



**UNIVERSITY OF GOTHENBURG**  
**SCHOOL OF BUSINESS, ECONOMICS AND LAW**

# The emergence of an accounting practice

An analysis of how the changes in interpretation and application of IAS 19 paragraph 83 resulted in a new accounting practice in Sweden

**University of Gothenburg**  
**School of Business, Economics and Law**

FEA50E Degree project in Business Administration for  
Master of Science in Business and Economics, 30.0 credits

Spring term 2013

**Tutor**

Andreas Hagberg

**Authors**

Frida Martinsson

Kristina Edqvist

## **Preface**

Many thanks are directed to the interviewees who contributed with valuable opinions and made this thesis possible. For providing helpful advices and constructive criticism, many thanks are also directed to Andreas Hagberg, the tutor of this thesis. Also, the opponent groups deserve recognition for contributing with helpful opinions.

Göteborg, June 9, 2013

---

Frida Martinsson

---

Kristina Edqvist

# Abstract

**Type of thesis:** Degree Project in Business Administration for Master of Science in Business and Economics, 30.0 credits

**University:** University of Gothenburg, School of Business, Economics and Law

**Semester:** Spring 2013

**Authors:** Frida Martinsson and Kristina Edqvist

**Tutor:** Andreas Hagberg

**Title:** The emergence of an accounting practice - An analysis of how the changes in interpretation and application of IAS 19 paragraph 83 resulted in a new accounting practice in Sweden.

**Background and discussion:** IAS 19 paragraph 83 addresses the estimation of the discount rate used for determination of the present value of defined benefit pension plans. Until 2010, the paragraph was consistently applied within Sweden, when all companies agreed that the yield on government bonds should be used as a reference for the discount rate. A number of companies then started to refer to the yield on mortgage bonds, a reference rate that is not one of the stated alternatives in the paragraph. This action has been debated among the accounting practitioners in Sweden, as a possible deviation from the standard. A new interpretation and application of the paragraph has led to the emergence of a new accounting practice within Sweden, without an actual change in the regulation.

**Purpose:** The purpose of this thesis is to analyze how the changes in interpretation and application of IAS 19 paragraph 83 resulted in a new accounting practice in Sweden.

**Research design:** Two research approaches are used in this study. First, disclosures in the annual reports of all listed companies on NASDAQ OMX Stockholm Large Cap are studied, to find the reference rates and discount rates used. Second, interviews with four companies, the Big Four audit firms and one bank are conducted, to collect their opinions regarding the situation. To achieve the purpose of the thesis, the results are then analyzed through the regulation, the situation in Sweden and two explanatory theories.

**Results and conclusions:** The study shows that more and more companies have started to use the YMB while fewer companies use the YGB. Also, it was a significant spread between the highest and lowest discount rate used. The main explanations for the dispersion in the use of reference rates are the changes in the bond markets, the principle-based regulation, incentive driven accounting practitioners and that companies strive for legitimacy by imitating each other.

**Suggestions for further studies:** As further studies it would be interesting to expand the analysis and interview more companies on Large Cap. It would also be interesting to analyze Small Cap and Mid Cap to see if the same results would be found. Also, it would be interesting to conduct statistical tests to investigate the correlation between the level of discount rates and reference rates used.

**Keywords:** IAS 19, discount rate, yield on mortgage bonds, new accounting practice.

## **Abbreviations**

DBP – Defined Benefit Pension Plans

FASB – Financial Accounting Standards Board in the United States of America

IAS – International Accounting Standards

IASB – International Accounting Standards Board

IASC – International Accounting Standards Committee

IFRS – International Financial Reporting Standards

RFR – The Swedish Financial Reporting Board (Sw. Rådet för Finansiell Rapportering)

SEAG – The Swedish Enterprise Accounting Group (Sw. Näringslivets redovisningsgrupp)

US GAAP – Generally Accepted Accounting Principles in the United States of America

YCB – Yield on Corporate Bonds

YGB – Yield on Government Bonds

YMB – Yield on Mortgage Bonds

# Content

<b>1</b>	<b>Introduction</b>	<b>1</b>
1.1	Background	1
1.2	Discussion	2
1.3	Purpose and research questions	4
1.4	Contribution	4
1.5	Research design and limitations	5
<b>2</b>	<b>Frame of reference</b>	<b>6</b>
2.1	Introduction to the frame of reference	6
2.2	Regulation	6
2.2.1	IFRS regulation	6
2.2.2	IAS 19 Employee benefits - determination of the discount rate	7
2.2.3	ED/2009/10 Discount Rate for Employee Benefits	8
2.3	The situation in Sweden	9
2.3.1	Bond markets	9
2.3.2	Accounting practice	11
2.3.3	Surveillance	11
2.4	Explanatory theories	12
2.4.1	Positive accounting theory	12
2.4.2	Institutional theory	14
2.5	Summary and expectations	15
<b>3</b>	<b>Methodology</b>	<b>17</b>
3.1	Introduction to the methodology	17
3.2	Research design	17
3.3	Data collection and sampling	18
3.3.1	Frame of reference	18
3.3.2	Compilation of information given by Large Cap companies	18
3.3.3	Mapping of the perceptions of the dispersion	20
3.4	Interview questionnaires	23
3.5	Analysis model	24
3.6	Discussion	25
<b>4</b>	<b>Results</b>	<b>27</b>
4.1	Introduction to the results	27
4.2	Reference rates and discount rates used by Large Cap companies	27
4.3	Perceptions of the dispersion in the use of reference rates	32
4.3.1	Companies	32
4.3.2	Audit firms	35
4.3.3	Bank	36
<b>5</b>	<b>Analysis</b>	<b>38</b>
5.1	Introduction to the analysis	38
5.2	Reference rates and discount rates used by Large Cap companies	38
5.2.1	Regulation	38
5.2.2	The situation in Sweden	38
5.3	Explanations for dispersion in the use of reference rates	40
5.3.1	Regulation	40
5.3.2	The situation in Sweden	41

5.3.3	Explanatory theories .....	42
<b>6</b>	<b>Conclusions and suggestions for further studies .....</b>	<b>45</b>
6.1	Introduction to conclusions .....	45
6.2	Conclusions .....	45
6.2.1	Reference rates and discount rates used by Large Cap companies .....	45
6.2.2	Explanations for dispersion in the use of reference rates .....	45
6.3	Contribution .....	46
6.4	Reflections .....	47
6.5	Suggestions for further studies .....	48
	<b>References .....</b>	<b>49</b>
	<b>Appendices .....</b>	<b>53</b>
	Appendix 1 – Included companies in the study of the annual reports .....	53
	Appendix 2 – Excluded companies in the study of the annual reports .....	54
	Appendix 3 – Companies for the interview sampling .....	55
	Appendix 4 – Interview questionnaires .....	56
	Appendix 5 – Classification of used reference rates .....	57

# 1 Introduction

## 1.1 Background

A more globalized world and the stock market's increased role in financing have led to an increased demand for harmonized accounting practices. Since 2005, all publicly traded companies within the EU have to apply the International Financial Reporting Standards (IFRS) and the International Accounting Standards (IAS) in the consolidated financial statements (the European parliament and the Council of the European Union, 2002). In 2002, the International Accounting Standards Board (IASB) and the US Financial Accounting Standards Board (FASB) started to cooperate in order to achieve convergence between the IFRS regulation and Generally Accepted Accounting Principles in the United States of America (US GAAP) (IFRS, 2013). The work is important in the process of developing harmonized accounting principles that focus on comparability between companies in different countries. IASB and FASB are working on several long-term projects, with the aim to reduce the more fundamental differences between the two regulations (Marton, et al., 2010).

One of the standards that are subject to revision is IAS 19 Employee Benefits (Marton, et al., 2010). The accounting for post-employment benefits is one of the areas regulated in IAS 19. Accounting for post-employment benefits, and particularly accounting for defined benefit pension plans (DBP)<sup>1</sup>, is a complex and controversial area (Glaum, 2009). This applies to both practical and conceptual issues. When accounting for DBP according to the IFRS regulation, companies have to make several actuarial assumptions in order to determine the present value of the pension liabilities (Marton, et al., 2010). The actuarial assumptions are made by the companies themselves, and involve a great amount of judgment (Glaum, 2009). Therefore, the assumptions, and hence the recognized pension liabilities, can differ between otherwise comparable companies.

The actuarial assumptions are of both demographical and financial character (IAS 19 para. 76). One of the financial actuarial assumptions to determine is which discount rate to use (IAS 19 para. 76). IAS 19 paragraph 83 specifies:

“The rate used to discount post-employment benefit obligations (both funded and unfunded) shall be determined by reference to market yields at the end of the reporting period on high quality corporate bonds. In countries where there is no deep market in such bonds, the market yields (at the end of the reporting period) on government bonds shall be used. The currency and term of the corporate bonds or government bonds shall be consistent with the currency and estimated term of the post-employment benefit obligations.”

The reference for the discount rate can thus be two different ones, depending on the nature of the bond markets. Sweden is one of the countries that do not have a deep market for corporate bonds, and Swedish companies should therefore use the yield on government bonds (YGB) when determining the present value of their DBP (RFR, 2009). Marton

---

<sup>1</sup> Defined benefit pension plans is defined in IAS 19 paragraph 8.

(2012a) argues that paragraph 83 is specific and one of few examples of an IFRS paragraph that is rule-based rather than principle-based. He believes that since the paragraph does not state that “the yield on corporate bonds or equivalent” should be used, it leaves no room for interpretation (Marton, 2012a).

The determination of the discount rate depends, as described, on the development of the bond markets. A new situation in these markets has led to new solutions regarding the reference rates (Marton, 2012a). Despite the fact that the standard clearly indicates that the YGB should be used within Sweden due to the lack of a deep market for corporate bonds, many companies have started to use the yield on mortgage bonds (YMB) instead (Marton, 2012a). This is, according to Marton (2012a), a consequence of the financial crisis in 2008 and the collapse of the investment bank Lehman Brothers. He argues that this collapse resulted in a large yield spread between corporate bonds and government bonds, when the yield on corporate bonds (YCB) rose while the YGB declined (further denoted “the yield spread”).

## 1.2 Discussion

The fact that two different reference rates should be used by companies when determining the discount rate, depending on which country they operate in, results in great differences in pension liabilities (IASB, 2009a). A higher discount rate results in lower reported liabilities, and vice versa. When the yield spread widened as a consequence of the financial crisis, the comparability significantly deteriorated further between companies with DBP in different countries (IASB, 2009a). The Swedish Financial Reporting Board (RFR) (Sw. Rådet för Finansiell Rapportering) (2009) considered the situation after the financial crisis, and the effects it had on the yield spread and hence the discount rates, to be an urgent matter. Consequently, they sent a letter concerning the situation, to make IASB aware of the effects the financial crisis had on countries like Sweden without a deep market in corporate bonds. They stated that the low level of the YGB results in reported liabilities that do not faithfully represent the underlying obligation (RFR, 2009). They also expressed a concern that if the YGB continue to fall, the companies will report their pension obligations at almost undiscounted cash flows. They further argued that the increase in the YCB, as discussed above, led to lower comparability between companies in countries with a deep market for those bonds and countries, like Sweden, without this deep market. The decrease in the YGB in Sweden had been 1.6 percentage points between 2007 and 2008, from 4.5 percent to 2.9 percent (RFR, 2009). This trend continued during the following years and is still ongoing (Sveriges Riksbank, 2013). Due to this unfavorable change in rates, Swedish multinational companies experienced problems explaining the different changes in pension liabilities in their subsidiaries, e.g. in Sweden, the Eurozone and the US (RFR, 2009). Thus, an amendment of IAS 19 in terms of an adaption of the discount rate to the new economic environment was rather justified.

In 2009, IASB started an attempt to revise IAS 19 paragraph 78<sup>2</sup>, and published an exposure draft (IASB, 2009b). Due to the situation with the low YGB and the anticipation

---

<sup>2</sup> A revised version of IAS 19 was adopted by the EU commission in 2012. The content of the paragraphs concerning the discount rate were not changed, though they were renumbered. Paragraph 78 was renumbered paragraph 83. (IAS 19)



of the progress of the project, Swedish companies started to find alternative references for the discount rate. Consequently, as mentioned above under “1.1 Background”, a number of companies started to use the YMB instead of the YGB (Marton, 2012a). IASB’s project with the amendments to IAS 19 paragraph 78 became more complex than anticipated, and was postponed (IASB, 2009b). IASB stated that companies in countries with a lack of a deep market in high-quality corporate bonds, including Swedish companies, still had to use the YGB as the reference for the discount rate. Despite this, it has become common for Swedish companies to use the YMB as an alternative reference rate (Marton, 2012a).

When two companies with comparable pension obligations use different discount rates, it will result in large differences in reported liabilities, all else equal (Glaum, 2009). Glaum (2009) further states that this will lead to different financial ratios for the companies, e.g. debt to equity ratios and earnings. He also refers to a previous study, which shows that a small increase in the discount rate, with one percentage point, results in a decrease by 15 percent in the reported pension liabilities on average, and vice versa. This view is also shared by RFR (2009) that states that a credit spread of 2.25 percentage points for liabilities with a duration of 20 years leads to differences of 50 to 60 percent in the reported pension liabilities.

According to Marton (2012a), it can be assumed that the Swedish determination of the discount rate is in conflict with IAS 19, in one way or another. On one hand, the use of the YMB can be viewed as a deviation, since the standard clearly states that the YGB shall be used when there is no deep market for high-quality corporate bonds. On the other hand, Marton discusses that preparers of the financial statements might argue that mortgage bonds could be comparable to corporate bonds and that it thus would be a deviation from IAS 19 to use the YGB. Rundfelt (2013a) partially agrees with Marton that it is not possible to refer to the YMB according to IAS 19. However, he argues that the requirement for fair presentation in IAS 1 may justify a deviation from IAS 19, which would make the use of the YMB acceptable. Nevertheless, it is important for the companies to describe the choice of reference rate in their disclosures (Rundfelt, 2011). Further, Rundfelt (2013b) discusses that the YMB could be seen as an estimate for the discount rate due to the fact that NASDAQ OMX Stockholm has shown that there is a deep market in Sweden for those bonds. Swedish companies are used to refer to good accounting practice (Sw. god redovisningssed), meaning that the large listed companies and their auditors mainly guide the accounting (Marton, 2012b). However, within the IFRS regulation, there is no good accounting practice, according to Marton. The standards must be followed, which is something that Swedish companies have to adapt to (Marton, 2013). Marton (2013) further argues that there is a conflict of interest when it comes to regulation of the accounting principles in Sweden. He states that it is important that the regulators do not work as preparers of financial statements or auditors. This is however not the case in Sweden; he notes that those who influence the regulation of the accounting also exercise it.

Since publicly traded companies have to comply with the IFRS regulations, they must follow IAS 19 paragraph 83 and hence use the proper discount rate according to the circumstances. The fact that a number of Swedish companies started to use the YMB as a reference rate in 2010, while others continued to use the YGB, indicates that there is

uncertainty about how to interpret and apply IAS 19 paragraph 83. The dispersion between the use of the YGB and the YMB was examined in the master thesis from 2012 where the purpose was to investigate the distribution between the two rates and examine if the choices depend on company specific factors (Oguz and Markovic, 2012). The study shows that all publicly traded companies in Sweden with DBP use the YGB until 2010 when 25.4 percent of them started to use the YMB. In 2011, this proportion had increased to 49.2 percent. Further, the study shows that the only company specific factor affecting the choice of reference rate is company size. They conclude that the differences are a result from the financial crisis in 2008 as well as dispersion in the interpretation of the standard. This thesis will continue the study through an examination of the differences in the interpretation and application of IAS 19 paragraph 83, and how these changes could lead to a change in the accounting practice in Sweden.

### **1.3 Purpose and research questions**

In the light of the described situation, with different reference rates used by Swedish companies, this thesis will investigate the occurrence of the situation. The purpose of this thesis is to analyze how the changes in interpretation and application of IAS 19 paragraph 83 resulted in a new accounting practice in Sweden. In order to serve this purpose, the following research questions will be investigated:

1. How did Swedish companies listed on NASDAQ OMX Stockholm Large Cap apply IAS 19 paragraph 83 in 2010 and 2011?
2. How can the phenomenon that Swedish companies use both the yield on government bonds and the yield on mortgage bonds be explained?

### **1.4 Contribution**

The contribution of this thesis will be to provide comprehension of how it can become common practice for companies to use two different reference rates when the standard indicates that only one should be accepted within a country. It will clarify how changes in external factors can influence the current accounting practice and create a new practice. The fact that Swedish companies use both the YGB and the YMB could indicate that the application is in conflict with IAS 19 paragraph 83. Another way to look at the situation would be to argue that the Swedish use of the reference rates comply with IAS 19, due to the fact that the regulation is principle-based, or is a valid deviation from the standard, which could be a possible argument according to Rundfelt (2013a). Either way, it is important to identify the views on the interpretation and application problems.

The accounting for pension liabilities is an area that interests several parties, namely shareholders, investors, creditors, employees, etc. This thesis will contribute with better understanding of how the accounting practitioners justify the use of the two reference rates, and provide a better understanding of the effects of the dispersion. The study will provide an example of how a change in the accounting practice can be spread throughout a country by deciding to change the interpretation of a standard, without an actual change in the standard.

The articles by Marton and Rundfelt in the industry journal *Balans*, indicate that discussions on the matter exist. Further, the Confederation of Swedish Enterprise (Sw. Svenskt näringsliv) regularly follows the development of its member companies, and which reference rate they use for their pension liabilities. However, they do not publish the reports nor provide them on request. Nor is it possible to find published documents about the discussion of this situation on the websites of RFR and FAR<sup>3</sup>. Since it is little open discussion about this situation it is important to bring the discussion to the public, and by addressing the situation, this thesis will thus contribute to its recognition.

## 1.5 Research design and limitations

In order to serve the purpose of the thesis, and to answer the research questions, annual reports will be studied and interviews will be held. The examination of the annual reports will focus on the disclosures regarding the pension liabilities and the discount rate, for all companies included in the study. The interviews will be conducted with a sample of four companies listed on NASDAQ OMX Stockholm Large Cap with DBP, one representative from each of the Big Four<sup>4</sup> audit firms, and one fixed income trader from one of the largest banks in Sweden. The results from the annual reports and the interviews will be analyzed based on the applicable regulation, the situation in Sweden in terms of the bond market, accounting practice and surveillance, and explanatory theories that can be used to explain the occurrence of the phenomenon.

This thesis is based on accounting within Sweden according to IAS 19 paragraph 83 and thus the determination of the discount rate. The paragraph is only applicable for publicly traded companies with DBP and the thesis will hence focus on companies listed on NASDAQ OMX Stockholm, the largest stock exchange in Sweden, that have these kinds of obligations. Further, the thesis is limited to companies listed on Large Cap. These companies are the largest and can therefore be assumed to have the largest pension liabilities in nominal numbers why this limitation is justified. The companies with large pension liabilities are affected the most by changes in the discount rate and their behavior is thus the most interesting to investigate.

---

<sup>3</sup> FAR is the Swedish professional institute for public accountants and other highly qualified professionals in the accounting sector.

<sup>4</sup> Big Four refers to Deloitte, Ernst & Young, KPMG and PwC.

## **2 Frame of reference**

### **2.1 Introduction to the frame of reference**

The discussion regarding the use of both the YGB and YMB as a reference for the discount rate, discussed under “1 Introduction”, formed the ideas behind the frame of reference. To enable an appropriate analysis of the situation and to answer the research questions, the frame of reference consists of three parts; regulation, the situation in Sweden, and explanatory theories. First, an examination of the IFRS regulation regarding IAS 19 in general, and paragraph 83 in particular, is conducted. The Conceptual Framework, IAS 1 and IAS 8 are also given consideration since this leads to a better understanding of how to interpret IAS 19 paragraph 83. Also the exposure draft “ED/2009/10 Discount Rate for Employee Benefits – proposed amendments to IAS 19” is studied. To answer the purpose of the thesis, which is to perform an analysis of how the changes in interpretation and application problems relating to IAS 19 paragraph 83 resulted in a new accounting practice in Sweden, this examination of the regulation is essential.

As a second part of the chapter, a description of the current situation regarding the development of the bond markets in Sweden together with the accounting practice and surveillance is submitted. The understanding of the development of the bond markets is fundamental in the process of analyzing the situation, as the bond markets is the foundation for the determination of the discount rate. The Swedish accounting practice is also essential in order to understand the behavior of Swedish companies, which are accustomed to the Swedish accounting practice. Further, the surveillance by NASDAQ OMX Stockholm is of interest as it is the monitoring body of the listed companies and thus has a major influence on the behavior of the companies.

Finally, explanatory theories are discussed. The specific phenomenon has not been studied before, which is why the theories can be used to explain the behaviors causing the dispersion in the interpretation and application of IAS 19 paragraph 83. Possible explanations for the fact that Swedish companies have started to use the YMB instead of the YGB can be found in the positive accounting theory and the institutional theory. The positive accounting theory stresses the individuals’ effects on decisions made in an organization. The institutional theory instead recognizes the organizations as the driving forces in the decision making process. These theories are thus not entirely compatible, but rather provide two different ways to explain the phenomenon. At the end of the chapter a summary of the regulation, the situation in Sweden and the explanatory theories is made. Also, the expectations on the results arisen from the frame of reference are outlined.

## **2.2 Regulation**

### **2.2.1 IFRS regulation**

The IFRS regulation is a principle-based system, which means that the preparers of financial statements have to use their professional judgment to interpret the standards (Marton, et al., 2010). There are few directions for specific situations. For guidance to the preparers and users of financial statements, the International Accounting Standards

Committee (IASC)<sup>5</sup> developed a Conceptual Framework (Marton, et al., 2010). The Conceptual Framework is not adopted by the European Union, but should still provide the basis for solving accounting situations in a judgmental manner (the European Union, 2003). The Conceptual Framework contains concepts and basic principles for the presentation of financial statements (the Conceptual Framework, para. 1). It is however not an IFRS or an IAS and the content is subordinate to the standards (the Conceptual Framework, para. 2). It explains the purpose of financial statements, qualitative characteristics and fundamental definitions. Financial statements provide a fair presentation when they are understandable, relevant, reliable and comparable (the Conceptual Framework, para. 24, 46). Comparability over time and between companies simplifies investment decisions but can be difficult to achieve (Gordon and Gallery, 2012). Gordon and Gallery (2012) argue that different accounting methods for a similar event lead to non-convergent comparability. Requirements for the presentation, content and structure of financial statements are given in IAS 1 Presentation of financial statements (IAS 1, para. 1) in order to ensure comparability between financial statements over the years and between companies. If the compliance with a specific standard results in misleading information, which is in conflict with the purpose of the financial statements according to the Conceptual Framework, companies may in very rare cases deviate from the requirements (IAS 1, para. 19).

## **2.2.2 IAS 19 Employee benefits - determination of the discount rate**

The reporting of employee benefits obtained from formal agreements, legislative requirements and informal practices are treated in IAS 19 Employee benefits (IAS 19, para. 4). Employee benefits are divided into four different types: short-term employee benefits, post-employment benefits, other long-term employee benefits and termination benefits (IAS 19, para. 5). The most complex of the areas is post-employment benefits (Marton, et al., 2012), which also occupies most of the standard (IAS 19, para. 26-152). The standard distinguishes between defined contribution pension plans and defined benefit pension plans (DBP).<sup>6</sup> Accounting for DBP requires a number of actuarial assumptions in order to measure the present value of the obligation (IAS 19, para. 55). The determination of the discount rate is one of the actuarial assumptions that have to be made (IAS 19, para. 76). The determination of the discount rate has been widely debated over the years, and the discussions have revolved around the appropriateness of different rates (Napier, 2009). Small changes in the actuarial assumptions result in great effects due to the long-term nature of the pension liabilities (Glaum, 2009). It is therefore of great importance to make the best assumptions possible.

Guidance for determining the discount rate is given by IAS 19 paragraph 83, which is cited under “1.1 Background”. The first sentence of the paragraph states that the discount rate should be determined by reference to market yields on high-quality corporate bonds, at the end of the reporting period. Hence, in order to determine the discount rate, an interpretation of “high-quality” and “corporate bonds” must be made. The second sentence states that if there is no deep market in high-quality corporate bonds, the market

---

<sup>5</sup>The IASC was reorganized in 2001 and renamed the IASB.

<sup>6</sup> Defined contribution pension plans and defined benefit pension plans are defined in IAS 19 paragraphs 27-30.

yield on government bonds at the end of the reporting period should be used. “Deep market” and “government bonds” are not defined and thus have to be interpreted by the accounting practitioners. The third and last sentence states that the currency and term of the corporate bonds or government bonds should be consistent with the currency and estimated term of the post-employment benefit obligation, which could lead to calculation problems.

As further guidance as to how the discount rate should be determined, IAS 19 paragraph 84 to 86 is applied. The discount rate should reflect the time value of money, hence be risk-free, and not include any actuarial or investment risks (IAS 19, para. 84). The discount rate is one of the actuarial assumptions that have a material effect (IAS 19, para. 84). The measurement effects on the reported DBP are crucially sensitive with respect to the determination of the discount rate (Beechy, 2009). Beechy argues that because of the long average period of discounting, a change in the discount rate will result in great changes in the reported pension liability. A single weighted average discount rate is often used in practice, which should correspond to the underlying obligation (IAS 19, para. 85). In those situations where the maturity on the reference bonds is not sufficiently long to match the estimated maturity of all of the benefit payments, estimations have to be made (IAS 19, para. 86) According to the paragraph, the estimations for these longer-term payments consist in an extrapolation of the current market rates along the yield curve. Companies have to provide disclosures regarding DBP and specifically the actuarial assumptions, such as the discount rate (IAS 19, para. 135-152).

The opinions and underlying thoughts that lead to the published IAS 19 is outlined in the Basis for conclusions on IAS 19 Employee Benefits (IAS 19 BC). It expresses that the determination of the discount rate is one of the most important issues when accounting for DBP (IAS 19 BC129). The main issue addressed in the Basis for conclusions was that the discount rate should not be risk adjusted and only reflected the time value of money (IAS 19 BC134). The IASC further argued that it is rational to base the determination of the discount rate with reference to a deep market since it incorporates all publicly available information (IAS 19 BC136). They argued that a market yield is more relevant and reliable than if estimations of a long-term average were made.

### **2.2.3 ED/2009/10 Discount Rate for Employee Benefits**

As a result of the widened yield spread arising after the financial crisis in 2008/2009, IASB published an exposure draft, “ED/2009/10 Discount Rate for Employee Benefits – proposed amendments to IAS 19”, with the intention to amend IAS 19 with respect to the determination of the discount rate (IASB, 2009a). The idea behind it was to remove the requirement for companies to use the YGB, as a reference to the discount rate, when the country they operate in does not have a deep market for corporate bonds (IASB, 2009a). The intention was to amend paragraph 78 (current paragraph 83) and delete paragraph 81 (current paragraph 86) (IASB, 2009a). The questions outlined in the exposure draft was whether the respondents (1) agree that the board should eliminate the requirement to refer to the YGB, (2) agree that the guidance in IAS 39 Financial Instruments: Recognition and Measurement for determining fair value should be used when determining the discount rate, and (3) believe that changes in the DBP arising from the application of the proposed

amendments should be recognized as an actuarial gain or loss in the period of initial application or directly in retained earnings (IASB, 2009a). Question three (3) is not discussed further since it is outside the scope of this thesis.

The need for amending paragraph 78 arose from the fact that there is a large credit spread between the YGB and the YMB (IASB, 2009a). The same pension liability is reported significantly different depending on whether a deep market for corporate bonds exists in the jurisdiction in question or not. IASB (2009a) outlines that the amendments would reduce the range of rates used and hence improve comparability between entities and over time. At the same time it would remove the requirement for entities to evaluate if the market for corporate bonds is deep or not. IASB (2009a) recognizes however that entities sometimes need to make estimations for the YCB, but states that those estimations will be sufficiently objective, compared to other standards.

The comments received by the Big Four audit firms, FAR, RFR, and the Swedish Enterprise Accounting Group (SEAG) (Sw. Näringslivets redovisningsgrupp) are perceived to have a major impact on the development of IAS 19 and/or to represent the general perception in Sweden on the matter. There is an agreement regarding the problems with the current paragraph amongst the respondents. The audit firms all believe that there is a need for amending the paragraph, but the opinions differ when it comes to the appropriateness of the suggested amendments, as Ernst & Young and KPMG argue that they are premature (CL Deloitte, 2009; CL Ernst & Young, 2009; CL KPMG, 2009; CL PwC, 2009). The main supporters of the proposed amendments were SEAG, RFR and FAR, who considered it urgent that the amendments were implemented as soon as possible (CL SEAG, 2009; CL RFR, 2009; CL FAR, 2009). However, the exposure draft was stopped in October 2009 and the amendments were postponed until a more fundamental review of the standard was to be made (IASB, 2009b). The IASB justified this by referring to the fact that complex issues had been drawn to their attention through the comment letters received on the exposure draft.

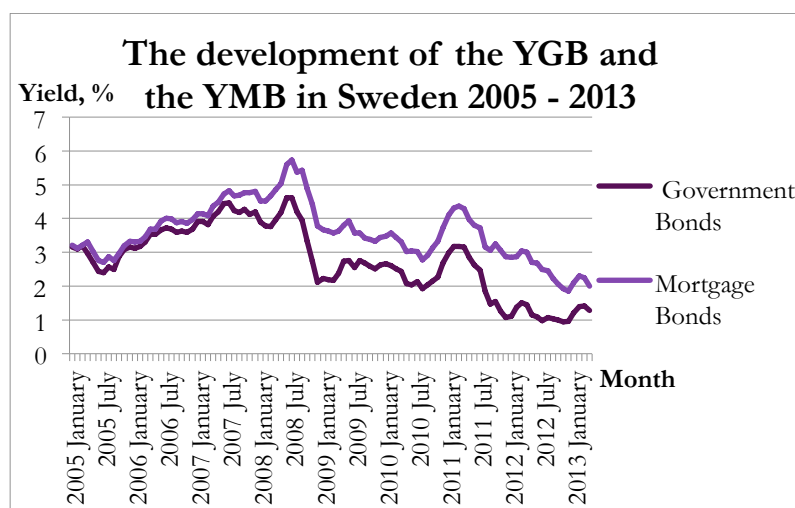
## **2.3 The situation in Sweden**

### **2.3.1 Bond markets**

There are three different bond types relevant for this thesis, namely corporate bonds, government bonds and mortgage bonds. Corporate bonds are issued by non-financial companies as a way to raise capital (Sveriges Riksbank, 2012). The credit risk varies significantly for corporate bonds, as few companies in Sweden are credit rated and the liquidity is low due to the fact that the investors usually keep the bonds to maturity. Further, there are no noted bid and ask prices, as corporate bonds are not traded very actively. Government bonds, on the other hand, are used to finance the government's long-term borrowings (Sveriges Riksbank, 2012). They have low credit risk because of the stability of the government, and high liquidity due to an active trade. Further, mortgage bonds are used to finance the mortgage institutions' lending. They generate a better return than the risk free government bonds (SEB, 2013). Since 2006, the mortgage institutions issue covered bonds, where the holder of the bond has priority to the collateral in case of a bankruptcy of the issuer (Sveriges Riksbank, 2012). The collateral consists of mortgage

credits, and public sector credits, which results in a low credit risk. Mortgage bonds have a high liquidity and rating, AAA, since they are actively traded on a secondary market (Sveriges Riksbank, 2012; SEB, 2013).

Since the market for corporate bonds is not considered to be sufficiently deep in Sweden in order to use it as a reference for the discount rate, the discussion about the bond markets will further exclude the corporate bonds. The chart in Figure 2.3.1 shows the development of the YGB and the YMB from January 2005, when Swedish companies first had to comply with IFRS, until April 2013, the most recent month for which information is available. The presented rates are the government bonds issued by Riksgäldskontoret and the mortgage bonds issued by Stadshypotek Handelsbanken with five years' duration (Sveriges Riksbank, 2011). In order to enable a comparison, five years are used since that is the longest duration available for both bond types. The two yields were almost at the same level in January 2005, when the YGB was 3.16 percent on average and the YMB 3.20 percent. The yield spread was narrow until the middle of 2007 when it grew larger. Despite the increased yield spread, and the YMB being consistently higher than the YGB, the yields have developed in a similar way. During the financial crisis in 2008, both yields fell substantially, and then stabilized at a lower level in 2009. The yields then fell between 2011 and 2013 and reached the lowest levels during these eight years. In April 2013 the YGB was 1.27 percent on average while the YMB was 2.00 percent. As of 30 December 2010, the last banking day of the year, the YGB was 2.89 percent, while the YMB was 3.95 percent (Sveriges Riksbank, 2013). As of 30 December 2011, the YGB was 1.03 percent, while the YMB was 2.84 percent (Sveriges Riksbank, 2013). The discount rate that shall be used when determining the present value of DBP is the rate on the balance sheet date (IAS 19 para. 83). Most companies in the study have a financial year equal to the calendar year why these numbers are presented.



**Figure 2.3.1** The chart shows the development of the yield on Swedish government bonds and on Swedish mortgage bonds, with maturities of five years, from January 2005 to April 2013. The yields presented are the average yield per month. Source: Self-produced based on data from Sveriges Riksbank (2013).



### **2.3.2 Accounting practice**

Before the EU adopted the IFRS regulation, Swedish companies were required to follow the Swedish legislation, namely the Årsredovisningslag (1995:1554), further denoted as ÅRL. It states that financial statements must be prepared in a perspicuous manner and in accordance with good accounting practice (Sw. god redovisningssed) (Årsredovisningslag (1995:1554), ch. 2 para. 2). Thus, according to ÅRL, the accounting practitioners should determine the accounting practice according. The IFRS regulation, on the other hand, should be interpreted and applied according to an application hierarchy in IAS 8, paragraph 7-12. First, a standard applicable to the specific situation should be applied, when it does not lead to insignificant effects (IAS 8, para. 7-8). When a standard is not applicable, and the guidance is not helpful, the management should use their judgment in order to achieve information that is relevant and reliable (IAS 8, para. 10). For these situations, guidance should be found in standards that concern similar situations before the definitions and concepts in the Conceptual Framework are used. Also, statements from other standard setters who use a similar Conceptual Framework can be used as reference, as well as other accounting literature and industry practice (IAS 8, paragraph 11-12). Janzon and Arnell (2009) discuss that the Swedish stock exchange has too much influence on the accounting practice of IFRS in Sweden, as they perform the accounting oversight. They believe that the stock exchange contributes with creating a special Swedish accounting practice. In their opinion, the stock exchange should adhere to the oversight and not interfere in creation of the norms. Marton (2013) supports this view and expresses that the creation of the norms in Sweden is determined by practicing accounting specialists, auditors and preparers of the financial statements. He believes that it is a conflict of interest regarding the system for accounting regulation in Sweden. Schipper (2005) agrees that, in general, in the absence of guidance, preparers and auditors will seek guidance somewhere else, possibly from the GAAP in the country concerned.

### **2.3.3 Surveillance**

Enforcement of the IFRS, to ensure compliance with the accounting standards, is the responsibility of the EU member states (The European parliament and the Council of the European Union, 2002). Swedish publicly traded companies listed on NASDAQ OMX Stockholm are supervised by the stock exchange itself. Isidro and Raonic's (2012) study shows that a monitoring body is important for the accounting quality. NASDAQ OMX Stockholm publishes annual reports with a compilation of observations made during each year, together with any performed investigations. An investigation was carried out in 2008, which showed that the companies' discount rates did not comply with IAS 19 paragraph 78 (current paragraph 83) (NASDAQ OMX Stockholm, 2008). They noted that the YGB with duration of ten years was between 2.40 percent and 2.60 percent. Yet, the companies used discount rates ranging from 3.00 percent to 5.80 percent. Even though the companies obviously did not use a proper discount rate, NASDAQ OMX Stockholm did not criticize the companies' use of the higher discount rate. In their opinion, the use of the YGB would result in overestimated DBP for Swedish companies that, in comparison with foreign companies, would result in a weakened financial position (NASDAQ OMX Stockholm, 2008). However, they stated that they expect the companies to improve the explanations of

their choice of discount rate.

During 2010, NASDAQ OMX Stockholm pointed out that the disclosures regarding the discount rate were not clear enough and that it is not sufficient to write as the standard, especially not in Sweden where there is no deep market for corporate bonds (NASDAQ OMX Stockholm, 2010). In 2012, NASDAQ OMX Stockholm continued to criticize the disclosures regarding the determination of the discount rates, and went further with an investigation of the companies that had DBP (NASDAQ OMX Stockholm, 2012). The investigation showed that the discount rates used are scattered and that several companies do not leave sufficient information regarding the discount rate. After an inquiry made to these companies, it was revealed that several companies used the YMB, as they considered them to be high-quality corporate bonds. Other explanations for the use were that the mortgage bonds served as alternative to corporate bonds or as alternative to government bonds. The stock exchange concluded that the current situation on the financial market can result in changes in rating and in the efficiency of the bond market. For that reason, NASDAQ OMX Stockholm continued to examine the market for Swedish mortgage bonds. The conclusion drawn was that the discount rate for Swedish DBP according to IAS 19, for the financial year of 2012 and forward, should be based on the YMB, as the market for them is now considered to be deep enough and sufficiently well functioning. They further argued that since the term “high-quality corporate bonds” is not defined, mortgage bonds should not be excluded from the definition only because of the common perception of a corporate bond (NASDAQ OMX Stockholm, 2012).

## **2.4 Explanatory theories**

### **2.4.1 Positive accounting theory**

Positive accounting theory is the label used for theories that explain and predict the behavior of individuals, i.e. accountants, regulators and researchers, within the accounting area (Watts and Zimmerman, 1990). Positivism is the concept of surveying a study object's characteristics and is based solely on facts, which allows predictions to be made (Boland and Gordon, 1992). The positive theories are of “is” characteristics, unlike normative theories that are of “ought” characteristics (Boland and Gordon, 1992). Watts and Zimmerman (1990) borrowed the term “positive accounting theory” from economic research theory. The economic approach implies that the costs and the benefits of a considered action are weighted against each other and determine which decision to make, based on whether the benefits of an action exceed the costs. The economic approach further implies that individual perceptions, and hence decisions, are the basis for all social phenomena, and the decisions made by any group (Boland and Gordon, 1992). Some take it one step further and state that individuals make decisions solely to maximize their own utility (Boland and Gordon, 1992). The idea behind developing a positive accounting theory was to enable better understanding of the accounting standard-setting process, and the pressures it is exposed to, the effects accounting standards have on individuals and why individuals and organizations exercise pressure on the standard setters in order to influence their work (Watts and Zimmerman, 1978).

Positive accounting theory focuses on empiricism and strives to identify patterns within the accounting area and to find explanations for them (Watts and Zimmerman, 1990). The theory is recognized to contribute with important knowledge of financial reporting activity (Demski, 1988). Demski (1988) argues that the main focus of the theory is the choice of accounting methods. Watts and Zimmerman (1978) assume that individuals act in self-interest, trying to maximize their own benefits. Hence, management prefers accounting standards that serve their best interests. Watts and Zimmerman further argue that these self-interest incentives are derived from the expected future compensation or wealth. They conclude that when management can affect factors that affect future compensation or wealth, and hence increase either the firm's stock price or the bonus contracts based on accounting choices, they are better off (Watts and Zimmerman, 1978). The management will have incentives to try to influence accounting standard setting as long as a firm's future cash flows possibly can be affected by the standards (Watts and Zimmerman, 1978).

A range of accounting principles is demanded as a consequence of the variety of individual interests existing (Watts and Zimmerman, 1979). Watts and Zimmerman (1979) argue that financial statements reduce agency costs arising from the fact that the interest of the management does not correspond with the interest of shareholders. Watts and Zimmerman (1978) claim that accounting theories have not fulfilled their intended purpose, i.e. to support a well functioning accounting practice, but now also serve as ways to find support for already predetermined perceptions. They further claim that there is no single theory that can be used to explain all accounting practices and standards, despite the theory based on self-interest (Watts and Zimmerman, 1979). They argue that the theories are used to justify one's actions, and that different theories are used to justify different behaviors.

The fact that auditors, accountants and managers influence the accounting standards based on their incentives is surveyed by Watts and Zimmerman (1979) while Ball, Robin and Shuang Wu (2003) go further and investigate situations when the incentives and standards conflict. They conclude that the market forces, the public disclosures and the shareholders' function as corporate governance resolve much of the information asymmetry arising. The determination and supervision of accounting standards is submitted to private sector functions and the accounting and auditing profession, which also performs services to corporations being monitored (Ball, Robin and Shuang Wu, 2003). Accounting practice is not only determined by the regulation, it is also impacted by the fact that the standards involve judgment and that they are not detailed enough to cover all possible situations (Ball, Robin and Shuang Wu, 2003). The study performed by Ball, Robin and Shuang Wu (2003) shows that market effects are predominant in regulating accounting standards.

The need for accounting regulation arises due to information asymmetry between better-informed managers, who prepare the financial statements, and less-informed investors (Fields, Lys and Vincent 2001). Hence, if markets were completely well functioning, there would be no need for accounting regulation. However, Ball, Kothari and Robin (2000) argue that not all accounting practice is determined by the established rules, but to a large extent also by current practice. This is due to the inadequacy in the level of details and

innovations of the accounting standards, and to the necessity of judgments required by management (Ball, Robin and Shuang Wu, 2003).

Fields, Lys and Vincent (2001) further state that agency costs, such as managerial compensation and debt covenants, and other externalities related to contractual or non-contractual parties are the other types of market imperfections that have an impact on the accounting choices made by managers. The preparers of the financial statements have to exercise judgment based on current regulations, which allows them to manipulate the financial statements in the desired direction (Fields, Lys and Vincent, 2001). Fields, Lys and Vincent argue that the tendency for managers to base their accounting choices on their self-serving goals is an example of earnings management, even though earnings management mainly concerns areas other than accounting.

#### **2.4.2 Institutional theory**

Institutional theory can be described as when organizations are influenced by normative pressures (Zucker, 1987). Zucker (1987) explains that these normative pressures arise from external sources such as the state, or from within the organization itself. She further argues that these pressures stem from legitimizing motives, i.e. that standard procedures, professions and state requirements can be used as explanations for the legitimizing actions. Professions take form as a legitimizing motive due to the influences from formal education and professional networks. Legitimacy refers to the social acceptability and credibility an organization needs in order to survive (Scott, 2001). According to Meyer and Rowan (1977), the techniques, policies and programs in an institutional environment have become myths that represent legitimacy. Zucker (1987) states that, in order to gain legitimacy, task performance is no longer in focus for organizations. DiMaggio and Powell (1983) agree, and claim that the need for efficiency and competition are no longer what make organizations change; they are rather driven by requirements from the government and by professions.

There are several opinions on what an institution is, but there is no clear definition. Yet, Scott (2001) states that a perception that are shared by most people is that an institution is a social structure formed by different elements, i.e. regulative, normative and cultured-cognitive elements. Financial accounting can thus be seen as an institution (Young, 1996). Young (1996) states that the Conceptual Framework by FASB structures the purposes, characteristics and categories of financial accounting. The framework is generally accepted and rarely questioned, and therefore, the financial accounting in different organizations is similar to one another. Young further discusses how the emergence of new financial instruments challenges existing financial accounting practices. This is an example of how new conditions in the environment may force the consideration for a change of the accounting framework. However, the fact that financial accounting can be seen as institutions may constrain these changes (Young, 1996). Appropriate solutions might be missed as the institutions can result in narrowed ways of thinking, even though it simplifies the decision-making process when providing standardized solutions (Young, 1996).

Scott (2001) sorts different theorists' views on institutions into three pillars: the regulative, the normative, and the cultural-cognitive pillar. The regulative pillar illustrates how

institutions affect behavior by setting rules, and through monitoring and sanctioning activities. The normative pillar shows that institutions are driven using values and norms that appoint the proper ways to achieve the operating goals. Finally, the cultural-cognitive pillar focuses on the importance of symbols and meanings in the process of achieving organizational objectives. Scott (2001) continues to discuss that each of the three pillars provides different forms of legitimacy. The regulative pillar stresses that organizations that conform to legal requirement are legitimate, the normative pillar derives legitimacy from moral, while the cultural cognitive pillar states that legitimacy comes from preconscious, taken-for-granted understandings of a common structure for certain situations.

The fact that organizations become more similar in order to gain legitimacy can be explained by isomorphism (DiMaggio and Powell, 1983; Zucker, 1987). DiMaggio and Powell (1983) describe three isomorphic processes that can explain why organizations become more similar: coercive, mimetic, and normative isomorphism. Coercive isomorphism explains how organizations can be forced, persuaded, or attracted to homogenization. These pressures stem from other organizations on which they are dependent, from cultural expectations in society and from government requirements. Mimetic isomorphism refers to uncertainty as a reason why organizations imitate the structure of other organizations. This can be driven by organizational technologies that are poorly understood, goals that are ambiguous or symbolic uncertainty created by the environment. When uncertainty occurs, mimetic behavior simplifies the search for a solution to the problem with little expense. Lastly, normative isomorphism derives from professionalization within organizations. Professionalization can be explained by formal education, formed by universities and professional training institutions, and professional networks, where people at the same positions in different organizations have formed a unified opinion, which have shaped the work of different professions in a certain way (DiMaggio and Powell, 1983).

A study by Deephouse (1996) shows a positive correlation between strategic isomorphism and measures of legitimacy within commercial banks. Deephouse found that regulators and the general public perceive banks with similar strategies to be more legitimate than banks with different strategies. The study therefore supports the view of Meyer and Rowan (1977) and DiMaggio and Powell (1983), that isomorphism legitimates organizations.

## **2.5 Summary and expectations**

The principle-based structure of the IFRS regulation is expected to explain dispersion in the application of IAS 19 paragraph 83 due to the interpretation possibilities. The paragraph is of “either-or”-nature, but dispersion could be explained by the different interpretations of the concepts in the paragraph, e.g. “deep market” and “corporate bond”. The expectation is further that companies use the qualitative characteristics comparability, according to the Conceptual Framework, to justify the use of the YMB. Further, IAS 19 and the Basis for conclusions on IAS 19 is expected to explain how companies justify the use of the YMB by referring to the purpose of the paragraph. The exposure draft for the proposed amendments to the paragraph and the related comment letters might provide an

explanation for the dispersion in the use of reference rates, as the companies and audit firms might be affected by the amendment process.

The description of the bond markets and the fact that the YGB has reached a very low level is expected to explain the companies' transition to the use of the YMB instead of the YGB. Further, the longstanding tradition of good accounting practice in Sweden is expected to still have an influence on the companies' behavior. When companies follow other companies in the use of the YMB, the use of the YMB eventually becomes accepted as good accounting practice. The expectation is that the accounting practitioners try to find guidance in the Conceptual framework and from industry practice. Further, the stock exchange's approval of the YMB is expected to explain that companies will continue to use the YMB. If the surveillance body approves the alternative interpretation of the paragraph, there is no reason for the companies not to use a discount rate that results in lower reported liabilities.

Positive accounting theory puts emphasis on preferences and management incentives, and can thus be used to explain the phenomenon that Swedish companies have started to use the YMB. Therefore, the expectation is that the preparers of the financial statements will use the interpretation possibilities to act in self-interest, as well as meeting the expectations of the stakeholders, by choosing a discount rate as high as possible resulting in lower pension liability and thus better key ratios. The institutional theory differs from the positive accounting theory as it states that organizations change in order to gain legitimacy, which is driven by requirements from the government, other organization and professions. It emphasizes how external and internal forces influence companies to become more similar. The institutional theory is expected to explain that a general acceptance to use the YMB is spreading as a result of external forces. The two explanatory theories discussed are based on rather contradictory ideas. However, it is beneficial as they can provide two different approaches to explain the phenomenon.

## **3 Methodology**

### **3.1 Introduction to the methodology**

The methodology chapter starts with a presentation of how the study is performed in order to answer the research questions, using two different approaches. After the research approaches are described, a detailed description of the data collection and sampling procedure follows. First, the process of collecting the information used for “2 Frame of reference” is described. To answer research question one, annual reports from the companies listed on NASDAQ OMX Stockholm Large Cap is studied. The process of collecting this data is described as the second part of the data collection. Interviews are held in order to answer research question two. The sampling procedure for the interviews is strategically performed, and need a thorough explanation. This explanation follows after the description of the data collection from the annual reports. Since the interviews are an important part of the thesis, the questionnaires used in the interviews are given a separate section, under which the process of producing the questionnaires is described. Further, the analysis process is described in order to clarify how the results from the empirical study are analyzed by comparing it to the frame of reference. The chapter ends with a discussion on credibility and limitations of the research method.

### **3.2 Research design**

To serve the purpose of the thesis, thus to analyze how the changes in interpretation and application of IAS 19 paragraph 83 resulted in a new accounting practice in Sweden, two research questions have been outlined:

1. How did Swedish companies listed on NASDAQ OMX Stockholm Large Cap apply IAS 19 paragraph 83 in 2010 and 2011?
2. How can the phenomenon that Swedish companies use both the yield on government bonds and the yield on mortgage bonds be explained?

The nature of the two research questions is different, which is why two research approaches are used. First, annual reports of listed companies on NASDAQ OMX Stockholm Large Cap are studied. The information in the annual reports about the companies' use of discount rate and reference rate is compiled and analyzed in order to answer research question one. When sufficient information is not possible to retrieve from the annual reports, clarification is requested from the companies directly. Further, interviews are conducted with representatives from four companies listed on NASDAQ OMX Stockholm Large cap, four representatives from the Big Four audit firms and one representative from one of the largest banks in Sweden. The information gathered from the interviews is used to answer research question two. The results from the two approaches are presented separately as the purpose with the different approaches is to answer the two research questions one by one.

The study of the annual reports contributes with width since many companies can be studied. Research question one can be analyzed by examining the dispersion among the discount rates and reference rates used. The results are presented in figures or tables,

together with explanations of the numbers or disclosures. The quantification of the information allows conclusions to be drawn about the population investigated.

The interviews contribute with depth as more and deeper information about the problem can be found. The companies contribute with examples of opinions from the preparers of the financial statements, who are directly affected by the paragraph. The audit firms are also affected by the accounting regulation, and can be assumed to contribute with a slightly different view than the companies. The representative for the bank is used in the study as an independent party to discuss the bond markets, without any knowledge in accounting. The interviewee can thus contribute with an unbiased opinion, without any incentives to advocate one reference rate over the other. The interview will be helpful in the analysis of the results from the other interviews since it provides an understanding of the bond markets and concepts discussed. The results from the nine interviews will be presented based on the three groups of interviewees, i.e. the companies, the audit firms and the bank, and not based on their opinions. The presentation of the companies will further be divided into two groups, one with the two companies that use the YGB and one with the two companies that use the YMB. The opinions can then be compared within the groups as well as between the groups, in order to analyze and explain the factors causing the interpretation and application problems.

### **3.3 Data collection and sampling**

#### **3.3.1 Frame of reference**

The content of the frame of reference was gathered from different sources. The information about the IFRS regulation, the exposure draft and the accounting practice were mainly found through the Economics Library of Gothenburg University Library and in documents from the IFRS foundation and the IASB. Further, the information about the bond markets was mainly collected from Sveriges Riksbank. The information about the surveillance was, for the most part, based on reports published by NASDAQ OMX Stockholm. The research articles for the thesis and the explanatory theories were found in the databases World of Science, Scopus and Business Source Premier. The key words used to find useful articles for the thesis in general were “IAS 19”, “accounting”, “pension accounting”, “pension plan(s)”, “defined benefit pension plan(s)”, “discount rate” and “yield spread(s)”. Different combinations of these key words were used to find suitable articles. To find articles for the section of explanatory theories, several key words were used and numerous articles were read before determining that the positive accounting theory and the institutional theory should be used in this thesis to explain the phenomenon. Thus, the key words “positive accounting theory” and “institutional theory” generated the useful articles for this section. Further, useful articles were found in the reference list and the citing list from the articles found in the search results.

#### **3.3.2 Compilation of information given by Large Cap companies**

According to the first research approach, annual reports of the listed companies on NASDAQ OMX Stockholm Large Cap for 2010 and 2011 are studied. A limitation to one of the lists, i.e. to Small Cap, Mid Cap or Large Cap, is justified in order to investigate all of



the companies on one of the lists. The possibility to investigate an entire population enhances the quality of the results. Large Cap is chosen since the list contains the largest publicly traded companies, with a market value of over one billion euros (NASDAQ OMX, 2012). It can be assumed that since the companies are the largest, they also have the largest pension liabilities in nominal numbers. The effects of a change in the discount rate are greater the larger the pension liabilities are, which is why this limitation is justified. The limitation to Large Cap is also supported by the master thesis by Oguz and Markovic (2012) that found that company size is the only company specific factor that affects the choice of reference rate. They believe that that is due to the fact that large companies analyze the effect of a change in the discount rate to a greater extent than small companies. Hence, it can be assumed that a larger part of those companies have started to use the YMB instead of the YGB, and that they have considered to a larger extent why the use of the YMB could be justified. Large Cap is therefore the most appropriate list to investigate in the study.

Annual reports from 2010 and 2011 are used since those are the most current reports available in time for the study to be based on. It was not until 2010 that a number of companies started to use the YMB in Sweden. Before this point of time the paragraph was applied consistently within Sweden when all companies used the YGB (Oguz and Markovic, 2012). The annual reports from 2009 and earlier would consequently not contribute with anything to the study. For those companies that do not have a financial year equal to the calendar year, the annual reports for 2009/2010, 2010/2011 and 2011/2012 would be possible to consider for the study. However, the two annual reports chosen to represent the financial years 2010 and 2011 are the two where the majority of the financial year stretches over the year concerned.

The annual reports from each company are collected during February 2013, and organized based on their industry classification<sup>7</sup>. The number of companies listed on Large Cap, i.e. the number of companies examined, is 61. To find the companies that have DBP, i.e. those that are relevant for this study, the disclosures regarding the pension liabilities for the 61 companies are reviewed and gathered in an Excel sheet in a systematic manner. Two companies that follow US GAAP instead of IFRS are excluded, together with one company that do not report any pension plans at all. Further, eight companies that distinctly express that they do not have DBP in Sweden are excluded, as well as five companies that only have DBP invested in Alecta. Alecta plans are reported as defined contribution plans instead of DBP, as sufficient information about the plans is not considered to be available (UFR 3). After the exclusion, 45 companies remain and are therefore examined more thoroughly. The companies included and excluded in the study of the annual reports are outlined in appendix 1 and 2.

Further, information about the reference rate and the discount rate are compiled. The reference rates are the rates used as benchmarks to determine the discount rate. The YCB, the YGB and the YMB are mainly used. The companies that refer to corporate bonds or other rates, that leave explanations identical, or close, to IAS 19 paragraph 83 or that leave

---

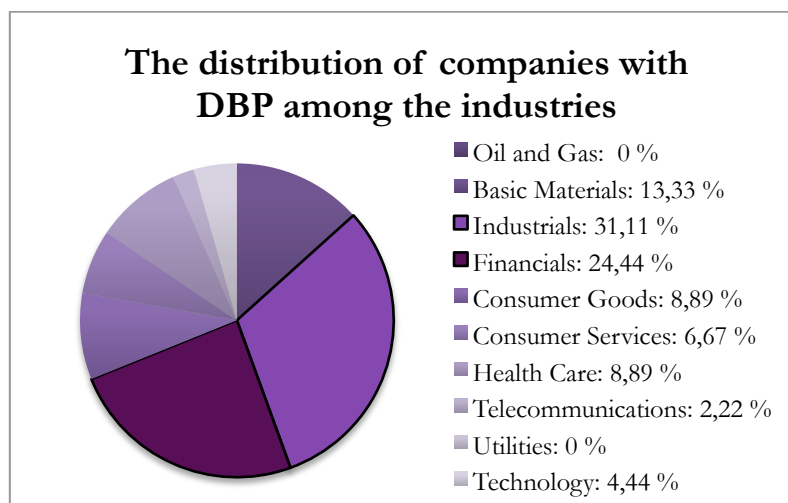
<sup>7</sup> The industry classification used by NASDAQ OMX Stockholm is the Industry Classification Benchmark (ICB), which is also used in this thesis. The industries classified are "Oil and Gas", "Basic Materials", "Industrials", "Consumer Goods", "Consumer Services", "Health Care", "Telecommunications", "Utilities", "Financials" and "Technologies".

no information at all about their reference rate are considered to leave insufficient information. Due to the fact that it is not possible to understand which reference rate that is used by these companies, requests about a clarification of which reference rate they use are sent out by email to these companies. For the companies that do not answer even after a reminder email is sent, telephone contact is established to improve the answer ratio. The information about the companies' reference rates, given in the annual reports, in the emails, and by telephone, is used to categorize the companies. Out of the 28 companies that did not leave sufficient information, i.e. the ones that were contacted, 22 replied. Hence, only six companies did not provide any clarification. Consequently, the information from the annual reports had to be used in the categorization process for these companies. The categorization results in six groups based on companies that distinctly express that they use the YGB, the YMB or the YCB, those who use another reference rate than the three discussed, those who have a clarification similar to IAS 19 paragraph 83 and those who leave no information at all. The fact that the two last mentioned categories is not eliminated is the result of that the response rate is not one hundred percent. Further, the discount rate is the level of the rate used for the pension liabilities in Sweden or a weighted average for all pension liabilities in the consolidated statements. This information will be used to investigate how the use of discount rate differs among Swedish companies. This information enables the analysis of how Swedish companies listed on NASDAQ OMX Stockholm Large Cap applied IAS 19 paragraph 83 in 2010 and 2011.

### **3.3.3 Mapping of the perceptions of the dispersion**

According to the second research approach, interviews with representatives from four companies, the Big Four audit firms and a bank are conducted in order to gain a deeper understanding of the interpretation and application problems that led to the emergence of a new accounting practice.

The companies are selected based on the population that has been developed to carry out the study of the annual reports, described under "3.3.2 Compilation of information given by Large Cap companies". As described, 61 companies are listed on Large Cap, but only 45 can be included in the study. Since it is not possible to interview all of the companies a systematic approach is used to identify an appropriate sample to select the interviewees from. First, based on the industry classification, the industries with the largest proportion of companies with DBP are selected. The distribution of companies among the industries is shown in Figure 3.3.3 below. It shows that 56 percent of the companies with DBP belong to the industries Industrials (31 percent, 14 companies) and Financials (24 percent, 11 companies). The remaining 44 percent of the companies are distributed among the other eight industries. Basic Materials, which is the third largest industry on Large Cap, represents only 13 percent of the companies with DBP and is not considered to constitute a sufficiently large portion to be one of the industries selected. Further, Industrials and Financials also represent 52 percent of the total number of companies listed on Large Cap, and is thus an appropriate sample to study more thoroughly. The respondents' answers will consequently be examples of opinions from the two industries that represent more than half of the Large Cap companies.



**Figure 3.3.3** The figure shows the distribution of companies with DBP among the different industries. Source: Self-produced based on the industry classification used by NASDAQ OMX Stockholm (2013) and the annual reports, for 2011, of the companies listed on NASDAQ OMX Stockholm Large Cap.

One of the purposes of interviewing the companies is to examine the conflicting views held by companies that use the YGB and those who use the YMB, among the industries Financials and Industrials. Therefore, the companies are divided into four different groups, illustrated in Table 3.3.3, from which the interviewees are selected. The most recent annual reports, i.e. the ones from 2011, are used as the base for the selection of the interviewees. The companies that have an explanation similar to IAS 19 paragraph 83 are assumed to use the YGB since there is no deep market for corporate bonds in Sweden. This might not be the correct assumption but is only done for the interview sampling, and not for the other parts of the thesis. It is important to determine if the correct assumption is made for the company in question, when it is contacted for an interview request, as it is important for the thesis to investigate the opinions expressed by two companies that use the YGB and two companies that use the YMB. Several companies do not provide any information in order to determine whether they refer to the YGB or to the YMB and are therefore excluded. If possible, it would have been preferable to base the interview sampling on the complete compilation of the reference rates used, discussed under “3.3.2 Compilation of information given by Large Cap companies”, as less companies had been excluded. However, as the answers are difficult to get, and takes a considerable amount of time to collect, this is not possible. Further, all of the companies concerned are relevant since the interviewees will contribute with examples of conflicting views held by companies. Therefore, it is not crucial that the interview sample only consists of companies that have large pension liabilities and a ranking of the size of the pension liabilities is therefore not necessary. Further, by using excel, the interviewees are randomly selected, one from each of the four groups illustrated in Table 3.3.3. The base for the selection of the interviewees is outlined in appendix 3.

### The groups from which the interviewees are selected

	Industrials	Financials
YGB 2011	5	4
YMB 2011	6	3
<b>Total</b>	<b>11</b>	<b>7</b>

1 Industrials, YGB	1 Industrials, YMB	1 Financials, YGB	1 Financials, YMB
--------------------	--------------------	-------------------	-------------------

**Table 3.3.3** The groups from which the interviewees are selected. The four groups are based on which industry the companies belong to, and what reference rate they refer to. Source: Self-produced based on information from the annual reports, for 2011, of the companies in the industries Industrials and Financials listed on NASDAQ OMX Stockholm Large Cap.

The interviewees will represent 22 percent of the companies in the sample. However, the representation from the two industries and from the distribution between the two reference rates differs, as shown in Table 3.3.3. The interviewees will therefore not represent the four groups equally. For example, the group that consists of companies that belong to Industrials and that use the YMB is larger than the other three groups. An interviewee from this group will thus result in a lower proportional representation than the interviewees from the other three groups. Despite the differences in the representation, the interview results are considered to contribute with an understanding of the groups' reasoning.

Further, to gain a deeper understanding of the interpretation and application problems leading to the new accounting practice, interviews with representatives from the Big Four audit firms are conducted. The audit firms are also affected by the accounting regulation, and are believed to have considerable influence on the companies' accounting choices. They can thus contribute with a different view of the phenomenon than the companies. The four largest audit firms can be assumed to have extensive knowledge in the IFRS regulation since they all have a large number of listed companies as clients. Hence, it is relevant to interview them in order to find their perspectives of the situation. Further, by interviewing one representative from each of the Big Four it is possible to confirm whether the opinions are consistent. The representatives from both the companies and the audit firms are to some extent believed to be influenced by their own experiences and to have a desire to report in a certain way. For this reason, and since the understanding of the Swedish bond markets is of importance for the thesis, an interview with a representative from a bank contributes with a different view of the problem. In the process of selecting an appropriate interviewee, a random selection is made based on the four largest banks in Sweden<sup>8</sup>. It is important that the representative have great experience in the bond market, why such a representative is requested.

In order to find the most suitable interviewees, i.e. with the best knowledge in the subject, the companies, the audit firms and the bank are given the opportunity to select a representative themselves. Contact is established and the purpose of the thesis is explained in order for the company, audit firm or bank to choose the most appropriate interviewee.

<sup>8</sup> The four major banks in Sweden are Nordea, SEB, Svenska Handelsbanken and Swedbank (Svenska Bankföreningen, 2013)

However, this method involves some degree of risk that the chosen representative is not the most appropriate person to interview, but the one that is available. This risk is however not considered to be that present as the first name mentioned by the companies, audit firms and bank as a suitable interviewee, was then interviewed. This applies to all interviewees except the one from Deloitte, which was more difficult to find. Luckily, the interviewee turned out to be as familiar with the phenomenon as the other interviewees. The representatives for the companies are financial controllers and accounting specialists and the representatives for the audit firms are accounting specialists and actuaries. They are all considered to have an extensive knowledge in pension accounting, which makes them appropriate to interview. The representative for the bank is a fixed income trader who has an extensive knowledge in the Swedish bond markets, which is why the interview is relevant for the study.

Personal interviews are held with the interviewees that are available in Gothenburg, while phone interviews are held when personal interviews are not possible. This results in three personal interviews and six telephone interviews. Each interview takes approximately 30 minutes. The interviewees from the companies are, on request, anonymized and referred to as company, or interviewee, A, B, C and D in “4.3 Perceptions of the dispersion in the use of reference rates”. The representatives for the audit firms will be referred to as audit firm, or interviewee, 1, 2, 3 and 4.

### **3.4 Interview questionnaires**

After selecting the interviewees, different questionnaires for the three groups of interviewees are compiled. The interview questions are based on the discussion in “1 Introduction” and on the content in “2 Frame of reference”. The questionnaire for the fixed income trader is primarily based on the discussion about the bond markets under “2.2 The situation in Sweden”. Since this specific phenomenon has not been studied before, and since it is such a specific part of the regulation that is investigated, there are no previous studies to base the questionnaires on. Appendix 4 presents the different questionnaires. The questionnaires are sent to the nine interviewees a few days before the interviews. In order to achieve a greater depth, the interviews are semi-structured. Since the aim for the thesis is to find reasons for, and to understand, the situation, semi-structured interviews are preferable. The structure ensures that the answers from the different interviews can be compared while the open questions allow the interviewees to raise new perspectives to the research problem. By conducting interviews it is possible to explain the behavior of the companies.

The questions used for the interviews with the companies are developed based on the companies’ arguments for the choice of reference rate. In order to answer research question two, the aim is to discover the reasoning behind the choices in order to analyze the answers later in the thesis. Further, the aim is to find the companies’ perception of the advantages and disadvantages with the use of the two rates, whether they can see any conflicts or problems arising from the dispersion, and whether they can see any interpretation and/or application problems with IAS 19 paragraph 83. By finding answers

to these questions, it is possible to analyze how the companies could start to use two different reference rates in Sweden.

The aim for the interviews with the audit firms is similar to the aim for the interviews with the companies. In addition, the representatives' role in the interpretation and application of IAS 19 paragraph 83, together with their possibilities to impact the accounting is investigated. The perception held before the interviews are conducted is that the transition in 2010, from using the YGB to using the YMB, was a major step for the audit firms to accept. Consequently, to understand the audit firms' reasoning during this point of time, they are asked to explain their reasoning regarding the change of reference rate in 2010.

The purpose of the interview with the fixed income trader is to investigate the trader's perception of the bond markets, with focus on the market for mortgage bonds in Sweden in comparison to the market for corporate bonds abroad. Due to the fact that Swedish companies referred to the YGB consequently from 2005, when the IFRS regulations became mandatory for listed companies in Sweden, until 2010, when a number of companies started to use the YMB, it is important for the analysis to investigate the development of the bond markets between these years. The aim of the interview is further to clarify whether the interviewee considers it possible to classify mortgage bonds as corporate bonds.

### **3.5 Analysis model**

The analysis is carried out based on the structure in "2 Frame of reference". By starting from the frame of reference and applying it to appropriate parts of the results of the study, it simplifies and brings logic to the analysis, as it is easy to follow the reasoning. As the two research questions will be answered separately in chapter "6 Conclusions", the analysis is presented accordingly.

To answer research question one, an analysis is made by comparing the results in "4.2 Reference rates and discount rates used by Large Cap companies" to the information in "2.2 Regulation" and "2.3 The situation in Sweden". As the regulation and situation in Sweden form the foundation when companies consider how to interpret and apply IAS 19 paragraph 83, these parts are used to enable understanding of the findings from the companies' annual reports. However, research question one is largely answered already through the result section of the thesis and is thus not given as much consideration in the analysis as research question two.

Research question two is the key question in order to serve the purpose of this thesis. As the first research question, the second question is answered by analyzing the results in "4.3 Perceptions of the dispersion in the use of reference rates" by comparing it to the frame of reference. All three parts of the frame of reference, namely "2.1 Regulation", "2.2 The situation in Sweden" and "2.3 Explanatory theories", are used. All of the opinions held by the interviewees, hence the three different parts of the results, are considered and compared. As the foundation for how the companies and audit firms relate to the paragraph is found in the regulation and the situation in Sweden, explanations for how it have been possible to use two different reference rates simultaneously are believed to be found when these parts are applied to the results from the interviews. However, these parts

of the frame of reference are not sufficient to fully understand why the phenomenon has arisen. The section “2.3 Explanatory theories” is thus given considerable scope as it provides important tools for explaining why the phenomenon has arisen. These theories will enable an analysis from two different perspectives and provide different explanations for the phenomenon. As the situation has not been studied before, the theories can bring understanding to it and help to clarify the situation.

### **3.6 Discussion**

The fact that all companies listed on NASDAQ OMX Stockholm Large Cap are included in the study of the annual reports allows conclusions to be drawn about these companies. An expanded approach would have been to include the entire NASDAQ OMX Stockholm. More companies would have been studied, and conclusions could have been drawn for the entire stock exchange. If the thesis had been based entirely on research question one, this would have been preferred. However, as the purpose of the thesis is to analyze how the changes in interpretation and application of IAS 19 paragraph 83 resulted in a new accounting practice in Sweden, that is, to perform a deep study of the phenomenon, research question one is subordinate to research question two. An expansion of the study to include all companies listed on NASDAQ OMX Stockholm is consequently not considered to be necessary.

The annual reports, used to gather information about the companies' choice of discount rate, are official documents. It is therefore possible to find the same information again, which increases the reliability of the study. However, NASDAQ OMX Stockholm has noted that many companies do not provide sufficient information about their actuarial assumptions such as the discount rate, as discussed under “2.2.3 Surveillance”. Consequently, the results from the annual reports cannot be considered to be complete why the reliability decreases. When contact is established with the companies that do not provide sufficient information the response ratio is increased and much of the lost reliability is restored. Further, although the response ratio was good, 79 percent, replies from all of the companies were not obtained. It is not possible to draw any conclusions for the remaining 21 percent, even though they are still included in the compilation.

As discussed above, under “3.3.3 Mapping of the perceptions of the dispersion”, the sample of companies for the interviews is based on the population in which the annual reports are studied. This means that the interviewees contribute with examples of opinions from the companies included in the first part of the study. As the sample represents 56 percent of the companies listed on Large Cap that report DBP, the sample represents a large proportion of these companies. Further, the interviewees represent 22 percent of the companies in the sample. However, it is not possible to generalize the results of the interviews for the sample. The interviewees contribute with examples of opinions and cannot be used to draw conclusions the sample or the population. However, their opinions are important to allow a discussion regarding the interpretation and application problems and to increase the knowledge regarding the reasons for the problem and the new accounting practice. This also applies to the interview with the fixed income trader who represents only one of the four major banks in Sweden. The interviews with the

representatives of the audit firms cover each of the Big Four, which improves the validity. However, it is important to be aware of the fact that it is not possible to fully distinguish the audit firms' position in the matter, from the interviewees' personal opinions. Further, two of the interviewees from the audit firms are members of FAR, RFR and/or SEAG. Also, accountants from two of the interviewed companies are members of SEAG. The fact that they are involved in discussions within these organizations might also affect their opinions. As with the companies, the possibilities for generalization of the answers given by the interviewees from the audit firms can be discussed. However, the possibilities are greater for the audit firms, as the representatives of the audit firms represent all of the Big Four while the companies only form a sample.

An alternative approach to the study would have been to conduct a survey instead of holding interviews. The advantage of a survey is that more answers can be collected and that the opinions can be used for generalization. However, there is a risk that the response ratio is low or that the respondents do not understand the questions and therefore do not answer, or unintentionally give the "wrong" answer. The intention with this study is to understand the companies' and audit firms' reasoning around the phenomenon. It is thus preferable to conduct interviews, as it is possible to ensure that the interviewees understand the questions and that their opinions are properly described.

The fact that some interviews are personal while others are held by telephone provides a risk of decreased reliability. It is possible that, during the personal interviews, the interviewees are affected by the body language and acting of the interviewers. On the other hand, during the telephone interviews, the interviewers forfeit the possibility to read the body language of the interviewees. This risk is reduced as the interviewers try to act as neutral as possible towards the interviewees. Also, complementary questions are asked when the interviewee's opinion is not clear due to the fact that it is not possible to read the interviewees body language. All interviewees are given the opportunity to prepare themselves for the interviews as the questionnaires are sent to them a few days before the interviews. It is not guaranteed that all interviewees embrace this possibility, which can make their answers less careful. However, since the phenomenon is so specific, the persons who express that they have knowledge within the area are believed to have sufficient knowledge even without preparation. To ensure that no information is missed and to be able to focus on the discussion with the interviewees, the conversations are recorded, with the interviewees' permission. Afterwards, the recordings are transcribed and sent to the interviewees for comments. Five of the respondents used this opportunity to clarify a few statements. This process increases the reliability of the interview data used in the thesis.

Anonymization of the interviewees might decrease the reliability since the opinions cannot be referred to a particular respondent. However, this is the request from the interviewees and must be respected. On the other hand, the quality of the results of the interviews is not negatively affected due to the anonymization. No important information has to be removed to ensure the anonymity of the interviewees. Also, the anonymization could even improve the reliability as the interviewees can express opinions that they otherwise would not dare do express. The request for anonymity is interesting, as it could indicate that the companies are afraid to be criticized.



## **4 Results**

### **4.1 Introduction to the results**

The empirical material is based on two research approaches, as described under “3.2 Research design”, and is presented accordingly. First, the compiled data from the annual reports and the clarifications from the companies describe the current situation. Based on the information given by the companies in their annual reports and after clarifications, statistics on which reference rate and discount rate they use is compiled. The result will be used to analyze how Swedish companies listed on NASDAQ OMX Stockholm Large Cap applied IAS 19 paragraph 83 in 2010 and 2011.

Second, the results from the interviews are summarized and presented based on the three groups: companies, audit firms and bank. Further, the interviews with the companies are presented based on whether they use the YGB or the YMB. In both categories, one company operates in the industry Financials and the other in Industrials. The opinions are weighted against each other in order to analyze the similarities and differences at a later stage. The interviews with the audit firms are then discussed, to bring their opinions into the discussion and to contribute with a wider and more nuanced picture. Finally, the interview with the bank is presented to further contribute with a different perspective to the analysis. The results from the interviews will be used in the analysis to explain how the phenomenon that Swedish companies use both the YGB and the YMB has occurred.

### **4.2 Reference rates and discount rates used by Large Cap companies**

As suggested in “1 Introduction”, the financial crisis has led to dispersion in the application of IAS 19 paragraph 83. A mapping of the current situation in Sweden shows that different reference rates have been used for the discount rate. The mapping is based on the companies’ annual reports and completed with clarifications from the companies in those cases where the disclosures are not sufficient. Contact was taken with 28 companies, of which 22 responded. The distribution of the different classifications, both from the annual reports and after the clarifications from the companies, is shown in Table 4.2. The clarifications enhanced the compilation of the distribution as more companies’ reference rates could be classified as either the YGB or the YMB. The table shows that the distribution is highly changed after the clarifications. The classification of reference rates according to the annual reports and after clarifications from the companies is outlined in appendix 5.

Even though it is commonly known that there is no deep market for corporate bonds in Sweden (RFR, 2009; Marton, 2012a), four companies in 2010, and three companies in 2011, write in their annual reports that they refer to the YCB when determining the discount rate. After clarifications from three of these companies it is clear that they classify mortgage bonds as corporate bonds. It is possible, and even likely, that the fourth company that did not reply does the same classification. The group with companies that left an explanation similar to IAS 19 paragraph 83 could almost be eliminated for both years, as the contact with the companies showed that six used the YGB and two used the YMB in

2010, while four used the YGB and three used the YMB in 2011. Two of these companies used neither the YGB nor the YMB, and were categorized as “other” in both years. However, three of these companies did not reply. The company classified as “other” in the annual report actually used the YMB as a reference. Finally, out the companies that did not provide any information about the reference rate, two used the YGB and six used the YMB in 2010, while one used the YGB and six used the YMB in 2011. Three of those companies did not reply to the request. Consequently, the group “YGB” increased with eight companies for 2010 and with five companies for 2011 after the clarifications. The group “YMB” increased with twelve companies for 2010 and with thirteen companies for 2011.

Due to the fact that 28 companies were considered to leave insufficient information in their annual reports, the further discussion will be based on the classification after the clarification from the companies, i.e. the two columns to the right in Table 4.2 a. There is a significant increase in companies that refer to the YMB between 2010 and 2011. In 2011, 27 companies referred to the YMB compared to 21 companies in 2010, hence an increase by 29 percent. Companies that referred to the YGB, on the other hand, decreased from 17 to 11 companies, hence by 35 percent, between the two years. In total, 60 percent of the companies used the YMB in 2011, while only 24 percent used the YGB. For 2010, the same figures were 47 and 38 respectively. Due to the fact that the disclosures are insufficient and that not all companies replied to the clarification requests, it is possible that the numbers presented in Table 4.2 a could be modified even more.

### Classification based on reference rates

Classification	Annual reports, 2010	Annual reports, 2011	After contact, 2010	After contact, 2011
<b>YCB</b>	4	3	1	0
<b>YGB</b>	9	6	17	11
<b>YMB</b>	9	14	21	27
<b>As IAS 19, para. 83</b>	11	12	1	3
<b>Other</b>	1	1	2	2
<b>No information</b>	11	9	3	2
<b>Total</b>	45	45	45	45

**Table 4.2 a** The table shows a compilation of the distribution between different reference rates used for the discount rate, for companies listed on NASDAQ OMX Stockholm Large Cap, in 2010 and 2011. Source: Self-produced based on the information from the annual reports, for 2010 and 2011, of the companies listed on NASDAQ OMX Stockholm Large Cap together with information gathered after contact with the companies.

By studying the annual reports of the 27 companies that are concluded to use the YMB as the reference rate for 2011 more thoroughly, it is shown that only four companies leave explanation and reasoning in the disclosures as to why they choose to use the YMB. Three of the companies argue that the Swedish market for mortgage bonds is deep and that the bonds are rated AA or AAA. The fourth company says that they use the YMB due to the fact that the YGB is too low in the long term. Seven companies write as a statement that they use the YMB and four companies comment that they refer either to corporate bonds or mortgage bonds as the first alternative and that they refer to the YGB only if there is a

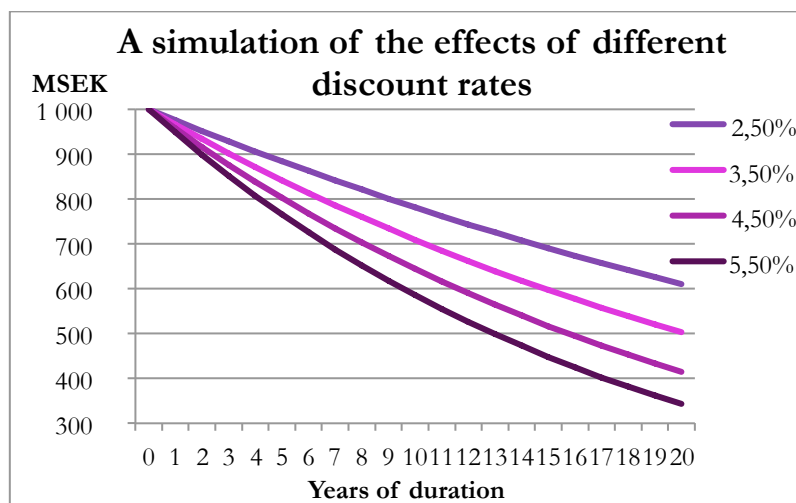
lack of a deep market for corporate bonds. Hence, they equate mortgage bonds with corporate bonds. The annual reports also show that three companies that use the YMB only provide an explanation similar to IAS 19 paragraph 83 and that three companies claim that they use the YCB. Further, six companies do not leave any information about the reference rate at all. The companies have thus chosen to exclude any information about which reference rate they use, although the information is available.

Figure 4.2 a is also developed based on the compiled information. It presents the different discount rates used by the companies, sorted in four intervals. Five companies had to be excluded for 2010 as they referred to an interval of discount rates. Four companies were excluded for 2011 for the same reason. Hence, out of the total number of 45 companies, 40 and 41 companies are represented for 2010 and 2011 in the figure. As the figure describes, in 2010, 10 companies had a discount rate between three and four percent, while 20 companies had a discount rate between four and five percent. In 2011, 20 companies had a discount rate in the interval of three to four percent, while 16 companies had a discount rate between four and five percent. As shown in the figure, the discount rates have decreased in general between the years. Only one company had a discount rate as high as between five and six percent in 2011, while the number for 2010 was as high as nine companies. The highest discount rate used in both years was 5.40 percent, while the lowest rate was 2.70 percent in 2010 and 2.50 percent in 2011. Hence, the spread between the lowest and the highest discount rates was 2.70 percentage points in 2010 and 2.90 percentage points in 2011. Note, however, that the discount rates mentioned in the companies' annual reports, which are the ones used in the figure, are often weighted averages, and are therefore not always exclusively determined for the Swedish pension liabilities. Further, the majority of the companies do not provide information about the durations of the liabilities, which might also affect the levels of the discount rates.



**Figure 4.2 a** The graph shows the distribution of the discount rates used in 2010 and 2011, for all companies listed on NASDAQ OMX Stockholm Large Cap, which could be included in the sample. Source: Self-produced based on the information from the annual reports, for 2010 and 2011, of the companies listed on NASDAQ OMX Stockholm Large Cap.

To illustrate the effects different discount rates have on the present value calculation of DBP, a simulation is designed and presented in Figure 4.2 b. The amount of the DBP and the time to maturity are fictional numbers in order to enable an illustration. The simulation is performed without inclusion of any other actuarial assumptions. It shows how different discount rates affect the reported DBP if the obligations amount to MSEK 1 000 and the duration is assumed to be twenty years. The discount rates used represent the four intervals of discount rates presented in Figure 4.2 a. With these assumptions, a discount rate of 2.50 percent results in reported liabilities of MSEK 610, while a discount rate of 5.50 percent results in reported liabilities of SEK 343. Hence, an increase in the discount rate with three percentage points results in a decrease of the DBP with 44 percent. Note, however, that this is a simplified simulation and that other factors also affect the amount of the reported liabilities. The effects are also less significant for companies with smaller DBP, and more significant for companies with larger DBP.



**Figure 4.2 b** The figure shows a simulation of the effects different discount rates have on the present value calculation of DBP. Source: The data is invented specifically for this figure as an illustration. The discount rates used are based on the intervals in figure 4.2 a.

To further clarify the distribution among the discount rates, the minimum and maximum discount rates, together with the mean and median discount rates, for 2010 and 2011 are illustrated in Table 4.2 b. The results are divided into two groups, one representing companies that use the YMB, and the other, companies that use the YGB. The results are also presented separately for 2010 and 2011, to enable comparison. However, not all companies on Large Cap that report DBP could be included in the table. Nine companies had to be excluded since they did not leave sufficient information to determine whether they use the YMB or the YGB. However, two of these companies left sufficient information for one of the two years, and could thus be included for that year. Further, four companies are excluded since they refer to an interval of discount rates used in different jurisdictions. One company referred to an interval for only one of the years, and could thus be included for the year when a single discount rate was presented. As described in the table, all numbers are lower for the companies that use the YGB than for the ones that use the YMB. Further, all numbers for 2011 are lower than the ones for 2010. As displayed in the table, the difference between the average discount rate used for the

companies that refer to the YGB compared to the average for companies that refer to the YMB was 0.41 percentage points in 2011 and 0.66 percentage points in 2010. Further, the differences between the mean and median values are quite narrow for both years and for both categories of reference rates. That implies that there are no extreme values significantly affecting the numbers.

### Descriptive data of the discount rates

	YMB, 2010	YGB, 2010	YMB, 2011	YGB, 2011
<b>Minimum</b>	3,25%	2,70%	2,77%	2,50%
<b>Maximum</b>	5,30%	5,10%	4,60%	4,10%
<b>Mean</b>	4,55%	3,89%	3,82%	3,41%
<b>Median</b>	4,75%	3,90%	3,75%	3,50%

**Table 4.2 b** The table shows descriptive data of the discount rates used in 2010 and 2011 divided between the YGB and the YMB, for the companies on NASDAQ OMX Stockholm Large Cap, which could be included in the sample. Source: Self-produced based on the information from the annual reports, for 2010 and 2011, of the companies on NASDAQ OMX Stockholm Large Cap.

To illustrate how the use of the two different reference rates, the YGB and the YMB, affect the chosen level of discount rates, Figure 4.2 c is presented. 14 companies had to be excluded from the figure for the same reasons they were excluded from Table 4.2 b. The companies that were included for only one of the years in Table 4.2 b, are however not included in Figure 4.2 c. The number of companies in the figure that used the YGB in both 2010 and 2011 was nine, while the number of companies that referred to the YMB both years was 18. As the number of companies included in the two graphs differs, the y-axis has different scales to enable the comparison of the distribution. As the graphs show, the distribution of the discount rates differs between companies that use different reference rates as the YGB results in lower discount rates than the YMB.



**Figure 4.2 c** The graphs show the distribution of the discount rates used in 2010 and 2011 divided between the YGB and the YMB, for the companies on NASDAQ OMX Stockholm Large Cap, which could be included in the sample. Source: Self-produced based on the information from the annual reports, for 2010 and 2011, of the companies on NASDAQ OMX Stockholm Large Cap.

Finally, the distribution of the discount rates used by the companies in the industries Industrials and Financials are described in Figure 4.2 d. As described under “3.2.1 Mapping of the perceptions of the dispersion” the interview selection for the companies is made from these two industries. It is therefore of interest to examine the distribution of discount rates within these industries before the review of the interview results. There are ten companies that used the YMB and seven companies that used the YGB in these industries in 2010 and 2011. The distribution of the discount rates in the figure is not divided based on which reference rate they use. Two of the companies that used the YGB referred to an interval of discount rates and are therefore excluded from Figure 4.2. c. The graph shows that the distribution among the companies in the sample is similar to the distribution among all Large Cap companies, presented in Figure 4.2 a.



**Figure 4.2 d** The graph shows the distribution of the discount rates used in 2010 and 2011, for the companies listed on NASDAQ OMX Stockholm Large Cap in the industries Industrials and Financials, which could be included in the sample. Source: Self-produced based on the information from the annual reports, for 2010 and 2011, of the companies in the industries Industrials and Financials listed on NASDAQ OMX Stockholm Large Cap.

### 4.3 Perceptions of the dispersion in the use of reference rates

#### 4.3.1 Companies

##### Companies that use the yield on government bonds

The interviewed companies that use the YGB will be presented as Company A and Company B. Company A operates in the industry Industrials and provides digital visualization technologies. For 2011, their DBP represented 2.14 percent of their long-term liabilities. Company B operates in the industry Financials and is an investment company that consists of a fully owned industrial operation together with a portfolio of listed companies. For 2011, company B had DBP that represented 22.10 percent of their long-term liabilities. Company A had a discount rate of 2.75 percent while company B had a discount rate of 4 percent, in 2010 and 2011, both referring to the YGB.

The interviewee from company A states that the use of the YGB is not the obvious choice. They have made attempts to find an estimate for the YGB for a “normal state”, where the

YGB would have been at a higher level. In the process of finding a functional discount rate, they consulted their actuaries who referred to the fact that a deep market for corporate bonds does not exist in Sweden. Interviewee A states that they had to use the YGB, even though that is the last alternative according to IAS 19 paragraph 83. The interviewee from company B says that their aim is to use the correct discount rate, at a level that will not be questioned by the auditors. They used the YGB until 2011, the reference rate they consider to be correct according to the regulation. However, interviewee B explains that the auditors have questioned their level of the discount rate, 4 percent, the last two years. Thus, after discussions with their actuary, they agreed that a reasonable level of the discount rate is between 3.50 and 3.60 percent, which will be used for 2012. The interviewee argues that a reasonable level of the discount rate is a level that most companies use. Simultaneously, the interviewee claims that on the advice of the actuaries they will start to use the YMB for the annual report of 2012. A deep market for mortgage bonds with a sufficiently long duration now exists, B states. Hence, for the upcoming annual report they will change the reference rate from the YGB to the YMB while the discount rate will decrease from 4 percent to between 3.50 and 3.60 percent.

Interviewee A is hesitant to the use of the YMB and argues that mortgage bonds are not equivalent to high-quality corporate bonds, and that companies use the YMB solely because it is higher than the YGB. Interviewee A further states that IAS 19 paragraph 83 does not mention any alternative rates after the YGB. Companies that use the YMB do not apply the standard correctly, A argues. Interviewee B, on the other hand, argues that it is important to use a yield on a bond type that actually exists in Sweden, which the YMB does, in contrast to high-quality corporate bonds. B claims that the YMB is the rate that is most equivalent to the YCB and would therefore be most accurate to use. Further, interviewee B argues that the YGB no longer represents what it is intended to represent, and is thus no longer appropriate to use. Interviewee B continues to state that the use of the YMB has become a temporary solution due to the situation on the bond market. Interviewee A, however, does not agree with the arguments for the use of the YMB and says that the paragraph is clear and leaves no room for interpretation. The YGB is consequently the only reference rate that is allowed in Sweden, according to interviewee A. At the same time, A states that companies that use the YMB suffer less when the bond rates decrease. The interviewee continues by explaining that they probably would have considered starting to use the YMB as well, if they had had larger pension liabilities. Yet, interviewee A claims that the argument that the YMB increases the comparability between Swedish and foreign companies is not enough in order to justify the use of it. The DBP depend on other actuarial assumptions as well, specific for each country, interviewee A specifically points at. However, due to the financial crisis, the global conditions have changed and the YGB is much more volatile than before. The discount rate should reflect the long-term pension liabilities, an argument that interviewee A claims can be a better argument for the use of the YMB.

Interviewee B explains that there are other areas in which valuation is of greater importance than within pension accounting. Therefore, the stakeholders, and the shareholders in particular, are more focused on these areas, rather than the valuation of pension liabilities, B continues. Consequently, the effects of a change in the discount rate

are not believed to be recognized by the stakeholders. Interviewee A, however, believes that the banks and the largest stockholders understand the effects of the changes in the actuarial assumptions. Both interviewees say that an amendment to paragraph 83 is demanded. Interviewee A argues that it would be preferable if companies could refer to more stable rates, such as the YMB, instead of the volatile YGB. Interviewee B states that a global standard can lead to problems at a national level. The IASB consequently needs to find a solution that would work in all applicable countries, in order to avoid this kind of discussions and disagreements.

### **Companies that use the yield on mortgage bonds**

Company C and D represent the two companies that use the YMB. Company C is a vehicle manufacturer that operates in the industry Industrials. In 2011, company C had DBP representing 5.83 percent of their total long-term liabilities. They started to use the YMB as a reference in 2010 when they had a discount rate of 4.75 percent. In 2011, the discount rate was lowered to 3.50 percent. Company D is an industrial holding company and operates in the industry Financials. The DBP in company D represent 1.37 percent of their total long-term liabilities. They started to use the YMB in 2011. Nevertheless they had a discount rate of 3.75 percent in both years.

Interviewee C explains that they were one of the companies that advocated the use of the YMB in 2010 and consequently started to refer to it the same year. The company made an evaluation of the market for mortgage bonds in 2010 that showed that it was active enough, and had the right duration, to be used as reference for the discount rate. The chief accountant of company C was involved in the discussions about the discount rate in SEAG and lobbied for Swedish companies to make the decision together to start using the YMB in 2010. However, the interviewee states that many companies hesitated to the change in 2010, but followed the year after. One of those companies was company D. Interviewee D is also a member of SEAG, and has been involved in the discussions. D argues that they were not convinced that the use of the YMB would be approved and therefore awaited the reactions on the other companies' change in 2010 before they followed. When it was clear that a large number of companies had started to use the YMB they made the decision to follow in 2011.

Both interviewees argue that mortgage bonds are equivalent to high-quality corporate bonds and would therefore be the right reference rate to use according to IAS 19 paragraph 83. Both companies discuss the estimation of the discount rate with actuaries. Interviewee D says that the company's and the actuaries' estimations are usually very similar, which indicates that the discount rate used is at a reasonable level. Due to the lack of guidance in the standard, interviewee C believes that it is up to the companies to interpret, and agree on, the application of IAS 19 paragraph 83. However, the interviewees state that companies in Sweden should be able to agree on which reference rate to use. Interviewee C further states that the largest companies have reached an agreement that the use of the YMB is an appropriate alternative to the YCB for Swedish companies, and the YGB should no longer be used. Interviewee D continues to explain that due to the approval of the YMB from NASDAQ OMX Stockholm, companies should use the YMB. This view is shared by interviewee C, who at the same time says that it might not be a



problem that companies with small pension plans still use the YGB since the difference is not that significant.

Interviewee C claims that the stakeholders do not understand the effects on the pension liabilities due to changes in the discount rate. The interviewee believes, however, that the understanding of changes in actuarial assumptions will be enhanced with the revised IAS 19, which requires increased disclosures and sensitivity analysis. According to interviewee D, the effects are only understood by well-informed analysts since the area of pension accounting is complicated.

### **4.3.2 Audit firms**

The interviewees from the Big Four audit firms will be presented as accounting specialist 1, 2, 3 and 4. All of the interviewees express that it has become rarer for companies to use the YGB as a reference for the discount rate, as many companies have started to use the YMB instead. Interviewee 4 believes that less than 10 percent of all listed companies in Sweden used the YGB in 2011. They all express that their role in the interpretation and application regarding IAS 19 paragraph 83 is to provide guidance for the companies in the process of determining the discount rate. They share knowledge regarding the regulation and offer help in the estimation process. However, it is up to every company to make their own assumptions, interviewee 1 and 2 states. The role as advisor also applies in relation to their colleagues in the firm that they work for. Interviewee 4 says that they serve as support for fundamental issues and provide guidance for the reasoning and argumentation techniques. Interviewee 1 argues that they ensure that the companies' treatment of the pension liabilities is compliant with the regulation. The audit firm agrees on a range in which they consider it appropriate for the discount rate to be, interviewee 3 says, and which they recommend to the companies and auditors. Interviewee 2 says that the fact that the companies make the assumptions themselves can lead to dispersion in the assessments, but argues that there can be several best practices.

The respondents say that the situation arose in 2010, when the discussions about using an alternative reference rate took off. Interviewee 3 reasons that larger companies, with large pension liabilities, were in the forefront of changing reference rate. The situation arose when the bond rates in Sweden started to fluctuate more, and reach significantly lower levels than before, 3 argues. Interviewee 2 and 4 agree, and also denote that the entering of more mortgage bonds in the market was a contributing factor. Interviewee 1 highlights the increased yield spread as the main factor, together with the fact that the companies felt that they were being unfairly punished. Interviewee 4 argues that there are difficulties associated with getting a couple of hundred companies to jump on a trend of changing the reference rate simultaneously. Interviewee 4 further states that 25 to 30 large companies represented in SEAG agreed on changing the reference for the discount rate to the YMB simultaneously, supporting each other. Also interviewee 2 states that there had been forces from the enterprises lobbying for a change, which resulted in several long and tough discussions and meetings. None of the interviewees had an opinion about whether they had been able to use the YMB as a reference even before 2010.

Interviewees 1, 2 and 4 say that there are many benefits with the fact that the IFRS regulation is principle-based and that it leaves interpretation opportunities for the practitioners. Further, there is a common agreement among interviewee 3 and 4 that it should be possible, however, to find a common perception of the Swedish bond markets. They believe it should be possible to determine whether there is a deep market for corporate bonds in Sweden or not, that is, whether mortgage bonds could be classified as corporate bonds or not. Interviewees 1 and 2 express a slightly different opinion, and argue that the result of the interpretations can differ since each company is allowed to make its own interpretation. Further, interviewee 4 believes that a consensus of the bond markets in Sweden has been achieved, as there is now a common agreement that mortgage bonds can be classified as corporate bonds and that the market for them is deep enough. Accounting specialist 3 agrees that this consensus has been reached, and mentions that the international opinion is consistent with the view that the Swedish market for mortgage bonds is deep and well functioning. However, 1 and 3 believe that it is still possible for companies to choose the most suitable reference rate and thus discount rate for them. 3 argues that it is possible for companies with more conservative accounting methods to choose the YGB and thus report higher pension liabilities, which is in line with the opinion expressed by interviewee 1 and 2. Interviewee 4, on the other hand, does not support this view, and says that it is not appropriate to use the YGB and that from now on it will be difficult to argue for the use of the YGB. Interviewee 1, 3 and 4 refer to NASDAQ OMX Stockholm's annual report regarding their surveillance of financial accounting information that was published in the end of 2012 as a support for the use of the YMB. The essence of the report was that NASDAQ OMX Stockholm believed that the YMB should be used when discounting DBP according to IAS 19, since they consider the Swedish market for mortgage bonds to be deep enough.

One unified perception among the respondents regarding the awareness among the shareholders, and other stakeholders in general, of the companies is that they have limited knowledge about the effects of a potential change of the discount rate. Interviewee 2, 3 and 4 believe that professional investors are relatively well informed while amateur investors are assumed to have limited knowledge. Interviewee 1 separates management as the only informed stakeholder, while other stakeholders are not assumed to be aware of the effects. Further, accounting specialist 4 believes that the revised IAS 19, with the removal of the corridor method, will result in increased awareness.

### **4.3.3 Bank**

The interviewee that represents the bank is a fixed income trader, at the department for foreign exchange and money market, and will further be denoted as "the trader". The trader explains that there is a clear difference between covered mortgage bonds and corporate bonds in terms of liquidity risk, credit risk and rating. Corporate bonds involve lending money to the issuer without security, while mortgage bonds are covered. From 2006 when the banks started to issue covered bonds, the market has not changed very much and there are no major differences in liquidity or rating for the covered bonds.

The market for covered mortgage bonds is deep and well functioning, the trader explains. During the financial crisis, it was even better functioning than the market for government

bonds. The Swedish market for covered mortgage bonds is liquid with an “on tap” issuing process, where the bonds are issued regularly based on the borrowing need of the banks. The difference between the bid and ask rates of the bonds are insignificant under normal market conditions, which implies that the secondary market for covered mortgage bonds is well functioning, the trader argues. For corporate bonds, on the other hand, there is a completely different market and liquidity, the trader explains. The prices can be widespread and there could be some difficulties involved in the buying and selling process, if the bonds are uncommon.

The trader keeps pointing at the differences between corporate bonds and covered mortgage bonds, and does not believe that mortgage bonds could be equated with corporate bonds. In a comparison of covered mortgage bonds in Sweden with foreign corporate bonds, the trader finds that the only characteristics comparable would be the rating of the bonds. However, the trader continues, there are fewer AAA rated countries nowadays, which means that there are fewer companies rated as AAA, and hence fewer corporate bonds that are AAA rated. The essence of the statements is that corporate bonds and covered mortgage bonds generally do not have the same rating and liquidity, and that corporate bonds are not covered like mortgage bonds are. Hence, they cannot be equated. However, the trader emphasizes the lack of knowledge about the accounting principles discussed in this thesis, and limits the statements to cover the bond markets.

## **5 Analysis**

### **5.1 Introduction to the analysis**

In this chapter, the results of the study are compared to the regulation, the situation in Sweden and the explanatory theories presented in the frame of reference. In the same manner as the presentation of the results, the analysis is divided into two parts based on the two research questions. Research question one is answered to a large extent by the result section but will also be answered more thoroughly in this section based on the regulation and the situation in Sweden. Research question two, on the other hand, will be answered based on all sections of the frame of reference. The regulation and the situation in Sweden provide explanations for how it has been possible for the phenomenon to arise. The explanatory theories are given the greatest scope in the analysis of research question two and are used to understand why the situation has arisen.

### **5.2 Reference rates and discount rates used by Large Cap companies**

#### **5.2.1 Regulation**

The IFRS regulation is principle-based and allows different estimations and calculations to be made (Marton et al., 2010). The distribution of the reference rates in Table 4.2 a, and the discount rates in Figure 4.2 a, shows how the regulation is applied differently. Due to the long period of discounting, small changes of the discount rate result in great effects on the pension liabilities (Beechy, 2009). The simulation in Figure 4.2 b proves this as it highlights the effects of the different discount rates used. Consequently, the differences in interpretation and application lead to significantly different liabilities, which in turn affect the financial statements as a whole, and lead to deteriorated comparability.

IAS 19 paragraph 83 gives no options for the companies; the YCB should be used under certain circumstances, and the YGB under other. Nevertheless, the examination of the annual reports shows that the use of reference rates is not consistent. The separation between the use of the YGB and the YMB shows that there is substantial dispersion. Only 24 percent of the companies listed on NASDAQ OMX Stockholm Large Cap used the YGB in 2011, while 60 percent used the YMB. In 2010, the distribution was slightly more even, when 38 percent used the YGB and 47 percent used the YMB. Further, the spreads of 2.7 and 2.9 percentage points between the highest and lowest discount rate used by companies, in 2010 and 2011, show that the use of discount rates differ significantly among the companies

#### **5.2.2 The situation in Sweden**

The negative development of the market yields in government and mortgage bonds (Sveriges Riksbank, 2013), described in Figure 2.3.1, is reflected in the discount rates used by the companies. The distribution of discount rates in Figure 4.2 a shows that the level of discount rates has decreased in general between 2010 and 2011. Further, the mean of the YGB and the YMB for both years, illustrated in Table 4.2 b, shows that the companies that

refer to the YMB use a discount rate at a higher level than the companies that refer to the YGB do, in accordance with the development on the bond market. Figure 4.2 c further indicates a correlation between the development on the bond markets, shown in Figure 2.3.1, and the companies' discount rates. Figure 4.2 c also indicates that the use of YMB leads to the use of higher discount rates, than the YGB does. Even though companies use different reference rates, which result in two levels of discount rates, they follow the development of the two bond markets. However, the overall level of discount rates is higher than the actual development of the YGB and the YMB, as shown when Figure 2.3.1 is compared to Figure 4.2 a. Table 4.2 b in comparison with Figure 2.3.1 shows that the mean of discount rates used by the companies are generally around one percentage point higher than the actual level of yields, with the exception of the mean of the discount rates used when referring to YGB for 2011, that is, more than two percentage points higher than the actual YGB. The differences might be influenced by the fact that the data used in Figure 2.3.1 are bond yields with durations of 5 years, while the discount rates used by the companies probably are estimated for much longer time periods. That information is however not available in the majority of the disclosures investigated. Nevertheless, this comparison shows that there is a problem relating to the levels of discount rates in relation to the actual levels of bond yields. This relation was found to be present already during 2008 (NASDAQ OMX Stockholm, 2008), which implies that the problems relating to the discount rates occurred already before companies started to use the YMB in 2010.

Further, there is a long tradition among Swedish companies of referring to good accounting practice (Årsredovisningslag (1995:1554)). The proportion of companies that use the YMB have increased from 47 to 60 percent between 2010 and 2011, while the companies that use the YGB have decreased from 38 to 24 percent. The fact that more and more companies are making the change of using the YMB instead of the YGB could indicate that a good accounting practice, saying that the YMB is the correct yield to use, is emerging. This supports the view expressed by Marton (2013) that the accounting practitioners develop the Swedish accounting practice, and implies that the use of reference rate is becoming more consistent within Sweden.

According to NASDAQ OMX Stockholm (2010), the disclosures in the annual reports regarding the discount rate were not satisfactory in 2010. They criticized companies that only wrote as IAS 19 paragraph 83 in their disclosures. The study of the annual reports in this thesis shows that this situation still exists; there were 11 companies that cited the paragraph in 2010 and 12 companies in 2011. However, the clarifications from the companies changed the distribution among reference rates, which shows that the information about which reference rate they use is available.

Further, NASDAQ OMX Stockholm (2012) explains that the current situation in the financial market can result in changes in rating and efficiency of the bond markets. Also, because of the insufficient information in the companies' annual reports, in 2012, an investigation was made, which showed that several companies actually used the YMB (NASDAQ OMX Stockholm, 2012). This thesis shows that several companies referred to the YMB already during 2010 and 2011. The disclosures in the annual reports of the companies that were shown to use the YMB indicate that there are uncertainties as to why

the YMB should be used. There are only four companies that explain why they use the YMB while the rest of the companies do not leave any information at all, or provide different statements without an explanation of the use of the YMB. Due to the fact that the stock exchange stated in 2012 that the YMB from now on is the correct reference rate to use, the uncertainty should decrease.

## **5.3 Explanations for dispersion in the use of reference rates**

### **5.3.1 Regulation**

As a result of the principle-based IFRS regulation, standards have to be interpreted by the preparers of the financial statements (Marton, et al., 2010). The interviewees repeatedly discuss the principle-based characteristics of the regulation during the interviews, and the arguments for the use of both the YMB and the YGB are that they are in accordance with IAS 19 paragraph 83. Hence, the fact that the regulation is principle-based allows different applications to be made. It is important for the financial statements to be comparable over time and between companies (the Conceptual framework, para. 24, 46; IAS 1, para. 1). Comparability between companies applies to companies within a country as well as between companies in different countries. When companies use different reference rates within a country the comparability is deteriorated, as shown in Figure 4.2 b. However, it is possible that the comparability is increased between companies in different countries. Yet, comparability is barely discussed by the interviewees, which is why comparability as an argument is not found to be present. Further, if the compliance with a specific standard is in conflict with the purpose of the financial statements it is, in rare cases, possible to deviate from it (IAS 1, para. 19). However, none of the interviewees argues that the use of the YGB or the YMB is a deviation from IAS 1, why it is not relevant to investigate whether any deviation from the standard is valid or not.

The regulation clearly states which reference rate that shall be used under which circumstance (IAS 19, para. 83). However, the interviews show that there is dispersion in the interpretation of the concept “corporate bonds”. The majority of the interviewees are rather unified as they consider it possible to include mortgage bonds in the interpretation of the concept “corporate bonds”. The only company that will continue to use the YGB expresses a different opinion than the majority. Also, the fixed income trader does not agree with the majority’s opinion that mortgage bonds and corporate bonds can be equalized. Thus, there is no common agreement on how Swedish companies should relate to the regulation. The concepts “high-quality”, “deep market” and “government bonds” are not proven by the interviews to include the same interpretation problems. Again, the principle-based regulation enables different interpretations to be made.

The discount rate should reflect the time value of money and not be risk-adjusted (IAS 19, para. 84, IAS 19 BC134). In Sweden, mortgage bonds include a slightly higher credit risk than government bonds (SEB, 2013). As most of the companies advocate the YMB, the intention with the paragraph cannot be used to explain the phenomenon. The new situation with the widened yield spread has induced discussions on how the determination of the discount rate should be made (IASB, 2009a; CL Deloitte; CL Ernst & Young; CL FAR; CL KPMG; CL PwC; CL RFR; CL SEAG, 2009). The IASB made an attempt to find

a solution to the problem, but did not succeed (IASB, 2009a; IASB, 2009b). The exposure draft published by the IASB in 2009, was however not discussed by any of the interviewees from the audit firms as a factor in the discussions in 2010 regarding the change of reference rate. A new situation like this, resulting in a problem that is not resolved, can explain the behavior to turn to other alternatives. This is proven by five of the interviewees that express that the YGB have reached significantly low levels, which can explain that the YMB is preferred before the YGB. This is further exemplified by one of the interviewees who argue that the use of the YMB is a temporary solution due to the fact that the YGB currently does not represent what it is intended to. The same company used a discount rate of 4 percent referring to the YGB, which in fact was 1,03 percent on the balance sheet date in 2011 (Sveriges Riksbank, 2013). They also had a higher discount rate than both of the companies that refer to the YMB. This indicates that the application problem could be explained by the fact that the purpose with the use of the YGB has been deteriorated as a result of the changed bond markets.

### **5.3.2 The situation in Sweden**

The development of the bond markets, illustrated in Figure 2.3.1, has resulted in an increased yield spread (Sveriges Riksbank, 2013). As described by the audit firms and the companies, they started to look for alternatives when the YGB reached exceptionally low levels. According to the companies and the audit firms, the YMB was first evaluated in 2010, which is why the dispersion arose at that point of time. This would imply that it was the decrease in the YGB, and not a change in the characteristics of the YMB, that induced the desire to find an alternative reference rate in the YMB, and thus resulted in dispersion in the use of reference rates. This view is supported by the fixed income trader who argues that there have been no major changes in liquidity or rating for covered mortgage bonds in Sweden, since 2006 when they were first issued.

Lack of guidance in a specific situation can lead to companies seeking guidance from the generally accepted accounting principles within the country (Schipper, 2005). The interviews support this view, as they show that the largest companies started the trend to use the YMB, and that the smaller or more uncertain companies follow their lead. Swedish companies are accustomed to a long tradition of good accounting practice (Årsredovisningslag (1995:1554)). This behavior implies that the accounting practice in Sweden is still determined by the influential practitioners, generating a new accounting practice. The majority of the interviewees from the companies argue that the YMB should be used instead of the YGB, even though they differ in the degree of conviction. Also the opinions expressed by the interviewees from the audit firms differ, in terms of how appropriate the use of the YMB is. None of them expressed that the YMB is inappropriate though. Their opinions extend from the view that it is the responsibility of each company to make their own interpretation of whether the YMB is correct or not to use, to the view that the YMB is the correct reference rate to use and that the YGB thus is inappropriate to use. The opinion that stood out the most compared to the rest of the companies, and the audit firms, was the opinion expressed by the interviewee from the company that use the YGB, and will continue to use it in the annual report for 2012. The interviewee stated that there is no acceptable justification for the use of the YMB.

Janzon and Arnell (2009) argue that the Swedish stock exchange contributes to create a special Swedish accounting practice. Already during 2008, NASDAQ OMX Stockholm revealed that the companies' discount rates were not at appropriate levels compared to the yields on the bond markets (NASDAQ OMX Stockholm, 2008). They did not criticize this phenomenon, however, as the situation was considered to be unfair to the Swedish companies (NASDAQ OMX Stockholm, 2008). This thesis shows that the development with a large spread between the discount rates used have continued during 2010 and 2011. The fact that the surveillance body for the Swedish listed companies overlooked this behavior, even though they did not consider it to be appropriate, implies a shortage in the surveillance. The fact that the surveillance body did not leave any sanctions on the behavior made it possible for companies to continue. Further, the fact that three of the interviewees refer to the approval by NASDAQ OMX Stockholm, to justify the use of the YMB, supports the view expressed by Janzon and Arnell (2009). The approval was not published until the end of 2012, which is why it cannot be used as an explanation for why Swedish companies started to use the YMB in 2010. However, it indicates that companies will continue to use the YMB.

### **5.3.3 Explanatory theories**

#### **Positive accounting theory**

Companies make accounting choices based on the action where the benefits exceed the costs (Watts and Zimmerman, 1990). It is shown that the four interviewed companies try to find an interpretation of IAS 19 paragraph 83 that results in the reported pension liability to be as low as possible. Even the company that will continue to use the YGB in 2012 tries to find a higher discount rate to use, even though they do not find the YMB appropriate to use. Also, they express that they would probably have considered using the YMB as well, if the pension liabilities were larger, that is, if the benefits of the action of changing reference rate had been greater than the costs of the action. This implies that Watts and Zimmerman's idea is a possible explanation, not only for the interpretation problems, but also for the application problems with the paragraph.

Further, the economic approach of the positive accounting theory emphasizes how the individual's perceptions and utility impact group decisions (Boland and Gordon, 1992). The interviews show that the practitioners strive to serve their self-interests instead of following the standard to the letter, as was done in the past. Small changes in the discount rate result in significant differences in the reported pension liabilities (Beechy, 2009), which is proven by the simulation in Figure 4.2 b. Therefore, the application of IAS 19 paragraph 83 has great implications for the companies and the individuals involved in the financial reporting. As the companies that use the YMB, and the audit firms, explain, both of the groups have tried to influence the interpretation and application of IAS 19 paragraph 83 and to bring about amendments to the paragraph, mainly through the organizations SEAG and RFR. Watts and Zimmerman (1987) argue that this kind of behavior will continue as long as the companies and individuals benefit from a change in the regulation. The impact accounting practitioners have on the accounting practice is among other things a result of the fact that the standards involve judgment (Ball, Robin and Shuang Wu, 2003). The interviewed companies and audit firms are proven to share this view. When the incentives



of companies and accountants conflict with accounting standards, market forces normally resolve the conflicts (Ball, Robin and Shuang Wu, 2003). It is clarified through the interviews that the accounting practitioners determine the accounting practice in Sweden to a large extent. A possible explanation for that could be the fact that the accounting standards include insufficient level of details, why the market effects are predominant in regulating accounting standards, as discussed by Ball, Kothari and Robin (2000). The change in the bond markets is an example of how market effects have resulted in a change in the interpretation of a standard, even though the standard itself is not amended.

The presence of information asymmetry generates a need for accounting regulation (Fields, Lys and Vincent, 2001). Information asymmetry is revealed to be highly present as the interviewees discuss that the companies' shareholders, their owners, are fairly aware of the effects the use of different discount rates have on the pension liabilities. Thus, there is a need for a functioning accounting regulation. Fields, Lys and Vincent (2001) say that managers can manipulate financial statements in a desired manner due to the fact that the standards involve judgment. This thesis shows that companies choose a reference rate that suits them, i.e. that affects the financial statements in a desired manner.

### **Institutional Theory**

Organizations strive to gain legitimacy, which can be achieved by means of policies, standard procedures, professions and state requirements (Scott, 2001; Meyer and Rowan, 1977; Zucker, 1987; DiMaggio and Powell, 1983). Through formal education and professional networks, professions could be used to legitimize actions (Zucker, 1987). The accounting practitioners at the companies and audit firms have similar backgrounds with regard to education. Also, three of the interviewees and one chief accountant of one of the companies are members of one or several of the professional networks FAR, RFR and SEAG. Three of the interviewees say that there was pressure from these organizations that lobbied for the use of the YMB. Hence, the pressure arising on the professionals due to the networks and the formal education is evident. The occurrence of new environmental conditions can challenge existing financial regulation (Young, 1996), as is the case with the phenomenon discussed in this thesis. However, the idea that financial accounting as institutions provides a narrowed way of thinking, and limits the changes made to accounting practice (Young, 1996), is not shown to be true based on the interviews.

The regulative pillar of the institutional theory stresses the institutions' rules, monitoring activities and sanctioning activities to affect behavior of the organizations (Scott, 2001). NASDAQ OMX Stockholm did not, however, sanction the companies for the action of starting to use the YMB in 2010 without sufficient disclosures, which suggests that the monitoring of the companies is not as functioning as it could be. When companies are not punished for finding alternative solutions the emergence of a new accounting practice is possible. Companies are affected by internal and external rules, stressing the importance of legal requirements (Scott, 2001). The two companies that used the YMB in 2011, together with three of the audit firms, say that it is important that NASDAQ OMX Stockholm approved the use of the YMB, as it increases the legitimacy of using it. However, the approval was not published until December 2012 (NASDAQ OMX Stockholm, 2012), which is why it was not the causing factor for the phenomenon. It was rather the lack of

sanction activities in the first place that explains how it was possible for the phenomenon to occur.

The ideas of isomorphism stress that organizations are becoming more similar in order to gain legitimacy (DiMaggio and Powell, 1983; Zucker, 1987). The companies are becoming more similar as the use of the YMB has become more common to use, while at the same time more audit firms advocate the same reference rate. Coercive isomorphism, where organizations pressure each other to homogenization (DiMaggio and Powell, 1983), is present in this matter. Three of the interviewees explain that companies exercised pressure on each other to jointly start to use the YMB. This makes it evident that the companies have been highly influenced by other organizations. Further, mimetic isomorphism implies that uncertainty is the cause of why companies imitate each other (DiMaggio and Powell, 1983). One of the companies that used the YMB in 2011 says that they awaited the reactions on others' use of the YMB before they started to use it themselves. Also, the company that used the YGB in 2011, and will start to use the YMB for 2012, has awaited reactions and will now use the YMB. The same company says that the correct reference rate to use is the one used by other companies, which is a clear example of mimetic isomorphism. The normative isomorphism, which derives from professionalization within organizations (DiMaggio and Powell, 1983), might also be an explanation for the phenomenon and is discussed above, where professions are discussed. It will therefore not be explained again. In general, the organizations' pursuit of social acceptance and credibility (Scott, 2001) is present in the arguments outlined by the interviewees, as they all talk about what is generally accepted and what is not as accepted. Also, the study carried out by Deephouse (1996) shows a positive correlation between strategic isomorphism and legitimacy within commercial banks, which supports the idea that isomorphism legitimates organizations. Banks are perceived to be more legitimate if they have similar strategies. Similarly, this study indicates that the companies believe that it is more legitimate to use the same reference rate as most other companies. Three of the interviewees claim that Swedish companies have reached a common agreement that the YMB is the correct reference rate to use, which is why it can be assumed that the YMB is the reference rate that should be used in order to gain legitimacy.

## **6 Conclusions and suggestions for further studies**

### **6.1 Introduction to conclusions**

In this chapter, the conclusions drawn from the analysis are presented. The conclusions are used to answer the research questions outlined in the introductory chapter, and to serve the purpose of the thesis. In the same manner as the results and the analysis, the conclusions are presented separately according to the two research questions.

1. How did Swedish companies listed on NASDAQ OMX Stockholm Large Cap apply IAS 19 paragraph 83 in 2010 and 2011?
2. How can the phenomenon that Swedish companies use both the yield on government bonds and the yield on mortgage bonds be explained?

Further, the contribution of the study is highlighted, and reflections are discussed. Lastly, suggestions for further studies based on this study are presented.

### **6.2 Conclusions**

#### **6.2.1 Reference rates and discount rates used by Large Cap companies**

This thesis has shown that there are several differences in the use of reference rates and discount rates, as an answer to the first research question. The companies refer to different rates, mainly YGB and YMB, using different explanations. This indicates uncertainty in why the YMB would be correct to use. Even though IAS 19 paragraph 83 indicates that Swedish companies should use the same reference rate, there is no consensus reached within Sweden. The distribution between the YGB and the YMB, the two reference rates used by most companies, has changed between 2010 and 2011. The use of the YMB has increased while the use of the YGB has decreased between the years.

Also, different discount rates are used. The spread between the highest and lowest discount rate was 2.7 percentage points in 2010, and 2.9 percentage points in 2011. The regulation is thus applied differently among the companies. The discount rates have decreased in general between 2010 and 2011, following the development of the bond markets, even though the overall level of discount rates has been at a higher level than the actual market rates. However, it is not possible to say whether the differences depend on the use of different reference rates or different estimations and calculation, even though the study indicates that a correlation exists between the use of reference rate and level of discount rates.

#### **6.2.2 Explanations for dispersion in the use of reference rates**

As an answer to the second research question, the main explanation for why some Swedish companies started to use the YMB, while others continued to use the YGB, was the change in the bond markets. The new situation with the decreased bond yields explains why companies first started to look for a new accounting alternative. As found in this study, the principle-based regulation is the main reason for the possibility of two different interpretations of a paragraph that indicates that the same reference rate should be used within a country. The study has shown that even “obvious” words such as “corporate

bonds” can be difficult to define, and that the principle-based regulation allows creativity. It is shown that it is rather the decrease in the YGB that is the explanation for the change of reference rate, not the changed characteristics of the mortgage bonds. Nevertheless, the study shows that the fact that the regulation is principle-based can outweigh that mortgage bonds are not obviously corporate bonds. The tradition of good accounting practice in Sweden is proved to result in the large companies to set the tone, and to affect the other companies to follow. The study has also shown that the lack of criticism from NASDAQ OMX Stockholm, the surveillance body, enabled the different interpretations. The stock exchange is shown to influence the accounting choices, but is not the explanation for why the YMB was first used as reference for the discount rate.

Incentive-driven accounting practitioners who want to report pension liabilities at as low amounts as possible, explained by the positive accounting theory, brought the start of using the YMB forth. Without the accounting practitioners’ incentives to increase their personal benefits, the accounting practice would probably not have changed. As companies benefit from a higher discount rate, the accounting practitioners will continue to lobby for a change in the regulation or to keep finding their own interpretations. Also, as long as the shareholders are not knowledgeable in this matter, the companies can choose a reference rate and discount rate that suits them without being publicly criticized.

The trend of changing the accounting practice continued to accelerate due to the fact that companies are affected by each other and that they all strive to gain social acceptance and credibility, by acting in a similar way as other companies, as explained by the institutional theory. Unlike the positive accounting theory, it contributes with the idea that the organizations are affected by internal and external factors. The three types of isomorphism are the main explanatory factors. Pressures, uncertainty and professions explain how companies are affected by each other. Isomorphism indicates that companies that use the same reference rate gain legitimacy. Therefore, the efforts to interpret IAS 19 paragraph 83 seems to lose relevance when companies instead strive to use the same reference rate and discount rate that most other companies use, to achieve social acceptance and thus legitimacy.

### **6.3 Contribution**

This thesis has mainly provided an example of how the emergence of a new accounting practice have been possible due to changes in interpretation and application of the regulation. Even though IAS 19 paragraph 83 indicates that only one reference rate shall be used within a country this is not the case. Through answering research question one, this thesis has provided a picture of how the situation with the use of two different references looks like, which is important for the understanding of the situation. Research question two has further provided comprehension of how the accounting practitioners can determine to change the accounting practice without an actual change in the regulation, which provides an important insight into the power of individuals within a principle-based regulation. Since it has been little open discussion about this situation, this thesis contributes to its recognition and brings an important discussion to the public.

The main purpose of financial reporting is to provide useful information to the companies' shareholders. The idea of having a regulation regarding the determination of the discount rate is to provide consistent and comparable reporting. When companies and audit firms create a new accounting practice in this matter, the idea with the regulation is lost. The problem might seem small once it has been broken down. However, the problem is significant due to the great effects of the different discount rates on the financial statements. This thesis has investigated the opinions held by specialists from the Big Four, who, surprisingly, are not completely unified in this matter. If the experts are not unified, and do not provide strong arguments for the use of the reference rates, it becomes difficult for the rest of the accounting practitioners to make the right decisions. This thesis contributes by breaking down the problem. Important is whether it can be acceptable that there is such uncertainty among the audit firms and other accounting practitioners in Sweden regarding this matter. Further, if it is possible to change the accounting practice without a change in the regulation on this matter, then there is no guarantee that the same situation cannot arise in other areas of accounting. One can question whether it is reasonable that the accounting can be adapted and changed like this due to changes in external factors, instead of changes in regulation. These circumstances make this thesis highly relevant as it discusses the problems.

## **6.4 Reflections**

The interviews with the four companies in the thesis have shown four different explanations to the use of the reference rate. One company argues that the characteristics of the YMB is changed and that it is now the correct one to use, one company claims that the YMB is used as a temporary solution in anticipation of a solution and one company states that they use the YMB since that is the rate used by most of the companies. Also, one company argue that the paragraph clearly states that the YGB is the correct reference rate to use and that they therefore will continue to refer to it. Ironically, the statement that a reasonable level of the discount rate is a level that most companies use seem to be the most accurate, even though it at first did not seem very well prepared. When all companies within the IFRS regulation use the same discount rate, the purpose of financial reporting is best achieved. Also, it was shown during the interview with one of the companies that they would change from the YGB to the YMB, in the annual report of 2012, which indicates that the trend of changing reference rate is ongoing.

The expectations held on the results were essentially proved to be true. The expectations were mainly that the principle-based regulation should explain the phenomenon, together with the development of the bond markets and the tradition of good accounting practice within Sweden. Also, the two theories discussed were believed to explain the phenomenon. These perceptions were proven to be true. However, it was also expected that the companies would use increased comparability internationally as justification for the use of the YMB, which was not proven to be the case. Further, the exposure draft was not discussed by any of the interviewees as an important part of the discussion regarding the YMB as a reference rate, which is why the exposure draft was not proven to explain the phenomenon. Lastly, the approval by NASDAQ OMX Stockholm turned out to be evidence for a continued use of the YMB.

After the completion of this thesis, the understanding of how important the methodology is has increased. If the thesis had been carried out again, more focus would have been placed on the planning of the thesis in the beginning of the process. A better-planned methodology would have simplified the continued work with the thesis. If the approach would have been finalized already in the beginning, more focus could have been placed on what to do rather than how to do it. In the way this thesis was carried out, the work with the methodology continued during a long period of time and was more time consuming than would have been needed. Further, in the light of the completed thesis, more focus could have been placed on research question two, with more emphasis on the explanatory theories. It would then have been possible to find even more explanations to why companies have started to use the YMB and now use different reference rates within Sweden.

## **6.5 Suggestions for further studies**

This thesis only investigated a small sample of companies listed on NASDAQ OMX Stockholm Large Cap. It would therefore be of interest for further studies to expand the study of Large Cap and include more companies in the sample. If more companies were included, the study would gain even more relevance, as it would be possible to draw more reliable conclusions.

The use of the YMB is a trend that was started by large influential companies, as is shown by this thesis. However, this thesis only provides results for companies listed on Large Cap. It would therefore be interesting to perform the same study on smaller companies listed on Small Cap and Mid Cap. That would make it possible to compare the three lists and thus find similarities and differences.

This thesis indicates a correlation between the reference rate and discount rate used within the companies. However, it also seems that the companies use a discount rate that suits them, regardless of which reference rate they use. If all companies estimate a discount rate that is significantly higher than the actual bond rates, and if there is no correlation between the reference rate and the discount rate, the discussion of different reference rates loses relevance. It would therefore be interesting to conduct statistical tests in order to find the correlation between the level of discount rates and reference rates used.

It is also suggested in this thesis that the disclosures of the Large Cap companies are insufficient in terms of information given about the reference rate. It would therefore be interesting to conduct a more detailed study of the disclosures in the annual reports in order to find out if companies comply with the disclosure requirements regarding the actuarial assumptions, and the discount rate in particular. It would be of special interest to conduct the study in a few years to see if the companies improve their disclosures.

## References

- Ball, R., Kothari, S.P. and Robin, A. (2000) The effect of institutional factors on properties of accounting earnings. *Journal of accounting and economics*. Vol 29. pp 1-51.
- Ball, R., Robin A. and Shuang Wu J. (2003) Incentives versus standards: properties of accounting income in four East Asian countries. *Journal of accounting and economics*. Vol. 36. pp 235-270.
- Beechy, T.H. (2009) The many challenges in pension accounting. *Accounting perspectives*. Vol. 8. No. 2. pp.91-111.
- Boland, L.A. and Gordon I.M. (1992) Criticizing Positive Accounting Theory. *Contemporary accounting research*. Vol. 9. No. 1. pp. 142-170.
- CL Deloitte (2009) Comment Letter on ED/2009/10 Discount Rate for Employee Benefits – proposed amendments to IAS 19
- CL Ernst & Young (2009) Comment Letter on ED/2009/10 Discount Rate for Employee Benefits – proposed amendments to IAS 19
- CL FAR (2009) Comment Letter on ED/2009/10 Discount Rate for Employee Benefits – proposed amendments to IAS 19
- CL KPMG (2009) Comment Letter on ED/2009/10 Discount Rate for Employee Benefits – proposed amendments to IAS 19
- CL PwC (2009) Comment Letter on ED/2009/10 Discount Rate for Employee Benefits – proposed amendments to IAS 19
- CL RFR (2009) Comment Letter on ED/2009/10 Discount Rate for Employee Benefits – proposed amendments to IAS 19
- CL SEAG (2009) Comment Letter on ED/2009/10 Discount Rate for Employee Benefits – proposed amendments to IAS 19
- The Conceptual Framework. The Conceptual Framework for Financial Reporting. International Accounting Standards Board.
- Deephouse, D. L. (1996) Does Isomorphism Legitimate? *Academy of Management Journal*. Vol. 39. No. 4. pp. 1024-1039.
- Demski, J.S. (1988) Positive Accounting Theory – a review. *Accounting Organizations and Society*. Vol. 13. No. 6. pp. 623-629.
- DiMaggio, P. J. and Powell, W. W. (1983) The Iron Cage Revisited: Institutional Isomorphism and collective Rationality in Organizational Fields. *American Sociology Review*. Vol. 48. No. 2. pp. 147-160.
- The European parliament and the Council of the European Union (2002), Regulation (EC) No 1606/2002 of the European Parliament and of the Council of 19 July 2002 on the application of international accounting standards.
- The European Union (2003), Kommentarer till vissa artiklar i Europaparlamentets och rådets förordning (EG) nr 1606/2002 av den 19 juli 2002 om tillämpning av internationella

redovisningsstandarder samt rådets fjärde direktiv 78/660/EEG av den 25 juli 1978 och sjunde direktiv 83/349/EEG av den 13 juni 1983 om redovisning.

Fields, T.D., Lys, T.Z. and Vincent, L. (2001) Empirical research on accounting choice. *Journal of accounting and economics*. Vol 31. pp. 255-307.

Glaum, M. (2009) Pension accounting and research: a review. *Accounting and Business Research*. Vol. 39. No. 3. pp 273-311.

Gordon, I. and Gallery, N. (2012) Assessing financial reporting comparability across institutional settings: The case of pension accounting. *The British Review*. Vol. 44, issue 1. pp.11-20

IAS 1 Presentation of financial statements. International Accounting Standards Board.

IAS 8 Accounting policies, changes in accounting estimates and errors. International Accounting Standards Board.

IAS 19 Employee benefits. International Accounting Standards Board.

IAS 19 BC. Basis for Conclusions on IAS 19 Employee Benefits. International Accounting Standards Board.

IASB (2009a) Exposure Draft ED/2009/10 Discount rate for employee benefits – Proposed amendments to IAS 19. International Accounting Standards Board.

IASB (2009b) Discount rate for employee benefits (Stopped). [http://www.ifrs.org/Current-Projects/IASB-Projects/Post-employment-Benefits-\(including-Pensions\)/Discount-rate-for-Employee-Benefits/Pages/Discount-rate-for-Employee-Benefits.aspx](http://www.ifrs.org/Current-Projects/IASB-Projects/Post-employment-Benefits-(including-Pensions)/Discount-rate-for-Employee-Benefits/Pages/Discount-rate-for-Employee-Benefits.aspx) (Accessed 2013-02-05).

IFRS (2013) Convergence between IFRSs and US GAAP. <http://www.ifrs.org/Use-around-the-world/Global-convergence/Convergence-with-US-GAAP/Pages/Convergence-with-US-GAAP.aspx> (Accessed 2013-03-12)

Isidro, H. and Raonic, I. (2012) Firm incentives, institutional complexity and quality of "harmonized" accounting numbers. *The International Journal of Accounting*. Vol. 47 pp. 407-436.

Janzon, C. and Arnell, G. (2009) Debatt: Börsen ska inte ägna sig åt normgivning. *Balans*. No. 5 2009. <http://www.farkomplett.se.ezproxy.ub.gu.se/?docId=TN000065BD> (Accessed (2013-03-15)

Marton, J. (2012a) Inblick: Strider svensk användning av diskonteringsräntan mot IAS 19? *Balans*. No. 5 2012. <http://www.farkomplett.se.ezproxy.ub.gu.se/?docId=TN00009487> (Accessed 2013-01-29).

Marton, J. (2012b) Inblick: Är IASB redovisningens Higgs-boson? *Balans*. No. 8-9 2012. <http://www.farkomplett.se.ezproxy.ub.gu.se/?docId=TN0000973F> (Accessed 2013-03-13)

Marton, J. (2013) Inblick: Vem har makten över reglerna? *Balans*. No. 3 2013. <http://www.farkomplett.se.ezproxy.ub.gu.se/?docId=TN00009F04> (Accessed 2013-03-13)

Marton, J., Falkman, P., Lumsden, M., Pettersson, A. K. and Rimmel G. (2010) *IFRS – i teori och praktik*. 2<sup>nd</sup> edition. Stockholm: Bonnier utbildning.



- Meyer, J. W. and Rowan, B. (1977) Institutionalized Organizations: Formal Structure of Myth and Ceremony. *American Journal of Sociology*. Vol 83. No. 2. pp. 340-363.
- Napier, C. J. (2009) The logic of pension accounting. *Accounting and Business Research*. Vol. 39. No. 3. pp 231-249.
- NASDAQ OMX (2012) Rules for the Construction and Maintenance of the NASDAQ OMX Nordic All-Share, List, Tradable and Sector Indexes. [https://indexes.nasdaqomx.com/docs/Methodology\\_OMXNORDIC.pdf](https://indexes.nasdaqomx.com/docs/Methodology_OMXNORDIC.pdf) (Accessed 2013-02-28)
- NASDAQ OMX Stockholm (2008) *Iakttagelser i NASDAQ OMX Stockholms genomgång av årsredovisningar 2008*. [http://www.nasdaqomx.com/digitalAssets/70/70951\\_bilaga\\_1\\_-\\_iakttagelser\\_2009.pdf](http://www.nasdaqomx.com/digitalAssets/70/70951_bilaga_1_-_iakttagelser_2009.pdf) (Accessed 2013-03-15)
- NASDAQ OMX Stockholm (2010) Årlig rapport avseende Nasdaq OMX Stockholm ABs övervakning av regelbunden finansiell information 2010. [http://www.nasdaqomx.com/digitalAssets/72/72471\\_rsprapport\\_2010\\_finansiell\\_information.pdf](http://www.nasdaqomx.com/digitalAssets/72/72471_rsprapport_2010_finansiell_information.pdf) (Accessed 2013-03-14)
- NASDAQ OMX Stockholm (2012) Årlig rapport avseende Nasdaq OMX Stockholm ABs övervakning av regelbunden finansiell information 2012. [http://www.nasdaqomx.com/digitalAssets/83/83403\\_vervakningavregelbundenfinansiellinformation2012.pdf](http://www.nasdaqomx.com/digitalAssets/83/83403_vervakningavregelbundenfinansiellinformation2012.pdf) (Accessed 2013-03-14)
- NASDAQ OMX Stockholm. (2013) *Aktier*. <http://www.nasdaqomxnordic.com/aktier/?instSearch=&radio=nordicShares&market=2&segment=0&fnSegment=contains%28@lists%2C%27Premier%27%29> (Accessed 2013-04-02)
- Oguz, S. S. and Markovic, S., (2012) *Redovisning av förmånsbestämda pensionsplaner enligt LAS 19 – Valet mellan statsobligationsräntan och bostadsobligationsräntan som diskonteringsränta*. Master thesis. Gothenburg University, School of Business, Economics and Law.
- RFR (2009) *Comment Letter: Discussion Paper – Preliminary Views on Amendments to LAS 19 Employee Benefits*. The Swedish Financial Reporting Board.
- Rundfelt, R. (2011) Inblick: Avvikelser från IFRS, är det tillåtet? *Balans*. No. 1 2011. <http://www.farkomplett.se.ezproxy.ub.gu.se/?docId=TN00004B22> (Accessed 2013-03-13)
- Rundfelt, R. (2013a) Inblick: Är Avvikelser från IFRS tillåtna? *Balans*. No. 1 2013. <http://www.farkomplett.se.ezproxy.ub.gu.se/?docId=TN00009F0B> (Accessed 2013-03-13)
- Rundfelt, R. (2013b) Inblick: Konsten att välja pensionsränta. *Balans*. No. 3 2013. <http://www.farkomplett.se.ezproxy.ub.gu.se/?docId=TN00009F05> (Accessed 2013-03-13)
- SEB (2013) *Bostadsobligation*. <http://www.seb.se/pow/wcp/index.asp?website=TAB4> (Accessed 2013-03-14)
- Schipper, K. (2005) The Introduction of International Accounting Standards in Europe: Implications for International Convergence. *European Accounting Review*. Vol. 14. No. 1. pp. 101-126.

- Scott, W. R. (2001) *Institutions and Organizations*. 2<sup>nd</sup> Thousand Oaks, California: Sage.
- Svenska Bankföreningen (2013) *De fyra storbankerna*. [http://www.swedishbankers.se/web/bf.nsf/\\$all/03C87A40933FEB85C12576180046A87C](http://www.swedishbankers.se/web/bf.nsf/$all/03C87A40933FEB85C12576180046A87C) (Accessed 2013-03-27)
- Sveriges Riksbank (2011) *Svenska marknadsräntor*. <http://www.riksbank.se/sv/Rantor-och-valutakurser/Forklaring-till-serierna/Svenska-marknadsrantor/> (Accessed 2013-04-02)
- Sveriges Riksbank (2012) *Den svenska finansmarknaden 2012*. Stockholm: Sveriges Riksbank.
- Sveriges Riksbank (2013) *Sök räntor & valutakurser*. <http://www.riksbank.se/sv/Rantor-och-valutakurser/Sok-rantor-och-valutakurser/?g7-SEGVB5YC=on&g9-SEMB5YCACOMB=on&from=2005-01-01&to=2013-03-14&f=Month&cAverage=Average&s=Comma> (Accessed 2013-04-02)
- UFR 3 Klassificering av ITP-planer som finansieras genom försäkring i Alecta. The Swedish Financial Reporting Board.
- Watts, R.L. and Zimmerman, J.L. (1978) Towards a Positive Theory of the Determination of Accounting Standards. *The Accounting Review*. Vol. 53. No. 1. pp. 112-134.
- Watts, R.L. and Zimmerman, J.L. (1979) The Demand for and Supply of Accounting Theories: The Market for Excuses. *The Accounting Review*. Vol. 54. No. 2. pp. 273-305
- Watts, R.L. and Zimmerman, J.L. (1990) Positive Accounting Theory: A ten year perspective. *The Accounting Review*. Vol. 65. No. 1. pp. 131-156.
- Young, J. J. (1996) Institutional Thinking: the Case of Financial Instruments. *Accounting, Organizations and Society*. Vol. 21. No. 5 pp. 487-512.
- Zucker, L. G. (1987) Institutional theories of organization. *Annual review of Sociology*. Vol. 13. pp. 443-464.
- Årsredovisningslag (1995:1554)

## Interviews

- Company A, financial controller. Telephone interview, 2013-03-05
- Company B, financial controller. Personal interview, 2013-03-06
- Company C, financial controller. Personal interview, 2013-03-07
- Company D, accounting specialist. Telephone interview, 2013-03-12
- Deloitte, Brendan Deal, actuary. Telephone interview, 2013-04-23
- Ernst & Young, Göran Abrahamsson, accounting specialist. Telephone interview, 2013-03-26
- Handelsbanken, Lena Grahn, fixed income trader. Personal interview, 2013-03-19
- KPMG, Eva Wadman, accounting specialist. Telephone interview, 2013-03-11
- PwC, Claes Janzon, accounting specialist. Telephone interview, 2013-03-07

## Appendices

### Appendix 1 – Included companies in the study of the annual reports

The list shows the companies included in the study of the annual reports, organized according to which industry they belong to.

<b>Industrials</b>	<b>Financials</b>	<b>Health Care</b>
Alfa Laval	Fabege	Getinge
Assa Abloy	Industrivärden	AstraZeneca
Atlas Copco	Investor	Elekta
Hexagon	Kinnevik	Meda
NCC	Latour Investment	<b>Basic Materials</b>
NIBE	Lundbergföretagen	Boliden
Peab	Nordea Bank	BillerudKorsnäs
Saab	Ratos	Holmen
Sandvik	SEB	Lundin Mining Corporation
Scania	Svenska Handelsbanken	SSAB
Skanska	Swedbank	Stora Enso
SKF	<b>Consumer Services</b>	<b>Consumer Goods</b>
Trelleborg	Axfood	Electrolux
Volvo	Hakon Invest	Husqvarna
<b>Technology</b>	Hennes & Mauritz	SCA
Ericsson	<b>Telecommunications</b>	Swedish Match
Tieto Oyj	Tele2	

## Appendix 2 – Excluded companies in the study of the annual reports

The list shows the companies excluded in the study of the annual reports, divided based on industry and with an explanation of the reason for exclusion.

Company	Reason for exclusion
<b>Industrials</b>	
ABB Ltd	US GAAP
Securitas	No DBP
<b>Financials</b>	
Atrium Ljungberg	Alecta
Castellum	Alecta
Hufvudstaden	Alecta
Melker Schörling	No DBP
Wallenstam	Alecta
<b>Telecommunications</b>	
TeliaSonera	No DBP
Millicom Int. Cellular	No DBP
<b>Technology</b>	
Axis	Alecta
<b>Basic materials</b>	
Semafo	No pension plans
<b>Oil and gas</b>	
Aliance Oil Company	No DBP
Lundin Petroleum	No DBP
<b>Consumer goods</b>	
Autoliv	US GAAP
Oriflame	No DBP
<b>Consumer services</b>	
Modern Times Group	No DBP

### Appendix 3 – Companies for the interview sampling

The companies are organized according to the four groups from which the interviewees are selected, based on industry and which reference rate the company is assumed to use. Further, the companies excluded in the interview sampling, due to lack of information regarding the reference rate, are listed.

<b>YGB, Industrials</b>	<b>YGB, Financials</b>
Alfa Laval	Latour Investment
Hexagon	Lundbergföretagen
Peab	Ratos
SKF	Svenska Handelsbanken
Trelleborg	
<b>YMB, Industrials</b>	<b>YMB, Financials</b>
Atlas Copco	Investor
Saab	Kinnevik
Sandvik	Nordea Bank
Scania	
Skanska	
Volvo	
<b>Excluded, Industrials</b>	<b>Excluded, Financials</b>
Assa Abloy - no information in A/R	Fabege - no information in A/R
NCC - no information in A/R	Industrivärden - no information in A/R
NIBE - no information in A/R	SEB - referred to YCB
	Swedbank - referred to other reference rate

## **Appendix 4 – Interview questionnaires**

### **Interview questionnaire for companies**

- Can you elaborate the reasoning behind the company's choice of reference rate?
- To what extent do actuaries participate in the determination of the reference to the discount rate?
- Companies in Sweden interpret IAS 19 paragraph 83 differently. What problems do you see with the interpretation of the paragraph?
- What are the arguments for and against the use of the yield on government bonds and the yield on mortgage bonds, considering IAS 19 paragraph 83?
- How aware do you think your stakeholders are of the effects that different discount rates have on the pension liability and how does that affect your choice of discount rate?

### **Interview questionnaire for audit firms**

- Describe your role regarding the interpretation of IAS 19 paragraph 83, and thus the estimation of the discount rate towards companies and within the audit firm.
- Companies in Sweden interpret IAS 19 paragraph 83 differently. What problems do you see with the interpretation of the paragraph?
- What are the arguments for and against the use of the yield on government bonds and the yield on mortgage bonds, considering IAS 19 paragraph 83?
- How aware do you think the companies' stakeholders are of the effects that different discount rates have on the pension liability and how do you think that affects the companies' choice of discount rate?
- Could you please describe how the audit firm reasoned regarding the Exposure draft published by IASB in 2009 and the change of reference rate in 2010? What was the perception on that several companies started to use the YMB?

### **Interview questionnaire for bank**

- What rating do mortgage bonds have in Sweden? Can they be classified as high qualitative bonds?
- To what extent is the market for mortgage bonds active in Sweden? Describe if there is any differences between different maturities.
- Describe the development of the mortgage bond market from 2005 until today.
- How is the comparability between the mortgage bond market in Sweden and the foreign corporate bond market regarding liquidity and rating?
- What are the arguments for and against a classification of mortgage bonds as corporate bonds, considering characteristics, liquidity and rating?

## Appendix 5 – Classification of used reference rates

The classifications of reference rates used by the companies are listed in the table according to the disclosures in the annual reports and after the clarification from the companies.

Company	According to annual reports, 2010	According to annual reports, 2011	After clarifications, 2010	After clarifications, 2011	Comments on clarifications attempts
<b>Industrials</b>					
Alfa Laval	As IAS 19, paragraph 83	As IAS 19, paragraph 83	As IAS 19, paragraph 83	As IAS 19, paragraph 83	No reply
Assa Abloy	No information	No information	YMB	YMB	Reply
Atlas Copco	YMB	YMB	YMB	YMB	Sufficient information from A/R
Hexagon	As IAS 19, paragraph 83	As IAS 19, paragraph 83	YGB	YGB	Reply
NCC	No information	No information	YMB	YMB	Reply
NIBE	No information	No information	YGB	YGB	Reply
Peab	YGB	YGB	YGB	YGB	Sufficient information from A/R
Saab	YMB	YMB	YMB	YMB	Sufficient information from A/R
Sandvik	YMB	YMB	YMB	YMB	Sufficient information from A/R
Scania	YMB	YMB	YMB	YMB	Sufficient information from A/R
Skanska	YMB	YMB	YMB	YMB	Sufficient information from A/R
SKF	YGB	As IAS 19, paragraph 83	YGB	As IAS 19, paragraph 83	Sufficient information from A/R/No reply
Trelleborg	As IAS 19, paragraph 83	As IAS 19, paragraph 83	YGB	YGB	Reply
Volvo	YMB	YMB	YMB	YMB	Sufficient information from A/R
<b>Financials</b>					
Fabege	No information	No information	YMB	YMB	Reply
Industrivärden	No information	No information	YMB	YMB	Reply
Investor	YGB	YMB	YGB	YMB	Sufficient information from A/R
Kinnevik	No information	YMB	No information	YMB	No reply/Sufficient information from A/R
Latour Investment	YGB	YGB	YGB	YGB	Sufficient information from A/R
Lundbergföretagen	As IAS 19, paragraph 83	As IAS 19, paragraph 83	YGB	YGB	Reply
Nordea Bank	YGB	YMB	YGB	YMB	Sufficient information from A/R
Ratos	As IAS 19, paragraph 83	As IAS 19, paragraph 83	YMB	YMB	Reply
SEB	YCB	YCB	YMB	YMB	Reply
Svenska Handelsbanken	YGB	YGB	YGB	YGB	Sufficient information from A/R
Swedbank	Other	Other	YMB	YMB	Reply

Company	According to annual reports, 2010			According to annual reports, 2011			After clarifications, 2010			After clarifications, 2011			Comments on clarifications attempts		
<b>Health Care</b>															
Getinge	As IAS 19, paragraph 83	As IAS 19, paragraph 83	As IAS 19, paragraph 83	YGB	YGB	Other	YGB	YGB	Other	YGB	YGB	Other	YGB	YGB	Reply
AstraZeneca	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	Sufficient information from A/R
Elekta	No information	No information	No information	No information	No information	No information	No information	No information	No information	No information	No information	No information	No information	No information	No reply
Meda	YCB	YCB	As IAS 19, paragraph 83	YCB	YCB	YCB	YCB	YCB	YCB	YCB	YCB	YCB	YCB	YCB	No reply
<b>Telecommunications</b>															
Tele2	No information	No information	As IAS 19, paragraph 83	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	Reply
<b>Technology</b>															
Ericsson	As IAS 19, paragraph 83	As IAS 19, paragraph 83	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	Reply
Tieto Oyj	No information	No information	No information	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	Reply
<b>Basic Materials</b>															
Boliden	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	Sufficient information from A/R
BilleludKorsnäs	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	Sufficient information from A/R
Holmen	YCB	YCB	YCB	YCB	YCB	YCB	YCB	YCB	YCB	YCB	YCB	YCB	YCB	YCB	Reply
Lundin Mining Corporation	No information	No information	No information	No information	No information	No information	No information	No information	No information	No information	No information	No information	No information	No information	No reply
SSAB	As IAS 19, paragraph 83	As IAS 19, paragraph 83	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	Reply
Stora Enso	As IAS 19, paragraph 83	As IAS 19, paragraph 83	As IAS 19, paragraph 83	Other	Other	Other	Other	Other	Other	Other	Other	Other	Other	Other	Reply
<b>Consumer Goods</b>															
Electrolux	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	Sufficient information from A/R
Husqvarna	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	Sufficient information from A/R
SCA	As IAS 19, paragraph 83	As IAS 19, paragraph 83	As IAS 19, paragraph 83	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	YMB	Reply
Swedish Match	As IAS 19, paragraph 83	As IAS 19, paragraph 83	As IAS 19, paragraph 83	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	Reply
<b>Consumer Services</b>															
Axfood	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	YGB	Sufficient information from A/R
Hakon Invest	YCB	YCB	YCB	YCB	YCB	YCB	YCB	YCB	YCB	YCB	YCB	YCB	YCB	YCB	Reply
Hennes & Mauritz	No information	No information	No information	No information	No information	No information	No information	No information	No information	No information	No information	No information	No information	No information	Reply