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# Is goodwill a factor of stock market risk?

A study of the Stockholm Stock Exchange

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## Abstract

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**Five keywords:** goodwill, risk, beta, regulation, IFRS

**Purpose:** The purpose of this thesis is to examine the connection between goodwill intensity and stock market risk and how the transition to the IFRS has effected this connection.

**Methodology:** The study has presumed a quantitative approach in which hypotheses derived from a theoretical perspective is tested. Tests of correlation and regression are used in order to determine connections between researched variables.

**Theoretical perspectives:** The study is based on previous research in goodwill as a concept, its development through regulation change and finally the concept of risk narrowed down to specific risk factors and techniques

**Empirical foundation:** This thesis investigates the Swedish stock market during two time periods, 2003-2004 and 2009-2010.

**Conclusions:** This study, examining the connection between goodwill intensity and stock market risk, found no clear basis for concerns regarding the enlarging goodwill assets in Swedish listed companies. The study also showed that the transition to the IFRS have not increased the connection between goodwill intensity and stock market risk which was the theoretical perception. On the contrary we found a weakened connection between the two variables. It is however also to be highlighted that even though there is no apparent connection on an aggregated level between goodwill intensity and stock market risk, an individual companies could still be subject to an increased risk due to a high level of goodwill intensity.



## Acknowledgements

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Lund 2011-05-25

A handwritten signature in cursive script, reading "David Ericsson".

David Ericsson

A handwritten signature in cursive script, reading "Robin Svensson".

Robin Svensson



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## Abbreviations

<b>IASB</b>	<i>International Accounting Standards Board</i>
<b>IFRS</b>	<i>International Financial Reporting Standards</i>
<b>IASC</b>	<i>International Accounting Standards Committee</i>
<b>IAS</b>	<i>International Accounting Standards</i>
<b>GAAP</b>	<i>Generally Accepted Accounting Principles</i>
<b>FASB</b>	<i>Financial Accounting Standards Board</i>
<b>SFASC</b>	<i>Swedish Financial Accounting Standards Council (Redovisningsrådet)</i>



## 1 INTRODUCTION

### 1.1 BACKGROUND

Goodwill accounting has been a highly debated topic for many decades and still is of great importance for corporations throughout the world (Bloom, 2009). A recent study by one of the 'Big Four' auditing firms, Ernst & Young, reveals that in average 59 per cent of Swedish business acquisitions are made up by goodwill and that high amount of goodwill further enhances the risks of write downs in difficult times (Ernst & Young, 2009). Several different financial analysts have also recently expressed their concerns about goodwill and its accumulating tendencies. It is stressed that companies accumulating goodwill could have a thrilling effect on the stock market (Malmqvist, 2010; Isskander 2010; Jönsson 2010).

The concept of goodwill refers to a part of a company's market value that cannot be explained by assets or reserves, often gained in the process of acquisitions. A strong market position or an effective organization could be such examples of company values, which often result in goodwill (Ekberg & Lorentzon, 2007). Goodwill is also explained as being a payment for future revenues exceeding the ordinary level, thus higher profits (CE Services, 2007; E24, 2010).

Historically in Swedish accounting, conservatism and prudence were important principles and this was mainly due to the connection between accounting and taxation in Sweden. In 1991 the private Swedish Financial Accounting Standards Council (SFASC) started to issue accounting standards for listed Swedish companies. The recommendations by SFASC were primarily based on the International Accounting Standards (IAS) and only some minor national changes and additions were made to comply with Swedish law. These changes were mainly motivated by tax reasons and by the desire to diminish alternative accounting methods when several methods were permitted by the IAS (Nilsson, 2006).

In 2002, the European Union decided to adopt the International Financial Reporting Standards (IFRS) requiring all listed companies to prepare their consolidated financial statements in accordance with the IFRS starting from financial year 2005. The IFRS applied within the European Union may differ from IFRS used elsewhere, since every standard has to be approved by the Accounting Regulatory Committee in order to be endorsed within the



European Union (IAS Plus, 2011). Since much in the previous Swedish regulations was based on the IFRS, the adoption of the new regulation did not have a revolutionary effect on Swedish consolidated statements. According to Nilsson (2006) it is fair to say that Sweden has gradually adapted to the IAS/IFRS during the whole period of 1991-2005.

In year 2000 the EU commission took actions towards the harmonization of EU directives concerning accounting regulation. The commission proposed that all listed companies within the European Union should by 2005 be required to use the IFRS for consolidated statements and thereby eliminate the option to use domestic or US rules. A single-set of accounting standards would improve comparability and would make it easier to interpret financial reports across countries (Nobes & Parker, 2010).

Until 2005 the Swedish Financial Accounting Standards Council (SFASC) regulated consolidated financial statements for listed Swedish companies and according to Swedish GAAP, any goodwill was amortized annually over the economic life. Before 2000, the longest permitted goodwill amortization period in Sweden was ten years. However, in a recommendation from the SFASC in 2000, up to a 20-year amortization period was approved, although with some stricter conditions such as business stability, product life cycles and dependency on key figures (Ekberg & Lorentzon, 2007).

After 2005, due to the transition to the IFRS, Swedish listed companies started to account for goodwill in accordance with the IFRS 3. The standards state that goodwill should not be amortized but instead annually tested for impairment (IFRS 3). Booked values of goodwill are in this situation tested by comparing them to either the re-sale value or the net present value of future cash flows associated to the goodwill asset, whichever is highest. This comparison will show whether the booked values of goodwill should be written down and if so also expensed in the company's income statement (Ekberg & Lorentzon, 2007).

This change in accounting practice, where goodwill is no longer amortized, has been met by some critique for instance claiming that this new type of accounting for goodwill would make the process of goodwill valuation more subjective. Since goodwill is no longer amortized and the impairment process is considered subjective, goodwill assets would accumulate resulting



in a radical increase in the goodwill assets (Li & Sloan, 2010; Grant Thornton, 2010; Ekberg & Lorentzon, 2007).

## 1.2 PROBLEM DISCUSSION

When a company identifies a need to write down its goodwill asset, a loss will be recognized in the income statement and consequently the corporation's equity will be reduced and its financial ratios will be lowered. These measures are some of the most important to evaluate the corporation's management and share value (Broberg, Collin, Tagesson, Axelsson & Schéle, 2008). Consequently there are obvious incentives for corporate management to make assumptions that at least confirm the current value of the company's goodwill asset and rules out any impairment charges. The perceived performance of management and their potential bonuses (if tied to e.g. EBIT) could be negatively affected by a write-down of goodwill (*ibid.*). Furthermore, a goodwill write-down might be interpreted as a signal of instability in the company and/or a less successful company acquisition and lead to reduced trust from owners, banks and stock market analysts.

In other situations, corporate management might have incentives to account for goodwill impairment and to reduce profits. A potential motive could be income smoothing. By manipulating earnings over time the reported earnings can be less variable. Big bath accounting is another example where management may intentionally apply assumptions that lead to large goodwill impairments and in so doing reduce the risk of forced impairments in coming years (Sevin & Schroeder, 2005; Godfrey, Mather & Ramsay, 2003; Riahi, 2004).

With a large element of subjectivity that comes with the IFRS and the varied incentives for corporate management in making their assumptions, there is a risk that the impairment test is based on manipulated assumptions. As a consequence it is very difficult for investors and stock market analysts to estimate the correct value of a company's goodwill assets and evaluate the impairment testing made by the firm (Hayn & Hughes, 2006; Hamberg & Beisland, 2009).

With the IFRS, according to which goodwill is no longer amortized annually, the total goodwill reductions are significantly lower. With previous regulation, goodwill was



amortized over a period of 10-20 years, equal to a yearly amortization of 5-10 per cent. A study by Hamberg, Paananen & Novak (2009) showed that during 2001-2004 the average annual goodwill reduction was 10,7 per cent. For the years 2005-2007 the average annual goodwill reduction, now only consisting of impairments, had drastically dropped to 1,1 per cent. Several other studies have been made in recent years examining the write down percentage of goodwill under the IFRS. Grefberg (2009) studied the 50 largest listed companies in Sweden and found that their combined write down of goodwill in 2008 was six billion SEK, i.e. only 0,7 per cent of their total goodwill assets. Other studies focusing on listed Swedish companies have showed that the combined write-downs are close to one per cent of the total goodwill assets (PwC, 2009; Gauffin & Thörnsten, 2010). All these studies were made based on the closing balances of 2008, i.e. in the middle of the financial crisis and after the toughest year on the stock market in more than 100 years, where the Stockholm Stock Exchange all share index dropped by 42 per cent (Andersson, 2008).

When comparing the IFRS, under which companies wrote down their goodwill assets with roughly one per cent during a year characterised by the worst financial crises in the last century, to the old regulation where companies amortized 5-10 per cent annually, it is obvious that the current regulation will allow the goodwill asset to accumulate and become a large balance sheet item in many companies (Gauffin & Thörnsten, 2010).

A major concern with goodwill occurs when it is put in proportion to the company's balance sheet and especially its equity. Gauffin & Thörnsten (2010) studied the relation between goodwill and equity in Swedish companies listed at the Stockholm Stock Exchange. The study of the 259 companies closing balances on the 31 December 2008 showed that the total goodwill was equal to 30 per cent of the total equity and around 30 companies had a goodwill asset that was larger than 100 per cent of its equity.

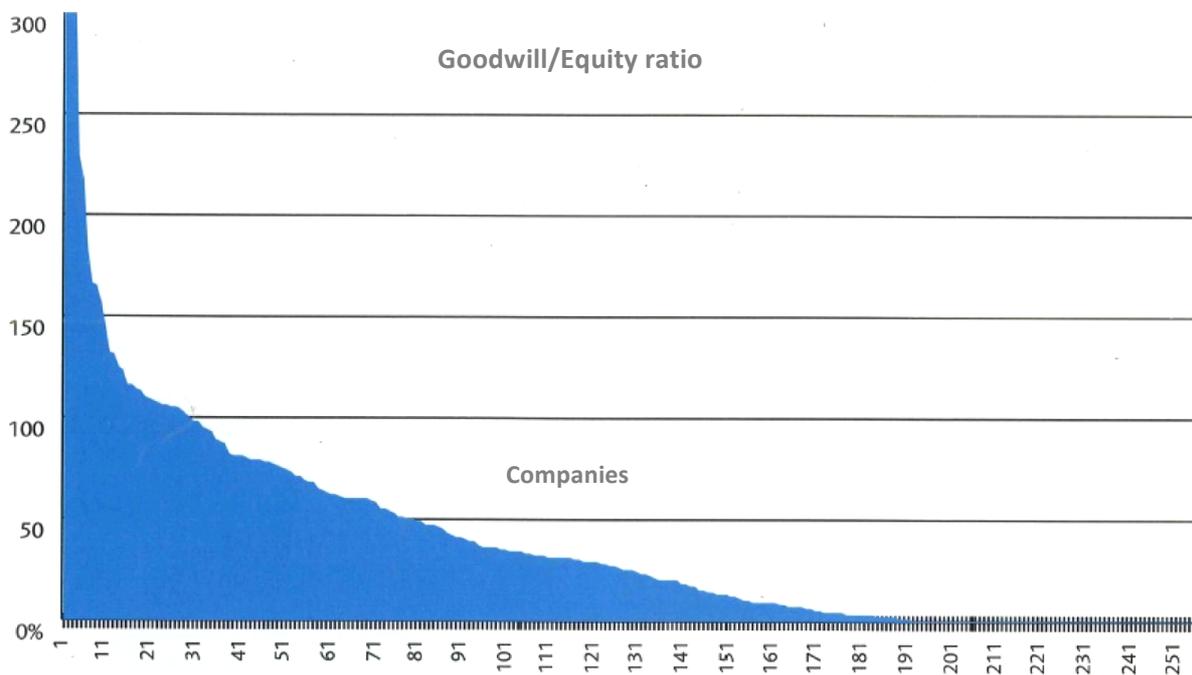


Figure 1.1. Goodwill in relation to equity 2008 (Gauffin & Thörnsten, 2010)

It is difficult for stock market analysts to forecast the effects of goodwill write-downs and still it may have a major effect on reported earnings (Gauffin & Thörnsten, 2010, Ernst & Young, 2009). This became apparent with Swedbank during the financial crisis where analysts did not anticipate goodwill write-downs in Ukraine in Q4 2008 and Q1 2009 (Veckans Affärer, 2009; Mellqvist, 2009). Swedbank also surprised the analysts who expected write-downs of goodwill in the Baltics in 2009, while Swedbank did not recognize such a need (E24, 2009; Affärsvärlden, 2010).

With the enlarging goodwill assets there is an increasing risk with a regulation that depends on subjective regulations by corporation's management. Several financial analysts have expressed their concern for the increasing goodwill intensity in Swedish corporations. Nabizadeh (2009) recommended share investors to be cautious with companies that possess large goodwill assets. Jönsson (2010) recognized an increased stock market risk in goodwill-swollen companies and blames the current regulation. Isskander (2010) went a step further and anticipates companies with high goodwill intensity to be the thriller of the stock market in 2011.



Estimations on future earnings and cash flows of which goodwill is representing are an internal issue for the specific company's management. As goodwill as an asset represents a past business acquisition or merger, there is an immediate risk of subjective decisions from the management. This fact is supported by several studies indicating that a large part of business acquisitions fail in providing expected stakeholder value. This is explained by management decisions and their perceptions on future earnings and cash flows (Johansson, 2010). So, not only the process of impairing goodwill but also goodwill as a fundamental concept is somewhat subjective or at least could be in the case of biased management decisions.

### **1.3 PURPOSE**

The purpose of this thesis is to examine the connection between goodwill intensity and stock market risk and how the transition to the IFRS has effected this connection.

### **1.4 OVERALL APPROACH**

The research in this thesis is based on a hypothetico deductive method, which begins with hypothesis formations derived from background reading (Popper, 1965 cited in Evans & Kakas, 1992). The basis for our formatted hypothesis was a theoretical framework, which is based on previous theories and studies. The next step was to establish an appropriate form of study in order to collect data as well as analyse. Our collected data, as a part of the analytical process, is further put in relation with previously formatted hypothesis in order to be either confirmed or rejected. Finally, based on the result of the analysis of the hypothesis, the previous theories and ideas were evaluated. The general process of this study is emphasized in figure 1.2 below.

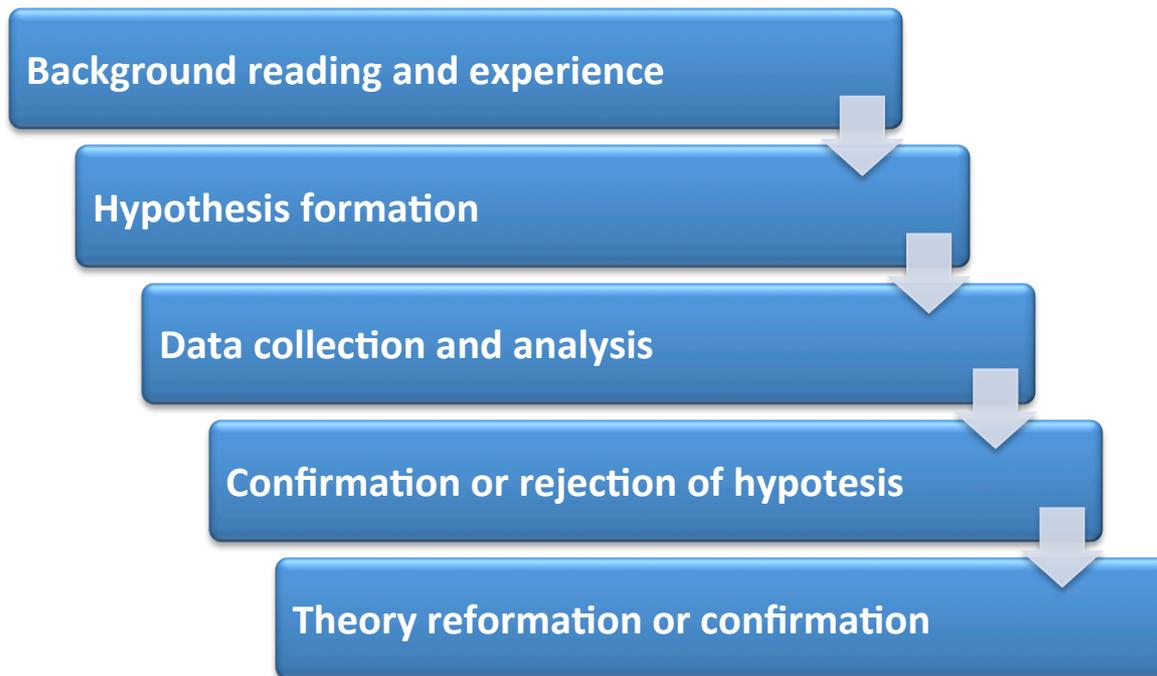


Figure 1.2. Own construction of the hypothetico deductive method based on Popper (1963).

## 1.5 DISPOSITION

### *Chapter 2: Theoretical Framework*

The theoretical framework handles two major topics: goodwill and risk. First of all, the concept of goodwill is defined with a further presentation of the development of the regulation on goodwill. The latter is divided into two parts: before and after the introduction of mandatory IFRS usage by Swedish listed companies in 2005. Secondly, the concept of risk is narrowed down to possible factors of risk in situations where goodwill is present. The final part of this chapter is the formation of two hypotheses on which further work and analysis was based.

### *Chapter 3: Methodology*

The methodology chapter specifies chosen methods as well as justifications on choices made concerning sampled population, time period and variable choices. The chapter



also specifies the parts of the empirical data collection as well as the statistical research and analysis methods.

#### ***Chapter 4: Data Analysis***

The empirical chapter is a presentation of the empirical study conducted in accordance with previously presented hypotheses. This chapter will contain a number of statistical tests, more extensively explained in the methodology chapter.

#### ***Chapter 5: Analysis***

This chapter will further analyse the collected data, as well as the statistical tests presented in the former chapter. The empirical study conducted by us is in this chapter put into reference with previous studies and theories, presented earlier in the theoretical framework.

#### ***Chapter 6: Conclusions***

This final chapter will present our conclusions based on the empirical research in relation to previous studies and theories. We will also present our ideas for interesting future research as another analytical view.



## 2 THEORETICAL FRAMEWORK

### 2.1 GOODWILL

#### 2.1.1 Definition

Goodwill is considered to be the difference between the purchase price of an entity and the entity's net assets (see e.g. Hendriksen & Van Breda, 1992; Johnson & Petrone, 1998; FAR, 2010). FAR (2010) also emphasizes that goodwill acquired in the process of an acquisition is an asset that represents future economic benefits. Dogra (2005) agrees with the definition of goodwill, but also emphasizes that acquisitions are complex and often characterized by two or more bidders pushing up the price to a level where the profit and loss account would be charged with huge amortization entries. According to him the goodwill factor consists of four characteristics:

- An intangible asset on the balance sheet
- Transactions costs bundled in the goodwill concept
- Amortization charges and impairments referring to the goodwill charged to the profit and loss account
- No value in a liquidation

According to Bryer (1995) goodwill represents that an entity is believed to offer a higher return, explained by a number of factors, such as employee relations, customer relations and management etc., compared to alternative investments with a similar risk that goodwill exists. Bryer (1995) also emphasizes that: '*... goodwill is measured as the difference between the market value of an entity at any point in time and the fair value (either the replacement cost, recoverable amount or net realizable value) of its net assets, including any separately identifiable intangible assets (such as trademarks, copyrights, patent rights)*' (Bryer, 1995, s. 286).



### 2.1.2 Goodwill regulation until 2005 – previous regulation

In 1944, Swedish legislation for the first time required companies to present a consolidated balance sheet (Nilsson, 1998). Companies Act of 1944 states that if a company acquired another business and compensates with a value greater than the value of the acquired business' assets the difference can be accounted for as an asset. This asset shall each year be amortized with a reasonable amount, however at least ten per cent, if nothing else is suggested by special circumstances.

The goodwill regulation was transferred to the Bookkeeping Act in 1976 and it is added that the maximum amortization period is ten years and no exceptions are allowed. In 1977, FAR issued a recommendation on the goodwill topic in which it confirmed the rules in the Swedish Bookkeeping Act and added that the amortization charges are subject to the income statement and should not be charged to equity. In FAR's final recommendation in 1978 it is stated that for some companies ten years could be too long and these companies were recommended to use a shorter amortization period (Johansson, 2005; Nilsson 1998).

In the 1980s, increasing stock prices and acquisition activity brought debates on why goodwill must be amortized in only ten years. Companies referred to the regulation in the United States where an amortization period up to 40 years was allowed. According to new Swedish legislation, the Swedish Financial Accounting Standards Council (SFASC) shall provide a detailed regulation for consolidated accounting (Nilsson, 1998).

The SFASC issued its first recommendation in 1991, RR 01:91 – Business Combinations, and it stated that companies had to account for goodwill as an asset (*ibid.*). According to paragraph 26, the value of goodwill is calculated as the difference between the purchase price and the market value of the acquired assets less debts. Paragraph 32 stated that the goodwill should be amortized according to international practice. In general the amortization period should be no longer than ten years, but under special circumstances the amortization period could be up to a maximum of 20 years.

In 1996, the SFASC updated their previous recommendation and issued RR 01:96. In paragraph 45, companies were advised to generally amortize goodwill over a period of five years, by considering factors, such as product life cycle, competitive situation and acquired



brands. However, companies could still argue for an extended amortization period for up to 20 years.

SFASC updated the recommendation once again in the year 2000. The updated recommendation RR 01:00 no longer suggested a general amortization period. Instead the company ought to estimate the economic life of the benefits the goodwill represents. SFASC assumed that the economic life would be no longer than 20 years, but in rare cases exceptional conditions might suggest a longer amortization period.

### **2.1.3 Goodwill regulation from 2005 – present regulation**

In 2002, the European Union decided that all listed companies should follow the same regulation on consolidated financial statements. The common regulation should be the International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB). From the financial year 2005 the consolidated financial statements issued by companies listed at the Stockholm Stock Exchange were to be composed in accordance with the IFRS.

#### **Goodwill and business acquisitions**

The IFRS 3, named Business Combinations, was issued in March of 2004 and was a replacement of the former IAS 22, also named Business Combinations. The IFRS 3 is a result of the convergence between the IASB and its American equivalent FASB and it is very similar to FASB standards FAS 141 and FAS 142 (Dansell & Philips, 2007). With the replacement of IAS 22, the IFRS 3 brought with it some changes:

- “All acquisitions must be accounted for according to the acquisition method;
- An acquirer must always be identified in an acquisition;
- Acquired identifiable intangible assets, which meet the requirements of being an asset, should be separated from goodwill;
- Acquired goodwill is not to be amortized. Instead, it is to be tested for impairment at least once a year, or more frequently if there are any indications for impairment;
- All acquired assets, debts and contingent liabilities should be valued at fair values



- Negative goodwill should be identified in the profit and loss statement as an income.” (Dansell *et al.*, 2007)

The purpose of the IFRS 3 is to improve the relevance, reliability and comparability of the information developed due to acquisitions of businesses. The standard itself states (1) how the acquirer should account for and value the identifiable acceded assets as well as the acceded debts, (2) how to account for and value acquired goodwill and (3) what relevant information concerning the characteristics of the acquisition to present to users of financial reports (IFRS3).

The acquirer is required to account for goodwill in accordance to point 32 in the IFRS 3 which states that the value of goodwill is the sum of the transferred compensation valued at real values at the time of the acquisition. This refers to the assets and debts transferred in the acquisition process in relation to the previous equity in the acquired company deducted with identifiable intangible assets, such as customer relations, patent technology, unpatented technology and brands (Deloitte, 2004). The remaining goodwill should in principle represent: “[...] *the capitalized amount of incremental profits achievable through use of the intangible asset as compared with the profits of the same business not using it [...]*” (Deloitte, 2004 p. 52).

### **The subjectivity of impairment testing**

In accordance with the IAS 36, Impairment of Assets, acquired goodwill is not to be amortized but instead only be tested for impairment at least once every year. When an asset’s recoverable amount is exceeded by the carrying amount before the impairment test, an impairment loss is recognized. The asset’s recoverable amount is then determined by choosing the highest of either (1) the value that future cash flows derived from the asset could generate in the business or (2) the re-sale value (IAS 36; Deloitte, 2004). In a situation concerning individual assets, the re-sale value (or the ‘fair value less costs to sell’ as in figure 2.1) is considered as being the bid price in an active market where the asset is traded. In a situation where an active market does not exist, the re-sale value is determined by using the

best possible information at the balance sheet date, that reflects the amount between a potential buyer and seller (Deloitte, 2004).

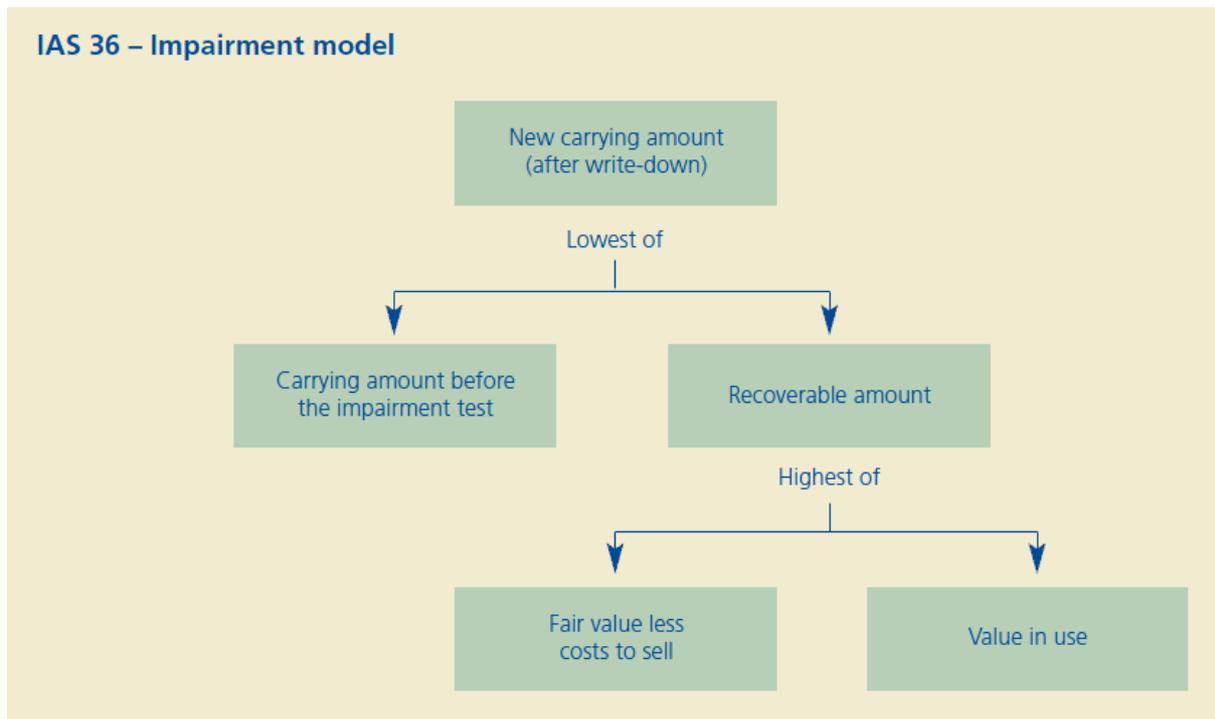


Figure 2.1. IAS 36 – Impairment model (Deloitte, 2004, p. 26)

When testing for impairment, goodwill acquired in the process of an acquisition should be distributed on each of the acquirers cash-flow generating units that are set to benefit from the synergies of the acquisition, regardless of how other assets or debts have been distributed to various units. It is however also recognized, in paragraph 81 of IAS 36, that the process of dispensing goodwill to certain cash-flow generating units can be a difficult process and therefore allows a less strict view.

The yearly impairment test at the cash-flow generating unit on which goodwill has been dispensed can be executed anytime during the fiscal year, providing that the test is performed at the same time each year. Different cash-flow generating units can be impairment tested at different points of time. If assets and debts which constitute the cash-flow generating unit have not been changed significantly since the last calculation of the salvage value and if the latest calculation of this value surpassed the booked value significantly, given that the



possibility of a major change in the calculated value is very small, then this calculation can be used the next fiscal year (IAS 36 paragraph 99).

In accordance with point 134d in IAS 36, the process of goodwill impairment requires management to make decisions concerning for instance discount rates, growth rates and the time frame in which future excess profits are expected. These management decision options are further discussed by Marton (2009) who emphasized the potential issues with reduced accounting quality as a consequence of the transition to the IFRS. The main issue discussed was the administering of regulations as the IFRS is considered as being more principle and judgement based than its predecessors. This is also discussed by Hamberg *et al.* (2009) who accentuate the lowered goodwill reductions with the transition to the IFRS. This is further suggested by Marton (2009) as an issue because of the difficulties in determining objective criteria's when impairing goodwill.

#### **2.1.4 Goodwill and the Swedish capital market**

In 2009 Hamberg *et al.* (2009) studied the goodwill reporting of all firms listed at the Stockholm Stock Exchange in the years 2001 to 2007. According to the study the goodwill assets have increased both in nominal value and in percentage scaled by total assets since the transition to the IFRS. For 2004 to 2007 the nominal value has more than doubled and goodwill scaled by total assets has steadily increased from 11.3 per cent to 16.1 per cent.

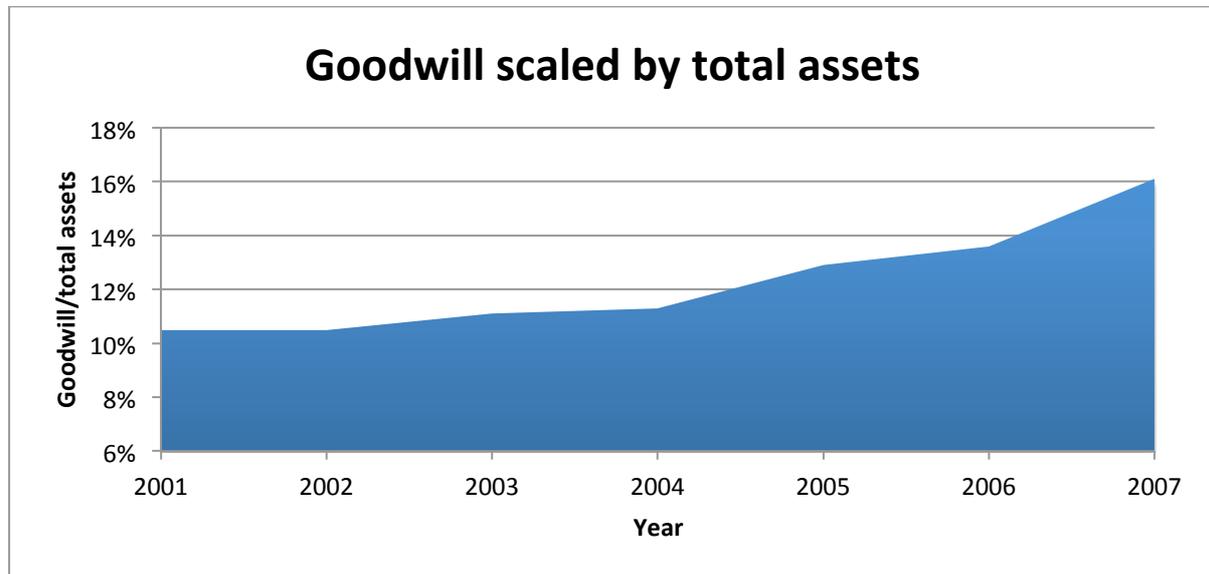


Figure 2.2. Goodwill scaled by total assets 2001-2007 (Reconstruction of Hamberg *et al.* (2009))

It is suggested by Hamberg *et al.* (2009) that the enlarging goodwill assets have two main explanations. The first suggested explanation is an increased value of acquisitions in the years 2005-2007 compared to 2001-2004. The second and most explanatory factor is the decrease in goodwill reductions. The goodwill reduction consists of two parts, amortization and impairment of goodwill. Based on information provided by Hamberg *et al.* (2009) we have calculated the average goodwill reductions for year 2001 to 2007 (see appendix 1). For year 2001-2004 the average goodwill amortization was 7,9 per cent and the average goodwill impairment was 2,8 per cent, making the total goodwill reduction 10,7 per cent. After the introduction of the IFRS, goodwill was no longer amortized and the goodwill reduction only consisted of impairments. Between 2005 and 2007 the average goodwill impairment was 1,1 per cent, a decrease in average goodwill reduction by 9,6 percentage points (Hamberg *et al.* 2009; Appendix 1).

Later studies by Gauffin & Thörnsten (2010) and PwC (2009) examined the goodwill write-downs by the end of 2008. These studies both showed that impairment by the end of 2008 was still close to one per cent. In the article Gauffin & Thörnsten questioned the listed companies' use of the IAS 36 and referred to the impairments as suspiciously low. Remarkably, the worst year for the all share index on the Stockholm Stock Exchange during



the last century did not affect the overall goodwill impairments considerably (Anderson, 2008).

Gauffin & Thörnsten (2010) also examined the relation between goodwill and equity in the companies listed at the Stockholm Stock Exchange. Of the 259 companies in the study eleven per cent of the companies reported goodwill assets that were larger than its equity by the end of 2008. The total goodwill assets by the end of 2008 amounted to 613 billion SEK, i.e. an increase from 196 billion SEK by the end of 2004 (Gauffin & Thörnsten, 2010; Hamberg *et al.*, 2009). At the end of 2008, the total reported equity amounted to 2 076 billion SEK which equals to an average goodwill/equity ratio at 30 per cent (Gauffin & Thörnsten, 2010). The authors raised the question whether companies were exploring the subjectivity in the goodwill regulation in order to maintain their equity in a turbulent market.

According to a study on acquisition accounting by Ernst & Young (2009) 59 per cent of the purchase price of Swedish acquisitions converts into a goodwill asset. According to Björn Gustafsson, responsible for valuation services at Ernst & Young, high goodwill values increase the risk of impairments in weak and turbulent markets. The situation worsens in times of economic downturn when acquisitions have been made at price levels that will be hard to defend under new economic circumstances.

### **Concerns among stock market analysts**

Swedish financial analyst Peter Malmqvist (2010) also expressed his concern for the high goodwill intensity in many companies listed at the Stockholm Stock Exchange. The author presents a study of key factors to the dramatic decline of stock prices in several large listed companies with large goodwill assets. Malmqvist (2010), another financial analyst, also recognized goodwill assets as the most important explanatory factor for the decline in stock price in the studied companies – company's profit development. If goodwill intensive companies make steady profits the capital market is pleased and large goodwill assets are not considered to be a risk factor. Though, the author points out that if a company starts showing declining profits or losses this might force an impairment of goodwill, which further decreases the accounting profits.



For a company with a high goodwill to equity ratio this might drastically reduce the company's equity and consequently its financial solidity might crash-drive. As a consequence, the company might be forced to issue new shares to restore its financial solidity due to pressure from banks, covenants on loan agreements or equity drops below the minimum required level (*ibid.*). The process of issuing new shares often makes the capital markets doubtful about the company's condition and might be very costly to its current shareholders. Through this reasoning, Malmqvist (2010) suggests that high goodwill intensity increases the risk for companies in the event of a declining profit.

Jönsson (2010) is another financial analyst that expresses her concern on the swollen balance sheet due to the new regulation on goodwill. She denotes that since the cessation of goodwill amortizations it has become increasingly difficult to interpret the accounting profits and suggests a return to yearly goodwill amortizations. She indicates that the accounting profits with current goodwill regulation are manipulated and as a consequence too high. Non-manipulated profits would in turn have lowered the P/E ratio and Jönsson (2010) believes that the ratio now fails to display the risk in companies with high goodwill intensity.

The large goodwill assets in companies listed at the Stockholm Stock Exchange also alarmed financial analyst Isskander (2010). He argues that managers, in order to justify an acquisition, use stretched assumptions in terms of growth and profitability for the company to be acquired. Later, if the assumptions used to defend the acquisition price are also used in the initial impairment testing, a need for impairment is no likely to be identified. Though, after a few years when managers' expectations often are not fulfilled, a need for goodwill impairments is likely to be recognized. Similar to Malmqvist (2010), Isskander (2010) accentuates the risk of a company being forced to issue new shares as the main threat for investors and concludes that they should be very careful with companies having a high goodwill/equity ratio.



## 2.2 RISK

### 2.2.1 *Company acquisition risk*

Several studies during the last decades have all shown the difficulties of business acquisitions. Johnson (2006) points out the billions of dollars invested in acquisition failures that are due to a number of management mistakes, including cultural as well as business transition factors that are somewhat underestimated. A recent Swedish study conducted by Öhrlings PwC (2008) has shown that seven out of ten business acquisitions fail in delivering expected value for the affected stakeholders. This fact is also emphasized by Johansson (2010), CEO at a Swedish consulting firm, who suggested that decision-makers often have naïve conceptions about acquisitions and acquired companies' ability to grow. The conception that two mediocre companies could become a stronger unit together is an example of these naïve conceptions portrayed by Johansson (2010) meaning that a company that is not organically growing and expanding on its own will probably not be better off after an acquisition. Taking these facts and dangers in processes of business acquisitions into account, it can be concluded that not only is goodwill a subject of a debated accounting regulation, the actual transaction behind the asset could also be a risk factor.

As presented earlier, the goodwill asset represents future earnings and cash flows in the process of business acquisitions and as highlighted by Johansson (2010) these future earnings are often naively projected by corporate management. These anticipations might spur two or more bidders pushing up the price to a level where it will be very difficult to yield a reasonable profit on the investment. From an external stakeholder perspective this could have an effect on the perception and legitimacy of goodwill as a company asset.

### 2.2.2 *Information Risk*

In a model developed by Easley & O'Hara (2004) it is shown that in a state of steadiness, returns on assets depend on information structure and therefore include a risk premium based on the same information structure. If the information concerning the asset is perfect, then the asset is priced at its future value, thus considered as being risk free. However, if the information is *not perfect*, there is a risk premium that is positively correlated with the



amount of uncertainty. The authors emphasize the fact that investors would demand compensation for factors concerning the information structure, which can be viewed as idiosyncratic. The amount of idiosyncratic risk is partly explained by the quantity of disclosed information by corporations, effectively providing private or more public information depending on the amount of disclosure. The uninformed investor would demand a higher risk premium in order to compensate for the amount of idiosyncratic risk his or her investment would equal, in comparison to that of an informed investor.

With the transition of goodwill regulation focusing on the impairment of goodwill instead of amortization of goodwill has meant that companies and their management have been forced to bear a larger responsibility in evaluating and reporting real goodwill values. There is also another dimension to this, which is that it is now the investor who is faced with the question whether the management is making a fair goodwill valuation. According to a study by Hayn & Hughes (2006) the ability to predict whether goodwill should be impaired or not is very limited for someone who bases his predictions on financial statements. This ultimately means that disclosed financial information does not allow users of financial statements, such as investors, to evaluate management's judgments concerning goodwill valuation.

According to Hamberg & Beisland (2009) the cessation of goodwill amortization has affected the financial markets view on goodwill impairments. Their study showed that the financial markets pay less attention to goodwill impairments since the implementation of the IFRS. The authors suggest two reasons: (1) the company's management through their estimations is able to influence if and when the impairment is to be made, (2) in the old regulation a diminishing value through additional amortization was the standard procedure and impairment was a sign of a significant reduced value since the acquisition. Today's impairments are not necessarily a result of radically reduced value, but the replacement of the previous amortizations. As a consequence the new regulation has increased the uncertainty of the financial reporting and made it harder for analysts to interpret financial reports.

A Swedish study conducted by one of the four big accounting firms also emphasize the information asymmetry showing that in processes of business acquisitions, companies focus on integration strategies and internal communication. External communication is on the other



hand rarely prioritized with approximately three out of ten rating it as of high priority (Öhrlings PwC, 2008).

### **2.2.3 Earnings Management**

The essence of earnings management is the ability to make choices that would enable managers to achieve a level of income, which they desire, thus ‘manipulating’ incomes. This technique, in which corporate officers use ‘selective financial reporting’ to influence short-term reported income, is frequently used during a CEO change. In the process of a CEO change, the newly appointed CEO faces two important tasks in firstly pleasing the board and senior staff by managing their expectations as well as secondly pleasing all stakeholders and earning their confidence in a relatively short time period by setting realistic performance goals. These performance goals will further emphasize the incentives for the newly appointed CEO to initiate earnings management techniques which are profit decreasing in order to engage in earnings management which will increase profits in the subsequent year(s). These actions would make the years following the initial profit decreased years be perceived as better as these years are benchmarked against the previous not so successful years. This type of strategy is referred to as ‘clearing the decks’ or ‘big bath’ and are often expected and perceived as normal during CEO changes (Godfrey, Mather & Ramsay, 2003; Riahi, 2004).

CEO tenure is also discussed by Masters-Stout, Costigan & Lovata (2008) where they focus on goodwill impairment in situations of CEO change. They discuss reasons why deeply rooted CEOs do not have incentives to impair goodwill. In contrast to this a newly appointed CEO has incentive to manage earnings low as performance in following years would be benchmarked to the low managed year. It could also be explained by the fact that a newly appointed CEO can evaluate goodwill from a more objective point of view.

### **Agency Theory**

When cooperating parties have different attitudes towards goals and division of labour, we talk about a principal-agent problem. The concept of agency theory focuses on the



relationship between these two parties, the principal who delegates work to the agent. The theory aims to explain two problems that might occur in these types of relationships: (1) goals and desires are subject to conflict between the principal and the agent and (2) the high costs or level of difficulty experienced by the principal in verifying what the agent is doing. The second is an issue of risk and occurs when the two parties have different attitudes concerning risk and therefore, because of their different risk preferences, might prefer diverse actions (Eisenhardt, 1989, Perloff. 2007). Taking into consideration the effects of information risk and its increase as management bears a larger responsibility in goodwill accounting would, in terms of agency theory, infer that management decisions would always be in line with their own self-interest. Depending on their incentives they could exploit the subjectivity of goodwill impairment in order to achieve a desired result. From an external investor perspective this will amount to a greater uncertainty on whether the reported earnings are made according to best practice or influenced by the agent.

### **Big Bath Accounting**

Sevin & Schroeder (2005) also discuss earnings management and highlights five earnings management techniques, previously outlined by the former Chair of the SEC Arthur Levitt, which he describes as being threatening towards financial reporting and its integrity:

1. *“Taking a bath.”* The one-time overstatement of charges against income to reduce assets, which reduces future expenses. The expectation is that analysts and investors who will focus on future earnings discount the one-time loss in the marketplace.
2. *Creative acquisition accounting.* Avoiding future expenses by one-time charges for in-process research and development.
3. *“Cookie jar” reserves.* Overstating sales returns or warranty costs in good times and using those overstatements in bad times to reduce similar charges.
4. *Abusing the materiality concept.* Deliberately recording errors or ignoring mistakes in the financial statements under the assumption that the impact is not significant.



5. *Improper revenue recognition.* Recording revenue before it is earned. It was noted that over half of the SEC's enforcement cases filed in 1999 and 2000 involved improper revenue recognition issues." (Sevin & Schroeder, 2005, p. 49)

The study by Sevin & Schroeder (2005) further investigates the use of 'big bath accounting' and questions the conception that big corporations use big bath to a higher extent compared to smaller corporations. This idea is based on the belief that larger corporations have larger incentives to manage earnings, possibly explained by political reasons among several other reasons, in comparison to smaller corporations. The study shows that, in a period after the introduction of impairments, smaller corporations use big bath to a higher extent in comparison to larger corporations. The authors mean that this could be explained by the fact that goodwill is often a bigger part of the total assets in smaller corporations (Sevin & Schroeder, 2005).

Current regulation, with the introduction of IFRS in 2005, would allow the possibility for corporations to pursue techniques such as 'big bath accounting', thus further emphasising the subjectivity in goodwill valuation. Also, taking into account that this technique might further increase information asymmetry as, in reference to Hayn & Hughes (2006), it probably would be even more difficult to determine real values of remaining goodwill using financial statements.

### **Income smoothing**

The idea of income smoothing is to manipulate earnings over time, making reported income less variable. Riahi (2004) present two distinctions of income smoothing with the first distinction being between designed smoothing, which is basically intentional smoothing, and natural smoothing. Designed smoothing refers to deliberate choices and decisions made in order to influence fluctuations. In contrast to this, natural smoothing is a natural consequence generated by the income generating process.



The second distinction, proposed by the author is the classification on whether designed smoothing is accomplished by either artificial or real smoothing. Artificial smoothing refers to accounting manipulations in order to smooth income whilst real smoothing refers to transaction choices, which control underlying economic events. Real smoothing is also matter of timing with timing of purchases, investments, sales etc. as examples of real smoothing activities. As another perspective in order to manipulate incomes, it is proposed that either (a) a possible manipulative variable is excluded from the calculation or (b) it is included (Riahi, 2004).

## 2.3 HYPOTHESIS FORMULATION

### 2.3.1 *Goodwill and stock market risk*

The process of business acquisitions often result in a goodwill asset in the acquiring corporation's balance sheets. The original value is the difference between the purchased companies equity, identifiable assets and the purchase price and the goodwill values aim to represent future earnings and cash flows. However, such earnings and cash flows are hard to estimate and when attempted Johansson (2010) emphasizes that estimations often are naïve and exaggerated. As a result, business acquisitions fail more often than they do not in delivering expected values to corporations' stakeholders according to a study conducted by Öhrlings PwC (2008). Taking this into consideration, external investors are likely to suffer an increasing risk in acquiring companies.

After the acquisition the goodwill assets are according to the IFRS regulation at least annually tested for impairment. Many consider the process of impairment testing as being subjective due to the fact that it is based on management's estimations (Isskander, 2010; Jönsson, 2010). This enables the possibility of earnings management where managers can manipulate the profitability to a desired level. A corporations management could use assumptions that would confirm the value of the goodwill asset and thereby not suffer any impairment charges in the income statement. Another example of earnings management techniques that could be applied is 'big bath accounting', which according to Godfrey *et al.* (2003) and Riahi (2004) is common during management change processes. With the big bath technique management



initially reduce profits by charging large costs in the income statements in one year to be able to show a rising and better result in coming years (Riahi, 2004). With this technique and the present goodwill regulation, corporate management and the CEO are able to manipulate benchmarks on which their future performance will be evaluated. According to Perloff's (2007) suggestion on agency theory it is implied that managers will exploit these possibilities and that impairment testing will be based on desired outcome and not actual expectations.

If, as indicated, goodwill valuation is a subjective process in which management has the opportunity to manage earnings, this worsens the possibility to understand reported profits. As a result, information asymmetry between corporation's management and investors is supposed to be larger in goodwill intensive companies. Easley & O'Hara (2004) discuss the effects of information asymmetry and how the external investor would demand a higher risk-premium if there is a gap between disclosed information and internal available information and this further implies that there is an increased risk in the corporation with high goodwill intensity. It is therefore possible to presume a correlation between goodwill intensity and stock market risk. We therefore hypothesise:

***Hypothesis 1: Goodwill intensity is positively correlated with stock market risk.***

### **2.3.2 The effects of the transition to IFRS**

Historically in Swedish consolidated accounts, goodwill assets have been amortized annually over a period of 10-20 years (RR:01 91; RR:01 96). After the implementation of IFRS in 2005 goodwill is no longer amortized and goodwill reductions only consist of impairments. A study by Hamberg *et al.* (2009) covering two time periods 2001-2004 and 2005-2007 shows that in the second time period the average annual goodwill reduction was decreased by 9,6 percentage points or 89,7 per cent. Since companies have continued to acquire new businesses this has made the total value of goodwill assets increase drastically. In the end of 2004 the total goodwill assets in the companies listed at the Stockholm Stock Exchange amounted to 196 billion SEK (Hamberg *et al.*, 2009) and by the end of 2008 the total goodwill assets had increased to 613 billion SEK (Gauffin & Thörnsten, 2010). With the enlarging goodwill assets there should be an increased possibility of applying earnings management techniques,



which in turn would increase the information asymmetry. In a study by Hayn & Hughes (2006) the authors question the ability to make proper decisions concerning goodwill using financial statements as base since there is a clear information asymmetry between an informed and an uninformed investor. The authors also point out that this information asymmetry would make the uninformed investor more exposable to risk.

The change in Swedish accounting regulation in 2005, forcing listed Swedish companies to account in accordance with the IFRS have changed goodwill accounting towards being more subjective. The most obvious example of this subjectivity is the impairing of goodwill in accordance with the IAS 36. By having impairments as the only way to reduce goodwill the valuation of the assets is entirely left out to companies' management. Taking into consideration earnings management techniques such as 'big bath accounting', income smoothing as well as agency theory, these management predictions could be questioned of its legitimacy. With previous discussion on information risk and that an uninformed investor bears greater risk in comparison to a more informed investor, it is possible to presume that the positive correlation between goodwill and stock market risk has increased since the introduction of IFRS.

***Hypothesis 2: The positive correlation between goodwill intensity and stock market risk has increased since the change in Swedish goodwill regulation in 2005***



## 3 METHODOLOGY

### 3.1 OPERATIONALIZATION

This study has presumed a quantitative approach in order to research a large population and to yield results that could be of general nature. In order to examine the presented hypothesis, we needed to operationalize the two variables in our analysis. In the following text goodwill intensity and stock market risk will be defined and the method used to make them measurable will be presented. The reasoning behind the chosen time period will be presented at the end of the section.

#### 3.1.1 *Goodwill intensity*

To analyse the goodwill intensity in the researched companies we needed to decide on an appropriate measure for this variable. All listed companies report their goodwill assets but in order to receive an intensity measure we needed to decide on a denominator and the two we considered were total assets and shareholders' equity.

Malmqvist (2010), Isskander (2010) and several other stock market analysts, that have expressed their concerns on goodwill intensive companies, use the measure goodwill assets scaled by equity. As equity represents the shareholders' ownership interest in the company, the goodwill/equity ratio expresses well their exposure to the goodwill assets. For example, a goodwill/equity ratio at 50 per cent expresses that an impairment of the goodwill asset could jeopardize half of the shareholders ownership interest in the corporation. Furthermore, when a company has a goodwill/equity ratio over 100 per cent, it implies that the goodwill asset exposes the entire equity of the corporation and moreover, the exceeding share is an exposure for the company's other financiers. Malmqvist (2010), among others, states that one of the risk factors with the goodwill asset is that it may threaten covenants in finance agreements e.g. solidity. Based on these thoughts we concluded that the most relevant denominator when calculating a corporation's goodwill intensity would be equity.



### 3.1.2 Stock market risk

The stock market values the shares of companies by discounting their estimated future cash flows (Campbell, Polk, Vuolteenaho, 2010). Consequently, the prices are driven by news about the affecting estimated cash flows and the variation of discount rate, since the discount rate is a common denominator for all companies and changes in this variable affects the price of all shares. This connection makes the stock price of all companies at the stock market move together in the absence of news concerning the fundamentals of companies. Depending on when the estimated cash flows are predicted to occur, a shift in the general discount rates affects the share price of companies differently. If the estimated cash flows are estimated in the near future a small change in discount rate will have a moderate effect. On the other hand, if a company's cash flow is supposed to occur in many years from now the effect of the share price will be more substantial (*ibid.*).

By looking at the price movements of individual stocks and putting these movements in relation to those of the stock market index, it is possible to analyse a company's risk profiles (Koller, Goedhart, Wessels, 2010). The measure of stock volatility in relation to the overall market is called beta. By definition the overall stock market has a beta of 1.0 and individual stocks are based on their deviation from the market. Stocks with a beta value above 1.0 are more volatile and are supposed to be riskier than the overall market. Low beta stocks with a beta value below 1.0 have on the contrary a lower volatility than the overall market and are supposed to be less risky. The formula used to calculate the beta ( $\beta_a$ ) of an asset is:

$$\beta_a = \frac{Cov(r_a, r_i)}{Var(r_i)}$$

where  $r_a$  measures the rate of return on the asset,  $r_i$  measures the rate of return of the index. With the formula, the beta for each individual stock can be calculated using different periods and frequencies. While choosing the time frame for the beta value calculation we followed the data service provider Bloomberg and used a measurement period of two years. According to Koller *et al.* (2010) a beta calculation should be based on at least 60 data points, which gave us the option to use daily or weekly values. We chose to collect both daily and weekly values in order to compare the effects on collected beta values. These collections showed that beta



values based on either daily or weekly values diverted very little from each other and we ended up using daily values, which better captured all price movements.

### **3.1.3 Chosen time period**

To examine our first hypothesis we needed to decide on at least one time period on which we would conduct our study. Since we aim to identify the current connection between goodwill intensity and stock market risk we decided to analyse the latest time period possible. In addition the fact that the debate of risk following goodwill intensity has intensified in the last years and the implications from stock market analysts, that the risks has increased in later years, also supports this decision. In order to be able to calculate an appropriate beta value, a two-year time period was required. Therefore the first researched time period was 2009-01-01 to 2010-12-31.

Our second hypothesis required one additional time period to be studied in order to analyse the effects of the shift in goodwill regulation in 2005. In order to better capture the effects of change in goodwill regulation we wanted to analyse two time periods close to each other. By doing this, we reduced the risk of noise from other potential changes that might affect the connection between goodwill intensity and stock market risk. During the time period 2009-01-01 to 2010-12-31 the stock market was in a bullish trend and the OMX All Share index rose with 47,6 per cent and 23,0 per cent respectively (Ekonomifakta, 2011). To reduce the risk of stock market trends affecting the comparison of the two time periods we wanted our second time period to also cover a bullish stock market trend. Based on the above stated requirements the second time period in our study became 2003-01-01 to 2004-12-31. This time period was close to the regulation change and in 2003 and 2004 the stock market rose 29,8 per cent and 17,6 per cent respectively (Ekonomifakta, 2011).



## 3.2 QUANTITATIVE DATA COLLECTION

### 3.2.1 Sampling process



Figure 3.1. Sampling process of population, 2003-2004.

On the 1st of January 2003 a total of 297 companies were listed at the Stockholm Stock Exchange. In this study we examined the connection between the goodwill intensity and stock market risk. In order to be able to calculate the stock market risk the companies in our study needed to be listed for the studied period.

Therefore the first criterion in our sampling process was that the companies were listed for the whole period 2003-01-01 to 2004-12-31. During 2003-2004 a total of 51 companies were delisted, acquired or merged with another company and could therefore not be included in our study. A second criterion in the sampling process was that the company had its main listing on the Stockholm Stock Exchange. We wanted all companies in the study to have the equal disclose requirements and since companies with a primary listing on another stock exchange issued additional financial reports we decided to exclude these companies in the study as well. Another reason for the decision was that companies with another primary listing than the Stockholm Stock Exchange are likely to operate under different market conditions and receive a disparate attention from stock market analysts, which potentially could affect the study negatively. For a more homogeneous group of companies we chose not to include companies with a primary listing on another stock exchange, which affected a total of eleven companies.



A last criterion in our sampling process was that the company had a fiscal year that was identical to the calendar year. Since our study focuses to some extent on information asymmetry, it is important that the studied companies follow the same financial reporting cycles and perform the required annual impairments on similar occasions. This requirement excluded another 22 companies and consequently the studied population for 2003-2004 ended at 213 companies.



Figure 3.2. Sampling process of population, 2009-2010.

In the sampling process for the population in second period, 2009-01-01 to 2010-12-31 the same criteria were used. 29 companies were excluded since their stocks were not listed for the entire period from beginning of 2009 to the end of 2010. An additional 14 companies were excluded because the Stockholm Stock Exchange was not the primary listing of these companies. Finally, 21 companies were excepted since its fiscal year was not identical to the calendar year.

### 3.2.2 Data collection process

Data was collected in two steps using two different databases. The first step of information collected in this research is based on information available in companies' annual reports. This information has been produced in accordance with Swedish regulation and should, in that



respect, be considered as reliable information. Available annual report information was collected through the use of a database provided by *Osiris, Bureau van dijck*, a database that lists company information from throughout the world. The data collected from this specific database was concerning amounts of goodwill as well as values of total assets and equity. The goodwill/equity ratio was calculated based on the opening balances for the two years in each time period. To calculate an average goodwill/equity ratio for each period we used the means of the two values collected. The data collection was furthermore limited by the previously mentioned delimitation thresholds, which limited the number of research companies to 213 for 2003-2004 and 207 for 2009-2010.

The second part of the data collection process was that of collecting daily as well as weekly prices on the specific company's primary stock, also limited by the presented delimitation. These prices were retrieved using a *Reuters Datastream*, a different database than that of the annual report collection process. As mentioned, prices were collected both for each day within the two selected periods of time (2003-01-01 – 2004-12-31 and 2008-01-01 – 2009-12-31) as well as prices once per week. The reason for this was solely to determine the most efficient choice of prices when implementing them as a part of a beta calculation. These prices were in the next step put in comparison with the index prices of the Swedish OMX stock market which were also collected daily as well as weekly, using the *Reuters Datastream* database. As parts of a beta calculation, daily prices and weekly prices showed very little divergence from each other in values of beta. We chose to use daily share prices because of the larger number of data points and based on the fact that this measures covers better all price movements.

### 3.3 STATISTICAL RESEARCH METHOD

The statistical research and analysis was divided into three steps. First of all, a descriptive analysis was conducted in order to effectively present and to some extent interpret the collected data. Secondly, the correlation between selected variables was studied and in the third step beta values' dependence on goodwill/equity ratios was analysed. The initial descriptive analysis, in addition to basic descriptive measures such as means, ranges and



observed ratios, also features a classification of goodwill/equity ratios in six different groups in order to more effectively describe the researched population in accordance with the purpose. In order to determine whether patterns of correlation could be found within the two researched variables, beta values and goodwill/equity ratio, the second and third step of the analysis process was conducted using models of correlation and regression in SPSS.

The second step in the statistical analysis was to examine whether the two researched variables co-varied with each other. The use of the Pearson correlation model yielded in a correlation coefficient ( $R$ ). Following Djurfeldt & Barmark (2009) the correlation was then tested for statistical significance based on the returned p-value.

The third and final step in the statistical analysis was to determine whether variations in beta values could be explained by variations in goodwill/equity ratios, using a linear regression model. By setting the goodwill/equity ratio as the constant and the beta value as the dependent variable the coefficient of determination ( $R^2$ ) is received. The linear regression model initially demands two prerequisites, first that the residual is normally distributed and second that the constant ( $x$ ) is independent of the dependent variable ( $y$ ). The normal distribution is determined by examining the significance in a Shapiro-Wilks test. There is however another situation where a normal approximate distribution could be assumed and that situation is dependent on the sample size. According to Aczel & Sounderpandian (2009) in larger samples, which the authors define at least 30 observations, it is possible to anticipate a normal distribution, regardless of the population's distribution. This fact, which is called the central limit theorem, is also described and supported by Körner & Wahlgren (2000).

Furthermore, it is also important to determine that the received interdependence is not due to coincidences. This is tested by comparing the specific f-values to the critical f-value from a selected regression model (Djurfeldt & Barmark, 2009). Finally, in order to ensure that a regression analysis is not affected by trends and ensuring the non-existence of any autoregressive components, the Durbin-Watson test is effective. A Durbin-Watson test will yield a value in between zero and four and according to Djurfeldt & Barmark (2009), in order to ensure the absence of trends, the value should be in between 1,5 and 2,5. A total absence of trends is ensured when the test yields a value of two.



In this research the dependent variable is stock market risk (beta) and the independent variable is goodwill/equity ratio. By testing the correlation between these two variables we will be able to determine at what degree the two variables co-vary. A linear regression model would eventually yield the previously mentioned  $R^2$ , which is the coefficient of determination. Using the linear regression model we will be able to determine how much, if any, of the variation in beta could be explained by the variation in goodwill/equity. For example, if  $R^2$  equals 0,500 it would mean that 50 per cent of the variance in the dependent variable (beta) could be brought back to the independent variable (goodwill/equity ratio) (Djurfeldt & Barmark, 2009).

### 3.4 RELIABILITY AND VALIDITY

It is important to take into consideration the effects of reliability and validity to a research paper. Reliability in a research perspective, such as this, refers to the reliability of the data collected. Factors such as the type of data collected, methods used to collect that data, as well as how the data is processed all relate to the reliability of a research (Johannessen & Tufte, 2003). There are many ways to test the reliability of a study and one effective way for doing this is to use the *test-retest* method. The principle of this method is to repeat the same research at another period of time, say with 2-3 weeks apart. According to Bryman & Bell (2003) this will show stability in the research, if the repeated test shows high correlation with the initial test. Another way to test the reliability of a research is to compare results from different researchers studying the same thing (Holme & Solvang, 2003).

In order to maintain the reliability of information collected from external sources we were consistent in choosing sources that we valued as being reliable. The reliability was ensured by choosing sources that presented clearly by whom, where as well as when it was written and where it had been published. Furthermore, the reliability of this study was also ensured by replicating the same test as explained in the previous section. This is however a topic and specifically a narrow research question which has not been researched with the same delimitations before. It is therefore impossible to verify the reliability by comparing to



previous similar studies. Giving grounds for choices made, for example specific choices of measures and operationalization on the other hand could ensure the validity.

Validity refers to the relevance of the data, in other words, how well the collected data represents the researched topic. It is not enough to just have reliable information, because information can be extremely reliable but if it is not valid for your research it is not usable at all (Holme & Solvang, 2003). Bryman & Bell (2003) for instance argue that one could question the validity of an IQ test as a measurement of intelligence. *Face validity* is a way of testing validity in researches and is often a required minimum in terms of validity. A measure is considered as being *face valid* when, essentially intuitively, the measure reflects on the content of the researched concept. In other words, a measure can be interpreted as *face valid* when others, perhaps people with experience in the field, feel that the measure is reflecting the content, at least on the face of it (Bryman & Bell, 2003).



## 4 DATA ANALYSIS

### 4.1 DESCRIPTIVE

Figure 4.1 and 4.2 show the goodwill/equity relation within the researched population for the two time periods. During the first time period, 2003-2004, 57 of the 213 researched companies do not have any accounted goodwill assets and therefore their goodwill/equity relation is zero. During the second time period, 2009-2010, the number of companies with no goodwill assets has somewhat decreased to 51 out of 207. Furthermore, figures 4.1 and 4.2 also show that the total goodwill/equity ratio across the entire population has risen in the period 2009-2010.

To enable a just comparison between the two charts the Y-axis in figure 4.2, showing the years 2009-2010, has been fixed at maximum 250 per cent. As a result, it is only possible to distinguish one of the highest three counts at 196, 260 and 358 per cent for the period 2009-2010. In comparison to the period 2003-2004, where the top three extremes were 174, 175 and 208 per cent, it is also obvious that the extreme ratios have risen between the studied time periods.

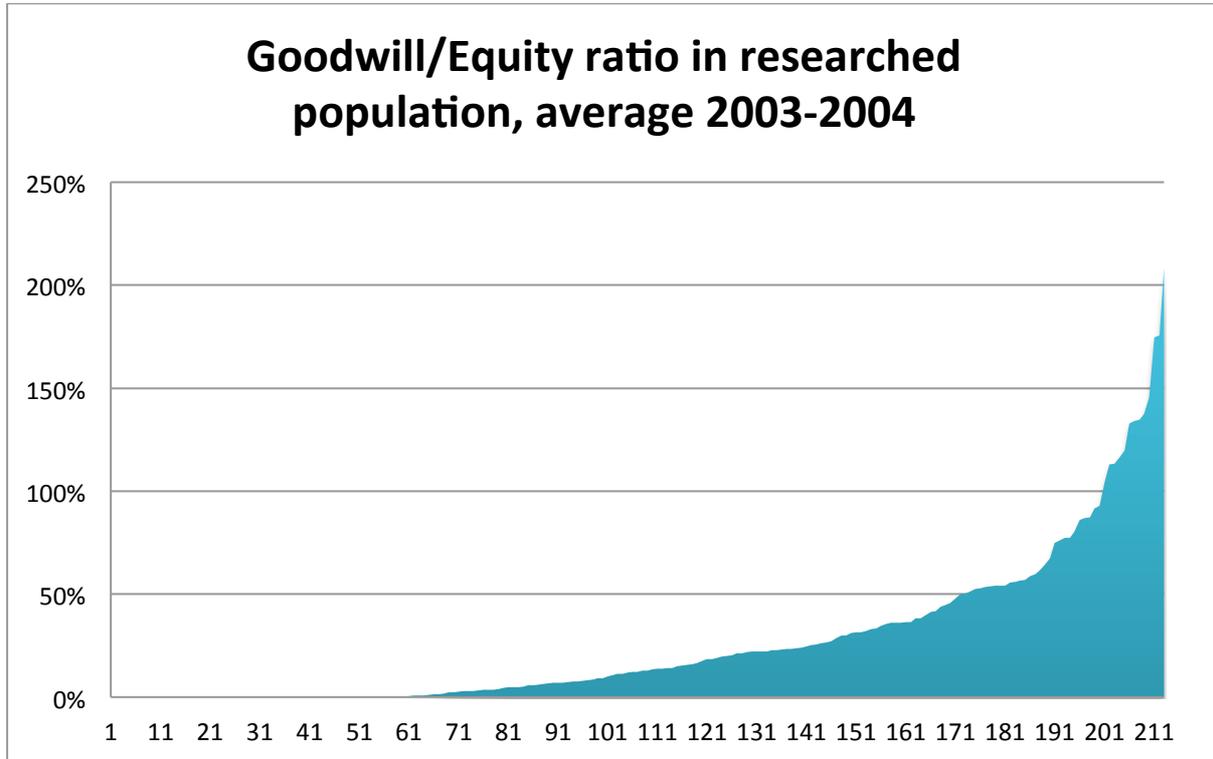


Figure 4.1. Goodwill/Equity ratio in researched population, average 2003-2004

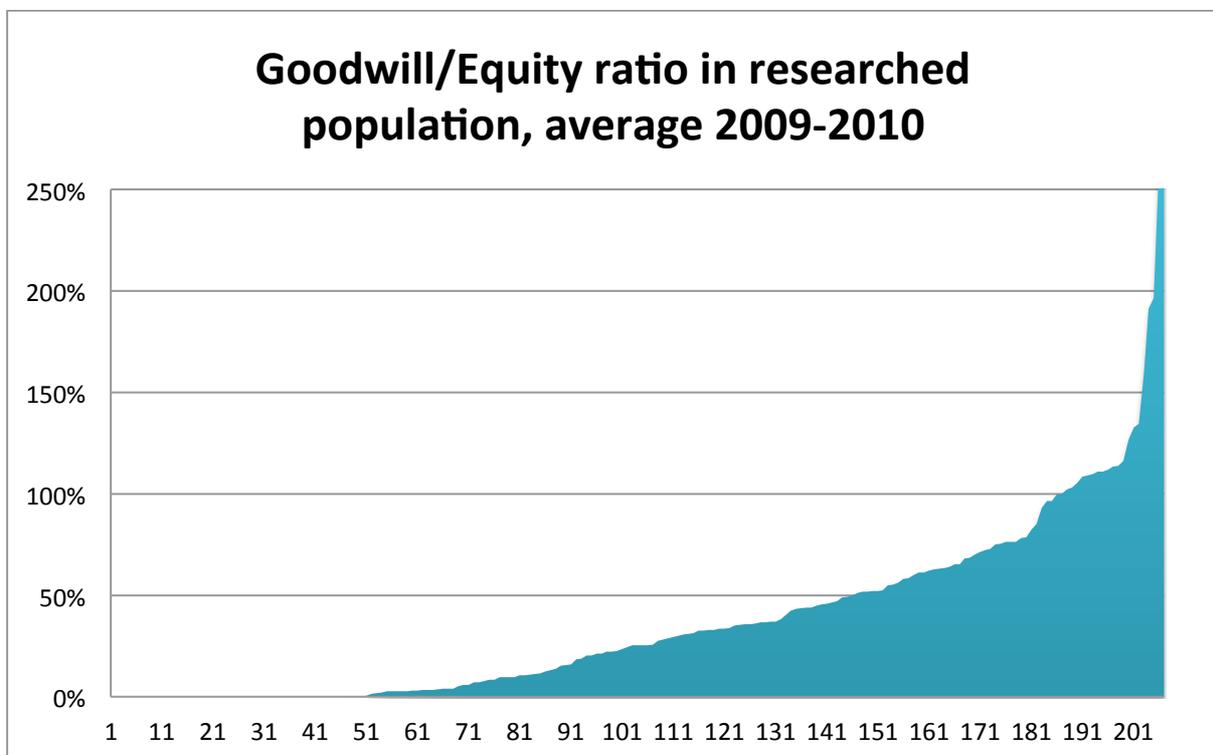


Figure 4.2. Goodwill/Equity ratio in researched population, average 2009-2010. Note that two extreme values (260 and 358) cannot be observed in the graph.



Table 4.1. Descriptive statistics both time periods.

### Descriptive Statistics

	N	Minimum	Maximum	Mean	Std.
<b>2003 – 2004</b>					
Goodwill/EQ	213	0,00 %	208,47 %	26,57 %	37,26 %
Beta value	213	0,21	2,71	0,88	0,44
<b>2009 – 2010</b>					
Goodwill/EQ	207	0,00 %	357,80 %	37,81 %	47,67 %
Beta value	207	- 0,05	2,16	0,93	0,38

The empirical research was conducted during two periods of time featuring 213 companies during the first time period between 2003 and 2004 and 207 companies in the second time period between 2009 and 2010. Booked values of goodwill and equity were collected for each company and for each of the researched years. The value of goodwill assets were put in relation to booked values of equity, resulting in goodwill/equity ratios. The mean ratio for the two years was used as an average for the time period. The goodwill/equity ratio was ranging between 0 and 208,47 per cent for the period 2003-2004 with a mean of 26,6 per cent. The period 2009-2010 resulted in a range of ratios between 0 and 357,8 per cent with a mean of 37,8 per cent. The fact that the goodwill/equity ratio generally has increased in companies with a goodwill asset and at the same time there are still many companies with no goodwill asset, has resulted in an increased standard deviation for 2009-2010.

As described in the methodology chapter, the second step of the data collection process was that of collecting daily prices for each of the companies' stock. By putting the movements in relation to the daily index movements of the OMX all-share index (OMXS) we calculated the beta of each company that was based on the movements during the two years. This calculation yielded ranging beta values between 0,21 and 2,71 for the period 2003-2004 and between - 0,05 and 2,16 for the period 2009-2010.



Table 4.2. Grouping of average beta values

**Average beta value based on goodwill/EQ grouping**

	Goodwill/EQ					
	0 %	>0-20 %	>20-40 %	>40-60 %	>60-80 %	>80 %
<b>2003 – 2004</b>						
Beta value (mean)	0,76	0,81	0,92	1,03	1,06	1,19
N	57	68	40	22	7	19
<b>2009 – 2010</b>						
Beta value (mean)	0,80	1,05	0,95	0,75	0,92	1,08
N	48	46	39	26	22	26

GW (mean) in >80 group = 122,93 % (2003-2004)

GW (mean) in >80 group = 132,46 % (2009-2010)

All companies were divided into five groups decided by their goodwill/equity ratio. This classification of companies enables us to highlight the growing mean of beta values in proportion to growing means of goodwill/equity during 2003-2004. During this time period there is a noticeable pattern and the beta value mean becomes higher as the mean of goodwill/equity rises. The companies in the 2009-2010 populations are also grouped in the same five categories as above, but the results for this time period differ. In this second time period the beta value is no longer clearly increasing with the increasing goodwill/equity ratios and no clear pattern can be recognized from table 4.2.

## 4.2 GOODWILL INTENSITY AFFECTING RISK

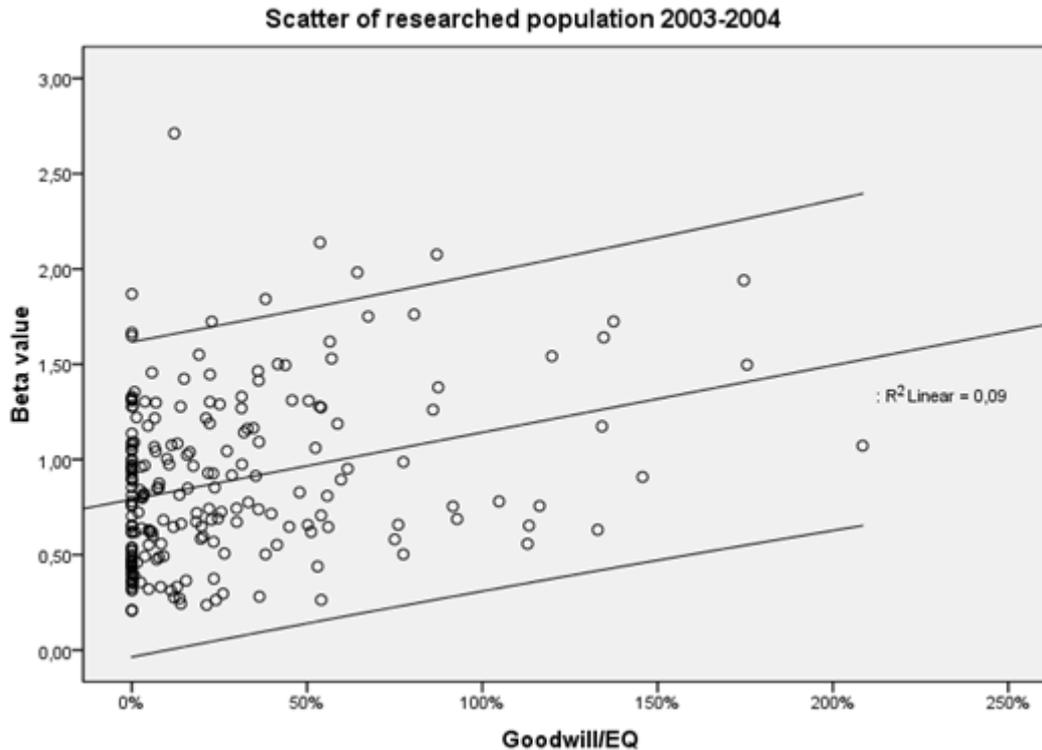


Figure 4.3. Scatter of researched population, 2003-2004.

While observing the scatter of the researched population in the first time period, 2003-2004, we were able to identify a pattern of higher beta values with an increasing goodwill/equity ratio. The slope of the regression line also confirms the pattern of a positive correlation between the increasing goodwill intensity and higher beta values. As expected, since goodwill/equity is one of many factors that could potentially affect the beta value, the observations are not centred along the regression line. Most observations were inside the outer lines mark two standard deviations and all observations but one are inside two and a half standards deviations.

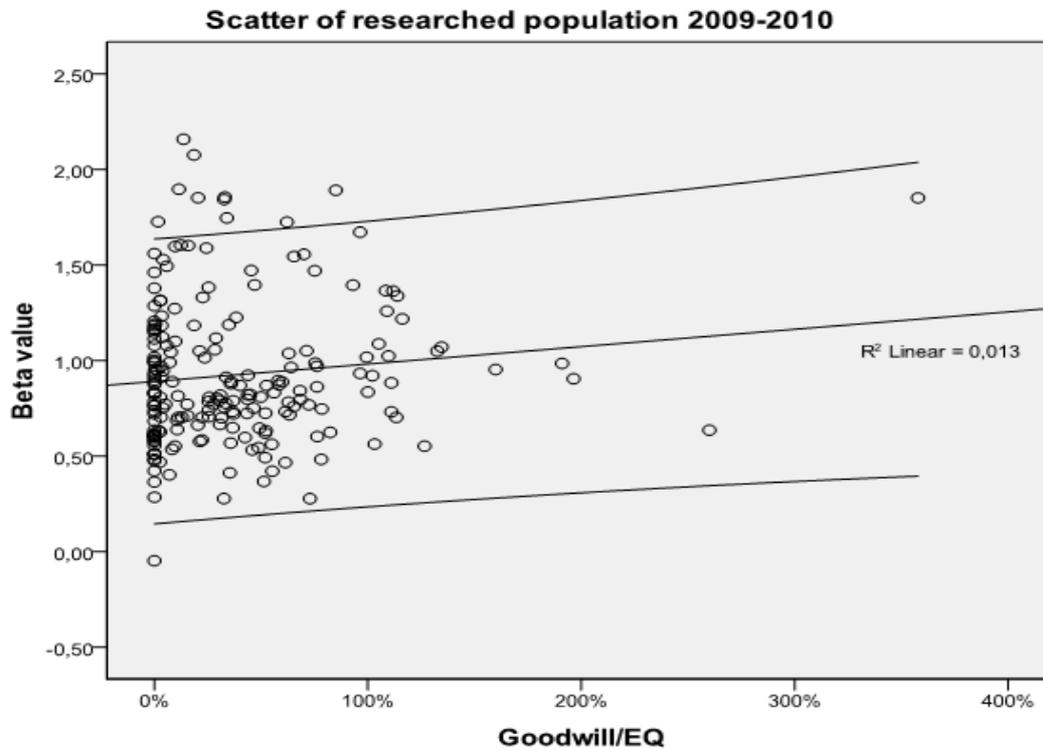


Figure 4.4. Scatter of researched population, 2009-2010.

In the scatter of the researched population in the second time period, 2009-2010, we can observe a very weak pattern of high beta value in the companies with high goodwill intensity. In the second time period there is one area, to the upper left in the scatter that clearly diverges from the regression line and the outer lines marking two standard deviations. The observation in this area marks companies with a very high beta value even though they have a low goodwill/equity ratio.



**Table 4.3. Correlation of goodwill and beta, both time periods.**

<b>Correlation</b>	<b>2003-2004</b>	<b>2009-2010</b>
Pearson Correlation (R)	0,300**	0,115*
Sig. (1-tailed)	0,003	0,050

\*\* Correlation is significant at the 0,01 level

\* Correlation is significant at the 0,05 level

To determine the strength of the correlation we calculated the correlation coefficient Pearson R and received a value of 0,3 for the period 2003-2004, which is presented in table 4.3. The correlation was statistically significant at the 0,01 level, meaning that it is 99 per cent certain that there is a correlation between increasing goodwill value and higher beta value. However, the correlation coefficient does not examine the dependence relationship between the studied variables, it is only a measure to what degree the variables co-vary. In order to determine the dependency between goodwill/equity and the beta value a regression analysis is needed.

Table 4.3 also shows the calculated Pearson correlation coefficient for the period 2009-2010. In this period the correlation is 0,115 and the co-variation is statistically significant at the 0,05 level. This means that with a 95 per cent certainty we can conclude that there is a correlation between increasing goodwill/equity ratio and a higher beta value also in the second time period. It is however important to note that the correlation at 0,115 in relation to the level of significance at 95 per cent together show a very weak correlation between the two variables in this time period.

**Table 4.4. Goodwill and beta regression, both time periods.**

	<b>Goodwill and beta regression</b>	
	<b>2003 – 2004</b>	<b>2009 – 2010</b>
R Square (R <sup>2</sup> )	0,090	0,013
Adj. R Square	0,086	0,008
Sig.	0,000	0,100
F	20,844	2,734
Durbin-Watson	2,110	1,889

Regression based on Goodwill/EQ as the constant and beta as the dependent variable.



By squaring the correlation coefficient (R) we receive a coefficient of determination ( $R^2$ ). This measure expresses at what degree the dependent variable can be explained by the independent variable. Table 4.4 shows that in the period of 2003-2004, the coefficient of determination was 0,09, implying that 9 % of the variation in stock market risk was determined by the goodwill/equity ratio. Table 4.4 also shows that coefficient of determination in the period 2009-2010 was not statistically significant as its p-value was 0,100. However, the significance within a regression analysis is not only dependent on whether the confidence of determination is greater than zero or not, a critical f-value will also make sure that the correlation is sufficiently separated from zero and thereby ensure that the perceived relationship is not explained as a coincidence. In order to determine whether the linkages we have shown are significant or not, a specific f-value, also shown above in table 4.4, must be higher than a critical value.

The critical f-value is determined by a combination of the size of the population and the chosen confidence interval and equals to 6,63 for a 99 per cent confidence interval and 3,84 for a 95 per cent confidence interval (Djurfeldt & Barmark, 2003). The generated f-value during the time period of 2003-2004 is 20,884, which means that the calculated relationship during this time period is not a coincidence. The generated f-value for the period 2009-2010, which is also put in relation with the former critical values, is 2,734. The critical f-value is 6,63 for a 99 per cent confidence interval and 3,84 for a 95 per cent confidence interval, which in this case would mean that a relationship could be explained by another variable, such as coincidence.



Table 4.5. Regression coefficients, both time periods.

### Regression coefficients

	Unstandardized Coefficients <sup>a</sup>	Sig.
<b>2003-2004</b>		
(Constant)	0,791	0,000
Goodwill/EQ	0,352	0,000
<b>2009-2010</b>		
(Constant)	0,891	0,000
Goodwill/EQ	0,091	0,100

a. Dependent variable: Beta value

By setting goodwill/equity as the independent variable and beta value as the dependent variable we received the regression line:  $y = 0,791 + 0,352x$  for the period 2003-2004. The constant, 0,791, expresses the average beta value for a company with no goodwill asset. Further, the regression line suggests that for every 100 per cent in goodwill/equity ratio a company's beta increases on average by 0,352. For example a company with a goodwill/equity ratio at 150 % is expected to have a beta at 1,319 ( $0,791 + 0,352 * 1,5$ ). The prediction according to the formula above is not accurate for all individual companies and as could be seen in the scatter, most companies were not on the regression line. This states that with the same goodwill/equity ratio, companies can still have different betas and that several other factors besides goodwill/equity ratio affects the actual betas of the companies. During the period of 2009-2010 as emphasized earlier, the regression is not statistically significant.



## 5 DISCUSSION

During the end of 2010, several stock market analysts expressed their concern about the growing goodwill assets in companies listed at the Stockholm Stock Exchange. Theories regarding information risk, earnings management and agency theory would infer a connection between the intensity of goodwill and investors' uncertainty and risk. Furthermore, the fact that goodwill is a result of business mergers or acquisitions and the fact that these business transactions often fail in delivering expected value would also imply that there is an increased risk in acquiring companies.

The data analysis showed that in both of the two time periods, 2003-2004 and 2009-2010, there is a statistically significant correlation between goodwill in relation to equity and stock market beta. However, the correlation in both time periods is relatively weak although the correlation was stronger in the period 2003-2004 compared to 2009-2010. These correlations prove that there is a co-variation between companies' goodwill/equity ratios and beta values. A further analysis of the beta values dependence of the goodwill/equity ratio yielded two-sided results. The period 2003-2004 showed a significant coefficient of determination ( $R^2$ ) at 0,09 and in the period 2009-2010 the result was not statistically significant. The coefficient of determination establishes how much of the variations in beta values can be explained by the goodwill/equity ratio, which in turn means that the  $R^2$  of 0,09, in the period 2003-2004, denotes that nine per cent of the variations in beta value are explained by the goodwill/equity ratio.

Connecting back to the first hypothesis: *goodwill intensity is positively correlated with stock market risk*, the correlation in 2009-2010 was extremely weak. This infers that there is only an indication of a connection between goodwill intensity and stock market risk. The regression analysis furthermore shows that the correlation could be the result of another affecting variable. We can therefore not find enough support in the study to either reject or accept hypothesis 1.

In reference to Easley & O'Hara (2004), information asymmetry would equal an increased demand for a higher risk premium as a response to an increased uncertainty. With the development of goodwill regulation, accounting for goodwill has become increasingly



subjective. The cessation of goodwill amortization has led to more subjective valuations concerning the ensuring of future earnings and cash flows traced back to the goodwill asset. The discovered, yet weak, correlation between goodwill/equity and stock market beta in this study could therefore be in line with a risk premium perspective discussed by Easley & O'Hara (2004) in situations of uncertainty and information asymmetry.

Riahi (2004) further emphasizes that by applying various earnings management techniques the company's management could effectively influence the impairing of a goodwill asset. In this respect, Perloff's (2007) suggestion on agency theory and its focus on self-maximization implies that usage of such earnings management techniques would always be in line with management's own self-interest. In reference to these theories it is also possible to hypothesise that with the removal of goodwill amortization, management impairment testing would become even more subjective and associated with additional uncertainty.

With enlarging goodwill assets, the information asymmetry correlated with the uncertainty of goodwill valuations is likely to have increased (Marton, 2009; Gauffin & Thörnsten). With larger goodwill assets the effects of potential impairments will have a larger effect on the income statement. Jönsson (2010) stresses that corporation accounted profits since 2005, could be manipulated due to the subjectivity of impairment testing and implies that financial statements have become harder to interpret. In addition Malmqvist (2010) suggests that a big risk with the goodwill asset is its effect on corporates profit.

This study shows that the correlation, which is observed during both time periods, has become weaker in the period 2009-2010, after the cease of goodwill amortization. The result of the study does not support the theories that the increased goodwill intensity, due to the cessation of goodwill amortizations has contributed to an increased information asymmetry or an increased exposure to earnings management. In reference to our study, showing that the correlation has not increased, we believe that this signals that the stock market is effective in the way that it focuses on underlying earning capabilities, which are not affected by corporate goodwill valuations. In the event of goodwill impairment, the stock market adjusts for one-time items affecting comparability, therefore management decisions on whether to account for goodwill impairment or not will probably not have a large effect on stock market prices. A factor that could contribute to the positive correlation between goodwill intensity and stock



market risk is the fact that processes of acquiring businesses often fail to deliver the expected value. According to Johansson (2010) and Öhrlings PwC (2008) a large share of business acquisitions fail to deliver expected values for the acquirer. If the stock market investors share these expectations, a high risk is likely to be associated with acquiring companies. Another aspect to be considered is the fact that our study, which did not find sufficient support for a connection between goodwill intensity and stock market risk, is conducted on an aggregated level. Even while reviewing the highest goodwill intensive companies within the population, as in table 4.2, there is no obvious connection between researched variables. However, we emphasize that even though there is no apparent connection on an aggregated level that does not mean that the individual company could not be subject to an increased risk.

Considering the second hypothesis: *the positive correlation between goodwill intensity and stock market risk has increased since the change in Swedish goodwill regulation in 2005*, was not supported by our study. On the contrary, our study indicated that the correlation has become even weaker in the period 2009-2010 and that variations in beta values could not be explained by goodwill intensity. Therefore, hypothesis 2 is rejected.

A possible explanation to the lowered correlation in the period 2009-2010 could be the fact that the stock market in 2009-2010 experienced an extraordinary development. The stock market during this period rose by 80,45 per cent – a situation where, according to Malmqvist (2010) it is easier to argue for a continuous high valuation of goodwill if the economy as a whole is experiencing a high growth rate. Risk associated with goodwill is more apparent in situations of declining economies and corporate profits seeing as it is hard to argue for the previous goodwill valuation in this situation. This is also supported by Jönsson (2010) and Ernst & Young (2009) underlining that there is an increased risk for goodwill impairments in weak and turbulent markets.

It is also important to consider that there is no perfect technique of measurement when measuring risk. Using beta as a measure of stock market risk is in our opinion the best method but there are also other factors that could influence stock market risk. Different lines of businesses are surely exposed to different levels of risk and fluctuations of risk. Also, corporation size could have an effect on levels of perceived stock market risk. Furthermore, larger companies probably acquire companies to a larger extent than smaller companies. This



would in turn mean that larger companies are more exposed to risk connected with processes of business acquisitions, as discussed by Johansson (2010) and Öhrlings PwC (2008).



## 6 CONCLUSIONS

The purpose of this study was to examine the connection between goodwill intensity and stock market risk and how the transition to the IFRS has effected this connection. In the end of 2010 several financial analysts expressed their concerns about the increasing goodwill intensity in listed Swedish corporations. However, in this study examining the connection between goodwill intensity and stock market risk, we found no basis for these concerns. The study also showed that the transition to the IFRS have not increased the connection between goodwill intensity and stock market risk which was the theoretical perception. On the contrary, we found a weakened connection between the two variables. It is however also to be highlighted that even though there is no apparent connection on an aggregated level between goodwill intensity and stock market risk, an individual companies could still be subject to an increased risk due to a high level of goodwill intensity.

### 6.1 FUTURE RESEARCH

This study has been conducted during a bullish period on the Swedish stock market. It is implied by several researchers that the connection is stronger in a period of economic decline. It would therefore be interesting to conduct a similar research covering these economic conditions. Furthermore, conducting a study where additional variables such as industry and corporate size are included would be another opportunity for future research. Finally, we find that similar studies in other countries would also be of interest.



## REFERENCES

- Aczel, D. A. & Sounderpandian, J. (2009) *Complete Business Statistics*. 7<sup>th</sup> ed. McGraw-Hill Irwin.
- Affärsvärlden (2010) – *Analytiker: Swedbank får oss dödskallemärkta*. Retrieved 2011-03-28  
<http://www.affarsvarlden.se/hem/nyheter/article2595305.ece>
- Andersson K. (2008) SvD. *2008 – ett rekorduselt börsår*. SvD; Retrieved 2011-04-05  
[http://www.svd.se/naringsliv/2008-ett-rekorduselt-borsar\\_2260997.svd](http://www.svd.se/naringsliv/2008-ett-rekorduselt-borsar_2260997.svd)
- Bloom, M. (2009) “Accounting For Goodwill”. *Abacus*, vol. 45, pp 379-389.
- Broberg P., Collin S.O., Tagesson T., Axelsson M. & Schéle C. (2008) *Why reduce profit? – accounting choice of impairments in Swedish listed corporations*. Kristianstad University College. Working paper
- Bryer, R.A. (1995) “A political economy of SSAP22: accounting for goodwill”, *The British Accounting Review*, 27(4), pp. 283-310
- Bryman, A. & Bell, E. (2003) *Business research methods*. Oxford university press
- CE Services (2007) *Goodwill – Performance and Risk*. Retrieved 2011-04-02  
[http://www.ceams.ch/uploads/Perspective%20Archiv/English/Goodwill\\_-\\_Performance\\_and\\_Risk.pdf](http://www.ceams.ch/uploads/Perspective%20Archiv/English/Goodwill_-_Performance_and_Risk.pdf)
- Dansell, R. & Philips, D. (2007) *Koncernredovisning I praktiken*. 5th ed., Bonnier Utbildning AB, Stockholm.
- Deloitte (2004) *Business combinations – A guide to IFRS 3*. Retrieved 2011-04-07  
[http://www.deloitte.com/assets/Dcom-China/Local%20Assets/Documents/ifrs3\(1\).pdf](http://www.deloitte.com/assets/Dcom-China/Local%20Assets/Documents/ifrs3(1).pdf)
- Djurfeldt G., Barmark M. (2009) *Statistisk verktygslåda – multivariat analys*. Studentlitteratur, Lund.
- Dogra, K. (2005) “Accounting for goodwill”. *Financial Management*. Retrieved 2011-04-06  
[http://findarticles.com/p/articles/mi\\_qa5386/is\\_200505/ai\\_n21374651/](http://findarticles.com/p/articles/mi_qa5386/is_200505/ai_n21374651/)



- Easley, D. & O'Hara, M. (2004) "Information and the Cost of Capital". *The Journal of Finance*, vol. 59, No 4 (Aug., 2004), pp. 1553-1583
- Eisenhardt, K. (1989) "Agency theory: An assessment and review". *Academy of Management Review*, vol. 14 (1), pp. 57-74
- Ekberg, M. & Lorentzon, J. (2007) "Missbruk av goodwill en fråga för revisorerna". *Aktiespararen* vol. 6/7.
- Ekonomifakta (2011) *Börsutveckling i Sverige och USA*. Retrieved 2011-05-15  
<http://www.ekonomifakta.se/sv/Fakta/ekonomi/Finansiell-utveckling/Borsutveckling-i-Sverige-och-USA/?from171=2002&to171=2010>
- Ernst & Young (2009) *Hälften av värdet på förvärvade företag utgörs av goodwill – risken för nedskrivningar ökar på en svag marknad*. Retrieved 2011-04-04.  
<http://www.ey.com/SE/sv/Newsroom/News-releases/Pressmeddelande-090305>
- Evans, C. & Kakas, A. C. (1992) "Hypothetico-deductive Reasoning". *Fifth generation computer systems*, vol 1, pp. 546-554.
- E24 (2009) *Swedbank behåller baltisk goodwill*. Retrieved 2011-04-01  
[http://www.e24.se/business/bank-och-finans/swedbank-behaller-baltisk-goodwill\\_1630867.e24](http://www.e24.se/business/bank-och-finans/swedbank-behaller-baltisk-goodwill_1630867.e24)
- E24 (2010). *Swedbanks övervärdering riskerar Sveriges anseende*. Retrieved 2011-03-30.  
[http://www.e24.se/business/bank-och-finans/swedbanks-overvardering-riskerar-sveriges-anseende\\_1879525.e24](http://www.e24.se/business/bank-och-finans/swedbanks-overvardering-riskerar-sveriges-anseende_1879525.e24)
- FAR (2010) *IFRS-volymen 2010*. FAR SRS
- Gauffin, B. & Thörnsten, A. (2010) "Nedskrivning av goodwill – Få nedskrivningar 2008 som följd av finanskrisen". *Balans* no 1/10
- Godfrey, J., Mather, P. and Ramsay, A. (2003) "Earnings and impression management in financial reporting: The case of CEO changes". *Abacus*, Vol. 39, no. 1, pp. 95–123



- Grant Thornton (2010) *Ny studie visar: Låga nedskrivningar av goodwill i svenska noterade bolag i finanskrisens spår*. Press release
- Grefberg, C. (2009) "Goodwill ligger kvar på missvisande hög nivå". *Balans*. no. 8/09. p. 9
- Hamberg, M. & Beisland, L-A. (2009) "Changed Methods to Account for Goodwill – Did it really make a difference?". *Handelshögskolan vid Göteborgs Universitet*. Second draft
- Hamberg, M., Paananen, M. & Novak, J. (2009) "The Adoption of IFRS 3: The Effects of Managerial Discretion and Stock Market Reactions". *UH Business School*. Working Paper
- Hayn, C. & Hughes, P. (2006) "Leading Indicators of Goodwill Impairment". *Journal of Accounting, Auditing and Finance*. Vol. 21 (3), pp. 223-265
- Hendriksen, E.S. & Van Breda, M.F. (1992) *Accounting Theory*. 5th ed., Irvin McGraw Hill
- Holme, M. I. & Solvang, K. B. (2003) *Forskningsmetodik – Om kvalitativa och kvantitativa metoder*. 2<sup>nd</sup> ed. Studentlitteratur, Lund.
- IAS Plus (2011) <http://www.iasplus.com/country/sweden.htm>
- Isskander, G. (2010) *Goodwill nästa års börsrysare*. Avanza. Retrieved 2011-03-25  
[https://www.avanza.se/aza/press/press\\_article.jsp?article=177204](https://www.avanza.se/aza/press/press_article.jsp?article=177204)
- Johannessen, A. & Tuft, P-A. (2003) *Samhällsvetenskaplig metod*. Malmö, Liber AB
- Johansson, G. (2005) *SWE GAAP – svensk redovisningspraxis*. Studentlitteratur, Lund.
- Johansson, S. (2010) "Fusioner och företagsförvärv förväntas öka". *Pressrelase Hamrin & Partners*. Retrieved 2011-05-15  
<http://www.bolagsfakta.se/pressreleaser/visa/pressrelease/289454/fusioner-och-foretag/index.php>
- Johnson, L. & Petrone, K. (1998) "Is goodwill an asset?" *Accounting Horizons*, vol. 12, pp. 293-303.



- Johnson, R. (2006) "Why 80% Of All Acquisitions Fail". *Supply House Times*. Vol. 49:2, pp. 90-91.
- Jönsson, A. (2010) Affärsvärlden. *Ökad aktierisk i uppblåsta bolag*. Retrieved 2011-04-04  
[http://www.affarsvarlden.se/hem/hausse\\_baisse/article3027964.ece](http://www.affarsvarlden.se/hem/hausse_baisse/article3027964.ece)
- Koller, T., Goedhart, M. & Wessels D. (2010) *Valuation – Measuring and Managing the Value of Companies*. 5<sup>th</sup> ed. McKinsey & Company.
- Körner, S. & Wahlgren, L. (2000) *Statistisk data-analys*. Studentlitteratur, Lund.
- Li, K. K & Sloan G. R. (2010) "Has Goodwill Accounting Gone bad". *University of California at Berkele*. Working paper.
- Marton, J. (2009) "Nedskrivning av goodwill – hur jämförbart är det?" *Balans*, 5/09, p. 38
- Masters-Stout, B., Costigan, M. L. & Lovata L. M. (2008) "Goodwill impairments and chief executive officer tenure". *Critical Perspectives on Accounting*. Vol. 19, pp. 1370-1383.
- Malmqvist, P. (2010) "Risken med koncerngoodwill". *Balans*, nr 4/2010, s. 38-39
- Mellqvist, G. (2009) Dagens Industri. *Storförlust för Swedbank*. Retrieved 2011-04-04  
[http://di.se/Templates/Public/Pages/ArticlePrint.aspx?pl=14324\\_ArticlePageProvider](http://di.se/Templates/Public/Pages/ArticlePrint.aspx?pl=14324_ArticlePageProvider)
- Nabizadeh, B. (2009) E24. *Se upp för goodwillsmällor*. Retrieved 2011-04-01  
[http://www.e24.se/analys/se-upp-for-goodwillsmallar\\_1216759.e24](http://www.e24.se/analys/se-upp-for-goodwillsmallar_1216759.e24)
- Nilsson, S. (1998) "Redovisning av Goodwill". *Lund: University Press*.
- Nilsson, S. (2006) *Swedish GAAP/US GAAP; Divergence or Harmonization? A Study of the Development of Reported Net Income in Swedish Companies compared to the US GAAP*, presented at the IFSAM VIII World Congress, Berlin, September 2006.  
[http://www.ctw-congress.de/ifsam/download/track\\_7/pap00162\\_001.pdf](http://www.ctw-congress.de/ifsam/download/track_7/pap00162_001.pdf)
- Nobes, C. & Parker, B.R. (2010) *Comparative International Accounting*. 11 ed., Financial Times Prentice Hall. Harlow, England ; New York.
- Perloff, M. J. (2007) *Microeconomics*. 4<sup>th</sup> ed. Pearson Education Inc. pp. 664-696



- PwC (2009) *Finansiell rapportering – en genomgång av svenska börsbolags årsredovisningar 2008 upprättade enligt IFRS*. Retrieved 2011-04-26.  
[http://www.pwc.com/sv\\_SE/se/publikationer/assets/finansiell-rapportering-2009.pdf](http://www.pwc.com/sv_SE/se/publikationer/assets/finansiell-rapportering-2009.pdf)
- Riahi-Belkaoui, A. (2004) *Accounting Theory*. 5<sup>th</sup> ed. London: Thomson Learning
- Sevin, S. & Schroeder, R. (2005) “Earnings management: evidence from SFAS No. 142 reporting”. *Managerial Auditing Journal*, Vol. 20, pp. 47-54.
- Veckans Affärer (2009) – *Swedbank bommar*. Retrieved 2011-04-02  
<http://www.va.se/nyheter/2009/02/12/swedbanks-vinst-lagre-an-vantat/index.xml>
- Öhrlings PwC (2008) *Förvärv i förändringstider – En undersökning av svenska bolags syn på förvärv*. Retrieved 2011-05-14  
[http://www.e24.se/multimedia/archive/00133/L\\_s\\_hela\\_unders\\_kni\\_133207a.pdf](http://www.e24.se/multimedia/archive/00133/L_s_hela_unders_kni_133207a.pdf)



## APPENDIX

Appendix 1 – Own construction of Hamberg *et al.* (2009) goodwill reductions.

	2001	2002	2003	2004	Swedish GAAP	2005	2006	2007	IFRS
Observations in sample	257	254	240	232	983	232	242	234	708
Firms making goodwill impairments	55	54	43	33	185	32	35	5	92
<i>Mean value of goodwill (billion SEK)</i>									
Goodwill balance (end of year)	957,7	869,9	867,2	843	802,3	1465,3	1352,2	1879,5	1693,7
Amortization of goodwill	66,6	72,5	72,3	69,7	63,7	0,1	0	0	0
Impairment of goodwill	25,3	54,3	11,1	6,6	22,8	8,9	28,9	17,6	18
<i>Average percentage</i>									
Amortization of goodwill	7,0%	8,3%	8,3%	8,3%	7,9%	0,0%	0,0%	0,0%	0,0%
Impairment of goodwill	2,6%	6,2%	1,3%	0,8%	2,8%	0,6%	2,1%	0,9%	1,1%