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# **Determinants of the Accounting Choice of Goodwill in Unlisted Firms: Evidence from Sweden**

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## Abstract

**Background and research problem:** The area of accounting choice has been frequently studied on listed firms, however little attention has been directed towards unlisted firms. Hence, it is unclear how the results from previous studies apply to unlisted firms. In addition, the transition to the new K3 framework implies effects on the goodwill asset in Swedish unlisted firms since the longest allowed amortization period is being reduced from 20 to 10 years.

**Purpose:** The primary purpose of this study is to address the determinants behind the accounting choice regarding goodwill in unlisted Swedish firms prior to the transition to the K3 framework. In order to enhance the understanding and the interpretation of the primary purpose, a complementary purpose is included, which consists of studying how banks view the goodwill accounting regulation in RR 1:00 compared to K3 in their credit assessment.

**Method:** A quantitative study is carried out, using data from consolidated financial statements of Swedish unlisted firms for the fiscal year of 2013. The quantitative approach is complemented with a qualitative approach, consisting of three interviews with respondents from three Swedish banks.

**Empirical findings:** The results from this study indicate that accounting choice in unlisted firms is affected by specific determinants and that these determinants differ between listed and unlisted firms. Financial leverage does not have a statistically significant impact on the amortization period for goodwill among Swedish unlisted firms. However, firm size is shown to have a significant impact on the amortization period for goodwill. Moreover, the study finds significant results of firms in high-tech industries applying shorter amortization periods for goodwill, which is the opposite of what was expected. The findings from the quantitative approach are further supported and interpreted by insights gained from the qualitative approach.

**Suggestions for further research:** Since accounting choice in unlisted firms is a fairly unexplored research area, one suggestion for further research is to study the accounting choice of unlisted firms within other areas than goodwill accounting. Another suggestion is to further study the impact of industries on accounting choice. At last, it would be interesting to study if the transition to K3 will lead to an increased voluntary adoption of IFRS and if so, what the incentives for this might be.

**Keywords:** Accounting choice, unlisted firms, goodwill, K3, accounting regulation, SMEs

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## 1. Introduction

*This introductory section describes the background of accounting choice, goodwill regulation and unlisted firms. The background leads down to a discussion of the research problem and a presentation of the research questions. The section ends with the purpose, the delimitations and the outline of the paper.*

### 1.1 Background

When the International Financial Reporting Standards (IFRS) became mandatory for firms listed on regulated markets within the European Union (EU) in 2005 (Bao et al., 2010), Swedish domestic standard setters shifted their focus from financial statements of listed firms to financial statements of unlisted firms<sup>1</sup> (Danielsson et al., 2006). In 2004, the Swedish Accounting Standards Board, Bokföringsnämnden (BFN), started the development of a new accounting regulation framework for Swedish firms, namely the K-project. Depending on specific criteria, firms need to apply either the K1, K2, K3 or K4 framework by the introduction of the fiscal year of 2014 (Bokföringsnämnden, 2013a).

Moreover, small and medium-sized enterprises (SMEs) have gained importance to the Swedish as well as to the EU economy during the last two decades (European Commission, 2014). Today, SMEs amount to around 99 percent of the total number of firms within the EU (European Commission, 2014; Kaya & Koch, 2015) and are central to the economic growth in Europe (Evans et al., 2005; Kaya & Koch, 2015). SMEs can also be referred to as unlisted firms<sup>2</sup>, which can be defined as firms without public accountability (Kaya & Koch, 2015). These firms differ from listed firms in a number of aspects. Compared to listed firms, the transactions are less complex and the information less aggregated in unlisted firms (Harvey & Walton, 1996). Furthermore, the users of the financial reports, as well as the user needs, differ between listed and unlisted firms (Haller & Eierle, 2004). According to Paoloni and Dimartini (1997), the main users of SMEs' financial reports are creditors, tax authorities and management. Collis and Jarvis (2000), also include employees as a main user of SMEs' financial reports. Concerning Swedish SMEs, banks can be viewed as the primary stakeholder group, as the funding capacity of financial institutions play a vital role to these firms' businesses (Marton, 2013). However, in the current business situation, banks regard accounting information as somewhat problematic, mostly due to the possibility for firms to influence the financial results through subjective judgments in the accounting processes. Accounting choices can thus be essential to the credit assessment since the accounting choices might result in increased risk and uncertainty from a creditor's perspective, which in turn leads to disadvantageous loan terms and ungranted credits for the firms (Svensson, 2003).

According to Jarvis (1996), financial statements and accounting information are more important to private firms than to listed firms due to the non-existence of market price on

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<sup>1</sup> When referring to unlisted firms, we are also referring to firms listed on unregulated markets in Sweden since these firms are not required to follow IFRS.

<sup>2</sup> Hereafter, when referring to SMEs, we are also referring to unlisted firms, since the two in many aspects are synonymous.

equity among unlisted firms. Moreover, Kaya and Koch (2015) argue that the lack of market price on equity increases the importance of the debt-contracting role of accounting. Additionally, Bruns and Fletcher (2007) state that accounting information is one of the primary documents for banks and other creditors when assessing a firm's credibility. The implementation of the K-frameworks in Sweden implies new accounting rules and recommendations for Swedish unlisted firms. The K3 framework will be the new regulatory framework for many of the Swedish unlisted firms and the framework includes recommendations on the production of consolidated financial statements of unlisted firms (Bokföringsnämnden, 2013b). One area of the consolidated reporting, which will be affected by the new regulation, is the treatment of goodwill. The recommendations in K3 allow goodwill to be amortized over a maximum of 10 years (BFNAR 2012:1). The corresponding regulation prior to the implementation of K3 allowed goodwill to be amortized over a maximum of 20 years and in rare cases even more (RR 1:00). The transition to K3 thus implies at least a 50 percent reduction of the allowed goodwill amortization period, which might affect the producers as well as the users of the financial information.

## **1.2 Discussion of Research Problem**

Goodwill arises when the acquisition value exceeds the net assets of the purchased company and is accounted for in the consolidated financial statements (BFNAR 2012:1). The asset has gone from being an item not recognized, to an item commonly occurring in the balance sheets (Giuliani & Brännström, 2011) and discussions concerning valuation, useful life and impairment of goodwill are frequent in recent literature (Ding et al., 2008; Comiskey & Mulford, 2010; Seetharaman et al. 2006). Yet, little attention has been given to the treatment of goodwill in unlisted firms.

According to Evans et al. (2005), the introduction of measurement and recognition simplifications are two of the most controversial questions regarding accounting standards for SMEs. The K3 framework limits the accounting choice of goodwill in Swedish unlisted firms, leaving some firms to face the inevitable consequences of the new framework. Moreover, the accounting choice made by firms affect the contracting costs connected to for instance debt contracts (Watts & Zimmerman, 1990), on which the funding of many unlisted firms is dependent (Cressy & Olofsson, 1997). Previous studies show that there is a distinct relationship between the accounting choice made by firms and firm characteristics (Watts & Zimmerman, 1978; 1979; Christie, 1990; Holthausen & Leftwich, 1983). Penno and Simon (1986) state that even though this phenomenon has been frequently studied on listed firms, little focus has been directed towards the area of accounting choice in unlisted firms. The statement by Penno and Simon (1986) can still today be regarded as accurate, since we have not been able to find any recent literature on accounting choice in unlisted firms. Hence, it is unclear how the results from studies on accounting choice apply to unlisted firms. Studies made on both listed and unlisted firms do, however, show differences in the motives behind the accounting choice (Penno & Simon, 1986; Beatty & Weber, 2003). Nevertheless, we have not been able to identify any studies that focus solely on accounting choice in unlisted firms.



Hall (1993) studies the phenomenon of accounting choice of goodwill among listed firms in a context of accounting regulation that is partly similar to the Swedish regulation prior to the K3 framework. The author studies whether managements are influenced by economic consequences when determining the amortization period for goodwill and finds that large firms tend to amortize goodwill over shorter periods than small firms. Additionally, for those firms with covenants sensitive to goodwill accounting, the goodwill accounting choice is also affected by the financial leverage.

Irrespective of the lack of studies on accounting choice in unlisted firms, the accounting choice of these firms does matter. For instance, the recommendations on goodwill accounting in unlisted firms, according to the K3 framework, might have large effects on unlisted firms who have applied an amortization period longer than 10 years prior to the implementation of K3. This since the goodwill asset needs to be adjusted against the firm's equity if an amortization period exceeding 10 years has been applied prior to the implementation of K3 (BFNAR 2012:1). In practice, all goodwill recognized in the balance sheets, as a result of an acquisition made more than 10 years ago, need to be completely eliminated from the balance sheet and adjusted by a reduction of equity (BFNAR 2012:1).

Furthermore, Kaya and Koch (2015) argue that research is needed to determine stakeholder needs, agency relationships and strategies of unlisted firms. The authors point towards inconsistent findings regarding the costs and benefits of the financial reporting in unlisted firms combined with little existing research on the views and needs of the users of unlisted firms' financial statements. The fact that research on accounting choice in unlisted firms has been overshadowed by research on accounting choice in listed firms (Kaya & Koch, 2015) results in insufficient knowledge regarding the determinants of the accounting choice in unlisted firms. Hence, there is a need to create a foundation for researchers to perform further studies on accounting choice in unlisted firms.

### **1.3 Research Questions**

The previous discussion of the research problem results in the following primary research question:

*What were the determinants of the accounting choice of goodwill in unlisted firms, prior to the implementation of K3?*

Additionally, the discussion of the research problem results in the following complementary research question:

*How do banks view the goodwill accounting regulation in RR 1:00 compared to the K3 framework in their credit assessment?*

### **1.4 Purpose**

The primary purpose of this study is to address the determinants behind the accounting choice regarding goodwill in unlisted Swedish firms prior to the transition to the K3 framework.

Thereby, the study will attempt to explain cross-sectional variation in goodwill accounting across unlisted firms. In order to enhance the understanding and interpretation of the primary purpose, a complementary purpose is included. The complementary purpose is to study how banks view goodwill accounting regulation for unlisted firms and thereby to achieve a practical view on the issue, as well as to complement for the lack of previous studies performed on accounting choice in unlisted firms.

### **1.5 Delimitations**

This study will focus on goodwill solely in unlisted Swedish firms by applying the information from the consolidated financial statements of the main parent companies. The study will not include unlisted Swedish firms voluntarily following IFRS. Moreover, since the focus of the study is on consolidated financial statements, tax considerations and tax effects are excluded. Furthermore, the study is delimited to a cross-sectional analysis of data from annual reports for the fiscal year of 2013.

### **1.6 Outline of the Paper**

This paper consists of eight sections, structured as follows: The introduction is followed by the second section, which includes an introductory background of goodwill regulation in Sweden. In section three, the theoretical framework and hypotheses development is presented. The fourth section clarifies the method applied by initially discussing a quantitative approach and thereafter a qualitative approach of this paper. The findings from the quantitative approach are presented in section five, followed by the findings from the qualitative approach in section six. Section seven discusses and connects the findings from the two approaches. The paper ends with section eight, in which concluding remarks and suggestions for further research is presented.

## 2. Introductory Background of Goodwill Regulation in Sweden

*This section provides a brief background of the parts of Swedish goodwill accounting regulation that this study will cover. The purpose of the section is to create an understanding of the context of goodwill accounting in Sweden.*

### 2.1 The Swedish Annual Accounts Act

The Swedish Annual Accounts Act, Årsredovisningslagen (ÅRL), provides a basis for the standard setting bodies in Sweden (BFNAR 2012:1), by determining the legal frame for consolidated financial statements (Årsredovisningslagen SFS 1995:1554). Starting from the fiscal year of 2014, previous recommendations in RR 1:00 are replaced with the new K3 framework, which will imply changes in the treatment of goodwill. The regulation of goodwill in RR 1:00 and K3 is summarized below.

### 2.2 RR 1:00

The standard-setting recommendation RR 1:00 was developed by the Swedish Financial Accounting Standards Council, Redovisningsrådet (RR) (BFNAR 2012:1). Since IFRS became mandatory for all listed firms in the European Union in 2005, RR 1:00 was the main option for consolidated financial statements of Swedish unlisted corporate groups and included recommendations on the treatment of goodwill (RR 1:00).

If the applied amortization period of goodwill exceeds five years, this needs to be disclosed in the annual report, according to the Swedish Accountancy Act (ÅRL). Regarding useful life, RR 1:00 stated that the useful life should reflect a firm's expectations on future economic benefits connected to the goodwill. The maximum useful life was not expected to exceed 20 years. However, under certain circumstances, such as when goodwill was closely related to identifiable assets, whose useful life exceeded 20 years, the framework did allow goodwill to be amortized over a period exceeding 20 years. Firms who applied an amortization period exceeding 20 years were required to disclose the reasons behind it and to calculate the recoverable amount at least annually to determine potential needs for impairment (RR 1:00).

### 2.3 K3 Framework

The K3 framework came into full effect for the fiscal years starting after December 31st 2013 (BFNAR 2012:1) and is mandatory for all companies who meet the Swedish legal definition of a larger company (Årsredovisningslagen SFS 1995:1554). The framework is the main option when constructing annual reports and consolidated financial statements in unlisted firms (Bokföringsnämnden, 2013b). More specifically, consolidated financial statements are required in the parent company of all corporate groups that are not applying the IFRS and who fulfill at least two of the following three criteria (BFNAR 2012:1):

- The affiliated companies have had an average of more than 50 employees altogether during each of the last two years
- The balance sheet total of the affiliated companies have amounted to more than 40 million SEK during each of the last two years
- The net sales of the affiliated companies have amounted to more than 80 million SEK during each of the last two years

One of the differences compared to the recommendations in RR 1:00 concerns the amortization period of goodwill. In contrast to the previous recommendations, the longest useful life allowed under K3 is 10 years and no circumstances can justify an amortization period that exceeds 10 years. Firms that applied a goodwill amortization period longer than 10 years prior to the implementation of K3 must therefore adjust the carrying amount of goodwill against the common equity at the year of the transition to K3 (BFNAR 2012:1).

### **3. Theoretical Framework**

*This section consists of a theoretical framework, which includes a literature review of theories and previous studies relating to the subject of this paper. The section results in the development of three hypotheses. The theoretical framework will further be used to analyze both the quantitative and the qualitative approach of this study.*

#### **3.1 Accounting Choice**

Accounting choice research targets the fundamental issue of whether accounting information matters (Fields, Lys & Vincent, 2001) and concerns the choice of a manager to choose one accounting method over the other (Watts, 1992). Moreover, Fields, Lys and Vincent (2001, p.256) apply a broad definition of accounting choice as being: "...any decision whose primary purpose is to influence the output of the accounting system in a particular way".

According to Fields, Lys and Vincent (2001), there are three types of market imperfections affecting managers' accounting choice, namely agency costs, information asymmetries and externalities affecting non-contracting parties. Agency costs are often related to managerial compensation and debt covenants. Information asymmetry focuses on the relation between managers, with higher knowledge, and investors, with less knowledge. Other externalities are related to third party relations, contractual as well as non-contractual. Accounting is an important tool to reduce these market imperfections. First, accounting is important to a firm's contractual relationships by minimizing agency costs (Watts & Zimmerman, 1986). Second, accounting provides a channel through which managers can communicate information. Third, accounting regulation affects both the quality and quantity of financial disclosures, which in turn have welfare and policy implications in the presence of externalities (Fields, Lys & Vincent, 2001).

#### **3.2 Accounting Choice Hypotheses**

Positive accounting literature, which constitutes the basis for the accounting choice literature, offers an explanation to accounting practice and indicates the significant impact of contracting costs (Watts & Zimmerman, 1990). Studies (see for example Watts & Zimmerman, 1978; 1979; Christie, 1990; Holthausen & Leftwich, 1983) show that there is a distinct relationship between the accounting choice made by firms and firm characteristics. Previous research on accounting choice has focused on mainly three main hypotheses, referred to as the bonus plan hypothesis, the debt/equity hypothesis and the political cost hypothesis (Watts & Zimmerman, 1990).

The debt/equity hypothesis implies that a high financial leverage increases the likelihood that managers will make accounting choices to increase the reported income (Watts & Zimmerman, 1990). It is assumed that the higher the leverage, the closer the firm is to violate against the debt covenants (Kalay, 1982). Managers can thereby avoid costs arising from covenant violations through accounting choices (Watts & Zimmerman, 1990), which gives the managers incentives to make income-increasing accounting choices when the firm is close to violate the covenants (Watts & Zimmerman, 1986).

The bonus plan hypothesis states that managers of firms with bonus plans are more likely to make accounting choices to increase the reported income (Watts & Zimmerman, 1990). The dilution of ownership and control leads to a situation of conflict between the management and the shareholders, resulting in costs for the firm (Roberts, 2005). However, Penno and Simon (1986) find that dilution of ownership occurs mostly among listed firms.

The political cost hypothesis states that managers of large firms are more likely to make accounting choices that decrease reported earnings. Size is a commonly applied proxy to test this hypothesis and sets the level of political attention directed towards a firm (Watts & Zimmerman, 1990). Since unlisted firms are defined as firms without public accountability (Kaya & Koch, 2015), this hypothesis is however unlikely to be applicable to unlisted firms.

### **3.3 Contracting Costs and Accounting Choice**

The presence of contracting costs is vital to the accounting choice literature. In a situation where contracting costs do not exist, accounting becomes irrelevant, which implies that accounting choice per se cannot affect the value of a firm. To predict and explain accounting choice, the inclusion of information and transaction costs is thus necessary (Watts & Zimmerman, 1990). Contracting costs arise mainly as a consequence of market transactions, firm internal transactions and transactions in the political process (Watts & Zimmerman, 1990). Moreover, contracting costs include costs arising from evaluating, negotiating, writing and renegotiating the terms of the contracts, while monitoring costs include the costs related to keeping oneself informed about a firm's performance under contracts and the evaluation regarding the compliance of the contracts (Holthausen & Leftwich, 1983).

If markets were to be perfect and effective, accounting information and financial disclosures would be of a limited importance and there would be no need for accounting regulation. However, this is not the case in today's reality and accounting-based contracts are tools applied to address market imperfection (Fields, Lys & Vincent, 2001). When monitoring and contracting costs arise, accounting choice is applied to affecting firm value and thereby the wealth of the firm's stakeholders (Holthausen & Leftwich, 1983). Managers can use their discretion to either increase the wealth of the contracting parties or to maximize their own wealth at the expense of the contracting parties. The latter way can be viewed as if managers act opportunistically (Watts & Zimmerman, 1990). The contracting parties can however restrict the discretion of managers in their contracts and thereby decrease the possibility of opportunistic behavior of the managers (Watts & Zimmerman, 1990; Fields, Lys & Vincent, 2001).

### **3.4 Unlisted Firms and Debt Contracting**

The impact accounting choices might potentially have on banks is important to take into consideration since, according to Marton (2013), banks are vital for the funding of the operations in Swedish unlisted firms. Moreover, the relationship between the bank and the firm can be viewed as a contract between a principal (bank) and an agent (firm) and the agency theory might provide an additional understanding to why creditors restrict the actions of the firms to whom they are lending (Jensen & Meckling, 1979). Since the owner and the manager of unlisted firms often are the same person, there are rarely any agency costs

resulting from controlling and monitoring the manager of a firm. On the other hand, banks take over the role of monitoring firm actions and decisions in the case when a firm is owner-controlled (Ang et al., 2000).

Debt contracting is central in the production of accounting information for unlisted firms, due to the lack of organized capital markets (Kaya & Koch, 2015). According to Riistama and Vehmanen (2004), the value of unlisted firms at a specific time is not as relevant as their ability to achieve positive cash flows, profitability and liquidity. Furthermore, the Institute of Chartered Accountants of Scotland (ICAS) (1998) states that users of unlisted firms' financial reports focus on profitability and solvency. Debt contracts and debt covenants are often based on either floating generally accepted accounting principles (GAAP) or frozen GAAP. The term floating GAAP refers to the application of current accounting regulation when specifying the details in a debt contract, while frozen GAAP refers to the application of the accounting rules that were in place when the contract was signed. Frozen GAAP thus disregards from any changes in accounting regulation. A general assumption is that floating GAAP is applied since it is cheaper to monitor and less difficult to use compared to frozen GAAP. (Fields, Lys and Vincent, 2001).

Financial statements and accounting information is applied in debt contracts, (Leftwich, 1983) and the contracts include information from both the balance sheet and the income statement. The income statement informs banks about how a firm is performing operationally and whether a firm will produce sufficient cash flow to service the debt, while the balance sheet show the lower limit of the value of the assets and liabilities (Kothari et al., 2010) and indicate the minimum value that the creditor might collect in case of liquidation (Watts, 2003). Moreover, accounting information has mainly two roles in debt contracting. It can take an informative role by assisting the lender when determining the probability and potential costs of default, and the lender can thereby design the details of the debt contract. Additionally, financial statement information can serve a direct contracting role since debt covenants are based on accounting variables (Demerjian, 2011).

According to Jensen and Meckling (1979), covenants are used as a tool to minimize monitoring costs of debt contracts. There are also contracting costs related to the debt contract, which might comprehend the negotiation, design, writing and evaluation of an agreement (Holthausen & Leftwich, 1983). Debt covenants can be connected to both the balance sheet and the income statement. Examples of balance sheet-oriented ratios are leverage, net worth and current ratio, while examples of commonly applied income statement ratios are interest coverage, fixed charge coverage and debt-to-earnings (Demerjian, 2011). Furthermore, Beneish and Press (1993) show that violation of accounting-based covenants is costly and that the violation of covenants might have significant effects on firms' investments and financial policies as a consequence of the actions from banks. Debt contracts and covenants are usually not renegotiated, unless the renegotiation costs are assumed to be low, which emphasizes the importance for companies to not violate against the debt contracts (Demiroglu & James, 2010).

Regarding covenants and goodwill, Leftwich (1983) finds that debt contracts specify methods of accounting for intangibles and that these methods are completely different with GAAP. The author moreover argues that if the accounting treatment of goodwill were included in every debt contract, the accounting choice regarding goodwill would have no impact on the covenants. In contradiction to Leftwich (1983), El-Gazzar and Pastena (1990) show that specifications for goodwill accounting are not included in all debt contracts. The authors examined private debt contracts and found that 56 percent of the banks excluded goodwill from equity.

### **3.5 Development of Hypotheses**

*In this section, hypotheses on the accounting choice regarding goodwill of unlisted firms are developed. Some of the hypotheses frequently applied in previous studies will be excluded since these are considered to be inapplicable when studying unlisted firms.*

#### **3.5.1 Financial Leverage**

As mentioned above, debt contracts often include covenants, which restrict the action of management in different ways, such as limiting the dividends or restricting the issuing of new debt. Violation of these covenants can result in significant costs, such as legal fees. Hence, managers have incentives to avoid violating these debt contracts (Kalay, 1982). The content of the debt contract might affect the behavior and accounting choice in a firm. Moreover, the violation of an accounting-based covenant is considered as a technical violation, which might lead to the creditor accelerating the maturity time of debt, or renegotiating the contract (Holthausen, 1981).

Even though previous research has shown that risks of violating accounting-based debt covenants increase the risk of earnings management, researchers have generally applied financial leverage, measured by the debt to equity ratio, as a proxy for closeness of breaking debt covenants (DeFond & Jiambalvo, 1994; Fields, Lys & Vincent, 2001; Mangos & Lewis, 1995; Christie, 1990). Duke and Hunt (1990) argue that debt to equity ratio is an appropriate proxy for closeness to some covenant violations, including retained earnings, net tangible assets and working capital. However, not all studies show that debt to equity always proxy for closeness of violating debt covenants. For instance, De Angelo et al. (1994) study financially troubled firms and conclude that accounting choices are performed due to the financial difficulties rather than to avoid violating debt covenants. Some studies have used more direct tests by applying for instance dividend constraints as specified in the debt covenant as the variable (Watts & Zimmerman, 1990). However, the high costs associated with accessing actual information from debt covenants have lead to the application of financial leverage as a proxy (DeFond & Jiambalvo, 1994). Furthermore, Hall (1993) studies accounting choice regarding goodwill in listed companies. Although Hall (1993) does not find a statistically significant relationship between financial leverage and the amortization period for goodwill, the author does find a statistically significant relationship for firms with covenants sensitive to goodwill accounting, in line with the debt/equity hypothesis.

The evidence pointing towards accounting choices being motivated by debt covenants are inconclusive. Results from studies consistent with the debt/equity hypothesis are consistent



also with other hypotheses. Findings on financial leverage might be difficult to interpret since leverage might proxy for other variables than closeness of violating debt covenants (Leftwich, 1983; Holthausen & Leftwich, 1983; Christie, 1990). However, there is a sufficient amount of data pointing at a relationship between accounting choice and the debt covenants (Fields, Lys & Vincent, 2001). Based on the results from the previous studies presented above, one can expect a relation between a firm's financial leverage and the accounting choice for listed as well as unlisted firms.

This results in the following hypothesis:

*H1: Firms close to violating their debt covenants choose longer amortization periods for goodwill*

### **3.5.2 The Relative Costs of Producing Financial Information**

Regarding the political cost hypothesis, empirical tests have generally been consistent (Fields, Lys & Vincent, 2001). For instance, the findings in Hall (1993) show that larger firms tend to amortize goodwill over shorter periods than smaller firms. It is important, however, to stress that the study by Hall (1993) is made solely on listed firms. The results from Penno and Simon (1986), who study both listed and unlisted firms, show that larger firms, measured by sales revenues, generally choose income-increasing accounting methods. Though, the results from studies on the impact of size on accounting choice seem to comply only with the largest firms and are driven by the oil and gas industry (Zmijewski & Hagerman, 1981). Even though size has shown to have an effect on accounting choice, there are difficulties in applying size as proxy for political costs, since size can proxy for other factors, such as industry membership (Watts & Zimmerman, 1990). For instance, in Holthausen and Leftwich (1983), a relation between a firm's accounting choice and its size is found, however, the authors state that these results are difficult to interpret due to limited evidence that firm size actually is related to political costs. Moreover, Leftwich (1983) finds such a strong relationship between size and contracting costs that the author suggests size to proxy for other unknown variables outside the study. These results are in line with Christie (1990), who claims that size is a commonly used proxy for political costs, although size might proxy for other, unspecified factors in regards to production and investment.

Concerning the motives of various accounting choices, these might vary between listed and unlisted firms (Beatty & Weber, 2003). According to Penno and Simon (1986), listed firms are usually dependent on external markets for equity finance, and are thus likely to apply income-increasing accounting methods. Moreover, listed firms are to a greater extent manager-controlled while unlisted firms mainly are owner-controlled. Beatty & Weber (2003) also find that large firms are more likely to pay accounting-based performance bonuses to executives and to have accounting-based dividend restrictions in the debt contracts. Larger firms, firms with accounting-based bonuses and firms with dividend restrictions are more likely to make income-increasing accounting changes.

The political cost hypothesis has been frequently applied in previous studies, however it can be questioned whether this hypothesis is applicable to unlisted firms. An argument supporting this is that unlisted firms are defined as firms without public accountability (Kaya & Koch, 2015). An entity is considered to have public accountability if its debt or equity instruments are traded on a public market, or alternatively in the process of issuing such instruments for trade on a public market (IASB, 2009). As mentioned above, much of the previous literature has stated that size might proxy for other factors than political costs. However, literature does not concretely exemplify what these factors might be.

Even though political costs are unlikely to be present among unlisted firms, size might nonetheless affect the accounting choice. According to Collis and Jarvis (2000) the main benefits of financial reporting, perceived by owner-managers, are confirmation and verification of results while the main disadvantage is cost. The authors furthermore show how firm size is a relevant factor when evaluating costs and benefits. Evans et al. (2005) state that smaller firms have higher relative costs for producing financial information. Moreover, a goodwill amortization period longer than 5 years requires additional disclosures, according to ÅRL. The additional disclosures are likely to result in more complex and time consuming accounting and thereby also higher relative costs for smaller firms compared to larger firms. This would imply that larger firms have lower relative costs for motivating a longer useful life of goodwill.

This results in the following hypothesis:

*H2: Larger firms choose longer amortization periods for goodwill*

### **3.5.3 Industry Membership**

Mangos and Lewis (1995) extend the literature on accounting choice by modifying the economic paradigm into a socio-economic paradigm. The authors criticize the neoclassical view, on which most research on accounting choice is based. Moreover, the authors argue that a socio-economic view on accounting choice might provide a richer and more inclusive explanation on what factors that affect accounting choices and they study two of the social influences examined in Neu (1992). The first social influence, normative influences, might be characterized by the influence that the presence of a professional body can have on the accounting choice in a firm. For example, the existence of a professional accountant among the board of members will increase the probability that managers of the board will include an earnings forecast in a leaflet. The second influence, industry norms, concerns the general agreement within an industry to make certain accounting choices. However, the influence by industry norms on accounting choice has not only been studied in a socioeconomic context. According to Penno & Simon (1986), several studies have shown a relation between industry and a firm's accounting choice. A specific accounting method might be more suitable and common within a certain industry, which creates differences in accounting choices between industries. The authors, who apply the SIC-code as a proxy for industry membership, also state that industry is a suitable variable to include in studies on accounting choice. Moreover, Watts and Zimmerman (1990) state that firm size, which has been shown to affect the

accounting choice, might vary between different industries, which logically also would result in different accounting choices depending on industry membership.

Henning and Shaw (2003) study goodwill amortization period among listed firms in the U.S. and apply industry as one of the predicting variables in their study. The authors divide firms into two categories, namely high-tech industries (including firms in the computer hardware, computer software and pharmaceutical industries) and low-tech industries (all industries not categorized as high-tech industries). The study shows that industry membership does have a statistically significant impact on the goodwill amortization period. They more specifically conclude that high-tech firms are more likely to apply longer amortization periods for goodwill than firms within low-tech industries. A similar industry classification is applied by Rehnberg (2012), who studies Swedish firms listed on Stockholm OMX. The author classifies the IT, telecom and healthcare industries as high-tech and all remaining industries as low-tech industries.

This results in the following hypothesis:

*H3: Firms in high-tech industries choose longer amortization periods for goodwill than firms in low-tech industries*

## 4. Method

*This section includes a discussion of the method and methodology applied in the study. The study takes on both a quantitative and a qualitative approach, these approaches are discussed separately below. Initially, the method for the quantitative approach will be discussed, followed by the method for the qualitative approach.*

### 4.1 Choice of Method and Research Approach

This study is mainly based on a positivistic paradigm. This since applying a quantitative approach fulfills the primary purpose of the study, in which causal relationships between variables is analyzed in order to study determinants of the accounting choice of goodwill. The data used in the quantitative approach of the study derives from secondary sources and is objectively analyzed. Moreover, conclusions are drawn on logic rationality connected to theoretical concepts and variables deriving from existing literature. The quantitative approach seeks to structure and test theory, rather than to develop new theory. Hence, the study can be assumed to apply a deductive approach, since theories constitute the basis of the hypotheses tested in the study (Bryman & Bell, 2005).

The complementary purpose of the study incorporates an element of interpretivism into the study since results from the qualitative data is highly influenced by the perceptions of banks. The analysis is connected to previous theories as well as to the findings from the quantitative approach.

### 4.2 Quantitative Approach

#### 4.2.1 Collection of Data

The data applied in the quantitative approach is collected from the database Retriever Business. Retriever Business is a database with information regarding all firms in Sweden and the database collects the information through the Swedish Companies Registration Office (Bolagsverket) to which every limited firm is required to send their annual reports. This thus ensures the reliability of the main source of this study. Retriever Business is used to export statistical data for the fiscal year of 2013 and to access company annual reports, which are then assessed manually to obtain information regarding the applied accounting framework and the amortization period for goodwill.

#### 4.2.2 Target Population

This study focuses on goodwill in Swedish unlisted firms. Goodwill is recognized in the consolidated statements of head parent companies of corporate groups, which implies that all firms preparing and providing a consolidated financial statement for the fiscal year of 2013 and have recognized goodwill in the balance sheets are included in the target population. This also includes the firms that are not legally required to provide consolidated statements. We thus assume all firms who presented a consolidated financial statement in 2013 will be following the K3 framework in the future since this is the only applicable K-framework for consolidated financial statements among unlisted firms. Since the focus is on unlisted firms, the search in Retriever Business includes firms not registered on stock lists. However, firms listed on the stock lists *Aktietorget*, *Bequoted* and *First North* are also included in the study

since these are unregulated stock lists and do not require the firms to follow IFRS. 2187 firms in Retriever Business fulfill the criteria mentioned above. Among these 2187 firms, there is insufficient information regarding the total assets for 5 firms and zero net sales for 9 firms, which signals inactivity. These firms are consequently excluded from the target population, which leads down to a final target population consisting of 2173 firms.

**4.2.3 Random Sample**

In this study, the dependent variable needs to be collected by manually searching for goodwill amortization period in the annual reports. Additionally, information regarding which accounting framework a firm applies cannot be provided from Retriever Business and must therefore also be collected manually from the annual reports. Choosing a sample is thus unavoidable since the target population is too large to be manageable<sup>3</sup>. In a study of positivism, it is important that the sample constitutes an unbiased group that represents the population. This is obtained by choosing a random sample, which implies that every object in the population has the same chance of being selected. This furthermore makes generalization feasible (Collis & Hussey, 2014). According to Krejcie and Morgan (1970), a population of 2000 subjects might yield an appropriate sample size of 322 subjects. However, the appropriate sample size also depends on the level of accuracy and confidence in the results (Czaja & Blair, 1996). When determining the size of the random sample, consideration is taken to the consequence of some firms being excluded from the sample due to voluntarily application of IFRS, since IFRS does not allow goodwill to be amortized.

Considering all of the aspects mentioned above, the size of the random sample is set to 800 firms. Each firm from the final population is given a random number, generated from the RAND function in Excel. The random numbers are then numerically ordered and the firms with a number between 1 and 800 are chosen as the random sample. After manually searching the annual reports, a total of 168 firms are excluded from the sample (see table 4.2.3). This yields a final sample of 632 firms.

**Table 4.2.3**  
Firms excluded from the sample

No. Of Firms	Motivation for Exclusion
76	Voluntarily following IFRS
37	Does not present a consolidated statement*
27	Equity is negative**
16	Lacks information on goodwill amortization
10	Goodwill explicitly derives from acquisition of assets and liabilities
1	Goodwill explicitly derives from mergers
1	Already applying the K3 framework
Total: 168	

\* Based on 2§ 7 chapter in ÅRL, which states that firms which are a part of a larger group not are required to provide consolidated accounts.

\*\* Exclusion of firms with negative financial leverage due to difficult interpretation and misleading effects from this data.

<sup>3</sup> The target population is unmanageable in our case, considering the time frame for writing this paper, which is 20 weeks.

#### **4.2.4 Identification of Variables**

The next step of the quantitative approach is to describe the variables included in the statistical model. The included variables are identified based on previous research and literature.

##### **4.2.4.1 Dependent Variable**

The main purpose of this study is to address the determinants of the accounting choice regarding the amortization period for goodwill. Hence, the dependent variable applied in the study is the amortization period for goodwill, measured in years. Moreover, the dependent variable is applied as a dummy variable. This implies a clear separation of the firms in this study - firms applying an amortization period of 10 years or less and firms applying an amortization period of more than 10 years. This is connected to the K3 regulation, which restricts the amortization period for goodwill to be a maximum of 10 years. The goodwill amortization periods (GWA) are coded as follows:

0 = firms applying a goodwill amortization period of 10 years or less ( $GWA \leq 10$  years)

1 = firms applying a goodwill amortization period of more than 10 years ( $GWA > 10$  years)

Data on the dependent variable is, as mentioned above, collected manually. Firms might provide an interval for the amortization period, for instance of 5-20 years. To manage this issue, we make the same assumption as in Hall (1993) and apply the maximum goodwill amortization period of the interval as our observation.

##### **4.2.4.2 Independent Variables**

Financial leverage (FLEV) is the ratio variable used to test H1 and can be described as a continuous variable measuring the debt to equity ratio. Similar to for instance DeFond and Jambalvo (1994), Mangos and Lewis (1995) and Duke and Hunt (1990), this variable is applied as a proxy for the closeness of covenant violation.

Size (SIZE) is the ratio variable, applied to test H2 and can be described as a continuous variable measuring the net sales in thousand SEK. This variable is used as a proxy for the relative costs of producing accounting information, presented by Evans et al. (2005).

Industry (IND) is the variable used to test H3 and is, unlike the other two independent variables, classified as a categorical dummy variable. There are initially 28 different industry categories, developed by Retriever Business, which are divided into two dummy categories. By applying the industry allocation used by Rehnberg (2012) and Henning and Shaw (2003), firms are coded 0 ( $IND=0$ ) if categorized as firms within low-tech industries and coded 1 ( $IND=1$ ) if categorized as firms within high-tech industries. Based on the industry categorization applied by Henning and Shaw (2003) and by Rehnberg (2012), the Computer, IT & Communication industry, the Human Health Activities industry and the Education, Research & Development industry are classified as high-tech industries. For more detailed overview of the industries and the categorization applied in this study, see Appendix 1.

#### 4.2.4.3 Control Variables

To control for other variables, which possibly might affect the accounting choice regarding goodwill, goodwill divided by total assets (GWTA) and interest coverage (INTCOV) are applied as control variables. The GWTA ratio is applied as a control variable to capture the relative amount of goodwill and thus the relative effects that the accounting choice of goodwill has on a firm's financial statements. The relative effect of the accounting choice of goodwill is moreover assumed to affect the relative cost of motivating the amortization period for goodwill, i.e. the relative costs for producing accounting information. Henning and Shaw (2003) study how the relative magnitude of goodwill affects the chosen amortization period for goodwill by looking at the goodwill to total asset ratio. The authors hypothesize that firms with a higher GWTA choose longer goodwill amortization periods. The results from the study by Henning and Shaw (2003) is however not significant. Nonetheless, the ratio applied in Henning and Shaw (2003) is applied as a control variable in this study since results from studies made on listed firms might deviate from results made on unlisted firms.

The interest coverage (INTCOV) is mentioned in Demerjian (2011) as a common ratio used in debt contracts, and in Christie (1990) as a common variable in studies on accounting choice. INTCOV is applied to capture ratios, other than financial leverage, which might have an effect of the accounting choice of goodwill. It can be explained as how many times a firm can cover its financial expenses with its EBIT and does thus capture the effects of depreciations and amortizations.

#### 4.2.5 Statistical Model

To measure the ability of the various predicting variables to affect the outcome of the dependent variable (GWA), a logistic regression model is applied. When the dependent variable applied is a dummy variable, the relation between the dependent and the independent variables is not linear. Applying a logistic regression enables the expression of a nonlinear relationship in a linear form. Moreover, a logistic regression requires that at least one of the predicting variables is continuous (Collis & Hussey, 2014). Since this is the case in this study, a logistic regression can be carried out. Moreover, since more than one predicting variable is applied; the statistical model more specifically becomes a multiple logistic regression.

To address the determinants of the accounting choice regarding goodwill, the following multiple logistic regression model is applied:

$$GWA = \beta_0 + \beta_1 FLEV + \beta_2 SIZE + \beta_3 IND + \beta_4 GWTA + \beta_5 INTCOV + \varepsilon$$

Where

***Dependent variable:***

*GWA* = Goodwill amortization period (0 =  $GWA \leq 10$  years, 1 =  $GWA > 10$  years)



***Independent variables:***

FLEV = Financial leverage measured as:

$$\frac{(\text{Total provisions} + \text{total current liabilities} + \text{total non current liabilities}) + (\text{total untaxed reserves} \times 0.22)}{\text{Total equity} + (\text{total untaxed reserves} \times 0.78)}$$

SIZE = Size of the firm, measured by net sales<sup>4</sup>

IND = Industry (0 = firm in low-tech industry, 1 = firm in high-tech industry)

***Control variables:***

GWTA = Goodwill divided by total assets

INTCOV = Interest coverage measured as:

$$\frac{(\text{Operating profit} + \text{Interest income from group companies} + \text{External interest income} + \text{Other financial income})}{(\text{Interest expenses to group companies} + \text{External interest expenses} + \text{Other financial expenses})}$$

#### **4.2.6 Limitations**

In quantitative studies there is a risk of low validity since variables, affecting the dependent variable, might be excluded from the statistical model. Considering previous literature and theories when determining what variables to include reduces this risk. However, previous literature consists of studies on listed firms, and therefore, the variables applied in this study have been developed based on studies on listed firms, which might compose potential limitations. The lack of previous studies made on unlisted firms might result in problems of ensuring the validity of this study. To reduce the risk of low validity, the delimitations of the study are clearly assigned and exclusionary variables applicable on both listed and unlisted firms are included in this study. Since there is a lack of studies on unlisted firms, some limitations regarding the validity expressed above are unavoidable.

In order to gain a full understanding of the accounting choice regarding goodwill in unlisted firms, there would logically be a need of interviewing the people responsible for making accounting choices in firms. This would provide a nuanced view, which would enhance the validity. Since this study will not include such interviews, there is a possible limitation connected to the understanding of the determinants and the motives behind the accounting choice regarding goodwill. However, empirical data from such interviews would be difficult to interpret since due to the potentially high level of bias. Additionally, the risk of receiving dishonest and incomplete answers is considered to be substantial. The potential bias, together with the limited time frame, explains why this type of approach not was carried out in this study.

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<sup>4</sup> Defined as the total amount of sales generated after deduction of returns, discounts allowed and allowances for damaged or missing goods.



Regarding the reliability of the study, as mentioned, the usage of Retriever Business as the source for the data in the study ensures a high level of reliability for the statistical data. Moreover, the application of secondary data increases the replicability of this study and hence the reliability, which is mostly the case in quantitative studies. The limitations of the database Retriever Business does however limit the manageable amount of firms for this study since we are forced to manually collect information regarding the amortization period for goodwill and the applied accounting framework. The manual collection of data also implies the risk of human errors and might thus affect the reliability.

Another potential limitation of the study is that it only focuses on the fiscal year of 2013, which is the year prior to the mandatory transition to the K3 framework. This could add noise to the analysis since firms might have already started to adapt the accounting to the new framework by changing the amortization period of goodwill prior to the transition. Furthermore, an assumption made in this study, is that every firm providing a consolidated statement does this in line with RR 1:00 and in line with K3 after its implementation. This assumption could be viewed as somewhat weak since firms might be able to produce consolidated statements solely according to ÅRL. This weakness is, however, unlikely to affect the results. Partly, since we assure that no firms in the study prepare the consolidated statements solely according to ÅRL. Partly, because the study seeks to study the accounting choice regarding goodwill of unlisted firms and even though some of the firms might not be required to apply the K3 framework all of the firms included in this study are unlisted firms with goodwill in their consolidated financial statements. Furthermore, the exclusion of some firms from the sample can potentially affect the results. For instance, the exclusion of firms with negative equity (resulting in negative financial leverage, which is misleading since negative financial leverage would be treated as firms without leverage) might have an impact on the results. The possible noise from the exclusion of firms with negative equity is however considered to be lower than the noise that would have arisen due to the misleading values of financial leverage.

To conclude, the limitations of this study are mainly consequences of the lack of previous studies made on unlisted firms and data available in Retriever Business. To enhance the understanding and interpretation of the results, we choose to carry out three qualitative interviews with banks. This will, hopefully, complement for the lack of studies on accounting choice in unlisted firms, from which some of the limitations of the quantitative study derive.

### **4.3 Qualitative Approach**

As stated above, a qualitative study is carried out to answer the complementary research question. The data used for this study consists of primary data, collected through semi-structured interviews.

#### **4.3.1 Population and Sample**

The population for this study consists of all banks and creditors who are performing credit assessments of unlisted firms. Since the population is too large to be included as a whole, a sample is drawn from the population. From this population, a purposive sample (Collis & Hussey, 2014) is selected. A purposive sample is selected since finding interviewees with

knowledge and experience on the field of this study is of high importance. The sample consists of one to two employees at each of three large banks in Sweden, all with knowledge and experience of credit assessment and who are involved with the credit assessment process for unlisted firms at some level.

#### **4.3.2 Qualitative Data Collection and Analysis**

The qualitative data is collected through semi-structured interviews and the interview questions are developed based on previous research and theories. Conducting interviews enable the understanding of the creditors' views and attitudes (Collis & Hussey, 2014) of goodwill in connection to their credit assessment. Compared to fully structured interviews, semi-structured interviews provide more flexibility since they enable follow-up questions (Bryman & Bell, 2005), which might enhance the understanding of the subject we seek to study. To further enhance the understanding, open questions are asked. It is also preferable to conduct semi-structured interviews when the focus is on exploring the personal constructs and understandings of the interviewees (Easterby-Smith, et al., 2012), such interviews are thus considered feasible to answer the complementary research question.

An interview guide (Appendix 2) is developed, mainly by using previous literature. The interview guide is furthermore sent to the respondents prior to the interviews to give the interviewees a chance to prepare for the interviews. The interview guide sent out to the respondents included fewer questions than the interview guide we are using at the time of the interview, since additional follow-up questions are formulated to increase the quality of the empirical data. The purpose of sending out the interview guide in advance is to ensure that the respondents are prepared for the interview and informed about the topic of the interview.

To enhance honesty of the interviewees' answers, all interviewees, as well as the bank they represent, are offered anonymity and the interviews are carried out face-to-face at the workplace of each interviewee. The interviews are recorded and transcribed to ensure that no answers and opinions of importance during the interviews are missed. According to Heritage (1984) recording and transcribing the interviews induce advantages such as the possibility to perform a more accurate analysis and enable secondary analyses of other researchers. Moreover, Bryman and Bell (2005) suggest interviews to be carried out in the parental tongue to prevent the language to obstruct the communication during the interviews. Therefore, the interviews are carried out in Swedish and then translated to English.

The transcribed and translated interviews are analyzed by coding the interviews to identify themes and phrases of interest. The tool used for analyzing the transcribed interviews is a general analytical procedure, suggested by Miles and Huberman (1994). Additional analysis and reflection of the interviews is performed. The qualitative data analysis is then summarized and the consistencies found in the data are presented. The summarized data is then analyzed by using the theoretical framework and also by using the empirical findings from the quantitative part of the study.

### 4.3.3 Limitations

The scope and number of interviews constitute a possible limitation to the complementary research question. Firstly, there might not be qualitative data sufficient to draw any distinct conclusions. Secondly, there is a risk that the conclusions drawn from the qualitative section of the study might not be fully applicable to the quantitative section, which might reduce the connections between the findings from the quantitative and the qualitative approach. However, even though all findings from the qualitative approach might not be applicable on the results from the quantitative approach, they might still enhance the understanding of the area of this paper as a whole.

Moreover, recording the interviews might cause the respondents to feel uncomfortable and out of focus, knowing that what is being said will be recorded (Bryman & Bell, 2005). Considering this as a probable difficulty, anonymity is offered to reduce the risk of dishonest answers and the interviews are carried out on locations, which are familiar to the respondents. Potential criticism can furthermore be directed towards the choice of sending out the interview guide in advance. This since the respondents can prepare their answers, which could result in that the presence of spontaneity and honesty might be lost. Though, the advantages from sending out the interview guide in advance is considered to outweigh the disadvantages since the area of accounting choice of goodwill might require the interviewees to reflect upon the subject prior to the interviews.

## 5. Quantitative Findings

*In this section, empirical results and analysis from the quantitative approach are presented. Initially, descriptive statistics on the sample and the variables are shown. This is followed by a presentation of a correlation matrix for the independent variables in the model. The results from the regression model and the tests of the hypotheses end the section.*

### 5.1 Descriptive Statistics

Table 5.1.1 shows the mean and the standard deviation for four of the five predicting variables for the full sample, consisting of 632 firms. The mean of FLEV is 7.502 while the standard deviation amounts to 36.778. Even though this indicates a high variance, it is decided not to adjust this variable through winsorization<sup>5</sup> since further adjustments of the data might lead to misleading results. SIZE was initially reported as the net sales in thousand SEK. However, due to large values in comparison to the other variables along with a high standard deviation, the natural log of this variable is applied to make the variable more manageable in the statistical model. As shown in Table 6.1.1, the mean of the logged SIZE is 12.443 and the standard deviation 1.407, which can be regarded as low.

The mean and the standard deviation of GWTA are both low, since GWTA is a ratio variable with a maximum possible value of 1. The mean of 0.110 implies that 11 percent of the total assets of the average firm consists of goodwill. Moreover, due to extreme values in INTCOV, the data is winsorized by 5 percent in each tale in order to control for outliers, since these have a large effect on the standard deviation. The winsorized INTCOV yields a mean of 20.565 and a standard deviation of 44.412. The standard deviation being more than twice as large as the mean indicates a high variance. What also is noteworthy is that there are negative values of INTCOV, which can be interpreted as though these firms are reporting losses. Descriptive statistics on the IND variable is described separately in Table 5.1.3 below since IND is a categorical variable. Hence, the mean and the standard deviation are not informative descriptive statistics for the variable.

**Table 5.1.1**

Descriptive Statistics Full Sample

Variable	No. Of Firms	Mean	Std. Dev.	Min	Max
FLEV	632	7.502009	36.77728	.05	701.48
SIZE	632	12.44341	1.406654	2.564949	18.02773
GWTA	632	.1101056	.1687429	.00004	.82101
INTCOV	632	20.56483	44.41183	-7.57	174.67

In Table 5.1.2, descriptive statistics are presented regarding the mean and the standard deviation for the same predicting variables as in Table 5.1.1. In comparison to the table above, Table 5.1.2 divides the sample into two groups by the dependent dummy variable GWA. This in order to compare the descriptive statistics of each group. As Table 5.1.2 shows, 521 of the firms (82 percent) apply an amortization period for goodwill of 10 years or less

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<sup>5</sup> Winsorizing the data implies that a chosen percent of the data in each tail is being replaced by the next coming number, closer to the center. This controls for the potentially negative effects of outliers, which can have a large effect on the mean and standard deviation (Wilcox, 2012).

( $GWA \leq 10$ ) while 111 of the firms (18 percent) apply an amortization period that exceeds 10 years ( $GWA > 10$ ). In other words, nearly one in five firms in the sample apply an amortization period that exceeds 10 years.

Furthermore, by studying Table 5.1.2, some observations can be made regarding the differences of the means and the standard deviations for each group of the sample. Firstly, the mean of FLEV differs significantly between the two groups. For  $GWA \leq 10$  the mean FLEV is 6.350 and 12.909 for  $GWA > 10$ . This implies that the financial leverage is higher among firms that apply an amortization period that exceeds 10 years is higher, which would be in line with H1. However, the large standard deviation on FLEV in the  $GWA > 10$  group makes such interpretation questionable. Moreover, the mean SIZE is larger for the firms in the  $GWA > 10$  group than for those in  $GWA \leq 10$  (13.024 in comparison to 12.320). This difference might seem minor, though as mentioned above, SIZE is the natural log of the net sales, and the differing means between the two groups are hence in line with H2.

The descriptive statistics from GWTA indicate that the group with shorter goodwill amortization periods has on average 7.8 percent goodwill in relation to total assets while the other group has on average 26.0 percent, signaling that firms with a larger amount of goodwill in relation to total assets apply longer goodwill amortization periods. The last variable presented in Table 5.1.2 is INTCOV, with a mean of 22.235 for  $GWA \leq 10$  and 12.72 for  $GWA > 10$ . This could be viewed as if the group with longer goodwill amortization periods has less ability to cover the interest costs. Again, the high standard deviation however makes such interpretation questionable. To conclude, the observations from Table 5.1.2 show differences between the two groups of the sample regarding the means of the predicting variables. There is again, however, a high level of dispersion in the data for the  $GWA > 10$  group. Though, this is partly result of the lower number of observations in this group, since outliers then have large impact on the mean.

**Table 5.1.2**  
Descriptive Statistics GWA1

Variable	Full Sample (632)		GWA $\leq$ 10 (521)		GWA $>$ 10 (111)	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
FLEV	7.502009	36.77728	6.350077	25.82092	12.90883	67.61119
SIZE	12.44341	1.406654	12.31973	1.341031	13.02389	1.560949
GWTA	.1101056	.1687429	.0780852	.1287382	.2603998	.2394589
INTCOV	20.56483	44.41183	22.2348	45.49547	12.72649	38.13883

Table 5.1.3 presents descriptive statistics on the IND variable. First, merely 35 firms (5.54 percent) are categorized as firms within high-tech industries while 597 firms (94.46 percent) are categorized among the low-tech industries. This provides an indication of the small proportion of firms in high-tech industries among unlisted firms. Moreover, Table 5.1.3 also shows that 11.43 percent of the firms in high-tech industries and 17.92 percent of firms in low-tech industries are placed in the  $GWA > 10$  group. From the descriptive statistics, it thus seems as though firms in low-tech industries are more likely to apply goodwill amortization

periods of more than 10 years. This can additionally be viewed as if the data in this study contradicts H3.

**Table 5.1.3**  
Industry Categorization of the Sample

	High-tech industries	Low-tech industries
<b>No. Of Firms</b>	35	597
<b>Percent of total firms</b>	5.54	94.46
<b>GWA ≤ 10</b>	31	490
<b>GWA &gt; 10</b>	4	107
<b>GWA ≤ 10 percent</b>	88.57	82.08
<b>GWA &gt; 10 percent</b>	11.43	17.92

The correlation matrix, presented in Table 5.1.4, shows the correlation between the predicting variables (the statistically significant correlations are shown in bold). The matrix shows no high correlation between the predicting variables and the correlations are thus unlikely to imply problems interpreting the results from the statistical model. Hence, there is no multicollinearity<sup>6</sup> among the applied variables, which would have been the case if two variables were to correlate by 0.9 or more (Collis & Hussey, 2014). A noteworthy observation is that there is no statistically significant correlation between GWTA and SIZE. This implies that there is no relationship between the proportion of goodwill in a firm and the size of the firm. Additionally, there is a positive statistically significant correlation of 0.1145 between GWTA and FLEV. A possible explanation to this correlation might be that both variables often increase as a consequence of business combinations.

**Table 5.1.4**  
Correlation Matrix

	FLEV	SIZE	IND	GWTA	INTCOV
<b>FLEV</b> sig.	1.0000 -				
<b>SIZE</b> sig.	-0.0051 0.8991	1.0000			
<b>IND</b> sig.	-0.0293 0.4618	-0.1082 <b>0.0065***</b>	1.0000		
<b>GWTA</b> sig.	0.1145 <b>0.0040***</b>	-0.0592 0.1374	0.1020 <b>0.0103**</b>	1.0000	
<b>INTCOV</b> sig.	-0.0740 <b>0.0631*</b>	0.0529 0.1840	0.0749 <b>0.0597*</b>	-0.1706 <b>0.0000***</b>	1.0000

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

<sup>6</sup> Multicollinearity occurs when two independent variables correlate and become interdependent. Since a statistical model aims to study what effect an independent variable has on a dependent variable, interpretation of the results is difficult if the independence of the correlating independent variables can be questioned (Farrar & Glauber, 1967).

## 5.2 Regression Analysis

The statistical model applied in this study consists of a multiple logistic regression. The purpose with the model is to study whether the predicting variables affect the dependent dummy variable; the accounting choice regarding the applied amortization period for goodwill. Coefficients from a logistic regression can only be interpreted as logit coefficients and the interpretation of such can thus be viewed as limited. To interpret the coefficients derived from the multiple logistic regression, the marginal effects are computed. By calculating the marginal effects from the regression, the magnitude of the coefficients for each predicting variable can be interpreted. There are different methods for computing the marginal effects. In this study, the marginal effects at the means are applied.

As can be seen in Table 5.2, the marginal effect at the means is presented by the marginal effect coefficient. The coefficients reflect the percentage change in probability of GWA=1, given a 1 unit change in value of the predicting variable. Moreover, the marginal effects at the mean for the dummy variable IND is interpreted as the likelihood of a firm in a high-tech industry (IND=1) to apply GWA>10. The interpretation of the results in Table 5.2 will be presented under each hypothesis section below. Apart from the coefficients, Table 5.2 shows the statistical significance for the predicting variables. Statistically significant results can be found among three of the five predicting variables, namely SIZE, IND and GWTA. SIZE and GWTA are both significance at a 0.01 significance level. IND is moreover statistically significant at a 0.05 level. The p-values of the remaining variables exceed 0.1, thus, these predictors are not statistically significant.

DEPENDENT VARIABLE	PREDICTING VARIABLES	COEFF.
GWA	FLEV	0.00013 (0.00034)
	SIZE	0.05822*** (0.00957)
	IND	-0.07520** (0.03690)
	GWTA	0.65375*** (0.07950)
	INTCOV	-0.00012 (0.00036)
Observations		632

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

IND: Coeff. is for discrete change of dummy variable from 0 to 1

### 5.2.1 Financial Leverage

In this section, results from the testing of the following hypothesis is presented and analyzed:

*H1: Firms close to violating their debt covenants choose longer amortization periods for goodwill*

The output shown in Table 5.2 indicates a positive relation between FLEV and the goodwill amortization period. A positive marginal effect of 0.00013 implies that a 1 unit increase in FLEV would increase the probability that a firm applies  $GWA > 10$  by 0.013 percent. However, as Table 5.2 also shows, FLEV is statistically non-significant since the variable has a p-value of  $> 0.1$ . In other words, H1 is not supported by the results from this study.

These results contradict previous studies on accounting choice which, according to Fields, Lys and Vincent (2001) are sufficiently unequivocal to support the debt/equity hypothesis. It can moreover be argued that, based on the results of H1, the debt/equity hypothesis does not seem to apply to unlisted firms. However, the non-confirmation of the hypothesis partly corresponds with the results provided by Hall (1993), which also fails to support this hypothesis due to insignificant results. The author however finds significant results for firms with covenants sensitive to goodwill accounting. This separation of firms depending on whether they have covenants sensitive to goodwill accounting is however not possible in this study. The lack of statistical significance for FLEV might have several possible explanations. One might be that FLEV is not a suitable proxy for closeness of violating debt covenants when studying unlisted firms, since the studies applying FLEV as a proxy for closeness of violating debt contracts are used for studies on listed firms (see for example Leftwich, 1983; Duke & Hunt, 1990). Furthermore, the results from Hall (1993) indicate that the presence of covenants sensitive to goodwill accounting is required in order for FLEV to have an impact on the accounting choice of goodwill. The absence of covenants sensitive to goodwill accounting could explain the results of this study, even though this cannot be further supported. Other possible explanations for the outcome is that FLEV simply has no effect on the accounting choice in unlisted firms or that FLEV proxies for other factors than closeness of covenant violation, concerning unlisted firms. Due to the lack of studies similar to this one, it is not possible to support the various explanations based on previous literature.

### 5.2.2 The Relative Costs of Producing Financial Information

In this section, results from the testing of the following hypothesis is presented and analyzed:

*H2: Larger firms choose longer amortization periods for goodwill*

Table 5.2 shows that there is a statistically significant relationship between SIZE and GWA. The positive coefficient for SIZE, shown in Table 5.2 can broadly be interpreted as if the probability of applying an amortization period for goodwill that exceeds 10 years is higher for larger than for smaller unlisted firms. In other words, the probability of a firm applying an amortization period of more than 10 years increases with firm size. The magnitude of the coefficient for SIZE is 0.05822, which indicates that when SIZE increases by 1 unit, the



probability of a firm applying an amortization period that exceeds 10 years increases by 5.822 percent. As mentioned earlier, the SIZE variable has been converted to the natural log of the net sales (measured in thousand SEK), which makes the magnitude of coefficient difficult to interpret since a 1 unit change in SIZE is not equal to a change by 1000 SEK. To conclude, H2 can be supported at a 0.01 significance level. This implies that the lower the relative costs of producing the financial information (for which net sales is a proxy), the longer the applied amortization period for goodwill.

As expected, the results contradict the political cost hypothesis, which states that larger firms choose income decreasing accounting methods (see for example Watts & Zimmerman, 1990). This can be explained by the lack public accountability among listed firms, as stated in Kaya and Koch (2015). The lack of public accountability is likely to eliminate the political costs, which is present among listed firms. Even though Hall (1993) finds a negative relationship between firm size and amortization period for goodwill, there is a similarity to this study since the author finds a significant relationship between SIZE and GWA. This implies that firm size does affect the accounting choice in unlisted firms as well as listed firms, but that the effect on the goodwill amortization period is the opposite. Additionally, it can be concluded that size proxy for different factors, depending on whether size is applied in studies made on listed or unlisted firms. Leftwich (1983) and Christie (1990) furthermore suggest that size might proxy for other factors than political costs, which is shown by the results of H2. Similar to firm size in relation to political costs, there is a potential risk of size being a proxy for other factors than the relative costs of producing the financial information. Notwithstanding, the results from this study support Evans et al. (2005), who argue that small firms have higher relative costs for producing financial information. Additionally, this study's findings are in line with those of Penno and Simon (1986) and Beatty and Weber (2003), showing that larger firms are more likely to apply income-increasing accounting methods. It is, once again, worth mentioning that nearly all previous studies on accounting choice have been made on listed firms and that further studies are needed to confirm the findings of this study.

### 5.2.3 Industry Membership

In this section, the results from the testing of the following hypothesis is presented and analyzed:

*H3: Firms in high-tech industries choose longer amortization periods for goodwill than firms in low-tech industries*

As shown in Table 5.2, there is a statistically significant relationship between IND and GWA at a significance level of 0.05. Based on these results, there is a statistically significant difference in the applied goodwill amortization period between low and high-tech industries. However, the negative coefficient of the IND variable indicates that firms in low-tech industries choose longer amortization periods for goodwill. The coefficient of -0.07520 for IND more specifically implies that firms within low-tech industries are 7.52 percent more likely to apply an amortization period that exceeds 10 years. This is the opposite result of what was hypothesized and H3 are therefore not confirmed by the results from this study.

The result not only contradicts H3, but also the findings of Henning and Shaw (2003), who find that firms within high-tech industries choose longer amortization periods for goodwill. Whether the contradicting result depends on the fact that the study by Henning and Shaw (2003) are based on listed firms is difficult to comment on, although it could be an influencing factor. Another factor, which might have an effect on the results, is the low number of firms in the high-tech industry category, shown in Table 5.1.3. This could potentially lead to misleading results from the statistical model since outliers have a larger impact, due the low amount of observations. Moreover, even though H3 cannot be supported by the results from this study, the difference between the industries are in line with Neu (1992). The author argues that there are general agreements within industries to make certain accounting choices, which is confirmed by the results in this study. The results are also in line with those of Penno and Simon (1986) who find that there is a relation between industry membership and a firm's accounting choices. To conclude, there is a statistically significant difference between industries regarding the amortization period for goodwill in unlisted groups and that the results are the opposite of those presented by Henning & Shaw (2003), who study the same phenomenon on listed firms.

#### 5.2.4 Control Variables

Table 5.2 shows a negative coefficient for INTCOV, indicating a negative relation to the amortization period of goodwill. However, similar to FLEV, the significance of INTCOV is not sufficient to show a statistically significant impact. INTCOV is mentioned by Demerjian (2011) as a common ratio applied in debt covenants. The results from this study show that neither FLEV nor INTCOV impacts the accounting choice of goodwill in unlisted firms. Since both FLEV and INTCOV are proxies for debt covenant violation, the explanation to why neither of the two has a significant effect on goodwill amortization period might be mutual. Moreover, a low interest coverage ratio indicates that the interest expenses of a firm are barely covered by the results, which could be seen as if a firm is financially troubled. According to De Angelo et al. (1994), financial difficulties might be another motive behind accounting choices. The statistically insignificant results of this study can however not support this reasoning. Again, by studying unlisted firms, this study differs from many of the previous studies on accounting choice, and the literature can thus not provide a satisfactory explanation to why these two variables show insignificant results.

As shown in Table 5.2, GWTA is positively related to goodwill amortization period at a 0.01 significance level. These results indicate that the larger proportion of goodwill a firm has, the longer goodwill amortization period it applies. The coefficient of 0.65375 can be regarded as high in relation to the other coefficients in this study. More specifically, a 1 unit increase in GWTA increases the probability of a firm applying  $GWA > 10$  by 65.375 percent. However, GWTA is a ratio, expressed as goodwill divided by total assets and has a possible maximum value of 1.00, which should be considered when assessing the magnitude of the coefficient. The findings imply that a firm is more likely to apply a longer amortization period if the relative size of goodwill larger. A potential explanation is that the annual cost for amortization has larger effect on the income statement when GWTA is large.

The results regarding GWTA correspond to those of Henning and Shaw (2003), though the authors did not find a statistically significant relation between goodwill amortization period and the relative amount of goodwill. As mentioned above, the study by Henning and Shaw (2003) is made on listed firms and even though the goodwill to total assets ratio did not have a significant impact on the accounting choice regarding goodwill, this study shows that the ratio has a statistically significant impact on the accounting choice in unlisted firms. The amount of the goodwill amortization, affecting the income statement, could also be put in relation to the relative costs of producing the financial information. Therefore, this variable might be connected to the SIZE variable and H2. As in the case of SIZE being a proxy for the relative costs of producing financial information (Evans et al. 2005), the proportion of goodwill in the balance sheet is likely to affect the impact of the annual amortization. This might explain why the GWTA ratio is likely to affect the amount of time and resources a firm puts into disclosing and motivating a longer amortization period for goodwill. Put into a larger context, the results from the GWTA might show that a firm's accounting choice is dependent on the relative impact of the item being accounted for.

### **5.3 Robustness Checks**

In order to evaluate the robustness of the statistical model applied in the study, three robustness checks are performed. First, to test the robustness of the dummy variable, the amortization period is categorized into three categories namely; 0-5 years, 6-10 years and more than 10 years. The aim is to evaluate if a three-categorical dummy variable has any impact in the model. The results from the regression with the three-categorical dependent variable are similar to those of the dependent dummy variable, and no significant observations can be identified between the first and the second category. Moreover, since the standard deviation of FLEV is high compared to the other predicting variables, the multiple logistic regression is run with FLEV winsorized by 5 percent in each tale, which generates a lower standard deviation of the variable but no difference in terms of statistical significance. Finally, IND is excluded from the predicting variables in order to test for potential noise caused by the variable. None of the three robustness checks yields different results in terms of significance, hence, the results from the statistical model are considered to be robust.

## 6. Qualitative Findings

*In this section, the empirical material collected from interviews with three Swedish banks, Bank A, Bank B and Bank C, is presented and analyzed. The interviews are carried out with one respondent from each bank, except for the interview with Bank B, where two respondents participate. The section is structured by the themes applied in the interview guide. The information concerns unlisted firms, unless otherwise stated. The key findings will be further discussed in relation to the quantitative findings in section seven.*

### 6.1 Credit assessment

The consolidated financial statements are fundamental to both Bank A and B when issuing debt to a firm within a group. To Bank C, the annual report is more central to the credit rating even though the consolidated statement is applied in the assessment as well. Moreover, information from forecasts and budgets are also important during the credit assessment according to all the three banks. Additionally, Bank B especially stresses the importance of a firm's cash flow. According to Riistama and Vehmanen (2004), the focus when assessing unlisted firms is directed towards cash flows, profitability and liquidity and ICAS (1998) argue that users of unlisted firms' financial reports focus on profitability and solvency. This corresponds to the statements by the banks. Furthermore Bank A and Bank B follow up the agreements at least annually, although the frequencies of the follow-ups vary depending on the risk level of the firm. Bank C generally follow-up on the agreements each quarter, however the frequency varies depending on firm size, as well as status of the firms.

Regarding the importance of consolidated statements in the credit assessment, there is a policy at Bank A implying the bank cannot give a higher rating to the individual firm than it has given the corporate group. Additionally, one of the respondents at Bank B express that cash might be transferred from a healthy to a troubled firm within a group and it is therefore important to view ratios both at firm and group level. According to Bank C and the importance of the consolidated statements vary between different debt agreements. Regarding the quality of the financial information, both Bank A and Bank B express that larger firms generally provide financial information of higher quality. Bank A additionally states that listed firms provide more detailed information than unlisted firms. Bank C moreover states that the smaller firms only view accounting as a difficult and expensive process and that these firms rarely communicate with their auditors since this is costly. The perception of varying quality of the financial information might be explained by the relative costs for producing the financial information, discussed in Evans et al. (2005). Since larger firms have lower relative costs for producing financial information, it is more likely that the quality of the information is higher as a result. The perception of differing quality depending on firm size might strengthen the statements in Leftwich (1983), Christie (1990) and Watts and Zimmerman (1990) that size might proxy for other determinants of accounting choice, than political costs.

### 6.2 Covenants

The application of covenants in debt agreements varies depending on the size of the firms, though none of the three banks applies covenants for smaller firms. According to the respondent at Bank A, the bank knows from experience that smaller firms tend to violate

covenants since they lack understanding of what it takes to avoid covenant violation. Covenants, when applied, are connected to ratios such as solidity and EBITDA in all three banks. Relating to Hall (1993), the covenants applied by the banks for larger unlisted firms can be regarded as sensitive to goodwill accounting, since both the useful life of goodwill and potential impairments affect the solidity. Bank B and Bank C also mention net debt, while margins and financial leverage are mentioned as ratios applied at Bank A. This is in line with what Holthausen (1981) defines as accounting-based debt covenants. Moreover, Bank A states that the ratios are usually set at a group level, which is the case also for Bank C regarding credits associated to acquisitions. None of the three banks have any experience of specifically restricting a firm's accounting choice, which is in line with El-Gazzar and Pastena (1990) but contradicts the findings of Leftwich (1983) that debt contracts often specify methods for the accounting of intangible assets. Furthermore, financial leverage and interest coverage are frequently mentioned in previous literature as ratios included in debt agreements (see for example Christie, 1990; Demerjian, 2011; DeFond & Jiambalvo, 1994; Fields, Lys and Vincent, 2001) which seem to be applied also on unlisted firms. However, as stated above, the banks only apply covenants for larger unlisted firms. The accounting information of the smaller unlisted firms thus seem to take solely an informative role to the banks, since the information is used to determine the risk and potential costs of default (Demerjian, 2011). Regarding the larger firms, on which covenants are applied, the accounting information also serves a direct contracting role (Demerjian (2011)).

### **6.3 Accounting Regulation**

All of the banks perceive their knowledge of accounting regulation and the transition to the K3 framework as general and fairly good, although the respondent at Bank C wishes the bank were more informed. Neither Bank A nor Bank B believes they will require firms to provide shadow accounting due to the transition to K3. This since, according to Bank B, K3 requires firms to provide a comparable year by recalculating last years figures in line with the new framework. Bank C on the other hand states that shadow accounting might be required in some cases, although not to a large extent. Bank B and Bank C state that the covenants might need to be re-written to adapt to the new framework. According to Demiroglu and James (2010), covenants are usually not renegotiated unless renegotiation costs are assumed to be low, though the banks might have to renegotiate covenants even if the costs are high. Moreover, since neither of the banks are certain they will require firms to apply shadow accounting, the banks in this study seemingly apply floating GAAP which, according to Fields, Lys and Vincent (2001) is cheaper to monitor and less difficult to use.

### **6.4 Goodwill**

Concerning goodwill, Bank A performs an analysis of the goodwill asset in order to establish whether the size and amortization period of the asset is justifiable. The respondent further explains that if the value of goodwill is not justified, the asset is adjusted, which leads to altered financial statements and financial ratios to analyze. Bank B expresses that goodwill is not the first aspect the bank attends to in the credit assessment but stresses the importance of putting goodwill in relation to equity in order to assess how a firm would manage an impairment. Both Bank B and Bank C express concerns about the difficulty to analyze and evaluate goodwill. Bank C states that they most often eliminates goodwill from the balance

sheets in their analysis to create a worst-case scenario and to view the effect on equity. Bank C however add that the assessment differs when it comes to large acquisitions and big groups. Moreover, Bank A also mentions that the now retired bankers used to categorically eliminate the goodwill in their analyses, however the respondent does not share this view on how to assess goodwill. Considering the findings in El-Gazzar and Pastena (1990), who finds that 56 percent of the banks in their study exclude goodwill from equity, the exclusion occurs among Swedish banks even today, though only in certain situations.

*“We most often eliminate goodwill from our clients balance sheets when we are trying to define how financially strong our clients are” - Bank C*

*“...There is a justification in recognizing goodwill, the question is only at what level it can be justified.” - Bank A*

All of the banks express that they study the disclosures related the goodwill asset further. Bank B, for example, states that the disclosures are just as important as the numbers. Connected to the disclosures, the respondent at Bank A expresses that larger firms are those that might be able to argue for longer amortization periods and motivate a lasting value of the asset.

According to Bank B, the risk in a firm increases through business combinations, the process of when goodwill arises, and adds that a business combination often results in increased financial leverage. Bank A and B express that the importance of the goodwill asset increases as the goodwill to total assets ratio increases. Bank B further state that they might not focus on the disclosure regarding goodwill if the importance of the goodwill assets is low. On the contrary, Bank C expresses that the problem is rather to follow and understand what happens to the asset over time. According to Bank A, it is easier to understand the underlying value of goodwill and the amortization period if the bank is involved in the acquisition process at an early stage. Furthermore, Bank C states that difficulties in analyzing goodwill arise when the acquired firm is merged or restructured within a group, since it is then problematic to evaluate the performance of the acquired firm. In relation to this, Bank A and Bank B view a high return on total assets on group level as a sign of that the acquired firms are performing well.

Concerning amortization period, Bank A estimate that most of their clients apply amortization periods for goodwill of 5 years while Bank C experience a 10 year amortization period as most common. On the contrary, Bank B says that most of the clients apply amortization periods of 20 years and that a 5 or 10-year amortization periods for goodwill are less common. Bank B also adds that the transition to K3 therefore might have considerable implications. Moreover, all three banks are positive towards shorter amortization periods, which they view as a sign of financial strength.

*“Why would a firm apply a 20 year long amortization period? Probably because the firm would not afford the acquisition otherwise.” - Bank C*



The banks express positive attitudes towards the transition to the K3 framework and the maximum amortization period being shortened from 20 to 10 years. Applying a useful life of 20 years imply that a forecast 20 years into the future, which is problematic according to Bank B and Bank C. Additionally, the all banks say they are aware of the reduction of the required amortization period and the transition rules regarding goodwill. If firms were to violate covenants as a consequence of the transition to the K3 framework, the consequences will be managed from case to case and depending on the financial situation of the firms, according to Bank A and Bank C. Bank A adds that the risk of negative equity at group level, as a consequence of the transition rules might affect firms within a corporate group, since these firms cannot achieve a higher credit rating than the group. Bank C states that negative impacts on group level could affect subsidiaries within the group, although only in some of the rating models. Altogether, the transition to K3 will be managed from case to case and the transition will not change the assessment of goodwill to any great extent in Bank B and Bank C. Bank C adds that the impairments in the IFRS-model has more verve than amortization models since firms are forced to annually motivate and test goodwill.

*“As I said earlier, it is not negative from our perspective that the allowed amortization period is shortened, rather it is more natural for us” - Bank A*

*“The faster it (goodwill) disappears from the balance sheet, the happier I am” - Bank C*

Lastly, Bank B cannot identify a connection between industries and the size of goodwill and its amortization periods while the respondent at Bank C is unable to comment on this issue. Bank C additionally comments on that business combinations in technologically based industries result in larger goodwill and also mentions that since these industries are rapidly changing, the goodwill amortization period should logically be shorter.

## 6.5 Key Findings

A first key finding from the quantitative approach is that consolidated statements of unlisted firms are of importance to all of the three banks, even though the importance varies between the banks. This shows that the banks consider the financial information, in which goodwill exists. Moreover, figures on group level in some cases affect how the banks assess subsidiaries within the group, which further illustrate the potential impact of the accounting choice regarding goodwill in unlisted firms. In addition, covenants are commonly set at group level, which, too, increases the impact of the accounting for goodwill. Another observation is that the general perception of the banks that larger firms provide financial information of higher quality, which can be connected to the findings from the quantitative approach in this paper. A second difference between banks' perception of smaller and larger unlisted firms, with possible implications to the quantitative findings, is the lack of application of covenants in debt contract with smaller unlisted firms. Accounting-based covenants are only applied for listed firms.

Descriptive statistics from the quantitative approach can be compared to the perception of the most commonly applied amortization period for goodwill differs between the banks, from 5 years at Bank A, to 10 years at Bank C and 20 years at Bank B. It is however difficult to

speculate regarding what causes these differences between the banks. Moreover, two of the banks state that the importance of goodwill increases along with the goodwill to total assets ratio. This can be related to the study by Henning & Shaw (2003), which states that an increase of this ratio results in longer amortization periods, as well as to H2. Additionally, one bank expresses the view that larger firms are more likely to be able to motivate longer amortization periods. These key findings can be directly connected to the quantitative approach. The two approaches have been presented separately but will be discussed and interpreted together in the next section.



## 7. Discussion

*In this section, the findings from the quantitative approach and the key findings from the qualitative approach will be compared and discussed.*

When comparing the descriptive statistics from the quantitative study with the key findings from the qualitative study, some observations can be made regarding the amortization periods for goodwill applied by unlisted firms. According to the descriptive statistics, nearly one in five firms apply an amortization period that exceeds 10 years. This somewhat corresponds to the views of two of the banks, while the third Bank expresses that a 20-year amortization period is most common among their clients. It can also be concluded that one in five firms hence will be required to adjust the amortization period for goodwill according to the transition rules in K3, which implicate that the equity of these firms will be reduced along with the size of the goodwill asset. Findings from the qualitative study show that the banks assess both equity and total asset and the transition to the K3 framework might thereby affect the firm's stakeholders, leastways in terms of creditors. The banks have not developed a standardized process for how they will manage the changes K3 will involve but will rather assess the effects from case to case. Potentially, this could result in costs for the banks as a result of rewriting and renegotiating debt contracts and covenants with their clients.

The testing of H1 shows non-significant results regarding the connection between financial leverage and the amortization period for goodwill, which partly corresponds to the study by Hall (1993), although the author finds a significant relationship between financial leverage and the goodwill amortization period in firms with covenants sensitive to goodwill accounting. The results on H1 furthermore contradict a large amount of studies pointing towards a relationship between financial leverage and firms' accounting choice (see for example Watts & Zimmerman, 1990; DeFond & Jiambalvo, 1994; Fields, Lys & Vincent, 2001; Mangos & Lewis, 1995). As previously stated in this paper, financial leverage is applied as a proxy for closeness to violating of debt covenants. Hence, H1 is based on the assumption that covenants are applied in debt contracts with unlisted firms. The results from the qualitative study however show that the banks do not apply covenants in debt contracts with smaller unlisted firms. If covenants are not applied in the debt contracts with smaller unlisted firms, these firms might, as a consequence, not have incentives to make certain accounting choices to affect the financial leverage. This could create noise when testing H1 among all unlisted firms and thus be viewed as a potential explanation to why H1 is not supported by the findings in the quantitative study. It can moreover be assumed that the covenants applied in debt contracts with larger unlisted firms are sensitive to goodwill accounting, based on the interviews with the banks. If H1 would have been tested only on the larger unlisted firms, significant results similar to those by Hall (1993) might hypothetically be found. Though, these are only speculations since we have not tested H1 with solely the larger firms. Nonetheless, this could be further explored in future research.

Furthermore, two of the three banks mention interest coverage as one of the ratios, which might be applied in covenants. The results from this study show that neither financial leverage nor interest coverage has a statistically significant impact on the amortization period for

goodwill. In addition, liquidity and ability to repay the debt is expressed as a focus for the banks when issuing debt to unlisted firms. The lack of covenants in debt contracts for smaller unlisted firms might explain why the results are insignificant also regarding the interest coverage. Closeness to debt covenant violation might hence be an unsuitable hypothesis to apply when studying unlisted firms in Sweden. As mentioned in previous literature, financial leverage might possibly proxy for other factors than closeness to debt covenant violation, which might be the case also in unlisted firms. Descriptive statistics from the quantitative approach show that the financial leverage is twice as large for firms with an amortization period for goodwill that exceeds 10 years. Since H1 cannot be confirmed, we cannot conclude the explanation to the differences in financial leverage.

Results from the quantitative approach furthermore show a statistically significant relationship between firm size and the amortization period for goodwill, supporting H2. As expected, this contradicts the political cost hypothesis, which often is applied in studies on accounting choice in listed firms. In this study, size is applied as a proxy for the relative costs of producing accounting information, which, according to Evans et al. (2005), are higher for smaller firms. Moreover, an amortization period for goodwill that exceeds 10 years is assumed to imply more advanced, complex and time-consuming accounting for the firms. This can be related to the findings from the qualitative study, since the banks perceive the quality of the financial information produced by larger firms as higher. Since the relative costs of producing the accounting information is lower in larger firms, logically, the quality of the accounting information increases with firm size. This since the lower relative costs in larger firms presumably implicate the possibility to allocate more time and resources into the accounting process. In that sense, size also proxy for the quality of the financial information when regarding unlisted firms, based on our findings. Overall, it can be stated that the accounting processes and the accounting quality seem to differ between larger and smaller unlisted firms. In addition, the banks express that they do not apply covenants for smaller firms and two of the banks claim this is due to the lack of knowledge on how to avoid violating these covenants. This gives an indication of how banks view the knowledge on accounting in smaller unlisted firms. Hence, findings from the qualitative study further develop and confirm the assumptions behind H2.

The relative costs of producing the accounting information can also be related to the goodwill to total asset ratio, which has a statistically significant positive relation to the goodwill amortization period. This corresponds to what Henning and Shaw (2003) express regarding the magnitude of goodwill and its relation to the amortization period. In relation to our quantitative findings, two of the banks express that the importance of goodwill increases along with the goodwill to total asset ratio, since the amortization and potential impairments thus will have a larger effect on other financial ratios. Moreover, it could be argued that a larger GWTA might make the accounting choice regarding goodwill more important to firms, since a larger GWTA increases the impact of the accounting choice regarding goodwill. This since the amortization costs hence has greater impact on the income statement. Potentially, a large GWTA could implicate that even the small firms allocate resources and time to motivate a longer amortization period due to its large impact, even though the relative costs for this are

high. When studying accounting choice in unlisted firms, it can be regarded as suitable to include a variable which proxy for the relative impact of the accounting choice in question, since this study has shown that the relative impact leads to a longer amortization period for goodwill. A larger proportion of goodwill in relation to total assets also increased the banks' focus towards the asset. The relative impact of an accounting choice should thus imply incentives for unlisted firms to apply income-increasing accounting methods.

Evidence from the quantitative study also indicates that a difference between industries in regards to the accounting choice of goodwill, which is in line with previous literature. The results, however, contradicts H3, the outcome is thereby the opposite of what was hypothesized. It can be stated that firms within high-tech industries are more likely to choose a lower amortization period for goodwill. Results from the qualitative study does not provide a further explanation to the results, since two of the banks do not perceive any difference regarding the amortization period for goodwill between different industries. However, one of the banks comments on this issue. The respondent expresses that firms in knowledge and technology-based industries logically should apply shorter amortization periods, due to the rapidly changing business environment within these industries. This is a noteworthy expression, which is in line with the results from the quantitative approach of this paper, which might constitute a potential explanation to why the proposed H3 is not supported. Another potential explanation could be that H3 is developed by literature mainly based on listed firms. The speculative discussion regarding the statistically significant results from H3 thereby calls for further research.

The results of this study show that the determinants of the accounting choice differ between unlisted and listed firms. This corresponds to what is claimed by Penno and Simon (1986) and Beatty and Weber (2003) regarding the differences in the motives behind accounting choices in unlisted and listed firms. These claims are not only confirmed by the quantitative approach but also by the results emerging from the qualitative approach.

## 8. Concluding Remarks

The primary purpose of this study was to address the determinants of the accounting choice regarding goodwill in unlisted Swedish firms. Since this study is one of few focusing on the accounting choice in unlisted firms, only tentative conclusions can be drawn from the results. Nonetheless, the results can be viewed as an indication of what factors that affect the accounting choice in unlisted firms, as well as a basis for future studies. A complementary purpose was included in order to enhance the understanding and the interpretation of the accounting choice in unlisted firms, this by considering how banks view goodwill accounting regulation for these firms.

The overall results from this study indicate that accounting choice in unlisted firms is affected by firm characteristics and that these determinants differ between those of listed firms. One difference regards the impact of financial leverage. Even though the financial leverage has been studied among several researchers, of which many have found a link between financial leverage and accounting choice, this study does not come to the same conclusion. One possible explanation to this is that previous literature has focused on listed firms and that this literature is inapplicable when studying unlisted firms. In addition, none of the banks in this study apply covenants in debt contracts with smaller unlisted firms. This might explain the statistically insignificant relation between financial leverage and the amortization period for goodwill. The results from the study moreover show that firm size has a positive effect on the amortization period for goodwill. As expected, firm size has the opposite effect compared to when size proxy for political costs among listed firms. The evidence implies that larger firms choose longer amortization periods for goodwill, which is explained by the lower relative costs of producing the financial information. Findings that banks generally perceive the quality of financial information as higher in larger firms, confirms our findings that the size does have an effect on accounting choice in unlisted firms.

This study also shows that firms within high-tech industries apply shorter amortization periods for goodwill, compared to firms within low-tech industries. These findings are the opposite of what was hypothesized and the literature is not sufficient to provide a possible explanation to these findings. Even though one of the banks mention the rapidly changing business environment within high-tech industries as one possible explanation to shorter amortization periods for goodwill in these industries, we believe that further studies are needed to theoretically confirm these findings. It can furthermore be concluded that consolidated statements are of importance in banks' credit assessments, which can be seen a presumption for goodwill accounting to have an impact on how banks view unlisted firms. The findings also show that banks have a positive view of firms applying shorter amortization periods for goodwill and, hence, are positive towards the transition to the K3 framework. Altogether, including the perspective of banks when studying the accounting choice in unlisted firms was shown to be both appropriate and useful since a number of distinct connections were identified between the quantitative and the qualitative approaches in this study.

## **8.1 Suggestions for Further Research**

As stated throughout the paper, the area of accounting choice among unlisted firms is an area that needs to be studied further. This study contributes by constituting a basis for further research, as there are many areas yet to be studied. Since this paper covers the accounting choice of goodwill, it would be interesting to study the accounting choice of other accounting areas, such as research and development. Furthermore, the findings regarding differences between industries were the opposite of what was hypothesized. Since we did not find a satisfactory explanation to the outcome of this hypothesis, this study opens up for future studies on what impact industry membership might have on the accounting choice in unlisted firms. Perhaps by studying a different categorization of industries or by including firms outside Sweden. It would also be interesting to study if the transition to K3 leads to an increased voluntary adoption of IFRS and if so, what the incentives for this might be.

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## Appendices

### Appendix 1: Categorization of Industries

**Table 4.2.4.2**  
Categorization of industries

	<b>Description</b>	<b>No. Of Firms</b>	<b>Percent</b>
<b>High -tech</b>	Computer, it & telecommunication	22	3.48
	Human health activities	9	1.42
	Education, research & development	4	0.63
		<hr/>	<hr/>
		35	5.54
<b>Low-tech</b>	Sewage, waste, electricity & water	15	2.37
	Banking, finance & insurance	128	20.25
	Employment placement agencies	5	0.79
	Business, employers & professional membership org.	1	0.16
	Construction, designing & decoration	49	7.75
	Retail trade	25	3.96
	Real estate activities	41	6.49
	Business support	14	2.22
	Hotels & restaurants	8	1.27
	Agriculture, forestry, hunting & fishing	3	0.47
	Legal, financial & consultancy services	68	10.76
	Arts, entertainments & recreation	5	0.79
	Manufacture of food products	7	1.11
	Media	11	1.74
	Sale of motor vehicles	13	2.06
	Public administration	3	0.47
	Wholesale	66	10.44
	Advertising, marketing & market research	5	0.79
	Repair & installation	5	0.79
	Travel agencies & tourism	3	0.47
	Technical consultancy	26	4.11
	Manufacturing & industry	60	9.49
	Transport & storage	24	3.80
	Rental & leasing	11	1.74
	Other personal services	1	0.16
			<hr/>
		597	94.46

## Appendix 2: Interview Guide

### Credit assessment process:

- Could you describe a typical credit assessment process of an unlisted firm?
  - What documentation and data do you apply in this process?
- What role do the annual reports; financial statements and the accounting information play in this process?
  - Are there any items in the financial statements and the annual reports that you view as risk items?
  - In what kind of situations do the consolidated statements and the consolidated accounting become relevant and interesting?
- What are the costs, in terms of time and resources, related to the negotiation a debt contract?
- What are the routines for monitoring and checking up on the existing debt contracts and the existing covenants?

### Covenants:

- How do you develop and form the covenants when you negotiate a debt contract with unlisted firms?
- What are the potential consequences for a firm of violation of the covenants?
- Do you apply covenants in order to restrict unlisted firms accounting choice?

### Accounting regulation frameworks:

- To what extent do you believe that you possess detailed knowledge about the accounting regulation frameworks regarding unlisted firms?
- How do you handle and manage the transition to the new K3 framework?
  - How do you/will you treat the existing debt contracts and covenants which are based on the old accounting regulation frameworks (RR 1:00, RR, BFNAR)?

### Goodwill:

- What is your view of goodwill in unlisted firms?
  - How did you view firms that applied an amortization period for goodwill of five years in comparison to firms that applied twenty years prior to the transition to K3?
- What importance could goodwill have in the credit assessment process of unlisted firms?
- What was/is your view on the accounting regulation regarding goodwill in RR 1:00 and K3 respectively?
- What will the new K3 framework mean and imply for your analysis and interpretation of the goodwill asset?
  - Does the new framework change your view of the goodwill asset in unlisted firms?
  - For you as a creditor, how do you view the fact that K3 reduces the allowed amortization period for goodwill with more than 50 percent?
  - How do you view the transition rules regarding goodwill in the K3 framework?