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*Measurement of PPEs after recognition*  
*- Factors explaining the preference of the cost model*

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## **Abstract**

**Title:** Measurement of PPEs after recognition - Factors explaining the preference of the cost model

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**Five key words:** IAS 16, Cost model, Revaluation model, Positive Accounting Theory and Institutional Theory

**Purpose:** The purpose of this study is to identify and explain why Swedish companies prefer the cost model to the revaluation model when measuring PPEs after recognition.

**Methodology:** This research is mainly based on a deductive approach, and we have applied a quantitative research method comprising of structured interviews by telephone.

**Theoretical perspectives:** The theoretical approach is based on Positive Accounting Theory and Institutional Theory, in order to reveal which one that has the best explanatory power. We have also tried to identify any linkages between these accounting choice theories.

**Empirical foundation:** Empirical data is primarily gathered through 18 interviews, with representatives from 16 listed and two unlisted companies. Five different industries have been involved, namely energy, industrials, materials, financials and information technology.

**Conclusions:** This research suggests that Institutional Theory has the best explanatory power regarding the preference of the cost model, as it is resulting from the respondents' desire to present reliable numbers, tradition, professional groups preferring this model and industrial practice within the energy industry. Thus, this theory's isomorphic mechanisms and the assumption of institutional inertia have all been able to explain this preference to some extent. Positive Accounting Theory, by contrast, has only been able to explain the preference of the cost model because it is easier, more practical and cheaper to apply than the revaluation model, hence it is a rational choice. In addition, this theory can also explain tradition through cost of thinking and social innovation.

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Lund, 27<sup>th</sup> of May 2012

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Hege Kvemo Dahl

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Charlotte Nyman

## **Abbreviations**

FASB	Financial Accounting Standards Board (US)
GAAP	Generally Accepted Accounting Principles
IAS	International Accounting Standard
IASB	International Accounting Standards Board
IASC	International Accounting Standards Committee
IFRS	International Financial Reporting Standards
IT	Institutional Theory
OOPs	Owner-Occupied Properties
PAT	Positive Accounting Theory
PPE	Property, Plant and Equipment
SASB	Swedish Accounting Standards Board
SFASC	Swedish Financial Accounting Standards Council

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# 1. Introduction

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*This chapter presents the background to the chosen topic. This is followed by a problem discussion, which subsequently leads to the purpose of this study. In addition, our delimitations in carrying out this research will be described, and the chapter ends with a presentation of this essay's continuing disposition.*

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## 1.1 Research background

IFRS is issued by the IASB, which is an independent standard-setting body of the IFRS Foundation. This foundation is an independent, not-for-profit private sector organisation (IFRS Foundation, 2012), and one of its principal objectives is the following:

To develop, in the public interest, a single set of high quality, understandable, enforceable and globally accepted financial reporting standards based upon clearly articulated principles. These standards should require high quality, transparent and comparable information in financial statements and other financial reporting to help investors, other participants in the world's capital markets and other users of financial information make economic decisions. (IFRS Foundation, 2010, para. 2 (a))

However, even if this is the aim with IFRS, and the application of the standards increases on a global basis, the use of IFRS can differ from one country to another. In addition, differences can also be found on national levels, among companies and industries. This is resulting from *inter alia* IFRS providing scope for various practices to occur, and one category of scope is its overt options (Nobes and Parker, 2010). One standard providing such an overt option is IAS 16, namely the possibility to measure property, plant and equipment, henceforth PPEs, at either cost or fair value after recognition. The choice of fair value, and thus the revaluation model, will have several implications for the financial statements. Simply put, if an asset's carrying amount increases as a result of the revaluation, the increase shall be recognised in other comprehensive income, and accumulated in equity under the heading of revaluation surplus. If an asset's carrying amount decreases on the other hand, the decrease shall be recognised in profit or loss. The use of the cost model by contrast, involves no changes in the carrying amount, as PPEs are to be measured at cost when recognising these assets (IAS 16, para. 15, 30, 39 and 40).

The overt option provided by IAS 16 constitutes an accounting choice, which Fields, Lys and Vincent (2001, p. 256) define as:

(...) any decision whose primary purpose is to influence (either in form or substance) the output of the accounting system in a particular way, including not only financial statements published in accordance with GAAP, but also tax returns and regulatory filings.

The authors argue that the managerial intention is key to this definition, and three main categories of motivations behind accounting choice are identified. These are contracting, asset pricing and influencing external parties. The first category is relating to agency costs (ibid.). Agency cost is the cost of the agency relationship, which arises when decision-making authority is delegated from the owners to the managers. In this relationship, the agents (managers) are assumed to be driven by self-interest and act opportunistically towards the principals (owners), unless restrictions are established to avoid such behaviour. Such restrictions are often defined in written contracts, which thereby reduce agency cost (Watts and Zimmerman, 1986). Moreover, the contractual arrangements also include debt covenants. The second category, asset pricing, is driven by information asymmetry, and aims at influencing the price of the assets. When markets do not provide perfect information about the price of the assets, for instance because of trading restrictions such as insider trading laws, accounting choice can be applied to overcome such problems. This may be done to provide less informed external parties with better information about the timing, magnitude and risk of future cash flows. However, self-interested managers may also make such accounting choices in order to contribute to higher stock prices, and thus their compensation and reputation. The third category, influencing external parties, refers to parties other than actual and potential owners of the firm, such as suppliers, competitors and the government, and the ambition to influence their decisions through the financial statements (Fields, Lys and Vincent, 2001).

Parallels can be drawn between these categories of motivations, and theories engaged in explaining accounting choices (Deegan, 2009). According to Collin et al (2009), the scientific literature contains mainly two such theories, namely Positive Accounting Theory and Institutional Theory, henceforth referred to as PAT and IT. Starting with PAT, Watts and Zimmerman are regarded as the founders of this theory (Deegan, 2009), and its initial underlying assumption is that managers are motivated by self-interest and maximisation of wealth (Watts and Zimmerman, 1978). PAT comprises three hypotheses, which all to some extent could be applied to explain the three motivations behind accounting choice. As will be



elaborated in section 4.1 of this essay, the bonus plan hypothesis can be used to explain both the contracting and the asset pricing motivations, the debt/equity hypothesis can explain both the contracting and the influence of external parties motivations, and the political cost hypothesis can also explain the last motivation (Watts and Zimmerman, 1990). Regarding IT on the other hand, the focus here is more on obtaining legitimacy by adapting to what is considered as normal by specific powerful groups or the society. DiMaggio and Powell have made important contributions to this theory, which provides explanations to why companies, often within the same industries, tend to be rather similar in their organisational forms (Deegan, 2009). As will be presented in section 4.2, IT comprises three isomorphic mechanisms, namely the coercive, mimetic and normative one. All these mechanisms may explain the motivations behind accounting choice in general. However, regarding the specific motivations illustrated above, we believe that IT only can explain the influence of external parties motivation, as the coercive and mimetic mechanisms concern important stakeholders and competitors. In this theory, competitors refer to other companies within the organisational field. Yet, IT provides additional motivations behind accounting choice, such as normative pressure from professional groups promoting their competence (DiMaggio and Powell, 1983).

Drawing the attention to the accounting choice provided by IAS 16 again, Hjelström and Schuster (2011) revealed that this standard was one of 13 IFRS standards considered critical for the understanding of accounting practice. In 2006, they performed in-depth exploratory interviews with representatives from 17 Swedish listed companies, and IAS 16 was found to be giving rise to problems in the IFRS transition process. These problems occurred because the standard involves judgments, demands great effort, and thereby leads to non-negligible costs of compliance. Thus, the authors argue that the impact of management incentives and institutional factors on accounting choices cannot be ignored, and by that, they are able to place IAS 16 in the context of PAT and IT. Regarding the first, Hjelström and Schuster suggest that by recognising management incentives to a greater extent, the accounting policy literature can be enriched. Regarding the latter, the role of institutional factors in shaping management incentives, such as financial market developments, capital structure and tax systems, should also be emphasised (ibid.).

## 1.2 Problem discussion

According to Marton et al. (2008), the majority of Swedish companies have some sort of PPEs, and their amounts are often material. Still, IAS 16's option of the revaluation model after recognition is rarely applied, and most companies prefer the cost model instead (ibid.). In 2009, Diehl (2010) performed a study concerning the measurement option provided by IAS 16 on companies in Scandinavia and the Baltics. His study comprised of annual reports from companies listed in the premier segment of ten Scandinavian and Baltic stock exchanges, and he found that for the Baltic companies, almost every industry had at least one company choosing fair value. In Scandinavia by contrast, only a few companies in the financial industry applied fair value. Regarding Sweden in particular, only one company among those listed at NASDAQ OMX Stockholm 30 chose fair value, namely Investor AB. Based on these findings, Diehl argues that while fair value appears to be acceptable in almost every industry in the Baltics, the Scandinavian results indicate that measuring PPEs at fair value is more costly than advantageous. Fair value may be considered more relevant since it provides more updated numbers, but this method also requires more expenses in order to get those numbers. However, Diehl also suggests that the finding may be a result of regional differences. One example of such differences is that managers of publicly traded companies in the Baltics are obligated to make the choice between cost or fair value every year. This may in turn affect whether or not they keep their employments, as fair value can lead to, for instance, higher stock prices and lower interest rates (ibid.).

Based on these assumptions, we believe that the greater application of fair value in the Baltics may be explained by the Baltic managers' attempts to keep their jobs. Regarding the Scandinavian companies by contrast, the preference of the cost model appears to be resulting from the resources required by the revaluation model. Hence, we suggest that PAT is applicable in both these regions, because of its basic assumption of managers being motivated by self-interest and maximisation of wealth (Watts and Zimmerman, 1978). Moreover, concerning Sweden, if the Swedish managers believe that the revaluation model will affect their financial statements negatively, especially regarding its possible negative effect on profit or loss if the assets' carrying amount decreases, it might be likely that they will try to avoid this effect. Therefore, PAT's hypotheses regarding the impact of profit on bonus and debt covenants (Watts and Zimmerman, 1990), might also explain the preference of the cost model. In addition, we assume that this preference could be resulting from the lack of

developed practices on how to measure PPEs according to the revaluation model. To clarify, before the implementation of IFRS in 2005, RR 12 on PPEs was the effective accounting standard, and this standard only allowed the cost model after recognition of the assets (Bokföringsnämnden, n.d.). Thus, it might be regarded as appropriate to await other actors' application of this model, and thereby IT's mimetic mechanism could be applicable (DiMaggio and Powell, 1983).

Referring to Marton et al's (2008) statement and Diehl's (2010) findings, we want to examine why the preference of the cost model is so extensive. Because the choice of the revaluation model appears to be almost non-existing in Sweden, we will try to identify factors explaining the limited use of this model on a sample of companies applying IFRS. As mentioned in the preceding section, Hjelström and Schuster (2011) were able to place IAS 16 in the context of PAT and IT, through their emphasis on the impact of management incentives and institutional factors on accounting choice. Furthermore, as argued above, both these accounting choice theories appear to be able to explain the preference of the cost model. Hence, we will base our study on these theories, and we will try to reveal which of them that has the best explanatory power in this aspect. However, according to Tagesson et al (2009), when a study is aiming at explaining an empirical phenomenon, it might be a problem when theories are regarded as competitive instead of complementary. Therefore, the outcome of our empirical study will mainly try to reveal weaknesses and strengths of the respective theories in this particular case, in addition to identify any possible linkages between them. We will also keep an open mind towards other explanatory factors complementing the ones provided by PAT and IT, which may be revealed during our empirical study. This reasoning leads to the purpose of this study.

### **1.3 Purpose**

The purpose of this study is to identify and explain why Swedish companies prefer the cost model to the revaluation model when measuring PPEs after recognition.

### **1.4 Delimitations**

Given the aim of this study, our intent is to administer a consistent and coherent essay. As such, delimitations have to be made because of the time factor as well as the extent of the research. First and foremost, we have chosen to delimit our study to Swedish companies, which all apply IFRS. A sample of 16 listed and two unlisted companies have been selected,

representing the industries energy, industrials, materials, financials and information technology. Even though this selection cannot be argued to constitute a representative sample, we still consider that it provides a general overview. Moreover, we have chosen to focus on two accounting choice theories, PAT and IT. Hence, we exclude other theories, such as Legitimacy Theory and Stakeholder Theory, which probably also could be applied to explain the preference of the cost model. Additionally, in order to focus on our core issue, we have not considered any other options provided by IAS 16, such as depreciation based on estimates of useful life or residual value. This also yields for other accounting choices provided by IFRS, except for IAS 40 *Investment Property*, which has been a subject in the interview with one respondent from the financials industry.

## **1.5 Disposition**

The proceeding part of this essay has the following outline:

*Chapter 2 - Methodology:* This chapter presents our research approach, as well as the selection of respondents, theoretical approach and the progress of collecting data. The chapter ends with a discussion regarding the quality of this study.

*Chapter 3 - Regulation:* This chapter begins with an overview of Swedish legislation and IAS 16, followed by a presentation of IFRS and fair value. The last part of the chapter provides a brief description of the differences between cost accounting and fair value accounting.

*Chapter 4 - Theoretical framework:* This chapter focuses on presenting PAT and IT, and some criticism towards them. The results from a selection of research articles will also be described, and empirical hypotheses will be derived from the respective accounting choice theories.

*Chapter 5 - Empirical data:* This chapter presents the responses from our empirical study. It begins with a short presentation of the respondents involved, followed by a summary of the answers received. The chapter ends with a separate presentation of Investor AB's responses.

*Chapter 6 - Analysis:* This chapter discusses the outcome of our empirical study in light of PAT and IT. The chapter is divided into two sections, where the first focuses on factors

explaining the preference of the cost model. The subsequent section concerns implications of a change to the revaluation model.

*Chapter 7 - Conclusions:* This chapter connects the empirical findings to the purpose of this research. It begins with a conclusion of findings, and a discussion is made concerning the explanatory power of PAT and IT. The chapter ends with a presentation of implications for future research.

## **2. Methodology**

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*This chapter presents our research approach, as well as the selection of respondents, theoretical approach and the progress of collecting data. The chapter ends with a discussion regarding the quality of this study.*

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### **2.1 Research approach**

#### **2.1.1 Deductive strategy**

The aim with this study is to identify the reasons why a sample of Swedish companies prefers the cost model when measuring PPEs after recognition. In order to do so, we mainly have a deductive strategy, which involves deriving hypotheses based on existing knowledge within a specific area. These hypotheses are then subjected to an empirical examination, which either supports or rejects the hypotheses. Another strategy, opposite to the deductive one, is induction. Simply put, it involves creating theory based on empirical data, instead of testing the theory against empirical data. These two approaches are often considered as exclusive. Still, the relation between theory and research in terms of deduction and induction is not so clear-cut, and it might be hard to practically categorise all type of research into either one of them. The two strategies are possibly better considered as tendencies, rather than an unambiguous distinction that always applies (Bryman and Bell, 2005). Therefore, the reason why we refer to our strategy as being mainly deductive, is that we will primarily base our empirical study on hypotheses derived from PAT and IT. These will be tested in order to reveal which of these accounting choice theories that has the best explanatory power regarding the preference of the cost model. In addition, linkages may also be identified between these theoretical contributions, and we will examine whether this yields in this aspect. Moreover, other explanatory factors complementing the ones provided by PAT and IT may also be identified during our research, and a discussion will be held whether this is the case in the concluding chapter of this essay. Hence, we cannot argue that our research solely relies on a deductive strategy.

We started our research by expanding our knowledge concerning PAT and IT, in addition to examining statement and prior studies on accounting choice in general, and IAS 16 in particular. This was done in order to get an indication of why companies in general tend to prefer certain accounting methods, and develop hypotheses that could be subjects to our empirical study. Because Marton et al' (2008) statement and Diehl's (2010) empirical study,

as presented in section 1.2, suggested that companies prefer cost to fair value when measuring PPEs after recognition, we mainly based our hypotheses on this assumption. This yields for all the hypotheses involved in this study, except for one derived from PAT's political cost hypothesis, and they will all be presented in chapter 4. In order to ensure that this assumption was correct, we performed a small test by examining annual reports from a sample of Swedish companies, currently listed at NASDAQ OMX Stockholm. The annual reports were from 2011, and the sample comprised of 22 companies within the industries energy, industrials, materials, financials and information technology, as categorised by NASDAQ OMX's Nordic list of 2012. The way we selected the companies will be elaborated in section 2.2.2. Moreover, we also examined the annual reports from two unlisted companies applying IFRS, namely Vattenfall AB and Munksjö AB, active within the respective industries energy and industrials. These companies were chosen due to a suggestion from one of our respondents. Overall, our small test provided significant support for our assumption, as 23 of 24 companies chose the cost model.

### **2.1.2 Quantitative research**

A quantitative research approach is considered suitable when the intention is to explore the extent or frequency of a phenomenon (Jacobsen, 2002). This method prioritises quantity when collecting and analysing data, and parallels can be drawn to the deductive approach because of its emphasis on examining existing theories. Some of the contrasting features between qualitative and quantitative research, is that the former emphasises, for instance, close involvement with the respondents, rich and deep data, unstructured interviews and generating theoretical concepts out of data, thus a more inductive approach. Quantitative research, by contrast, emphasises more distance to the respondents, reliable and unambiguous data, structured interviews and theoretical concepts preceding the collection of data, hence a deductive approach, as already mentioned (Bryman and Bell, 2005). Therefore, given these respective features, this study constitutes a quantitative research.

As will be presented in section 2.2.3, structured interviews have been performed with 18 out of the 24 companies involved in our test of annual reports. It has been possible to quantify and categorise all the responses received, and test them based on the respective hypotheses derived from PAT and IT. However, this study does not totally fulfil all the features of a quantitative research, as it does have some limitations. That is, our selection of respondents, which will be elaborated below, constitutes a non-probability sample. This is characterised by

a selection that is not random, because some respondents are more likely to be selected than others (Bryman and Bell, 2005). Moreover, the companies we approached in order to get an interview had the opportunity to choose whether they wanted to participate or not in our research. Hence, the selection of respondents is biased, and therefore does not constitute a representative sample (Lind, Marchal and Wathen, 2005). Based on these reasoning, our empirical results cannot be presented in terms of statistical significance due to the absence of a probability sample. Limitations to generalisation are also apparent because we do not have a representative sample (Bryman and Bell, 2007). Nevertheless, instead of presenting our results through statistical significance, we will present them in terms of number of responses received, and, as will be argued in section 2.3.2, we do believe that they can be representative for a greater extent of companies.

## **2.2 Collection of data**

### **2.2.1 Primary data**

Primary data in this research is mainly gathered through 18 interviews. Primary data is characterised as being collected directly from the primary information source, and the researcher is often the first one to collect it. Questionnaires and interviews, tailored to the purpose of the study, are common techniques to gather such data (Jacobsen, 2002). Moreover, the 24 annual reports reviewed in the initial stage of our research, followed by an examination of various factors in the empirical stage, can also be categorised as primary data. Even though the approach used here, namely content analysis, is rather differing from the ones mentioned above, it is considered suitable when the aim is to quantify and gather data from analysing documents (Bryman and Bell, 2005).

### **2.2.2 Selection of respondents**

As mentioned above, the selection of respondents in this research constitutes a non-probability sample (Bryman and Bell, 2005). Due to our focus on IAS 16, we have chosen respondents that first of all apply IFRS in their consolidated accounts. Secondly, we searched for companies from various industries, in order to reveal whether the reasons for choosing the cost model differed due to variations in the industrial contexts. Thirdly, we wanted to involve companies with different size. For the listed companies, this involves registration in the segments Large Cap, Mid Cap and Small Cap of NASDAQ OMX's Nordic list of 2012, hence we apply market capitalisation as an approximation for size. Information about the



respective registrations is provided below. Finally, we searched for companies with a large share of PPEs of total assets. This was done because we assumed that the accounting choice provided by IAS 16 would have a greater impact on these companies, compared to companies with a rather small proportion of PPEs. In addition, we also figured that these companies would have given more thought to why they prefer the cost model to the revaluation model.

The industries we have focused on are energy, industrials, materials, financials and information technology. The first three were chosen due to their large share of PPEs. This is often not the case for the industries financials and information technology. However, financials was involved mainly because Diehl (2010) found that this industry was the only one in Scandinavia applying fair value, as mentioned in chapter 1. In addition, companies in this industry often have investment properties. Investment properties are reported according to IAS 40, and our small test of annual reports indicated the preference of fair value for these assets. Therefore we wanted to examine why this was not the case for PPEs, as both IAS 16 and IAS 40 concern properties. Unfortunately, we were only able to get two interviews with companies from this industry, namely Investor AB and L E Lundbergföretagen AB. Out of the three other companies approached within this industry, two stated that our topic was not relevant to them because of their insignificant share of PPEs, and one did not have the time. Regarding information technology on the other hand, the reason for involving this industry was simply to reveal whether IAS 16 had been discussed at all, and whether their reasons for preferring the cost model differed from the industries with a greater share of PPEs.

Out of 24 approached companies, 18 had the opportunity to participate. Two companies (Mid Cap) from the industry financials declined due to irrelevance resulting from a small share of PPEs, two respondents from financials (Small Cap) and industrials (Mid Cap) respectively declined because they did not have the time, and two companies from energy (Large Cap) did not reply. Out of 18 respondents, 16 are listed at NASDAQ OMX Stockholm. Vattenfall AB and Munksjö AB are not listed, but they still apply IFRS. The companies involved in our study, categorised by their industries, are as follows:

**Energy:** Vattenfall AB, PA Resources AB (Mid Cap), Concordia Maritime AB (Small Cap)

**Industrials:** Munksjö AB, Trelleborg AB (Large Cap), Alfa Laval AB (Large Cap), Studsvik AB (Small Cap)

**Materials:** SSAB (Large Cap), Holmen AB (Large Cap), Bergs Timber AB (Small Cap), XX AB (anonymous, Mid Cap), Rottneros AB (Small Cap)

**Financials:** L E Lundbergföretagen AB (Large Cap), Investor AB (Large Cap)

**Information technology:** YY AB (anonymous, Large Cap), PartnerTech AB (Small Cap), Novotek AB (Small Cap), Know IT AB (Small Cap)

### 2.2.3 Structured interviews

The empirical data has been gathered through structured interviews, often referred to as standardised interviews, which are frequently applied within quantitative research. This is because they facilitate both the interview process and the subsequent registration and classification of the responses. The aim with such interviews is to create the same context for each interview, and to ensure that the responses can be compiled in a comparable way. The interviews are based on a predetermined interview guide or questionnaire, which often contains quite specific questions (Bryman and Bell, 2005).

We approached the selected companies by email, in order to set a date for the interviews. The reason why we chose email was that we wanted to get hold of respondents with experience and knowledge about our topic, and we realised when calling a few of the companies that the receptionists often did not know whom to contact. Thus, we assumed that email was the most optimal approach, and we often contacted the CFO or the group accounting manager of the companies, so that they could connect us to the right respondent. Due to time limitations and geographical dispersion, we performed the interviews by telephone. This interview context has several advantages compared to personal interviews. For instance, it is far cheaper regarding time and money spent on travelling. It is also quicker to administer, and the responses gathered are often more objective compared to interviews in person. This is because the latter involves a risk that the respondents' replies are affected by the characteristics of the interviewer, such as ethnicity or class, and that they may reply in ways deemed desirable by the interviewer (Bryman and Bell, 2007). Hence, this interview context facilitated our quantitative research method. Moreover, each interview lasted on average 30 minutes, and we emailed the questions beforehand to the respondents. Even though this may lead to less spontaneous answers, the responses we got when booking the interviews was that many respondents had not given greater thought to why they chose the cost model. Therefore we figured that in order to get more deliberated answers, it might be fruitful to give the respondent some time to ponder on their replies. Because we had rather specific questions, we decided to make notes during the interviews instead of recording them. We considered this to be less time consuming for the subsequent registration and classification of the answers. Each

conversation began with a short introduction of our intent with the interview, and we asked all respondents if we could contact them again in case we needed to ask further questions.

Our main interview guide is available in Appendix 1. It is designed to address the purpose of this research, by focusing on the preference of the cost model with reference to the specific explanations provided by PAT and IT. This guide ensured that basically the same questions were raised to all respondents, except for small amendments. The amendments concern in general the potential choice of fair value according to IAS 40 *Investment Property*, for companies within the financial industry. Yet, this was only relevant for one company, namely L E Lundbergföretagen AB. In addition, we designed a separate interview guide for Investor AB, because we wanted to identify why they chose the revaluation model, and which effects they have experienced from this choice. This interview guide is available in Appendix 2. One comment we would like to make regarding the question of tradition, which was raised to all the respondents, is that it concerns institutional inertia. This will be presented in more detail in chapter 4, but inertia is traditionally defined as the inability to accomplish internal change when facing significant external change (Van der Steen, 2009). Hence, because the respondents involved in our study are well-established companies, where the majority is listed, we figured that none of them would admit that they are unable to change in case of measurement of PPEs. Therefore, the choice of the word tradition was considered to be a more neutral way of getting an indication of whether institutional inertia occurs in this aspect.

#### **2.2.4 Theoretical approach**

Our mainly deductive approach involves the application of PAT and IT. These theories were chosen because, as mentioned in chapter 1, the scientific literature contains mainly these two theories engaged in explaining accounting choice (Collin et al, 2009). According to Deegan (2009), PAT and IT focus on describing particular phenomena, and they often seek to predict and explain why managers tend to prefer certain accounting methods instead of others available (Deegan, 2009). As we argued in section 1.2, both PAT and IT appear to be able to explain the preference of the cost model, and this is the reason behind our choice of theoretical approach.

Accounting choice in general is a topic that has been examined quite extensively, and the results from a selection of research articles have been of great support in this research. These articles have examined the impact of IFRS and various accounting choices on *inter alia* a

sample of Swedish listed companies, and, as will be presented in chapter 4, we have categorised them into PAT or IT in order to illustrate the respective theories. Even though several of the articles do not directly express their connection to PAT or IT, we have tried to define a linkage by providing arguments for our assumptions. Moreover, the articles have been published in journals such as *Journal of International Accounting, Auditing and Taxation*, *European Accounting Review* and *Accounting in Europe*, and they were retrieved from Lund University's databases, Summon and Business Source Complete, by using key words such as 'accounting choice' and various IASs. After retrieving them, we ensured that the majority of their publishing journals were listed in the Association of Business Schools' (2010) Academic Journal Quality Guide.

Additionally, chapter 3 provides, for instance, a section on IFRS and fair value. This section is mainly based on Cairns' (2007) chapter in the textbook 'The Routledge Companion to Fair Value and Financial Reporting', which may not appear to be very critical. However, we have not been able to obtain any 'basis for conclusions' for IAS 16 that provides us with relevant background information to the standard. After correspondence with David Alexander, who is former Professor of international accounting at the University of Birmingham and, for instance, co-author of several IFRS-based textbooks, he confirmed this issue. As IAS 16 is a standard which originates from 1982, David Alexander argued that the 'basis for conclusions' to the current version is rather useless because it has no history. Therefore we use David Cairns' statements to such a great extent, as he was the Secretary-general of the IASC from 1985 to 1994.

## **2.3 Quality of the research**

When determining the quality of a quantitative research, reliability and validity are important criteria often used in this aspect (Bryman and Bell, 2005). Therefore, the following sections will discuss the quality of this research in light of these criteria.

### **2.3.1 Reliability**

Reliability concerns the question whether the results of a study are repeatable, or if they are affected by temporary or random factors. Replication is another criterion close to reliability, which also deals with the possibility to reproduce another researcher's findings (Bryman and Bell, 2005). Whether it is possible to reproduce our findings is rather hard to say. First, as the

interviews performed are relatively few and the findings are based on the respondents' personal opinions at the time, it is possible that a similar study will not result in identical conclusions. Secondly, the interviews were held in Swedish, and we cannot argue that the representation of the responses is completely free from translation errors. Despite this, we have tried to contribute to this research's reliability by thoroughly describing how we proceeded in gathering information. Thus, we believe that if other researchers were to raise the same questions to the same respondents within the nearest future, they would obtain rather similar responses. Moreover, we have both been present at all the interviews and the subsequent registration and classification of the answers, thus assuming that our perceptions of the responses are quite correct. We have also raised basically the same questions to all respondents, and tried to avoid leading the respondent in a certain direction. Therefore, we believe that the responses received and the representation of them are rather unaffected by our personal interpretations (Jacobsen, 2002).

### **2.3.2 Validity**

Validity is a matter of empirical data being relevant and valid. This implies that the measurements made are consistent with the initial intentions with the research, and that the findings are possible to generalise (Jacobsen, 2002). We believe that the validity in general is relatively good in this research, as the empirical data obtained is what we initially intended to measure. We have also sought to have a relevant connection between the empirical data and the theoretical approach, by deriving hypotheses from PAT and IT that were subjects to empirical testing. Additionally, we have, as already mentioned, focused on interviewing respondents with experience and knowledge about our topic, rather than emphasising titles such as group accounting managers or CFOs. This was done in order to get access to first-hand information. Some of the respondents, Anna Troedsson Wiklander at Investor AB, and one anonymous respondent, YY AB, have also read a preliminary version of this essay to ensure that we present their responses correctly, which strengthens this research's validity (ibid.). Nevertheless, it is hard to determine whether our results can be generalised. This is because we have performed a limited number of interviews, and the responses received are often based on the respondents' personal perceptions. In addition, as argued above, our selection of respondents does not constitute a random sample, and it is biased because the approached companies were given the opportunity to participate. However, our intention has been to interview representative companies whenever possible, and our experience, which will be elaborated in chapter 6, is that most of them have rather corresponding reasons for

preferring the cost model. Hence, it is likely to believe that other companies also have rather similar views, and that our results might be representative for a greater extent of companies.

### 3. Regulation

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*This chapter begins with an overview of Swedish legislation and IAS 16, followed by a presentation of IFRS and fair value. The last part of the chapter provides a brief description of the differences between cost accounting and fair value accounting.*

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#### 3.1 IAS 16 and Swedish legislation

Sweden has a history of accounting regulation where legislation provides the framework, and more detailed rules are found in standards and recommendations. This system still applies, except for listed companies' consolidated accounts, in which compliance with IFRS is obligatory (Marton et al, 2008). According to the Accounting Act of 1995, chapter 7 § 32, companies covered by Article 4 in Regulation (EC) No 1606/2002 on the application of international accounting standards shall apply only a few provisions in the chapter for their consolidated accounts. Some of these concern, for instance, when a company is the parent company, and the duties or exemptions from the obligations to prepare consolidated accounts, annual reports, interim reports and other publications. RFR 1 *Additional reporting norms for groups*<sup>1</sup>, issued by the Swedish Council for Financial Reporting<sup>2</sup>, provides norms that complement these requirements (Marton et al, 2008). Beyond those, companies with securities admitted to trading on a regulated market at their balance sheet date are required to apply international accounting standards for each financial year after 1 January 2005 (Regulation (EC) No 1606/2002, article 4). Those international accounting standards refer to: “(...) *International Accounting Standards (IAS), International Financial Reporting Standards (IFRS) and related Interpretations (SIC-IFRIC interpretations) (...) issued or adopted by the International Accounting Standards Board (IASB)*” (Regulation (EC) No 1606/2002, article 2). Furthermore, according to the Accounting Act, chapter 7 § 33, companies other than those referred to in § 32 are allowed to prepare their consolidated accounts according to IFRS.

One difference between IAS 16 and the former Swedish accounting standard, RR 12, which was applied in the consolidated accounts before the implementation of IFRS, is the measurement of PPEs after recognition. RR 12 was issued by the Swedish Financial Accounting Standards Council<sup>3</sup>, which was decommissioned in 2007 (Bokföringsnämnden, n.d.). According to RR 12, para. 18, PPEs must be carried at their cost less accumulated

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<sup>1</sup> Our translation of *Kompletterande redovisningsnormer för koncerner*

<sup>2</sup> Our translation of *Rådet för finansiell rapportering*

<sup>3</sup> Collin et al's (2009) translation of *Redovisningsrådet*

depreciations and any impairment losses after recognition. According to IAS 16 para. 29 by contrast, an entity can choose either measurement at cost or fair value after recognition. If choosing cost, the cost model is to be applied. This involves that PPEs are carried at their costs, less any accumulated depreciation and accumulated impairment losses (IAS 16, para. 30). Para. 6 of defines cost as follows:

(...) the amount of cash or cash equivalents paid or the fair value of the other consideration given to acquire an asset at the time of its acquisition or construction or, where applicable, the amount attributed to that asset when initially recognised in accordance with the specific requirements of other IFRSs (...).

Concerning fair value on the other hand, this is defined in para. 6 as: “(...) *the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (...)*”. Whereas the implications of measurement at cost are rather straightforward, fair value measurement, and thereby the revaluation model, is more complex. Para. 31 explains that PPEs must be carried at a revalued amount, when their fair values can be measured reliably. The revalued amount is the item’s fair value at the date of the revaluation, less any subsequent accumulated depreciation and impairment losses. Revaluations must be made with sufficient regularity, in order to ensure that the carrying amount does not differ materially from what would have been determined when applying fair value at the end of the reporting period. The carrying amount is defined in para. 6 as: “(...) *the amount at which an asset is recognised after deducting any accumulated depreciation and accumulated impairment losses.*” According to para. 39, if an asset’s carrying amount increases because of revaluation, the increase shall be recognised in other comprehensive income, and accumulated in equity under the heading of revaluation surplus. Yet, the increase must be recognised in profit or loss to the degree that it reverses a revaluation decrease of the same asset, which previously has been recognised in profit or loss. Moreover, if an asset’s carrying amount decreases by contrast, para. 40 states that this decrease must be recognised in profit or loss. Nevertheless, the decrease must be recognised in other comprehensive income if any credit balance is present in the revaluation surplus that concerns the asset. This decrease reduces the amount accumulated in equity under the heading of revaluation surplus.



### 3.2 IFRS and fair value

IASB (2006) defines the objective of financial statements in the ‘Framework for the Preparation and Presentation of Financial Statements’, para. 12: “(...) *to provide information about the financial position, performance and changes in financial position of an entity that is useful to a wide range of users in making economic decisions.*” In order to do so, four principal qualitative characteristics are defined in para. 24ff of the framework, namely understandability, relevance, reliability and comparability. According to Hague (2007), fair value contributes strongly to relevance by providing information that is congruent with the interests of the users, such as current economic conditions. It also enhances understandability by reflecting underlying economics, and comparability by making similar conditions look alike, and dissimilar look different. However, regarding reliability, there are situations where reliable determinations of cost/benefit bounds remain difficult. Still, reliable determinations are increasing.

According to Cairns (2007), the implementation of IFRS, especially within the EU, has led to widespread comments of IASB moving towards full fair value accounting, and IFRS being ‘fair value-based standards’. However, IFRS’ introduction of fair value into asset and liability measurement is not rapid, and the use of fair values is not in any way extensive. For instance, in the typical IFRS balance sheet, the use of fair value measurements is remarkably low. Nevertheless, Alexander (2007) argues that there is a vast amount of evidence that IASB is positive towards the use of fair value, and since its establishment, the fair value concept has advanced. Additionally, the new single statement of financial performance, which IASB and FASB are working towards, is also designed to facilitate fair value reporting (ibid.). This is part of the current project of IASB and FASB on developing a joint conceptual framework for financial reporting standards (Whittington, 2008). According to the IFRS Foundation (2010b), the overall objective with this project is to establish a sound foundation for future accounting standards, which are internally consistent, internationally converged and principles-based. Notwithstanding these developments, the emergence of the fair value concept appears to have occurred more or less spontaneously during the last decades, with no well-defined theoretical foundations (Alexander, 2007).

The concept of fair values in general mirrors long-standing requirements in UK GAAP, and concerning IAS 16 in particular, the option of fair value measurement of PPEs is a long-

standing UK treatment incorporated into IFRS (Cairns, 2007). The IASC, which was the predecessor of IASB until 2001 (Nobes and Parker, 2010), first used 'fair value' as a term in IAS 16. In 1982, fair value was defined in that version of the standard as follows: "*The amount of which an asset could be exchanged between a knowledgeable, willing buyer and a knowledgeable, willing seller in an arm's length transaction*" (Cairns, 2007, p. 11). At that time, fair value was not used in case of today's option of the revaluation model when measuring PPEs after recognition. Instead it was applied regarding measurement of cost for PPEs acquired in exchange for another asset. The same definition was also used for other IASs, such as IAS 17 *Accounting for Leases* and IAS 20 *Accounting for Government Grants and Disclosure of Government Assistance* (ibid.). Since that, the IASC has given slightly different definitions of fair value (Alexander, 2007). Whereas IASC frequently applied fair value for measurement of transactions at the initial recognition, as indicated above, it was much slower regarding requirements or allowances of fair value measurement after recognition. While the 1982 version of IAS 16 did allow the use of revalued amounts for PPEs, it did not require these amounts to be, or be based on, fair values. Instead, these amounts could be any amounts not exceeding recoverable amounts. In 1986, IASC introduced the possibility of measurement at fair value after recognition for the first time. This was done through IAS 25 *Accounting for Investments*. Concerning IAS 16, this option was introduced in the 1993 revision of the standard (Cairns, 2007).

Cairns (2007) further clarifies the more specific meaning of fair value in IFRS. Fair value is a generic term that applies to all assets, liabilities and equity instruments, regardless of whether they are traded or quoted on active markets. Whenever traded or quoted, their market value is a subset of fair value. Thus, market value is fair value, as determined by active markets. In case of absence of trading or quoting by contrast, IASB requires, when possible, the use of market information and accepted valuation techniques (ibid.).

### **3.3 Cost accounting versus fair value accounting**

Over the years there have been criticisms from several important researchers concerning cost accounting. The criticism is mainly concerning this approach's shortcomings and incapability to provide relevant information when prices are changing, as it holds the view that money has a fixed purchasing power (Deegan, 2009). Elliot (1986 cited in Deegan, 2009) argues that this assumption is not quite valid, because of price level changes caused by, for instance,

technological developments and changes in consumer preferences. General price level changes due to inflation and fluctuations in exchange rates may also support the view that cost accounting does not provide the most updated information. Hence, the book value of a corporation, as reported in the financial statement, is considered to only accidentally reflect the present value of the assets. However, although cost accounting has been subject to a lot of criticism, it also has many supporters. The fact that cost accounting has sustained and still is being used to a great extent, can be regarded as an indication of continued application also in the future. Deegan (2009) states that this can be seen as a perspective of accounting Darwinism, meaning that those concepts that are most efficient and effective will survive over time. This is supported by Mautz's (1973 cited in Deegan, 2009), who claims that the way accounting works is not resulting from what accountants want. It is more a 'product' of businessmen influence. If those making management and investment decisions on a daily basis had not considered financial reports based on cost to be useful during the years, this approach would have changed a long time ago. However, Mautz further argues that the relevance of being informed that something did cost a specific amount years ago, when its present value might be significantly different, is questionable.

Regarding fair value on the other hand, Whittington (2008) identifies the criticisms of what he refers to as the Fair Value View. This criticism is expressed by the supporters of the opposite, so-called Alternative View, and it is based on the current project of IASB and FASB, as mentioned in the section above, on the development of a joint conceptual framework for financial reporting standards. Simply put, the Fair Value View holds the assumption that markets are rather perfect and complete, and financial reports should be able to meet the needs of investors and creditors by reporting fair values derived from present market prices. The most important feature of the Fair Value View is the emphasis on usefulness for economic decisions, and both present and potential investors, as well as creditors, are regarded as the most central users of the financial statements. Their main need is the possibility to forecast future cash flows. This view considers relevance to be the most important characteristic of financial statements, followed by representation faithfulness, which is replacing reliability. In this aspect, prudence is considered to be a distortion of accounting measurement that violates faithful representation. The Alternative View by contrast, assumes, for instance, that markets are rather imperfect and incomplete. It also emphasises stewardship by indicating that financial statements should meet the monitoring requirements of present shareholders, through their reflections of past events and transactions.

In addition, reliability is considered to be an essential characteristic of financial statements, and prudence can enhance reliability (ibid.).

McGregor (2007) further discusses the future of fair value accounting, by referring to the immense rise of the use of fair value during the last 15 years, and various upcoming projects on IASB's agenda. He discusses whether the fair value trend will last, or whether it will gradually disappear like one of its current value cousins, namely current (or replacement) cost. He further questions whether fair value in the future will be regarded as an interesting, but not very successful, experiment. However, the suggestion is that fair value is here to stay, because it is deeply rooted in the IASB literature and the calls from the user community are increasing regarding its expanded application. McGregor assumes that IASB will continue to examine other financial reporting areas where it could be appropriate to require or permit the use of fair value, either by improving current requirements or establishing new ones. Concerning PPEs in particular, this standard was involved in an improvement project undertaken by IASB. McGregor states that some commentators wanted the fair value option to be removed from IAS 16, in order to remove the number of total options provided by IFRS. Even though IASB did not expect an extensive practice of revaluation of PPEs, they did not agree with the commentators. The reason was that revaluations were a usual procedure in some jurisdiction and, as the information can be beneficial to users, companies should not be prohibited from applying the revaluation model (ibid.).

## 4. Theoretical framework

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*This chapter focuses on presenting PAT and IT, and disclosing some criticism towards them. The results from a selection of research articles will also be described, and empirical hypotheses will be derived from the respective accounting choice theories.*

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### 4.1 Predicting the choice of accounting model through the lens of PAT

Watts and Zimmerman principally developed PAT. In 1978, they published the article ‘Towards a Positive Theory of the Determination of Accounting Standards’, which is considered as the key paper in the development and acceptance of PAT (Deegan, 2009). This article aimed to explore managers’ attitudes towards particular accounting standards, and it identified factors that could affect these attitudes, such as management compensation plans, bookkeeping costs and political costs (Watts and Zimmerman, 1978). Watts and Zimmerman’s article made the basis for many subsequent studies, and the acceptance of the economics-based ‘rational economic person’ assumption is central to the development of PAT. As long as actions are considered wealth maximising, decisions will be based on self-interest, and this is considered to be the driving force behind managers’ choice of particular accounting methods, when several methods are available (Deegan, 2009).

Empirical evidence to rational behaviour in general, can be found in Collin et al’s (2009) study. Even though their research did not concern IFRS, but instead Swedish municipal corporation’s, hereafter SMCs, choice of accounting standards, they found strong support for the overall suggestion derived from PAT. This was, simply put, that SMCs considered the economic impact of the accounting standards. By examining the 2001 annual reports from 545 SMCs, their results indicated a preference of the standards issued by the Swedish Accounting Standards Board, henceforth SASB, compared to those issued by the Swedish Financial Accounting Standards Council, hereafter SFASC. SFASC standards were harmonised with IFRS, and thus more costly to apply than the more conservative SASB standards. Therefore, the SMCs were found to prefer the SASB standards because they were less costly to apply and had a greater tendency to retain earnings, which constitutes a rational choice.

Based on the assumption of rationality and the above findings, we suggest that the respondent involved in this study prefer the cost model because of the possible negative impact of the

revaluation model. First, as the cost model has been applied for several years, the respondents probably have established routines for this way of measuring their PPEs. For them to develop new routines for fair value measurement could require an increase in resources spent. They might also face difficulties in determining fair values, which in turn could lead to resources spent on judgments and estimates. Secondly, if the respondents are able to determine the fair value of their PPEs, these may be below the value obtained by the cost model. This involves a decrease in the carrying amounts, which usually is to be recognised in profit or loss. Or, by contrast, the fair value obtained may also be higher, which in turn could increase depreciations in the subsequent years. Thus, the choice of the revaluation model could result in a negative economic impact, mainly on profit or loss. In order to avoid this, our main empirical hypothesis derived from PAT is:

*PAT<sub>1</sub>: The respondents prefer the cost model because it is a rational choice*

In 1990, Watts and Zimmerman published an article that considered the development of PAT during a period of ten years, namely ‘Positive Accounting Theory: A Ten Year Perspective’ (Deegan, 2009). Three key hypotheses were identified that frequently had been tested in accounting choice studies, namely the bonus plan hypothesis, the debt/ equity hypothesis and the political cost hypothesis (Watts and Zimmerman, 1990). These hypotheses will be explained in the proceeding three sections.

#### **4.1.1 The bonus plan hypothesis**

The bonus plan hypothesis is defined as follows:

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

According to Watts and Zimmerman (1986), bonus plans connected to reported income are often used as a tool to provide managers with an incentive to maximise firm value. This is mainly done in order to align the owners’ and the managers’ interests. An illustration of why this can be necessary can be found in agency theory, which incidentally is the theory content of PAT (Broberg et al, 2011). That is, when decision-making authority is delegated, the agents (managers) are assumed to be driven by self-interest and act opportunistically towards

the principals (owners), unless restrictions are established to avoid such behaviour. Examples of opportunistic actions are overconsumption of perks, stealing and shirking. In addition, principals are often considered to be more risk-neutral compared to the risk-averse agents, who tend to be more reluctant to, for instance, major investments and developments. In order to avoid such actions that are beneficial to the managers at the expense of the owners, or the absence of actions due to lower preference of risk, compensation plans tied to the performance of the firm is one way of aligning the divergent interests. According to Watts and Zimmerman, empirical tests of accounting choices have in general found results relatively consistent with the bonus plan hypothesis (Watts and Zimmerman, 1986).

As an example, Aubert and Grudnitski (2011) examined the impact of the mandatory adoption of IFRS on publicly traded EU firms from 2004 to 2005. The majority of Swedish listed firms were included in their sample, and they found, for instance, significant positive differences on return on assets, henceforth ROA, when applying IFRS instead of Swedish GAAP. Capkun et al (2008) performed a similar study and found the exact same yielding for 196 Swedish listed firms within the same time period, namely that IFRS had a positive impact on ROA. Even though the theoretical frameworks in these two articles primarily consist of information about IFRS and some prior empirical research on IFRS's accounting choices, we believe that a linkage can be drawn to PAT. As IFRS contains both overt and covert options (Nobes and Parker, 2010), it is possible that managers will select one option that increases ROA rather than decreasing it, in order to enhance their own bonuses. Still, ROA may not necessarily be directly connected to the PAT hypothesis, which emphasises reported income. However, ROA is calculated by dividing a company's annual income by its total assets, and higher ROA is an indicator of higher profitability relative to the assets (Nobes and Parker, 2010).

Due to PAT's assumption of self-interest and the above findings, we suggest that the preference of the cost model in IAS 16 is resulting from managers' ambitions to report the highest possible income, in order to increase their bonuses. Our arguments in this respect are basically the same as the ones presented for the above hypothesis, concerning the possible negative impact of the revaluation model on profit or loss. In addition, as several of the companies involved in our study operate with rather industry specific PPEs, their fair values may be below the PPEs' value of use to the companies. In that case, the choice of the revaluation model would result in decreased carrying amounts, usually recognised in profit or

loss. Therefore, in order to avoid probable negative impact on profit or loss, and by that reducing bonus, our empirical hypothesis derived from PAT's bonus plan hypothesis is:

*HPAT<sub>2</sub>: The respondents prefer the cost model because of its positive impact on bonus*

#### **4.1.2 The debt/equity hypothesis**

The second hypothesis identified in Watts and Zimmerman's article, the debt/ equity hypothesis, is defined in the following way: "*The debt/equity hypothesis predicts the higher the firm's debt/equity ratio, the more likely managers use accounting methods that increase income*" (Watts and Zimmerman, 1990, p. 139). This is mainly done in order to relax the constraints in the debt covenants, which tend to be tighter when the debt/equity ratio increases. This is resulting from the lenders' desire to restrict value-reducing investments and financing decisions that may reduce or eliminate the firms' possibilities to repay the funds. For instance, excessive dividends may be imposed in order to compensate for such possible behaviour. Consequently, managers are likely to try to ease the constraints by increasing income, if no restrictions are established concerning managers' abilities to control the calculation of numbers. Overall, empirical tests of accounting choices have provided evidences that are consistent with the debt/equity hypothesis (Watts and Zimmerman, 1986).

One example of such an empirical test is Broberg et al's (2011) research, which was based on both PAT and IT. They studied the use of impairments among corporations listed at NASDAQ OMX Stockholm, by examining a sample of 608 financial statements from the years 2002 to 2004. Even though IFRS was not mandatory for these companies at that time, the SFASC issued a new standard in 2002, RR 17 *Impairments*, which was a direct translation of IAS 36 *Impairment of Assets*. The authors found *inter alia* that impairments decreased during the time period, and a weak significant correlation was found between the capital structure and the use of impairment. As impairments is a mean to regulate profit, PAT's two other hypotheses were also tested. However, no conclusions could be drawn that impairments were applied to increase bonus or reduce political cost. Moreover, one important point made in this article is that, when facing other stakeholders that can influence the company, an alignment of interests between the owners and managers may be assumed. This can be compared with bonus plans, which, as already mentioned, aim at aligning divergent interests. Hence, when both the managers and the owners have incentives to incur low capital costs, one may assume that their interests are much in line. This might also yield for political risk.



Based on PAT's debt/equity hypothesis and the above findings, we suggest that the respondents' preference of the cost model is resulting from their desire to increase profit, as they want to relax the constraints in the debt covenants. Our main argument in this aspect is that some of the respondents, as will be presented in chapter 5, have debt/equity ratios above 1. A reduction in profit, due to the choice of the revaluation model, could potentially involve higher dividends or more restrictions from the lenders, resulting from increased debt/equity ratios. Hence, in order to avoid probable negative impact on profit, and by that increased debt covenants, our empirical hypothesis derived from PAT's debt/equity hypothesis is:

*HPAT<sub>3</sub>: The respondents prefer the cost model because of its positive impact on debt/equity*

#### **4.1.3 The political cost hypothesis**

The third hypothesis identified in Watts and Zimmerman's article, the political cost hypothesis, is defined as follows: "*The political cost hypothesis predicts that large firms rather than small firms are more likely to use accounting choices that reduce reported profits. Size is a proxy variable for political attention*" (Watts and Zimmerman, 1990, p. 139). This hypothesis is based on the assumption that large firms are more politically sensitive than smaller ones, in the sense that they have relatively larger wealth transfers imposed on them, which leads to political costs. One component of political costs is income taxes, and this is also the most direct way to transfer corporate assets (Watts and Zimmerman, 1986). Firm size can also be an indicator of market power, and larger firms are often under more scrutiny by different groups, such as media, the government and consumer groups. This can attract attention from regulatory bodies. One example is that the government may publicly promote the opinion that a specific firm is making excessive profits, and not paying its 'fair share' to the community. For instance, wages and environmental commitments may be regarded as too low, and the response may be increased regulation or additional taxes. In order to reduce such adverse political attention and its associated costs, politically sensitive firms are likely to adopt accounting methods that reduce their reported income (Deegan, 2009). According to Watts and Zimmerman (1986), empirical tests on accounting choices have provided evidences that are consistent with the political cost hypothesis.

As an example, Quagli and Avallon's (2010) examined the accounting choice provided by IAS 40 *Investment Property*, namely to measure investment properties according to either the cost model or the fair value model after recognition. Regarding the last model, changes in fair

value are to be recognised directly in profit or loss, and not in an equity reserve. As a consequence, the choice between the cost model and the fair value model involves considerable variations in the accounting results. Eight listed Swedish real estate companies were included in the study, and by analysing information from the Datastream International database in 2007, Quagli and Avallon found that these firms were extremely prone to adopt the fair value model. Although the authors do not directly base their theoretical approach on PAT, we believe that this theory is applicable here due to their reference to agency relationships, opportunism, leverage and political cost. The latter was even empirically tested and supported. In general for the whole sample, comprising 76 listed real estate companies from seven European countries, size as a proxy variable for political cost was found to diminish the possibility of using fair value.

We find it rather hard to derive an empirical hypothesis from PAT's political cost hypothesis. This is because it would be rather contradicting to derive a hypothesis stating that the preference of the cost model is resulting from the managers' wish to report lower profits. To clarify, the use of the cost model would probably lead to higher reported profits, as its only effect on profit or loss is depreciation and any impairment. Hence, the model that could reduce reported profits is instead the revaluation model. In addition to the potential negative effect on profit or loss due to a decrease in an asset's carrying amount, as discussed above, an increase in the carrying amount could lead to higher depreciations in the subsequent years. Therefore, the only hypothesis regarding political cost that we are able to derive in this aspect, is concerning the use of the revaluation model, which only is applicable for Investor AB:

*HPAT<sub>4</sub>: Investor AB prefers the revaluation model because of its negative impact on profit or loss, thus it reduces political attention*

#### **4.1.4 Criticism of PAT**

In their article 'Positive Accounting Theory: A Ten Year Perspective', Watts and Zimmerman also respond to some critical comments made on their previous articles about PAT (Watts and Zimmerman, 1990; Deegan, 2009). The comments are dichotomized into two groups, namely those concerning the methodology, including the philosophy of science, and those concerning the research methods used, including the inferences drawn. In the first group, the critics argue, for instance, that PAT is value-laden and not socially neutral as it asserts to be. Furthermore, PAT's fundamental assumption of self-interest represents a far too negative and simplistic

view of humankind. Watts and Zimmerman respond by stating that no research is value free, and they concede that researchers' preferences and expected payoffs affect their choices of topic, methods and assumptions. Still, the usefulness of PAT depends on its explanatory and predictive power, and the users of the theory's objective function and preferences. Another critical comment concerns that PAT is a 'sociology of accounting' rather than an accounting theory. The respond is that a theory that seeks to explain and predict accounting cannot divorce the study of people from accounting research, as people 'maintain' the system. There would not be accounting without accountants, managers, or preparers of the numbers. In the second group, the critics argue, for instance, that PAT lacks power and has not shown great development since its general inception in the 1970s. The same three hypotheses, as identified above, still continue to be tested in PAT literature within different environments and accounting policy issues. Moreover, critics argue that by considering individual accounting choices, such as revaluation of non-current assets, PAT researchers may fail to identify other accounting choices that have opposing effects on the financial position and performance. Watts and Zimmerman respond by stating that debating methodology is a 'no win' situation because researchers argue from different contexts, with various rules and no common ground. Moreover they argue that their methodology has produced useful predictions, even though it may not work in every situation. All theories have limitations, as they are abstractions of the 'real world', and even though the critics do have some merit, PAT continues to be applied by several accounting researchers (ibid.).

## **4.2 Predicting the choice of accounting model through the lens of IT**

In 1983, DiMaggio and Powell published the article 'The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields', which was of great importance to the development of IT (Deegan, 2009). In this article, DiMaggio and Powell (1983) refer to startling homogeneity in the organisational forms and practices, and they seek to explain why that is. They argue that in the initial stage of organisational fields' life cycle, considerable diversity exists in their approach and form. By organisational field they mean organisations that constitute a recognised area of institutional life, involving key suppliers, consumers, regulatory agencies, and other organisations that produce similar services or products. However, after their initial stage, and once the organisational fields become established, homogenisation arises. This can be explained by institutional isomorphism, which DiMaggio and Powell (1983, p. 149) define as follows: "*Isomorphism is a constraining process that forces one unit in a population to resemble other units that face the same set of*

*environmental conditions.*” Three isomorphic mechanisms that affect and change institutional practices are identified, namely the coercive, mimetic and normative one (ibid.). These mechanisms will be explained in the proceeding three sections.

#### **4.2.1 The coercive mechanism**

Coercive isomorphism results from the pressure to change practices in order to gain or maintain legitimacy. This pressure is both formal and informal, and it is exerted by parties that the organisations are dependent on (DiMaggio and Powell, 1983). Deegan (2009) further explains that pressure from powerful or influential stakeholders can coerce an organisation to adjust its reporting practices, and these stakeholders often also have similar expectations to other companies. Consequently, this leads to some kind of uniformity within institutional practices.

Empirical evidence to the coercive mechanism can be found in the research by Broberg et al (2011), which we presented in section 4.1.2. In their study of the use of impairments according to IAS 36, among corporations listed at the NASDAQ OMX Stockholm, they found, for instance, that institutional influence appeared to be stronger when impairments was in the interest of important stakeholders. Even though the authors do not directly refer to the coercive mechanism, we believe that it is applicable in this case. That is, the authors found, for instance, that the use of impairments decreased between 2002 and 2004. Thus, if less impairments, and thereby higher profits, are in the interest of important stakeholders, this may be a way to gain and maintain legitimacy from them.

Based on the coercive mechanism, we suggest that the preference of the cost model is resulting from the respondents’ desire to be considered as legitimate by the stakeholders whom they depend upon. In order to do so, they *inter alia* have to present financial statements with reliable numbers. As the revaluation model involves the use of market information and accepted valuation techniques when market values cannot be obtain (Cairns, 2007), which may yield for some of the respondents, the use of such estimates and judgments might appear as less reliable. Thus, we suggest that the respondents prefer the cost model because it provides more reliable numbers to their stakeholders. As the majority of the respondents are listed, and all the respondents are joint-stock companies, we assume that both present and potential investors are important groups of stakeholders. We also suggest that the companies operating within the same industries have somewhat the same group of important

stakeholders, thus facing rather similar conditions and expectations. To sum up, our empirical hypothesis, derived from IT's coercive mechanism, is:

*HIT<sub>1</sub>: The respondents prefer the cost model because it provides more reliable numbers to their important stakeholders*

#### **4.2.2 The mimetic mechanism**

Mimetic isomorphism is a consequence of uncertainty. Uncertainty is a powerful source, often encouraging imitation. It may result from poorly understood organisational technologies, ambiguous goals or symbolic uncertainty created by the environment. When organisations face uncertainty, they tend to model themselves after similar organisations within their organisational field. These organisations are often perceived as more successful or legitimate, and the imitation is mainly driven by the desire to be regarded as legitimate (DiMaggio and Powell, 1983).

Sahut, Boulerne and Teulon (2011) provide empirical indications of mimetic isomorphism. From 2002 to 2007, they performed a study on listed firms from nine European countries in order to analyse *inter alia* IAS 38 *Intangible Assets* and the book value of such assets. Their sample involved 177 Swedish listed firms. By examining their financial statements, the authors found that the use of IAS 38 increased these companies' total intangible assets, compared to the application of Swedish GAAP. This was mainly resulting from the majority of the firms choosing fair value instead of cost, an option provided by IAS 38. Even though the theoretical approach in this article is mainly based on former studies on intangibles, some reference is made to the influence of complex institutional factors. The authors argue that prior studies have had some difficulty in forecasting the impact of changes in certain accounting rules on the quality of financial data, because accounting regulation exists within a mosaic of other institutional factors that cannot be ignored (*ibid.*). As the use of the cost model was the traditional approach before the adoption of IFRS, according to RR 15 *Intangible assets*, para. 22 and 63, the departure from this approach could be explained by the mimetic mechanism. If more successful or more legitimate companies choose fair value, it might be reasonable to assume that other, potentially less successful, companies will copy this approach. This is done in order to appear as more successful or legitimate.

Based on these findings and the mimetic mechanism, we suggest that our respondents prefer the cost model because they want to imitate other, more successful, organisations within their industries. We expect this to be the case especially if the respondents face some sort of uncertainty, for instance if they operate with very industry specific assets, and the fair value of their assets is hard to determine. Moreover, since the fair value option in IAS 16 is rather new in Sweden, compared to RR 12's only option of the cost model, the respondents might be somewhat uncertain towards this new accounting model. Thus, it might be considered appropriate to await other companies' application of this model, and experience their consequences of this choice, before changing to the revaluation model. This may also be beneficial regarding the development of measurement practices, as they do not have to bear the expenses of this development solely themselves. Therefore, our empirical hypothesis derived from the mimetic mechanism is:

*HIT<sub>2</sub>: The respondents prefer the cost model because similar, often more successful, organisations prefer this model*

#### **4.2.3 The normative mechanism**

The normative mechanism is associated to professionalization. Professionalization is interpreted as a collective struggle of members of an occupation to establish a cognitive legitimation for their occupational autonomy, and to define their working conditions and methods. Thus, professional groups have a tendency to promote their competence, which is derived from group norms. For instance, highly educated employees have undergone a socialisation process in their university programs. As a result, they are more likely than others, less educated personnel, to have internalised dominant organisational models and reigning norms, which they try to impose on the organisation (DiMaggio and Powell, 1983). Deegan (2009) further explains that there is a professional expectation concerning corporate reporting that accountants will conform to accounting standards. This expectation acts as form of normative pressure, leading the companies for whom the accountants work to present financial statements according to the accounting standards. Moreover, particular groups with particular training are likely to adopt the same practices, such as reporting practices. If they deviate from accepted or expected behaviour, they will be regarded as out of line with their 'group', which in turn can lead to either formal or informal sanctions from the group.

Empirical evidence to the normative mechanism can be found in Collin et al's (2009) study, as presented in section 4.1. In this research, the authors found a significant correlation between the SMCs' choice of accounting standards and their audit firm. That is, their results indicated that the use of standards issued by the SFASC was positively correlated with being audited by KPMG and Ernst & Young. Application of standards issued by the SASB on the other hand, was associated with audits performed by PWC and Deloitte.

Based on the normative mechanism, and to some extent the findings above, we suggest that the respondents' preference of the cost model results from pressure exerted by professionals within their organisations. That is, given the fairly 'new' state of the revaluation model, this approach has probably not established itself as a norm within the accountancy profession. The cost model, by contrast, is likely to be a more integrated norm because of its long history of application, and this model has probably also been the only one subject to many of the professionals' education. Therefore, because professionals do not want to counteract with this norm, which can be an indication of opposition towards their professional 'group', they might have a tendency to promote the continued application of the cost model. It may also be considered appropriate to await the establishment of the revaluation model as a professional norm before suggesting its application. In addition, we also assume that similar preferences yield for the respondents' external professionals, such as their auditors or analysts, who therefore do not promote the use of the revaluation model. Hence, our empirical hypothesis derived from the normative mechanism is:

*HIT<sub>3</sub>: The respondents prefer the cost model because professionals within their organisational context prefer this model*

#### **4.2.4 Institutional inertia versus change**

According to Collin et al (2009), IT's normative mechanism contains both the attendance of pressure from professional groups and institutional inertia. Van der Steen (2009) further explains that inertia traditionally is defined as the inability to accomplish internal change when facing significant external change. It refers to the correspondence between organisational capabilities and the environment, and, in particular, organisations' responsiveness to change regarding the time it takes to gain, process and evaluate information from the environment. Inertia can be distinguished into two types, namely resource rigidity and routine rigidity. The first is associated with path-dependency and technological lock-in. It

occurs because of the requirements from external resource providers on internal managerial action, in addition to the presence of technologies that frequently lead to the exclusion of other technologies. Routine rigidity by contrast, is relating to the notion that routines are not able to handle discontinuities. This is because their fundamental logic pervades the thinking within the organisation (ibid.).

One research providing results supporting the assumption of institutional inertia, is the one presented in the article by Fasshauer, Glaum and Street (2008). This article provides a summary of a research report sponsored by the Association of Chartered Certified Accountants, ACCA, which examined the accounting choice provided by IAS 19 *Employee Benefits*. This was done through a wide-ranging analysis of pension plan disclosures, presented in the 2005 annual reports by companies listed in the premier segment of 20 European stock exchanges, and NASDAQ OMX Stockholm represented one of them. In 2004, there was a revision of IAS 19, allowing companies with identified benefit pension plans to choose one out of three methods for the recognition of actuarial gains and losses. The first one is the corridor approach, which, simply put, involves that actuarial gains and losses are temporarily deferred and their accumulated balance is tracked off-balance sheet. The second method is any systematic approach resulting in rapid recognition, containing immediate full recognition through profit and loss. The third method involves immediate full recognition through actuarial gains and losses, which do not affect profit and loss. The authors found that for Sweden's part, the majority of the companies, namely 12 out of 14 companies, used the corridor approach (ibid.). Although the theoretical approach in this article primarily comprises information about the revision of IAS 19, in addition to a few U.S. based empirical studies on accounting for pensions, we believe that institutional inertia has some explanatory power to the Swedish application of the corridor approach. As the corridor approach was the traditional approach before the implementation of IFRS, according to RR 29 *Employee benefits*, para. 92-95, the continued application of this approach may be an indication of taken-for-granted action and reluctance to change. According to Broberg et al (2011), taken-for-granted action means institutional inertia, thus the use of the corridor approach may in turn indicate namely institutional inertia.

Focusing on IAS 16 again, the fact that institutional inertia appears to be rather hard to contravene in certain aspects, leads us to the assumption that the respondents prefer the cost model because this is the model they always have been using. To clarify, RR 12 was, as



mentioned in the preceding chapter, the effective accounting standard before the implementation of IFRS in 2005, and this standard only allowed the cost model after recognition of the assets (Bokföringsnämnden, n.d.). Therefore, we suggest that the respondents may be reluctant to change because they, for instance, have established routines on measurement at cost that are not easily changed. Even though the definition of inertia is inability to change, we prefer the wording reluctant to change, as probably none of the respondents are unable to change if they do consider it necessary. Thus, our empirical hypothesis derived from institutional inertia is:

*HIT<sub>4</sub>: The respondents prefer the cost model because they are reluctant to change*

Regarding change by contrast, Kondra and Hinings (1998) discuss this in light of IT. They refer to DiMaggio and Powell's article from 1983, as presented above, where isomorphism is based on the assumption that companies become alike through institutional power. Kondra and Hinings argue that DiMaggio and Powell have ignored company diversity as well as how companies change. Furthermore, IT is regarded as a theory with little focus on why and how institutional norms change, and somewhat ignoring the undoubted fact that both these norms and organisations do change over time. Therefore, two vital questions remains unanswered: *"Where does the impetus for change come from, and how may organisations respond to pressure for change?"* (Kondra and Hinings, 1998 p. 743). Tuttle and Dillard (2007) answers the first question to some extent, by arguing that impetus for change mainly is imposed on organisations through powerful external parties, such as customers and suppliers.

Van der Steen (2009) elaborates this aspect further. He states that numerous of IT theorists have tried to describe change in management accounting practices. The institutional perspective of management accounting change describes the management accounting system as an establishment of formal rules and routines. In this establishment, institutional change can arise from interaction between these formal rules and established behaviours.

Nevertheless, Van der Steen indicates that these established behaviours, which are the foundation of the formal rules and routines, are normally considered to involve some sort of resistance to change, which often leads to the occurrence of inertia. But so far, the concept of inertia remains an abstract and theoretical notion. Rules and routines comprising management accounting practices must interact to achieve change. Still, not many attempts have been made to explain how inertia intervenes this interaction. Regardless of the presence of inertial forces,

management accounting practices could change through so-called loose coupling between routines and rules. However, the dynamics that are promoting routine inertia on an individual level are still not clear (ibid.).

#### **4.2.5 Criticism of IT**

DiMaggio and Powell (1991) present three areas of IT, which have been subjects for criticism. The first one is that the publications on IT are separating the market-driven sectors and the institutionalised sectors too extensively, as there do not necessarily have to be an opposition between competitive and institutional processes. The second area is that the publications do not focus on why less optimal activities continue over time, an aspect that according to DiMaggio and Powell is considered necessary in order to make IT research more productive. Despite observations made that organisational structures and practices are roughly connected with effects and policies, which is an important insight, it has been leading to an inappropriate view that institutionalised organisations are fairly passive. Hence, the focus is more on managers being inefficient manipulators of symbols, rather than emphasising the substance. Thirdly, an improved understanding of the sources of heterogeneity in institutional environments, in addition to the processes that are generating institutional change, is considered necessary. That is, IT proposes a view of organisations that is static, forced and over-socialised (ibid.).

## 5. Empirical data

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*This chapter presents the responses from our empirical study. It begins with a short presentation of the respondents involved, followed by a summary of the answers received. The chapter ends with a separate presentation of Investor AB's responses.*

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In order to provide the reader with some insight of the specific companies involved in this study, the presentation of them contains information about the respondents' positions, the companies' operations, share of PPEs<sup>4</sup> in SEK and debt/equity ratios. The latter is defined in footnotes if any information about the calculation of this ratio is presented. In addition, some information about any bonus programs or similar remunerations will be provided. Unless stated otherwise, all this information is gathered from their 2011 annual reports and consolidated accounts. The second part of this chapter provides a summary of the responses, which is divided into the respective industries energy, industrials, materials, financials and information technology. To be noted is that the respondents will be referred to by the company name, and not their personal name, in order to ease the reading. The final part will present Investor AB's responses, as this company is the only one in our sample choosing the revaluation model to some extent, namely for their owner-occupied properties.

### 5.1 Presentation of respondents

#### Energy

**Vattenfall AB.** Yvonne Pettersson, who is senior accounting specialist on group accounting, accounting development and analysis, represents Vattenfall AB. The company's main products are electricity, heat and gas. Vattenfall AB is a 100 per cent state-owned company (Regeringskansliet, 2012) and is not listed. Still, they apply IFRS because, according to Pettersson, it is a requirement set by the Ministry of Enterprise, Energy and Communications. Vattenfall AB's PPEs comprise 279,445 millions out of 524,558 millions in total assets. Their gross debt/equity ratio<sup>5</sup> is 1.226 and net debt/equity ratio<sup>6</sup> is 1.016. Regarding bonuses, none of the group managers or senior executives has remuneration schemes or variable payments.

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<sup>4</sup> We do not present information about any share of financial leases

<sup>5</sup> Gross debt/equity ratio = interest-bearing liabilities/equity

<sup>6</sup> Net debt/equity ratio = net debt/equity

**PA Resources AB.** Urban Adolfson, who is head of group control, represents PA Resources AB. This company specialises in acquisition, development, extraction and divestment of oil and gas reserves, in addition to exploration for new reserves. PA Resources AB has 5,612 millions in PPEs and 8,892 millions in total assets. Their debt/equity ratio<sup>7</sup> is 1.22, and net debt/equity ratio is 0.76. The company's bonus program encompasses senior executives, key staff and other qualified employees, and it is based on the performance of the company's share price over a three-year qualifying period.

**Concordia Maritime AB.** Göran Hermansson, who is CFO, represents the company. Concordia Maritime AB is an international tanker shipping company, which mainly supplies vessels. They have 3,433 millions in PPEs, 3,758 millions in total assets, and their gross debt/equity ratio is 1.02. The company provides variable compensations to senior executives, which is based on the achievement of commercial, financial and operational goals.

#### Industrials

**Munksjö AB.** Bo Eriksson, who is senior vice president of corporate division, represents the company. Munksjö AB is specialised within pulp and paper technologies. They are not listed, but still apply IFRS. Eriksson states that this is because they are about to be listed at NASDAQ OMX Stockholm, and this stock exchange requires the use of IFRS three years prior to the listing. Munksjö AB' PPEs comprise 2,153 millions out of 5,976 millions in total assets, and their gross debt/equity ratio is 1.2. The company provides variable remunerations to senior executives, based on the group's financial targets and individual goals.

**Trelleborg AB.** Jan Brandt, who is group account manager, represents the company. Trelleborg AB is a global engineering group, and is a global leader in polymer technology. The company's PPEs comprise 5,958 millions out of 28,691 millions in total assets, and their debt/equity ratio is 0.48. Variable salary to senior executives is based on earnings trends and operating cash flow. They also have a three-year long-term incentive program for certain senior executives, where the target value is the group's earnings per share.

**Alfa Laval AB.** Dag Olsson, who is group controller within group finance, represents the company. Alfa Laval AB is a leading global supplier of products and solutions for heat

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<sup>7</sup> Debt/equity ratio = (interest-bearing liabilities less cash and cash equivalents)/adjusted equity

transfer, separation and fluid handling. They have 3,936 millions in PPEs, 18,645 millions in total assets, and their net debt/equity ratio is 0.22. The size of the variable remuneration to executive officers depends on the outcome of a number of financial measurements and the results of special projects. They also have a three-year long-term incentive programme for certain executive officers, which is linked to the development of earnings per share.

**Studsvik AB.** Madeleine Nygren, who is accounting controller, represents Studsvik AB. This company is offering a range of advanced technical services to the international nuclear power industry. Their PPEs consist of 481 millions out of 1,456 millions in total assets, and their net debt/equity ratio is 0.17. Senior management executives are offered performance-related compensation, which is primarily based on the group's financial targets.

#### Materials

**SSAB.** Marie Sällström, who is director of group accounting, represents the company. SSAB is a leading producer of high strength steel. They have 18,693 millions in PPEs, 63,439 millions in total assets, and their net debt/equity ratio is 0.6. Variable compensation offered to senior management is based on results compared to defined and measurable targets.

**Holmen AB.** Kristina Ekblad, who is chief accountant, represents the company. Holmen AB is a forest industry group that manufactures printing paper, paperboard and sawn timber, and additionally runs forestry and energy production operations. The company's PPEs comprise 12,516 millions out of 37,217 millions in total assets, and their debt/equity ratio<sup>8</sup> is 0.32. Neither the CEO nor other senior managers receives variable remuneration.

**Bergs Timber AB.** Jörgen Karlsson, who is chief accountant and controller, represents the company. Bergs Timber AB is active within the timber industry. According to their 2010-2011 annual report, they have 309 millions in PPEs, 677 millions in total assets, and their net debt/equity ratio is 1.41. Variable remuneration to the CEO and other senior management is dependent on the individual fulfilment of quantitative and qualitative targets.

**XX AB (anonymous).** A group accounting manager at XX AB's represents the company. This company is a world-leading producer of metal powders. They have 2,556 millions in

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<sup>8</sup> Debt/equity ratio = net financial debt/(equity plus any non-controlling interests)

PPEs, 5,936 millions in total assets, and their debt/equity ratio<sup>9</sup> is 0.25. XX AB's performance-related payments to senior executives are based on the satisfaction of predetermined goals, which primarily relate to income, volume growth, return on capital employed and other similar objectively measurable goals. They also have a long-term incentive program for senior managers, which is based on income before tax.

**Rottneros AB.** Tomas Hedström, who is CFO, represents the company. Rottneros AB is a supplier of high-quality, customised pulp. They have 760 millions in PPEs, 1,347 millions in total assets, and their debt/equity ratio<sup>10</sup> is 0.03. The variable component of pay to senior executives is based on outcomes in relation to defined and measurable targets. These targets are broken down into specified quantitative objectives, mainly directed at the group's, but also the respective business unit's, financial objectives, results and cash flow, in addition to qualitative personal objectives, such as individual effort and performance.

#### Financials

**L E Lundbergföretagen AB.** Lars Johansson, who is CFO, represents L E Lundbergföretagen AB. This is an investment company, which both manages and develops a collection of companies by being an active, long-term owner. They have 12,547 millions in PPEs, 85,420 millions in total assets, and their debt equity ratio is 0.26. The company provides bonus payments to senior executives, which are connected to predefined and measurable criteria based on earnings and profitability targets.

**Investor AB.** Anna Troedsson Wiklander, who is accounting specialist, represents the company. Investor AB is an industrial holding company, and owns significant minority and majority interests in high quality companies. They have 2,494 millions in buildings and land, 1,501 millions in machinery and equipment, and total assets of 213,607 millions. Regarding buildings and land, the revaluation model has been applied for properties owned by Swedish and foreign subsidiaries. External appraisers regularly conduct property valuations, and fair value is determined based on current market prices for comparable property, in addition to a return model based on a calculation of the present value of future cash flows. Investor AB's

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<sup>9</sup> Debt/equity ratio = (interest-bearing debt less cash and cash equivalents and other interest-bearing receivables)/shareholders' equity.

<sup>10</sup> Debt/equity ratio = (interest-bearing net receivables/liabilities)/shareholders' equity

net debt/equity ratio is 0.1<sup>11</sup>. Concerning compensation, Investor AB provides variable salaries and long-term share-based remunerations to the majority of their employees. The variable salaries depend on individual work effort and performance in relation to quantitative and qualitative goals, while the long-term variable remunerations mainly are based on the long-term performance of Investor AB and its share price.

#### Information technology

**YY AB (anonymous).** One of YY AB's senior accounting specialists represents the company. YY AB is a provider of telecommunication equipment and services to mobile and fixed network operators. The company's PPEs comprise 10,788 millions out of 280,349 millions in total assets, and their debt/equity ratio is 0.35. YY AB provides both short-term and long-term variable remunerations to the CEO and other members of the group management. The short-term variable remunerations are based on net sales growth, operating income and cash flow, while the long-term depend on personal, corporate and share price performance.

**PartnerTech AB.** Åke Bengtsson, who is CFO, represents the company. PartnerTech AB develops and manufactures electronic, mechanical and mechatronic products. They have 176 millions in PPEs, 1,170 millions in total assets, and their net debt/equity ratio is 0.58. Variable remuneration to top executives is mainly based on the company's return on operating capital.

**Novotek AB.** Jonas Hansson, who is CFO, represents the company. Novotek AB is a supplier of industrial information technology and automation solutions. They have 0.62 millions in PPEs, 41.74 millions in total assets, and their debt/equity ratio is 0.44. Regarding bonuses, neither the CEO nor other senior managers receives variable remuneration.

**Know It AB.** Christina Jansson, who is group accountant manager, represents the company. Know It AB is one of the leading information technology consultancy firms in the Nordic region. They have 37 millions in PPEs, 1,573 millions in total assets, and their net debt/equity ratio is 0.1. The company provides variable compensations to senior executives, which is based on individual performance.

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<sup>11</sup> Net debt/equity ratio = (net debt/net cash)/total assets

## 5.2 Summary of responses

	Why do you prefer the cost model when measuring PPEs after recognition?	Is it partially a result of tradition?	Do you consider which model other companies within your industry prefer?	Have you considered the effect of the revaluation model on bonus or debt/equity ratio?	Do you see any advantages with changing to the revaluation model?	If no, what would be required in order to change valuation model?	Have any external professional parties suggested a change to fair value?
<b>Energy</b>							
<b>Vattenfall AB</b>	Hard to determine market value <sup>12</sup> , easier and less consequences	Yes	Yes	No	No	Legal requirements	No
<b>PA Resources AB</b>	Hard to determine market value and practical	Yes	Yes	No	No	The use of fair value within their industry	No
<b>Concordia Maritime AB</b>	Hard to determine market value, easier and practice within their industry	Yes	Yes	No for bonus, yes for D/E	No	Legal requirements	No
<b>Industrials</b>							
<b>Munksjö AB</b>	Hard to determine market value	Yes	No	No	No	Ability to obtain market values reflecting the PPEs' value of use	No
<b>Trelleborg AB</b>	Practical, less effort and less fluctuations in the financial statements	Yes	No	No	No	Legal requirements	No
<b>Alfa Laval AB</b>	Tradition and convenient with full depreciation of PPEs	Yes	No	No	No	Legal requirements	No
<b>Studsvik AB</b>	Easier and more consistent effect on profit or loss	Yes	No	No	No	Do not know	No
<b>Materials</b>							
<b>SSAB</b>	No actual market for their PPEs, practical, easier and more consistent effects on profit or loss	Yes	Yes	No	Yes, if it becomes industrial practice and they are able to determine market value		No

<sup>12</sup> Market value is the wording used by several respondent when referring to fair value



<b>Holmen AB</b>	Hard to determine market value and easier	Yes	No	No	No	Legal requirements	No
<b>Bergs Timber AB</b>	No actual market for their PPEs and an established principle within their industry	Yes	Yes	No	No	Ability to obtain correct market values	No
<b>XX AB</b>	No actual market for their PPEs, cheaper and less volatility in the financial statements	No	No	No	No	Legal requirements	No
<b>Rottneros AB</b>	More correct numbers and tradition	Yes	No	Yes	No	IASB's removal of the cost model	No
<b><u>Financials</u></b>							
<b>L E Lundberg-företagen AB</b>	Not material with fair value due to a small share of PPEs	No	No	No	No	Legal requirements	No
<b><u>Information Technology</u></b>							
<b>YY AB</b>	Hard to determine market value, easier and they would probably not gain anything from the revaluation model	Yes	No	No	No	An increase in PPEs, e.g. if they started to buy buildings instead of renting them	No
<b>PartnerTech AB</b>	Tradition, custom, a given principle within their industry and their competitors prefer this model	Yes	Yes	No	Yes, if they are able to determine correct market value		No
<b>Novotek AB</b>	Not material with fair value due to a small share of PPEs	Yes	No	No	No	If they became more PPE-extensive	No
<b>Know IT AB</b>	Not material with fair value due to a small share of PPEs	No	No	No	No	Material amount of PPEs	No

### **5.2.1 Reasons for preferring the cost model**

#### Energy

When IAS 16 was introduced to these companies, only one, Concordia Maritime AB, did discuss which option to choose. The management of the firm jointly made the decision of applying the cost model. The other two companies did not actively discuss the other option. It was rather a taken-for-granted action that they would continue to report at cost. PA Resources further states that this choice can be compared with painting a house; when the house already has one colour, one normally do not consider to change it.

The companies within this industry prefer the cost model mainly because they consider it to be almost impossible to measure their industry specific PPEs at fair value. If, hypothetically speaking, they were to choose fair value, this measurement would mainly be based on judgment, due to the absence of reliable market values. Vattenfall AB, for instance, raises the question of how their investors, auditors and analysts would respond to these rather unreliable numbers, and how to financially compare companies within their industry. Additionally, their desire to present reliable numbers to their stakeholders is by all respondents considered as a contributing factor to their preference. This also yields, at least partially for tradition, as the respondents already have established routines for the cost model. Moreover, as an extensive share of their total assets is PPEs, the choice of fair value would also have enormous impact regarding the practical and administrative implications. This concerns, for instance, the progress of actually determining the fair value of their PPEs, represented by assets such as ships, hydropower and nuclear power stations, and oil assets, and how often they would have to revise these values. Therefore, it is considered best practice to continue valuating PPEs at cost. One respondent, Concordia Maritime AB, also adds that their preference is resulting from the cost model being practice within their industry.

Furthermore, none of the companies discuss measurement of PPEs with other companies within their industry. However, they all consider which valuation model these companies prefer, also to some extent outside Sweden. For instance, Vattenfall AB cooperates with other European companies within the same industry, and they all measure their PPEs at cost. In addition, international conferences have also indicated that this yields for their entire sector. PA Resources AB faces similar conditions. Because of the relatively few oil companies in Sweden, they follow oil and gas accounting practices, which mainly are decided upon by

Norwegian and American oil companies. These companies have considered the fair value option to be out of question.

### Industrials

When IAS 16 was imposed on these companies, none of them did discuss which option to choose, or actively decide upon the cost model. Alfa Laval AB states that in order for them to choose fair value, this would require an active decision because they would have to move away from tradition. Continuing with the traditional measurement model by contrast, does not require such an active decision. Trelleborg AB supports this, by stating that they continued with 'business as usual'.

In this industry, the reasons why they prefer the cost model are rather differing compared to the industry above. Only Munksjö AB states that it is resulting from their difficulties in determining the fair value of their PPEs. Their argument is that their plants are often very industry specific, a little older and not very centrally located. If a third party were to buy their plants, they would probably have to demolish and rebuild the buildings because of the lack of an alternative use. Thus, when accounting at cost, this amount considers the assets' specific value of use to Munksjö AB. This value would probably be a lot lower to external parties, especially if they were not engaged within the same industry. Hence, the use of fair value is not considered as a relevant approach to Munksjö AB. Other reasons for preferring the cost model is that it is easier, more practical, full depreciation of PPEs is favourable and this model has a more consistent impact on profit or loss. Trelleborg AB also states that the revaluation model would require enormous effort workwise. In addition, tradition is considered by all the respondents to partially be a contributing factor. By contrast, their desire to provide reliable numbers to their stakeholders is only regarded as a contributing factor by two respondents, Munksjö AB and Alfa Laval AB. The other two argue that the revaluation model also can provide reliable numbers.

Moreover, none of the companies discuss measurement of PPEs with other companies in this industry. Neither do they consider which model these companies prefer.

### Materials

When IAS 16 was introduced to these companies, none of them discussed which model to choose or make an active decision of the cost model. Two respondents argue that they would

not even consider discussing the options, as the cost model is the obvious way of measuring PPEs and a taken-for-granted action.

The main reason for preferring the cost model in this industry, as argued to certain degrees by all the respondents, is the difficulties in determining the market value on their PPEs. Three respondents state that this is because there is no actual market for their industry specific PPEs, such as paper machines and steel machinery. For instance, Bergs Timber AB argues that the market value of their PPEs would probably be rather low, using the phrase ‘second hand value’, which is not reflecting their value of use to the company. Holmen AB supports this view by stating that it is hard to obtain correct market values for their cardboard and paper machines. Other reasons for preferring the cost model is that it is more practical, easier and cheaper than the revaluation model. SSAB also argues that the cost model has a more consistent effect on profit or loss due to regular depreciations. XX AB further states that the revaluation model would cause volatility in the financial statements, resulting from judgments made when determining fair value, which, in turn, would create confusion for the users of the financial statements. Parallels from this reasoning can be drawn to their desire to provide reliable numbers to their stakeholders, which is considered as a contributing factor for the preference of cost by all the respondents. Moreover, tradition is mentioned by Rottneros AB as one reason, which is referred to as contributing by three other respondents. Bergs Timber AB refers to the cost model as ‘a deeply rooted way of accounting for PPEs’, and two others refer to their well-established routines. Only XX AB argues that their preference has nothing to do with tradition. Instead they refer to the ‘code of good accounting practices’<sup>13</sup>. One respondent, Bergs Timber AB, also argues that they prefer the cost model because it is an established principle within their industry.

Additionally, Bergs Timber AB and SSAB are the only two companies who consider which model other firms within their industry prefer, both on a national and international level. However, they do not discuss measurement of PPEs with these companies, something that also yields for the other three respondents.

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<sup>13</sup> Our translation of *god redovisningssed*

## Financials

L E Lundbergföretagen AB did not discuss the option of the revaluation model when it was introduced. Neither did they actively decide upon the cost model. The reason why is that this company has a small share of PPEs compared to total assets. In addition, most of their PPEs consist of office equipment and cars, thus they do not find it material to choose fair value and it is not worth the time spent. The respondent further considers that this model would not provide their shareholders with more decision useful information, also because of the PPEs small proportion out of total assets. Hence, their preference of the cost model has got nothing to do with tradition, but it may in turn be affected by their wish to provide reliable numbers to their stakeholders. Moreover, they do not discuss measurement of PPEs with other firms in their industry, or consider their preference of measurement model. Even though Investor AB, the other company within the financial industry in this research, chooses the revaluation model for their owner-occupied properties, this is considered as irrelevant to L E Lundbergföretagen AB. This is because they do not have such assets. Instead, they have investment properties, which are to be accounted for according to IAS 40. This standard provided the option of measuring investment properties according to either the fair value model or the cost model after recognition, and L E Lundbergföretagen AB applies the first one. The reason why is that the alternative, the cost model, involves accounting for components, which they consider is even less relevant. Hence, it is like a choice between two evils. To obtain fair value for these properties, they are using a quite extensive ten-year cash flow model, which is fully described in their annual report, and this model has been in use for a few years. Before that, they had assistance of external experts, but currently this measurement is handled internally.

## Information technology

When the measurement options provided by IAS 16 were introduced to these companies, only one, PartnerTech AB, made an active decision of applying the cost model. This was done through their internal audit team, whose decisions are recorded in a bookkeeping manual. The other three respondents continued with already established practices, and this was not resulting from an active decision.

The reasons for preferring the cost model in this industry are rather differing. Two respondents, Novotek AB and Know IT AB, argue that fair value is not material to them because their share of PPEs is rather small. Another respondent, YY AB, states that they

prefer the cost model mostly because it is rather hard to determine the market value of their industry specific PPEs. Moreover, their machinery and product equipment are replaced quite frequently and have a short economic lifetime. Their value decrease is large over time, which would lead to a negative impact on profit or loss if they were to choose the revaluation model. Moreover, any potential gains from an increase in the assets' carrying amount would in turn lead to higher depreciations, an impact on profit or loss that would be negative. This company also argues that the application of the cost model is less complicated than the other model. PartnerTech AB, by contrast, states that their preference of the cost model is resulting from tradition, custom and that their competitors prefer this model. Two companies also consider that the first factor, tradition, is partially contributing. Only one company, Know IT AB, argues that their preference has got nothing to do with tradition, but is resulting from their above reasoning. However, they all find their preference to be affected by their wish to provide reliable numbers to their stakeholders, at least partially.

As already mentioned to some extent, PartnerTech AB is the only company who considers other firms in their industry's preference of measurement model. However, they do not discuss measurement of PPEs with these firms. Still, they refer to forums and associations within their industry, which discuss such accounting topics in order to obtain similar valuation for the entire industry. The other three companies neither discuss measurements of PPEs with other firms in their industry, nor consider their preference of measurement model.

### **5.2.2 Potential implications of the revaluation model in economical terms**

#### Energy

The respondents in this industry find it rather hard to estimate in specific numbers the economical impact of the revaluation model on their financial statements. They have not calculated this effect, thus some of their responses in this aspects are mainly based on assumptions. This is resulting from their extensive share of PPEs, and the difficulties in determining their market values. For instance, Vattenfall AB finds it hard to even state how many PPE components they have, and it would require a significant amount of work in order for them to suggest the impact. However, Concordia Maritime AB suggests that the revaluation model would give the appearance of a rather unstable business, when their operations actually are very stable. This would be resulting from very fluctuating values, suggested to be around +/- 15 per cent each quarter. Such fluctuation would in turn require a lot from the users of the financial statements regarding their ability to understand which

mechanisms that are underlying the presented numbers. Thus, the presented numbers would not be relevant or decision useful. PA Resources AB also states that the use of fair value would only reflect unrealised figures, which in turn would demand enormous work in order to get those figures.

Regarding the revaluation model's impact on bonus, none of the respondents have considered this effect. Two respondents, Concordia Maritime AB and PA Resources AB, state that this is a non-existing issue because their bonus systems are not based on profit or loss. Moreover, if they were to have this connection, they certainly would have excluded the managers' opportunities to affect their bonuses this way. Regarding the impact on the debt/equity ratio by contrast, this is considered by one respondent, namely Concordia AB. However, this effect could be both negative and positive, depending on whether the PPEs' values decrease or increase.

### Industrials

The respondents in this industry also find it hard to estimate the economical impact of the revaluation model. Two respondents, Trelleborg AB and Studsvik AB, have not calculated this effect, and they are not able to suggest what the impact would be. Nor Munksjö AB has calculated this effect because they do not know the fair value of their PPEs. Still, they assume that the revaluation model would have negative effect on the financial statements, resulting from probable low market values. Thus, they would have to increase depreciations in order to reflect the fair value, and the value of total assets would decrease significantly. This would result in an incorrect picture of their financial position compared to today's use of depreciations and impairment tests. However, one respondent, Alfa Laval AB, does to some extent calculate the fair value of their PPEs in order to obtain unofficial figures of the costs of their plants. Through these calculations they have found that the value of their plants would increase in the balance sheet, and the depreciations would increase as a consequence, thus reduce profit.

None of the respondents have considered the revaluation model's impact on bonus or debt/equity ratio. Trelleborg AB indicates that they do not have bonuses connected to profit or loss, and if they did, this effect would have been excluded.

## Materials

None of the respondents in this industry have calculated the economical effect of a change to fair value. Holmen AB and Bergs Timber AB cannot suggest the effect, due to their difficulties in determining the market value of their PPEs. The other three respondents however do assume that the impact in general would be negative, for rather similar reasons. XX AB refers again to volatility in the financial statements resulting from the judgments made in determining the market values. SSAB also states that the revaluation model would create fluctuations. Rottneros AB argues that the revaluation model would create an incorrect picture of their business, which would be hard to understand for the users of their financial statements. This model would not reflect their earnings potential, and it would impede their accounts.

Regarding the revaluation model's impact on bonus or debt/equity ratio, four of the respondents have not given this any thought. In the case of bonus, Holmen AB and XX AB indicate that their compensation systems are based on other parameters that exclude the potential effects of various accounting choices. Rottneros AB is the only company that has considered the effect, but also argues that it would not affect bonus with the same reasoning as above. Concerning the debt/equity ratio, this would either decrease or increase, depending on the determined fair values. However, according to the respondent, this ratio is of little importance to their lenders, who rather focus on earnings potential and other ratios.

## Financials

Due to L E Lundbergföretagen AB's low share of PPEs, they have not spent time calculating the effect of the revaluation model on their financial statements. However, they do assume that the impact would be very low, probably around +/- SEK 1-2 millions, thus not very noticeable in their financial statements. Due to this probable low impact, they have not considered the revaluation model's impact on bonus or debt/equity ratio.

## Information technology

In this industry, none of the respondents have calculated the economical impact of the revaluation model. The reason why for Know IT AB and Novotek AB is that their share of PPEs is low, and the impact of a change in valuation model would not be material. They assume that a change would only create marginal effects. PartnerTech AB also suggests the same impact for their PPEs. YY AB argues that the revaluation model would probably lead to



negative effects in comparison to the cost model's straight-line depreciation. This is because the value of their machinery and product equipment decreases rapidly. For instance, if they were to apply fair value for their computers, this value would probably decrease around 30 per cent already the day of acquisition.

None of the respondents have considered the potential effect of the revaluation model on bonus or debt/equity ratio, mainly because of the model's low impact on their financial statements.

### **5.2.3 Impressions of the revaluation model**

#### Energy

For several reasons, none of the respondents in this industry can see any advantages with a change to the revaluation model. Concordia Maritime AB expresses that they can only see disadvantages with the revaluation model, where the greatest one is that no one can define what fair value really is. It is hard to determine who the willing buyer is, and, consequently, it would be nothing more than an assumption. Nevertheless, Concordia Maritime AB argues that the revaluation model probably is applicable for factories and similar assets, but not for ships, which is their segment. Vattenfall AB assumes that if they were to choose the revaluation model instead, this would involve increased depreciations if the value of the assets rose. It would also require parallel financial records for PPEs, due to separate Swedish accounting rules for the individual accounts, implying a great administrative burden for the company. In addition, to be able to revise the revaluations as often as required, they would probably have to hire more staff. PA Recourses AB, by contrast, argues that they do understand the theoretical ambition with fair value, but it is hard to acquire such a value in practice.

Two of the companies, Vattenfall AB and Concordia Maritime AB, claim that the only reason for them to change to the revaluation model is if it became a legal requirement. Concordia Maritime AB additionally argues that if that happened, they would maybe consider moving abroad, where such a requirement was not imposed on them. PA Resources AB argues that they would consider a change if everyone else in their industry changed. If they did not change in that case, it would be hard compare them with the other companies. Furthermore, none of the respondents assume that they will consider a change to the valuation model over time, but two of the companies, Vattenfall AB and PA Resources AB, argue that one never

knows what the future holds. However, Vattenfall AB argues that nothing is indicating that there will ever be such a change. Moreover, neither of the companies has received any comments from external professional parties, such as their auditors or analysts, suggesting a change to the revaluation model. Vattenfall AB further questions how these parties would react if they were to change their approach, especially concerning their ability to justify the judgements made. This would certainly increase the hours spent reviewing the financial statements, and as a result, Vattenfall AB would have to pay higher audit fees. Therefore, Vattenfall AB suggests that auditors may express that they prefer fair value in theory, but concerning PPEs it probably would be almost impossible in practice.

### Industrials

All four companies within this industry are negative towards a change to the revaluation model. For instance, Munksjö AB does not see any advantages because of the negative impact on the financial statements. This would not provide decision useful information, as it would not reflect the PPEs' higher value of use to the company. The reason as to why Studsvik AB is negative is mainly because the revaluation model would be more complicated, and there is currently no actual market supporting this sort of measurement. Alfa Laval AB further states that their impression of fair value in general is very negative. By referring to the recent financial crisis, they suggest that their PPEs would not have the same value two days in a row. In order to obtain fair values, there is a need for a 'perfect' functioning market. Such markets do not exist today, which has been indicated by the crisis.

Two of the companies, Alfa Laval AB and Trelleborg AB, claim that they would only change to the revaluation model if it was required by legislation, and Studsvik AB has not considered what could make them change. Munksjö AB, by contrast, argues that they would consider a change if they were able to obtain more reliable observations on the market value of their industry specific assets, hence, indicating that they might consider changing their approach over time if this was possible. However, the other three respondents assume that they will not consider such a change in the future. Additionally, regarding comments made by external professional parties, none of these companies has received any suggestions regarding a change of measurement approach.

## Materials

One out of five companies within this industry, namely SSAB, considers the revaluation model to be advantageous in certain aspects. If one does not consider the resources this model requires, it is much better in reflecting the real value of PPEs. However, the model's disadvantages are considered to outweigh these advantages. SSAB further argues that the revaluation model appears to be relevant in theory, but it would be rather impossible to apply in practice. Holmen AB is one of the companies that consider the revaluation model to only provide disadvantages. They argue, for instance, that the cost model is the most reliable model. Even though SSAB is the only company in this industry that can see an advantage with the revaluation model, they assume that it would have an enormous impact. It would, for instance, require the establishment of reliable valuation models, which in turn involves a lot of resources. Thus, the only probable way for them to change their current approach is if it became practice within their industry, so that they could share the costs of establishing such models, or if they were able to easily obtain market values. To some extent, Bergs Timber AB has some of the same considerations, namely, they need to be able to obtain correct market values for their PPEs before they could consider a change. The other three companies, by contrast, state that the only reason for them to change is if they were forced to do it, such as a legal requirement or if IASB removed the option of the cost model. Rottneros AB further argues that if this were to happen, they would make the change, but it would be accompanied by great opposition. Moreover, none of the companies assumes that they will change to the revaluation model over time, and they have not received any comments regarding a change from any external professional parties.

## Financials

L E Lundbergföretagen AB does not see any advantages with the revaluation model, especially because of their small share of PPEs. The only reason for them to make a change is if it was legally required. However, even then they would probably try to avoid it, and they would argue that this model is not material for them. Hence, they will probably not consider changing their approach over time. Additionally, no external professional parties have suggested a change, probably because of their small share of PPEs, and the respondent considers it to be a waste of resources to even bring up this question.

## Information Technology

In this industry, only one out of four companies states that the revaluation model could be advantageous, namely PartnerTech AB. If they were able to determine correct market values, they assume that it would present their financial position in a more faithful way. However, it is questionable whether these values would be considered as reliable, especially by their investors, something that is of great importance to them. The three other companies, claiming that they cannot see any advantages with the revaluation model, hold rather similar arguments regarding what could make them change approach. YY AB states that if their share of PPEs were to increase, for instance if they started to buy buildings instead of renting them, they would probably consider a change. Novotek AB argues that if they became more PPE-extensive, then a change to the revaluation model could be more appropriate. For instance, if they were to have PPEs with a depreciation period of 15-20 years, this model could be relevant. But as of today, their PPEs have a five-year depreciation period, thus they do not find any relevance with a change. Know IT AB states that if they had a more material share of PPEs, then the revaluation model could be more appropriate.

One of these four companies, Novotek AB, assumes that they will not consider changing valuation model over time. YY AB indicates that such a change depends on the circumstances, for instance, if they were to acquire other PPEs with longer depreciation period, or if there were changes in the value of their current PPEs. Know IT AB argues that if the content of their PPEs would alter, then they might consider a change. PartnerTech AB further states that if other companies within their industry were to change, and the revaluation model became business practice, then they would change too. That is because they do not want to be the first company to change. Moreover, none of the companies within this industry have received any comments or suggestions regarding a change to the revaluation model from external professional parties.

### **5.3 Investor AB**

Investor AB measures their owner-occupied properties, henceforth OOPs, according to the revaluation model, and they mainly consist of hotel properties. The main reason why they chose this model is because they wanted to measure all their assets, whenever possible, at fair value when IFRS was introduced. Investor AB mainly owns shares, which have to be measured at fair value. Thus, they wanted the rest of their assets to be valued the same way, in

order to obtain conformity in their measurement of assets. However, the rest of their PPEs, such as office equipment, are measured at cost because of their low values. Investor AB assumes that this might be a result of tradition, but it is mainly because it would be much more expensive to apply the revaluation model for these assets, due to their low market values. Since Investor AB's application of the revaluation model for their OOPs is not the usual approach, this model was discussed within the company before they changed. They had a large project going on for several years before the transition to IFRS, and a specific team of professionals worked especially with IAS 16. However, the respondent questions whether this model is the best approach today, because measurement at fair value involves judgments. Moreover, the company did not, and still does not, discuss measurement of PPEs with other companies within their industry, especially because PPEs are not very industry specific assets.

Investor AB further assumes that the choice of applying the revaluation model for their OOPs may be affected by their desire to present reliable numbers. Concerning the economical impact of the revaluation model on their financial statements in general, there is a slight increase in depreciations in profit or loss, and more fluctuations in the balance sheet. These fluctuations depend on how the real estate market is developing. The revaluation model has had a positive impact on their debt/equity ratio, but this impact is rather small. This is because their share of OOPs is low compared to total assets. However, the respondent argues that this effect was not their intention when choosing the revaluation model. Nevertheless, the revaluation model has not had any impact on bonuses.

If Investor AB were to change approach for the rest of their PPEs, this would probably not lead to any significant difference in their financial statements, but they have not calculated this impact. It is more based on estimation, because the value of these PPEs is not substantial. Moreover, Investor AB does not know if the revaluation model has lead to any advantages, except for maybe a small positive impact in the initial phase, and they cannot see any advantages with a change to the revaluation model regarding the rest of their PPEs. The only reason as to why they might consider a change here is if it would provide a better representation of their financial position, and that these assets constituted a more material share of total assets. Hence, they are not considering changing their approach for the rest of their PPEs in the nearest future, and no external professional parties have suggested such a change.

## 6. Analysis

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*This chapter discusses the outcome of our empirical study in light of PAT and IT. The chapter is divided into two sections, where the first focuses on factors explaining the preference of the cost model. The subsequent section concerns implications of a change to the revaluation model.*

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In both sections of this chapter, we will explain the empirical findings within the specific industries, and across the industries. In order to ease the reading, the industries will be referred to by their specific industry name in capital letter, and we will mainly generalise the responses by dividing the respondents into the industries where they belong.

### 6.1 Factors explaining the preference of the cost model

The spontaneous responses we received when raising the question as to why the respondents prefer the cost model, indicate a predominance of the difficulties in determining the PPEs' market values, which is the terminology used by several respondent when referring to fair value. This response was to some extent received from nine out of the 17 respondents applying the cost model. Even though several of them did not use the exact wording, but instead referred to the absence of an actual market for their PPEs, we still consider that this also yields for them. That is, if there is no actual market, they will not be able to determine market values. However, differences can be seen between the various industries. Energy and Materials were the industries where all respondents, except for one Materials company, argued that this is the case, mostly by referring to their industry specific PPEs. By contrast, only one company from Industrials and Information Technology respectively stated that this is the reason, and Financials did not mention it at all. Furthermore, we believe that parallels can be drawn between the arguments of difficulties in determining market values and the respondents' desire to provide reliable numbers to the users of the financial statements. That is, in the absence of reliable market values, they probably do not want to base fair value measures solely on judgments and estimates. For instance, Vattenfall AB stated that they prefer the cost model *inter alia* because it is hard to determine market values. This company further questioned how their investors, auditors and analysts would respond to rather unreliable numbers obtained from judgment made, when determining fair value in the absence of market values. They also questioned how to financially compare companies within their industry when such judgments apply. As many as 15 companies responded positively when

specifically asked whether their desire to present reliable numbers to their stakeholders contributed to their preference of the cost model. These responses were received from all the five industries, and it may indicate that they respectively have the same group of important stakeholders. That is, they probably face rather similar expectations regarding the necessity to report in a reliable manner. In addition, one company from Industrials and two from Materials spontaneously responded correspondingly, by stating that the cost model leads to less fluctuation, less volatility and more correct numbers in the financial statements, compared to the revaluation model. This was argued to be resulting from the judgments made when determining fair value, which in turn was considered to require a lot from the users of the financial statements regarding their ability to understand which mechanisms that are underlying the presented numbers. However, to be noted is that two respondents, namely Trelleborg AB and Studsvik AB, considered that the revaluation model also could provide reliable numbers, and Investor AB stated that their choice of measuring OOPs at fair value could be affected by their desire to present reliable numbers. Nevertheless, in this aspect we believe that IT's coercive mechanism has explanatory power. In order to be regarded as a legitimate company by parties that they are dependent on (DiMaggio and Powell, 1983), they have to present reliable numbers. Even though only one respondent, namely Vattenfall AB, referred specifically to their investors, the application of the term 'users of financial statements' by the other companies discussing this matter, when not specifically asked, probably also refers mainly to their investors. This assumption is supported by Hague (2007), who states that both present and potential investors, as well as creditors, are regarded as the most central users of financial statements in IASB and FASB's project of developing a joint conceptual framework for financial reporting standards, as presented in chapter 3. Thus, based on this reasoning, our research supports the empirical hypothesis derived from IT's coercive mechanism: *HIT<sub>1</sub>: The respondents prefer the cost model because it provides more reliable numbers to their important stakeholders*

Another dominating argument revealed in our research, when raising the question about why the respondents prefer the cost model, is that this model is easier, more practical and cheaper to apply compared to the revaluation model. As many as eight respondents provided corresponding responses, and they represent all the industries except for Financials. The reason why we divide easier, more practical and cheaper into one category is that these responses, to some extent, indicate that the companies do not want to spend resources on the revaluation model, when they already have established routines for the cost model. A linkage

may also be drawn to the argument above about the difficulties in determining market values, as it would be rather resource demanding to establish fair values when market values cannot easily be obtained. A rather remarkable finding throughout this research is that the majority of the respondents have not discussed which measurement option to choose, or actively made any decision of continuing with the cost model. Some respondents even stated that they would not even consider discussing the options, as the cost model is the obvious way of measuring PPEs. Only one company within Energy and Information Technology respectively did discuss whether to apply the cost model or the revaluation model when IFRS was introduced. The other respondents continued with 'business as usual', and the cost model was a taken-for-granted action, as stated by some of the respondents. The latter can be linked to tradition, which we will return to later. However, we do believe that the argument of the cost model being easier, more practical and cheaper than the revaluation model first of all is applicable to PAT. According to Collin et al (2009), 'business as usual' means doing today what one did yesterday. The authors argue that this can be considered as a rational choice, and therefore constitutes as a viable explanation according to PAT. In order to obtain a policy change, companies need to gather information and theories on the economic effects of possible accounting methods, in addition to any impact on the relation between agents and principals, to be able to find alternative approaches. These activities are termed 'costs of thinking', which are regarded as an *a priori* non-negligible aspect. Moreover, if a change is considered as appropriate, the company will face costs of social innovation. These costs reflect the resources and activities necessary to motivate and implement an accounting change, resulting from reluctance towards such a change (ibid.). The aspect of cost of thinking and social innovation is illustrated by SSAB, who argued that the revaluation model would have an enormous impact on the company. It would, for instance, require the establishment of reliable valuation models, which in turn involves a lot of resources. Thus, the only probable way for them to change their current approach is if it became practice within their industry, so that they all could share the costs of establishing such models.

Therefore, our empirical findings indicate that the cost model is preferred because the respondents do not want to carry the 'costs of thinking' and social innovation themselves. It appears to be some hesitation towards spending resources on the 'new' revaluation model, a model that they do not know the exact outcome of. One respondent from Information Technology even stated that they would probably not gain anything from the revaluation model, and three respondents from Financials and Information Technology referred to fair



value as not being material to them, because of their small share of PPEs. Although not specifically stated that this is the case, we consider that these responses probably result from resistance towards spending resources on the revaluation model, because they do not know whether its benefits will outweigh its costs. For instance, as L E Lundbergföretagen AB argued, the revaluation model it is not worth the time spent. Additionally, according to three companies within Industrials and Materials, the cost model also provides desirable positive impact in economical terms, such as full depreciation of PPEs and more consistent effect on profit or loss. Hence, if these respondents were to apply fair value, this can be explained by either decreases in the carrying amounts, which usually is to be recognised in profit or loss, or increased carrying amounts involving higher depreciations in the subsequent years. Moreover, the revaluation model may also involve fluctuating values, resulting in inconsistent impact both on profit or loss and the balance sheet. Hence, even though 16 companies have not calculated the economical impact of the revaluation model, the cost model appears to be the rational choice in our research. As a result, our findings support the main empirical hypothesis derived from PAT: *PAT<sub>1</sub>: The respondents prefer the cost model because it is a rational choice*

Besides the arguments mentioned above, the next argument referred to the most regarding why the respondents prefer the cost model, is tradition. Three respondents from Industrials, Materials and Information Technology respectively, spontaneously argued that this is the case. In addition, 14 respondents admitted that tradition was a contributing factor to their preference, when specifically asked whether it was. These respondents represent all the industries except for Financials. However, Investor AB, also a Financials company, stated that their choice of the cost model for their PPEs other than OOPs could partially be a result of tradition. As mentioned above, the majority of the respondents, or 15 to be more exact, did neither discuss which measurement option to choose, nor actively make any decision of continuing with the cost model. Some respondents even referred to the cost model as being a taken-for-granted action when IFRS was introduced. Taken-for-granted is IT's way of explaining tradition, while PAT explains it through social innovation and cost of thinking, as presented above (Collin et al, 2009). Hence, both PAT and IT appears to have explanatory power regarding tradition as an explanatory factor in this research. Moreover, Broberg et al (2011) argue that taken-for-granted action means institutional inertia. Hence, tradition and institutional inertia are related factors, and the preference of the cost model may be an indication of both, as this has been the historical way of measuring PPEs after recognition. As

mentioned in chapter 2, when we asked if the respondents' preference of the cost model was affected by tradition, we did this in order to get an indication of whether institutional inertia exists. As inertia traditionally is defined as the inability to accomplish internal change when facing significant external change (Van der Steen, 2009), we figured that none of the respondents would concede that this was the case. Thus, we considered that the use of the word tradition was a more neutral way of getting such an indication. Moreover, according to Broberg et al (2011), historical cost accounting and the notion of prudence have a long tradition in Sweden. The connection between accounting and taxation also goes way back, and has led to an emphasis on profit or loss. Because of unwillingness to change and institutional inertia, formerly institutionalised norms are able to survive although they are not functional anymore. This might be resulting from accountants having invested much time and effort in learning the current norm system, hence actively opposing accounting change. Broberg et al did *inter alia* assume in their study, which was presented in chapter 4, that corporations in Sweden use impairments as a tool to keep down the value of their assets. This was argued to be resulting from the tradition of prudence and the close connection between taxation and accounting. Hence, the use of impairments could be interpreted as a sign of taken-for-granted action, and thus institutional inertia. However, the result of their study could not support this assumption, as the use of impairments decreased during the time period of their study (ibid.). Nevertheless, we believe that this reasoning is applicable in our research, except for the connection between accounting and taxation. That is, as argued in chapter 4, the cost models' only effect on profit or loss is depreciation and any impairment, and the application of it probably leads to higher reported profits compared to the revaluation model. Concerning the latter model, its potential negative impact on profit or loss is resulting from a decrease in an asset's carrying amount, or an increase in the carrying amount that could lead to higher depreciations in the subsequent years. Thereby, only the revaluation model can lower taxation. However, the preference of the cost model may instead be explained by the long Swedish tradition of historical cost accounting and the concept of prudence, as this also is a tool to keep down the value of the assets. This may in turn be an indication of institutional inertia. Therefore, our research supports the empirical hypothesis derived from institutional inertia: *HIT<sub>4</sub>: The respondents prefer the cost model because they are reluctant to change*

According to Collin el al (2009), IT's normative mechanism contains the attendance of both institutional inertia and pressure from professional groups. Our research has supported the first, as identified above, and we consider that it to some extent also has provided support for

the latter. Even though only two respondents from Energy and Information Technology respectively did discuss which option to choose when IFRS was imposed on them, we believe that all the 17 companies' internal professionals prefer the cost model, as they have not actively suggested a change to the revaluation model. If they had suggested such a change, one could maybe expect similar conditions as the ones at Investor AB, where a specific team of professionals decided that the revaluation model was the most appropriate for this company's OOPs. Moreover, regarding external professionals, the same probably also yields here, as none of the respondents have received any suggestions from their auditors or analysts regarding a change. This may be because of, for instance, rather unreliable numbers obtained by the revaluation model, as argued by Vattenfall AB. Moreover, this company also indicated that their auditors would probably face difficulties in justifying these numbers, and it would certainly increase the hours spent reviewing the financial statements. As a result, the company would have to pay higher audit fees. Apparently, this is not considered beneficial for the audit client, but we do wonder why this is not preferable for the audit firms. First, this could increase their income per client. Additionally, and maybe more importantly for the users of the audited financial statements, fair value contributes to several of IASB's principal characteristics (Hague, 2007). Thus, we question why the professional group of auditors do not promote the use of fair value, as it enhances the characteristics relevance, understandability and comparability (ibid.). Nevertheless, we believe that our research has provided results supporting IT's normative mechanism. The reason why we use the word believe, is that none of the respondents have specifically argued that their preference is resulting from professional pressure. However, the absence of any such pressure regarding a change to the revaluation model is an indicator of professional groups' preference of the cost model. Otherwise, we do believe that especially the auditors would exert such pressure, as they, according to Collin et al (2009), have the powerful means of issuing auditor's reports with remarks. Hence, our study has provided support for the empirical hypothesis derived from IT's normative mechanism: *HIT<sub>3</sub>: The respondents prefer the cost model because professionals within their organisational context prefer this model*

The last spontaneous response we received when raising the question about why the respondents prefer the cost model, is that it is industrial practice and that competitors prefer this model. As many respondents as for the tradition argument stated this, namely three. They represent Energy, Materials and Information Technology respectively. Moreover, when we specifically asked all respondents whether they consider the preference of other companies

within their industry, six admitted that they do. In this case, industrial variations are apparent, reaching from three Energy, two Materials and one Information Technology. Still, none of the 17 respondents discuss measurement of PPEs with other companies within their industry. Nevertheless, we consider that IT's mimetic mechanism is applicable regarding industrial influence. This yields especially for Energy, as all the respondents within this industry consider other companies' preferences. It may also be applicable for Materials and Information Technology, but as the results only represent the minority of these respondents, we cannot conclude that this is the case. We would however like to stress the clear example of the mimetic mechanism, presented by PartnerTech AB. This Information Technology company stated that if other companies within their industry were to change to the revaluation model, and it became business practice, then they would change too. That is because they do not want to be the first company to change. Moreover, according to the NASDAQ OMX's Nordic list of 2012, Energy is the industry with the second lowest share of Swedish listed companies. Utilities has the lowest share, with three companies, and Energy has five. Therefore, we assume that the Energy respondents operate within a more uncertain industry than the other respondents in this research, because few companies are active within this sector in Sweden. Thus, they might face a greater necessity to imitate the accounting practice of other successful companies within their industry (DiMaggio and Powell, 1983), not only on a national level. This may especially be the case for PA Resources AB. As they stated, they follow oil and gas accounting practices, which mainly are decided upon by Norwegian and American oil companies. This is because of the relatively few oil companies in Sweden. Vattenfall AB, an unlisted company, also indicated that they consider, for instance, their European co-workers' preference regarding measurement of PPEs. Thus, our research supports the empirical hypothesis derived from IT's mimetic mechanism for the Energy industry: *HIT<sub>2</sub>: The respondents prefer the cost model because similar, often more successful, organisations prefer this model*

Regarding the last two empirical hypotheses on the preference of the cost model, as derived from PAT's debt/equity hypothesis and bonus plan hypothesis, none of them can be supported in this research. Only two companies from Energy and Materials respectively stated that they have considered the impact of the revaluation model on the debt/equity ratio, and only the Materials company had considered its impact on bonus. Hence, this indicates that the rest of the respondents do not prefer the cost model because of its positive effect on the debt/equity ratio or bonus, as they have not considered the revaluation model's impact on these factors.

That is, if they had found the revaluation model to be less beneficial in this aspect, it could maybe be an additional reason for their preference of the cost model. Regarding the absence of considerations on the debt/equity ratio, this is probably explainable due to the rather low ratios among the respondents. The majority of the companies have debt/equity ratios below 0.5, hence it appears not to be material to try to decrease it more. Still, Investor AB, with a net debt/equity ratio of 0.1, indicated that the revaluation model has had a positive impact on their debt/equity ratio, although this impact is rather small. However, according to Rottneros AB, this ratio is of little importance to their lenders, as they rather focus on earnings potential and other ratios.

Several companies also revealed that the bonus plan hypothesis has no explanatory power. This is regarded as a non-existing issue because their bonus systems are based on other parameters than profit or loss. Investor AB supports this argument by revealing that the revaluation model has not had any impact on their bonus system. This is probably because their variable payments are based on individual performance and long-term performance of Investor AB and its share price, thus no direct connection to current profit or loss. Moreover, the other respondents argued that if they were to have such a connection, they certainly would have excluded the managers' opportunities to affect their bonuses through various accounting choices. This is an indicator of PAT's efficiency perspective, *ex ante*, which, for instance, explains the set of accounting practices that are restricted by the contracting parties, in order to reduce the likelihood of *ex post* managerial opportunism (Watts and Zimmerman, 1990). Nevertheless, the 2011 annual reports of some of the companies arguing that their variable payments are not based on profit or loss may indicate otherwise. For instance, Concordia Maritime AB provides variable compensation to their senior executives, which is based on factors such as achievement of financial goals. Trelleborg AB's variable payments to senior executives are, for instance, based on earnings trends. XX AB's performance-related pay to their managers is based to the achievement of predetermined goals, which, for instance, relate to income and return on capital employed. In addition, Rottneros AB's variable component of pay is based on the achievement of, for instance, financial objectives and results. Even though the terminology used here, such as 'achievement of financial goals', is a little diffuse, we do consider that the connection to profit or loss is not completely absent, as some of these respondents argued. Thus, we assume that PAT's bonus plan hypothesis may have some explanatory power, because these respondents probably do not consider it suitable to admit that any connection between accounting choice and bonus may exist. As Deegan (2009)

states, the bonus plan hypothesis certainly challenges the view of managers being objective when determining which accounting methods that should be applied. Hence, it might be somewhat jeopardising to admit that managers are not entirely objective when deciding whether to apply the cost model or the revaluation model. However, as this reasoning only is based on our assumption, we cannot conclude that this is a fact. Therefore, our research has not revealed any support for neither PAT's bonus plan hypothesis nor debt/equity hypothesis, and both our empirical hypotheses derived from these PAT-hypotheses must be rejected. This also yields for the empirical hypothesis derived from PAT's political cost hypothesis. As we argued in chapter 4, this hypothesis is not applicable for the companies choosing the cost model. We only found it to be applicable for Investor AB, but their reasons for choosing the revaluation model for their OOPs has nothing to do with reduction of political attention. Even though we did not specifically asked if this was the case, the respondent was unsure whether the revaluation model was the best approach today, and could not define whether it has led to any advantages. Additionally, their share of OOPs is approximately 0.01 per cent of total assets, hence any increase in depreciations will probably not reduce their taxable income noticeably.

## **6.2 Implications of a change to the revaluation model**

Only two out of 17 respondents applying the cost model consider the revaluation model to be advantageous in certain aspects. SSAB argued that this model is much better in reflecting the real value of their PPEs, and PartnerTech AB assumed that it would present their financial position in a more faithful way. However, we find this quite interesting that the other 15 respondents were not able to see any advantages with the revaluation model, mainly because they have not calculated its impact on their financial statements. Only one Industrials company has, to some extent, made this calculation. This is Trelleborg AB, who found that the value of their plants would increase, and, as a consequence, depreciations would increase. Investor AB partially supported these findings, as their application of the revaluation model on their OOPs has led to a slight increase in depreciations. In addition, fluctuations in the balance sheet have also increased, as they depend on how the real estate market is developing. Hence, they could not define whether the revaluation model has led to any advantages. This corresponds with several suggestions made regarding the possible impact of the revaluation model. All the 11 respondents who were able to estimate this effect assumed that it would have a negative effect on their financial statements. These respondents represent all the five

industries, and they suggested, for instance, that the revaluation model would create an incorrect picture of their businesses, resulting from very fluctuating values. Other respondents referred to probable low market values, which would lead to great depreciations in order to reflect the fair values. Thus, the value of their total assets would decrease significantly. This would in turn require a lot from the users of the financial statements, regarding their ability to understand which mechanisms that are underlying the presented numbers. Hence, the presented numbers derived from the revaluation model are not considered to be either decision useful or relevant. This is to some extent supported by Investor AB, who questioned whether the revaluation model is the best approach for their OOPs today, as it contains judgments. We consider that these statements challenge the objective of financial statements and the principal characteristic of relevance, as defined in IASB's (2006) framework. As stated by Hague (2007), fair value contributes strongly to relevance, by providing information that is congruent with the interests of the users, such as *current* economic conditions. Regarding PPEs in particular, IASB decided to keep the option of measurement at fair value after recognition in an improvement project, despite some comments of removing it. The reason was *inter alia* that information about fair value could be beneficial to the users of the financial statements (McGregor, 2007). Moreover, the assumptions also challenge the so-called Fair Value View, which is referring to the IASB and FASB's project of developing a joint conceptual framework for financial reporting standards. This view considers, for instance, markets to be rather perfect and complete, and that financial reports should be able to meet the needs of investors and creditors by reporting fair values derived from present market prices (Whittington, 2008). Therefore we question why several of the respondents involved in this study can hold such conflicting impressions of fair value in this aspect, compared to the standard-setting bodies IASB and FASB. Moreover, only one Materials company and three Information Technology companies assumed that they will consider a change to the revaluation model over time. This challenges McGregor's (2007) suggestion that fair value is here to stay, because it is deeply rooted in the IASB literature, and the calls from the user community are increasing regarding its expanded application.

The majority of the companies that do not see any advantages with the revaluation model claim that the only reason for them to change their current approach, is if they were forced to do it, such as a legal requirement or if IASB removed the option of the cost model. This response was received from as many as eight respondents from all the five industries. Another reason for a change indicated by three respondents from Information Technology, is linked to

a change in their current amount or extent of PPEs. Furthermore, the ability to obtain correct or relevant market values is argued by two respondents from Industrials and Materials as a reason for change, and one Energy company state that they would consider a change if everyone else within their industry did. Additionally, one Industrials company was not able to determine what could make them change approach. These findings are also rather remarkable, as none of the respondents refer to the users of their financial statements. As already mentioned above, McGregor (2007) suggests that fair value is here to stay, for instance, because of the calls from the user community. Tuttle and Dillard (2007) also argue that impetus for change mainly is imposed on organisations through powerful external parties, such as customers and suppliers. However, in case of PPEs, this does not appear to be existent. Therefore, in order to obtain a change in the current preference of the cost model, Van der Steen's (2009) argument of so-called loose coupling between rules and routines comprising accounting practices, may have greater explanatory power. He states that change is achievable through this process, regardless of the presence of inertial forces, which, as we already concluded earlier in this chapter, appears to be present concerning measurement of PPEs.



## 7. Conclusions and implications for future research

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*This chapter connects the empirical findings to the purpose of this research. It begins with a conclusion of findings, and a discussion is made concerning the explanatory power of PAT and IT. The chapter ends with a presentation of implications for future research.*

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### 7.1 Conclusion of findings and discussion

The outcome of our empirical research indicates a predominance for the preference of the cost model resulting from difficulties in determining fair value of PPEs. Parallels can be drawn to the respondents' desire to provide reliable numbers to the users of their financial statements, and hence we argue that IT's coercive mechanism has explanatory power. This yields for all the five industries involved in this research. Another dominating argument to the preference of the cost model is that it is easier, more practical and cheaper to apply compared to the revaluation model. This may be connected to the difficulties in determining fair value, because of the resources it might require in order to determine such values. Such a link can also be drawn to arguments that fair value is not material due to a small share of PPEs. That is, in the absence of easily obtained market values, companies may be resistant to spend resources on the revaluation model because they do not know whether its benefits will outweigh its costs. Moreover, the preference of the cost model because it is easier, more practical and cheaper than the revaluation model can also be connected to costs of thinking and social innovation accompanying fair value measurement. These factors are PAT's way of explaining tradition (Collin et al, 2009), which will be presented below. Hence, the application of the cost model appears to be a rational choice, in order to reduce or exclude such costs. In this aspect, we consider that PAT has explanatory power for all the five industries involved in this study.

Besides the arguments mentioned above, another reason to why the respondents prefer the cost model, is tradition. This is revealed by all the five industries to be an influencing factor, at least partially. Tradition is explained in IT through taken-for-granted action (Collin et al, 2009), which, according to Broberg et al (2011), means institutional inertia. Thus, the preference of the cost model may be explained by this being the only applicable model before the introduction of IAS 16, and continuance with already established practices may be a taken-for-granted action. Hence, in this aspect, institutional inertia appears to have explanatory power. This also yields for PAT's explanation of tradition through costs of

thinking and social innovation (Collin et al, 2009). Therefore, a linkage has been found in this research between these two theories regarding their ability to explain tradition. Moreover, according to Collin et al (ibid.), IT's normative mechanism contains the attendance of both institutional inertia and pressure from professional groups. We consider that our research to some extent also supports the latter, as the preference for the cost model may be a result of professional pressure. This is an assumption made, based on the absence of discussions or active decisions regarding the continued application of cost, when the accounting choice of IAS 16 was introduced to the respondents. Thus, we consider that none of their internal professionals neither promoted, nor do promote, the revaluation model to any extent because they prefer the cost model. This may be a result of the cost model being an integrated professional norm. We also believe that this probably yields for the respondents' external professionals too, such as auditors and analysts, as none of them have received any suggestions from such parties regarding a change to the revaluation model. Brännström (2011), who is Secretary General at FAR<sup>14</sup>, may explain why that is. He argues that fair value accounting is extremely complex. It is difficult for managers to apply, and it is also hard for auditors to scrutinise. Marton (2008) further argues that companies' internal control systems are often not developed to handle the judgments made when determining fair value, and it is difficult for auditors to understand and evaluate the pricing models used. Research also indicates significant problems in the application of fair value, and it is often found to be of no use, especially regarding financial instruments. Yet, in that case, it might be appropriate for companies that are not followed by analysts (ibid.). Therefore, professional groups preferring the cost model may explain the extensive use of this model, and, in that sense, IT's normative mechanism has explanatory power for all the five industries involved in this study.

The last argument to the preference of the cost model revealed in our study, is that it is industrial practice and that competitors prefer this model. This can be connected to considerations of the accounting choice made by other companies within the specific industries, and thus IT's mimetic mechanism. However, this is only applicable for the energy industry, as these arguments were only received from a minority of the other industries.

Summarising the outcome of our study in light of PAT and IT, we find that IT has been more successful than PAT in explaining the preference of the cost model. All IT's isomorphic

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<sup>14</sup> FAR is the professional institute for authorised public accountants, approved public accountants, and other highly qualified professionals in the accountancy sector in Sweden

mechanisms, in addition to institutional inertia, have to some extent been able to explain this preference. We have also found a linkage between PAT and IT regarding their ability to explain tradition. Moreover, PAT has only been found to have explanatory power regarding the cost model being a rational choice, and the connection between tradition and costs of thinking and social innovation. However, parallels can be drawn between the latter and rational choice, hence the assumption of the cost model being a rational choice appears to be PAT's only explanatory power in this research. Its other explanatory factors, identified through the bonus plan, debt/equity and political cost hypotheses, cannot be supported through this study. Especially the bonus plan hypothesis appears to be a theoretical weakness, as several respondents argue that if they were to have a connection between bonus and profit, they certainly would have excluded managers' opportunities to affect their bonuses through various accounting choices. Even though Watts and Zimmerman (1986) argue that empirical tests of accounting choices in general have found results relatively consistent with the bonus plan hypothesis, this statement is rather old. Hence, in this aspect we may even agree with the critics of PAT, who argue, for instance, that the theory lacks power and has not shown great development since its general inception in the 1970s (Watts and Zimmerman, 1990; Deegan, 2009). Nevertheless, the bonus plan hypothesis might be applicable for other contexts and respondents, but in this research it appears not to be.

Besides PAT and IT's explanatory factors, other factors may contribute to some of their explanations. For instance, the majority of the respondents do not find the revaluation model to be advantageous in any way. Nor do they consider that they will change to this model over time. Several of the respondents are also quite critical towards fair value in general, and therefore they seem to be emphasising cost accounting rather than fair value accounting, at least in case of PPEs. According to Deegan (2009), cost accounting can be regarded as a perspective of accounting Darwinism, meaning that those concepts that are most efficient and effective will survive over time. Thus, these factors may explain why tradition is apparent in this research, as unwillingness to change to fair value can be a result of cost being the most efficient and effective measurement approach. This is supported by Mautz's (1973 cited in Deegan, 2009), who argues that the way accounting works is resulting from businessmen influence. If those making management and investment decisions on a daily basis had not considered financial reports based on cost to be useful during the years, this approach would have changed a long time ago. Hence, the cost model will probably continue to be applied,

despite its shortcomings regarding its ability to provide relevant information when prices are changing (Deegan, 2009).

Another explanation to the preference of the cost model might be, as argued by Jönsson (1985), that Sweden is a country with a rather small accounting profession. The professionals meet on a regularly basis, which makes the relations between the influential parties of particular importance. The most influential have to a great extent an institutional position, but they are also closely acquainted with other influential parties, and pay particular attention to what the most respected among them consider. Although all individuals within this elite have every opportunity to take a stand on their own, a network of mutual respect exists, which affects the development of accounting norms. In addition, some influential parties establish themselves as particularly knowledgeable in certain areas, and thus perhaps get the conclusive word in critical stages (ibid). Thus, the preference of the cost model may be a result of the Swedish accounting culture, as no one wants to be out of line with the preference of the most influential parties. This may in turn complement IT's normative mechanism. That is, professionals are likely to adopt the same practices, and if they deviate from accepted or expected behaviour, they will be regarded as out of line with their 'group'. This might in turn lead to either formal or informal sanctions from the group (Deegan, 2009). The group here may be an indicator of the elite, and the accepted or expected behaviour may refer to the accounting norms 'decided' upon by the most influential parties, which Jönsson is referring to.

Moreover, the preference of the cost model may be resulting from a political process. According to Artsberg (2010), the Swedish state is known to be strong, but, retrospectively, it has not been able to control the development of accounting. This is resulting from heavy international influences, especially due to Swedish companies' intensive international activities. The accounting strategy has been developed through a pragmatic industry and pragmatic accountants, and the legislator has responded by, to some extent, keeping up with this development. Nevertheless, since the mid-1990s, the legal dominance of accounting has increased. For instance, the legislator prohibited the use of IFRS for individual accounts, despite the accounting profession arguing for the opposite. This prohibition was, for instance, based on tax consequences and creditor protection issues. Moreover, it also resulted from a battle between the legal profession and the accounting profession regarding the control of the jurisdiction of accounting. Whereas the first profession argued for a national accounting

model that is rule-based/transaction-based, the latter emphasised the principles-based/value-based IFRS-model. Apparently, the legal profession was more successful in convincing the legislator of the transaction-based model's practical usefulness in a broader political and social context, as the legislator listens to practical arguments. Therefore, as a result of a debate between competing interests and ideals, where national accounting solutions have been decided upon through political processes (ibid.), we may argue that the preference of the cost model is a result of a compromise made by the accounting profession, and especially the respondents involved in this study. As they are not allowed to apply IFRS in their individual accounts, the application of the revaluation model would, as one respondent argued, require parallel financial records for their PPEs. This could in turn imply, for instance, a great administrative burden for the companies. Hence, the significant preference of the cost model might be a result of the requirements for the individual accounts, and thus Swedish legislation. This may moreover be linked to PAT's political cost hypothesis, at least to some extent. Even though measurement at cost is not directly a tool to reduce profit and thereby taxation, as we earlier have argued in this essay, it may instead be resulting from a desire to satisfy the legislators. That is, in order to reduce negative political attention and scrutiny, the cost model may be considered as the obvious choice.

## **7.2 Implications for future research**

Throughout this study, we have identified some areas that we consider worthy further research. First of all, several respondents involved in this study have a rather negative impression of fair value measurement of PPEs. For instance, they do not consider the revaluation model to provide decision useful or relevant information. In addition, none of the respondents have received any suggestions from external professionals, such as auditors and analysts, regarding a change to fair value measurement. By contrast, fair value is argued to enhance the characteristics relevance, understandability and comparability, as presented in IASB's framework (Hague, 2007). It is also an important factor in the IASB and FASB's project of developing a joint conceptual framework for financial reporting standards, as financial reports should be able to meet the needs of investors and creditors by reporting fair values derived from present market prices (Whittington, 2008). Therefore, we question why the respondents, and probably also the external professionals, can hold such conflicting impressions of fair value measurement compared to the standard-setting bodies IASB and FASB, and this could be subject to further investigation.

Another area worthy more examination concerns change in case of institutional inertia. We have concluded that inertia probably exists regarding the respondent' measurement of PPEs, and we have also been able to identify where impetus for change comes from. Still, the dynamics that are promoting inertia are rather unclear. Hence it could be interesting to examine how organisations would respond to pressure for change, especially when it is not imposed through legislation.

In addition, concerning Diehl's (2010) research regarding the measurement option provided by IAS 16 on companies in the Baltics and Scandinavia, it could be interesting to investigate why the application of fair value is more frequent in the Baltics. For instance, we do question whether these companies do have more technical knowledge concerning fair value measurement of PPEs, or are less reluctant to change than Scandinavian companies. Hence, what is the driving force behind their fair value measurement?

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## **Appendix 1. Interview guide**

### **1. Why do you prefer the cost model?**

- Did you discuss the options provided by IAS 16 or make this decision actively?
- How did you reach your decision and did anyone actually decide upon it?
- Is your preference affected by tradition (i.e. inertia)?
- Does your desire to present reliable numbers to your stakeholders contribute to your preference?
- Do you discuss measurement of PPEs with other companies within your industry (in Sweden), and do you consider their choice of valuation model?

### **2. Potential implications of the revaluation model in economical terms**

- What would be the economic impact of the revaluation model on your financial statements?
- Have you calculated this effect?
- Have you considered its impact on bonus (through its impact on profit or loss) and/or the debt/equity ratio?

### **3. Impressions of the revaluation model**

- Do you see any advantages with a change to the revaluation model?
- If yes, what would this model practically demand?
- If no, what would be required in order for you to change to the revaluation model?
- Would you consider changing measurement model over time?
- Have any external professional parties, such as auditors or analysts, suggested a change of valuation model?

## **Appendix 2. Investor AB**

### **1. Owner-occupied properties**

- Why do you apply the revaluation model for your owner-occupied properties?
- How did you make this decision?
- How do you measure your owner-occupied properties at fair value?
- Does your desire to present reliable numbers to your stakeholders contribute to this choice?
- Has the revaluation model any impact on bonus (through its impact on profit or loss) and/or the debt/equity ratio? If yes, how?
- Has it been advantageous in any way to measure owner-occupied properties at fair value?
- What is the impact of the revaluation model on your financial statements?
- Do you discuss measurement of PPEs with other companies within your industry (in Sweden), and do you consider their choice of valuation model for the rest of your PPEs?

### **2. Other PPEs**

- Why do you apply the cost model for the rest of your PPEs?
- Does your desire to present reliable numbers to your stakeholders contribute to your preference of the cost model for the rest of these PPEs?
- What would be the economic impact of the revaluation model for these PPEs?
- Have you calculated this effect?
- Have you considered its impact on bonus (through its impact on profit or loss) and/or the debt/equity ratio?
- Do you see any advantages with changing your approach concerning these PPEs?
- If yes, what would the revaluation model practically demand?
- If no, what would be required in order for you to change to the revaluation model?
- Would you consider changing to the revaluation model in the nearest future?
- Have any external parties, such as auditors or analysts, suggested such a change?



