	,09	,61

	10	20	0.4	4.40	40.04	4.00	07		
Chelsea	-,19	-,20	,01	1,19	19,91	1,00	-,07	,75	
Manchester City	-,21	-,22	,01	,74	19,63	,0	-,11	,95	
Blackburn	-,14	-,15	,01	,28	18,11	,0	,11	,91	
RODA JC	-,03	-,04	,01	,05	15,93	1,00	-,14	,66	
Blackburn	-,15	-,16	,00	,24	17,86	1,00	,06	,77	
FC Groningen	-,22	-,23	,00,	,17	16,49	1,00	,13	,59	
Liverpool	-,23	-,23	,00,	,19	18,78	1,00	,16	,58	
AZ	-,13	-,13	,00,	,28	17,35	,0	,0	,67	
Manchester City	-,04	-,04	,00,	,54	19,14	1,00	,00	,64	
N.E.C.	-,04	- <i>,</i> 04	,00,	1,08	14,68	,0	-,31	,83	
Newcastle	-,13	-,12	,00,	,33	18,92	1,00	,07	,58	
Bolton	-,04	-,04	-,01	,65	17,71	1,00	,07	,55	
Arsenal	-,09	-,08	-,01	,55	20,26	1,00	,13	,45	
Bolton	-,14	-,13	-,01	,62	17,81	1,00	,14	,60	
Hull City	-,44	-,43	-,01	,05	14,85	1,00	,56	,57	
Aston Villa	-,15	-,14	-,01	,0	16,83	1,00	,09	,64	
Feyenoord	-,10	-,09	-,01	,37	17,46	1,00	-,16	,68	
Manchester Uni	-,13	-,11	-,02	,0	19,47	,0	,15	,48	
Blackburn	-,11	-,09	-,02	,46	17,92	,0	,03	,76	
Middlesbrough	-,30	-,28	-,02	1,10	18,16	1,00	,28	,80	
FC Twente	-,93	-,90	-,02	,62	17,88	1,00	,0	,78	
AZ	-,16	-,13	-,03	,46	17,81	,0	-,22	,65	
Manchester City	-,07	-,04	-,03	,59	19,02	,0	,03	,62	
AJAX	-,15	-,12	-,03	,03	18,65	,0	-,03	,64	
AJAX	-,12	-,09	-,03	,00	18,48	,0	,07	,49	
Newcastle	-,17	-,14	-,03	1,03	18,88	,0	,07	,85	
Newcastle	-,19	-,16	-,04	,76	18,72	1,00	,09	,68	
Tottanham	-,22	-,18	-,04	,31	19,20	1,00	,19	,46	
WestHam	-,22	-,17	-,04	,27	18,34	1,00	,22	,52	
Willem II	-,45	-,40	- <i>,</i> 05	,21	15,68	,0	,50	,46	
Bolton	-,16	-,12	- <i>,</i> 05	,89	18,22	,0	,02	,77	
SC Heerenveen	-,11	-,06	- <i>,</i> 05	,20	16,79	,0	,18	,51	
Arsenal	-,01	,04	-,05	,60	20,32	,0	,10	,34	
FC Groningen	-,19	-,14	-,05	,31	16,87	1,00	-,06	,58	
FC Twente	-,14	-,09	-,06	,69	16,37	1,00	,18	,67	
PSV	-,13	-,08	-,06	,57	18,68	,0	,19	,42	
WestHam	-,12	-,06	-,06	,35	18,24	,0	,03	,64	
NAC	-,34	-,28	-,06	,71	15 <i>,</i> 50	1,00	-,02	,66	
Everton	-,23	-,17	-,06	,61	17,98	1,00	,23	,59	
AZ	-,44	-,38	-,07	,22	17,83	1,00	,45	,46	
Tottanham	-,19	-,12	-,07	,13	18,45	1,00	,23	,47	
FC Utrecht	-,27	-,20	-,07	,00	16,80	,0	-,13	,56	
Arsenal	-,14	-,06	-,07	,51	19,93	1,00	,25	,48	
FC Utrecht	-,33	-,25	-,08	,02	15,79	,0	,37	,53	
Liverpool	-,30	-,22	-,08	,41	19,36	1,00	,14	,56	
FC Utrecht	-,14	-,06	-,09	,04	15,80	,0	,14	,48	
Everton	-,49	-,41	-,09	,63	17,65	1,00	,06	,75	
Everton	-,38	-,29	-,09	,59	17,69	,0	,34	,51	
PSV	-,12	-,03	-,09	,63	18,73	,0	,18	,54	
Aston Villa	-,61	-,52	-,09	,58	18,03	,0	,56	,77	
AJAX	-,16	-,07	-,09	,00	18,34	1,00	,02	,55	
	•	•		•		•	•		

SC Heerenveen	-,16	-,06	-,10	,12	17,34	1,00	,12	,51	
Feyenoord	-,36	-,26	-,11	,49	17,24	,0	,05	,66	
PSV	-,19	-,08	-,11	,38	18,79	,0	,19	,41	
SC Heerenveen	-,21	-,09	-,12	,11	17,81	,0	,41	,59	
AZ	-,30	-,18	-,12	,04	17,46	1,00	,39	,54	
SC Heerenveen	-,17	-,04	-,13	,15	17,55	,0	,28	,54	
Everton	-,39	-,26	-,13	,62	17,63	1,00	,27	,64	
FC Groningen	-,29	-,16	-,13	,44	16,91	,0	,10	,64	
FC Twente	-,15	-,01	-,14	,85	16,20	,0	,15	,60	
AJAX	-,22	-,07	-,15	,00	18,55	1,00	,09	,49	
Aston Villa	-,42	-,27	-,15	,49	17,79	1,00	,40	,88	
Hull City	-,64	-,48	-,16	,24	15,07	1,00	-,04	,77	
FC Groningen	-,25	-,08	-,17	,48	15,60	1,00	,53	,71	
Feyenoord	-,42	-,20	-,21	,47	17,25	1,00	-,07	,62	
RODA JC	-,33	-,12	-,21	,13	16,10	1,00	,04	,63	
Middlesbrough	-,39	-,18	-,21	,96	18,31	,0	,28	,59	
RKC	-,55	-,33	-,22	,58	15,46	1,00	,53	,56	
FC Twente	-,35	-,14	-,22	,74	16,34	,0	,46	,55	
RODA JC	-,29	-,06	-,23	,62	15,74	,0	-,03	,85	
NAC	-,35	-,12	-,24	,63	15,56	1,00	-,05	,78	
ADO Den Haag	-,46	-,22	-,25	,10	14,84	1,00	,18	,72	
Stoke City	-,85	-,57	-,28	,40	17,59	,0	,0	,56	
Willem II	-,34	-,06	-,28	,15	15,87	,0	,37	,48	
Tottanham	-,45	-,15	-,29	,20	18,72	1,00	,33	,55	
AJAX	-,36	-,07	-,29	,00	18,64	1,00	-,01	,73	

Appendix III



Scatterplot