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Four Papers on Top Management's Capital Budgeting and Accounting Choices in Practice

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Abstract

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This thesis contributes to an understanding of capital budgeting and accounting practice. The factors affecting practice are of special research interest. It is also investigated whether practice diverges from what is prescribed by finance text books and accounting standards/frameworks. The overarching research question posed in this thesis is: "What capital budgeting and accounting choices are made by top management in practice, and how can these choices be explained?". The thesis consists of four papers that address this issue.

The first two papers focused on capital budgeting choices. Findings emphasised that the use of sophisticated capital budgeting and cost of capital estimation methods such as NPV and CAPM was widespread in Swedish listed companies. However, also unsophisticated accounting based methods were employed. Overall, findings suggested that Swedish companies used capital budgeting and cost of capital estimation techniques less often than did U.S./continental European companies. Other interesting findings were changes over time. Over time, the use of sophisticated methods increased and the use of unsophisticated methods decreased. This indicated a closing of the theory-practice gap. Finally, size was generally positively related to more extensive use of methods.

The last two papers focused on accounting choices. Findings showed that non-preparers supported amortisation of goodwill to a greater extent than did preparers. Preparers instead supported the goodwill impairment-only approach. It was suggested that economic consequences could explain why preparers supported the goodwill impairment-only approach. When the impairment-only approach subsequently was introduced by the International Accounting Standards Board (IASB), Swedish and Dutch preparers however only disclosed slightly more than 60% of the assumptions underlying the impairment test, after three years of learning. Moreover, findings showed that the level of compliance with the IASB's disclosure requirements was associated with industry; financials were less compliant than were non-financials. Findings also showed that Swedish and Dutch companies were more compliant in 2008 than they were in 2005, which suggested learning over time. Finally, in 2005 the disclosure compliance level was higher in Sweden than in the Netherlands. Three years later, 2008, the difference was eliminated, thus indicating convergence.

Keywords: Capital budgeting method, cost of capital estimation, accounting choice, goodwill, disclosure compliance

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Fredrik Hartwig
Gävle, July 2012

List of essays

Essay 1:

Hartwig, F. (2012) “The Use of Capital Budgeting and Cost of Capital Estimation Methods in Swedish Listed Companies”. Accepted for publication in *Journal of Applied Business Research* (Vol. 28, number 6).

Essay 2:

Daunfeldt, S.O. and Hartwig, F. (2012) “What Determines the Use of Capital Budgeting Methods? Evidence from Swedish listed companies”. Submitted to *Journal of International Financial Management and Accounting*.

Essay 3:

Hartwig, F. (2012) “Preparers’ and Non-Preparers’ Lobbying on the Proposed Prohibition of Goodwill Amortisation in ED3 ‘Business Combinations’”. Submitted to *Finnish Journal of Business Economics*.

Essay 4:

Hartwig, F. (2012) “Swedish and Dutch listed companies’ compliance with IAS 36 paragraph 134”. Submitted to *International Journal of Disclosure and Governance*.

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1. Introduction

This thesis examines capital budgeting and accounting choices in listed companies. The aim of the thesis is to contribute to an understanding of capital budgeting and accounting practice and identify factors that may explain and predict it. The purpose of the introduction is to describe the capital budgeting methods and accounting standards that management (in theory) should use and adopt, highlight relevant theories that might help explain and understand the practical behaviour among the listed companies and their decision makers, present and discuss previous capital budgeting and accounting choice studies and explain why this practice matters from both company and societal perspectives. Moreover, I will point out how this thesis contributes to current knowledge within this field. The final purpose is to describe what (adjacent) research areas that are not covered by this work.

1.1 A normative perspective

Top managers' decisions are often pivotal for the success of any company. Two crucial, and interrelated, decisions concern what investments to make and how to communicate with external stakeholders.

Capital budgeting methods facilitate decisions within the company. Capital budgeting methods intend, in different ways, to capture the investment's expected risk and return, i.e. the amount, timing and risk of the cash flows that the investment might generate, and then processing them down to one quantitative measure. At first sight, this could be seen as nothing more than just a simple technical exercise whereby profitable investment projects are accepted and unprofitable ones rejected, but reality is more complex. The choice and application of capital budgeting methods is a highly subjective art. Several methods are described in the literature, including net present value method (NPV-method), internal rate of return method (IRR-method), the pack-back method etc. (e.g. Brealey and Myers, 2003; Lumby and Jones, 2003; Ross et al., 2005; Smart et al., 2007). Some of the methods, e.g. the NPV-method, are prescribed by textbooks while others are not (e.g. Brealey and Myers, 2003; Lumby and Jones, 2003; Ross et al., 2005; Smart et al., 2007).

The main purpose of accounting information is to facilitate communication between management and external stakeholders, especially the providers of capital. The providers of capital are important external stakeholders and the accounting design is therefore adapted to

their information needs (IASB 2001, FASB 2008). An important question for investors and creditors to face, is whether to invest in (or divest from) a company¹. Before such decisions, information regarding the company is collected. The capital market actors are especially interested in information about the amount, timing and risk of a company's future cash flows, which is, at least partly, derived from accounting information in financial reports (e.g. Catasús and Gröjer, 2003; Coram et al., 2011). The production of accounting information is, in turn, dependent on the design of accounting standards (as well as other factors to be discussed below). A majority of industrialised countries around the world adopt International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB). Since 2005 listed companies within the European Union are required by law to comply with the (EU endorsed) IFRS (EC, 2002).

Both the recommended capital budgeting methods and the IASB's standards and framework are taught and prescribed in business schools around the world. They are recommended since, according to their advocates/prescribing bodies, the employment of them leads to more efficient company and capital market resource allocation. Brealey and Myers (2003) have for example in their text book "Principles of Corporate Finance", which probably is the world's leading text book on the theory and practice of corporate finance, a chapter on "Why net present value leads to better investment decisions than other criteria" (Brealey and Myers, 2003;90). Standard setters such as the IASB and the Financial Accounting Standards Board (FASB) also claim that their aim is to produce standards that (given compliance) provide the capital market with decision relevant information which in turn improves capital market efficiency: "The Boards' [IASB's and FASB's] mandate is to assist in the efficient functioning of economies and the efficient allocation of resources in capital markets by developing high-quality financial reporting standards" (FASB, 2008;1).

In an ideal world, prescribed capital budgeting methods and accounting standards would be adopted by the academically trained company decision makers. However, research has shown that capital budgeting methods being lamented in text books are often employed by management in practice (e.g. Brounen et al., 2004; Graham and Harvey, 2001). Moreover, there is a considerable amount of research which shows that the preparers in many cases do not comply with accounting standards (e.g. Carlin et al., 2009; Street and Bryant, 2000; Street

¹ Investors invest in equity, bondholders invest in traded debt instruments and banks "invest" in bank loans.

and Gray, 2002; Street et al., 1999) and that the preparer's accounting (method) choices often appear to some extent to be affected by other considerations than accounting quality and decision usefulness (e.g. Fields et al., 2001; Holthausen and Leftwich, 1983; Ramanna, 2008; Rutledge, 1995; Watts and Zimmerman, 1990, Zeff, 2002;).

Research thus interestingly suggests a discrepancy between theoretical and legal prescriptions and the decision makers' practical behaviour. In this thesis the focus will be on top management's capital budgeting and accounting choices. It will be investigated whether practice diverges from what is prescribed by finance text books and accounting standards/frameworks. Of special research interest are the factors affecting practice, which will be discussed next.

1.2 Factors affecting the behaviour

One can (naïvely) argue that it is the capital budgeting methods and accounting systems that, given a certain input/data, produce the output/information and that the whole process therefore is objective and thus not very exciting to investigate. However, *people* within companies make the capital budgeting and accounting choices. They decide, for example, which capital budgeting and accounting methods² to use and how to apply them. These choices have a great impact on the output/information, and seen from that perspective, the process must be described as very subjective (and therefore interesting to study). This is acknowledged by the IASB and FASB in a joint exposure draft: "To a significant extent, financial reporting information is based on estimates, judgments, and models of the financial effects on an entity of transactions and other events and circumstances that have happened or that exist, rather than on exact depictions of those effects." (FASB, 2008;4). Moreover, from a capital budgeting perspective, Sharif and Irani (1999) assert that "Measuring the perceived value implications of an investment project is a highly subjective process." (page 190).

The most important capital budgeting and accounting choices are made by top management. Several theories try to explain management behaviour. These theories can be divided into two main groups. Even though the (theories in the) two groups to a large extent are based on different assumptions and logics, they can create similar predictions, indicating that the two groups are complementary rather than diametrically opposed (Collin et al., 2009). The first

² The same decision makers also make accounting choices on disclosure, measurement, recognition and presentation.

group of theories, including principal agent theory, positive accounting theory, signalling theory and proprietary cost theory, is explicitly or implicitly based on the idea that management is a rational wealth maximiser and that there is information asymmetry between management and the providers of capital³ (Jensen and Meckling, 1976; Watts and Zimmerman, 1978, 1986, 1990; Watson et al., 2002; Verrichia, 1983). The second group (of theories) focuses on the notion that contextual factors affect the behaviour of top management. Legitimising theory, stakeholder theory, institutional theory, the theory of cultural dimensions and new institutional accounting are examples of theories that focus on contextual factors' impact on managerial behaviour (Dowling and Pfeffer, 1975; Gray et al., 1996; Di Maggio and Powell, 1983; Hofstede, 1983, 1984; Wyszocki, 2011).

1.2.1 Information asymmetry and utility maximisation affecting the behaviour

Principal agent theory recognises that, because of separation of ownership and control, information asymmetry arises (Jensen and Meckling, 1976). Management, which is assumed to maximise its own utility, potentially has other goals than the providers of capital and could therefore use the information advantage to act opportunistically⁴. Nevertheless, principals expect that managers, i.e. the agents, will maximise their own utility at the cost of other stakeholders, and therefore take measures to protect against opportunism, including bonding and monitoring. The costs of bonding and monitoring are called agency costs. Because of bonding (which aligns the goals of the principals and agents) and monitoring (which reduces information asymmetry between the principal and agents) management will act in the interest of the shareholders to a higher extent⁵, but not fully (which is a "residual loss"). Thus, there is a limit on how much the principal is ready to spend on bonding and monitoring, leaving room for opportunism. Nevertheless, other competitive pressures in the product market, the market for corporate control and the managerial labour market (Fama, 1980), could potentially

³ Moreover, agency theory and positive accounting theory assume a conflict of interests between management and the owners.

⁴ Risk averse managers may (for example) use capital budgeting methods that promote investment projects with low risk (instead of promoting the most profitable investment projects with potentially higher risk). One reason for such behaviour could be that investments with lower risk levels have lower cash flow volatility, reducing the likelihood of bankruptcy (and consequently making it less likely that the top managers lose their jobs). Likewise, management in financially distressed companies could (for example) use unreasonable accounting estimates (e.g. low discount rates) to inflate asset values. The inflated assets values could reduce the risk of debt covenant violations and subsequent bankruptcy. These are two examples of what is called opportunistic behaviour. The described behaviour is called opportunistic since it increases the wealth of management at the expense of others (i.e. shareholders and/or debtholders).

⁵ Management could, because of bonding and monitoring, (for example) choose capital budgeting methods that pick out the most profitable projects and moreover (for example) choose accounting solutions that give the fairest possible picture of the company's financial condition.

discipline management. This conjecture is however questioned by Jensen and Meckling (1976): "...the existence of competition in product and factor markets will not eliminate the agency costs... If my competitors all incur agency costs equal to or greater than mine I will not be eliminated from the market by their competition." (page 330). Opportunistic behaviour could thus according to Jensen and Meckling (1976) be expected, at least to some extent, despite these competitive pressures⁶.

Positive accounting theory (Watts and Zimmerman, 1978, 1986, 1990), which is a widely used theory within accounting choice research, is also based on the idea that management is self-interested, has an information advantage and that there are conflicts of interest between the principal and the agent. Positive accounting theory assumes that accounting choice is determined by its economic consequences, for example how the accounting choice affects the level of management compensation. Thus, if compensation is based on accounting profits, management may be inclined to make profit-enhancing accounting choices. Signalling theory predicts that managers of higher performing companies (e.g. higher profitability) wish to distinguish themselves from lower performing companies (Watson et al., 2002; Watts and Zimmerman, 1986). There is information asymmetry between management and the capital market, but if management signals to the capital market, the asymmetry can be reduced. One communicate tool that management (in higher performing companies) could use is accounting information. Finally, proprietary cost theory asserts that companies' incentives to disclose accounting (or other) information is a decreasing function of the potential costs attached to the specific disclosure (Verrichia, 1983). One such (proprietary) cost is when competitors benefit from the disclosed information which potentially could lead to more product market competition

⁶ Although the agency theory has gained acceptance within accounting, finance and other fields within the social sciences (Eisenhardt, 1989), its assumptions have been questioned. The stewardship theory for example, contrary to principal agent theory, depicts agents as collectivists and moreover as trustworthy (Davis et al., 1997). In the same line of reasoning altruistic theories suggest that the natural selection, contrary to the assumption in the principal agent theory, has made humans unselfish and empathic (Bell, 2008). Additional critique against the agency theory is based on the argument that the agency theory is a self-fulfilling prophecy. Frank et al (1993, 1996) for example, show that academic economists (who have studied the agency theory), behave opportunistic in social dilemmas to a higher extent than others, and the reason for this is suggested to be that business schools teach their students that humans are self-interested.

1.2.2 Contextual factors affecting the behaviour

Instead of focusing on how information asymmetries and utility maximisation affect management, another group of theories are focused on how contextual factors have an impact on management. Legitimacy theory, stakeholder theory, institutional theory, the theory of cultural dimensions and new institutional accounting are all based on the notion that contextual factors can explain the choices top management makes. In essence, all five theories, which are overlapping, describe the impact that society's (and other stakeholders') norms, standards, legal systems, ethics, morals, cultures, institutions, value systems, thoughts etc, can have on company and management behaviour (Dowling and Pfeffer, 1975; Gray et al, 1996; Di Maggio and Powell, 1983; Hofstede, 1983, 1984; Wysocki, 2011).

Legitimacy theory asserts that companies (and their managers) ensure that they act within the bounds defined by society's norms. These bounds are dynamic, i.e. they change over time, and therefore companies/top management must adapt to the new norms. If the companies/managers do not adapt they run the risk of being perceived as illegitimate. (Dowling and Pfeffer, 1975) Stakeholder theory predicts that companies/managers will make sure that they satisfy the demands of the most important stakeholders (Gray et al, 1996). Institutional theory has an emphasis on the impact that formal and informal institutional pressures have on behaviour (Di Maggio and Powell, 1983). Hofstede's (1983, 1984) theory of cultural dimensions offers four (which were later extended to five and six) dimensions of cultural features which can be used to describe and map national cultures. Hofstede (1983, 1984) suggests that the national culture has an impact on company/management behaviour and decisions. Finally, new institutional accounting provides insights into the interrelationships between institutions such as enforcement systems and company practice (Wysocki, 2011)⁷.

In this thesis independent variables', derived from both groups, impact on capital budgeting and accounting choices are examined and discussed⁸. The presented theories will also be used to interpret and explain the observed behaviour. Rather than relying exclusively on one theory, I will thus use a joint consideration of theories.

⁷ The contextual based theories have, just like the agency theory, been questioned and criticized. Jensen (2010), for example, claims that "Stakeholder theory plays into the hands of special interests that wish to use the resources of corporations for their own ends... If widely adopted, stakeholder theory will reduce social welfare even as its advocates claim to increase it..." (page 42).

⁸ The chosen independent variables will be commented in more detail below when the individual papers are discussed.

In this chapter, theories that intend to explain what affects top managers when they make capital budgeting and accounting choices, have been discussed. In the next section key works in this field and, moreover, the research aims of this thesis, are briefly presented.

1.3 Capital budgeting and accounting choice

In this section selected key studies on capital budgeting and accounting choice and moreover the research aims of the thesis, are briefly presented. In addition, it is pointed out how this thesis will contribute to the current knowledge within this field.

1.3.1 Capital budgeting choice

Much research has examined capital budgeting in practice, especially in the U.S. and Europe from the 1970s until today (Arnold and Hatzopoulos, 2000; Bennouna et al., 2010; Gitman and Forrester, 1977; Gitman and Maxwell, 1985; Gitman and Mercurio, 1982; Klammer, 1972; Klammer and Walker, 1984; Liljebloom and Vaihekoski, 2004; Pike, 1989, 1996; Ryan and Ryan, 2002; Silvola, 2006) including Sweden (Andersson, 1994; Holmén and Pramborg, 2009; Renck, 1966; Sandahl and Sjögren, 2003; Segelod, 1995; Tell, 1978; Yard, 1987). Overall the results indicate a surprisingly extensive use of non-recommended methods such as the payback-method. However, since these studies did not use similar survey (or interview) questions, populations and statistical methods, it is difficult to draw conclusions regarding changing practices over time in Sweden, or regarding differences between Sweden and the U.S./Europe. However, Graham and Harvey (2001) with U.S. companies and Brounen et al. (2004) with continental European companies, used exactly the same questionnaire, making comparisons possible. I used the same questionnaire with Swedish companies, making further comparison possible. The first research aim is therefore to study current Swedish capital budgeting practice, to compare it with the practice in the U.S. and in continental Europe and furthermore to study changes over time in Sweden, by using the same questionnaire as in Graham and Harvey (2001) and Brounen et al. (2004).

Most previous studies within this field, are based on purely descriptive statistics, exploring only use/non-use, or frequency of use, of capital budgeting methods, but not the association between use and independent variables. When relationships between use and independent variables have been studied, descriptive statistical methods such as correlation analysis and independent-samples t-tests have commonly been utilised, making the results impossible to

interpret causally. Therefore, the next research aim is to study what factors determine the choice of capital budgeting methods in Swedish companies, by using multivariate regression analysis on questionnaire data.

1.3.2 Accounting choice

As with capital budgeting choice, much research has been done on accounting choice the last three to four decades (Allee et al., 2008; Baker and Hayes, 1995; Cazavan-Jeny et al., 2011; Fields et al., 2001; Holthausen, 1990; Holthausen and Leftwich, 1983; Hope and Briggs, 1982; Hill et al., 2002;; Mian and Smith, 1990; Ramanna, 2008; Yen et al., 2007; Zeff, 1978, 2002; Watts and Zimmerman, 1978, 1986, 1990), with Watts and Zimmerman (1978) as one of the most important seminal works. Watts and Zimmerman (1978) found, as predicted, that preparers (i.e. managers) lobbied for or against a proposed new accounting standard because of perceived economic consequences (rather than because of perceived conceptual strengths or weaknesses in the standard). This notion of managers as potential opportunists is one reason why it has been argued that fair value accounting, especially when based on management's own estimations, creates opportunities for creative accounting (e.g. Wines et al., 2007), potentially making accounting information less useful. Even though research indicates that the new largely fair value based IFRS-regime has positive economic consequences on for example the cost of capital (Pope and McLeay, 2011; Brown, 2011), it has received criticism for being too "soft" and dependent on management's judgement (e.g. Riistama, 2011). Moreover, to exemplify the widespread distrust, two U.S. accounting professors claim that the combination of IASB's principles based standards and unscrupulous managers will lead to more accounting manipulation and concluded that "IFRS is for criminals" (Catanach and Ketz, 2011). Relatively little is however known about whether top managers actually prefer IASB's fair value approach or not.

Following Watts and Zimmerman (1978), one way to learn more about that is to study management's positions in comment letters submitted on IASB's proposal of a goodwill "impairment only approach" (i.e. a fair value based non-amortisation approach). The third research aim is thus to study top managers' preferred choice of goodwill accounting method and moreover to examine what supportive arguments they use when trying to persuade the IASB.

Accounting choice studies can be broadly divided into those that measure the effects of accounting choices, such as share market reactions (Leuz and Verrecchia, 2000), and those that only examine the choices *per se* but not the effects (e.g. Watts and Zimmerman, 1978). Accounting choice studies can also be divided into those examining voluntary accounting choices (e.g. Iatridis and Alexakis, 2012), and those examining mandatory accounting choices (e.g. Gao and Kling, 2012). An example of the latter strand of research is investigations of the level of compliance with mandatory IFRS requirements. Disclosure compliance has potentially become even more important from a usefulness perspective because IASB embracing the balance sheet approach (Wüstemann and Kierzek, 2005). The balance sheet approach leads to a greater use of fair values and/or values in use, which as noted are more subjective and thus less reliable than historical cost minus depreciation. Disclosure of the assumptions underlying the fair values/values in use, are therefore often required. IAS 36 paragraph 134 for example requires disclosure of the underlying assumptions used by management when the recoverable amount of goodwill or other indefinite-lived intangibles are estimated. Prior research suggests, however, that compliance with the requirements in IAS 36 paragraph 134 is low (Carlin et al 2009; Carlin and Finch 2010), probably because the information is perceived as commercially sensitive. Adherence is important from a capital market perspective, since the disclosed information makes it possible for investors and analysts to assess whether management's subjective estimations of the recoverable amount are reasonable. Prior research has focused mainly on first-time adopters of IAS 36 paragraph 134 (which could explain the low compliance level), not examined whether there has been an improvement over time and finally not used cross-country data (which could proxy for different national enforcement systems). In addition, research on Swedish listed companies' compliance with this standard is limited. The fourth research aim is therefore to examine to what extent companies in Sweden and the Netherlands (with different enforcement systems) comply with the disclosure requirements, whether we can see improvements over time, and what factors determine the level of compliance.

In this section the research aims of this thesis and important prior works on capital budgeting and accounting choice have been presented. Next section explains why capital budgeting and accounting choices matter.

1.4 Why capital budgeting and accounting choices matter

Capital budgeting and accounting choices matter since they can have economic consequences. The economic consequences are described and discussed below.

1.4.1 Capital budgeting choice and economic consequences for companies

The most important operative decision is probably what investments to make. Indeed, a company can be seen as a bundle of investments, and from that perspective the investment decision is crucial. Over the years a number of capital budgeting methods have evolved. The capital budgeting methods are fed by different sorts of quantitative input (i.e. data) regarding the investment which is then digested. After having digested the input, the method produces output. The output has often been processed down to one quantitative figure. This output together with information from other sources, is an important basis for investment decisions. Since the choice of capital budgeting method can affect investment decisions, capital budgeting choices can have cash flow and cost of capital effects.

1.4.1.1 Cash flow effects. If, for example, management chooses capital budgeting methods which tends to accept profitable investments and reject unprofitable ones, cash flows will most probably be positive, at least in the long run. If, on the other hand, methods accepting unprofitable investments are used, there will be negative cash flow effects, at least in the long run.

1.4.1.2 Cost of capital effects. The use and application of capital budgeting methods can also affect how risky projects companies are willing to accept. The choice of capital budgeting methods can thus have an impact on the cost of capital in a company (since more risky assets should lead to a higher cost of capital). Some capital budgeting techniques do for example not consider the weighted average cost of capital (WACC). Other methods do consider the WACC, but do not prescribe risk adjustments of the WACC to reflect the underlying risk of investment projects. When the riskiness of investments is not included in the investment appraisal process, it is likely that riskier investments will be picked since they (in theory) have a higher expected return⁹; and riskier investments lead to, all other things held constant, a higher cost of capital (given efficient capital markets).

⁹ This is, for example, what happened in the U.S. when the high risk of the subprime loans was not considered in the pricing of CDOs (Collateralized Debt Obligations).

1.4.2 Accounting choice and economic consequences for companies

The value and risk/return of the investment activities, i.e. the left hand (asset) side of the balance sheet, and the value and risk/return of the financing activities, i.e. the right hand (liability) side of the balance sheet, are communicated through accounting information in financial reports. Intuitively, it may sound reasonable that the choice of capital budgeting methods can have economic consequences because of the linkage between capital budgeting methods and investments. At first sight, the link between accounting choice and economic consequences is less obvious. Certainly, accounting information and accounting choice is totally irrelevant (and without consequences), given complete and perfect markets¹⁰ (Fields et al., 2001). But since those assumptions are not met, accounting does matter. According to Watts and Zimmerman (1990), the accounting choice can be as relevant as the choice of other organisational technologies such as organisational structure, performance evaluation and reward systems, capital structure etc: “How the firm is organized, its financial policy, and its accounting methods, are as much a part of the technology used to produce the firm’s product as are its production methods” (Watts and Zimmerman, 1990;135). Accounting choices matter since they have cash flows effects (e.g. Fields et al., 2001; Graham et al., 2005, Graham et al., 2011; Watts and Zimmerman, 1978, 1986, 1990) and cost of capital effects (Botoson, 1997; Healy et al., 1999; Lambert et al., 2007; Leuz and Schrand, 2009; Leuz and Verrecchia, 2000; Sengupta, 1998; Welker, 1995).

1.4.2.1 Cash flow effects. Accounting choice and information can have several cash flow effects which are described and discussed here. i)When companies seek to raise new capital for investments, accounting information (together with other information) is used by investors to decide whether or not to grant financing.

ii)Accounting information can also have so called real effects. Research has for example shown that managers preferred economic actions with negative long-term consequences over within-GAAP choices, when they managed earnings (Graham et al., 2005). Managers were in other words ready to, for example, reject positive NPV-investments, because of their negative effects on quarterly profits. Moreover, Graham et al. (2011) reported that avoidance of financial accounting income tax expense (with no actual cash effects) was as important as avoidance of real income taxes (with cash effects) when U.S. multinationals decided where to

¹⁰ However, accounting can be relevant even if markets are complete and perfect, if the taxable income is based on the accounting numbers

locate operations and whether to repatriate foreign profits. They concluded that “GAAP ETR¹¹ affecting stock price is not consistent with the efficient market hypothesis. However, the GAAP ETR can indirectly affect cash flows in an efficient market through managers’ actions arising from their belief that the GAAP ETR directly affects stock prices.” (Graham et al., 2011;142). Another example of a real effect is when top management because of poor performance, based on accounting data in financial reports, is fired (i.e. the stewardship role of accounting).

iii) Accounting choices and accounting information can also have direct cash flow effects. One evident cash flow effect is that the process of preparing financial reports and the subsequent auditing process is more costly if a more complex method is chosen over a simpler one (for example if the fair value model is chosen over the historical cost model). Many contracts are also based on accounting numbers (Watts and Zimmerman, 1990). Debt contracts can for example state a maximum debt-to-equity ratio, and repayment may be stipulated in the contract, if the debt-to-equity covenant is violated. Another example of an accounting based contract is the contract between a company and the government which stipulates a legal obligation to pay corporation tax. Depending on the link between accounting numbers and the taxable income, accounting numbers in financial reports can lead to higher or lower taxable income. Another government-related contract can be found in commercial laws. In some countries there are restrictions on how much capital a company is allowed to transfer to its shareholders (in the form of dividends and share repurchases)¹². The maximum amount transferable to shareholders, may be based on the amount of non-restricted equity in the balance sheet. Thus, if an accounting choice affects non-restricted equity, transfers to shareholders can be affected. Moreover, if a chosen accounting method (for example) increases accounting profits, it may in turn lead to higher wage claims from trade unions or to higher bonus payments for management. Another cash flow effect not linked to accounting numbers in contracts is proprietary costs (Verrecchia, 1983). If information disclosed in financial reports is commercially sensitive, competing companies in product markets can benefit from the disclosures, with negative cash flow effects (i.e. proprietary costs) for the disclosing company.

¹¹ GAAP ETR = Accounting income tax expense (with no cash effects).

¹² The government has in effect established a non-optional contract between the company/shareholders and the debt holders (with the aim of protecting the latter) stating that a portion of equity cannot be transferred to the shareholders.

1.4.2.2 Cost of capital effects. Accounting choices and accounting information can also have cost of capital effects. i)As aforementioned, when a company is in need of capital, the first question is if it will receive financing. If it does receive financing, accounting, and other, information together with investor demand decides the financing costs (i.e. cost of capital).

ii)It was noted above that management's investment decisions could be influenced by accounting numbers. If managers, because of accounting considerations, for example engage in myopic investment behaviour, then projects with too high or too low risk could be picked, which in turn affects the cost of capital.

iii)If an accounting choice does not improve accounting quality, it should in an efficient capital market, not have any impact on the cost of capital. Nevertheless, if the quality is improved, it should reduce the cost of capital¹³ (Botoson, 1997; Healy et al., 1999; Lambert et al., 2007; Leuz and Schrand, 2009; Leuz and Verrecchia, 2000; Sengupta, 1998; Welker, 1995).

1.4.3 Why capital budgeting and accounting choices matter for society

As noted, capital budgeting and accounting choices can have economic consequences for companies, and are therefore relevant for managers and shareholders. But these choices are also important for society more broadly since they affect the allocation of limited resources.

One important institution that indirectly is supposed to facilitate efficient use of limited resources is the capital market. According to economic theory, allocation of resources will be more efficient, if the capital market is efficient. A distinguishing feature of an efficient capital market is that all relevant information is incorporated into the share prices, and moreover, that the incorporation process is fast (in theory immediate) (Fama, 1970). If all relevant information is incorporated in a proper¹⁴ way into the share price, the share price should, in theory, be the best available approximation of the intrinsic value of the company (i.e. the discounted value of all future dividends transferred to the shareholders).

¹³ Improved accounting quality reduces, according to economic theory, the information asymmetry component of the cost of capital.

¹⁴ What does "in a proper way" mean? Well, a method must be used to transform relevant information into a share price. In theory it should be a method that discounts some sort of a profitability figure, for example future net results, future cash flows, future dividends etc.

If all relevant information is incorporated into the share price, and the incorporation process is fast, the capital market is efficient. But how can efficient capital markets be beneficial to society? To put simply; efficient capital markets can indirectly be beneficial to society since there is a link between the capital market and the product market. A company that develops (or is planning to develop) products that are expected to meet the wants¹⁵ of individuals and organisations, will in an efficient capital market be priced higher than a company that is not expected to meet these wants. The capital market thus assumes that the ability to meet the wants will generate future earnings/cash flows, and therefore “rewards” the company with a higher share price, which the company can transform into cash when new shares are issued. The cash is ideally invested in projects that, in the end, are expected to meet the wants of individuals and organisations in society. The pricing mechanism of the capital market, thus promotes growth (i.e. increase in production) for those companies that supply products (i.e. goods and services) that are wanted. This is how the pricing mechanism works (or at least is supposed to work) in a capitalistic market based society¹⁶.

An important prerequisite for capital market efficiency, is that the capital market actors receive high-quality financial information. There are many sources of financial information, where financial information disclosed in the accounting reports is an important one. According to the IASB and FASB “Financial reporting information helps capital providers make better decisions, which results in more efficient functioning of capital markets and a lower cost of capital for the economy as a whole” (FASB, 2008;22). Given that accounting choices can improve the quality of accounting information, accounting choices do matter. They matter since they (if we assume that they affect the usefulness of accounting information) can make capital markets more efficient for the benefit of society.

The more useful information, the more efficient are the capital markets and consequently the better are the prospects that companies that produce goods and services that are highly demanded will produce and sell even more of their goods and services (since the capital

¹⁵ Sometimes, instead of the term “wants”, the term “needs” is used. There is a difference between wants and needs and it may be misleading to say that human needs are unlimited (Jensen and Meckling, 1994). Or put simply; we do not need everything we want. A person that is under treatment for alcoholism may want to drink (plenty of) alcohol, but is that want something that he absolutely needs?

¹⁶ The supremacy of the (capitalistic) market pricing mechanism over the (socialistic) planned economy mechanism, when it comes to allocational efficiency, has been described by many authors; for example Hayek (1945) and Smith (1776/2005). Capitalistic system crises, like the 1930 depression and also the latest financial crises, which began in 2008 with the Lehman Brothers bankruptcy, shows that a market based system also has it flaws.

market can finance their expansion). The use of unsophisticated capital budgeting methods may however make a profitable investment look unprofitable, thus disturbing the efficient resource allocation of the capital market. If capital budgeting methods do not take all cash inflows and outflows, the riskiness of the investment and the time value of money into consideration, the most efficient mix of products and services that given the demand should be produced (for the benefit of society) may not be produced, thus reducing economic welfare.

1.5 But do capital budgeting and accounting choices *really* matter...

It has been argued above that capital budgeting and accounting choices matter. This “relevance view” is however challenged.

1.5.1 Do capital budgeting choices matter?

Critics argue that the dominant research perspective - that of neoclassical economics - (wrongly) assumes that decision makers are rational and that their capital budgeting choices are based on rational considerations: “Capital budgeting is rarely portrayed as a by-product of inaction, fortune or circumstance - it is assumed to be a pro-active consideration of known options, given known objectives, leading to a ‘rational decision’ by organisational members. In reality, this resource commitment activity may be less ordered and systematic than supposed” (Northcott, 1991;220). It has also been suggested that management can use information to legitimise decisions already made (Burchell et al., 1980). If the use of capital budgeting techniques is purely ritualistic then it, from an efficiency perspective, does not matter which methods that are being used, or how they are applied, since the investment decision has already been made.

Product market competition and other forces would however, as noted earlier, in the long run probably discipline this type of behaviour (as they do with other types of opportunistic behaviour). Still, the use of capital budgeting methods as justification tools, rather than as decision tools, probably exists to some extent.

The relevance view (i.e. the view that use and application of capital budgeting techniques matter) has, moreover, been challenged by several studies which have found no significant positive relationship between use of sophisticated methods and performance (Farragher et al., 2001; Haka et al., 1985; Klammer 1973), while one surprisingly even found a negative

association (Pike, 1984). These results might be explained by lack of measurement precision in the independent and dependent variables. In addition, the use of a specific (sophisticated) capital budgeting method is not necessarily synonymous with more efficient capital investment decisions. There are many other factors that can affect management's investment decisions.

1.5.2 Do accounting choices matter?

The relevance of accounting can be questioned since, given market efficiency, all relevant information (including accounting information) quickly is incorporated in the share price. It is thus difficult to "beat the market" since the capital market actors probably have already assessed and priced in the available information. If we also assume that investors are perfectly diversified (i.e. owning shares in many companies), then they will not be interested in the company specific risk but rather the company's systematic risk (i.e. beta-risk) which cannot be diversified away¹⁷. Given efficient markets, a diversified investor should be "price protected" with higher risk investments yielding higher expected returns; i.e. you get what you pay for. Thus, seen from the individual investor's perspective, the only information that should be produced and consumed is beta values or other measures of systematic risk (which not should be viewed as accounting information). Nevertheless, to draw the conclusion that because of efficient capital markets and perfectly diversified investors¹⁸, accounting is of no importance is questionable; if no one does fundamental research where accounting numbers are an important ingredient, how can then the market be(come) efficient?

Accounting has also been criticised for not being value relevant (Balachandran and Mohanram, 2011; Lev and Zarowin, 1999)¹⁹. The association between new accounting information and share prices movements is suggested to be relatively weak. Again, the fact that one can question accounting's security valuation role does not mean that accounting choice is irrelevant. On the contrary, if accounting numbers in financial reports are not used when securities are priced, then it is important to improve the standards and the preparers'

¹⁷ Fundamental investors, on the other hand, try to find out if a share is efficiently priced or not. Fundamental investors analyse whether (according to the analysis) price equals intrinsic value.

¹⁸ Whether the capital market is efficient and whether investors are perfectly diversified can of course also be questioned.

¹⁹ Notice that this critique is different from the critique in the paragraph above. Here it is claimed that accounting does not matter since new accounting information does not affect the share price (i.e. accounting information is not value relevant). The former critique was based on the idea that, given market efficiency and diversification, accounting information does affect the share price, but only the first millisecond, and after that first millisecond the accounting information is old news and will not affect the share price any more. For that reason (if we assume market efficiency) accounting is superfluous from the individual investor's perspective.

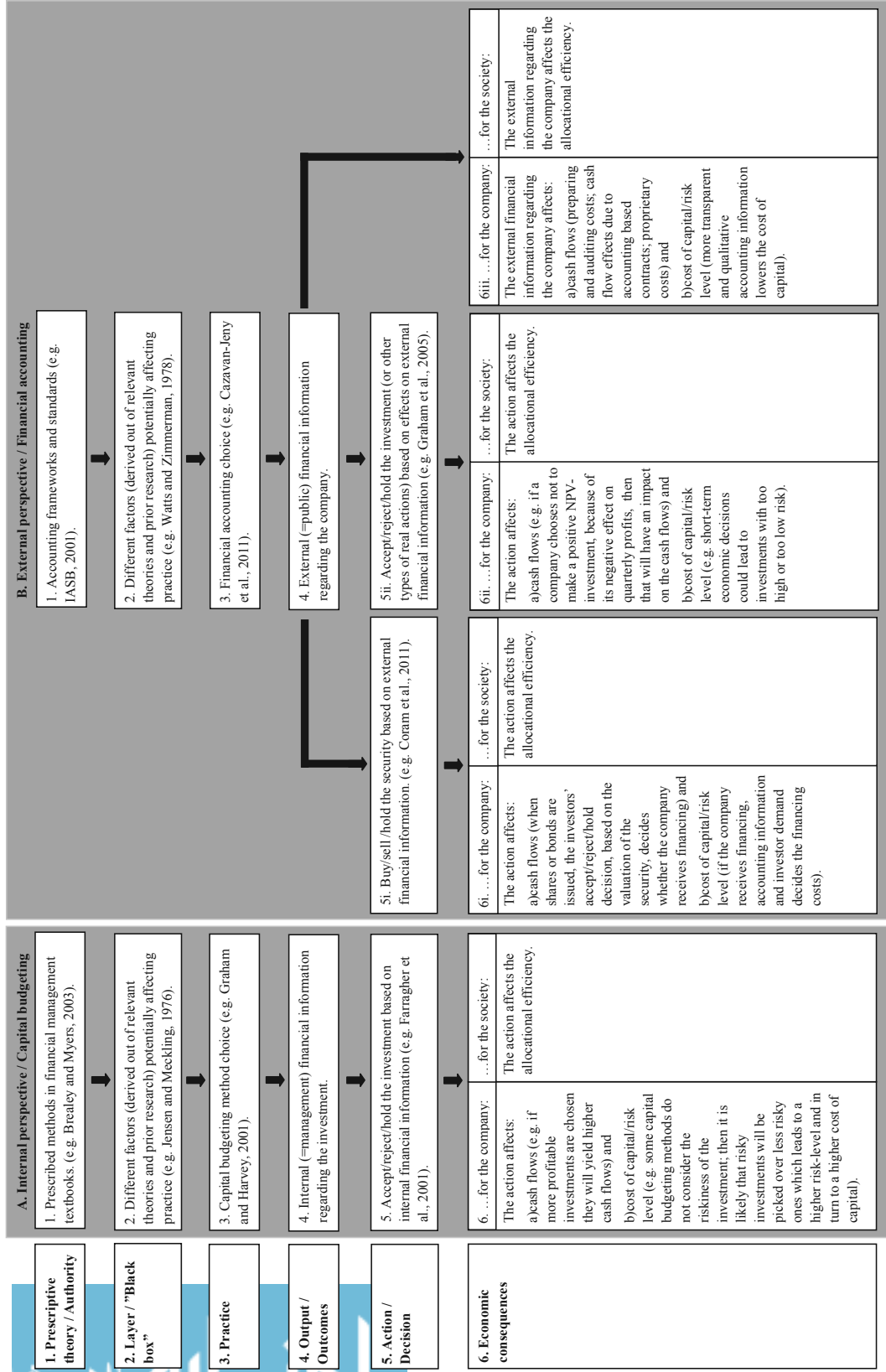
application of the standards, so that accounting becomes more value relevant. In fact, recent research does suggest that the adoption of IFRS has increased the value relevance of accounting (Barth et al, 2008; Chalmers et al., 2011).

Additionally, even if accounting had no effect on security prices, it would still have a contractual role (Watts and Zimmerman, 1986), be more or less costly to prepare and audit, and probably also have real effects (e.g. Graham et al., 2011), implying that accounting choice would matter even if it did not affect security valuations.

1.6 Summary

The discussion so far is summarised in Figure 1, which reflects the view that capital budgeting choices (A3) and the consequent output, i.e. financial information regarding investments (A4), not necessarily is a direct function of what is taught in business schools and prescribed in finance text books (A1). The discrepancy between normative theory and practice could be understood and explained by a number of theories (A2) such as principal-agent theory (Jensen and Meckling, 1976), legitimacy theory (Dowling and Pfeffer, 1975), stakeholder theory (Gray et al., 1996), institutional theory (Di Maggio and Powell, 1983), theory of cultural dimensions Hofstede (1983, 1984). Managers may (or may not) base their investment project decisions (i.e. accept/reject/hold) on the capital budgeting outcome (A5).

Figure 1. Outline of capital-budgeting and financial accounting choices and consequences.



Whether or not managers base their decisions on the capital budgeting outcome is difficult to say with certainty. However, if they do, then there should be a positive association between use of sophisticated methods and company performance. This positive association (between use of methods and performance) has however not been found (e.g. Farragher et al., 2001), which could indicate that managers do not consider the outcome of sophisticated methods when they choose investment projects (or alternatively that they do consider the outcome of sophisticated methods but that the use of sophisticated methods does not lead to better investment decisions). Finally, which is the sixth level in Figure 1 (A6), it is asserted that the investment decision could be important from a company perspective since it has cash flow effects (if more profitable investments are chosen they will yield higher cash flows) and cost of capital/risk level effects (e.g. if some capital budgeting methods do not consider the riskiness of the investment, it is likely that risky investments will be picked over less risky ones, subsequently leading to a higher risk-level and in turn to a higher cost of capital), and from a societal perspective since it affects the allocational efficiency (A6).

Similarly, Figure 1 reflects the view that financial reporting outcomes (B4) depend not only on the current accounting framework and standards (B1), but also on management's accounting choices (B3), which in turn could be understood and explained by theories (B2) such as positive accounting theory (Watts and Zimmerman, 1978), principal-agent theory (Jensen and Meckling, 1976), proprietary cost theory (Verricha, 1983), signalling theory (Watts and Zimmerman, 1986), new institutional accounting (Wysocki et al., 2011) and institutional theory (DiMaggio and Powell, 1983). Capital market actors use accounting information (i.e. the financial reporting outcome) at least to some extent when they value securities (e.g. Coram et al., 2011), which subsequently leads to a buy/sell/hold decision (B5i). Accounting information thus plays a role in determining the amount and cost of financing made available (B6i). Moreover, accounting information can influence real decisions (B5ii). Research has for example suggested that managers prefer economic actions that have negative long-term consequences over within-GAAP choices, when they manage earnings (Graham and Harvey, 2005). Management's sensitivity to (negative) capital market reactions can thus, for example, lead to rejection of profitable investments due to short term negative effects on quarterly profits (B6ii). In addition, preparing and auditing costs are affected by the accounting method choices and information in the accounts (B6iii). Accounting information also decide the distribution of (company) income between the various stakeholders since many contracts are based on accounting numbers (Watts and

Zimmerman, 1986), inform competing companies in product markets, leading to proprietary costs (Verricha, 1983) and has an impact on the cost of capital (e.g. Leuz and Verrecchia, 2000) (B6iii). Accounting information also matters to society since it (together with other sources of information) affects the allocational efficiency (B6i-iii).

The focus of the thesis will be on managerial capital budgeting and accounting practice, i.e. level 3 in Figure 1, and the outcome of that practice, i.e. level 4 in Figure 1. Moreover, I will attempt to understand and explain, and also to some extent predict, top management's choices, by using relevant theories, i.e. level 2 in Figure 1. I will however not examine whether the observed practice has an influence on company decisions/actions, i.e. level 5 in Figure 1, or whether it leads to economic consequences, i.e. level 6 in Figure 1. Moreover, even though capital budgeting methods described in finance textbooks, and the IASB's accounting standards and framework ("prescriptive theories"), i.e. level 1 in Figure 1, to some extent will serve as a starting point, they will have a background role and will not be a research object *per se*²⁰. To sum up; this thesis will thus focus on level 2-4 in Figure 1.

In section 1.3 the four research aims of this thesis were briefly outlined. In the next chapter the thesis research questions are presented in detail.

2. Research questions and a collection of papers...

The aim of the thesis is to contribute to an understanding of capital budgeting and accounting practice and identify factors that may explain and predict it. The aim is thus to open up the black box of capital budgeting and accounting choice. The overarching research question of the thesis is:

What capital budgeting and accounting choices are made by top management in practice, and how can these choices be explained?

More specifically, the questions asked in the four papers of the thesis are:

²⁰ See Boyle and Guthrie (1997) and Wüstemann and Kierzek (2005), for an example of analytical/normative research where capital budgeting methods and accounting standards are the research objects being dissected *per se*.

Research question 1: *“What capital budgeting and cost of capital estimations methods do managers in Swedish listed companies choose?”*. The research question is broken down to the following sub-questions: *What capital budgeting and cost of capital estimation methods do top managers use, and how are the methods applied, in practice? Does top management act according to text books/norms? What factors are associated with the use? Are there differences among countries?* (Paper 1).

Research question 2: *“What determines the use of capital budgeting methods in Swedish listed companies?”*. The research question is broken down to the following sub-questions: *What causal factors determine the use of capital budgeting methods? Have there been changes over time?* (Paper 2).

Research question 3: *“What goodwill accounting method does top management prefer?”*. The research question is broken down to the following sub-questions: *Do top management’s preferences differ from other producers and consumers of accounting information? How do top management and other producers and consumers of accounting information argue for their positions?* (Paper 3).

Research question 4: *“What determines compliance with the disclosure requirements regarding the goodwill impairment test, in Swedish and Dutch listed companies?”*. The research question is broken down to the following sub-questions: *What is the level of compliance? What factors explain the level of compliance? Have there been any changes over time? Are there differences among countries?* (Paper 4).

The thesis consists of a collection of four papers. In Table 1, the main research aim, method, data and results of each individual paper are described in brief. The table is followed by a summary of the papers.

Table 1. Summary of the four papers.

Table 1. Title	Main research aim	Method	Data	Main results
Paper 1. The Use of Capital Budgeting and Cost of Capital Estimation Methods in Swedish Listed Companies	To investigate to what extent Swedish listed companies use capital budgeting and cost of capital estimation methods, if management use the recommended methods, to explore what factors are related to this use, to study changes over time, to compare to other countries.	The CFO:s of companies listed on the Stockholm Stock Exchange (=NasdaqOMX) are surveyed.	Questionnaires from 2005 (105 responses) and 2008 (88 responses).	The recommended NPV was the most employed capital budgeting method. By 2008 CAPM was the most utilised method to estimate the cost of equity, which could indicate greater sophistication over time. Overall, the use of sophisticated capital budgeting and cost of capital estimation methods seems to be rising. Swedish companies employed capital budgeting methods less frequently than their U.S. and continental European counterparts
Paper 2. What Determines the Use of Capital Budgeting Methods? Evidence from Swedish listed companies	To study what factors determine the choice of capital budgeting methods, and if there are changes over time.	The CFO:s of companies listed on the Stockholm Stock Exchange (=NasdaqOMX) are surveyed.	Questionnaires from 2005 (105 responses) and 2008 (88 responses).	Large companies used capital budgeting methods more frequently. Accounting numbers to some extent seemed to affect the use of capital budgeting methods. The use of non-recommended methods declined between 2005 and 2008.
Paper 3. Preparers' and Non-Preparers' Lobbying on the Proposed Prohibition of Goodwill Amortisation in ED3 'Business Combinations'	To examine preparers' and non-preparers' positions and arguments regarding how to account for goodwill.	Content analysis is used to code the positions and arguments put forth by the respondents.	128 submitted comment letters from year 2003.	Non-preparers supported amortisation of goodwill to a greater extent than did preparers. Both respondent groups employed "sophisticated" supportive arguments.
Paper 4. Swedish and Dutch listed companies' compliance with IAS 36 paragraph 134	To study to what extent Swedish and Dutch listed companies comply with IAS 36 paragraph 134, to explore what factors explain the level of compliance and to examine changes over time.	Content analysis is used. In order to code the data a disclosure index based on IAS 36 paragraph 134 is employed.	472 annual reports from 2005 and 2008 from companies listed on the NasdaqOMX and Euronext Amsterdam.	The level of compliance was low, but increased over time, which indicates learning. The results also suggest convergence between Sweden and the Netherlands. Non-financial companies were significantly more compliant than financial companies.

2.1 Paper 1. The Use of Capital Budgeting and Cost of Capital Estimation Methods in Swedish Listed Companies

The first paper examines the practical use of investment appraisal methods and cost of capital estimation methods in Swedish listed companies. Sophisticated capital budgeting methods are often “highly recommended” by financial management textbooks, e.g. net present value (NPV), whereas others that are simpler are not, e.g. undiscounted payback (e.g. Brealey and Myers, 2003). Still, the practical use of economic models can deviate from what is prescribed by normative theory. Management, possibly with other goals than the principal (Jensen and Meckling, 1976), decides whether the recommended methods should be employed or not. To illustrate this possible discrepancy between theory and practice the practical use of 1) capital budgeting methods and 2) cost of capital estimation methods in Swedish listed companies was examined.

The data was collected through a survey in 2005 and 2008. The results indicate that Swedish companies have increased the use of the recommended NPV since the 1960s. NPV is now the most frequently used method. In most studies the sample has consisted of the largest Swedish companies. An explanation for the increased use of NPV consistent with legitimacy and stakeholder theory (Dowling and Pfeffer, 1975; Gray et al., 1996), could be that management in large companies, because of the greater gap between the agent (management) and the principal (shareholders/board), needs to legitimise its investments with methods considered theoretically sound. Because of its strong theoretical merits, NPV has been embraced by textbook authors and taught at business schools, making it one of the most socially acceptable methods.

Discounting based capital budgeting methods, such as NPV, were more popular among large companies but the difference fell from 2005 to 2008 as did differences between manufacturers and non-manufacturers, perhaps because of the natural selection. Managers who do not adopt efficient procedures will in other words be replaced either by the present board or, after acquisition, by a new board. Alternatively, companies that, because of unsophisticated capital budgeting methods, choose bad investments, could go out of business. The suggested driving force is thus market pressures. Another possible explanation, not necessarily based on the belief that the observed behaviour is rational from an efficiency perspective, for why small and large companies and manufacturers and non-manufacturers acted more similar in 2008

when it came to the employment of capital budgeting techniques, is that a process of coercive, mimetic and/or normative isomorphism has taken place (DiMaggio and Powell, 1983; Carpenter and Feroz, 2001).

Somewhat surprisingly, between the 1960s and the first decade of the 21st century the utilisation of unsophisticated accounting-based capital budgeting methods increased in Swedish companies, perhaps because management's fear of failing to meet earnings targets.

The results were also compared to a U.S. (Graham and Harvey, 2001) and a continental European (Brounen et al., 2004) study. Total use of capital budgeting methods was generally higher in the U.S. and continental Europe than in Sweden. This cross-country difference could potentially be explained by cultural differences (Hofstede 1983, 1984), which management must adapt to.

Moreover, Swedish listed companies in general employed the unsophisticated "company discount rate" significantly less frequent in 2008 than in 2005. The most interesting finding regarding the utilisation of cost of equity estimation methods, was that the number of Swedish companies that estimated the cost of equity increased from 51% in 2005 to 61% in 2008. Moreover, in 2008 CAPM was the most utilised method to establish the cost of equity, while in 2005 it was the investors' required return. This could indicate more awareness and advanced behaviour among Swedish listed companies, confirming longitudinal data from U.S. companies (Gitman and Vandenberg, 2000).

2.2 Paper 2. What Determines the Use of Capital Budgeting Methods? Evidence from Swedish listed companies

In the second paper the aim is to analyse what determines the use of capital budgeting methods in Swedish listed companies in 2005 and 2008. The same survey data as in paper 1 was used. Previous studies have found size to be positively correlated with the use of some capital budgeting methods. However, most of these studies were based on descriptive methods such as correlation analysis and independent sample t-tests, which are not sufficient to establish causality. In this paper, multivariate regression analysis shows that large companies used net present value (recommended), internal rate of return (not recommended),

pay-back (not recommended), and sensitivity analysis (recommended) more than small companies.

Other company-specific variables that seemed to influence the choice of method were growth opportunities of the company, leverage, the dividend pay-out ratio, target debt ratio, the degree of management ownership, foreign sales, industry and individual characteristics of the CEO. The results supported hypotheses that Swedish listed companies have become more sophisticated over the years (or at least less unsophisticated); that companies with greater leverage used payback more; and that companies with stricter debt targets and less management ownership calculated the accounting rate of return more often. Surprisingly, companies with more educated CEOs used non-recommended methods such as IRR and discounted pay-back more than others.

2.3 Paper 3. Preparers' and Non-Preparers' Lobbying on the Proposed Prohibition of Goodwill Amortisation in ED3 'Business Combinations'

In the third paper, preparers' and non-preparers' positions regarding how goodwill should be accounted for, is investigated through an examination of submitted comment letters. I use positive accounting theory, an extension of agency theory (Watts and Zimmerman, 1978, 1986, 1990), to make predictions regarding the preparers' and the non-preparers' positions. It is hypothesised that, because of economic consequences non-preparers to a greater extent than preparers support the amortisation approach and that the preparers to a greater extent than non-preparers support the "impairment only" approach. The preparers are hypothesised to prefer the impairment only approach for two reasons.

First, it is assumed that preparers see it as advantageous when they can decide when an expense should be recognised. Due to the subjective nature of the impairment test, it is (within certain limits) possible for the preparer to decide when goodwill should be written-down (and thus when the expense should be recognised in the consolidated income statement). The possibility to choose when an expense should occur facilitates earnings management and since prior research suggests that managers do manage earnings (e.g. Leuz et al., 2003), it is reasonable to hypothesise that the proposed impairment only approach is supported by the preparers. Second, goodwill was at the time of the issuance of ED3, not amortised in the U.S. which could be perceived as a "competitive disadvantage" by the IASB-complying companies.

The non-preparer group consists mainly of auditing organisations and national standard setters. The main reason for why the non-preparers would not support the “impairment only” approach is that the “impairment only” approach, when compared to the amortisation approach, is difficult to verify. The difficulty of verifying the subjective impairment tests increases the risk of litigation (Moizer, 1992).

Moreover, the preparers’ and non-preparers’ supportive arguments, i.e. how they argue for or against the non-amortisation or amortisation approach, are studied. Based on previous research (e.g. Tutticci et al., 1994), it is hypothesised that both the preparers and non-preparers will use the same type of “sophisticated” framework based supportive arguments.

As hypothesised, preparers supported the impairment only approach to a greater extent than non-preparers. Moreover, both groups, as hypothesised, mainly employed sophisticated/conceptual arguments; i.e. usefulness arguments and cost/benefit arguments.

Even though preparers and non-preparers have different positions regarding the accounting for goodwill, which in this study is suggested to be due to perceived economic consequences, both respondent groups employed sophisticated/conceptual arguments and not economic consequences arguments. This finding is in line with earlier studies (Zeff, 1978, 2002; Watts and Zimmerman, 1979).

2.4 Paper 4. Swedish and Dutch listed companies’ compliance with IAS 36 paragraph 134

In the fourth paper, top management’s compliance (or lack of compliance) with IAS 36 paragraph 134, is investigated.

Disclosure compliance has potentially become even more important from a usefulness perspective because of IASB’s embracement of the balance sheet approach. The balance sheet approach leads to a more extensive use of fair values and/or values in use (Wüstemann and Kierzek, 2005). Since the purpose of the disclosure requirements is to improve the reliability of the accounting numbers, which to a higher extent than before are based on management’s estimations, compliance with the disclosure requirements could be of great importance from a

decision usefulness perspective. Prior studies have nevertheless documented a significant non-compliance with IFRS disclosure requirements (e.g. Street and Gray, 2002).

It was investigated to what extent companies listed on the NasdaqOMX and Euronext Amsterdam complied with the disclosure requirements in IAS 36 paragraph 134, and moreover which factors that explain why some companies comply with the standard to a higher extent than do other companies. The 2005 and 2008 annual reports were examined. The relation between the dependent variable, i.e. information disclosed in accordance with IAS 36 paragraph 134 in the annual reports of Swedish and Dutch listed companies and the independent variables, i.e. accounting oversight, auditing company, size, leverage, future prospects, industry and learning were examined.

The study shows that Swedish and Dutch companies, on average, only to a low extent complied with IAS 36 paragraph 134. The compliance level has however increased between 2005 and 2008 in both countries (however only significantly in the Netherlands) which indicates learning. Moreover, the results suggest convergence, supporting Peng et al. (2008). In 2005 Swedish companies were significantly more compliant with the disclosure requirements. In 2008, however, there was no significant difference between Swedish and Dutch companies. This indicates a development toward a more uniform application of (at least) IAS 36 paragraph 134, and potentially also other standards. This finding is of course great news for the IASB and ESMA, since one of their objectives is to facilitate a more uniform application of accounting standards. However, they should not settle since the results in the present study also reveal a high-level of non-compliance, despite learning. On average, only 61,9% of the requirements in IAS 36 paragraph 134 were met in 2008. The low level of disclosure compliance supports prior studies (e.g. Carlin et al., 2009; Al-Shammari et al., 2008; Carlin and Finch, 2010). Finally, the results also shows that financial companies disclosed significantly less information than non-financials, supporting (Lopes Rodrigues, 2007)

2.5 Data sources and research methods

The purpose of this section is to describe the primary and secondary data sources that are used in the four individual papers. Moreover, the choice of research methods and also some methodological issues are discussed.

2.5.1 Data sources

The first and second paper in this thesis are based on the interpretation of primary as well as secondary data. The primary data is data collected from two questionnaires (which foremost contain information on top management's use and application of capital budgeting and cost of capital estimation methods; i.e. the dependent variables). The secondary data in paper 1 and 2 is collected from Datastream (mostly independent variables such as size and leverage etc) and the Stockholm Stock Exchange (information regarding which companies that were listed on specific dates). The third paper is based on primary data collected from submitted comment letters (which, after coding, contain information regarding the respondents' positions and arguments). Finally, the fourth paper is based on primary data from annual reports (which, after coding, contain information regarding the level of compliance) and secondary data from Datastream (mostly independent variables such as size, P/E etc).

2.5.2 Research methods

Paper 1 and 2 employ the survey method. The first and second papers are based on data from questionnaires. The questionnaires were sent to the CFO's of all Swedish companies listed on the Stockholm Stock Exchange in year 2005 and 2008. The surveys are constructed as a replica of one performed in the US (Graham and Harvey, 2001). The survey results from 2005 and 2008 are compared to the Graham and Harvey (2001) survey and also to a Continental European survey (Brounen et al., 2004). Since the questionnaires in principle are identical the studies can be seen as highly comparable.

One drawback with questionnaires is that they do not measure the direct use of investment appraisal methods and cost of capital estimation techniques; they only measure reported use. Since I am not making direct observations, the reported use serves as a proxy for actual use. Nevertheless, even if direct observations had been made and we could establish the actual use, we can never know for sure whether the CFOs actually use the output from the appraisal methods when decisions are made (as discussed earlier). It could as well be that the investment decision is already made, and that the CFOs then utilise the appraisal methods to justify their choice of investment.

It is evident that the survey instrument in most cases does not permit deep drilling. On the other hand, it can cover large areas. Thus; even though the survey instrument has its

drawbacks, it also has a strong merit since enables a broad and rich overview. A broad and rich overview of the practical use of capital budgeting methods and cost of capital estimation techniques in Swedish listed companies has never been made in Sweden before

Paper 3 and 4 employ content analysis. Content analysis is a systematic method to code text into categories based on explicit coding rules (Krippendorff, 1980). In the third paper, the content in the comment letters is, through coding, dichotomised (impairment only approach or amortisation approach, conceptual/theoretical arguments or economic consequences arguments, consumption based arguments or internal logic based arguments). The dichotomous classification of the positions and arguments is based on a self-constructed coding scheme. The fourth paper uses a disclosure index to code the content in the annual reports. Disclosure indices can be either pre-developed (e.g. Flöstrand and Ström, 2006) or self-developed (e.g. Camfferman and Cooke, 2002). The disclosure index employed in the fourth paper is based on IAS 36 paragraph 134, so in that respect the disclosure index is pre-developed. On the other hand, since IAS 36 paragraph 134 to some extent is principles based, complementary coding rules has been developed and implemented in the disclosure index, so in that respect the disclosure index is self-developed. The index is constructed as a check list, and the more information that is being disclosed (in accordance with IAS 36 paragraph 134), the higher score the company receives.

The content analyses in paper 3 and 4 require judgement, which in turn, because of subjectivity, can open up for bias when the coding scheme (in paper 3) and disclosure index (in paper 4) are constructed and applied. To remedy the potential bias a description of the coding scheme (in paper 3) and disclosure index (in paper 4) are made in the individual papers. Still, even with the description of the coding scheme/disclosure index, it can always, because of the element of subjectivity, be questioned whether the “output” from the content analysis, is reliable. On the other hand makes the subjective qualitative approach, based on judgement, it easier to measure what I want to measure; the respondents’ positions and arguments (in paper 3) and the level of compliance (in paper 4). It would, for example, in the third paper be difficult to measure a respondent’s position, and supportive argument, just by counting how many times the respondent use one or many pre-specified terms (which on the other hand would be a more reliable measure). This is a typical trade off between reliability and validity that many researchers are faced with.

3. Conclusions, contributions and directions for future research

This thesis gives an insight into capital budgeting and accounting practice. The four papers consist of empirical data which describes management's capital budgeting and accounting choices. The four individual studies have been conducted with the purpose of answering the overarching research question: *What capital budgeting and accounting choices are made by top management in practice, and how can these choices be explained?* The overarching research question was then scaled down to four questions.

3.1 Research question 1

“What capital budgeting and cost of capital estimations methods do managers in Swedish listed companies choose?”. The research question is broken down to the following sub-questions:

What capital budgeting and cost of capital estimation methods do top managers use, and how are the methods applied, in practice? Answer: In 2008, the most utilised investment methods were the NPV-method and CAPM. Moreover, when evaluating foreign investments, the country discount rate, was the most employed discount rate. *Does top management act according to text books/norms?* Answer: Both yes and no. Managers seem to use both recommended and non-recommended methods. *What factors are associated with the use?* Answer: Two important factors are size and industry. *Are there differences among countries?* Answer: Yes, CFOs in the U.S. and continental Europe seem to use and apply capital budgeting methods more often than their Swedish colleagues.

3.2 Research question 2

“What determines the use of capital budgeting methods in Swedish listed companies?”. The research question is broken down to the following sub-questions:

What causal factors determine the use of capital budgeting methods? Answer: Large companies, for example, used NPV-method, IRR-method, pay back-method, and sensitivity analysis more than small companies. Other factors, such as industry, leverage and management ownership, also affected the use. *Have there been changes over time?* Answer: Yes, IRR (not recommended) and discounted pay-back (not recommended) were used less

often in 2008 than in 2005. Since the results show that the use of two non-recommended methods has decreased, it could implicate that management act more according to text books/norms in 2008 than in 2005. Nevertheless, non-recommended accounting based methods are also widely used.

3.3 Research question 3

“What goodwill accounting method does top management prefer?”. The research question is broken down to the following sub-questions:

Do top management’s preferences differ from other producers and consumers of accounting information? Answer: Preparers/managers generally prefer, as hypothesised, the impairment only model significantly more than non-preparers. *How do top management and other producers and consumers of accounting information argue for their positions?* Answer: Both preparers/managers and non-preparers used, as hypothesised, the same type of framework based arguments. The real reason for why the preparers and non-preparers lobbied was suggested to be economic consequences. Nevertheless, in line with previous research, the arguments put forth were based on normative accounting theory (and not on potential economic consequences).

3.4 Research question 4

“What determines compliance with the disclosure requirements regarding the goodwill impairment test, in Swedish and Dutch listed companies?”. The research question is broken down to the following sub-questions:

What is the level of compliance? Answer: The compliance level is low (slightly above 60% in both Sweden and the Netherlands in 2008). *What factors explain the level of compliance?* Answer: Non-financial companies seem to comply with the accounting standard to a higher extent than others. *Have there been any changes over time?* Answer: Yes, the level of compliance increases over time which indicates learning. *Are there differences among countries?* Answer: Yes, Swedish companies were significantly more compliant in 2005, but in 2008 there was no significant difference. This indicates convergence.

3.5 Main contributions

The first two studies (paper 1 and 2) give an important insight into capital budgeting practices in Swedish listed companies. For the first time the use of capital budgeting and cost of capital estimation methods in Swedish companies could be directly compared with U.S. and continental European practices. Overall, the results suggest that Swedish companies used capital budgeting and cost of capital estimation techniques less often than their U.S./continental European counterparts. Other interesting findings were changes over time. The use of two non-recommended methods declined significantly between 2005 and 2008. The results also show that Swedish listed companies in 2008 mostly utilised the NPV-method (which is recommended by textbooks), CAPM (which is often recommended by textbooks) and (when evaluating foreign investments) the country discount rate (which is often recommended by textbooks since it considers extra risk-factors). Over time, the use of sophisticated methods seems to be increasing and the use of unsophisticated methods decreasing. This indicates that the theory-practice gap is closing. The gap is however not eliminated, since accounting based methods still, probably because top managers' focus on quarterly earnings, are relatively popular.

Moreover, the results in paper 3 and 4 suggest that preparers in general supported the goodwill impairment-only approach, possibly because goodwill amortisation would be prohibited (paper 3). However, when the impairment-only approach subsequently was introduced, the preparers only disclosed slightly more than 60% of the assumptions underlying the impairment test, after three years of learning (paper 4). Goodwill is in other words not amortised and the substitute (i.e. impairment tests plus disclosure of the assumptions underlying the impairment test), seems to be more or less neglected by many listed companies.

3.6 Directions for future research

Results in the thesis raise some potential questions for future research. It would be interesting to follow the use of capital budgeting methods in Sweden. It seems as if more sophisticated methods are more common today than previously. Will this trend continue? Will, for example, discounting based methods be used more frequent in the future? More interesting is maybe the question why the use of more sophisticated methods does not affect company

performance. Should we measure the use differently, or should we measure company performance differently? Or should we conduct in-depth studies?

Another interesting field is that of management discretion. As noted, management can more or less “choose” when to expense goodwill. How does management handle this power? Should we trust management? To what extent does the auditor question management? Do the investors prefer the new accounting regime over the old one? How can the enforcement mechanism be improved?

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