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# Appraising Investment Property at Fair Value

Practice in Listed Swedish Property Companies

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## **PREFACE**

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In this thesis we have had the possibility to deepen our knowledge within accounting and investment property appraisal. We want to thank all respondents who took their time to provide us with insight in the appraisal by answering our questionnaire. We would also like to thank the auditors and Bo Nordlund who gave us valuable information for our thesis. Finally we would like to thank our supervisor, not only for suggesting the topic for our thesis but also for guidance throughout our work.

Karlstad, June 4, 2007



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## ABSTRACT

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On January 1, 2005 a new accounting standard became the valid standard for all listed companies within the EU and among them the property companies. This means that the real estate business now appraise their property holdings at fair value, using the IAS 40 – *Investment Property* standard.

The new IAS/IFRS standards opens up for a more subjective judgment, and appraisal at fair value is used to a greater extent. An important problem which should be acknowledged when appraising properties at fair value is the uncertainty that the appraisal is associated with.

A description whether the property companies use the sales comparison approach or the income approach when appraising their property holdings have been given. And by reading annual reports and sending questionnaires to the listed property companies on the Swedish market a study has been made about how properties are appraised. Another aim was to find out if the standard has led to an increased comparability and a true and fair view.

In the frame of reference, information taken from annual reports and other literature has been presented, in order to form statements further on. The types of references used are accounting concepts, standards and models of appraisal. A number of definitions as well as the meaning of having an appraisal made internally and externally have been discussed.

The frame of reference is then followed by the empirical studies, where information derived from the annual reports has been combined with information provided by the respondents to our questionnaires. The respondents are not only represented by 13 companies but also by two auditors and Bo Nordlund, who is doing research within this field.

The result of the study is first of all that the cash flow model is the one used by all companies, whereas the sales comparison approach is used only to estimate certain components in the cash flow model. Secondly, property appraisal will always be surrounded by a high degree of subjectivity and uncertainty. This is why we question the expression 'fair value', will it ever be possible to reach a fair value when appraising?

## ZUSAMMENFASSUNG

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Am 1. Januar 2005 einen neuen Standard der Buchführung den rechtschäftigen Standard für die gesamten börsennotierten Unternehmen innerhalb der EU bekam, und unter diesen die Immobiliengesellschaften. Das bedeutet, dass die Immobiliengesellschaften heutzutage seine Bestände der Immobilien zu Zeitwert bewerten, durch die Benutzung des IAS 40 – *Investment Property* Standards.

Die neue Standards des IAS/IFRS eine subjektiver Beurteilung erlauben, und Zeitwertbewertung ist damit mehr benutzt. Ein wichtiges Problem das beachtet werden sollte, ist die Unsicherheit verknüpft mit der Bewertung.

Eine Nachstrebung des Aufsatz war eine Beschreibung zu geben, inwiefern die Immobiliengesellschaften die Vergleichsverfahren oder die Ertragswertverfahren benutzen, um die Bestände der Immobilien zu bewerten. Um studieren zu können wie die Immobilien bewertet werden, ist Information aus Jahresberichten und Enqueten zu den börsennotierten Gesellschaften am schwedischen Markt gesammelt werden. Noch einen Zweck war zu herausfinden, ob den Standard zu einer zusätzliche Komparabilität und angemessener Einblick geleitet hat.

Die Information des Jahresberichten und anderen Literaturen ist im Bezugsrahmen präsentiert um danach Schlussfolgen machen zu können. Den Bezugsrahm innerhält Buchhaltungsbegriffe, Standards und Bewertungsmodellen. Definitionen und auch intern und extern Bewertung werden im Kapitel diskutiert.

Nach den Bezugsrahm folgt die empirische Studiums, wo Information von Jahresberichten ist mit Information aus den Enqueten kombiniert. Die Befragten der Enqueten sind 13 Unternehmen, zwei Wirtschaftsprüfer und Bo Nordlund, der forscht innerhalb des Bereichs.

Ein Ergebnis dieses Ausatzes ist, dass den Cash Flow Modell von allen Unternehmen benutzt ist während die Vergleichsverfahren nur benutzt werden wenn besonderen Komponenten der Cash Flow Modell geschätzt werden müssen. Noch ein Ergebnis ist, dass Immobilienbewertung werden immer von einem hohen Grad der Subjektivität und Unsicherheit umgeben. Deshalb fragen wir uns über, den Ausdruck „Zeitwert“, wird es jemals möglich ein Zeitwert zu erreichen?

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## **ABBREVIATIONS**

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CEO	Chief Executive Officer
EU	European Union
GIPS	Global Investment Performance Standard – Real Estate
IASB	International Accounting Standards Board
SFI / IPD	Swedish Property Index / Investment Property Databank
ÅRL	Årsredovisningslagen / Annual Accounts Act

# 1. INTRODUCTION

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*This chapter presents the problem area which will be discussed in this thesis. It is introduced with a review of the background and problem area followed by the problem presentation which results in a purpose.*

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## **1.1 Background**

On January 1, 2005 a new accounting standard became the valid standard for all listed companies within the EU and among them the property companies. The new IAS/IFRS standards are influenced by the Anglo-Saxon accounting traditions where the true and fair view represents the guiding principle. This involves a challenge for a country such as Sweden that is characterized by a legalistic view and has a long tradition of the prudence concept. Instead of making sure that the accounting strictly follows the law, the new standards means that the market takes on a greater part in managing the appraisal.

The introduction of the IFRS standards means that the real estate business now appraise their property holdings at market value, using the IAS 40 – *Investment Property* standard. According to this standard the companies could chose to appraise their investment properties at fair value or to the historical cost with deductions for depreciation.

The purpose of having unified accounting standards within the EU is to create a functioning capital market, which reinforce the free mobility of capital and create opportunities for companies to compete having similar conditions (SOU 2003:71). Bengtsson (2006) concludes, after having completed his study that the new rules and regulations contribute to a considerably better conformity between the reported equity of the property companies and their values on the stock market.

An important problem to enlighten in the work of property appraisal at fair value, is the uncertainty embedded within the appraisal.

## **1.2 Problem area**

The new IAS/IFRS standards open up to more a subjective judgment, and appraisal at market value is used to a greater extent. These changes have an impact on the quality of the accounting, while a more complicated accounting represents a problem for the ones setting the norms, the producers as well as the external investors. An important problem which should be acknowledged when appraising properties at fair value is the uncertainty that the appraisal is associated with.

Question is what signifies an appraisal? Betts and Ely (2005, p. 2) gives a simple explanation, that an appraisal is “*an estimate and opinion of value*”. They continue by saying that this is a way of defining an appraisal while it is neither a statement of value nor a fixing of value. Instead, it is one person’s opinion, i.e. the appraiser, based on whatever skills, training, data and/or objectivity that person possesses. For the appraisal the appraiser has a number of models at disposal, which are scientifically supported but

are in fact based on assumptions made by the creators of the different models, which the appraiser then has to handle Nilsson, Isaksson and Martikainen (2002) add. They also explain that this is the reason why a single appraisal never generates an exact and indisputable value.

Then there is the concept of value which can be interpreted in a wide range of ways. Betts and Ely (2005, p. 45) writes that “*value is generally defined as the dollar worth of a things, it is a word that has many different meanings.*” They conclude that because of the different interpretations of the word, value can be very subjective. They explain further that value means the worth, usefulness, or utility of an object to someone for some purpose. Depending on the purpose for which an object is to be used or for what the person is seeking to use it, the so called value of an object varies.

Betts and Ely (2005) present four basic elements of value, which must be present before an object can have value on the market. The first one is utility or usefulness, meaning the ability to arouse a desire for possession. The second element is scarcity; there should be a relatively short supply, and the third element presented is demand, meaning the desire to possess along with the ability to buy. The fourth and final element is transferability, which is the ability to change ownership or use. They add that to be any measurable benefits from owning an object, it must be useful and scarce at the same time. Further, Betts and Ely (2005) conclude that real estate does not have an intrinsic value. The value of real estate is in fact derived from the rights and benefits that come with its ownership, possession and use.

A practical problem area arose when studying the companies’ annual reports. First of all each of the 17 companies had its own description on how their property holdings had been appraised, but the descriptions were also meager and indistinctly explained. We then understood we had to find out more about the models of appraisal in order to fully grasp what was written in the reports. We then decided to add this in our thesis.

### ***1.3 Presentation of Problem***

Since the IAS 40 regulation became the new accounting standard for property investments within the EU, the companies had the choice to appraise their property holdings at fair value or according to the cost model. All companies listed on the stock market chose to appraise at fair value, following the IAS 40. According to our studies of the listed companies’ annual reports, no company is appraising their properties using the direct sales comparison approach which is suggested to be the standard providing the truest and fairest view. Instead, the companies appraise their property holdings using a type of cash flow model. This fact has brought us to formulate the following questions:

- How come the property companies have chosen to use the cash flow model instead of the sales comparison approach?
- Which are the reasons for not using the sales comparison approach?
- What are the reasons for using internal and/or external appraisal? Is there one that is being used more frequently?

- We want to take a closer look at the weight of comparability between the companies.
- Do the company results show a “true and fair view”?

### ***1.4 Purpose***

The purpose of this thesis is to describe and explain whether the property companies use the sales comparison approach or the income approach when appraising their property holdings. We want to examine how the property companies appraise their properties and if the standard has led to an increased comparability and a true and fair view.

### ***1.5 Delimitation***

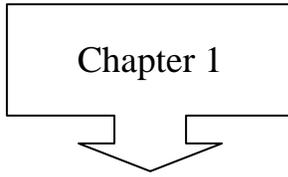
First of all we chose to study the IAS 40 standard. We wanted to concentrate our study on property companies, and among these only the companies listed; since they are obliged to use this standard, whereas non-listed companies are not. The listed property companies were a total of only 17 and we therefore consider it to be a manageable selection.

It is our choice not to discuss the acquisition value in this thesis as it is not currently used in practice. Instead, we have chosen to focus only on the parts concerning the fair value appraisal in the IAS 40 standard. This means that we will discuss the sales comparison approach and the income approach. This also means that our focus is on the actual appraisal, concerning methods used, parties involved in the appraisal and so on. We have for example not taken the effects of the appraisal in the income statement and balance sheet into consideration.

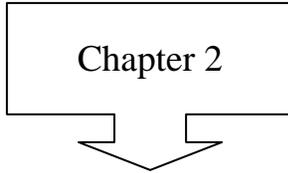
### ***1.6 Previous Research***

The IAS 40 standard has been a subject of research of a number of theses. Many theses have been found where the choice of appraisal between acquisition value and fair value has been discussed. Quite a few theses also study the outcome of the implementation of the IAS 40 standard. Though, no thesis have been found which look into the methods of fair value appraisal.

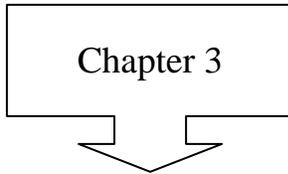
### 1.7 Disposition



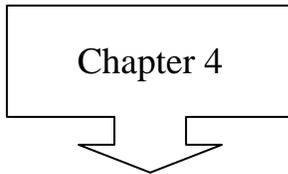
**INTRODUCTION** – this chapter introduces the problems concerning the topic chosen. It also describes the purpose of this essay.



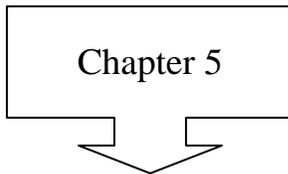
**METHOD** – this chapter describes the methods used and the course of action in the information gathering.



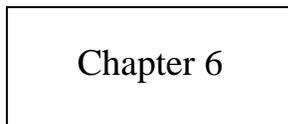
**FRAME OF REFERENCE** – this chapter presents relevant concepts of accounting and other interesting aspects of our study.



**THE EMPIRICAL STUDY** – information gathered from annual reports and questionnaires are presented in this chapter.



**ANALYSIS AND DISCUSSION** - the empirical information is related to the information in the frame of reference.



**CONCLUSIONS** – in this chapter the conclusions of our study based on the purpose of our essay is presented.

## 2. METHOD

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*This chapter describes the methods used and our course of action to gather and put together information.*

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For this thesis we have chosen a scientific method. It is said to be the preferred method for accounting research according to Ryan, Scapens and Theobald (2002). Bryman (2002; Layder 1993) writes that the idea that the principles of natural science can be applied for a study on a social phenomena has been rejected to a certain extent. The differences between natural science and social science have been noted by Halvorsen (1997) who describes the differences in purpose. Natural science aims to explain the laws of nature, i.e., to search for explanations and causes to physical and biological phenomena which in turn are foundations for predictions and control. The author explains further that the objective of the social science principle on the other hand is to expose and explain social regularities and to understand relationships in the society; and this is consequently the science of this thesis.

Halvorsen (1997) then continues writing that the hermeneutic approach rejects the ideals of natural science for social researching. He writes further, that the natural science view when doing social research is called positivism, which claims the science to be neutral and free from valuation. The critic towards positivism, referred to by Halvorsen (1997), argues that there can not be any unchangeable laws for the human behavior or for the society in contrast to natural laws. He also writes that social science is characterized through the communication with its object of study, there is no obvious difference between the observer and the observed; unlike in the natural science. And further that the idea of hermeneutic is to analyze a text from the meaning and perspective of its author.

Within accounting research there are researchers who are critical towards the image of accounting as a neutral and professional procedure, according to Artsberg (2005, p. 91). She describes two types of critical studies; one of them is mainly about criticizing and the mission of the research is to analyze and bring out injustices in the society in order to start a “*the public conversation*”; meaning that there is a lack of balance between those who have more and less power. The second type of critical researchers goes further and formulates and suggest alternative ways of accounting and accounting models.

This thesis has a critical focus towards the main standard and alternative standard in the IAS 40 and consequently has another critical direction.

### ***2.1 The Inductive Approach***

There are two approaches when collecting data; they are termed deductive and inductive. Halvorsen (1997) explains the inductive way of thinking means that empirical observations are made without any form of theory. In the inductive strategy are empirical studies made without any expectations. Jacobsen (2002) then write that it continues with systemizing information and thereafter are the theories formulated from the foundation

made. He point out that the goal is that nothing shall limit the information being collected. Bryman (2002) states that the inductive strategy often is associated with a qualitative approach and that the deductive strategy is associated with the quantitative approach. Halvorsen (1997) writes that a deductive-logical way of thinking is the starting point for empirical observations in the theories. The deductive strategy means, according to Jacobsen (2002), that expectations are first collected through theories and earlier empirical studies about what the world looks like, thereafter are empirical studies made to examine whether the expectations were correct. He then continues writing that critics of this strategy mean that the collected information is limited and that there is a risk that important information is overlooked, because the researcher only searches for information which he or she finds relevant.

According to Bryman (2002) is the theory a result of a study, it means that one makes conclusions based on the observations that can be generalized. But many qualitative studies do not generate any theory; the theory is often used as background to qualitative studies. This thesis has more of an inductive strategy because we have not made any theories before we made our empirical study. We have read about the subject and read the annual rapports of the companies before we made the questionnaires, this to be able to find relevant questions.

## ***2.2 The Qualitative Method***

Bryman (2002) writes that several authors distinguish qualitative and quantitative methods. Some mean, according to Layder (1993, p. 110) that there is a fundamental differences, but for others there is no specific difference at all, and some even think that the “*division is false*”. Jacobsen (2002) for example, is the opinion that the distinction between a quantitative and a qualitative method lies in the way of use. When using a quantitative method numbers are collected, whereas the usage of a qualitative method involves the collection of words. He writes further that the classical measuring instrument for a quantitative study is a questionnaire with given alternatives for answering. The critics towards this method claim that it does not measure anything besides the understanding of the researcher. The foundation for this standpoint is the fact that researchers define the questions themselves as well as the alternative of answers. According to Holme and Solvang (1997) the qualitative method is used when trying to study a phenomenon from the inside to get a deeper and complete understanding. They continue saying that there is closeness between the researcher and the researched and the behavior of the researcher can affect the result. They state further that qualitative methods are unsystematically and unstructured observations, like in-dept interview or a interview guide without already made questions or answer alternatives.

The method used in this thesis has a more qualitative character than a quantitative, this because we have used a questionnaire without answer alternatives and we have collected words instead of numbers. Even if this thesis is mostly qualitative we have also used what Bryman (2002) terms quasi-quantifying, which means that we have attempted to clarify the frequency and occurrence of the researched objects.

### **2.3 Data Collection**

Both primary data and secondary data have been used in this thesis. The secondary data were mainly accounting data such as annual reports from institutional sources, because it was the obvious most effective way to find out how the companies have been working with the new standard. Then we have also used process data, such as articles.

Our primary data are the answers obtained from the anonymous questionnaire as well as individual questionnaires sent to the university assistant master Bo Nordlund who is doing research in this field, and the anonymous questionnaires sent to two property company accountants. Some of the data of this thesis has quantitative qualities because they are measurable and can be expressed with numbers, but the main part of the data has qualitative qualities. This according to Halvorsen (1997) tells something about the survey entities, for example what is typical.

The thesis is a comparative study. Studies using this approach are research made to find the similarities and differences of a social phenomenon (Halvorsen 1997). In our study this means that 17 property companies have been compared to one another to see if any interesting findings could be made.

### **2.4 Questionnaire**

The procedure for primary data collection was done using questionnaires. All the observed property companies received identical questions which characterizes a quantitative method, this according to Halvorsen (1997). He writes further that standardized interviews have certain advantages, for example could the amount of information be reduced to the area of which we are interested. We used a questionnaire with a limited number of questions, a total of seven questions. This limitation was chosen to fit the limited amount of time which the possible respondents considered themselves to have. The reason to why we have chosen to have anonymous questionnaires is because we hope it will lead to detailed answers, and we hopefully receive more answers.

We have sent the questionnaire to persons within the companies listed on the Swedish stock market, who according to themselves have the required knowledge to answer our questions. They all received them through e-mail and we received answers from 13 of the 17 companies. This was the most advantageously way for the respondents; besides there was no possibility to carry out the necessary interviews in another way, such as personal interviews. An aspect to take into consideration when sending out a questionnaire is that there is no interviewer and therefore the questionnaire must be easy to understand and to answer, this has been written by Bryman (2002). The questionnaire consisted of seven already formulated questions for which there were no ready answers; this is according to Halvorsen (1997) called an unstructured interview. A questionnaire must also, according to be short to minimize the risk that a respondent does not answer Bryman (2002) adds. He continues saying that further advantages with a questionnaire are that it is not expensive to administrate, especially since the respondents can be reached in a wider geographical area; as well as the fact that a questionnaire can be sent to a lot of respondents in a short period of time. Besides Bryman (2002) adds, there is no effect

from an interviewer. Disadvantages, which can appear when using questionnaires, also mentioned by Bryman (2002) is that the answers could be delayed. Another possible problem is that the respondent has no one to ask when trying to answer the questions if they are difficult to understand, that is why it is of great importance to outline clear straightforward questions. Furthermore he explains that there can be no attendant question asked, a respondent can avoid answering questions and there is also a risk with respondents falling off.

Our questions had an open approach and were systematically presented; this is discussed by Halvorsen (1997). He also concludes that open questions have advantages such as a possibility to disclose knowledge, misunderstanding and unexpected frames of imagination. As answers have been given by 16 respondents altogether, we have chosen to present a selection of the most interesting answers for our purpose, instead of giving a full report on their answers. As this would not lead to an improvement of the empirical study, it would rather cause information overload.

According to Silverman (2005) the type of our case study can be defined as a “collective case study” which means that a general phenomenon is investigated by studying a number of cases, though we have through annual reports investigated the population. The results of our study are rather likable to generalize in accordance with the methods of generalizability, also discussed by Silverman (2005). There were 13 of 17 listed Swedish property companies answering our questionnaire, this means that the fall off has been rather small. The sample of 13 answers can be seen as a representative of the population, this once again according to Silverman (2005). He suggests a few methods for obtaining generalizability from cases to populations. One, identical to ours, is to obtain information about relevant aspects of the population and then compare the cases with the information gathered.

Another method is to seek out the sample in a purposive way, i.e., to search out a type of group with similar settings in which the process being studied are most likely to occur (Silverman 2005). The process of IAS 40 is valid to all company listed, but we decided to investigate the matter within the property companies, as more than 90 percent of the assets are investment property in most of those companies.

## ***2.5 Validity and Reliability***

The two measuring terms used mostly in theses are validity and reliability. Bryman (2002) notes that since measurement are not the first interest for researchers with qualitative method, is the term validity not of a particular interest for such studies while the validity concerns measurement of numbers. He then continues that qualitative studies can be judged and valuated from other criteria than the ones of the quantitative studies continue. From the view of those who think that there can be more than one explanation to reality Bryman (2002) adds. Regarding these aspects there are two criteria which can be used instead, namely trustworthiness and authenticity.

### 3. FRAME OF REFERENCE

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*In this chapter we will present a few concepts of accounting relevant to our study, the IAS 40 standard and other interesting aspects of investment property appraisal.*

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#### **3.1 The Continental and Anglo-Saxon approach**

In appraisal there are two founding views on accounting which influence the regulations and concepts used in different countries worldwide. Those two views explained by Bengtsson (2000), namely the continental approach, which is the primer concept used in Swedish accounting culture; and the Anglo-Saxon approach, which is widespread in the United States are based on different value concepts. The different value concepts stem historically from who is the target group of the accounting reports.

The continental approach on accounting apply to the cost approach which focuses on the balance sheet and where it, according to Johansson et al. (2004) is important that the companies provide relevant and reliable information to the banks, which in turn are the lenders from where the companies are financed; but also to the taxation authorities. In accordance to this approach the assets are appraised by using the prudence concept, meaning that the assets are appraised at historical acquisition value.

The Anglo-Saxon approach is stock market and operating statement oriented, while the companies in countries using this approach are to a great extent financed by private investors, i.e. stock holders. Bengtsson (2000) predicts that the increasing orientation towards a stock market financing in the countries having a continental tradition will in the future lead to a shifting standard, into a more Anglo-Saxon approach. Also Nordlund (2004) has observed a turn of the focus towards the investors, especially the owners, when accounting principles are being agreed on today. Bengtsson (2000) notes that it is important to be aware of the fact that some Swedish multinational companies have to create a report following the American standards, i.e. Anglo-Saxon tradition, beside the annual report following Swedish regulation, meaning the continental tradition and the IAS.

Bengtsson (2000) continues by writing that the accounting is conceived as an instrument for the management and owners in accordance with the principal-agency theory in the Anglo-Saxon tradition, whereas the continental approach is to inform a wider spectrum of stake holders. To use appraise assets at fair value represents one of the keystones in the Anglo-Saxon approach, whereas the continental tradition stands for the use of historical cost.

Sweden, which belongs to the group sharing the continental tradition, is traditionally bounded with a strong connection between accounting and taxation. This means that the reported result has been the same one as the result which is the foundation for taxation (Johansson et al. 2004; Falkman 2004). Johansson et al (2004) says that since the standards founded by IASB shall be applied by all listed companies in the EU and the IASB has a pronounced focus towards informing the stock market, Sweden has now turned more and more towards the Anglo-Saxon approach. This approach is according to

Artsberg (2005) considered to be closest to the standards of IASB. The change from a continental tradition into an Anglo-Saxon can lead to complications, Bengtsson (2000) believe that the harmonizing of the two accounting cultures can be difficult. Johansson et al. (2004) points out that the IASB does not regard the needs of the Swedish tax authorities or the Swedish tax laws when founding standards and Falkman (2004) has seen a trend in separating the accounting reports from the taxation reports.

The continental and Anglo-Saxon approaches summarized by Bengtsson (2000, p. 129) are interpreted in table 3.1.

<b>Continental approach</b>	<b>Anglo-Saxon approach</b>
Regulation primarily with law	The regulation is mostly voluntary
Governmental regulation	Regulation in the private sector
The form of the transaction is deciding	The meaning of the transaction is deciding
Legal view	Fair view
Law over right	Right over law
Weak accounting corps	Strong accounting corps
Financing with bank loan	Financing with stock market
Emphasis on the distribution role of the accounting	Emphasis on the service role of accounting
Most important is calculative qualities of the accounting	Most important is informative qualities
Focus on stake holder model	Focus on principal-agency theory
The prudence concept	The matching concept

Table 3.1 The Continental and Anglo-Saxon Views (Bengtsson 2000, p. 129)

## 3.2 Concepts of Accounting

### 3.2.1 The Consistency Concept

The principle means that the information and numbers shall be calculated and disclosed in the same way as the previous year. The concept of consistency is regulated in the Swedish law, where it is stated that “the same principles for valuating, classifying, separating the entry and part entries shall consequently be applied from one financial year to another” (ÅRL, SFS 1995:1554, Ch. 4 §2). This principle is described under two headings in the IAS 1, the consistency frame and comparable information. The reasons for changing a company’s principles of valuation and classifying are sometimes strong, and it can be done even though the changing itself is at conflict with the principle of consistency, this according to Johansson et al. (2004). They explain further that

sometimes there have been a new recommendation or law founded which a company is obliged to follow, or when a company has been merged with another, and those need to have the same principles. There could also be a change of the principles of valuation and classifying when a company shows bad results and the change is used as a cover. This is, according to Johansson et al. (2004) the reason why the principle of comparativeness exists in the law. Sometimes though Jönsson and Lundmark (1999) conclude that a new principle can show fairer view of a company and this of course can cause a change to be made.

Johansson et al. (2004) describes the principle of consistency with the example that when an annual report is used, for example as a basis for decision, there is a rising need for comparison; to be able to see a company's result and development over time or comparing a company's annual report with annual reports made by other companies'. With the IAS 40 the companies in different countries could be compared with one another.

### **3.2.2 The Prudence Concept**

The prudence concept has according to Falkman (2004) existed for a long time within accounting, and has an owner-creditor perspective which means that the incomes and assets should not be overvalued and that liabilities and costs should not be undervalued. Jönsson and Lundmark (1999) add that the concept explains when to separate and merge entries. Kinserdal (1995) remarks that the prudence concept can not be made fully, it must be realistically applied, otherwise the principle of comparativeness will be lost. This concept leads to stable conditions in accounting and there will be no dramatic actions that will change the owner situation and threaten the creditors, according to Falkman (2004).

### **3.2.3 The Matching Concept**

According to Artsberg (2005) this concept means that the balance sheet includes a mix of assets and liabilities appraised at fair value. The problem with this principle is to find a method that in the best way can relate the costs to income, i.e. how they are to be valued. The cause-and-effects are a central part of this concept and therefore it would be fairer to match present value costs against income, while income is expressed in "present value". The accruals concept is by some interpreted in such a way that matching, i.e. accrual accounting, shall be valid for both the incomes and costs. Artsberg (2005) concludes that this means that the matching concept is in conflict with the prudence concept.

### **3.2.4 True and Fair View**

This concept of fair view has not been included in the Swedish law, instead has the expression "*god redovisningssed*" been expressed in the law, meaning the generally accepted accounting principles in Sweden. Johansson et al. (2004) describes the true and fair view by explaining that sometimes there are situations when the result is misleading even though all of the accounting rules have been followed. Therefore, in most regulations there are exceptions for a company to use instead of having to show a fair view. The

conception of true and fair view has its origin in Great Britain and was transferred to Sweden with the EU accounting directive. But the Swedish interpretation is clearly different from the British, according to Johansson et al. (2004) and Thorell (2003). They mean that there are no countries that have the same interpretation even if the original standard is the same. From a Swedish point of view Johansson et al. (2004) add that a company is showing a fair view if all of the rules of accounting have been followed, and if there were one which could not be followed, there are an explanation informing why. Thorell (2003) points out that it depends on who the reader is when an image of a company is being true and fair.

### ***3.3 Definition of Real Estate***

Real estates have as market objects a number of more or less pronounced characteristics. Among them, a fixed location with particular factors of location, surroundings and uniqueness, Persson (2006) explains. He also suggests other characteristics such as long period of use and the fact that the investments in real estate require large capital investments on a regular basis, often in combination with financing through loan.

Low turnovers characterize the “after use” real estate market which holds the old estates in a market. The market information is according to Persson (2006) often brief and delayed.

Betts and Ely (2005) explain further that any type of real estate may be purchased for income and/or investment purposes. For property that is primarily purchased to generate income is termed income property, where the most common type is the multiple-residential property including large and small apartment buildings. However, income or investment property also includes commercial and industrial properties.

### ***3.4 IAS 40 Investment Property***

IAS 40 prescribes the accounting treatment for investment property. Johansson et al. (2004) states that all listed companies within the EU are, since 2005 obliged to follow this recommendation and it is also allowed for the non-listed companies to use. The standard is founded by IASB which is a private, global organization sponsored by accountants which standard has been accepted by the EU. This part, 3.4, is all based on what is stated in the IAS 40 standard (2007) established by IASB.

#### ***3.4.1 Definition of Investment Property***

An investment property is in IAS 40 (2007, paragraph 5, p. 2016) defined as:

*“property (land or a building-or part of a building- or both) held (by the lessee under a finance lease) to earn rentals or for capital appreciation or both, rather than for (a) use in the production or supply of goods or services or for administrative purposes; or (b) sale in the ordinary course of business.”*

Each property must be classified individually. The generated cash flows from an investment property are independent of the other assets held by an entity. When an investment property is to be recognized as an asset in the balance sheet, there are two conditions to be fulfilled. First it must be probable that the future economic benefits that are associated with the investment property will flow to the entity, and second, one must be able to measure the cost of the investment property reliably. An entity need to develop judgment criteria for when a property qualifies as an investment property, in order to gain consistence in this type of judgment. When the classification is difficult, the entity is required to disclose the criteria. The investment property costs shall be evaluated to the recognition principle at the time they are incurred. Costs incurred initially to acquire an investment property and costs incurred subsequently to add to, or replace part of, or service a property, shall be included. Costs of day-to-day servicing, primarily the cost of labor and consumables are often described as the “repairs and maintenance” and shall not be recognized in the carrying amount of an investment property, according to the principle.

### 3.4.2 The Definition of Fair Value

Fair value is in IAS 40 (2007, paragraph 5, p. 2016) defined as:

*“the amount for which an asset could be exchanged between knowledgeable, willing parties in an arm’s length transaction.”*

IAS 40 states that it should exclude an estimated price inflated or deflated by special terms or circumstances such as atypical financing, sale and leaseback arrangements, special considerations or concessions granted by anyone associated with sale.

The fair value shall reflect market conditions on the balance sheet day. It shall be time-specific at a given date. The fair value may be incorrect or inappropriate if it is estimated some other time than the balance sheet day because market conditions change. Another assumption is that the exchange and completion is simultaneously made by the contract for sale.

The fair value reflects, among other things, rental income from current leases and reasonable and supportable assumptions that represent what knowledgeable, willing parties would assume about rental income from future leases in the light of current conditions. Any cash outflows, including rental payments and other outflows that could be expected in respect of the property shall also be reflected, on a similar basis.

By “knowledgeable” it is meant that both the willing buyer and the willing seller are reasonably informed about the nature and characteristics of the investment property, its actual and potential uses and market conditions at the balance sheet date. The willing buyer is described as someone who is motivated, but not compelled to buy, and the buyer is neither over-eager nor determined to buy at any price. This assumed buyer would not pay a higher price than a market comprising knowledgeable, willing buyer or seller would require. The seller is defined as willing to sell but is neither over-eager or forced to

sell at any price, nor is the seller prepared to hold out for a price not considered reasonable in the current market conditions. This seller is motivated to sell the investment property at market terms for the best price obtainable. Because this willing seller is a hypothetical owner, the factual circumstances of the actual investment property owner are not part of this consideration.

An “arm’s length“ meaning that the transaction between the parties is presumed to be between unrelated parties, each acting independently, and that the parties do not have a special relationship that makes prices of transactions uncharacteristic of market transactions.

An entity is then encouraged to determine the fair value model of investment property on the basis of a valuation of an independent appraiser, though, it is not required. The independent appraiser should hold a recognized and relevant professional qualification and should have recent experience in the location and category of the investment property being appraised.

### 3.4.3 Methods of Fair Value

In IAS 40 (2007, § 45, p. 2022) it is stated that;

*“the best evidence of fair value is given by current prices in an active market for similar lease and other contracts. An entity takes care to identify any differences in the nature, location or condition of the property, or in the contractual terms of the leases and other contracts relating to the property.”*

But when there is an absence of current prices in an active market of the kind described in the § 45, an entity shall consider information from other sources, which is described in § 46. The first alternative is to check current prices in an active market, but for properties of a different kind, or in a different condition, or on a different location, or subject to different lease or other contracts, but then adjusted to the investment property. The second option is to consider recent prices of similar properties on less active markets. These prices must then be adjusted to reflect any changes in the economic conditions since the date of the transactions occurred at the prices on the less active market. As a last option it is possible to use discounted cash flows. The discounted cash flows shall be projections based on reliable estimations of future cash flows, supported by the terms of any existing lease and other contracts and (when possible) by external evidence such as current market rents for similar properties in the same location and condition. Discount rates used to discount the cash flows shall reflect the current market assessments of the uncertainty in the amount and timing of the cash flow. A remark in IAS 40 says that in some cases the various sources of information listed in § 46 may suggest different conclusions about the fair value of an investment property. An entity is obliged to consider the reasons for those differences in order to come to the most reliable estimation of fair value within a range of reasonable estimations. When the variability in the range

of reasonable fair values estimated is very large and the probability of the various outcomes difficult to assess a single estimation of fair value may be useless.

The fair value is not allowed to reflect synergies between property and other assets, tax benefits- or burdens for example; they would not be factors available to knowledgeable, willing buyers and sellers. It also does not reflect future capital expenditure for improvements of the property. If the present value of the investment property payments exceeds the present value of the related cash receipts it shall apply the IAS 37 Provisions, Contingent Liabilities and Contingent Assets.

When the fair value of an investment property cannot be reliably determined the entity shall use the cost model in IAS 16. This occurs when comparable market transactions are infrequent and when, for example, discounted cash flow projections are unavailable. In this case fair value shall be applied on the other investment properties. Once the fair value is applied, it shall be used continuously even if comparable market transactions become less frequent or if market prices become less readily available.

### ***3.5 Different Aspects of the IAS 40 and the Fair Value***

Different opinions have been stated regarding the IAS 40 standard. Those who support a fair value model argue that they believe that it gives the users of financial statements *“more useful information than other measures, such as depreciated cost”* (IASB 2007, § B44, p. 2046). They think that income from rent and changes in fair value are *“inextricably linked as integral components of the financial performance of an investment property”* (IASB 2007, § B44, p. 2046) and that it is necessary that this financial performance are measured at fair value. Another reason for using the fair value model is that an investment property generates cash flows largely independent of the other assets held by an entity. Therefore the supporters of the fair value think that

*“the generation of independent cash flows through rental or capital appreciation distinguishes investment property from owner-occupied property”* (IASB 2007, § B45, p. 2046).

The possibility to choose between a fair value and a cost model was given for two reasons. The first is to give preparers and users time to gain experience by using fair value model. The second, it provides the time for countries with less-developed property markets and valuation professions to mature.

The opinions of those who oppose measurement of investment property at fair value are also referred to. They say that (IASB 2007, § B46, p. 2046)

*“[...] there is often no active market for investment property [...]. Real estate transactions are not frequent and not homogenous. Each investment property is unique and each sale is subject to significant negotiations. As a result, fair value measurement will not enhance the comparability because fair values are not determinable on a reliable basis [...]. A*

*deprecated cost measurement provides a more consistent, less volatile, and less subjective measurement”.*

Also, the measurement at fair value is too costly in relation to the benefits to the users according to those who resist fair value. It is also said that when a market is thin it can be impossible to measure the fair value in a reliable manner, or when the market is not active. Further arguments against appraising at fair value is that “[...] *the market for property is not liquid enough and market values are uncertain and variable [...]*” (IASB 2007, § B46, p. 2050). Thorell (2003) also criticize the fair value. He is doubtful towards the use of this regulation on investment properties in Sweden. In particular those located outside the large cities. He is questioning whether this regulation really is reflecting current market value, because the markets of such properties often lack sufficiently high activity. He thinks that if fair value are to be applied to even more entries in the annual report, the current assets on one hand are up to date, but at the cost of the information value. This because of the usage of the report as a basis for prognosis or discounted cash flows.

Further according to IASB (2007) it is stated that this is the first time a fair value model was set for a non-financial asset and the financial market is a lot more liquid than the property market. There were many who opposed this for conceptual and practical reasons, especially for companies whose main activity is not to hold property for capital appreciation. Another reason was that some markets for certain types of investment properties were not yet sufficiently mature to work as a base for estimating a fair value. Then there were opinions expressing that it was not possible to create a sufficient definition of investment property and that it therefore could be a fair value model.

In this context, the report put together by Lantmäteriverket<sup>1</sup> and Mäklarsamfundet<sup>2</sup> (2006) explains the concept of market value and the concept of price even further. It is written that the relationship between the two concepts is close, although they are not identical. Market value is the most probable price at a possible sale; it is a type of prognosis for an imaginary transaction. A price, though, is a result of an actual transaction where more or less randomly decided relations play a part. This means that the price can vary in a specific transaction depending on the different prerequisites for the transaction while the market value only is the most likely price to occur, this according to Lantmäteriverket and Mäklarsamfundet (2006).

Lantmäteriverket and Mäklarsamfundet (2006) conclude further that on a specific market, prices will be distributed according to a normal curve, while there are both higher and lower prices than the market value. This can according to this report be explained hypothetically: if a sale were made several times at one particular occasion there would still be a variation in prices. This is due to the fact that buyer and seller do not share the same information and knowledge; instead they have very different information, along with varying experience of property sales, different preferences, etc. Even though the prices would be spread on the curve, there would be regularity in the spreading and most

<sup>1</sup> Swedish organization, which for example develops methods for property appraisal.

<sup>2</sup> Swedish business organization for professional real estate agents.

prices would lie in the central price interval. The most likely price is the one most noted, which is then said according to Lantmäteriverket and Mäklarsamfundet (2006) to be the market value.

### 3.6 *Uncertainty Interval*

A fair value can give evident effects on results and financial strengths depending on uncertainty in the appraisal and the economic situation among others, as indicated by Persson and Nordlund (2003). They write further that there is a problem by property appraisal with variance and uncertainty in estimating the value. A variance or uncertainty of +/-10 percent is according to Persson and Nordlund (2003) not unusual when estimating market values. Though, according to Lantmäteriverket and Mäklarsamfundet (2006) is a disclosed interval useless, unless the probability of the estimated value to stay within the interval is mentioned. The interval should be based on statistical calculations founded on comparable material to be correct. Lantmäteriverket and Mäklarsamfundet (2006, p. 59) exemplify by stating that when the price for the property XXX lies within the interval with 90 percent accuracy, the price will vary between 1 400 000–1 600 000 SEK, and the most likely price is estimated to be 1 500 000 SEK. It is important to understand that it is impossible for the appraiser to guarantee that the price stays within in the stated interval. If there are similar objects that are easily comparable then the certainty of the estimation is considered to be great, and the uncertainty interval can be set to a smaller range, for example +/-5 percent. A greater uncertainty interval should be used for objects with greater uncertainty; this interval could be +/-20–30 percent, according to Lantmäteriverket and Mäklarsamfundet (2006).

Persson and Nordlund (2003) also note that the market value on properties over time show cyclical lapses, which in turn follows inflation and underlying economic growth. The effects of these cyclical lapses can influence market values and accounting. They lay weight in being aware of the extent of the uncertainty in the value estimation, this for the reason that the estimated change in value affect the income statement each year. According to Persson and Nordlund (2003) the uncertainty is of the extent and art that the information in general should be represented in the annual report. Because of the cyclical lapses in the property value, Person and Nordlund find it necessary that the real estate companies inform about differences in percentage in valuation changes and its effects on the financial strength and in other profitability measurement.

Also Nordlund (2004, p. 5) writes that a certain variance/uncertainty arises when an investment property is appraised at fair value, and he thinks it can bring “*conceivable problems*”. Nordlund (2004, p. 19) thinks that the long-term approach is being lost because the fair value model “*focus on nominal values and ‘true and fair’ snapshots of investment properties [...]*”. This can according to Nordlund lead to a sub-optimization and refers to bonus and incentive systems which are based on the annual reports.

To reduce the uncertainty in the capital market Persson and Nordlund (2003, p. 32) are the opinion that “*there is of great importance that agreement should be attained regarding the use of value concept and valuation models*”. According to them the

information about how input have been used and assured in quality, if inspection on the property has been done should be included in the annual report. They also demand assurance that the valuator does not have owner interest in the company which properties the valuator values. Another request concerns if valuation process and value reports is following a homogeneous standard.

### **3.7 Models of Evaluation**

Lantmäteriverket and Mäklarsamfundet (2006) write that it is rather common that both the sales comparison approach and income approach are used in practice, when appraising tenement building and industrial buildings. But those models often provide different results, which raises the question of what model to choose. Lantmäteriverket and Mäklarsamfundet (2006) states that there is no simple answer. Before choosing a model it is wise to examine the reason for these major differences. In the book it is suggested to look at the number of properties, the homogenous of the material, how the conveyances are spread during the years and the certainty of the rental information.

Persson (2006) has made a rough classification of the different evaluation models used when appraising real estate, namely the sales comparison approach and the income approach.

#### **3.7.1 The Sales Comparison Approach**

The sales comparison approach, also known as the market approach, is based on market analysis of conveyances of real estates which are considered to be comparable. This means that the appraisal of a property is made by comparing to similar properties, so called object of comparison, that have recently sold on the open market (Persson 2006; Betts & Ely 2005). This expresses the principle of substitution. Betts and Ely (2005) also state that to be able to use this approach properly requires good knowledge of the subject property, understanding of the neighborhood, city and region where it is located. From their perspective, which is in fact to describe the American market, the strengths of the sales comparison approach is its simplicity; it is straightforward and easy-to-understand. Persson (2006) on the other hand argues from a Swedish point of view.

The ideal situation for the sales comparison approach is, according to Lantmäteriverket and Mäklarsamfundet (2006), when there are identical comparable object, but this is practically never the case. The solution to any possible quality differences between the subject property and the object of comparison is solved through standardization. The way of standardization must be decided in each individual appraisal situation, which depends on the property itself and the data access.

### 3.7.1.1 *The Direct Comparison Approach*

Betts and Ely (2005; Persson 2006) divide this approach into two different methods where *the direct comparison method* is the first. Persson (2006, p. 367) in turn has divided the direct comparison method into six different steps:

- a) define and delimit a relevant market
- b) find an object of comparison
- c) gain information about the object of comparison
- d) work up, analyze and interpret the material
- e) apply and make corrections on time and characteristic
- f) make final appraisals and estimate insecurity in the market value appreciation

#### *a) define and delimit a relevant market*

There are no general rules of market delimitations; instead it is for the appraiser to make relevant delimitations from the current situation. A district could be a suitable delimitation when appraising a small house, whereas central Sweden could be a suitable delimitation when appraising a larger agriculture. Depending on what type of property which is to be appraised the delimitations could vary significantly. A conveyance as close in time as possible compared to the point of valuation is most desirable. The Swedish market is characterized by low turnovers and delays in market information accounting, which leads to few or no purchases exists around the point of valuation. This also means that conveyances further back in time must be sought, despite the fact that changes in price level and the market as a whole likely have changed during that time.

#### *b) find an object of comparison*

Because each property is more or less unique when it comes to location and characteristics, the accessibility of relevant objects of comparison can be quite limited.

#### *c) gain information about the object of comparison*

Persson (2006) is the opinion that one of the weaknesses of the sales comparison approach is to find significant information about the property of comparison when it comes to location-, technical-, legal- and economical characteristics and qualities.

#### *d) work up, analyze and interpret the material*

The ideal situation would be to have identical objects acquired at the point of valuation. In reality this is not the case, since each property is unique and conveyed at different points in time. This makes it harder to make comparisons. Some type of factor related price comparison is often used to improve the comparability through standardization of price. Relating to a certain factor means that prices are related to different value carrying factors. Persson (2006) stipulates two examples. The first example is when there are very similar properties, then the relating can be done to the entire property, he gives a semi-detached house on a particular market as a suggestion. Most often, though, the relating is made to any of the value carrying factors area, operating net and ratable value. Which type of factors used depends on the type of the property. Persson's (2006) second example handles commercial property which could be related to factors such as size, rent,

and operating net or ratable value. He also points out that the estimation of value is more reliable the more relating that can be done.

Persson (2006) also explains that because the objects of comparison in general differ concerning the size of the value carrying factors, there is often a need for a standardization of prices paid of the objects of comparison. This means that the prices are unit price related to one or a few value carrying factors. Depending on the different standardizations there are different types of sales comparison approach methods. He gives these examples:

Area method	price related to area
Net capitalization method	price related to operating net
Gross capitalization method	price related to rent
Purchase-sum coefficient method	price related to ratable value

*e) apply and make corrections on time and characteristic*

To find an object of comparison at the time a property is to be appraised is not always easy, which means that the appraiser have to choose an object that has been appraised at an earlier stage. The emerging time difference can result in differences in the value level because of real value changes or changes in the value of money (inflation). This connection between time and price could be treated in different ways, either through a graphic illustration with axes showing time and price where standardized values can be illustrated, or through estimation of a price trend that illustrates the market development but also a basis for conversion of prices paid.

If the appraised object's characteristics match the average of the object of comparison there is no need for correction. This is otherwise needed if there are significant differences, and should be done from the quality and standard of the object of comparison.

*f) make final appraisals and estimate insecurity in the market value appreciation*

When a preliminary appraisal has been made the appraiser has to consider the credibility of the estimation. Corrections may have to be done and texts that explain further might have to be added. Persson (2006; Nordlund 2003) also writes (also mentioned above) that all types of appraisals suffer from insecurity. This insecurity can be stated in different ways, statistical through an insecurity interval, verbally or not at all. It is often expressed with a percentage but there is no general rule.

### **3.7.1.2 The Elements of Comparison Method**

Betts and Ely (2005) then describe the second method of the sales comparison approach, *the elements of comparison method*. They say that comparable sales arrive from the marketplace and reflect therefore, both the value of the property on the market and the conditions of the sales transaction itself.

After finding comparable sales and the relevant data has been gathered, the third step is to identify the differences between the sales and the subject property. The purpose is to

identify differences that could cause significant variations in the prices paid in the specific market. The elements of comparison are a composite term for the critical characteristics of both the sales transaction and the property involved in the sale. The four elements of comparison are:

- Terms and conditions of sale
- Time of sale
- Location elements
- Physical elements

The first point involving the terms and conditions of sale describe the fact that the sale can influence the selling price. Betts and Ely (2005) also give favorable financing as an example, which can easily produce a selling price that is higher than typical. They suggest that a price adjustment should then be made to reflect the advantage. The other way round, if unfavorable terms are found, then the price should be adjusted to illustrate the disadvantage. There are also a few conditions of sale to consider, that includes property right conveyed, motives of the parties and personal property and/or tenant improvements included.

The second point is the time of sale. It is of great importance that any market changes are noted, considered and adjusted for, while significant changes in market conditions since the sale date may invalidate a particular sale as a useful comparable.

The location element is the third point, which includes the important elements of the comparison process. Condition and quality of nearby properties, the availability of utilities and transportation, and the proximity of nuisances or hazards are a few examples mentioned by Betts and Ely (2005). They also suggests that the effects of social, economic and political forces should be studied to find out if any differences in prices could be ascribed to them.

The forth and last point is the physical elements, which explains the importance of the property itself and site characteristics such as size, quality, age, condition of improvements.

### **3.7.1.3 The Indirect Sales Comparison Method**

Persson (2006) suggest another sale of comparison method in this field, based on ratio matrixes. He has noted that instead of using the direct method the Swedish companies apply experiences from ratios concerning price levels. The reason for its popularity is that the method is relatively easy and less time consuming. Another reason is the lack of comparable sales. The basis for this method is a matrix on earlier experiences with ratios, such as price per squared meter and direct yield.

### **3.7.2 The Income Approach**

The income approach is based on the principle of anticipation. Betts and Ely (2005, p. 285) explains this as a principle which states that “the value of any property may be defined as the *present worth of future benefits*”. They explain further that benefits in the

form of money, such as investments or income property may be measured by the amount of net income the property is expected to produce. Persson (2006) enlightens the same phenomenon by pointing out that investment calculation models provide the foundation of this approach. The appraisal is made from an estimated credible market and from the expected view and actions of the market parties. The results of the calculation provide a market value.

All forms of estimations of market values are, according to Persson (2006), a sort of market simulation that is supposed to give a probable price at a fictive conveyance. Lack of comparable properties provides enhanced significance for the use of other methods. These methods are normally founded on general investment calculus models. The methods for calculating yield which are normally used to appraise are roughly divided into two main categories depending on the length of the calculation period, named the methods of direct yield and the discount methods.

### 3.7.2.1 *The Methods of Direct Yield*

This method is based on what Persson (2006) calls an ‘eternity capitalization’ of a standardized first year operating net (On). The operating net of the property consists of the yearly surplus that remains after operation and maintenance disbursements, including tax on real estate (this will be abolished in 2008) and possible ground rent has been withdrawn from the gross payments. Investments, stamp duty and other acquisition costs are not to be heeded when estimating the operating net. Persson (2006) consider this method as simple in its structure but is impaired by a number of problems that limits its usefulness.

The methods of direct yield are mainly used to estimate the market value when appraising property. The formula for this method and the net capitalizing method, which is use to make estimation on the market value based on operating net and prices paid, are the same (Persson 2006).

#### The method of direct yield:

$$MV = \frac{On}{dr}$$

MV = market value  
On = standardized operating net year 1  
dr = direct return

#### Gordon growth model:

$$MV = \frac{On}{p - g}$$

MV = market value  
On = standardized operating net  
p = interest rate  
g = growth rate  
p-g = direct return

Figure 3.1 Methods of Direct Yield, (Persson 2006, p. 387)

### 3.7.2.2 The Methods of Discounting

The discounting method is built on a present value estimation of operating net during a specific calculation period as well as a present value estimation of a residual value at the termination of the calculation period. This method is different from the method of direct yield because it has two calculation periods instead of one. It has the eternity capitalization of the operating net but also a shorter period of normally 5-10 years (Persson 2006).

$$MV = \sum_{t=1}^n On_t \frac{1}{(1+p)^t} + \frac{R_n}{(1+p)^n} \quad \text{where, } R_n = \frac{On_{n+1}}{dr_n}$$

Figure 3.2 Method of Discounting (Persson 2006, p. 388)

The discounting methods have evolved from earlier cash flow methods into cash flow calculations, which are based upon the same basic principles as the former discounting methods with the exceptions – they are based on operating cash flow disbursements and cash receipts. Persson (2006) continues by explaining that real conditions are better reflected in these calculations and provides a more realistic picture of the liquidity conditions over time. The cash flow calculations offering a greater flexibility can, if used properly, help to capture changes during the calculation period. These calculations can be used to estimate a market value but also to estimate an individual value determined on an earnings basis. It is important to make sure that the cash flow calculations are based on input data of the appraised property that is up to date.

$$MV = \sum_{t=1}^n \frac{(R - O - M - T - S - I)_t}{(1+c)^t} + \frac{r_n}{(1+c)^n}$$

R = rent  
 O = operation  
 M = maintenance  
 T = real estate tax  
 S = ground rent  
 I = property investments  
 $r_n$  = residual value  
 t = time  
 n = calculation period  
 c = cost of capital on total capital

Figure 3.3 Present Value of Expected Future Cash Flows (Persson 2006, p. 389)

A prognosis is made on the cash flow calculations of disbursements and cash receipts during the calculation period. A residual value is estimated at the end of the calculation period. The present value of the expected future cash flows is estimated as above.

Persson (2006) has presented this present value estimation of a property, but we have also found that it is the same one used by the SFI/IPD Swedish Property Index in all but one variable, the interest grant, which SFI suggests should be estimated separately.

The Lantmäteriverket and Mäklarsamfundet (2006) explain further that the parameters of a cash flow model can be calculated in several ways. The calculation period can be decided in two ways; either through the planning horizon of the investor; or through the economic life of an investment. The cost of capital expresses the demanded yield on the investment and is based on the expected real interest, compensation for risk and addition for expected inflation. When a value determined on an earnings basis is to be used, the minimum yield of the company should be used as the cost of capital. Although, if the market value is being used then the cost of capital should be derived from the market according to Lantmäteriverket and Mäklarsamfundet (2006).

Nordlund (2004) on the other hand, notes that the calculation does not take disbursements, such as interest and amortization into account. He also remarks that cash flows are more difficult to project because of the business cycles of an economy, which in turn are affected by the rate of vacancy and the rental income. Nordlund (2004) writes further that their existence is known, but impossible to foresee exactly. He also points out that cash flows should be calculated with more than one possible outcome, there should be at least three; an optimistic, a possible and a pessimistic one.

A few problems derived from the variables in the calculation have been notified by Nordlund (2004). He means that it would be better to avoid projected cash flows that do not show the right development of a business cycle. They could sometimes give the wrong picture of the development of future cash flows which could complicate the judgment for the investors in an economy. Nordlund (2004) thinks that this issue can lead to more sensitivity analysis.

### ***3.8 SFI / IPD Swedish Property Index***

The SFI/IPD Swedish Property Index has published a manual with recommendations on how to appraise the value on property. It is a non-detailed tool, which the index offers, to be used by both internal and external appraisers. They also state that much substantial estimation for the market value is in fact for the individual appraiser to decide. The index then follows up the appraisals on a yearly basis in order to bring consistency, and in their opinion – quality, to the index. This part, 3.8 is all based on what is stated in the manual published by the Swedish Property Index.

Up until 2004 the SFI was estimated on a value weighted and yearly basis. From 2005 and forward it has been estimated in two steps where the first is a value weighted estimation on a monthly basis and the second a time weighted index on a yearly basis.

This is an example of an adjustment to the international standard GIPS – *Global Investment Performance Standard – Real Estate*. This new regulation is supposed to make comparisons to other types of income easier as well as comparisons to other countries.

SFI also writes that while the total yield is established on property level it is not enough to estimate a market value on the property portfolio as a whole, instead there is a need to determine the market value on each individual property. They also conclude that these estimations of value suffer from an uncertainty in proportion to the market information available. SFI writes further that the information concerning the market parts are often insufficient. This is a good reason why the appraisal of all properties should be done in the same way in all companies that have chosen to give their information to this index. It minimizes the risk to make systematic mistakes and prevents the credibility of the index from lacking.

### **3.8.1 Methods of Appraisal**

The index uses different types of valuation methods depending on what type of property to appraise. The appraiser should choose the method which is most suitable regarding the type and extent of the market information. With access to comprehensive market information the appraiser can practice direct sales comparison approaches. Though, on most market parts there are relatively few acquisitions and the terms could significantly vary. The information on yield of the conveyed properties are likewise difficult to obtain, but the index states that to find comparable conveyances of properties and the necessary information is often most difficult when dealing with commercial properties. The index recommends the cash flow calculations to be used when dealing with this type of property, while the appraiser has to base his or her estimations on market information also when applying yield methods. (Commercial properties are the term used by the index, but investment properties are the term we have chosen to use in this thesis.)

At the end of 2005, 97 percent of the value of the property index had been appraised by using the cash flow method as the main method, though, often complemented by other valuation methods.

The manual propose a benefit that comes with the usage of this method, the fact that assumptions are made explicitly allows penetration of the appraisals and comparisons. The index takes greater effort in following up the appraisals made by using the cash flow method. Therefore, to be able to contribute to increasing market information they consider it to be wise, according to the manual, to choose this method when appraising for the property index. The manual also tell us that when appraising land, individual homes, tenant owner's rights and properties which do not provide any yield, then it is most suitable to use the sales comparison approach.

The index explains further that to relate the paid prices to the operating net is most common when it comes to investment properties. The method is then called the net capitalization method or direct yield calculation. Also this type of calculus based on yield

is in fact an example of the sales comparison approach. It is also written that to be able to use this method when establishing the index there must be a number of documented objects of comparison. And any adjustments made to the value of the subject property compared to the object of comparison need to be thoroughly motivated and enough accounted for to enable a follow up.

Unequivocal definitions of the operating net are, according to what is written in this index, of great importance when analyzing the direct yield requirements at conveyances. The operating net represents rental income minus the operating and maintenance costs of the property, real estate tax and ground rent.

The prognosis of the cash flow calculus according to the Swedish Property Index is based on conditions in existing tenancy agreement and estimated market rent, degree of vacancy, operating and maintenance level of cost seen from a probable investor's point of view. The estimated cost of capital and residual value in the calculus should be adjusted to the market. Then the index has drawn up a number of prerequisites to reach comparable results. These can all be read in their guide but we will not mention them further here. This is the cash flow calculation used in their type of appraisal:

$$V = \sum_{t=1}^n \frac{(R - O - M - T - S + IG - I)_t}{(1 + c)^t} + \frac{r_n}{(1 + c)^n}$$

V = present value  
 R = rent  
 O = operation  
 M = maintenance  
 T = real estate tax  
 S = ground rent  
 (IG = interest grant, the present value is suggested to be estimated separately)  
 I = property investments  
 r<sub>n</sub> = residual value  
 t = time  
 n = calculation period

Figure 3.4 Cash Flow Calculation, (SFI, p. 16)

Another part of the index calculations is the estimations of total yield, direct yield and value changes of a particular month using the time weighted estimation method:

$$TR_t = \frac{CV_t - CV_{t-1} - C \exp_t + Crec_t + NI_t}{CV_{t-1} + C \exp_t}$$

$$IR_t = \frac{NI_t}{CV_{t-1} + C \exp_t} \quad CVG_t = \frac{CV_t - CV_{t-1} - C \exp_t + Crec_t}{CV_{t-1} + C \exp_t}$$

$TR_t$  = total yield (%) month t

$IR_t$  = direct yield (%) month t

$CVG_t$  = value change (%) month t

$CV_t$  = market value, end of month t

$CV_{t-1}$  = market value, beginning of month t

$C \exp_t$  = investments made month t (including all purchases, project and other activated investments)

$Crec_t$  = sales and part sales month t

$NI_t$  = operating net month t

Estimating the annual yield from monthly yield.

$$TR = [(1+TR_1/100)*(1+TR_2/100)*.....*(1+TR_{12}/100)-1]*100$$

Figure 3.5 Time Weighted Estimation Method, (SFI, p. 26)

### 3.9 External or internal valuation

According to IASB (2007) it is stated that some of the commentators thought that the valuation should be “independent” to enhance the reliability. But critics were of the opinion that IASB could not require an independent valuation because of the cost-benefit aspect. The appraisal should not even be encouraged. They thought that it was a question for the preparers to decide in consultation with auditors if their company got sufficient internal resources to be able to determine a reliable fair value. There were also critics who pointed out that external appraisers were not available on all markets. Though, in spite of the critics the IAS 40 regulation does encourage property companies to determine the fair value with the help from an independent appraiser who “holds a recognised and relevant professional qualification” and who have knowledge and experience from the location and category of the investment property that are to be appraised. Also Engshagen (2002) is the opinion that it is desirable but not necessary that an appraisal is done by independent appraiser.

## 4. THE EMPIRICAL STUDY

*This chapter presents the empirical information gained from questionnaires and annual reports.*

### 4.1 Disclosed appraisal information

All of the examined companies are listed on the Stockholm stock exchange and are obliged to report in accordance with the IFRS/IAS. All of the companies have chosen to appraise their investment properties to fair value. The information on the different companies is derived from each company's 2006 annual report. Missing information has been marked with an "X" in the tables.

#### 4.1.1 The Income Approach

	Value model	Calculation period (year)
Balder	Cash flow model	10
Brinova	Cash flow model	6
Castellum	Cash flow model	10
Catena	Cash flow model	10
Din Bostad	Cash flow model	5
Diös	Cash flow model	5
Fabege	Cash flow model	5
Fast Partner	Cash flow model	10
Heba	Cash flow model	5
Home Properties	Cash flow model	10
Hufvudstaden	Direct yield	X
Klövern	Cash flow model	5
Kungsleden	Cash flow model	5
Ljungberggruppen	Cash flow model	X
Sagax	Cash flow model	10
Wallenstam	Direct yield	X
Wihlborgs	Cash flow model	5

Table 4.1 Value Model and Calculation Period

A summary shown in table 4.1 above illustrates that of the 17 companies, 15 are stating that they are using a cash flow model. Each company is obliged to give information about the model used. Even if they claim that they are following the cash flow model, we have found that the descriptions of the model are rather varying. Some have specified their model in details while other companies barely describe it at all and the parameters in it.

Most of the companies describe that their cash flow model are based on forecasted cash flows added with a residual value. Though, they are using different terms on the variables. In the annual report made by Sagax the cash flow model allows the market position, level of rent, future development of market rent and long-term vacancy rate to be taken into consideration. Some of the companies inform that the foundation for the

cash flow model is real revenues, costs, valid tenancy agreements and the current and historical rental market. Some also have considered the changes in the level of vacancy and in the rent price levels. When forecasting the cash flows some companies have considered the property's position and prerequisites on the market and the future development of the market. Some also mention that they also take the ground rent into consideration. The need for investments has also been a variable to consider and some companies have specified that the investments are made in order to maintain the conditions of the property. One of the companies states that the yield requirement and the assumption of future real growth are the main driving factors for the value of a property. Another company means that the property appraisal is guided by the demand and supply on the property market, where the three most important factors are the development of the rent market, the current rate situation and the credit market. Some companies have mentioned that they have not regarded the tax situation of each property.

These different parameters considered differently by the companies all provides us with a rather blurred vision on how this can be suggested to be comparable.

Some companies state that their estimations on value are based on cash flow models, which in turn are based on future cash flows and on comparisons and analysis of transactions made of properties within respective market part. This means that the sales comparison approach has been used to some extent, although it has been included as a component of the cash flow model.

Below there are three examples of models used by the companies. Two are cash flow model and the third is a model of calculating the value of a property using direct yield. It can not be said if the cash flow model is similar in all of the companies using the cash flow model, while only a few have presented their model in their annual report, though this is presented as an example.

Cash Flow Model

- + Calculated rent payments
- Operating costs according to cash flow method  
(including property tax, repair and maintenance costs and ground rent)
- = **Operating profit according to cash flow method**
- Reduction for investments
- = **Cash flow of property**

Figure 4.1 Cash Flow Model (Klövern, Annual Report 2006, p. 40)

<b>Example of a cash flow model</b>											
<i>Castellum</i>											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Rental value	2387	2411	2435	2459	2484	2509	2534	2559	2585	2611	2637
Rental incomes	2078	2146	2216	2272	2335	2383	2407	2431	2456	2480	2505
<i>Economic leasing</i>	87%	89%	91%	92%	94%	95%	95%	95%	95%	95%	95%
Property costs	-682	-689	-696	-703	-710	-717	-724	-731	-739	-746	-753
Operating surplus = cash flow	<b>1396</b>	<b>1457</b>	<b>1520</b>	<b>1569</b>	<b>1625</b>	<b>1666</b>	<b>1683</b>	<b>1700</b>	<b>1717</b>	<b>1734</b>	<b>1752</b>
		↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
Discounted cash flow year 1-9	10511	←									
Discounted residual value year 10	12769	←									25314
Assumed value, projects and land	846										
<b>Sum property value</b>	<b>24126</b>										

Figure 4.2 Cash Flow Model (Castellum, Annual report 2006, p. 83)

The above model illustrates the second cash flow model, an example taken from Castellum, which shows how the estimated value of each year is discounted to a present value. The model below is an example of calculating the direct yield.

#### Model of Direct Yield

- + rent value
- general vacancy of 3 percent within the commercial holdings
- operating costs including real estate tax, excluding the administration of 2007
- = **operating net**
- / yield requirement on the property
- = **the property value determined on an earnings basis, gross**
- two annual rents for vacant area
- intended investments and major repairs
- +/- present value of temporary additions/deductions
- + present value of interest grant
- + location supplement
- = **the estimated market value on the property**

Figure 4.3 Model of Direct Yield ( Wallenstam, Annual Report 2006, p. 38)

When it comes to the calculation period we have found that there is a range from five to ten years mostly. Although some companies stated that a longer period, up to fifteen or twenty years, were used for some of their properties. Then there are differences in how the companies are calculating. To stipulate an example one company has stated that it calculates with the cash flow for nine years and then add the residual value of year ten while another company stated that it used the cash flows of ten years and then add the residual value of year ten.

This means that not only do the companies take different parameters into account when appraising their property holdings, there are also different methods used to calculate the individual parameters.

	Direct yield requirement, %	Yield requirements, %	Cost of capital, %	Rate of inflation, %
<b>Balder</b>	4,5-12,0	X	6,5-14,0	2,0
<b>Brinova</b>	X	X	X	X
<b>Castellum</b>	X	6,0-10,0	X	1,5
<b>Catena</b>	5,9-9,3	X	5,1-10,2	X
<b>Din Bostad</b>	3,5-7,0	X	5	2,0
<b>Diös</b>	5,8	5,5-10,0	X	2,0
<b>Fabege</b>	5,2-10,0	X	5,2-10	2,0
<b>Fast Partner</b>	X	6,0-13,0	X	X
<b>Heba</b>	1,5-8,5	2,5-6,4	4,6-8,5	2,0
<b>Home Properties</b>	5,5-9,0	X	7,5-11,0	2,0
<b>Hufvudstaden</b>	4,3-5,8	X	X	X
<b>Klövern</b>	6,0-12,0	X	5,5-14,0	2,0
<b>Kungsleden</b>	5,0-14,0	X	6,5-16,0	1,5
<b>Ljungberggruppen</b>	X	2,5-8,0	X	X
<b>Sagax</b>	6,5-12,5	X	8,8-14,5	2,0
<b>Wallenstam</b>	X	2,6-9,0	X	X
<b>Wihlborgs</b>	5,0-9,0	X	X	X

Table 4.2 Summary of Interests

The table 4.2 above is a summary of the different interests used. The table illustrates the different information given by the companies. Also here is the amount of disclosed information varying. Brinova does not provide any information on yield, cost of capital or rate of inflation, though for instance Heba has informed about all of these variables. The type of information which is disclosed depends on what type of cash flow model that has been used. The yields are varying depending on where a property is located. For example are the yields lower if the property is located in Stockholm or Gothenburg and higher if the property is located in other parts of Sweden.

The direct yield requirement varies between 1,5 to 14,0 percent, meanwhile yield requirements are varying between 2,5 and 13,0 percent. Balder has written that their yield requirement is influenced by location, level of rent vacancy and the condition of the property. Only Home Properties states that the market for their type of properties, hotel properties is limited. They considered other types of commercial properties for the determining of yield requirement. The cost of capital is between 4,6 and 16,0 percent and Catena states that it corresponds to the market requirements of return on total assets and consists of real interest rate, compensation for inflation and with an addition for risk. Some of the companies have written that the cost of capital is based on the nominal interest on a long term government bond, for example Fabege uses a bond with duration of five years along with a general addition for properties and also an addition that is specific for property. Sagax states that the cost of capital and the direct yield requirement

for judgment of residual value is founded on analysis on transactions made and individual judgments regarding level of risk and market position of a property. There is one parameter which the companies do have agreed on, the estimated rate of inflation. They have followed the aim of the Swedish Central Bank with an interest set to be between 1,5 and 2,0 percent, where most companies have chosen 2,0 percent.

	Total number of properties	Value of investment properties, mkr	Value of investment properties related to total assets
Balder	128	6 949	95,4%
Brinova	X	3 389	54,5%
Castellum	480	24 238	99,1%
Catena	35	2 158	88,5%
Din Bostad	285	4 685	93,1%
Diös	53	2 246	90,9%
Fabege	174	27 188	90,6%
Fast Partner	X	3 177	81,0%
Heba	51	2 674	99,5%
Home Properties	X	2 283	46,5%
Hufvudstaden	29	17 409	84,8%
Klövern	X	10 701	94,8%
Kungsleden	591	22 235	91,6%
Ljungberggruppen	X	16 855	93,5%
Sagax	57	3 268	92,3%
Wallenstam	X	18 279	92,5%
Wihlborgs	219	10 707	95,4%

Table 4.3 Total Properties and Capital Influenced by IAS 40

The table 4.3 above declares how many investment properties owned by each company. It ranges from 29 up till 591 properties. The total asset of the majority consists of more than 90 percent investment properties and this means that they are affected by IAS 40 to a major extent.

#### 4.1.2 Uncertainty Interval

The companies are all explaining that the appraisal involves a great risk. One of the companies specifies this risk by saying that it depends on the different parameters, which are all estimated by the appraiser. Some of the companies take an uncertainty interval in consideration by the valuation of a property, this to reflect the uncertainty involved in assumptions and calculations made. Three of them have an interval that is set to +/- 5-10 percent, two had +/- 5 percent and only one company used +/- 3-6 percent and the other eleven companies did not mention any specific interval. One of the companies states that the fair value is a judgment and that it is marred with a certain uncertainty. The uncertainty is varying with property type, geographic location and economic situation of property. The uncertainty is reduced when property holdings are appraised compared to estimating properties individually. Some of the companies explained this by suggesting that property uncertainties of a property holding cancel each other out.

### 4.1.3 Internal and External Appraisal

We have put together a table, showing the extent at which the companies appraise their property holdings, both internally and externally.

	Internal appraisal	External appraisal	Appraisal institute	Follows SFI
<b>Balder</b>	100%, each quarter	20% of the internally estimated fair value	Newsec	X
<b>Brinova</b>	100%, once a year	39% of the property book value	X	X
<b>Castellum</b>	100%, once a year	51%	NAI Svefa	X
<b>Catena</b>	X	100%, once a year	Forum Fastighetsekonomi	Yes
<b>Din Bostad</b>	100%, each quarter	100%, once a year	Ernst & Young Real Estate	Yes
<b>Diös</b>	X	100%, during the year	Ernst & Young and Savills	X
<b>Fabege</b>	X	100%, once a year	DTZ Sweden and Newsec Analys	Yes
<b>Fast Partner</b>	100%, continuously during the year	30% each year	X	X
<b>Heba</b>	X	100% twice a year	Forum Fastighetsekonomi	Yes
<b>Home Properties</b>	100%, once a year	X	X	Yes
<b>Hufvudstaden</b>	100%, once a year	36% of the internally estimated market value, once a year	DTZ Värderings institutet AB and FS Fastighetsstrategi AB	X
<b>Klövern</b>	100%, three times a year	100%, once a year	DTZ Sweden	X
<b>Kungsleden</b>	100%, continuously during the year	70% of the total property value, every third year	Newsec	X
<b>Ljungberggruppen</b>	100%, twice a year	100%, once a year	Forum Fastighetsekonomi	X
<b>Sagax</b>	X	100%, each quarter	DTZ Sweden and CB Richard Ellis	Yes
<b>Wallenstam</b>	100%, once a year	X	X	X
<b>Wihlborgs</b>	100%, each quarter	100%, once a year	Malmöbryggan Fastighetsekonomi AB and Savills Sweden AB	X

Table 4.4 Internal and External Appraisal

From this table we have concluded that 9 of the 17 companies let an external institute appraise 100 percent of the property holdings at least once a year. Another 6 companies involve external appraisers only to a limited extent. But there are also 2 companies, Wallenstam and Home Properties that do not use any sort of external appraisers, all appraising is made internally. It is also noticeable that 5 of the 17 companies rely only on the external institute, the institute actually does the appraisal for them.

A number of these companies have pointed out that their primary reason for using external appraisal is to validate the credibility of the internal appraisal. Another company writes that the internal appraisal is continuously updated on acquisitions, investments and sales. One of the companies also gives requirements from banks as another reason. Wallenstam, using only internal appraisal motivates this choice by writing that they believe themselves to have a good market and property knowledge, due to their active property dealings. Some companies have mentioned the value deviation of the property holdings appraised both internally and by the external appraiser; to point out that the deviation is insignificant.

Din Bostad points out that the value influencing parameters used in the appraisal corresponds to the interpretation made by Ernst & Young of how investors and other players argues and act.

A couple of companies also mention that the same valuation models have been used in the external and internal appraisal, while others do not mention it at all. There are 5 companies stating that they follow the Swedish Property Index (SFI).

## ***4.2 Responses on the Questionnaires***

Below are the questions to the property companies presented followed by a compilation of the answers given. First are the answers given by the property companies presented followed by the answers given by Bo Nordlund and finally the two auditors.

### **4.2.1 Answers from the Property Companies**

*1. Is it internally (the CEO, management or board) or externally (appraising institute) decided which value model to use? What we mean by value model is the choice between the alternatives given in the IAS 40 regulations, which is the sales comparison approach or a type of cash flow model.*

One of the companies' explains that the decision to use a cash flow model has been taken within the company itself as well as by the external appraising institute. The reason given to why this model has been chosen is that it is the standard model used on the market today, besides it is the model recommended by the SFI. Four other companies told us that the decision is made internally, but with no further details, and another company specified that the decision is made by the CEO. Another company explained that the company management presents a model which is then approved by the board. Three companies give another reason for choosing a cash flow model; the decision is made by the choice of

appraising institute. The external appraisal is altogether on appraising institute's table. They decide what model to use from what they think is reasonable.

2. *Is there an outside pressure to choose a specific model for example from analytics, investors or competitors?*

A great number of the companies asked; do not believe there is any pressure to use one model or the other. Although many of them states that it is common practice in the business to use a cash flow model, one of these companies also think that the property companies take the current situation on the market into consideration when estimating the property value. One of the companies explains that they use a type of valuation approach which they themselves consider to be correct.

3. *How come you have chosen to use a cash flow model instead of using the sales comparison approach, i.e. to use an object of comparison on the market?*

One reason for using a cash flow model according to one respondent is that this model takes the properties normalised and real operating net into consideration. Another company respondent finds that the cash flow model provides a better foundation when discussing the entire composition of the portfolio. According to another respondent, the cash flow model is interesting for the company to use when judging a potential affair. One respondent point out that in the end a potential buyer uses the cash flow model. The company says further that presumptions and prerequisites of the cash flows can vary in the analyses made by different appraisers. It is often the yield requirement which balances how the risks of cash flows and area events should be considered in the appraisals. One reason given by one company is that the method is already well known to the management. Another reason given is that the cash flow model includes a comparison to the market, when it is discounted with a market- and property adjusted yield level, which considers the value development on the specific market, for the specific type of property. Another respondent says that a comparable object on the market can not always be found, but a cash flow model holds all the knowledge about the property and tenants that are currently known to the management. One company respondent says that besides the cash flow model comparisons and analysis of conveyances have been made, in each market part.

4. *What reasons do you have for not using the sales comparison approach when appraising the properties?*

A reason given by some of the companies to why they do not use the sales comparison approach, is that very few transaction are made in their specific property segments. One respondent explained that there is a problem finding relevant data. Another thinks that the sales comparison approach is a bit blunt because it requires identical objects of comparison. A third respondent says that it is hard to find an object of comparison and states that, while many company

transactions are made it is hard to bring out the value set on the property. Another company states that the transactions made on each location penetrates the valuations, though they do not use the sales comparison approach. A different respondent argues that the company focuses on the cash flows in the operation. They consider their yield the most interesting part and not so much what others have paid. One of the companies that uses a cash flow model states that they look at the sales comparison approach to some extent because they think they have a good contact with the market for making price levels, this because they have sold a lot of properties during the last years. One of the respondents says that they do not have a specific reason for not using the sales comparison approach, and believes that the cash flow model is the predominant model of appraisal in our county. This also means that more people recognise this model and easy understand how the values arise.

*5. Do you think there should be a detailed model of appraisal in the IAS 40, to make sure that an improved comparability between the appraisals made by different property companies can be done?*

One of our respondents believe it would be interesting with a detailed model of appraisal, if there is someone who is capable of constructing a relevant and usable model – and, of course, gain hearing for it, to be a part of the IAS 40. Another respondent believe it would make the appraisal easier if a standard did exist. It would make the comparison between the companies easier and increase the readers' understanding of the financial reports. A third company respondent would prefer a homogenous model and the appraisal to be done by external appraisers. Another respondent says that there already exists a value model for traditional property companies, posed by the SFI. There is one more company respondent who thinks that guidance on how the cash flow model should look like already exists, who also believe that it is the practice that is leading this matter. Another thinks that almost every company in the business is using a similar model, but while several assumptions always have to be made there will always be some subjectivity in the valuations.

Another of our respondents is the opinion that no detailed model of appraisal should be advocated, the respondent does not think the accountants are the right people to confirm the value models. The respondent also suggests that the theoretical effort will be changing over time and it is important for the property company not to be back bound by old-fashioned recommendations which do not keep up.

The difference in the way an appraisal is made provides, according to one company, business opportunities because companies do their estimations a bit differently and see the development and/or the value of the properties in different ways. The respondent states that the SFI has tried to co-ordinate the appraisal, but have not succeeded. This is due to the fact that property owners tend to see things

differently. Although, the respondent is the opinion that the comparability would be easier if all companies appraised their properties in the same way.

One of the answering companies, on the other hand, did not feel that there should be a more detailed value model in the IAS 40 regulations. A second respondent says that on one hand there should be more guidance concerning projects, investments and other situations where appraising is difficult. The appraisal is in the end based on judgements about the future, about cash flows, markets and dreams etc. Different appraisers will undoubtedly find different values. The respondent also says that the property companies could describe the difficulties and their appraisal material further. They could also point out the value intervals better.

*6. Do you feel that you are forced to contact external appraisers when the properties are to be appraised? Are there any particular reasons to use an external appraiser?*

Twelve out of thirteen of our respondents did not feel forced to contact an external appraiser. One company explains that an external appraiser is contacted as a quality assurance for the company's own model. Another company use external appraisers to secure the quality and independency of the appraisal. A respondent explain that it is seen as a possibility for the company itself, the market and the analytics to see how well their appraisal agree with an appraisal made by an external appraiser. A fourth respondent says that although they do not feel forced, there is an external interest to have an independent appraiser checking the company appraisals. While the companies are listed on the stock market, potential investors are interested in this type of independent opinions. Another company believes that it is needed to gain credibility on the market. One company respondent also says that the company see the external appraisal as practice, meaning to externally appraise parts of the property holdings at each date of appraisal and to internally appraise the remaining property holdings at each date of appraisal. To engage an appraisal institute is above all a means of quality assuring the internal appraisals, to prevent the market from distrusting the values disclosed by the company.

One of the company respondent states that they get help from external appraisers of their own free wills, this because they do not want the internal appraisals to be questioned. The respondent says further that if you declare that the properties have been appraised at market value and the effect is taken over the equity via the operating statement, then it is important to have credible appraisals at the bottom. The best way of doing this is, according the respondent, to hire a respected appraising institute. There is also one respondents believing that market credibility should increase by an independent appraisal, and suggests the appraisal to be more effective using external rather than internal appraisers.

One company respondent, not using external appraisers believe they have handled such a great number of properties and consider themselves to know the market

very well and because of this they feel there is no need for an external appraiser. Instead they let their accountants verify the valuations in connection with the auditing of the annual report.

Another company respondent explain that they do feel forced to contact external appraisers, because the banks require an external appraisal in order to grant any loan. The company respondent says further that when it comes to the entire portfolio it is good to have a reference appraisal to increase the trustworthiness for the internal appraisal. The respondent is also the opinion that those values can be used to compare to the company's own values. In the accounting process is only internal appraisals used. The reason is for the company to have control of the process, while it is the most important entry in the financial report. The valuation thinking is one of the most central parts in the responding company's business model.

*7. The seventh and final question was an open one, for respondents to express further opinions. Is their anything you would like to add, which could be interesting for our thesis?*

According to one respondent, the sales comparison approach might be a bit unusual when appraising investment property. Instead, the respondent suggests that it is used mostly when appraising individual homes.

A respondent says that accounting theoretically one can question an attempt to appraise properties at a market value, i.e. the financing shall under certain circumstances be appraised at market value, while the deferred taxes should not. This is also mentioned by another company. The respondent also wonders where the credibility can be found in this, and suspects that this leads to slovenliness and too much compromising in the work of developing rules. The respondent also wonders how this will reflect on future practice and interpretation of the IFRS regulations.

One of the respondents points out that the cash flow model is more common in the Nordic countries while the rest of Europe widely use the direct yield model.

### ***4.3 Answers from Bo Nordlund***

Bo Nordlund has an auditor background and is working as a university assistant master at KTH, the Royal Institute of Technology in Stockholm and is currently studying for a doctor's degree. He has written a number of articles within property appraisal as well as a licentiate's dissertation. Below are the questions and answers presented.

*1. Why is the cash flow model used at a larger extent then the sales comparison approach? According to you, which are the advantages and disadvantages of the different methods?*

Nordlund answers that foremost, all type of property appraisal is fundamentally based on the sales comparison approach. Though, many companies claim that they use a cash flow model. Nordlund is the opinion that the result will be the same whether the cash flow model or the sales comparison is being used, as long as the purpose is to reach an estimation of the market value (fair value). He means that after all it is mostly about how the discount rate/yield requirement that is used at the appraisal is derived; from transactions with comparable objects (sales comparison approach) or from the financial market (income approach/cash flow model). Nordlund think that the reason why the companies say that they use the cash flow model, to certain point, depends on the assumption made by the companies that the cash flow model is a type of Swedish business practice and that the market demands this type of appraisal.

The advantages connected to the sales comparison approach seen by Nordlund are, that the appraisal is clearly based on prices in transactions with comparable objects. The difficulty with the approach is partly to find objects of comparison in transactions made on the market. The advantages using the income approach is that if the conditions for the appraisal are clearly given, it is easier for an external user to make an uncertainty analysis. The disadvantage is the frequent use of stereotypic input data, which do not consider what the appraiser thinks of the future influence of the business cycle, etc. This could give the impression that the appraisal is more certain than it sometimes is.

2. *According to IAS 40 the best way to appraise at fair value is to use the sales comparison approach. Do you agree? What do you think are the reasons to why the sales comparison approach is used?*

While Nordlund consider the approach to be used by all companies in some way, he does not find a reason why the approach should not be used. He also agrees that the sales comparison approach in the ideal situation provides the best way of appraising the properties.

3. *Do you think there is pressure from the outside, from analytics, investors or competitors, to choose one model before another?*

He says that there seem to be a certain “trend” in using the cash flow model.

4. *What is your opinion about the comparability between properties when appraised according to the income approach?*

If the appraisal has been done using a pure income approach, then the cost of capital/discount rates used in the models should primary be derived from the financial market. There are for example obvious difficulties to exactly know the level of danger money (which affects the level of the discount rate) used in the calculations.

5. *According to you, should there be a detailed valuation model in the IAS 40, in order to increase the comparability between the property companies?*

Nordlund suggests that the IAS 40 regulation should be more explicit on which additional information referred to in the IAS 40 § 75 d, to make it more obvious for the user to understand which assumptions that have been used in the calculations. This is of great importance, Nordlund states.

6. *Do you suggest that the appraisal should be done internally by the company itself or externally by a valuation institute? Are there any advantages or disadvantages?*

An advantage, using internal appraisal is that the appraiser has a wider knowledge about the specific objects, whereas the external appraiser has not. A disadvantage is that the internal appraiser could, to a larger extent be influenced by the company's wish to reach a certain value level.

An advantage of having an external appraisal arises if the external expert is independent. The external appraiser might also have a better understanding of the market as a whole than the internal appraiser; this is of course not always the case. Similar to the previous answer, one disadvantage is that the external appraiser may have less knowledge about the subject property than an internal appraiser. Nordlund states though, that an external is normally to be preferred.

7. *Is there anything else you would like to add that could be of interest for our studies?*

Nordlund concludes that the valuation of properties is complicated. He notes that so far we have had a positive upward market trend since the IFRS became a requirement in the annual report. He says, it will be interesting to see what will happen within accounting when the market sometime turns down and prices fall.

#### **4.4 Answers from Auditors**

1. *Why is the cash flow model used at a larger extent than the sales comparison approach? According to you, which are the advantages and disadvantages of the different methods?*

According to one of the interviewed auditor the cash flow model is used because it is really hard to find entirely comparable properties. Meanwhile, the other auditor finds the cash flow model to be the theoretically most sufficient. An argument for using the sales comparison approach is that the prerequisites often varies between different locations, which should improve a true and fair view of the value of the property holdings. Although to use a combination of methods is understood to be most frequently used.

2. *Do you think there is pressure from the outside, from analytics, investors or competitors, to choose one model before another?*

Both auditors agree that they have not experienced that there is a pressure from the outside to use a specific method.

3. *What is your opinion about the comparability between properties when appraised according to the income approach?*

The auditor thinks that the comparability between the properties is good enough if the information is given according with IAS 40. The other auditor is the opinion that each property is unique and it is therefore of greater importance that the appraisal is consequently and reasonably made.

4. *According to you, should there be a detailed valuation model in the IAS 40, in order to increase the comparability between the property companies?*

The respondents do not think that there should be any specific valuation model in the accounting rules. One auditor also thinks that it is the appraisal specialists' roll to develop this model. The other says that, it depends on the business purpose of the company. A cash flow model might suit a property administrating company better than the sales comparison approach, where the cash flow from the administration and the development of the interest charges are the important factors, not the value development (which reflect the administration result but is highly affected by external factors such as the property market, interest development etc).

5. *Do you suggest that the appraisal should be done internally by the company itself or externally by a valuation institute? Are there any advantages or disadvantages?*

One of the auditors is the opinion that parts of the property holdings should be appraised externally, for example through a representative selection of the internally appraised properties. The reason is quality assuring the appraisal made internally. The other auditor means that an externally made appraisal should improve the objectivity. Although, the auditor points out that situations have occurred when valuation institutes have performed commissioned appraisals, i.e. that the value finally arrived at is the value desired by the property appraiser. The disadvantage using external appraisal are the costs. But also the risk important factors are overlooked. When appraising the properties internally, there is greater knowledge about the properties and the auditor would therefore like to recommend the internal appraisal. To quality assure this appraisal some properties should be externally appraised.

6. *Is there anything you would like to add that could be interesting for our thesis?*

One of the auditors suggests the possibility to consider the utility of putting property market values into accounting. These values were previously accounted separately. A disadvantage of the current system is the changes in value which often to a large extent affects the result. This in turn means that the development of the property net operating income becomes obscured. Further more are the appraisals an effect of future judgments, which means a high degree of subjectivity.

## 5 ANALYSIS AND DISCUSSION

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*In this chapter, the empirical information gathered, i.e. questionnaires and studying of annual reports is put together with the frame of reference, presented in the third chapter.*

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The introduction of the IAS 40 standard in Sweden can be seen to be the beginning of a changeover from the traditional continental view into the Anglo-Saxon. Appraising at fair value leads to a change of concept from the prudence concept into the matching concept. This means that the investors become an even more important target group for the accounting. And as the earlier study made by Bengtsson (2006) shows; the conformity between the reported equity and the value on the stock market improves when using the fair value model instead of the previous cost model. Then there are alternatives given by the IAS 40 standard to estimate the properties at fair value; the direct sales comparison approach, the elements of comparison approach and the income approach.

### ***5.1 Cash Flow Model vs. Sales Comparison Approach***

We have concluded that all property companies appraise their property holdings with some type of cash flow model; there is only one company which mentions that they use the sales comparison approach – but only for 30 percent of the properties. This indicates a use of an alternative rather than the main standard. As Nordlund answered in the questionnaire, to use the cash flow model for appraisals is a Swedish business practice, or as he would also like to put it – a *trend*; something which it is required by the market. Several of the companies we have asked have also given this reason for the wide use of this model. Another, perhaps even more relevant reason could of course be that it has also been used to appraise properties prior to the introduction of the new IAS 40 standard.

Although, the answers given in some of the questionnaires and information provided by some annual reports indicate that the sales comparison approach is used to estimate a component in the cash flow models used by the companies. This has then also been claimed by Nordlund, saying that all type of property appraisal is fundamentally based on the sales comparison approach. This was an interesting aspect which we chose to consider, while this was not evident at a first look. Instead, it seemed as the companies had only considered aspects of the financial market, such as government bonds and rate of inflation, along with individual risks of the properties. Though, when deeper studied, we found an indication that the sales comparison approach does in fact exist as a part of a component in the cash flow model in some of the companies. Although, the comment made by Nordlund, that *all* property appraisal is based on the sales comparison approach, has not been clearly expressed in the annual reports. An explanation for this could either be that it has not been incorporated in the report, or it has been described vaguely and has therefore been overlooked by us. But when looking at this from a completely different perspective, then perhaps the companies claim they use the sales comparison approach as a component of the appraisal in order to appear to be using the first alternative appraising method, which is claimed to provide the true and fair value of a property.

The reasons for not using the sales comparison approach is according to literature and some of the responding companies, first of all the fact that the Swedish property market is not active enough, with very few objects of comparison. The company which has stated that it uses the sales comparison approach, to an extent of 30 percent has its properties within the Stockholm and Gothenburg inner-city areas, and these are markets which can provide the sufficient number of conveyances. The major part of Sweden is characterized by insufficient activity on the property market, few similar properties in the same location and in the same condition. Another aspect is that each property is unique and the market value is therefore too uncertain and varying. The market value has previously been used only for financial assets, where the value is derived from a much more liquid market than the one for properties.

## **5.2 Comparability**

According to the concept of consistency should there be possible to compare the annual reports between different companies. A first impression is that comparison should be easy to do, while most companies use the cash flow model; but at a closer look there are in fact a number of differences within the cash flow models used by different companies. The difference lies within the various components used. Various calculation periods and interest rates make the comparison a lot more difficult. The companies even have interest rates which in themselves take different components into consideration. The interest levels also vary between the companies.

A detailed cash flow model in the IAS 40 standard, including all components, which according to the legislator are the ones that should be considered in the model, could perhaps improve the comparability. Though, it would not be possible to define the level of interest in such a model, because the interest rate should according to the IAS 40 standard be based on the condition of the property and the market. Different interest levels would still make a total comparison complicated. Question is, is it really more important to protect the comparability than having companies showing a fair value on their property holdings? One of our respondents expresses an interesting view when saying that there could be a risk having a specific model which does not keep up with the market developments. Old recommendations would then have a back-binding affect. This is of course seen from the property companies' point of view. The view of an investor would probably be somewhat different. Investors would probably put more value to an improved comparability. The Swedish property index has put together a model to be used by all companies that have chosen to be connected to the index. Problem is that the index has not had such an impact on the market as only a few property companies follow these recommendations.

The fact that many companies have made individual estimations of what should be part of their cash flow model, logically mean that differences in the appraisals arise. Question is, whether small variations within components or a use of completely different components leads to major variation in the appraisal; or if one eliminates the other when doing a comparison? If this would be the case, then the difficulties of comparison would arise first when a comparison is made between specific components.

So, we are, as well as some of our company respondents a bit doubtful whether a detailed model would ever become generally accepted, especially since the property companies all have such different views on appraisal. We are the opinion, though, that the present wording of the IAS 40 standard concerning the cash flow model should provide some type of formal requirement of which components to include in the model. Today, it is complicated to compare the appraisals made by various companies within our country and then we ask ourselves how it is supposed to be comparable to other European property companies; if this is the aim of the new standard?

### ***5.3 Internal and external appraisal***

According to what we have found both in the annual reports and in the answers to our questionnaire a majority of the companies appraise their properties internally as well as externally. We agree with the auditors that having appraisals done both internally and externally should lead to a fairer value of the properties. We believe that the internal appraisal contribute to greater knowledge about the properties, whereas the external appraisers can contribute to a decreasing subjectivity in the appraisal.

When the property appraisals are made only internally, then there might be a risk of failing confidence to the appraisal among the stakeholders. The disbelief could be based on the concern that the appraisal is made in a specific way in order to improve the result. Cynically, on the other hand, an external appraisal can not guarantee an objective and fair appraisal. The companies could perhaps have an ordered appraisal done, which is in accordance with their internal appraisal. We hope that this is not of frequent occurrence, but occurs occasionally according to one of the auditors.

### ***5.4 Uncertainty and Credibility***

All companies have stated that the investment property appraisal is one of the entries in the annual report associated with the greatest risk. As uncertainty and subjectivity characterize the entire valuation process the confidence in the fair value of the property appraisals could always be a matter of discussion. In theory, a cash flow model can generate an “exact” value; though, which components to use in order to arrive at such a value involve a high level of subjectivity and is therefore questionable. This means that the possibilities to influence the final value and thereby the accounting could be used advantageously for the company.

Question is, would an appraisal using the sales comparison approach really improve the conformity between the property companies? If no objects of comparison are at disposal and adjustments have to be made, this too leads to differences in how the objects are being appraised as well as a higher degree of arbitrary. This leads us back to the same problem involved in using the cash flow model, components differ and conformity decreases.

The true and fair value of a property can only be attained at the point of sale, whereas all other appraisal is based on estimated values. This estimation affects the income of a majority of the companies, as about 90 percent of the companies' total assets are based on estimated values.

When values are estimated, subjectivity can never be completely eliminated and as a result, uncertainty can never be avoided as well as credibility can never be guaranteed.

## 6 CONCLUSION

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*This chapter presents the conclusions of our study, based on the purpose of our thesis, followed by a few proposals for further research within this area of research.*

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The purpose of this thesis was to describe and explain whether the property companies use the sales comparison approach or the income approach when appraising their property holdings. Our conclusion is that the cash flow model is the one used by the actors on the property market. Despite the fact that many companies assure the reader of their annual report that they have considered the sales comparison approach as a certain component of the appraisal; it represents such a tiny part in the model that it is more or less non-essential.

Though, perhaps the use of this model is inevitable, since the Swedish market is too inactive and there are few transactions which means there is not a sufficient number of comparable objects. This also depends on the business purpose of the company. A cash flow model might even suit a property administrating company better than the sales comparison approach. Today, the sales comparison approach represents a part of the cash flow model used by the companies, i.e. it is used only to estimate certain fundamental components in the cash flow model. Our opinion is that it is rather sensational that the companies have a basis good enough to use the approach to a certain extent, but suggest it to be impossible to use in the entire appraisal.

The property companies could also use the IAS 40 standard suggesting that when there is an inactive market and objects of comparison are rare adjustments for differences can be made. Instead, the companies use the third alternative to appraise their properties. This could of course have something to do with our conclusions above, but this could also be a matter of costs. A cash flow model is probably not as costly, perhaps because it has been used before and has therefore become the market practice. Trend, or not, companies always search to find better and easier ways to minimize costs.

Our suggestion, though, is that if a true and fair view is the main aim of accounting, then we believe that the sales comparison approach should be the method used as widely as possible. As this is the one approach said to best provide the fair value of a property. As the actual fair value can only be settled at a sale. But in those cases, where the sales approach cannot be used, our suggestion is that an overall standard for the cash flow model with formal requirements of components to be included and excluded should be used and stated in the IAS 40 standard. Or perhaps a completely new standard adjusted for the Swedish market should be founded in order to obtain a fair value on each property.

We also wanted to examine how the property companies appraise their properties and if the standard has led to an increased comparability and a true and fair view. And one of our conclusions in this matter is that; using either the cash flow model or the sales comparison approach, there will probably never be a model that can guarantee a complete

conformity. Properties are unique objects and this fact will always characterize the appraisal. Property appraisal will always be surrounded by a high degree of subjectivity and uncertainty. This is why we question the expression 'fair value', will it ever be possible to reach a fair value when appraising?

***Further Studies***

During our work with this thesis we have found other interesting aspects closely related to our topic, but which are not relevant enough to be brought up here. Our suggestions are presented below.

- The same study could be made on non-listed companies, and from there see if any differences can be detected.
- A comparison could be made between appraisals made internally and externally.
- A deeper study can be made of the components used in the cash flow model with a focus on comparability.
- A more specific topic could be how the deferred tax should be treated in the business deal, and how it is allowed or not allowed to be noted as a separate entry in the balance sheet; and how this can affect the value presented in the balance sheet. The reported value in the balance sheet could in the end be a net of the value paid by the company and the discount it received when the property lies within companies where a temporary difference exists. This was suggested by one of our respondents.

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