

# Swedish and Swiss Implementation of IAS 40: Does Culture Matter?

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**Abstract:** When fair value accounting was introduced in 2005 it was, and still is, controversial, and accused leaving greater room for subjectivity in the valuation. The aim of this paper is to investigate if culture, via a greater or lesser extent of emphasis on conservatism on the accounting value level, is to influence accounting practice in the fair value valuation when marking-to-model investment property according to IAS 40. The study focuses on the real estate market, since it with its relative illiquidity and therefore necessitated marking-to-model provides a unit of study where subjectivity is allowed to play a greater role than in more liquid markets. Valuation praxis in annual reports is studied, interviews with respondents in both countries performed and analysed, and an analysis of the components of the discount rates used in the valuation by the real estate companies conducted. No general conclusions could be drawn, but the study detected a few areas where practice appeared to slightly differ, and where further research may be of interest.

**Keywords:** IAS 40, culture, risk premium, decision usefulness, fair value.

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# 1 Introduction

The principal objective of the accounting framework IFRS (International Financial Reporting Framework) issued by International Accounting Standard Board (IASB) is to provide a true and fair view of the state and performance of the firm by presenting information that is relevant and reliable in order for the users of financial statements to be able to make informed decisions (Alexander & Nobes 2007). Special attention is paid to the informational needs of investors, and when fair value accounting was introduced in 2005 it was on the merits of being more relevant than the previous cost based accounting. Fair value accounting was, and still is, however controversial and accused of being subjective, and critics argue that the increase in relevance comes at too high a price - the decrease in reliability (Hitz 2007, Rérolle 2008).

Using the hypothesis of Gray (1988) linking values on an accounting level to these of society on a national level this paper will be concerned with the possible impact of culture, expressed as more or less strong emphasis of conservatism on the accounting value level, on financial reporting practice. The real estate market will be in focus since it with its relative illiquidity and therefore necessitated marking-to-model provides a unit of study where subjectivity is allowed to play a greater role in the fair value valuation than in the mostly more liquid financial markets. The study will investigate the reporting practice disclosed in annual reports, analyse interviews with respondents from both companies and external real estate bodies in both countries, and step by step break down discount rates into their components and analyse the values at each level.

## *1.1 Problem Discussion*

The mission of IFRS is, as will be further discussed below, to increase the harmonization across nations, in order to make accounting and financial statements more comparable (IASB 2006). Different implementation of IAS 40 across countries could impair the decision usefulness and comparability across nations of financial reporting, and make it more troublesome for investors to internationally diversify their real estate portfolios, in the end making capital markets function less well. The paradigm shift within accounting standard setting towards fair value accounting is motivated on the grounds of increased decision usefulness, but it is crucial that the implementation of fair value accounting improve the relevance of reporting, and not only leads to an impairment of the reliability (Hitz 2007). The subjectivity inherent in the fair value concept may make harmonisation of accounting practice even harder. This motivates an investigation of whether the national culture has implications for the meaning of 'a true and fair view' and 'fair value' on a national level, and whether a different degree of conservatism is employed across nations. As will be seen below, valuing investment property may involve adjusted market values, and, marking-to-model (IASB 2006). The real estate market is often seen as relatively illiquid since few transactions are made (Geltner et al. 2007). As a consequence the valuation of investment property often has to rely to a larger extent on valuation models, leaving greater room for subjectivity and discretion in form of assumptions made and discount rates employed. The real estate market and IAS 40 hence provides a possibility of investigating the role the national emphasis of conservatism is allowed to play in the process of arriving at a fair value for investment property.

## ***1.2 Relevance of the Study***

It is now quite some time ago Gray (1988) wrote his article, and although it can be claimed that cultural values are sticky in the sense that they are not hastily changed or converging (Hofstede, 2001), it would be interesting to illuminate what empirical picture emerges today with regards to the optimism-conservatism dimension, and if the two countries are still positioned in the same way relative each other, given that Gray (2009) today suggests that a drift of all countries towards the optimistic end has taken place. Especially so since Gray (1988) never carried out empirical testing of his hypotheses and empirical research have yet to provide satisfactory proof for the hypotheses (Finch 2006).

Empirical research on the overlap between the spheres of research on financial reporting and accounting on one hand, and culture on the other, is most important due to the effects on harmonisation and decision usefulness that follows (Finch 2006). It has further been pointed out that the main body of previous empirical research on fair value accounting is largely related to financial instruments (Hitz 2007).

## ***1.3 Aim of the Study***

The aim of this study has been chosen based on the discussion above and is to investigate if culture, via a greater or lesser extent of emphasis on conservatism on the accounting value level, is allowed to influence accounting practice in the fair value valuation when marking-to-model investment property according to IAS 40. Building on the work by Hofstede (1984) it has been suggested by Gray (1988) that culture on a national level and accounting values at the sub cultural level, are linked, and this paper aims to empirically illuminate one of Gray's (1988) hypotheses on accounting values. The hypothesis in focus is: 'The higher a country ranks in terms of uncertainty avoidance and the lower it ranks in terms of individualism and masculinity the more likely it is to rank highly in terms of conservatism' (Gray 1988, p. 10). This hypothesis can be visually expressed as positions on a continuum, on which the Nordic countries are positioned closer to the optimistic end than are the Germanic, see *Figure 5*. To the degree that values at the accounting level are related to accounting practises, the presence of conservatism on the accounting value level may be empirically illuminated by studying reported accounting practice disclosed in annual reports, by performing interviews, and by breaking down and analysing the components of the discount rates disclosed in annual reports. The research question is as follows:

*As suggested by Gray (1988), i.e. that values at the accounting level in Switzerland are more conservative in Switzerland than in Sweden, is it possible to empirically detect a difference regarding conservatism in financial reporting in the two countries with regards to IAS 40, fair value reporting of investment property?*

The merits of our thesis are hence twofold: First it makes an up to date attempt to lay out the ground and provide suggestions for areas of future research concerning empirical tests of Gray's (1988) hypotheses linking culture and accounting. Second, by doing so it assists in illuminating the empirical presence, or lack thereof, of a national bias in accounting, taking the form of a different emphasis on the importance on conservatism. Since culture may be sticky in the sense in that it takes a long time to change, this is important to establish (Doupnik & Tsakumis 2004). The paper is hence a voice, however minor, in the debate on harmonisation of accounting

practice and comparability of international fair value accounting, and hence on the decision usefulness of accounting and its implications on global flows of capital.

### ***1.4 Disposition***

The outline of the paper is as follows: After briefly discussing the main objectives and underlying assumptions of IASB, the models employed for real estate valuation will be touched upon, and IAS 40 Investment Property summarised. Thereafter a part concerned with harmonization of accounting, and reasons for national differences will follow. This section will be followed by a section on the theoretical framework on culture, leading up to the Method. The result section is next in line, and has been divided into three parts. The first part discuss the reporting praxis disclosed in annual report, the second part touches upon the view of the praxis communicated in the interviews, and a final section breaks down discount rates in their components and analyse the values obtained at each level. Finally suggestions for future research within the field will be made.

## **2 Theoretical Framework**

### ***2.1 The Accounting Framework***

#### **2.1.1. The Main Objectives of Accounting and Underlying Assumptions**

As discussed above, the main objective of IASB is to provide a ‘true and fair view’ of the firm by presenting relevant and reliable information (Alexander & Nobes 2007). In turn, for financial information to be useful, it needs to be relevant, and in turn, to be relevant, information needs to be: (i) material, i.e. ‘its omission or misstatement could influence the economic decision of users taken on the basis of the financial statements’ (IASB 2006, Framework 30, p. 39). (ii) understandable, i.e. given that users are reasonably knowledgeable and willing to learn they should be able to use the statements. (IASB 2006, Framework 25) (iii) comparable (and consistent), across firms, and over time. This necessitates consistency in reporting, display and measurement, and that notice is given when accounting procedures change (IASB 2006, Framework 39 and 40). (iv) timeliness (IASB 2006, Framework 39 and 43). To be useful information also has to be reliable: (i) provide a faithful representation of events and transaction (IASB 2006, Framework 33). (ii) reflect economic substance rather than legal form (IASB 2006, Framework 35). (iii) be neutral, i.e. free from bias (IASB 2006, Framework 38). (iv) complete, to an extent reasonable considering cost and materiality (IASB 2006, Framework 37). (v) conservative, as described below (IASB 2006, Framework 36).

#### **2.1.2 Conservatism – A Definition**

Conservatism, also referred to as prudence, is linked to the reliability concept (Alexander & Nobes 2007). It should however be noted that IASB Framework 37 defines prudence, not conservatism, as ‘the inclusion of a degree of caution in the exercise of the judgments needed in making the estimates required under conditions of uncertainty, such that assets or income are not overstated and liabilities or expenses are not understated’ (IASB 2006, Framework 37, p. 40). Alexander and Nobes (2007) point out that conservatism, within the IASB Framework, is not to be given the space it used to be given in some countries, i.e. to ‘ensure the avoidance of

overstatement by deliberately setting out to achieve a degree of understatement,' when faced with uncertainty in estimating (Alexander & Nobes 2007, p. 42). Nobes and Parker (2008) point out that conservatism can take two forms; first, in the speed with which losses are being recognized, and, second, in the extent to which profit and assets are understated.

### **2.1.3 The Users of Accounting**

Financial accounting is concerned with the accounting used by parties external to the firm (Alexander & Nobes 2007). There is however a greater focus on the needs of investors in the new Framework, introduced in 2005, and it is claimed that if their needs are fulfilled, so may the needs of the other users. The ability to generate, the timing of, and the uncertainty surrounding future cash flows is hence given a central role in the framework (IASB 2006, Framework 10 and 15).

### **2.1.4 Accounting for Investment Property - Fair Value and IAS 40**

The revised version of IAS 40 Investment Property originates from 2005 and introduced 'fair value' accounting for real estate holdings classified as Investment property. IAS 40 defines 'fair value' as 'the amount for which an asset could be exchanged between knowledgeable, willing parties in an arm's length transaction' (IASB 2006, IAS 40:5, p. 2016). Further, Investment Property is defined as 'property (land or building-or part of a building-or both) held [...]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' (IASB 2006, IAS 40:5, p. 2016). The standard also states that 'The fair value of investment property shall reflect market conditions at the balance sheet day' (IASB 2006, IAS 40:38, p. 2021). It further holds that 'A gain or loss arising from a change in the fair value of investment property shall be recognised in profit or loss for the period in which it arises' (IASB 2006, IAS 40:35, p. 2021). Hence the standard requires unrealised gains and losses to be reported in the income statement, feeding into the balance sheet as an increase in equity.

There are four ways to arrive at a fair value and a market based valuation is favoured. (i) Anchoring the valuation on market prices follows the logic that up to date prices for equivalent properties in a liquid market are inclusive of a greater amount of information and are more reliable than are internal estimates (IASB 2006, IAS 40:45). This is however only valid when the asset is traded regularly on a sufficiently liquid market. (ii) If the market is disqualified on the above criteria, the second best option are up to date prices of a liquid market for properties that differ regarding condition, location or nature where adjustments are made for the differences. (iii) If such prices are in scarce supply, the recent prices for similar objects on a less liquid market, adjusted for changes in the economic environment since the transactions occurred, are next in line. (iv) If such a market is absent the last resort is used and fair value obtained through internal marking-to-model supported with market data on parameters such as rents (IASB 2006, IAS 40:46). Further, it is up to the firm, in discussion with the auditor, to decide whether to use an external valuation party or not (IASB 2006, IAS 40: B55).

In Sweden listed firms are for consolidated statements *required* to apply *IFRS as approved by EU* (FAR Förlag 2006). In Switzerland it is *not required*, however, most of the large companies in Switzerland use IFRS (Wild 2008) and the Swiss firms listed on the SIX, the Swiss stock exchange, are *required* to do so (KPMG 2009).

## **2.2 The Real Estate Market**

Commercial real estate is connected to two markets, the space market (land and built space), and the asset market. The space market is the market related to usage of property, also called the usage or rental market, and this market determines the cash flows a property can generate. The rent tenants pay is determined by the demand and supply in the space market. The asset market is the market for ownership of real estate assets, which contains real properties, that is land parcels and the buildings on them. These assets contain claims to future cash flows in the form of rents, and compete in the capital markets with other capital assets. Major factors that influence the price of the property values are: opportunity cost of capital related to the *interest rates from other investments* in the capital markets, the *growth expectations* of future net rent, and the *risk* of future potential net income from the property. The users of the buildings that make up the demand side in the space markets care about the physical characteristics of the real estate assets, the demand side in the asset market cares only about future cash flows, growth expectations and risk. When analyzing the space market it is vital to look for broad trends in *vacancy rate* (percentage of stock built but not occupied) affecting the expected cash flow since it indicates the balance between demand and supply, *rent level*, *quantity of new construction started*, *quantity of new construction completed*, and *absorption of new space*, since they characterize both the demand and the supply side, and their equilibrium (Geltner et al. 2007).

### **2.2.1 Valuation of Investment Property**

In valuing investment property two main types of models may be used; models based on recent transactions at the same location involving similar properties, called Sales Comparison Methods, and financial Cash Flow Models.

#### **2.2.1.1 Sales Comparison Methods**

For the first type of models, the Sales Comparison Models, transactions of similar properties in the market are of importance as a benchmark. For very similar properties the recent transaction price is a good proxy in itself, whereas transaction multiples on net rents, square meters, or other factors related to the value of the property, are used to compare properties that differ (Fastighetsnytt 2003). For commercial property it is common to relate net operating income to transaction price, as in the Income Capitalization Method, in short the cap method (Svenskt fastighetsindex 2006). The cap rate, or current yield (Geltner et al. 2007), is the ratio of net operating income to transaction price, and is hence by definition derived from the real estate market (Fastighetsnytt 2003), and the cap method may be seen as the real estate equivalent to valuating a company with the help of the p/e multiple (Leimdörfer 2003a). It might be easier to observe the cap rates at which properties trade, rather than total returns investors are expecting. A required return of 12 percent with a long term growth of three percent, would hence imply a cap rate of 9 percent, indicating that the property would sell for a price of eleven (1/0,09) times its annual net income (Geltner et al. 2007). The simplicity of the approach is tempting, but leaves room for a few caveats in that each property is unique, the amount of transactions may be minor, and the potential time lag since the last similar transaction may distort comparability (Fastighetsnytt 2003). Further, since the cap rate does not specifically state its inherent growth assumptions, it does not separate risk and expected growth. The implications of this are discussed below (Leimdörfer 2003b).



The Constant-growth perpetuity formula ( $PV = CF_1 / (r - g)$ ) illustrates a basic way to understand the value of a infinitely lived income-producing asset, as a relationship of the current level of net cash flow produced by the asset, the likely long-term average rate of growth in that cash flow, and the expected annual total return required by investors in the asset. This model is therefore broadly applicable for commercial properties and provides a basic understanding of the cap rate (Geltner et al. 2007).

The cap rate model can be illustrated as:

Fair Value<sub>0</sub> = Net operating income<sub>1</sub> / Cap Rate (Fastighetsnytt 2003, p. 368).

Geltner et al. (2007 p. 254) point out that the discount rate, E (r), can be expressed as:

$$E(r) = E(y) + E(g) \approx (\text{Cap rate}) + E(g)$$

Where E (g) is expected growth, derived from typical rent growth rates in the space market, net of the real depreciation effect that will affect the standard of the property and therefore the feasible level of rent. E(y) is the actual net cash flow yield, i.e. the yield based on the cash flows from the property *after* capital improvement expenditure, as opposed to the cap rate, which is based on net operating income, which is *before* capital improvement expenditure (Geltner et al. 2007).

### 2.2.1.2 Cash Flow Models

The cash flow models originates in financial theory and relies on the logic that the value of an asset is the present value of the expected future expected free cash flows that will flow to its owners, and is the most common way to value real estate. The cash flow models consist of three steps: forecasting of the expected future cash flows, deciding on a required total return, and discounting the cash flows to a present value at the required rate of return (Geltner et al. 2007). The cash flows are discounted, using a discount rate, to render the present value at the valuation date (Brealey et al. 2006). The Cash Flow models can be split in two sub categories based on the length of the forecasting period. The first cash flow model is the constant-growth perpetuity formula, also called the Gordon Formula, previously discussed above:

$PV = CF_1 / (r - g)$  (Geltner et al. 2007, p. 160) Where r is the discount rate and g is growth.

The second cash flow model, the Discounted Cash Flow model (DCF) has both an explicit forecasting period, with individually forecasted cash flows, and a terminal value at the end of the forecasting period. The terminal value consists of the cash flows in perpetuity capitalized with the discount rate (Brealey et al. 2006). Both the cash flows during the explicit forecasting period, and the terminal value at the end of the explicit forecasting period, are discounted with the discount rate to render the present value at the valuation date (Brealey et al. 2006). The present value can be obtained as follows:

$$PV = (FCF_1 / (1 + WACC)) + (FCF_2 / (1 + WACC)^2) + \dots + (FCF_H / (1 + WACC)^H) + (PV_H / (1 + WACC)^H)$$

Where  $PV_H = (FCF_{H+1} / (WACC - g))$ , g is growth, and WACC is the weighted cost of capital, further discussed below (Brealey et al. 2006, p. 509-510).

### 2.2.1.3 Real Estate Valuation in Practice

The DCF may provide a more realistic reflection of the future cash flow stream than the direct capitalization, since constant cash flows may provide a poor reflection of reality (Geltner et al. 2007). A criticism of the DCF is however that it may give a false impression of exactness (Fastighetsnytt 2003), and that the quality of the value obtained by employing a DCF is no better than the assumptions fed into the right hand side. Some mistakes in using the DCF valuation method include less appropriate forecasted cash flows, due to unrealistic vacancy rate expectations, unrealistic levels of operating expenses, and poor discount rate assumptions. The forecasting of cash flows needs to be based on an analysis of the space market, consideration of the existing leases and vacant space in the building (Geltner et al. 2007).

Leimdörfer, an independent financial adviser on the Nordic property market, discusses that the main differences between the Sales Comparison and the Cash Flow models is the degree to which assumptions regarding risk and growth are explicit and internal, as in the Cash Flow models, or, implicit and external, as in the Sales Comparison model (Leimdörfer 2003a). The problem with the cap rate is that it makes it difficult to separate assumptions of risk and growth (Leimdörfer 2003b). Important is also the difference that the cap rate is a multiple on net operating rents, which are *after* maintenance cost, but *before* investments (Svenskt Fastighetsindex 2007) whereas the DCF takes into account investments and *all* outflows, both constituting prerequisites for the generation of the cash flows predicted in the model Leimdörfer (2003a).

*Figure 1:* Implicit in the cap rate are several assumptions that the DCF model states explicitly (4, 5 & 6).

	DCF	Cap Rate		
1) Rent	CF	NR	CF	Cash Flow
2) Usage and Maintenance Real Estate Cost	CF	NR	DR	Discount Rate
3) Expected Vacancy	CF	NR	NR	Net Rent
4) Expected Growth in Rents	CF	CR	CR	Cap Rate
5) Compensation for Location Risk	CF	CR		
6) Expenses and Investment	CF	CR		
7) Nominal Rate	DR	CR		
8) Compensation for Systematic Risk	DR	CR		
9) Liquidity Premium	DR	CR		

Source: Leimdörfer (2003a, p. 6).

In practice, the Sales Comparison and the DCF methods are often combined (Leimdörfer 2003a), with the terminal value in the DCF calculated not with the Gordon capitalization formula, but with an *exit yield*. The exit yield is based on a cap rate, derived through the Sales Comparison method, which is then tailored to reflect the property that is to be valued regarding location, characteristics, and market development (Svenskt Fastighetsindex 2006).

It is the net operating rents of the year after the explicit forecasting period that are capitalized with the exit yield at the end of the forecasting period. These net operating rents are *after*

maintenance cost, but *before* investments. In the explicit forecasting period however, the investments are deducted (Fastighetsnytt 2003). Leimdörfer (2003a) points out that future costs are severely underestimated in the valuations combining the two methods. If *all* costs are accounted for in the cash flow, the difference between the exit yield, and the rates used for discounting cash flows should be the growth assumption. However, forecasted future costs are often lower than the actual later outcomes. Sometimes costs are accounted for by increasing the exit yield. When analysing seven companies Leimdörfer (2003a) observed that the difference between the exit yield and the rate for discounting cash flows were approximately two percent, i.e. the inflation expectation in the long run. Hence, either the rates used for capitalization seemed not to have been adjusted, and future costs not compensated for, or, there has been an assumption of growth, in addition to the inflation, that neutralise the cost effect. Leimdörfer (2003a) points out that the former seems to be the case, since the actual cap rates observed during the last fifteen years, are lower than those used in the valuations (Leimdörfer 2003a).

The combining of the two models leads to some confusion, and to the rendering of a value which could be argued neither reflecting the market value, nor a theoretically correct DCF value. Geltner et al. (2007) note that the stock market analogy regarding the cap rate is less accurate in theory as it is based on the cash flow not to the investor but on cash flows before capital improvement expenditure. The simplicity of the cap rate method may seem attractive in that less assumptions and projections has to be made, but in fact these are still made, only that it is no longer the valuator himself that makes them, but other market participants, as opposed to the explicit assumptions the analyst is forced to make in order to set up a DCF (Geltner et al. 2007). Further, as described above, factors influencing not the risk, but rather the cash flows, are included in the cap rate (Leimdörfer 2003a).

#### **2.2.1.4 The DCF Discount Rate**

The role of the discount rate is to convert future money into their present equivalents, requiring the accounting for both time value of money, and the risk inherent in the expected future cash flows. A higher discount rate is used for riskier cash flows, since these cash flows have a higher cost of capital in the asset markets, and the discount rate is seen as the opportunity cost of capital, reflecting expectations of returns on other types of investments of similar risk.

As investors are risk averse they demand compensation in form of returns in addition to that of a risk free asset for investing in assets that are not risk free. The expected risk premium is proportional to the amount of risk investors perceive is connected with investing in the given asset. The expected return of an asset over the future period  $t$ ,  $E(r_t)$ , consists of the risk free interest rate component ( $r_f$ ), accounting for the time value of money, and of the risk premium,  $E(RP_t)$ , accounting for the risk, and is defined as:

$$E(r_t) = r_{f,t} + E(RP_t) \text{ (Geltner et al., 2007 p. 186).}$$

Since real estate investments are often long-term a long term treasury bond with a maturity equal to the explicit forecast period, normally five to ten years, is often used as an approximation for  $r_f$  (Geltner et al., 2007 p. 186, Svenskt Fastighetsindex 2007). The risk premium consists of risk specific to the property, but also to properties as an asset class (Svenskt Fastighetsindex 2007), i.e. risks that are diversifiable, like environmental risk, and technical risk should be accounted for in higher expected cost, not in the discount rate (Leimdörfer 2003b). The risk premium further reflects the tenant mix (Svenskt Fastighetsindex 2007), the type and location of the property

(Geltner et al. 2007), the size, and the time until a market price can be obtained for the property (Leimdörfer 2003b).

CAPM holds that:  $E(r) = r_f + RP = r_f + \beta \cdot (E(r_m) - r_f)$ , showing that an asset's expected return risk premium is proportional to its beta, and the asset's risk-premium therefore equals the beta times the market price of risk, which is the expected return risk premium of the market portfolio, the expected return on investors' overall wealth over the risk-free interest rate. Beta explains a large part, once controlled for size and market value ratio, etcetera, of the remaining variation in average ex post returns. Brealey et al. (2006) discusses that fudge factors may be added to the discount rate to offset failures in forecasting cash flow outcomes. However, investors demand additional risk-premium for difficulties to diversify away risk exposure, such as investments in small firms that are more affected by for example capital market crisis (Geltner et al. 2007). The risk premium might also depend on the size of the market as suggested by Gunnelin et.al (2004) due to that smaller markets may be more risky from a liquidity perspective and to have less well diversified economic bases and therefore be more volatile and more risky (Gunnelin et.al. 2007).

Commercial real estate leases lasts several years and cash flows become less risky once the lease agreements are signed and the tenant is legally obliged to pay the rent. To reflect the different risk, two discount rates are used; one lower for the intra lease period and one slightly higher for the later inter lease period. In reality however, a blended discount rate is often used as a legitimate shortcut (Geltner et al. 2007).

### **2.2.2 Fair Value accounting for Real Estate - Implications for Decision Usefulness**

The switch to fair value accounting has its proponents as well as its opponents. Supporters point to the increased relevance of reports since the fair value reflects the market consensus of the value of the asset. They also hold that cost accounting provides an understatement of the true earnings volatility (Hitz 2007), in that capital appreciation, just like rents, is the essence of the financial performance of real estate companies and hence should be considered together (IASB 2006, IAS 40 BC: 44). Opponents on the other hand argue that the increase in relevance comes at too high a price, the decrease in reliability (Hitz 2007) (Rérolle 2008). The decrease in reliability may be particularly severe when marking-to-model is applied in that valuator's individual assumptions and expectations may take part in the valuation outcome (Hitz 2007), and fair value may be viewed as a 'chewing gum concept' (Skogsvik 2009), subjective in itself (Rérolle 2008). Opponents further claim that fair values of real estate holdings are not only unreliable, but also do not improve comparability since real estate markets are not as active as some financial markets, i.e. real estate transactions are infrequent, properties heterogeneous, and transfers of ownership involve negotiations. Critics further hold that fair value measurement is too costly in relation to the informational gain for investors, and that fair values are more relevant for short term assets than for assets held for investment, such as investment property holdings (IASB, 2006, IAS 40 BC: B46). Further it has been pointed out that the difficulty of carrying out a fair value model is not to be underestimated in that some countries may lack the human capital and competent valuation firms (IASB 2006, IAS 40 BC: B58a). Also, the relevance may be questioned since the fair value obtained by market-to-model for certain non-financial assets do not provide the consensus view of the market of the asset value that motivated the adoption of the fair value accounting in the first place, since the marking-to-model in IAS 40 can be seen as by definition clashing with the theoretical reasoning of the consensus present value of a liquid market that the fair value concept hinges on. If market liquidity dries up, the reliability objection

holds, both for financial and non-financial assets (Hitz 2007). It has further been claimed that including unrealised changes in fair value in the income statement increases earnings volatility, making performance less easy to assess and predict, without increasing transparency (IASB 2006, IAS 40 BC: B63c).

## ***2.3 Influences on Accounting***

### **2.3.1 The Strive Towards International Harmonisation**

The two most important accounting bodies when it comes to harmonisation are the International Accounting Standards Board (IASB), and its precursor, the International Accounting Standards Committee (IASC). Continental Europe was one of the places where the IASC met with most scepticism and was seen as a ‘Trojan horse’ bringing Anglo-Saxon ‘fair’ accounting into the European fortress of continental accounting practice (Nobes & Parker 2008). Among the objectives of IASB is to bring ‘high quality, understandable and enforceable global accounting standards,’ to encourage application of these and to work with national standard setters in order to reach convergence’ (IASB, p. 25). However, it is one thing to have a qualitative international standard, and quite another to implement it in a similar way across national borders. The framework can be viewed as ‘only one leg of a three-legged stool,’ where implementation and enforcement constitute the other two (Gray 2009). Nobes and Parker (2008, p. 75) define ‘harmonization’ as ‘a process of increasing the compatibility of accounting practices by setting bounds to the degree of their variation.’ Nobes and Parker (2008) further discuss the difference between harmonization of accounting rules (de jure), and harmonization of accounting practice (de facto), and stress the importance of the latter. To describe the problem surrounding international harmonisation of practices the simile of a man owning a Ferrari in India may be used: He is the proud owner of a fast and beautiful car, but is able to drive solely on the highway, and only between 2am and 4am since the road otherwise may be filled with people and cows, and the smaller roads are too bumpy (Gray 2009). Financial analysts and investors wishing to invest in foreign companies need to feel comfortable with and understand the accounting of potential investment objects (Nobes & Parker 2008). It is interesting to notice that as a result of market forces, harmonisation of accounting practices can be achieved without harmonisation of the rules (Nobes & Parker 2008).

### **2.3.2 Possible Reasons for International Differences in Financial Reporting across Nations**

Published annual financial reporting differs from one country to another, and Nobes and Parker (2008) note that a number of researchers have been preoccupied with the causes of differing financial reporting across nations, and point out that ‘The history of financial reporting in Europe provides a striking example of the influence of political and economic change on accounting rules and practices’ (Nobes & Parker 2008, p. 238). Continental Europe has been more conservative for a substantial time, and different amounts of conservatism on a national level seem to have remained, despite harmonising accounting rules across nations. Nobes and Parker (2008) discuss that contexts in which national accounting systems operate within, may be the main obstacle for harmonisation across borders. They discuss the implications of the sharp divide between the French and German relative secrecy and focus on creditors as a source of funding, as opposed to the Anglo-Saxon and Dutch emphasis on investors and transparent reporting, and in addition the relative importance of law or tax. The list of other possible explanatory factors for

international differences is long: historical inflation, economic and political events, colonial heritage, language, history, geography, religion, education, and, lately (Nobes and Parker 2008). Below follows a discussion on the role played by the legal system, the extent of funding in form of dispersed shareholders vs. debt, the tax system, and the role played by accounting institutions. To the above list of factors influencing financial reporting the effect of national culture can be added, discussed below.

The legal frame within a country matters in the formation of financial reporting practice. Common law refers to the law in UK and US and builds on the notion that a solution to each individual case should be sought rather than trying to foresee possible future situations and regulate these. This translates into the commercial law in the way that accounting in such a setting is likely to be more self regulating, incurring accountants to set up standards and recommendations, rather than specifying the law in detail. In contrast, law based on the Roman *ius civile*, sometimes referred to as *codified*, implies a more rigid system that to a greater extent rely on written law, also when it concerns to the laws for financial reporting.

Nobes and Parker (2008) points out that the main types of funding are the credit based funding and equity based funding. The preferred way to fund businesses may also influence the financial reporting in a country. France, Italy and Germany, nations in which banks are a major source of financing, and where small family businesses is the notion, can be contrasted with countries such as UK and US, where reliance on equity for funding is more pronounced and ownership dispersed. Nobes and Parker (2008) conclude that the need for published information and audit is less clear in countries where banks, families and government is in control also of listed companies. The focus on the needs of creditors may also have lead to the relatively greater focus on conservatism, since creditors are not as concerned with what constitutes a fair view of the future cash flows of the company as they are with if they, in a worst case scenario, are likely to get their investment back or not. The clear cut distinction between countries of 'equity' and countries of 'credit' has lately been somewhat blurred by the development and increased globalization of the financial markets, but Nobes and Parker (2008) hold that it is still a major influence on the differences in place in between international financial reporting.

Yet another source of influence on the financial reporting is the tax system. The tax systems can be categorized in a number of ways, but only some classification systems are meaningful as explanatory variables in an accounting context. For example, countries in which equity is a main source of funding there are two sets of accounting rules, and two measures of income; one for the purposes of tax collection, and one for providing information to the market (Nobes & Parker 2008).

The causality may go both ways when it comes to role played by the accounting profession in shaping financial reporting, i.e. the position of the profession shapes the financial reporting, just as the role played by financial reporting shapes the profession (Nobes & Parker 2008).

Nobes and Parker (2008) hold that culture is relevant within the accounting setting, but, point out that it may be only indirectly influential on accounting, through the other factors discussed above. They do however point out that when looking at former colonies, the culture of the former colonial power often has an influence outreaching even factors such as corporate funding. As an example, former British colonies in Africa have an accounting system similar to that of Britain, although they lack an equity market. The possible explanatory variable examined in our study,

culture, is discussed in the Theoretical Framework section below, where the role of national culture, elaborated on by Hofstede (1984, 2001) , is extended to the accounting level by Gray (1988).

## ***2.4 Linking Culture to Accounting***

The review of the findings of Hofstede (1984, 2001) below is in place for the reader to get the background on culture, and cultural differences, necessary for understanding the theory proposed by Gray (1988), which constitutes a theoretical framework linking culture to accounting. Already Hofstede (1984) notes however that cultural differences have ‘profound consequences for the validity of the transfer of theories and working methods from one country to another’ (p. 12) and that ‘organisations are culture-bound’ (p. 252).

### **2.4.1 A Brief Summary of Hofstede’s Study on National Culture**

The main body of cross cultural empirical research is concerned with merely two or three country samples. The problem with this approach is that other variables than culture could list such a limited sample in the same order. This probability diminishes as the sample increase (Schwartz 1994). One of the most prominent such studies is the empirical and theoretical study undertaken by Hofstede. His extensive sample of quantitative data has been popular in studies of cross cultural research employing statistical analysis since it is seen as a reliable set of independent variables (Finch 2006).

In order to describe mental processes, Hofstede (2001) focuses on values, both individual and collective, and culture. Values are defined as ‘a broad tendency to prefer certain states of affairs above others’ (Hofstede 1984, p. 25), and culture is held as ‘the collective programming of the mind that distinguishes the members of one group or category of people from another’ (Hofstede 1984, p. 21). In the last definition ‘the mind’ refers to ‘the head, heart and hands,- that is for thinking, feeling and acting’ and in this way culture is inclusive of values, and culture could be said to constitute for the ‘collectivity what a personality is to an individual’(Hofstede 1984, p. 21). Hofstede (2001, p. 10) notes that ‘Values are invisible until they become evident in behaviour’ and that culture is expressed also through visible *symbols*, *heroes*, and *rituals*, all three of which can be included in the term *practices*.

Hofstede (2001) collected over 116 000 questionnaires from employees of IBM in over fifty countries in two rounds between 1967 and 1973 in an attempt to specify the elements that make up culture (Hofstede 2009). Whereas many studies set out on a search for similarities or differences, Hofstede (1984) recognised that this is two sides of the same coin, and that the two can be combined to make up a scale, or, a dimension. These dimensions make visible the collective values that to a great extent make up the different national cultures.

The values of the employees in the study were in focus of analysis, and four dimensions emerged from culture clusters based on how nations scored (Hofstede 1984). During the eighties a fifth dimension concerned with the extent of Long Term Orientation was added (Hofstede 2001). Schwartz (1994) provides both a reliability check on Hofstede’s findings with an alternative way of measurement, as well as a new set of cultural values. Below follows a brief description of Hofstede’s (2001) dimensions:

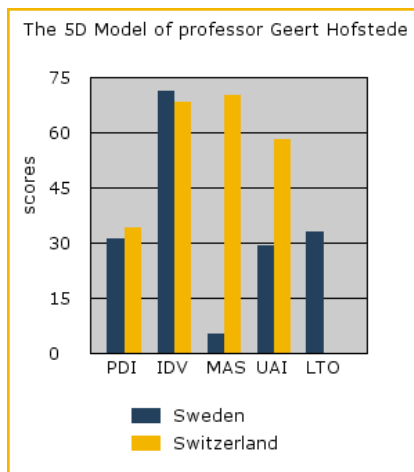
**Power Distance (PDI):** The dimension Power Distance is concerned with the inequality between people in a society, and at what level people are at peace with the level of inequality (Hofstede 1984).

**Uncertainty Avoidance (UAI):** Uncertainty Avoidance refers to the tolerance for uncertainty, and this dimension measures the degree to which it is avoided. Hofstede (1984) notes for example that Germany has laws also for things that *might* take place, as opposed to UK that lack a written constitution.

**Individualism versus Collectivism (IDV):** This dimension describes the relationship between the individual and the collective, which prevails in a given society (Hofstede 1984).

**Masculinity versus Femininity (MAS):** Hofstede (1984) Feminine societies are seen as: people oriented, stressing quality of life, and are in favour of equality between the sexes. Masculine societies are defined by: regarding performance and achievement as important, stressing the value of money and possessions, and seeing the man as in a dominating position.

**Long Term versus Short term Orientation (LTO):** The Long Term Orientation vs. Short Term Orientation relates to the way of balancing tradition between the present and future (Hofstede 2001).



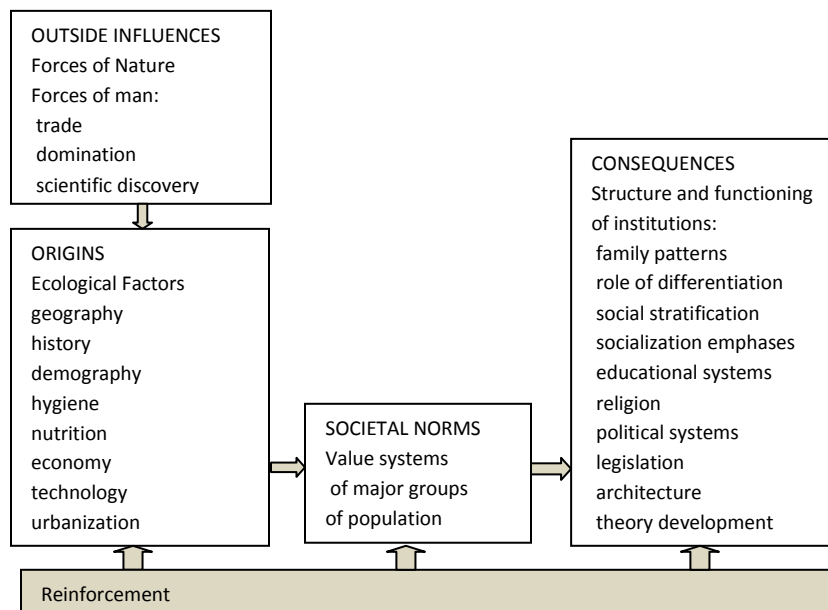
*Figure 2: Hofstede's dimensions PDI, IDV, MAS and UAI for Sweden and Switzerland, exclusive Swiss scores on LTO.*

Source: Hofstede (2009b).

Hofstede (2001) claims that cultural values, and hence differences and similarities between cultures, are not swiftly changed from one generation to another since preserving feedback effects exist, making the consequences of a system of central norms, i.e. the structure and functions of institutions such as the family, education, and legislation, reinforce the prevailing norms and their origin. This model of reinforcement further suggests that changes to the system are mainly caused by a change in ecological factors as a result of external forces, as seen in *Figure 3*. It has been argued that since all cultures are exposed to the same innovations, they should converge. Hofstede (2001) recognises the influence of innovations, but points to the many other influences apart from technology, as well as to the fact that the different present cultures may handle the change in prerequisites in a different way, and differences may hence increase rather than diminish. Hofstede (1984) further points out that in his study there was no convergence between countries during the years between the two times of data collection.



*Figure 3: Hofstede's (2001) model of reinforcement where feedback mechanisms makes the consequences of a system of central norms, i.e. the structure and functions of institutions, reinforce the prevailing norms and their origin.*

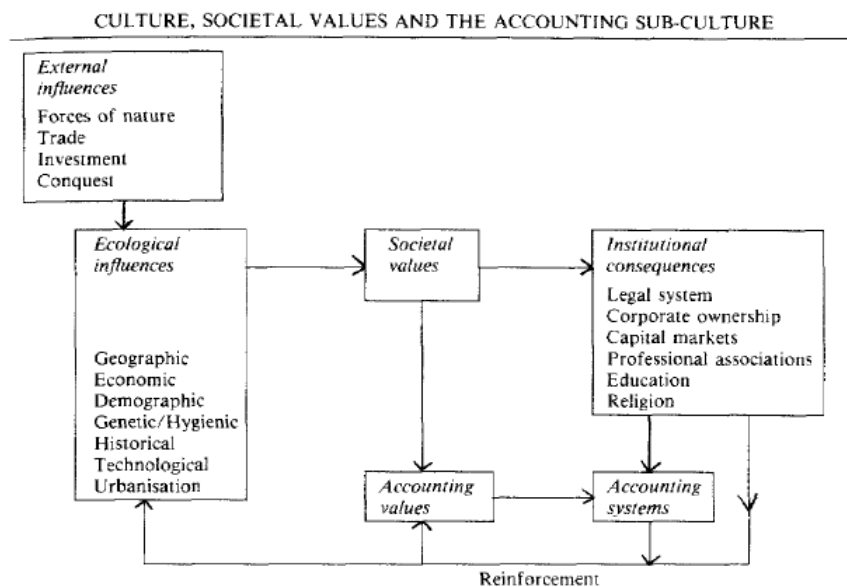


*Source: Hofstede (2001, p. 12).*

#### **2.4.2 Gray's Four Hypothesis linking Accounting Values to National Culture**

The theoretical framework of our paper is based on Gray's (1988) pioneering article 'Towards a Theory of Cultural Influences on the Development of Accounting Systems Internationally.' In his study Gray (1988) relates international variation in financial reporting to culture. As discussed above, different international environments have resulted in different accounting, and such differences could distort international harmonisation and economical integration. Gray (1988) provides a framework consisting of accounting values on the sub cultural level for linking these international differences to Hofstede's (1984) cultural dimensions. Gray (1988) reasons that if 'societal value orientations are related to the development of accounting systems at the sub cultural level, given that such values permeate a nation's social system, then it may be hypothesised that there should be a close match between culture areas and patterns of accounting systems internationally' (p. 5). In the above 'subculture' is referring to culture on the level of the firm/family, as opposed to the meaning of 'culture,' referring to the country level (Gray 1988, p. 4). Gray (1988) suggests that there is a model, similar to the one suggested by Hofstede (1984) that forms and preserves cultures at the national level, that is extended to include accounting practices, and linking these to national values via accounting related values present at a sub cultural level.

Figure 4: Hofstede's (2001) model of reinforcement extended by Gray (1988) to include accounting values.



Source: Gray (1988, p. 7).

Based on Hofstede's (1984) four cultural dimensions Individualism, Power Distance, Masculinity and Uncertainty Avoidance, Gray (1988) hypothesises four value pairs at the accounting sub cultural level:

**Professionalism versus Statutory Control:** 'a preference for the exercise of individual professional judgement and the maintenance of professional self-regulation as opposed to compliance with prescriptive legal requirements and statutory control.'

**Uniformity versus Flexibility:** 'a preference for the enforcement of uniform accounting practices between companies and for the consistent use of such practices over time as opposed to flexibility in accordance with the perceived circumstances of individual companies.'

**Conservatism versus Optimism:** 'a preference for a cautious approach to measurement so as to cope with the uncertainty of future events as opposed to a more optimistic, laissez-faire risk-taking approach.'

**Secrecy versus Transparency:** 'a preference for confidentiality and the restriction of disclosure of information about the business only to those who are closely involved with its management and financing as opposed to a more transparent, open and publicly accountable approach' (Gray 1984, p. 8).

Gray (1988) argues that Uncertainty Avoidance and Individualism stands out as the most important of Hofstede's dimensions when relating values on the accounting and culture level, that Power Distance is somewhat relevant, but Masculinity is less so.

Gray (1988) hypothesises that the strongest link between Conservatism, on the accounting level, and Hofstede's (1984) dimensions is that between Conservatism and high Uncertainty Avoidance since 'A preference for more conservative measures of profits is consistent with strong uncertainty avoidance following from a concern with security and a perceived need to

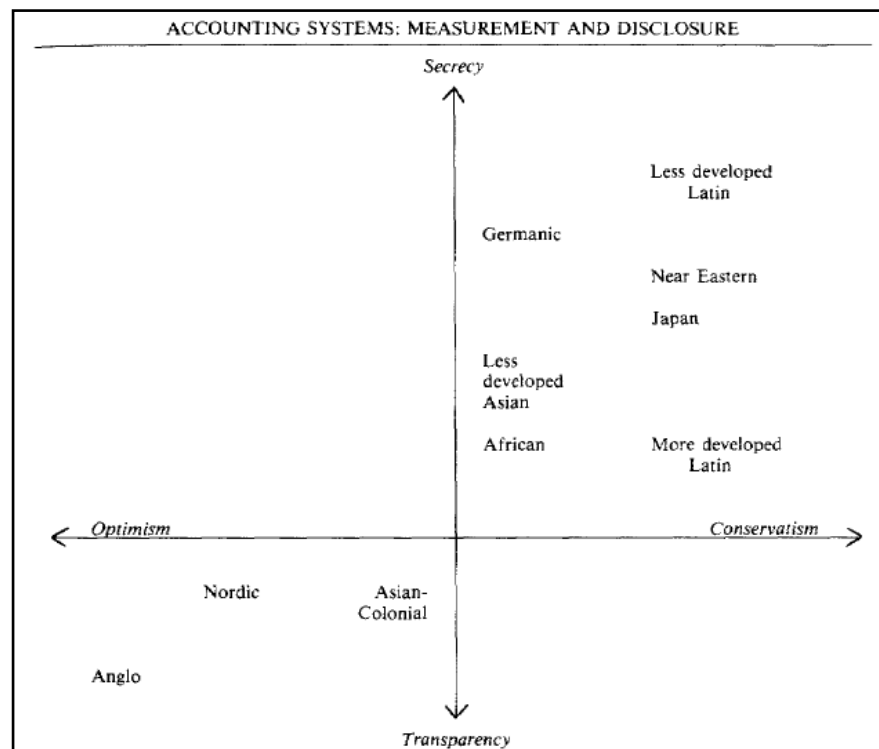
adopt a cautious approach to cope with the uncertainty of future events' (p. 10). Gray (1988) further suggests a less strong linkage between Conservatism and low levels of Masculinity and Individualism, since promoting accomplishment on the individual level may lead way to less conservative measurement. Gray (1988) comments that the influence of conservatism, on a national level, on accounting measurement practice seems to be strengthened by the role of tax laws, different user interests, and how sophisticated the capital markets are.

Gray (1988) notes that Secrecy and Conservatism has in common that both are in favour of a cautious approach to financial reporting, Conservatism when it comes to measurement and Secrecy when it concerns disclosure. Gray (1988) hypothesises that Secrecy is closely linked to high Uncertainty Avoidance, high Power Distance, low Individualism, and low Masculinity.

*Figure 5: Gray's (1988) dimensions related to measurement and disclosure: Secrecy and Conservatism.*

Gray (1988) further notes a link, although less strong, that relates Secrecy to Masculinity in the way that a society promoting quality of life is also likely to promote openness and not secrecy.

Groups of countries have been formed on the basis of accounting values. *Figure 5* describes the dimensions related to measurement and disclosure. To the question how he thinks things have changed from the publication of his article to date with regards to the *Figure 5*, Gray (2009) responds that he believes a general movement downward and to the left may have occurred.



Source: Gray (1988, p. 13).

## 2.4.3 Previous Empirical Research

Salter and Niswander (1995) discussed all four of Gray's (1988) hypothesis. Holding Gray's (1988) accounting level values, empirically tested as accounting practice, as dependent variables, and Hofstede's (1984) culture level values as independent variables, they found that Gray's (1988) model is works best when predicting actual financial reporting practices and less well when explaining professional and regulatory structures. Salter and Niswander (1995) found a significant relationship between some of Hofstede's values and Gray's accounting level values, but the support for the Conservatism was less strong than that for Secrecy. Within the hypothesis on Conservatism the authors found support for Uncertainty Avoidance, Masculinity and Power

Distance, but not for Individualism. In their study Salter and Niswander (1995) also found that Uncertainty Avoidance was the cultural level value that was most closely linked to accounting values.

In a review on the empirical testing of Gray's (1988) framework, Finch (2006) reports little satisfactory support for the hypothesis. Douppnik and Tsakumis (2004) provide a review on the literature on cultural influence on financial reporting and conclude that the studies up to the date of their publication had not successfully been able to confirm the validity of Gray's (1988) theory. Nobes and Parker (2008) note the mixed results of the study by Salter and Niswander (1995) and raise the criticism that Gray's (1988) accounting level values were poorly and indirectly tested. Nobes and Parker (2008) bring forward a critique of the Gray-Hofstede framework in that there may be more direct influential factors to accounting practice than culture, for example funding, tax and law. Douppnik and Tsakumis (2004) however point out that culture changes most slowly, and therefore stress the need for establishing whether culture is an important factor for financial reporting or not, since it, if that is the case, will postpone the prospects of harmonisation, a necessity for the globalisation of capital markets. Salter and Niswander (1995) point out that even if there is harmonisation of the rules, the effect of culture may be that financial reporting becomes less clear possibly making international investors, basing their investment decisions on what they believe is the same information as at in the home country, miss subtle differences, and as a result make poor investment decisions.

### **3 Method**

#### ***3.1 Design***

It has been recognised that humans are formed by their environment, and that accounting practices are, to some extent, linked to the environment. In this study an exploratory case study will be conducted, where accounting practices in Swiss and Swedish real estate firms will be described, compared and where potential reasons for differences will be discussed. This with the aim to generate ideas for further testing and possible generalisation in future studies (Ryan et al. 2002). An inductive approach will be followed in analysing the accounting practices, in order to investigate whether it is possible to detect a pattern of conservatism among the interviews, annual reports and risk premiums, and if so try to relate this to influencing economical and cultural factors (Gray 1988). The study will be divided into three parts, and concern with valuation both in a natural setting, by studying published annual reports and risk premiums, and, in a provoked situation, when conducting interviews (Hofstede 2001).

In the current case study the market risk premium ( $r_m - r_f$ ), was selected as the quantifying tool to reflect the conservatism inherent in the valuation practice. In the above expression  $r_m$  is the rate of return on market portfolio, and  $r_f$  the risk free rate (Bodie, et al. 2008). Assuming that the risk in the real estate market in the two countries on average is the same, higher risk premiums, and thus higher discount rates would imply a more conservative accounting, and vice versa. The ( $r_m - r_f$ ) was selected since it is comparable across countries and an important part in the determination of the discount rate at which future free cash flows are to be discounted. The discount rate in turn is the most crucial parameter in arriving at a present value of the future cash flows, and hence better suited for the task of measuring conservatism than for example internal

estimates of the future long term vacancy in the company portfolio, since the conservatism in this latter estimate is both difficult to compare across companies due to that their portfolios differ, and since it is not as crucial for the valuation outcome. To arrive at the (rm-rf) we first back solved for  $r_e$  using the WACC, the discount rate disclosed in the annual reports, as illustrated below:

$$r_e = (WACC - (r_d * (D / (MV + D))) / (MV / (MV + D))) \text{ (Brealey et al. 2006).}$$

Where MV equals number of shares outstanding times share price at year end, and D equals interest bearing debt. To be noticed is that the companies disclosed discount rates (WACC), are before taxes, hence no consideration is taken to taxes in the formula. The leverage of the property portfolio was approximated with the company gearing (D/E). After arriving at  $r_e$ , and using leveraged betas, hereafter referred to as  $\beta_E$ , obtained from Datastream, we solved for (rm-rf) using CAPM:

$$r_e = r_f + \beta_E (rm - rf) \text{ (White et al. 2003).}$$

Both the discount rates for the cash flows in the explicit forecasting period, hereafter defined as  $r_{cf}$ , and the rates used for arriving at a terminal value at the end of the explicit forecasting period, later referred to as  $r_{tv}$ , and to which assumptions of country specific inflation expectations was added, were back solved for arriving at (rm-rf). In order to get the unleveraged  $r_{cf}$ , i.e.  $r_u$ , and an unleveraged  $r_{tv}$ ,  $r_{u tv}$ , that is rates excluding impact of firm specific capital structure, a beta asset, i.e. an unleveraged beta, hereafter referred to as  $\beta_A$ , was obtained from the  $\beta_E$ . The  $\beta_A$  were used in place of the  $\beta_E$  in CAPM to arrive at  $r_u$ . The betas were unlevered as below:

$$\beta_A = \beta_E (MV / (MV + D)) + \beta_D (D / (MV + D)(1 - T_c)) \text{ (Hjelström 2009).}$$

We aimed to focus on discount rates for commercial property, i.e. offices, hotels, retail, storage, and industry, as opposed to residential, since the residential market is more subject to political influence (Englund, 2009). The rates for commercial property and residential differ, with the latter most often being significant lower. Few companies held solely commercial properties, but the residential property constituted a minor part of their portfolio. It was not possible to separate rates for investments in residential from investments in commercial property, since a span of rates, or an average of total rates were reported. To get around the problem of residential property distorting the rates, reported average rates were foremost analysed. The assumption was made that the reported average was weighted, since the many firms stated that they used a weighted, and since the geometric average of the span of rates reported differed from the stated average.

The companies holding a majority of commercial properties were analysed by a set agenda of parameters extracted from the theory of Commercial Real Estate Analysis and Investments discussed by Geltner, et.al. (2007). The parameters were chosen in order to reflect the risk profiles on a company level and their investment profile in order to put their discount rates into a context. The parameters used for the company level were: the market value of the company, the interest bearing debt to equity ratio. Parameters used on the investment level were: reported fair value of the portfolio of properties, the total amount of properties, the percentage of commercial and residential out of total portfolio, largest renter out of total respectively regional portfolio, vacancy rate, defined as empty space out of total space or foregone rents out of total possible

rents, and net rents in relation to the fair value of the portfolio, i.e. the cap rate. Since many factors may indicate the risk of investing in investment property, a higher discount rate may not necessarily imply that the valuation team is more conservative, but may reflect the greater perceived risk inherent in the property portfolio. The assumption is made that the risk will average out across the two samples, since they cover the majority of the main players in the real estate commercial market within the countries.

In Sweden the inflation expectations disclosed in the annual reports were mainly two percent, as communicated by the Swedish Riksbank. Few of the Swiss firms reported inflation assumptions, and the two that did, reported a one percent inflation assumption. The Swiss National Bank (SNB 2006) communicated an increasing forecast in March 2006 of above 1, 25 percent. Due to that property investments mostly are long term, and the inflation expectation only affects the  $r_{tv}$ , an inflation of 1,25 percent was chosen (SNB 2009). If the length of the explicit forecast period was disclosed, a Swedish and Swiss treasury bond with the same maturity was used in estimating  $r_f$ , if not, the 10 year treasury was used.

Even though it was possible to control for differing inflation expectations between the two countries it may be less relevant to compare their respective  $r_{tv}$  values, after the adding back of inflation, for two reasons. First, the expectations of real growth may differ between the two countries, which could be estimated by the real GDP growth. The impression communicated by the annual reports is however that it is the inflation that constitutes the majority of the spread between the rates used for discounting cash flows and the rate used for capitalization. The second problem is that the reports is not specific on what costs are taken into account in the cash flows after the explicit forecasting period. Of the two problems discussed the second problem may distort the comparability most severe, since the fewer costs taken into account in arriving at the terminal value, the higher the capitalization rate should be, as discussed by Leimdörfer (2003a) above.

### ***3.2 Selected Units of study***

This paper is concerned with investment property companies preferably with a portfolio focused on commercial property, and preferably listed before 2004 or during the analysed time period. A sample of seventeen listed firms were studied, nine Swedish and eight Swiss. The British market was also considered, but the cost picture for the property holders differ, and since the valuation model does not include the discount rate for the explicit forecasting period, which to a great extent is the focus of this study, a comparison was difficult. The German market was also considered, but since that valuation process is subject to a larger extent of regulation, it may leave less room for subjectivity in the valuation process. Listed companies were studied to illuminate the implementation of cross border accounting standards, since their reporting rules are stricter for consolidated statements and IFRS has been followed since 2005 (Nobes and Parker 2008). In Switzerland data is used only from those firms with headquarters in the German speaking part of the country in order to get a more homogenous sample. The annual reports have been read in Swedish and German, since the English version contained less information. The Swedish firms were selected to match the Swiss sample with regards to their commercial property investment profile (Appendix II).

### **3.3 Instruments**

#### **3.3.1 Interviews**

The number of interviews made was limited by the restricted access to the Swiss firms to two in each country. Two Swedish companies were consecutively chosen. Interviews were held with CFO:s and Real Estate Controllers. Further, two interviews were performed with cooperation parties in Sweden and Switzerland to the Investment Property Databank (IPD), the global unbiased provider of real estate analysis, research, publications, and indices for the real estate market.

When interviewing the firms, the same questions, set up in order to cover central aspects of valuation practice and procedures were used (Appendix I). Both the Swedish and Swiss interviews were conducted over the phone, and, in order to encourage the interviewees to speak as freely as possible, interviews were not recorded but notes taken.

#### **3.4 Data analysis**

The discount rates will be broken down and their components analysed, in part by employing two sets of Student T tests. In the first set of tests the criteria for the sample is stricter, and only values derived from reported average rates are included. In the second setting the requirements on the sample have been relaxed in order to increase the sample size. In the first test setting a total of 25 values derived from the  $r_{cf}$ s of seven Swiss firms, and eleven values derived from the  $r_{cf}$ s of three Swedish firms, were included. Regarding values derived from the  $r_{tv}$ s in the first test setting, values from three Swedish and two Swiss firms were included in the sample. In the second test setting sample values derived from the geometric means of the rates, calculated by the authors, have been added to the sample. This rendered the inclusion of two more Swedish firm in the sample for values derived from  $r_{cf}$  and one more for  $r_{tv}$ . In both test settings the following tests were carried out:

Test 1: Testing the  $(rm-rf)$  derived from the reported average discount rate used in the explicit forecasting period

Test 2: Testing the  $(rm-rf)$  derived from the reported average discount rate used for arriving at the terminal value with the addition of expected inflation

Test 3: Testing the  $(rm-rf)*\beta_A$  derived from the reported average discount rate in the explicit forecasting period

Test 4: Testing the  $(rm-rf)*\beta_A$  derived from the reported average discount rate used for arriving at the terminal value with the addition of expected inflation

## **4 Results**

The valuation praxis and possible signs of a conservative approach to valuation within the companies in the two countries is in this section illuminated in three ways; it will be described what the companies disclose about what they do, what they say that they do, and what they actually do. In the first section methods employed in valuation, and the composition and origin of discount and capitalization rates disclosed in annual reports will be described, in the second interviews with two Swedish and two Swiss firms, and with the cooperation parties of IPD in

both countries are discussed, and in the third discount rates, and rates used for rendering the terminal value, are analysed and national differences in  $r_f + \beta_A \cdot (r_m - r_f)$ ,  $\beta_A \cdot (r_m - r_f)$  and  $(r_m - r_f)$  analysed and discussed, and in part illustrated by a Student T test.

#### ***4.1 Disclosed Information on Valuation Method and Rates***

The impression communicated by the annual reports is that there is no single standardised valuation method, but that cap rate methods, DCF valuations, and, a combination of the two, may all be mixed. Firms in both countries state that they most often value their properties with the DCF, but the Swedish are sometimes open with that they derive the exit yield via the Sales Comparison Method, whereas the Swiss firms report that they benchmark rates with the market.

The annual reports for the years between 2005 and 2007 overall give the same impression of the valuation procedure and assumptions, below exemplified with representative extracts from the notes on valuation in the 2007 annual reports. Note that no additional clarifications have been made to what has been stated in the annual report of each firm, this in order to reflect both amount and clearness of the information provided regarding the valuation process.

##### **4.1.1 Sweden**

The disclosure in the Swedish reports can on an overall level be said to be slightly vague, especially when it comes to parameters, assumptions and procedures related to the valuation of the real estate portfolio, but also regarding certain risk measures, for example the risk exposure to large customers that was not always consistently disclosed over time and over companies, impairing a comparison. The comparison was further weakened by the fact that not all firms disclosed their respective fair value per property type, i.e. residential and commercial, but some reported the composition of the portfolio expressed in rents, or, in area.

###### ***4.1.1.1 Atrium Ljungberg***

Employing internal cash flow calculations the firm revaluates their properties every half and full year, letting an external valuator perform a quality check on the fair value. Spans of discount rates for different property types are disclosed, but no exit yields. Rents are assumed to be in line with the present market rents. The discount rate is linked to the type of property holding, and the demand and supply in the market (Atrium Ljungberg 2007).

###### ***4.1.1.2 Balder***

The fair value is derived from a combination of the Sales Comparison method and a Cash Flow method. The exit yield and discount rates are derived from comparable transactions in the real estate market, but are also reflecting location, type of property, physical characteristics, and vacancy. The internal cash flow method consists of an explicit forecasting period of ten years, during which the cash flows are gradually adjusted to the market, and a terminal value representing the property value in year ten. Balder discloses discount rates and exit yields. When contracts come due an assessment is made of the risk that space becomes vacant, and whether rents on a market level may be extracted. The expected vacancy is derived from the current level, and gradually adjusted to the market vacancy, by taking characteristics of the property into account. The inflation is expected to be two percent, and rents are expected to follow the inflation. Forecasted maintenance cost is based on historical experience and budgets. Balder values the entire portfolio internally, but in 2007 an external evaluation party valued part of the portfolio, giving these properties a one percent higher value than Balder (Balder 2007).



#### **4.1.1.3 Brinova**

The company values all properties internally using a cash flow model with a reported six year forecasting period, where the sixth refers to the first year after the explicit forecasting period. The model is based on actual revenues and costs, with adjustments for normalized future cash inflow, and where future expected investments, market rents, vacancy rates, and costs linked to the property, are taken into consideration. The value is derived from discounting the future cash flows with a discount rate derived from comparable transactions in the market. The discount rate is stated to be derived in accordance with what is seen as the industry praxis; that to the risk free rate add a risk premium consisting of general property risk, and of the risk of the specific object itself. In addition to the internal valuation an external evaluator are valuating part of the portfolio, giving it a slightly higher value than the company itself. Brinova discloses exit yields (Brinova 2007).

#### **4.1.1.4 Castellum**

The firm uses an internal valuation method based on a cash flow valuation with a ten year explicit forecasting period. A terminal value, consisting of the cash flows in the life of the property after year ten, is added to the discounted net rents of the explicit forecasting period. From the total of these present values, investments initialised during the first nine years are deducted. Factors affecting the value are the assumptions of real growth, and the discount rate. The discount rate for discounting cash flows is the weighted cost of debt and equity, and the rate used for capitalization is the discount rate used for discounting the cash flows, minus inflation, both disclosed in the annual report. Discount rates are property specific and take into account location, purpose, physical characteristics and standard of the property. The cost of equity consists of the risk free rate, referring to a long term treasury bond, to which an investment specific risk premium, depending on the view of the future risk and potential of the property, is added. The risk premium can be split into two parts, individual and general risk, with the general being a compensation for the illiquidity of properties and the dependence on the economy. The general risk is assumed to be 2.5 percent. The individual risk is specific to each property and based on a judgement of the property type, location, the amount and length of contracts, and physical characteristics of the property. The judgement of the properties' future cash flow has taken into account the inflation expectation of 1,5 percent, changes in the market rent, the length of contracts, and changes in vacancies and property specific costs. An external valuation is performed on 50 percent of the portfolio. If indicated that the fair value of the portfolio has changed over the year, a revaluation is performed in the quarterly report (Castellum 2007).

#### **4.1.1.5 Fabege**

An external valuation is performed yearly, using two external valuation parties. Factors provided by Fabege to the external parties are: present and future tenant contracts, property maintenance costs, and expected investment needs according to plan, and expected vacancies. The valuation is cash flow based, and net rents during a five year forecasting period are discounted. Added to the present value of these is a terminal value consisting of the properties' market value at the end of the forecasting period. The terminal value is derived from the capitalized forecasted net rents of the first year after the explicit forecasting period. The nominal discount rate for total capital before taxes is based on experience of the market's required return for similar properties. The discount rate is based on a five year treasury bond, with addition of property specific risk. Long term vacancy is estimated from localisation and standard. The judgement of the external party when it comes to cash outflows for maintenance and other factors is mainly based on experience

from equal properties, and Fabège's present and historical costs. Costs are expected to increase with inflation. Fabège discloses discount rates and exit yields (Fabège 2007).

#### ***4.1.1.6 FastPartner***

An external party performs a quarterly valuation of FastPartner's properties. The company provides the external valuator with information regarding rents, duration of tenant contracts, vacancies, maintenance cost, which are assumed to increase with the inflation, and larger plans or newly made investments and repairs. In their valuation the external party also considers location and market conditions. To arrive at the market value, a cash flow model for each property is used, rendering the present value of future net rents during a ten year explicit forecasting period, and a terminal value. The approximation of cash outflow for maintenance is based on the information given by the company, and from experience. The cash outflow increase with inflation. The discount rate is based on a nominal required return on total capital before taxes. The discount rate is property specific, and based on the market return on similar properties. For 2007 the required return on total capital was disclosed (FastPartner 2007).

#### ***4.1.1.7 Hufvudstaden***

All properties are internally valued based on the 'direktavkastningsmetoden, it is however unclear to which valuation method this refers to. Net rents are based on market rents, adjusted for vacancy expectations. Subtraction of expected maintenance is made. The required return used in the valuation varies according to regions, and parts within those regions, and is based on comparable transactions. Differences in property type, technical standard, and construction are taken into consideration. To benchmark the valuation, two external valuation parties have been consulted, together valuing 40 percent the portfolio giving it a slightly higher value. Hufvudstaden discloses exit yields (Hufvudstaden 2007).

#### ***4.1.1.8 Klöver***

Klöver performs an internal valuation of the entire portfolio every three months, and an external party values a different 20 to 30 percent each quarter, making almost the entire portfolio externally valued during the course of a year. The valuation is performed using a cash flow method, where net rents are forecasted and investments taken into account. The explicit forecasting period is five years, but extended if contracts are longer. The cash flows of the first five years are discounted using the discount rate, and so is the terminal value derived by capitalizing the estimated market net rent at the end of the explicit forecasting period with the exit yield. The exit yield is derived from the external party's experience, market data, and from the Sales Comparison method, and adjusted for the risk inherent in the property it is to value. The discount rates, also in the internal valuation, are the ones set by the external party. Both exit yields and discount rates are disclosed. Future net rents are based on an analysis of each market, future rents, investments, and maintenance of each property. After the termination of a tenant contract, the market rent is estimated. Rents and maintenance increase with the expected inflation of two percents. Forecasts of market rents, future investment, and maintenance, are mainly made by the external valuator, based on their knowledge of the market. Inflation of 2 percent is expected, and long term estimated vacancy is disclosed (Klöver 2007).

### **4.1.2 Switzerland**

The Swiss companies state in their annual report that they employ a DCF model in the valuation. The Swiss annual reports are on average longer than the Swedish, containing more details,

foremost since the Swiss companies include a section provided by an external evaluator that provides a clear description of the valuation process. To notice is also that many Swiss firms use the same external valuator, contributing to the standardized impression of the Swiss reporting (Appendix II). Discount and rates used for capitalization for each single property holding is often disclosed.

#### ***4.1.2.1 Allreal***

Allreal has an external valuation party perform their fair value valuation employing a DCF with a ten year explicit forecasting period, where the earning potential of the property on the basis of future in- and outflows is considered. Rents are expected to grow with inflation, and net rents are after deduction of maintenance and administration. Investments are taken into account in both the explicit forecasting period, and in the cash flows capitalized. The estimation of future rents is based on actual contracts and yearly forecasted target rents. At the end of the contract period, the market rent is the expected rent. If the duration of the contract is not set, the market rent is used in forecasting the rent capitalized. The discount rate is property specific, and based on property type, and on macro and micro conditions. The discount rates and the rates used for capitalizing are based on the return of a long term risk free rate asset, with the addition of a risk premium, and verified against market transactions. The external valuator estimates the spread between the risk free ten year government bond and the property investment to be between 200 and 600 bp. Allreal discloses both discount rates and rates used for arriving at the terminal value. The rate used for arriving at the terminal value and the discount rate are stated to, with a simplification, give the same exit value. This simplification does neither take an increasing inflation into account (lower rate) nor property specific increasing risk and forecasting insecurity (higher rate). If these risks are known and the risks are not quantifiable they are taken into consideration in a higher rate (Allreal 2007).

#### ***4.1.2.2 Intershop***

Intershop's properties are valued once a year by an external party. The DCF is used, discounting the net cash flows of a property during a ten year explicit forecasting period, and adding a terminal value. Most often the discount rate and the capitalization rate both arrive at the same terminal value, based on the same discussion as above. The discount rate is based on the rate of a long term risk free ten year treasury, to which a specific risk premium is added. The risk premium accounts for the market risk, and the illiquidity in the real estate market. The discount rate varies with type of property, and with micro and macro conditions, location, the situation on the transaction market, and property size. The spread between the treasury and a real estate investment is regularly verified by their external valuator, and was at the end of 2007 200 to 600 basis points. The discount rates are seen as sticky (Intershop 2007).

#### ***4.1.2.3 Zueblin (Züblin Immobilien)***

Zueblin in the 2007 annual report states that they employ a DCF model, and other valuation models to confirm the outcome of the DCF. The DCF has a ten year explicit forecasting period, and a terminal value. The discount rates for the cash flows are based on net initial yields, interpreted as cap rates, from market transactions of similar properties, and this approach is seen as consistent with the market, as the cap rates reflect the buyers return expectations given the property specific risk. The rates used for capitalization to arrive at a terminal value are based on the property specific discount rates for the cash flows. Zueblin deducts CAPEX from net rents in order to arrive at the cash flows to discount. Expected rents are based on the rents paid by

existing tenants, how easy it is to re-let at current market rents, and the probability that current contracts are to be renewed. The rents possible to extract by re-letting are determined by the individual properties and local market conditions. Net income is defined as gross income subtracted with property specific costs that cannot be passed on to tenants. To arrive at the cash flows from the property, modernization, refurbishment, and maintenance costs are deducted from net rents (Zueblin 2006/2007).

#### **4.1.2.4 Mobimo**

The whole portfolio is externally valued with the DCF method. The properties are valued on the basis of previous valuations and specific information that is at the valuator's disposal. The discount rate is based on a long term risk free asset, to which an additional risk premium for the illiquidity of the property as an investment class, the market risk associated with real estate, and specific risk associated with the specific property considering location and characteristics, etcetera, is added. The current rent level on the reporting day and planned investments are taken into consideration in the external valuator's life-cycle approach. Changes in terms of potential rents, absorption time of vacancies, and discount rates are checked and adjusted for the individual case. The estimated cost for example for maintenance is extracted from a combination of historical data, budgets, and research made by the external evaluator. Factors influencing the value are: changes in the economy, new tenants, changes in vacancy, development in the market specific to the property, changes in the transaction market that affects the discount rate, and the ageing of the properties which is stated to affect the value annually by one percent, etcetera. The discount rate reflects the specific risk associated with the property, where characteristics of the property, and market orientation, and location are taken into account. The starting point of the valuation is the estimation of the effective rents. For properties where the contract is due within the timeframe of the valuation period, an estimated rent is used that is extracted from a mix of the most recent contract, a benchmark towards similar properties, and research made by the external valuator (Mobimo 2007).

#### **4.1.2.5 PSP**

The valuation of the properties is performed by an external party, which also makes the assumptions that cash flows and discount rates are based on. The properties are given a market value every half year based on the DCF. If the company suspects that a significant change in value, of over two percent, has occurred during the first and third quarter, the external party is valuing the properties at that point as well. The valuation is property specific, and based on opportunities, risks, and market influences. Other factors taken into consideration are: the quality and risk of property valued, i.e. its attractiveness, the possibility of letting, construction, micro and macro conditions, and vacancy. After an explicit forecasting period of ten years, a terminal value consisting of the earnings streams of the future 100 years, is added. The discount rate is benchmarked towards available comparable transactions, and consists of a risk free rate, with the addition of a premium for real estate risk, macro conditions, and micro effects concerning the property type, quality of the property, and risk concerning receiving rents. The discount rate is thus depending on the property, property type, and location. The creditworthiness of the renter is not taken into consideration in the valuation. Value increasing investments are taken into consideration for the eleventh year (PSP 2007).

#### **4.1.2.6 Swiss Prime Site**

The properties are valued every six months by an external evaluator, generally with the help of the DCF, by discounting the property's net rents, or, with other words the EBITDA (earnings before taxes, interest payments, depreciations and amortizations) and by taking investments into account. The valuation is performed for each property individually, and based on changes in the risks and changes in the market. Factors influencing the value are renovations, forecasted market rents, and vacancy. The explicit forecasting period is ten years, and the terminal value is derived using a 100 year horizon. A one percent inflation assumption is made for the cash flows and the discount rate in the valuation. The rents are adjusted every fifth year to the market rents. On the eleventh year reparation costs are taken into consideration. The discount rate is based on a real risk free asset, the long term government bond, to which inflation is added, together with a general risk premium, as well as an additional compensation for the property specific risk (Swiss Prime Site 2007).

#### **4.1.2.7 Warteck Invest**

All properties are externally valued using the DCF. The explicit forecasting period is 10 years, and net rents, where costs for repairs, maintenance, renovations, and etcetera are considered, are discounted. The rents are adjusted for inflation. All cash flows are discounted with a nominal discount rate that is tailored to each property. For the eleventh year a terminal value is extracted. The inflation rate is subtracted from the discount rate in arriving at the terminal value. The discount rate for the cash flows consists of the risk free rate of the long term government bond, and of a risk premium compensating for the illiquidity of real estate as an investment class, for the specific property type and location, etcetera (Warteck Invest 2007).

### **4.1.3 Summary on Disclosed Valuation Practices**

In summarising the above, a few things should be noted. The annual reports give the impression that the Swiss valuations to a greater extent than the Swedish are based on financial theory, i.e. that properties to a larger extent are viewed as assets generating cash flows. This view is based on three observations, first, the Swiss firms to a greater extent than the Swedish discuss the role of the risk free rate in conjunction with the discount rates, second, a finite number of years after the explicit forecasting period, rather than a perpetuity, is assumed for arriving at the terminal value, and third, Swiss firms are more explicit about taking future investments into consideration. Further, the Swedish firms to a greater extent report that they use the DCF in conjunction with the Sales comparison model.

The reports of the Swiss firms come across as more detailed, and more transparent. The Swiss firms are more explicit on that they benchmark the rate used in the valuation with the market, and adjust it internally to their own valuation assumptions, whereas in Sweden it appears to be less clear to what extent the rate derived from the market is adjusted. Given the information in the annual reports, i.e. that many Swedish firms disclose exit yields, and that the Sales Comparison model is mentioned, it appears the Swedish firms to a greater extent employ a hybrid model, discussed by Leimdörfer (2003) in the theoretical section.

Viewing the cash flow of a property as flows in perpetuity is possibly influenced by the assumption in the DCF model that a company will generate cash flows in eternity. However, as a property is a physical asset subject to impairment it may not be realistic to assume that it will persist for ever in the same way that may be assumed for a company. Hence, assuming that a)

real estate assets are to generate future cash flows in perpetuity, and b) not taking the full cost of future investments into account in the valuation, may be said to represent a more optimistic mindset, thus possibly indicating that in this specific case Sweden may be viewed as positioned more to the left on Gray's (1988) conservatism dimension, as proposed in *Figure 5*.

## ***4.2 Interviews with Real Estate Companies and Organisations in Sweden and Switzerland***

### **4.2.1 Real Estate Valuation Praxis**

Being granted access to the Swiss companies was not easy and may say something of where Switzerland is positioned on the Secrecy Dimension, the second of Gray's (1988) two Measurement and Control dimensions. When asked for an interview comments were made that nothing in addition to what was already disclosed in the annual reports was to be communicated, and that the potential interviewee therefore did not see any reason for conducting an interview. After calling the Swiss companies, presenting the aim of our thesis, and following up with a formal letter of request, with a reference to both our professor at SSE, and to a former professor at the Universität St Gallen in Switzerland, we were granted two Swiss interviews out of nine firms approached. Being granted access on the Swedish side did on the other hand not pose a problem, but was rather welcomed when contacting two Swedish companies. Interviews in both countries focused on the same following themes: industry valuation praxis, attitudes towards fair value accounting and IAS 40, the role played by the external valuation party, and discount rates. The two Swedish companies will in the following be denoted A and B respectively, and the Swiss C and D.

The overall impression emerging when conducting the interviews is that when it comes to valuation, much of it is based on praxis, rules-of-thumb, and on a feeling for the real estate market derived from working with it daily. Firms' own experience is combined with an external party's expertise on overall market parameters and valuation.

#### ***4.2.1.1 Discount Rate Discussion and Valuation Methods***

When setting the discount rate, Company A does not take the capital structure and cost of debt into account, but other transactions in the same area and of the same property type. When recent similar transactions are few, Company A prefers to look at older, similar transactions and adjust for the time lag, rather than to look at newer transactions involving properties less similar. It is further communicated that the terminal value is discounted using a discount rate approximately equal to the discount rate used for discounting the cash flows in the explicit forecasting period, with the deduction of inflation. It is however also taken into account that the cash flows in the explicit forecast period are more secure, and hence discounted using a lower rate.

Company B employs a DCF with a ten year explicit forecasting period. The discount rate is based on the risk free rate, and takes into account the length of the contracts, the amount of renters in a property, and the liquidity of the property. Future inflation is assumed to be the two percent communicated as Riksbanken's target, in line with the industry praxis. The rates used for arriving at the terminal value are the discount rate minus inflation.

The interviewee from Company C points out that fewer transactions will be undertaken as a result of the current crisis, since the availability of funding is impaired, due to rising bank lending rates, and requirements on lower leverage in transactions. This will in turn impact the practice of benchmarking to market transactions. Company C employs two discount rates, one for the explicit forecasting period, and one for arriving at a terminal value, with the latter mainly reflecting the general economic risk and interest rates.

The interviewee from Swiss Company D explains that the firm uses a DCF model and benchmarks the value obtained with experience and feeling, since the firm has a sense for roughly in what range the value should be. The interviewee communicates an approach for arriving at the discount rates where the Swiss 10 year state bond is used as a base, and a risk premium, consisting of risk related to the type of property, tenant mix, and risk of vacancy linked to environmental factors, and financial risk, is added. The respondent further points out that regarding the financial risk, the company is well below the upper limitation of about 65 percent of debt financing for properties in Switzerland. The respondent from Company D describes that an approximation for vacancy is derived from a combination of the internal vacancy rate and benchmarking against market data. When it comes to forecasting rents however, internal forecasts are favored, with the motivation that market data is dissimilar with regards to factors such as location, and physical characteristics of the properties. Benchmarking is used with caution, since even a building across the street may be totally different from the one in your portfolio, however, market rents are crucial for arriving at an approximation of future rents.

#### ***4.2.1.2 Reflections on the Role played by the External Valuation Party***

In Company A the portfolio is valued every quarter and an external valuation party values a part of the portfolio each time. The respondent from Company A expresses that he believes the external valuation to be a good thing, since it signals both objectivity, and that the internal valuation is linked to the external. The respondent from Company A points out that, over time, the value obtained in the internal and external valuation is the same. Further he discusses that Company A's valuation of their properties have been rather stable and that the value of the properties did not increase so much in the rally of 2006/2007, and as a result now do not decrease much either. The same respondent also points out that two properties recently sold for more than their reported fair value. There is a continuing dialogue between Company A and the external valuator, where the external party has a greater say in matters related to market factors i.e. discount rates, vacancies and inflation. The market factors are however adjusted to be applicable to the property portfolio of the company, and foremost the company sets the agenda on parameters related more closely to the operations of the firm.

The interviewee from Swedish Company B discusses that the internal valuation is the one disclosed in the balance sheet, and that it is less volatile than the external. This is interesting since it initiates the thought that the internal valuation may have less of a fair value characteristic than the external, since market values often are rather volatile. The respondent discusses that the external valuation party may rely more on market parameters in their valuation, since they have limited access to the internal business knowledge.

The Swiss firm Company C, does not perform an internal valuation, but only an external. The real estate firm is however in close contact with the external party and discusses assumptions. The interviewee from Company C points out that if the external valuation firm lacks internal details, the valuation outcome may be misleading. The external valuation is in the interview

motivated on the grounds that since Company C is a small firm, with approximately 20 properties to value, and since the external party values about 350, an external valuation may be more accurate. The interviewee from Company C expresses the view that the current economical crises may have made the external valuator a bit too conservative in their valuation.

Company D is not performing a valuation themselves since they do not have the resources, and leaves also the deriving of discount rates to an external party. Company D is in constant contact with the external party, and involved in discussions on the discount rates, although the external party has the final word.

#### ***4.2.1.3 Attitudes towards IAS 40 and Fair Value Accounting***

The attitudes to the resent application of IFRS and fair value accounting differ across the interviewees. The respondent from the Swedish Company A holds that he is less comfortable with fair value accounting since the valuation is based on many parameters that could go wrong, and often rather few recent comparable transactions to benchmark against exist, hence making the valuation subjective. He points out that valuations always have been subjective, and expresses that he feels most awkward that the subjectivity now is to be brought into the income statement, and points out that the unrealised results feels like monopoly money.

The respondent from the other Swedish company, Company B, was however positive towards fair value accounting and pointed out that the firm had adopted a more commercial mindset.

The interviewee from the Swiss Company C is positive to fair values, but acknowledges that they are unstable since they are dependent on the underlying assumptions, and since there are few transactions undertaken to confirm the valuation. He further experiences that the rules sometimes are less clear, and points out that the practice of IFRS of course is different in reality and points out that he believes that the regional practice still constitutes a major source of influence. The interviewee of Company C further reflects that IFRS may not provide an accurate view in the region where the company operates, since local policies and politics are strong. It is further discussed that it may sometimes constitute a greater problem to give a wrong view from the perspective of the local market, than to deviate from IFRS, and the interviewee points out that the world may not work in the same way in all markets.

The interviewee from Company D is in favor of IAS 40, and holds that it provides a better view of the value of the properties, even though it might be difficult to calculate. He believes the transparency is increased, more institutional investors attracted, and points out that without IAS 40 it would have been impossible for foreign investors to invest in Switzerland, and that IAS 40 is an improvement for everybody. The interviewee however points out that the DCF has a certain mechanical feature to it, and that the value in the model changes if you make investments a year sooner or later, whereas in the reality it does not. He further points out that the lack of recent similar transactions posts a problem to the fair value valuation. It is also stressed that all transactions do not constitute a 'fair sale' but rather that the seller under some conditions might be forced to sell. As an example the interviewee mentions the legal investment requirements of certain insurance companies, i.e. to have a certain percentage of the funds invested in equity. In the current financial crisis and plummeting equity market this percentage of the total portfolio has dropped, forcing the sale of real estate holdings in order to re-balance the portfolio weights.



## **4.2.2 Interviews with IPD's Cooperation Parties in Sweden and Switzerland**

### **4.2.2.1 IPD's Swedish Partner Svenskt Fastighetsindex (SFI)**

The interviewee discusses that she believes 99 percent of the Swedish real estate firms are using the DCF model in their valuations. The Swedish real estate companies are discounting the cash flows in the explicit forecasting period to arrive at a present value with a discount rate. An exit yield is used for capitalizing the cash flow after the explicit forecasting period to arrive at a terminal value. The terminal value is discounted with the same rate as the cash flows, and added to the present value. It is pointed out that the only difference between the exit yield and the cap rate is time, and that there will be a difference between the two only if the future is thought to differ from the present. The respondent points out that the Swedish approach underestimates the true costs in the cash flows after the explicit forecasting period. This is partly compensated by a larger exit yield.

### **4.2.2.2 IPD's Swiss Partner Wuest and Partner (Wüest & Partner)**

The interviewee points out that the main model used to value properties in Switzerland is the DCF method. The expected life of the property is assumed to be 100 years, with a ten year explicit forecasting period. This is regarded as giving a more accurate value than evaluating the property assuming a cash flow in eternity. The interviewee illustrates with the example that a real estate firm may want to know the value of a property after the end of a 20 year lease when the building is to be demolished.

It is pointed out that the DCF model is not fixed, but that the valuator always goes back to the market to benchmark with market transactions. If the value obtained through the model feels higher than what the valuator is comfortable with, the discount rate is adjusted. The extent to which it is benchmarked with the market depends on how similar the transactions being made are to the valuation object. The question is raised whether the 'comparable transactions' are in fact comparable.

The discount rate is mainly derived from the market, and consists of the rate of a risk free asset, such as the long term government bond, and a risk premium. The risk premium compensates for the real estate as an investment class, and for various macro and micro factors, and the quality of the property itself. The difficulty of arriving at the risk premium was stressed, since this is not a published value and differs from year to year. The interviewee also pointed out that there is a problem regarding the cap rate, in that everyone has their own definition.

The interviewee concludes that Swiss market is said to be different from other real estate markets, for example that it is not as highly regulated as the German market. It is further stated that the Swiss market has been closed for many years.

## **4.2.3 Summary on Communicated Valuation Praxis**

The Swiss companies value their entire portfolio externally, whereas the Swedish firms mainly compares the internal valuation for a part of the portfolio against that obtained by an external valuator. This gives an impression of a greater objectivity in the Swiss reporting, and may also imply that Swiss values are more in line with the market. The Swedish firms state that they are benchmarking with the market, however if the values of the transactions being made is not

representing the fair value and this is not adjusted for in the valuation, the value obtained will not be fair in neither of the countries. The Swiss reporting makes a more consistent impression, possibly since valuations are performed by a few selected external valuation parties. The impression is that the Swedish valuation is less standardised, and relies on praxis and rules of thumb to a greater extent. An example that indicates the greater diversity in the Swedish reporting is that Brinova in their annual report 2007 reports that they employ a cash flow model with a six year forecasting period.

Interesting to notice is that the Swiss firms seem to be more familiar with valuation practice, although they do not perform it themselves, than do the Swedish firms, which perform the valuations in house. One possible reason may be the close cooperation and discussion with the external valuator on valuation assumptions. A possible reason for the greater extent of external valuation in Switzerland might be that the rates used in valuation are more tailored to the specific properties, thus demanding external expertise. However, Swiss firms points out the importance of a frequent and close relationship with the external valuator.

It is worth noticing that when talking to both the interviewees from the cooperation partners of IPD, it is pointed out that firms in general perform their valuations with a DCF. The rate used for capitalization to arrive at the terminal value is however mainly derived from the market. The representative from IPD's Swedish cooperation partner discusses that Swedish firms use an exit rate derived from the market and that the full cost of future investments may not be considered. The impression is that the Swiss firms to a greater extent take investments into account. For someone trained in financial theory it is surprising to find out that the terminal value in real estate valuation occasionally do not seem to take capital improvement expenditures into account in the cash flows capitalized, since the net operating income used in these capitalization, is *before* this outflow. To note is that investments may be accounted for in a higher rate used for capitalization, rather than in the cash outflows, as discussed by Leimdörfer (2003a) in the theoretical section, and as pointed out above by the Swedish IPD cooperation partner. Whether the firms that did not take capital improvements into account in the cash flows for the capitalization compensated for this in form of a higher rate is hard to say.

From the interview with the Swedish cooperation partner of IPD, the picture emerging is that of a Swedish industry that underestimates its future investment costs. However, the established valuation praxis seems to work in that there is a functioning market, where market participants conform to the conventional praxis. Unless the Swedish firms account for the perceived lesser future investments in the form of higher capitalization rate, it may however be hypothesized that they in their valuation take a slightly more optimistic approach than do the Swiss valuers.

However, the impression has been given, for both countries, that as tenant contracts are due, either a larger capital improvement investment is made, thus making it possible to extract higher rents in the future from the property, or, the valuator accounts for lower future market rents. It appears as when this decision has been made, it is as if a new property is valued, with the valuation being made from a clean sheet. This may also partly explain why larger capital improvements might not be taken into consideration in the initial valuation. The impression from the interviews is that in the real estate market it is more common with infrequent but larger investments, and it may therefore be argued that accounting for those in the form of a small cash

outflows every year would imply a poor reflection of reality. On the other hand, not accounting for these outflows at all also seems an inaccurate assumption in a valuation.

The interviewee from Wuest & Partner comment's that the risk premiums are not published somewhere, so you always have to go back to the market. Benchmarking with the market is how firms are to go about in a valuation, according to IAS 40, and benchmarking to a greater or lesser extent may not give an indication of where the country is positioned on Gray's (1988) conservatism dimension. However, the information found in the market is interpreted and applied to the valuation of a property in question, and in these adjustments subjectivity is brought into the picture. This will be addressed in the section below, where discount rates are analysed.

### 4.3 Analysis of Discount Rates

This section will break down the discount rates and the rates used for capitalization step by step, and compare the national averages on each level. First leveraged rates will be compared, then unleveraged, and finally the  $\beta_A \cdot (r_m - r_f)$  and  $(r_m - r_f)$  will be compared using a Student T test.

Over the period the average vacancy in Sweden was between 10.3 in 2004 and 8.3 in 2007. In Switzerland the vacancy was between 7.8 in 2004 and 6.1 in 2007, see *Table 1*. Beta asset differ between the two countries, with Sweden averaging 70 percent higher over the time period investigated, 2004 to 2007. The tax rate is lower in Switzerland, averaging between 20 and 25 percent, depending on canton, compared the 28 percent used in Sweden during the period. When un-leveraging the beta equity, the tax rate impacts the beta asset obtained, but does however not explain all the difference in the beta assets. Beta equity for Sweden is approximately twice the beta equity for the Swiss companies, this whereas D/E is approximately seven percent higher in Sweden. It is important to notice that the ten year risk free rate, here approximated by a long term treasury bond, is higher in Sweden, since this impacts the spread between the discount rates. The spread in risk free rate between the two countries is between 390 and 80 bp during the period, see *Table 2*.

*Table 1:* Country averages of variables specific to the firms derived from the sample of the study.

Year	2007	2007	2006	2006	2005	2005	2004	2004
Company Variables	SWE	CH	SWE	CH	SWE	CH	SWE	CH
<b>Beta Asset</b>	0,5	0,3	0,5	0,3	0,5	0,3	0,5	0,3
<b>Beta Equity</b>	1,0	0,5	1,0	0,5	1,0	0,5	1,0	0,5
<b>Average D/E</b>	1,3	1,2	1,5	1,2	1,4	1,4	1,7	1,8
<b>Average Vacancy</b>	8,3	6,1	9,7	9,3	9,6	8,9	10,3	7,8
<b>Average Discount rate r cf*</b>	6,4	5,7	6,9	5,6	7,4	5,7	7,9	5,7

Source: Datastream, Annual Reports.

\* WACC

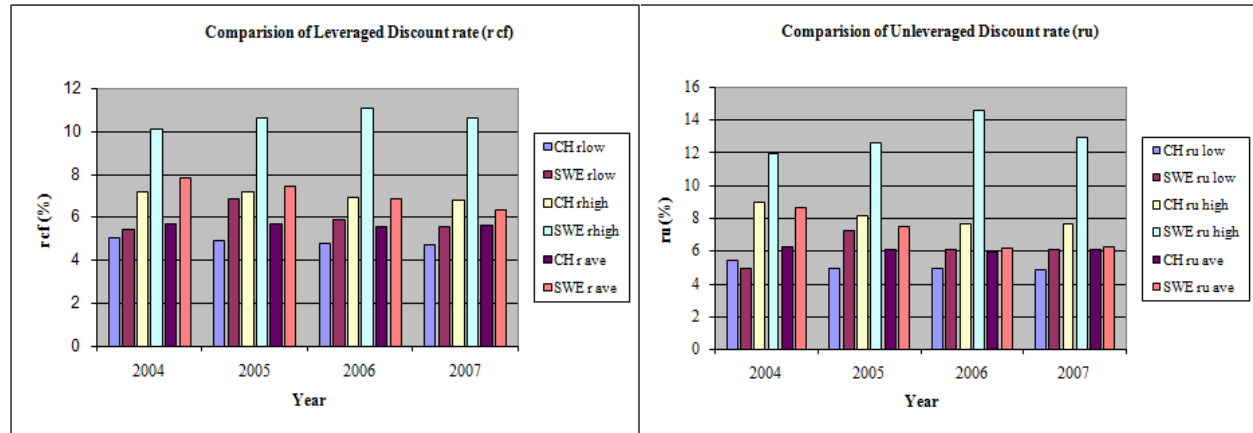
Table 2: Country averages of variables on a country level.

Year	2007	2007	2006	2006	2005	2005	2004	2004
Macro Variables	SWE	CH	SWE	CH	SWE	CH	SWE	CH
Interest rate	3,4	2,6	4,4	2,1	4,6	1,3	5,3	1,4
Real GDP growth (%)	3,3	2,5	4,1	2,5	1,9	-0,2	2,4	0,4
Inflation (actual)	1,7	0,8	1,5	1,0	0,8	1,1	1,0	1,3
General Vacancy rate	na	na	10,8	6,2	11,5	5,9	12,2	5,7
Exit yield average	na	na	5,4	na	6,0	na	6,7	na
Average Discount rate	na	na	na	4,9	na	5,0	na	5,1

Source: Eurostat, SNB, IPD.

The following section is, when it comes to company specific parameters, based on the values found in Appendix II. To note is that in some cases the averages are based on a very small sample. When comparing the leveraged discount rates, i.e. the one disclosed in the annual reports, for seven Swedish and seven Swiss firms, the Swedish  $r_{cf}$  are higher for both the highest and lowest rates in the span, as well as for the disclosed average rates, see *Graph 1*. To bear in mind is however, as previous mentioned, that the Swedish  $r_f$  and gearing is higher. When un-levering the rates, in order to take away the impact from the capital structure, the Swiss  $r_{u low}$  is higher for 2004, but for  $r_{u high}$  and  $r_{u ave}$  the Swedish rates are still higher. To notice is that the  $r_{u ave}$  for 2006 and 2007 between the two countries is almost equal, see *Graph 2*.

*Graph 1 and 2:* Comparison of country average of leveraged and unleveraged discount rates for 2004 to 2007 for Sweden and Switzerland.

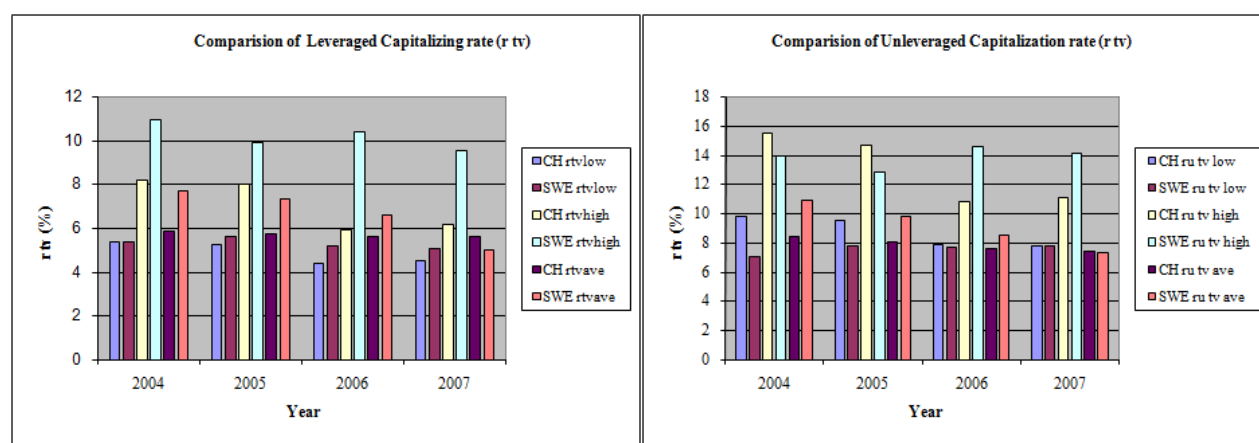


Source: Annual Reports, Datastream, Eurostat.

In the country averages of  $r_u$ , there is not only the effect from a higher  $r_f$  in Sweden but also from a higher beta asset. The beta asset is the beta of a firm funded only by equity, and reflects the risk of a firm's operations, i.e. only the underlying systematic risk of the assets (White et al. 2003). When comparing the leveraged rate used for capitalization,  $r_{tv}$ , in the two countries, it can be seen that  $r_{tv low}$  is the same for year 2004, and higher in Sweden the other years.  $R_{ave}$  is higher all Sweden during 2004-2006, but lower in Sweden in 2007. To notice is that this refers to a small sample in both countries. Regarding the unleveraged  $r_{tv}$ 's, there is more variety.

Regarding the spread between the  $r_{cf}$  and the  $r_{tv}$ , when comparing values both at the high and low end of the disclosed span, it seems to be more that separates the two than the inflation expectations, although for some years the inflation expectation neatly turns out to make up the difference, especially for the Swedish companies. It seems that the inflation expectation is lower in Switzerland, and that companies in neither of the countries expect growth in addition to inflation, since the spread rarely is more than the inflation expectation. Other factors seems to be taken into account, in addition to inflation, when it comes to  $r_{tv}$ , for example that future cash flows may be viewed as riskier, as discussed above, and that the rate used in the period after the expiration of a tenant contract may be higher.

*Graph 3 and 4: Comparison of country average of leveraged and unleveraged rates used for capitalization for 2004 to 2007 for Sweden and Switzerland.*



Source: Annual Reports, Datastream, Eurostat.

As discussed above, some firms were not explicit on different discount rates for different types of properties and locations. Many firms did not separately disclose their respective discount rates for commercial and residential property holdings, but reported a span of discount rates for the entire portfolio. This posed a problem since discount rates for residential property, when disclosed, has been lower than for commercial asset classes. Had the average of the discount rates been calculated as a geometric mean of the disclosed span, inclusive of the rates for residential property, and used as a base for the analysis and statistical testing, the outcome would have reflected not a possible lower level of conservatism in one country, but rather in what country the firms held residential property to the greater extent. A Student T test was performed on the all firms discussed, not only those represented in the two Student T test settings below, to see whether one of the country markets held more residential property. It was indicated, on the five percent significance level, that Swiss firms held more residential property.

The results of both sets of Student T tests on national averages of  $\beta_A \cdot (r_m - r_f)$  and  $(r_m - r_f)$  can be viewed in *Table 3*. In the first set of tests, where the selection criteria on the sample was the strictest, a difference is shown on a 1 percent significance level, in the way that Swiss companies have a higher  $(r_m - r_f)$  when beta asset is not considered, both for values derived from discount rates, and for values derived from rates used for capitalizing. When including the asset beta in the first test setting, a significant difference can no longer be detected. That is, the risk premium for the unlevered firm, i.e.  $\beta_A \cdot (r_m - r_f)$ , that is added to the risk free rate in order to arrive at the unlevered discount rate ( $r_u$ ), and, at the unlevered rate used for capitalizing plus inflation, seems

to be consistent across the two countries. However, when only considering the spread  $rm-rf$ , it is indicated in the T test that the firms in the Swiss sample may use a higher value.

In the second set of tests, where values derived from geometrical means are included, the picture is different. In this test setting a difference indicating that  $(rm-rf)$  in Switzerland is greater is seen on the ten percent significance level when analysing values derived from the rate used for capitalization. However, when beta asset is considered, the value of  $\beta_A*(rm-rf)$  is greater in Sweden on the ten percent significance level.

*Table 3: Student T tests of the sample with and without geometrical means.*

<b>Without Geometric Means</b>	Sweden Higher	Switzerland Higher	
Test	p-value	p-value	
Cash Flow Discount Rates, $(rm-rf)$	0,9996	0,0004	***
Capitalizing Rates, $(rm-rf)$	0,9982	0,0018	***
Cash Flow Discount Rates, $(rm-rf)*\beta_A$	0,5352	0,4648	
Capitalizing Rates, $(rm-rf)*\beta_A$	0,39	0,61	

Notes: \*, \*\*, and \*\*\* connote significance at the 10 percent, 5 percent and 1 percent levels, respectively.

<b>With Geometric Means</b>	Sweden Higher	Switzerland Higher	
Test	p-value	p-value	
Cash Flow Discount Rates, $(rm-rf)$	0,5958	0,4042	
Capitalizing Rates, $(rm-rf)$	0,9467	0,0533	*
Cash Flow Discount Rates, $(rm-rf)*\beta_A$	0,0697	*	0,9303
Capitalizing Discount Rates, $(rm-rf)*\beta_A$	0,0729	*	0,9271

Notes: \*, \*\*, and \*\*\* connote significance at the 10 percent, 5 percent and 1 percent levels, respectively.

*Table 3* shows the outcome for the two test settings, the first testing solely values derived from analysing average discount rates, as disclosed in annual reports, and a second test setting, in which values derived from geometric means are added. The T tests test the difference of means, and whether there is a significant difference between the means of  $(rm-rf)$ , and  $(rm-rf)*\beta_A$ , respectively. The Student T tests for the means of  $(rm-rf)$ , and  $(rm-rf)*\beta_A$  are performed twice in each test setting; once on values derived from the discount rates used for discounting the cash flows in the explicit forecasting period, and once on values derived from discount rates used for arriving at the terminal value.

From the above analysis of discount rates and rates used for capitalization it is shown that the picture of the Swedish rates being higher gradually fades as the rates are broken down in their components. When only looking at  $(rm-rf)$ , the residual remaining after company and country specific aspects are removed, and constituting the residual where valuers are able to add fudge factors (Brealey et al. 2006), the picture has changed, with the Student T test indicating that the Swiss  $(rm-rf)$  is higher. When including  $\beta_A$ , and viewing  $\beta_A*(rm-rf)$ , no significant difference can be seen in the stricter test setting, since the higher Swedish  $\beta_A$  compensates for the higher Swiss  $(rm-rf)$ . However, to be stressed is that all samples are very small, especially in the first test

setting, where the sample of values derived from  $r_{cf}$  only includes three Swedish and seven Swiss firms, and where the sample of values derived from  $r_{tv}$  includes values from only two Swiss and three Swedish firms. Since the samples are minor, no generalisations regarding the conservatism in the two countries can be made on a market level, although the Student T test indicates a significant difference on the one percent level for the first set of tests, where the criteria on the sample is the strictest.

## 5 Discussion

### 5.1 Discussion of Valuation Praxis

The aim of this paper was to investigate if culture, via a greater or lesser extent of emphasis on conservatism on the accounting value level, is to influence accounting practice in the fair value valuation when marking-to-model investment property according to IAS 40. No distinct conclusion regarding the extent to which conservatism on the accounting level is present in the two countries can be made, however, a few things can be pointed out.

The picture emerging from the annual reports is not clear cut, but it may be pointed out that Swiss firms to a greater extent may take a slightly less optimistic approach, exemplified by a presence of a greater discussion of future investments in Switzerland, and a possibly a more finite view of the life of the properties in the way that Swiss valuers more often than the Swedish assume a life of 100 years after the end of the explicit forecasting period, as opposed to a cash flow in perpetuity.

The impression of the interviews is also slightly mixed. The Swiss firms seem to be more aware of the valuation process, i.e. the assumptions made and where they come from. The interviewee from IPD's Swiss cooperation partner, Wuest & Partner, also mentions the 100 year capitalization period, discussed above, and in connection to the annual reports. One of the Swedish firms pointed out that their internal valuation was more stable over time than was the external, indicating a more cautious approach. However the interviewee of the Swedish cooperation party of IPD indicated that the Swedish firms may take an optimistic approach to future costs, a view also brought forward by Leimdörfer (2003a) in the theoretical section.

Regarding the analysis of rates, an interesting development can be seen as rates are broken down into their components, the capital structure neutralized, and national differences in  $r_f$  and  $\beta_A$  disregarded. The Student T test indicates that the  $(r_m - r_f)$  is higher in Switzerland, possibly implying that the required market return was higher in Switzerland, or that more fudge factors were included in the risk premium reflecting a less optimistic approach to valuation (Brealey et al. 2006). However since the sample is minor, the authors are well aware that no generalizations of the result can be made, despite the fact that the result is significant on the one percent level.

In summary, no general conclusions can be drawn in this study regarding whether there is more of an outspoken conservatism in Switzerland, or, a greater optimism present in the Swedish valuations, since our sample is limited. A possible reason for not being able to detect a clear difference is Switzerland's higher ranking on Masculinity and Individualism on Hofstede's dimensions. However, some interesting possible indications of such a relationship may be noted.

## ***5.2 Discussion of Method***

A number of weaknesses of the present study need to be addressed, the main one being the limited sample of eleven observations from three Swedish and 25 observations from seven Swiss firms for the Student T test of  $(rm-rf)$  derived from  $r$  of average. The authors are aware that the restricted sample does not permit any general conclusions to be drawn, although a statistical difference was indicated on the one percent level.

As Schwartz (1994) points out, a problem with using only two countries as a sample is that other variables apart from culture may exist that possibly list such a limited sample in the same order, and provide an explanation for the observed pattern. This probability diminishes in increased sample of cultures studied.

In the study it was assumed that the non-diversifiable risk in the property portfolios of the two samples was the same, since it was assumed that the two markets had the same non-diversifiable risk. This may not be the case. Our study relies on the assumption that differing levels of risk within the two portfolios will average out over sample, leaving the rest of the potential national differences in the risk premiums  $(rm-rf)$  to reflect different emphasis of conservatism in the valuation praxis. This may not be the case.

In our analysis of the risk premiums there are several error sources, for example it was necessary to base our estimates of the risk premiums on the averages of discount rates disclosed in annual reports, including residential property, since we were not granted access to internal valuation models, and discount rates for specific real estate holdings. Hence we have, as pointed out above, not been able to compare discount rates for each type of commercial property (offices, retail, hotel, industry, and storage), but have been forced to compare averages. The slightly heterogeneous sample is a weakness of our study.

The interviews have all been both conducted and interpreted by both authors together and the reliability may hence be seen as satisfactory.

## ***5.3 Implications for further research***

In order to be able to draw a general conclusion of whether the two countries are positioned on the Conservatism dimension as hypothesized by Gray (1988), further research needs to be carried out, with greater access to a larger number of firms. Further, extending such a study to a greater number of countries would better illuminate whether Gray's (1988) Conservatism dimension can be empirically verified.



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### **6.3 Verbal Communication**

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Englund, Peter, Stockholm, 2009/04/01

Gustafsson, Christina (IPD), Stockholm, 2009/05/26

Hjelström, Tomas, Stockholm, 2009/04/20

Skogsvik, Kenth, Stockholm, 2009/03/31

Dr. Zaborowski, Christoph, Wuest & Partner 2009/05/27

Company A, 2009/04/29

Company B, 2009/04/06

Company C, 2009/04/21

Company D, 2009/05/11

### **6.4 Annual Reports (2007, 2006, 2005, 2004)**

Atrium Ljungberg

Balder

Brinova

Castellum

Fabege

FastPartner

Hufvudstaden

Klövern

Wihlborgs

Allreal

BFW Liegenschaften

Intershop

Mobimo

PSP

Swiss Prime Site

Warteck

Zueblin

## **Appendix I**

### **Interview Themes and Questions**

#### **Industry Valuation Praxis**

- 1) Do you have any particular investment rules?
- 2) What valuation model do you use? Are you employing several?
- 3) How do you take expected revenue losses into consideration in the valuation?
- 4) From where/how do you get an approximation for vacancy?
- 5) Where do you find an approximation for the market rent?
- 6) In discounting the terminal value with the Gordon formula, how do you arrive at  $g$ ?
- 7) How do you take the impact of usage/damage of the properties into consideration in the valuation process?
- 8) Do you have any explicit target ROE or IRR for your properties, and if so, how this impacting you?
- 9) How do you perceive that the financial crisis has impacted you?

#### **Attitudes towards the Introduction of Fair Value Accounting and IAS 40**

- 1) What is your view on the change from cost accounting to IAS 40? Pros and cons?

#### **The Role played by the External Valuation Party**

- 1) What does the cooperation with your external evaluator look like?
- 2) Is the external party evaluating the whole holding by themselves or are you having discussions?
- 3) Do the internal and external valuation differ from the internal, and if so, in what way?

#### **Discount Rates**

- 1) How do you decide the discount rate and what parts is it made up of?
- 2) How has the current market environment, with a less liquid market, affected the process of arriving at the discount rate?
- 3) What rate is used as an estimate for the risk free rate?
- 4) Where do you get your measure for inflation from?
- 5) What constitutes the greatest risk in your risk premium (in the discount rate)?
- 6) How do you view the risk inherent in your different property classes, and in their respective locations?

## Appendix II

Company Variables	Atrium L	Balder	Brinova	Castellum	Fabege	Fast Partner	Hufvudstaden	Klövern	Wihlborgs
Market Cap SEK (Mil.)	8237,8	1147,8	2302,0	2302,0	11822,5	1761,7	12585,8	3069,3	4448,1
Amount of properties	56	121	69	549	167	82	29	220	245
Amount of countries	1	1	1	1	1	1	1	1	3
MV Regional Portfolio SEK (Mil.)	18698,6	6710,1	3452	27717	30829	3943,5	20530,5	12154,044	n.a*
% Commercial	86	71	30	96	92	95	100	83	96
% Residential & Commercial	0	0	63	0	0	0	0	0	0
% Residential	4	6,24	0	0	3	2	0	1	0
% Other	10	22,8	7	4	5	3	0	16	4
% Vacancy rate Regional	8	7	6	12,1	8	9,7	4,6	12	n.a
% Largest renter of Regional Portfo	n.a	3	n.a	1	n.a	9	n.a	14	n.a
D/E	0,81	2,2	1,34	1,12	1,51	1,45	0,29	1,44	1,74
Cap rate	5,6	6,5	6,4	9,94	4,8	8	4,9	7,1	6,8
r of low	4	7	8	6,8	n.a	4,25	n.a	5	n.a
r of high	7,3	11	13	11	n.a	9	n.a	13	n.a
r of ave	5,4	n.a	na	n.a	7,3	n.a	n.a	n.a	n.a
r tv low	n.a	5	5,5	5,3	5,1	n.a	4	5,5	n.a
r tv high	n.a	10	11	9,5	10	n.a	5,75	11	n.a
r tv ave	n.a	n.a	8,25	n.a	5,5	n.a	4,6	n.a	n.a
Horizon	n.a	5 - 10	5	10	5	10	n.a	5	5
External Valuator	Forum Fastighetseko nomi	Newsec	n.a	NAI Svefa	DTZ Sweden AB, Newsec Analys	DTZ Sweden	DTZ Sverige AB, FS Fastighets-strategi AB	DTZ Sweden	Malmöbryggan Fastighetseko nomi AB, Savills Sweden AB, DTZ

\* Total Portfolio is MSEK 13397

Source: Datastream, Annual Reports

Company Variables	Allreal	BFW	Intershop	Mobimo	PSP	Swiss Prime Site	Wartec	Zueblin *
Market Cap CHF (Mil.)	1486,0	130,0	661,5	790,5		2682,8	1475,1	231,7
Amount of Regional properties	71	63	72	79		194	118	38
Amount of countries	1	1	1	1		1	1	1
MV Regional Portfolio CHF (Mil.)	2031,3	403,8	1144,9	1348,6		5000,8	3651,6	361,4
% Commercial	83,7	6,8	92,1	60,5		96,8	91,3	41,9
% Residential & Commercial	0	26,6	0	0		0	5,1	19,5
% Residential	14,4	66,0	3,7	9,4		0	0	33,3
% Other	1,4	0,4	4,2	30,8		3,2	3,5	5,2
% Vacancy rate Regional	5,6	6,7	12,9	6,4	n.a		4,9	3,98
% Largest renter of Regional Portfolio	10	n.a	6,9	10,7	11		15,2	4,7
D/E	0,9	1,6	1,1	0,6		0,8	1,7	0,8
Cap rate	5,3	4,8	6,0	4,7		4,9	4,9	5
r cf low	4,9	n.a	5	4,2		4,6	3,8	5,1
r cf high	5,75	n.a	7,3	6,2		7,3	6,7	6,3
r cf ave	5,21	n.a	5,75	5,02		5,54	5,74	5,48
r tv low	4,9	n.a	n.a	2,43	n.a		n.a	n.a
r tv high	6	n.a	n.a	3,57	n.a		n.a	n.a
r tv ave	5,29	n.a	n.a	n.a	n.a		n.a	n.a
Horizon	10	n.a	10	n.a	10 (100)	10 (100)	10	10
		HEV						
		Verwaltungs						
		AG						
External Valuator	Sal Oppenheim	St.Gallen	Sal Oppenheim	Wuest & partner	Wuest & partner	Wuest & partner	PWC	Jones Lang LaSalle

Source: Datastream, Annual Reports