Abstract

The aim of this thesis is to examine the quality of the disclosure IAS 1 Presentation of Financial Statements, paragraphs 122 and 125 in the annual reports of Swedish publicly listed firms. These paragraphs state that firms are required to disclose judgments made by management in preparing financial statements that may have significant impact on the recognized carrying amount. These paragraphs should also include information about major sources of estimation uncertainty.

A quantitative research approach is used and the sample consists of 1,519 annual reports over a 7-year period. We construct a disclosure index to assess the quality of the disclosures in Critical judgements and key sources of estimation uncertainty (IAS 1:122 and 1:125) note and categorize the annual reports into four index groups. Additionally, the number of headlines in the note are counted and sorted into three other groups, creating a headline index. Lastly, we multiply the disclosure index with the headline index to get a score, which then enable us to distinguish and rank the quality of disclosure between firms. Further, we count the number of words in each individual disclosure in each annual report. This additional quantitative data enable regression analyses, further ensuring objectivity in assessing the disclosure quality.

Agency theory and political cost theory are used as base for determining which firm characteristics may affect disclosure quality. We examine the firm characteristics firm visibility, ownership concentration and leverage to investigate any relationship with disclosure quality. We use the ordinary least squares (OLS) regression method to analyse this data. The analysis shows that firm visibility and leverage have positive relationships with disclosure quality. This supports the political cost theory and suggests that firms that are more visible have stronger incentives to attain a high disclosure quality. Our findings also support debt-associated agency problems and are also in line with prior studies that found a positive relationship between disclosure quality and the degree of leverage, which indicates that disclosures reduces the information gap.
Acknowledgements

We are deeply grateful to Professor Mattias Hamberg, our supervisor, for his invaluable help, with data, fruitful insights and relevant feedback. We also want to thank our seminar groups who took time to read our thesis and gave us comments and suggestions that have been very helpful during this course.
TABLE OF CONTENTS

1. INTRODUCTION AND PROBLEMATIZATION ........................................ 1
   1.1 Aim ........................................................................................................ 3

2. INSTITUTIONAL SETTING .................................................................. 4
   2.1 Accounting regulation .......................................................................... 4
   2.2 Details on IAS 1 paragraphs 122 and 125 ........................................ 4
   2.3 The notion of IAS 1 ........................................................................... 6

3. THEORY .............................................................................................. 8
   3.1 Agency theory ................................................................................... 8
   3.1.2 Disclosures .................................................................................. 9
   3.2 Political costs theory ........................................................................ 10
   3.3 Firm visibility ................................................................................... 12
   3.4 Ownership concentration ................................................................ 13
   3.5 Leverage .......................................................................................... 15

4. METHOD ............................................................................................ 17
   4.1 Research approach ........................................................................... 17
   4.2 Operationalization ............................................................................ 17
   4.2.1 Content analysis .......................................................................... 17
   4.2.2 Disclosure quality measurement ................................................ 18
   4.2.3 Disclosure index .......................................................................... 19
   4.2.4 Word Count ................................................................................. 23
   4.3 Test variables .................................................................................. 24
   4.4 Control variables ............................................................................... 25
   4.5 Sample and data ............................................................................... 27
   4.6 Model used to test the hypotheses .................................................. 29
   4.7 Sample adjustments and tests .......................................................... 30

5. EMPIRICAL RESULTS ........................................................................ 31
   5.1 Descriptive statistics ........................................................................ 31
   5.2 Correlation analysis ......................................................................... 33
   5.3 Regressions ...................................................................................... 36
   5.4 The effect of firm characteristics on disclosures ............................. 43

6. CONCLUSIONS ................................................................................. 45

REFERENCES ....................................................................................... 47

APPENDIX 1 ....................................................................................... 57
1. Introduction and problematization

During the last decades, the international cooperation between standard setters has been intensified to harmonize the rules in accounting (Barth, Landsman & Lang, 2008). To accomplish this objective, in 2005 International Financial Reporting Standards (IFRS) were, which led to a significant change in the accounts for many firms around the world (Barth et al. 2008). A consequential feature of the IFRS is that the standards are principle-based rather than rule-based, which are characterized by less precise guidance and fewer bright-line rules (Barth et al. 2008). Thus, management has the discretion to determine how a specific transaction is accounted in disclosures with the overruled purpose of giving a true and fair view (Financial Reporting Council, 2014). A truthful depiction will help firms’ stakeholders to get a better understanding of firms operations (Healy and Palepu, 2001; CESR, 2010).

The increase of complex business structures, regulations and a dynamic economy have led to demands from stakeholders to get information from firms to assess their future (Dobler, 2008). Lang and Lundholm (1993) argue that the annual report is one of the most important means to supply information to stakeholders. Paragraphs 122 and 125 in International Accounting Standards 1 (henceforth referred to as IAS 1) have disclosure requirements about judgments and uncertainties on accounting information (CESR, 2010). If complied with, the gap of uncertainty and informational discrepancy between the firm´s management and their stakeholders decrease (Healy & Palepu, 2001). The financial crisis increased the focus on the judgments and estimates made by management with “users seeking to understand the extent to which the accounts had been affected” so enforces required preparers to disclose their rationale better (CESR, 2010, p. 16). The information should reflect firms underlying economics and address the complexity of measurement uncertainty (Healy & Palepu, 2001; CESR, 2010). This is important considering that disclosures are discretionary due to their subjective nature (Dobler, 2008). When allowing for large amount of judgement in accounting standards, such as for IFRS, it is necessary that managers present relevant information to stakeholders pertaining to the measurement process, to be able to evaluate whether the management judgment is reasonable (Barker, Barone, Birt, Gaeremynck, McGeachin, Marton & Moldovan, 2013; Schipper, 2007).
In practice, the firms management determine what information that should be disclosed (Healy & Palepu, 2001) and is sometimes merely a standardized text that lacks a sufficient background or context (CESR, 2007). Empirical studies have documented large variations and deficits in disclosures, which indicates that firms do not fulfil the requirements in a satisfying way (Dobler, 2008). These results are confirmed by the European enforcers, which also found substantial non-compliance with the disclosure requirements in IAS 1 i.e. the disclosure are not enough firm-specific and tends to include too much irrelevant information (CESR, 2007).

A plausible reason for the lack of information might be that firms do not want to disclose firm-specific information in fear of competitors that might use the information against them (Penno, 1985). However, as Fuller and Jensen (2002, p. 43) illustratively describes it: "trying to mask the uncertainty that is inherent in every business is like pushing on a balloon; smoothing out today's bumps means they will pop up somewhere else tomorrow, often with catastrophic results”. Indeed, the consequences of unexpected accounting scandals have had a major impact on the society (FAR, 2015). Information about uncertainties and estimations regarding the firm's operations is therefore an important matter for the whole society, because everyone is affected whether the firm will keep on operating or go out of business (Penno, 1985).

Even though research has indicated a lack of adequate information in disclosures, it exists incentives to have an informative reporting. In accordance with the political cost theory, firms are willing to comprehensively disclose information to avert unwanted attention (Watts & Zimmerman, 1978). Watts & Zimmerman (1978) argue that with less unwanted attention firms avoid potential investigations on the part of the stakeholders and thereby reduce their political costs.

Research about disclosures in general is not new and previous research has concluded that factors influencing the publication of information in annual reports are determined by e.g. firm size (Linsley & Shrives, 2006), ownership structure (Abraham & Cox, 2007), industry (Elzahar & Hussainey, 2012) and firm visibility (Cieslak, Hamberg & Vural, 2014). However, we have found scarce literature that is studying firm characteristics and incentives for providing comprehensive information in disclosures required by IAS 1 paragraphs 122 and 125. Also, there has been noted by European enforces a noncompliance with the
disclosure requirements (CESR, 2007, 2010), which make this an important area to study. Moreover, there is an on-going debate about disclosures and its role and shape, along with discussions regarding the merits of principle based accounting as well as recent updates to IAS 1 under the IASB’s current Disclosure Initiative (ED/2014/1) (IFRS Foundation, 2014).

1.1 Aim
The aim of this thesis is to investigate the quality of Swedish publicly listed firms disclosed information about critical judgments and major sources of estimation uncertainty and thereby increase the understanding of the underlying initiatives for providing information in disclosures. This study contributes to this area by giving important insights to the debate about the different types of firm characteristics that increase the initiatives to provide disclosures that reflect firms underlying economics. Thus, this study is important for regulators, standard setters and various stakeholders interested in disclosures in various ways.
2. Institutional setting

2.1 Accounting regulation
The International Accounting Standards Committee (IASC) published the first IAS in 1975 (Barth et al. 2008). Since then, the process for setting IAS has undergone substantial development, culminating in the 2001 restructuring of the IASC into the International Accounting Standards Board (IASB) (Barth et al. 2008). A goal of the IASC and IASB is to develop international financial reporting standards to ensure high quality (Barth et al. 2008). In 2002, The European Union adopted the IAS Regulation (IFRS, 2013).

A firm shall apply IAS 1 when preparing and presenting general-purpose financial statements in accordance with IFRS (EC, 2011). Since the adoption of Regulation (EC) 1606/2002 by the European Union, IFRS have been mandatory in consolidated financial statements for publicly listed firms since 2005. One of the main objectives with IFRS is to ensure a high degree of transparency and comparability of financial statements, and thus, become more useful and relevant to the users (Barth et al. 2008). IAS 1 deals with the overall disclosure requirements for financial statements by instructing how it should be structured, the minimum requirements for the content and overriding concepts like going concern and the accrual basis of accounting (IASplus, 2015).

In addition to the international accounting standards, Swedish firms are also required to comply with the recommendations for preparing annual reports, issued by the Swedish Financial Reporting Board, which is based on IFRS, but adapted to suit the Swedish legal and tax environment (IFRS, 2013). In addition, the Swedish Annual Reports Act (Årsredovisningslagen) requires firms to disclose information regarding future developments, material risks and uncertainties (SFS 1995:1554).

2.2 Details on IAS 1 paragraphs 122 and 125
IFRS are principle based and involves subjective estimates and judgements (Barth et al. 2008). Therefore, the disclosure requirements in IAS 1:122 and 125 are developed to provide information about those estimates and judgements (Barth et al. 2008). It is required that this information being disclosed in the notes, either in the significant accounting policies or in another note in the financial statement (IAS 1:122).
In accordance with IAS 1:122, the firm shall disclose information about the judgements that have been made by management when applying the firms accounting policies. This includes the judgements that have the most significant effect on the amounts recognized in firm’s financial statements (IAS 1:122).

In accordance with IAS 1:125, firms shall disclose information about the estimations that has been made by management (IAS, 1:125). This means the estimates and assumptions that require management’s most subjective, complex and difficult judgements (IAS 1:127). The standard also requires that firms should disclose information regarding the key assumptions they make about the future (IAS 1.125). Further, the firm shall disclose information about major sources of estimation uncertainty that have a high risk of resulting in a material adjustment of the carrying amounts of assets and liabilities (IAS 1.125). In those cases, the firm shall disclose detailed information regarding the nature and carrying amount of those assets and liabilities (IAS 1.125).

IAS 1 paragraph 122 states that a firm shall disclose the judgements (except those involving estimations) that management has made in the process of practice the firms accounting policies (IAS 1:122). All judgements that involve estimations are, according to IAS 1:125, required to be disclosed (IAS 1:125). In other words, the disclosure requirements in paragraph 122 are not the connected with the disclosures about sources of estimation uncertainty in paragraph 125 (IAS 1:122). Yet, even though the IAS 1 separate them, it is common in praxis that firms do not distinguish between them in the financial reports (Runesson & Marton, 2011; NASDAQ OMX Stockholm, 2014).

IASB holds the opinion that the disclosure requirements in the notes 122 and 125, if used in the intended manner, provide the financial statements users with valuable information (IFRS Foundation, 2014). Accounting literature also points out the importance of such disclosures. When a high degree of judgement is allowed, as in IFRS, it is important that users receive information about the measurement process for them to be able to evaluate if the judgment management have used is reasonable (Barker et al. 2013; Barth et al. 2008; Schipper, 2007)
2.3 The notion of IAS 1

The notes should provide narrative descriptions that are relevant to an understanding of the items presented in the financial statements, as well as facts about the items that do not qualify for recognition in the financial statements (EC, 2011). To help the users of financial statements to understand the information firm are required to present the information in a systematic manner (EC, 2011). Even though IASB (2014) clarifies that firms have some flexibility in how they present the notes they emphasize that understandability and comparability are important. To increase the understanding and comparability the firm can group together items and present them under one heading (EY, 2014). Grouping the relevant information together makes it clear what the relationships are among the type of information disclosed (IFRS Foundation, 2014). Thus, firms do this in practice by systematically divide the information under different subheadings (Runesson & Marton, 2011).

The IAS 1 is based on the concept of materiality and a direct reference is made in IAS 1:125. IASB define materiality in the Conceptual Framework as “an entity-specific aspect of relevance based on the nature or magnitude (or both) of the items to which the information relates in the context of an individual entity’s financial report” (Conceptual Framework for Financial Reporting, paragraph QC11). In other words, materiality is about making judgements about the importance of a firm-specific issue or type of item. Then management need to decide whether to disclose the information, considered both their nature and their magnitude. An item is considered material if it influences the economic decisions that users make (IFRS Foundation, 2014).

Standard setters are currently discussing the concept of materiality due to the lack of clarity and understandability in applying the concept in practice (IFRS Foundation, 2014). There are issues both regarding that firms disclose too much irrelevant (immaterial) information (IFRS Foundation, 2014) and not sufficiently relevant (material) information (Robinsson & Banner, 2014). Accordingly, IASB (2014) suggests that the materiality requirements in IAS 1 is clarified to emphasise that firms shall not aggregate or disaggregate information in a manner that hide useful information. This is a suggestion that also emphasize in a report by NASDAQ OMX Stockholm (2014), where they identified issues in the compliance with IAS 1 among Swedish listed firms. The report states the disclosure is often a general text that is applicable on any firm and not enough specific to the firm. Firm-specific information can be
information regarding the economic impact of estimates and judgements in the form of qualitative information and quantitative information (Beretta & Bozzolan, 2004).
3. Theory

3.1 Agency theory

In a public listed firm, there are clusters of contracts, such as between non-controlling owners, controlling owners, managers, board members and creditors (Jensen & Meckling, 1976). Principals are the firm’s stakeholders and agents are the firm’s managers (Jensen & Meckling, 1976). The agency theory assumes a difference of interest between the agent and the principal because of the separation of ownership and control (Jensen & Meckling, 1976). The inherent problem is that the principal cannot verify that the agent has behaved appropriately and acted in concert with the principal preferences (Jensen & Meckling, 1976; Eisenhardt, 1989). Information asymmetry is a common problem between principals and agents and have resulted in several control mechanisms, e.g. monitoring activities, to reduce this problem (Healy & Palepu, 2001).

Agency problems may arise from the separation of ownership and management, Type I agency problems (Jensen & Meckling, 1976; Shleifer & Vishny, 1986) or from conflicts of interest between controlling and noncontrolling shareholders, Type II agency problems (La Porta, Lopez-de-Silanes & Shleifer, 1999). Both types of agency problems may lead managers to act against the best interests of stakeholders. Agency theory is much about self-interest and one accompanying problem is that the principal and the agent may have different attitudes toward risk (Eisenhardt, 1989). The agent may prefer an action other than what the principal wishes (Eisenhardt, 1989) and to protect his property the owner can establish contracts between the two parties and thereby align their interests (Jensen & Meckling, 1976). However, research about contracts is vast and research has concluded that it is not feasible to determine the optimal contract due to the high costs and practical issues (Shleifer & Vishny, 1997; Eisenhardt, 1989). Fama and Jensen (1983) claims that to mitigate the effects of inadequate contractual agreements owners can monitor managers behaviour to achieve decisions that are in accordance with owners interest.

Monitoring activities involve the expenditure of resources by the outside stakeholders to guarantee that managers limit their activities in accordance with a contract (Watts & Zimmerman, 1986, p. 181). By investing in information systems, e.g. reporting procedures, principals can reveal the agents real behaviour (Eisenhardt, 1989). Jensen and Meckling (1976) argue that not only the principals that have incentives to employ monitoring. The
agents also have incentives to convince their stakeholders that they act in concert with their stakeholders’ preferences (Jensen & Meckling, 1976; Watts & Zimmerman, 1986, p. 184). By providing extensive information in the annual report, the agents demonstrate that they are acting in concert with stakeholders and thereby reduce monitoring costs (Abraham & Cox, 2007; Khlifi & Bouri, 2010).

Hart (1995) argue that in a widely held firm the incentives for limited liability shareholders to monitor management are low, which introduce free rider problems. Free rider problems occurs because shareholders in a widely held firm has little, or no incentives, to monitor management since only they will incur the costs of doing so, while the benefits will be distributed among all shareholders (Hart, 1995). It does not make sense for limited liability shareholders to actually incur the cost of monitoring. Hence, all shareholders hope to free-ride and leave someone else to pay for monitoring (Hart, 1995). When each shareholder thinks similar, very little monitoring will take place and less monitoring will take place (Hart, 1995). Consequently, with reduced monitoring, the agency cost increases (Jensen & Meckling, 1976).

To resolve the information asymmetry between management and the shareholders in a widely held firm it is of utmost importance that management provides high quality financial information that informs stakeholders about their actions (Ball, Kothari & Robin, 2000; Ali & Hwang, 2000). Hence, disclosures´ reduce agency costs (Jensen and Meckling, 1976) and firms are able to further reduce the agency costs by increasing the amount of information in the annual reports (Rajab, 2009). Still, Healy and Palepu (2001) stress the importance of the information to be relevant in order to be able to convincing the stakeholders that the management is acting in a proper manner.

3.1.2 Disclosures

Lang and Lundholm (1993) argue that annually financial reports are one of the most important devices to supply information to stakeholders. As aforementioned, disclosures about accounting information are also one of the most important monitoring mechanisms (Jensen & Meckling, 1976). In order to achieve the desired effect, however, the accounts have to possess certain qualities, and be of high quality (Barth, et al. 2008). Accounting standard-setters and regulatory agencies have taken several steps to improve disclosures
(Barth, et al. 2008) with the main objectives to achieve increased quality, harmonization and comparability of financial statements in Europe (EC, 2002).

IFRS are principle-based, meaning that they rely on concepts and principles, for example by requirements that values are measured reliably even though it requires subjective judgement rather than merely objective instructions about quantitative tests (Barth, et al. 2008). When management exercise professional judgment about the underlying economics, the substance of events is better depicted (Barth et al. 2008). The requirements in IAS 1 paragraphs 122 and 125 are therefore imposed to ensure that management is providing a minimum level of information about the key judgements and major sources of estimation uncertainties involved in the accounting policy (IFRS Foundation, 2014).

Managerial incentives that thwart the purpose of the information is assumed to exist due to the nature of the agency relationship, which reduce the usefulness of the accounts (Healy & Palepu, 2001). Firms are able to use disclosures as an instrument to manipulate stakeholders through the discretion provided by principle based standards (Dobler, 2008). For example, Beretta and Bozzolan (2004) and Abraham, Marston and Darby (2012) research indicate that firms prefer to disclose more backward-looking information rather than forward-looking information. Stakeholders, therefore, risk that important information is not included in the disclosure and the intended purpose of IAS 1 paragraphs 122 and 125 is lost. Dobler (2008) argue that the diverse application of requirements and non-compliance with standards are consistent with the perception that, at least some, managers actually exercising the discretion given by principle based standards (Dobler, 2008). If the reporting choices made by management are able to influence decisions and actions of stakeholders the manager is able to control, at least to some extent, stakeholder reactions and more specifically, manage the risks that are derived from these reactions (Dobler, 2008).

3. 2 Political costs theory

Watts and Zimmerman (1978; 1986, p. 226) argue that politicians have the power to intrude firms and redistribute wealth by e.g. imposes regulations. For instance, certain groups have incentives to lobby for regulation or break-up of an industry or corporation (Watts & Zimmerman, 1986, p. 171). These demands give politicians incentives to propose such actions to defend stakeholders that not are sufficient financially sophisticated against losses.
By introducing minimum disclosure requirements, regulators are able to reduce the information asymmetry inherent between firms and their stakeholders (Watts & Zimmerman, 1986, p. 169). Therefore, management has incentives to ward off unwanted attention from supervisors and potential government intrusions (Watts & Zimmerman, 1978). Providing information in annual reports are asserted to reduce agency costs whereby the management has the discretion to make choices to report information for their own self-interest (Watts & Zimmerman, 1978, 1979, 1986, p. 165; Dobler, 2008). Thus, a firm that is under high scrutiny from regulators or authorities have incentives to disclose extensive information to avoid regulatory interventions (Watts & Zimmerman, 1986, p. 165). When firms disclose detailed information in annual reports the likelihood that requirements of providing more rigorous, hence costly, disclosures will materialise decrease (Watts & Zimmerman, 1978).

Watts and Zimmerman (1986, p. 235) further argue that size is a factor that could lead to political costs. Hackston and Milne (1996) confirm this proposition and then state that the agency theory also contains arguments for a size-disclosure relationship. The reasoning behind this argument is that large firms have higher political costs that incurs from antitrust and corporate responsibility (Watts & Zimmerman, 1978). Trotman & Bradley (1981) argue that external pressures, including unfavourable public opinion, can vary with factors such as their impact on the society. Large firms are therefore more likely to provide stakeholders with extensive information to avoid regulations and to reduce political costs (Gray, Kouhy & Lavers, 1995). Another plausible explanation discussed by Lang and Lundholm (1996) is that the media and the public require more information from larger firms than they do of smaller ones.

Firms with high media coverage also incur higher public scrutiny from stakeholders, whereby they are able to increase the information in their disclosures to either manage their image positively, or to distract attention from various stakeholders (Deegan & Gordon, 1996). The degree of pressure from the public dictates the political costs that firms incur (Trotman & Bradley, 1981). Watts and Zimmerman (1978) assert that political costs affect firms decision about whether they are willing to meet, or exceed, the requirements of disclosures or if they are willing to suffer the costs of averting them (Watts & Zimmerman, 1986, p. 243). By avoiding negative attention the management is able to reduce the likelihood of adverse political actions and, thereby, reduce its expected costs, including the legal costs the firm
would incur opposing the political actions (Watts & Zimmerman, 1978). Hence, firms tend to disclose more information about their risks and uncertainties to avoid prosecution or investigations on the part of their stakeholders (Watts & Zimmerman, 1978).

3.3 Firm visibility

Resnick (2004) stresses that firms most important intangible asset is their reputation and argue that public missteps can result in a loss of confidence and trust among investors, analysts, customers and other stakeholders. He further argues that a loss of confidence and trust from stakeholders could be potentially disastrous to the long-term survival of the firm (Resnick, 2004). More specifically, some events have the impact of changing relevant public's perception of firms' activities (Mitchell, Agle & Wood, 1997). Therefore, firms must frequently monitor their stakeholders shifting perceptions to apprehend the opinions that may end up into legitimacy threats (Deegan, 2007). When firms are subject to high visibility in media, they also incur a higher level of scrutiny from the public (Cieslak et al. 2014). That is, accompanying with a high degree of visibility firms are also, generally, regarded to receive a disproportionate share of attention from politics, stakeholders and media (Core, Guay & Larcker, 2008). Additionally, relating to Watts and Zimmerman’s (1986, p. 235) argument that size is a determinant for political costs, Miller (2006) argues that size is a key determinant of publicity.

Core et al. (2008) discuss media as a “vehicle through which information is aggregated and credibly communicated to the public” (p. 2) and can therefore “play a substantial role in reducing the costs of contracting parties for collecting and evaluating information” (p. 2). Governments, but also other stakeholders, that become aware of visible firms are likely to require more justification, by means of disclosures, than firms that go largely unnoticed by their stakeholders (Watt & Zimmerman, 1986, p. 235). In other words, increased attention leads to imposing political costs, which in turn leads to increased justification by providing disclosures that firms are acting in the best interests of their stakeholders (Redmayne, Bradbury & Cahan, 2010). Indeed, several studies (e.g. Cormier & Magnan, 2003; Magnan & Van Velthoven, 2005; Leventis & Weetman, 2004) have found that media visibility is an important factor influencing better disclosures. Through the lens of agency theory, Watson et al. (2002) also discusses that high public scrutiny motivates firms to disclose high quality information, which subsequently reduces agency cost.
Cieslak et al. (2014) found a positive relationship between firm visibility and quality of executive compensation disclosures in Sweden. They found that the level of visibility in newspapers and business magazines increased firms’ incentives to disclose more accurate and timely (Cieslak et al. 2014). We argue that firms with high press visibility incur more scrutiny of their financial statements. In line with the findings of Cieslak et al. (2014), we argue that highly visible firms need to substantiate their decisions more i.e. disclose more firm-specific information, which leads to higher quality. Hence, in accordance with Cieslak et al. (2014) and Redmayne, Bradbury and Cahan (2010) we consider that higher visibility in press is an important incentive for firms to disclose extensive information in their annual reports.

H1: Visibility in the press are positively related with disclosure quality

3.4 Ownership concentration

In widely held firms, the separation of ownership and control is high, which render high monitoring costs (Jensen & Meckling, 1976). Widely held firms are therefore more likely to provide more detailed information in their disclosures to confirm that they are acting in the best interest of their stakeholders than firms with concentrated ownership (Depoers, 2000). It is believed that when a firm have many smaller owners, it is less likely that the firms owners are as familiar with the firms operations as large owners are able to be (Burkart, Gromb & Panuzi, 1997). The premise is that owners in firms with concentrated ownership tend to obtain the information they want, or require, from other information channels than from the information that firms disclose (Cormier et al. 2005). According to Burkart et al. (1997), one of these sources where large owners can get information is in board meetings. In essence, non-controlling owners demand extensive disclosures, thus compliance with the reporting standards, since disclosures are their main source of information about firms operations (Dumontier & Raffournier, 1998). If the information is not exhaustive, the costs of obtaining more information are high, and non-controlling owners may end up without important information (Dumontier & Raffournier, 1998).

However, there are mechanisms that promote good disclosure practices. Dyck and Zingales (2002, 2004) found that media plays a role in corporate governance and influences firms behaviour. If firms with weak corporate governance attract attention from media, it may drive politicians and regulators to impose reforms to prevent firms to failure, especially when
failure might cause public uproar (Dyck & Zingales, 2002). Moreover, the board of directors is a mechanism that are able to reduce agency problems since the board of director’s role is to monitor the management on behalf of external owners (Healy & Palepu, 2001). Raffournier (1995) argues, in line with Jensen and Meckling (1976), that managers in widely held firms also are motivated to disclose more information about how they act to help shareholders monitor their behaviour. The incentive is to avoid, or minimize, stakeholder suspicions about questionable practices, i.e. managers have substantial incentives to legitimize their actions (Bebchuk & Fried, 2003) so stakeholder demands does not end up into new regulations (Watts & Zimmerman, 1978). Hence, managers extensively disclose information to reduce their political costs (Watts & Zimmerman, 1978).

The Swedish context differs from most other countries in the ownership structures and governance mechanisms (Shleifer & Vishny, 1997; Leuz, Nanda & Wysocki 2003). Countries, such as the United Kingdom or United States, are characterised with diverse ownership structures (Shleifer & Vishny, 1997). In contrast, ownership structures in Sweden characterized by a weaker management and controlling owners (Shleifer & Vishny, 1997). The controlling owners often take active participation by sitting on the board of directors (Shleifer & Vishny, 1997). With controlling owners on the board, agency type II problems are important to consider since controlling owners have the opportunity to act opportunistic on behalf of the non-controlling owners (Shleifer & Vishny, 1997).

Prior research (e.g. Dumontier & Raffournier, 1998; Abraham & Cox, 2007; Bushee & Noe, 2000) has found divergent results. For instance, Ashbaugh (2001) Dumontier and Raffournier (1998) Lajili (2007) and Kajuter (2006) found that widely held firms provide higher levels of disclosure. However, Abraham and Cox (2007) found both a positive and a negative relation and Bushee and Noe (2000) did not find any relation between ownership concentration and disclosures. Even though research is inconclusive about how ownership structures affect disclosures, we argue that since larger shareholders play an active role in controlling the firm they are able to intervene when management does not act accordingly to their preferences and there is less need for disclosures (Cormier et al. 2005). Thus, following agency theory, we pose the following hypothesis:

H2: Ownership concentration are negatively related with disclosure quality
3.5 Leverage

Agency costs do not only arise between management and owners, and among controlling and noncontrolling owners, it also arises in relation to debt financing (Jensen & Meckling, 1976; Watts & Zimmerman, 1986, p. 210). Elzahar & Hussainey (2012) claim that firms with high debt has greater demands from creditors to extensively disclose information. Firms with high debt are firms that the society perceives as risky and, therefore, incur demands to disclose information about the associated risks (Jensen & Meckling, 1976; Watts & Zimmerman, 1986, p. 166). In these situations, the management can comply with the demand to legitimize their actions, i.e. reduce their political costs (Watts & Zimmerman, 1978; Deegan & Gordon, 1996).

Agency theory posits that firms with high levels of debt voluntarily disclose more information about the risks associated with high indebtedness (Jensen & Meckling, 1976; Watts & Zimmerman, 1986, p. 163). As firms debt increase, so do the risk of bankruptcy, but also the incentives for the creditor to monitor the firm (Ang, Cole & Lin, 2000). Firms, thus, have incentives to satisfy demands from creditors that they don´t behave opportunistic by e.g. reduce suspicions of wealth transfers to shareholders by incurring debt (Jensen & Meckling, 1976; Watts & Zimmerman, 1986, p. 215). Disclosures could therefore be a mechanism to convince creditors that shareholders and managers are not circumventing the debt contracts (Healy & Palepu, 2001).

The monitoring that creditors perform complements the monitoring that shareholders perform (Ang et al. 2000). The additional monitoring that creditors perform indirectly reduce Type I agency costs, i.e. the information asymmetry between owners and management decrease (Ang et al. 2000). If firms disclose information that explains the actions management has taken, it will reduce the risks perceived by all stakeholders and reinforce firms’ credibility (Iatridis, 2008). Thus, disclosures alone are capable of reducing the information asymmetry, and thereby, reduce uncertainties around firm’s financial situation and future prospects (Iatridis, 2008). The political cost theory also proposes that firms with high debt have incentives to disclose information and that firm’s reputation is a mechanism for resolving information problems (Watts & Zimmerman, 1986, p. 234). According to political cost theory, firms disclose information to legitimize their actions to reduce political costs and thereby reduce any negative impact on their business (Deegan & Gordon, 1996; Watts & Zimmerman, 1986, p. 242). Thus, the more information firms disclose the more trustworthy
they are perceived by their stakeholders (Watson, Shrives & Marston, 2002). Watson, Shrieve and Marston (2002) concluded in their study that agency costs are the underlying reason for the existence of such relationship.

According to Jensen and Meckling (1977), agency costs increases with a high debt ratio and creditors protect their interests by demanding information about firms operations (Watts & Zimmerman, 1986, p. 196). Firms have, therefore, the opportunity to disclose more information and thereby decrease the uncertainty for stakeholders, and consequently decrease agency costs (Watson et al. 2002). Hence, to reduce monitoring costs, management choose to extensively disclose information (Meek, Roberts & Gray, 1995). Indeed, research (e.g. Ismail & Chandler, 2005; Watson, Shrives & Marston, 2002; Broberg, Tagesson & Collin, 2009) has shown that companies accompanied with a high debt ratio tend to disclose more information. Watson, Shrives and Marston (2002) and Broberg et al. (2009) found results in their research indicating a positive relationship between leverage and the quality of the information that firms disclose. Thus, firms with high leverage disclose information more comprehensively than firms with low leverage (Watson, Shrives & Marston, 2002; Broberg et al. 2009). Therefore, following agency theory and political cost theory, we hypothesise that;

H3: Leverage are positively related with disclosure quality
4. Method

4.1 Research approach
We perform a quantitative study to investigate the quality of Swedish listed firms disclosures in accordance with IAS 1:122 and 1:125 *Critical judgements and key sources of estimation uncertainty*. We choose a deductive approach since our assumptions stems from already established theories and previous research (Bryman & Bell, 2011, p. 27). We perform our statistical analysis with an ordinary least squares (OLS) regression to examine the relationship between the disclosure quality and the influencing characteristics. To test the hypotheses we use the following model:

\[
\text{Disclosure Quality} = \text{Firm characteristics} + \text{Control variables} + \text{Fixed effects}
\]

Firm characteristics include firm visibility, ownership concentration and leverage. Our control variables are size, profitability, number of years listed and founding firm. We also control for fixed (year and industry) effects. The model captures the relationship between our chosen firm characteristics and the quality of disclosures between the years 2007 to 2013.

4.2 Operationalization

4.2.1 Content analysis
Previous studies (e.g. Beretta & Bozzolan, 2004; Abraham & Cox, 2007) have used content analysis to measure the quality of disclosures. Content analysis is ”a research technique for making replicable and valid inferences from texts to the contexts of their use” (Krippendorff, 2004, p. 18). Milne and Adler (1999) argue that content analysis is a useful method because it allows systematically comparing and then classifying the disclosures. However, content analysis has its drawbacks. One of the most frequent accusations is that the method is inevitably subjective (Linsley & Shrives, 2006). Furthermore, our analysis cannot be better than the material that we investigate (Bryman & Bell, 2011, p. 308). Although some drawbacks, we follow these scholars and use content analysis to study the quality of disclosures. Equal to Linsley and Shrives (2006) we use a coding method to be able to provide valid conclusions.
4.2.2 Disclosure quality measurement

Meaning of quality
In many fields of research, the definition of quality is a key concept e.g. quality of life and quality of service provision (Beattie, McInnes & Fearnley, 2004). In all cases, the concept is subjective and context-sensitive (Beattie et al. 2004). Defining quality of accounting disclosures is not an exemption. Quality is a complex concept and previous studies have defined it in several different ways (Beattie et al. 2004). Some accounting research defines disclosure quality “as the ease with which investors can read and interpret the information” (Beattie et al. 2004, p. 20). Other studies define disclosure quality as the amount of disclosure, i.e. firms that disclose more information can be expected to provide disclosure of higher quality, all other things being equal (Beattie et al. 2004).

However, relative amount is only one quality dimension. Some scholars (e.g., Dedhiya & Kong, 1995) propose that to obtain a rich understanding of disclosure quality the use of indices is beneficial. Beattie et al. (2004) argue that indices are useful in relating disclosure quality to other variables of interest. They further argue for the value of both indices and the amount of disclosure to assess disclosure quality. Following Beattie et al. (2004), we use two measures to define quality. The first is by constructing an index and perform a content analysis and the second one is by measuring the amount of disclosure.

Disclosure index construction
Beretta and Bozzolan (2004) have concluded that the quantity of disclosed information are not a satisfactory proxy of quality itself since it also depends on the information that is provided in the disclosures; thus, its relevance for stakeholders. The disclosures are more relevant to stakeholders if the information is specific to the firm, and not merely standardized text (IFRS Foundation, 2014). Therefore, to be able to provide reliable and valid conclusions we developed a disclosure index that we follow consistently throughout the investigation.

Marston and Shrives (1991) points out that the failure of many studies is because of a lack of explicitly consider validity issues. There are indeed validity issues with constructing indices since most researches adapts and tailor existing indices to meet their own needs. Still, Marston and Shrives (1991) conclude that even though subjective judgment is inevitably in the construction of disclosure indices it is a valuable research tool. We, therefore, use content analysis with a self-constructed index in this study. In line with Botosan (1997) we use a
coding scheme that incorporate ordinal measures, i.e. different levels to allow for the quality in IAS 1:122 and IAS 1:125 to be assessed.

Pilot study
Before the determination of our present index, we perform a pilot study. The pilot study included 10 companies from 2011 to 2013 and our initial disclosure index had five index groups (1 to 5). Afterwards we made minor alterations to our index due to the difficulties to assess to what disclosure group the disclosure should be categorized in. An index with too many groups, and too detailed, might complicate the assessments of similar disclosures. Thus, the alterations were made was to facilitate consistency with the assessments of the annual reports. Hence, we reduced five index groups to four index groups. Our, present, index is presented in the sect section.

4.2.3 Disclosure index
Grouping together items that are related is both suggested by praxis (EY, 2014) and by regulators (IFRS Foundation, 2014). In line with this, we assess the disclosures to be of high quality if firms provide separate subheadings in the note, which increase understandability. In addition, we follow Beretta and Bozzolan (2004), and assess high quality information when substantiated with quantitative information, i.e. information that specifies the economic impact in numbers. IAS 1:125 require firms to disclose the carrying amounts of critical assets and liabilities. Numbers in the note can relate to; dates, amounts, valuations, sensitivity analysis, in-/decrease in percent. However, we do not take into account whether a separate subheading contains numbers because of the aforementioned time limit. Hence, an annual report is categorised in the disclosure index group three if the note have separate subheading(s) and the note as a whole contain at least two numbers.

An annual report is categorised in the disclosure index group two if the note contain subheading(s), only qualitative information and not more than one number in the note as a whole. An annual report is categorised in the disclosure index group one if the note only have qualitative information and no subheading(s) or numbers. Lastly, an annual report that not provides a note with estimations and uncertainties is categorized disclosure index group zero. We present the disclosure index in Table I.
Table I. Disclosure Index

<table>
<thead>
<tr>
<th>Group</th>
<th>Criteria</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>The note has separate subheading(s), and the disclosure, as a whole, contains at least two numbers.</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>The note contains subheading(s), only qualitative information and not more than one number in the disclosure as a whole.</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>The note has only qualitative information and no subheading(s) or numbers.</td>
<td>2</td>
</tr>
<tr>
<td>1</td>
<td>There is no note with estimations and uncertainties.</td>
<td>1</td>
</tr>
</tbody>
</table>

Examples of the assessment process

For transparency reasons we give the reader an ability to understand our assessment process and we provide three examples of the different disclosure index groups below. The first one is an example from the firm Ericsson (2013, p. 66), which were placed in disclosure index group three, since the note consisted of subheadings (here as Inventory valuation) and the item (i.e. inventory) are described with both words and numbers (date, amount, percent).

“Inventory valuation

....In situations where excess inventory balances are identified, estimates of net realizable values for the excess volumes are made. Inventory allowances for estimated losses as of December 31, 2013, amounted to SEK 2.5 (3.5) billion or 10% (11%) of gross inventory.”

Below is an example from Eniro (2013, p.75). In this example we categorized the information in disclosure group number two because the note consists of subheadings (here as Income taxes) but not described with numbers;

“Income taxes

...Comprehensive assessments are required to be able to establish the Group’s provision for income taxes. Many transactions and calculations involve amounts whereby the final tax
payment is uncertain. In cases in which the final tax for these matters differs from the amount initially recognized, these differences will affect current and deferred tax assets and liabilities during the period when such conclusions are made.”

Below is an example from Clas Ohlson (2013, p.64). We assess this information to be in disclosure index group one. This information is not presented under a separate subheading, nor described with numbers;

“Preparing the financial statements in accordance with IFRS requires management to make judgements, estimates and assumptions that impact upon the application of the accounting policies and the carrying amounts for assets, liabilities, income and expenses. These are based on historical experience and a number of other factors that appear reasonable under the prevailing conditions”

Assessment of special cases
The majority of the annual reports are relatively easy to assess to which disclosure index group they should be in. Yet, there are special cases. When firms use bullet points instead of subheadings, we assess the bullet points as subheadings since the objective is the same, i.e. to create structure and thus facilitate for the reader. In cases where disclosures contain words and numbers but have no subheadings, we assess them as disclosure group one since it reduces the structure and the understanding of the information in the disclosure.

Keyword search
To be able to find the relevant note in the annual report we search for keywords; estimate(s), judgment(s), uncertainty(ies), assessment(s), assumption(s) essential and critical. The reporting firms use all aforementioned keywords as synonyms. Thus, firms merge IAS 1:122 and 1:125 and treat them as the same thing. However, the obvious lack of rigor is motivated by praxis. After identified the relevant disclosure, we classify it based on our self-constructed index into the four index groups (Table II).

Classification of subheadings
In conjunction with the assessment of the disclosures, we also count the subheadings (if any). We apply an inductive category development when we identify accounting areas subject to IAS 1 disclosures (Krippendorf, 1980). However, we are influenced by the
categorization that Runesson and Marton’s (2011) created in their research about IAS 1:122 and IAS 1:125. Based on their categorization, we merge categories where the level of detail become unwieldy and create new categories when the same headlines were continual. Hence, we merge Contingencies and Provisions due to our limited time to analyse which category the sub-heading belong. We also add Research and Development (R&D) to the list because it is a commonly used sub-heading. Examples of subheadings that are categorized in the category Other are e.g. environmental issues and company specific business operations. We present a table (Table II) with all categories below.

**Table II. Sub-headings**

<table>
<thead>
<tr>
<th>Headline categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intangibles</td>
</tr>
<tr>
<td>Deferred taxes</td>
</tr>
<tr>
<td>Employee benefits</td>
</tr>
<tr>
<td>PPE</td>
</tr>
<tr>
<td>Financial instruments</td>
</tr>
<tr>
<td>Revenue recognition</td>
</tr>
<tr>
<td>Receivables</td>
</tr>
<tr>
<td>Inventories</td>
</tr>
<tr>
<td>Share-based payments</td>
</tr>
<tr>
<td>Contingencies</td>
</tr>
<tr>
<td>Lease assets</td>
</tr>
<tr>
<td>R&amp;D</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>

Thereafter, we sort the number of sub-headings in each annual report into four index groups to create a headline index (Table III). The reasoning behind this step is to incorporate the number of headlines to the final disclosure score, i.e. a higher score is attainable if a firm provide several areas of judgment or major sources of uncertainties under separate headings. To limit our impact as researchers on the final disclosure score we sort the total number of sub-headings, thus the total number of sub-headings in the sample, into four percentiles. The percentile for index group 1 is 0 to 25 percent, the percentile for index group 2 is 26 to 50 percent the percentile for index group 3 is 51 to 75 percent and the percentile for index group 4 is 76 to 100 percent.
Table III. Sub-heading Index

<table>
<thead>
<tr>
<th>Group (%)</th>
<th>Number of Sub-headings</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>76-100</td>
<td>5-24</td>
<td>4</td>
</tr>
<tr>
<td>51-75</td>
<td>3-4</td>
<td>3</td>
</tr>
<tr>
<td>26-50</td>
<td>1-2</td>
<td>2</td>
</tr>
<tr>
<td>0-25</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Disclosure score

To arrive at the final disclosure score, the first dependent variable (DiscScore), we multiply the disclosure index with the headline index. The disclosure score is the product of the disclosure index and headline index (Table IV). Thus, an annual report is able to get a final disclosure score of maximum 16 points.

Table IV. Disclosure Score Matrix

<table>
<thead>
<tr>
<th></th>
<th>Sub Group 1</th>
<th>Sub Group 2</th>
<th>Sub Group 3</th>
<th>Sub Group 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DI Group 1</strong></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td><strong>DI Group 2</strong></td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td><strong>DI Group 3</strong></td>
<td>3</td>
<td>6</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td><strong>DI Group 4</strong></td>
<td>4</td>
<td>8</td>
<td>12</td>
<td>16</td>
</tr>
</tbody>
</table>

DI Group = Disclosure Index; Sub Group = Subheading Index

4.2.4 Word Count

As a complement to content analysis, we also measure the amount of disclosure in the note to capture a less subjective measure of disclosure quality (Beattie et al.2000). Measuring the amount of disclosure is a frequently used method in accounting research (e.g., Botosan, 1997; Lang & Lundholm, 2000). Regarding the amount of disclosures, prior studies suggest the
varying use of the unit of measurement such as words, sentences or lines (Gray et al. 1995). The number of pages may have advantages since it includes figures, charts or graphs into the analysis (Gray et al. 1995). However, due to the same reasons the number of pages is criticised for being noisy because the graphs or charts can be ambiguous (Gray et al. 1995).

We instead follow Hackston and Milne’s (1996) argument and use a word count approach because it does not require the researcher to interpret the text (Bryman & Bell, 2011, p. 308). Hence, we count the total number of words in the disclosures since it is a suitable alternative to the disclosure index. The second dependent variable is therefore the amount of words in disclosure (DiscWords). We measure DiscWords as the natural logarithm of the number of words disclosed in the note, and we exclude words in tables and figures (Gray et al. 1995). We copied the text in the disclosure and paste it in Microsoft Word and used the “Word count” to obtain the number of words in the disclosure. We chose to logarithm the words to make the variable more symmetric and to minimize extreme values in order to make the statistical analysis meaningful (Keene, 1995; Abraham & Cox, 2007).

4.3 Test variables
We test for three characteristics as incentives to provide disclosures. The first two are firm visibility and leverage, which are firm characteristics. The third one is ownership concentration, which concern firm’s corporate governance. We have derived these characteristics from Chapter 3 and previous research have use them as independent variables. In line with these previous studies, we argue that a firm increase the quality of disclosures because of external stakeholder demands (Watson et al. 2002; Dumontier & Raffournier, 1998), but also to lower their political costs (Watts & Zimmerman, 1978).

Firm visibility
Watts and Zimmerman (1978) originally used firm size to proxy for political costs. Other scholars (e.g. Ball & Foster, 1982) have criticized size as a too noisy proxy. Bujaki and Richardson (1997), claim they have found that size is used to proxy for eighteen theoretical constructs. They further argue that size, therefore, is proxy for more than only political costs (Bujaki & Richardson, 1997). In this study, we argue that firm visibility (FirmVis) is a more suitable measure of political costs since it is more straightforward. Still, size is an important variable to control the credibility of our results. We follow Cieslak et al. (2014) and use the
level of press coverage as a proxy for firm visibility. In line with Cieslak et al. (2014) we count the number of occasions a firm is referred to in Sweden's largest newspaper and three of the biggest business magazines, namely; Affärsvärlden, Veckans Affärer, Privata Affärer, Aftonbladet, Dagens Industri, Dagens Nyheter, Expressen, Göteborgs-Posten, Svenska Dagbladet and Sydsvenska Dagbladet. We use this method to collect data for the years of 2007 to 2014. Firms are then ranked and sorted in decile portfolios, where the firms with the highest press coverage are included in portfolio 10.

Ownership concentration
We define ownership concentration (OwnCon) as the voting share of the largest owner.

Leverage
After Botosan (1997), many empirical studies have used leverage as a determinant of the extent of corporate disclosure. Consequently, this study adds leverage (Lev) to the analysis as a test variable. Consistent with Abraham and Cox (1997), we measure leverage with the debt to asset ratio (total debt divided by total assets).

4.4 Control variables
In line with prior studies, this study includes several control variables in the regression model, stemming from the evidence of the association between these variables and corporate disclosures. Based on prior studies (e.g. Abraham & Cox, 1007; Linsley & Shrives, 2006) the most common control variables within corporate disclosure studies are size, number of years listed profitability and founding firm. Therefore, we include all these variables together with fixed (year and industry) effects, to control for unmeasured factors common to all firms (See section 4.8 Model used to test the hypotheses for specification of year and industry effects).

Size
Prior research is inconclusive over what measure that is preferred when measuring size (Hackston & Milne, 1996). Due to the lack of theoretical justification in research, we follow Cooke (1989) and measure size by logarithm total assets. We convert total assets to its natural logarithm because of nonlinearity (Linsley & Shrives, 2006) and to minimise the impact of extreme values (Abraham & Cox, 2007).
**Years listed**

Roberts (1992) identified age as a factor that influenced the level of disclosure. Roberts (1992) argue that firms that have existed for a long time have improved its financial reporting practices over time (Roberts, 1992). To control for improvements over time, we define age as the number of years the firm has been listed, with the minimum number of one. Moreover, we logarithm the number of years the firm has been listed (Abraham & Cox, 2007).

**Profitability**

Prior studies recognise that profitability potentially creates motives for managers to provide more disclosure (e.g. Watson *et al.* 2002; Haniffa & Cooke, 2002). Profitable firms have higher political costs and public scrutiny and therefore use disclosures as a means to reduce regulation (Watts & Zimmerman, 1978). We follow Meek *et al.* (1995) and use Return On Assets (ROA) as a proxy for firm profitability. We measure ROA as net profit divided by total assets.

**Founding firm**

When the largest owner also has founded the firm the owner have good knowledge of the firms operations, which make the manager more reluctant to make opportunistic actions (Ali *et al.* 2007). Hence, the agency costs and information asymmetry are lower in a founding firm and thus likely to disclose less information. Therefore, we add founding firm as a control variable. If the founder of the firm is the largest shareholder at the end of the year, we define a firm to be a founding firm. We use a dummy variable where; 1 if the firm is a family firm and 0 otherwise. Table V summarizes the definitions and measurements.
### Table V. Variable definition and measurement

<table>
<thead>
<tr>
<th>Definition</th>
<th>Variable</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Independent variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm Visibility</td>
<td>FirmVis</td>
<td>(+) Number of occasions a company is referred to in media</td>
</tr>
<tr>
<td>Ownership Concentration</td>
<td>OwnCon</td>
<td>(-) Voting share of the biggest shareholder</td>
</tr>
<tr>
<td>Leverage</td>
<td>Lev</td>
<td>(+) Total debt/ Total assets</td>
</tr>
<tr>
<td><strong>Control Variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Profitability</td>
<td>Prof</td>
<td>Return on Asset (Net profit/Total assets)</td>
</tr>
<tr>
<td>Years Listed</td>
<td>YearsListed</td>
<td>LN number of years the firm been listed</td>
</tr>
<tr>
<td>Founding Firm</td>
<td>FoundFirm</td>
<td>Dummy variable (1 if the firm is a family firm and 0 if otherwise)</td>
</tr>
<tr>
<td>Industry</td>
<td>Industry</td>
<td>4 dummy variables (1 = Manufacturing; 2 = Trade; 3 = Consumer Services; 4 = Finance)</td>
</tr>
<tr>
<td>Size</td>
<td>Size</td>
<td>LN total assets</td>
</tr>
<tr>
<td><strong>Dependent variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disclosure Group</td>
<td>DisGroup</td>
<td>Product of Disclosure index * Headline Index</td>
</tr>
<tr>
<td>Words</td>
<td>Words</td>
<td>LN number of words in the disclosure</td>
</tr>
</tbody>
</table>

Signs (+) and (-) in Table V illustrate the expected positive and negative correlation mentioned in the hypotheses.

### 4.4 Sample and data

The annual reports in our sample are solely in Swedish. The English versions disclose the same items, but the number of words may distort the results if the sample also contains English annual reports. We obtain the annual reports and related data from our supervisor, or from the firm’s web sites.
We initially started with 1,936 reports and then we excluded all banks (42 reports) since they must comply with additional disclosure requirements and are exposed to substantially different regulations due to be exposed to a higher level of financial risks (Abraham & Cox, 2007). Missing observations due to mergers, de-listings, inaccessible or unusable annual reports (274 reports) and missing values on variables in databases (102 reports) reduced the original sample to 1,519 annual reports of firms listed at the Small/Mid/Large cap on the Nasdaq OMX Stockholm exchange over a 7-year period (2007 to 2013). Thus, the total number of annual reports in the sample for the period is 1,519.

We reduce the sample for our second OLS regression with 91 annual reports because some annual reports do not have a note or heading in accordance with IAS 122 and 125. By excluding these annual reports, we are aware that the sample might be biased, and we will consider that throughout our analysis. Therefore, the total number of annual reports in the sample for the multivariate regression analyses of DiscWords is 1,428. Table VI summarizes the selection process.

<table>
<thead>
<tr>
<th>Table VI Sample size</th>
<th>Nr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Reports in the beginning</td>
<td>1936</td>
</tr>
<tr>
<td>Banks dropped</td>
<td>42</td>
</tr>
<tr>
<td>Mergers, de-listings and inaccessible or unusable reports</td>
<td>274</td>
</tr>
<tr>
<td>Firms with missing values on database variables</td>
<td>101</td>
</tr>
<tr>
<td>Total annual reports researched</td>
<td>1519</td>
</tr>
<tr>
<td><strong>Annual Reports removed for the quantity regression</strong></td>
<td></td>
</tr>
<tr>
<td>Annual reports removed due to no words/note</td>
<td>91</td>
</tr>
<tr>
<td>Total annual reports researched</td>
<td>1428</td>
</tr>
</tbody>
</table>

We chose this timeframe because we want to minimize the impact from the learning curve that stems from the introduction of IFRS in 2005 in general and IAS 1 paragraphs 122 and 125 in particular.
The data on firm visibility (\(FirmVis\)), are partly obtained from our supervisor (between the years 2007 to 2010). We manually collect the data between the years 2011 to 2013 by replicate the same method, that were used to produce the data from 2007 to 2010. We use the database Retriever Research (Media archive) to search in our aforementioned newspapers and business magazines.

\[4.6 \textbf{Model used to test the hypotheses}\]

We use an ordinary least square (OLS) regression model with fixed (year and industry) effects to examine the relationship between disclosure quality and firm characteristics. We follow previous accounting research (e.g. Depoers, 2000; Broberg et al. 2009) and perform a multivariate regression analysis to investigate the relationship between our two dependent variables and our three independent variables. Our two dependent variables are DiscScore and DiscWords and our three independent variables are FirmVis, OwnCon and Lev. The equation for the OLS regression is as follows:

\[
\text{Disclosure Group} = \beta_0 + \beta_1(1) + \beta_2(2) + \beta_3(3) \ldots \ldots + \beta n(n) + \epsilon
\]

Applying the model to our study results in:

\[
\text{DiscScore} = \beta_0 + \beta_1(\text{FirmVis}) + \beta_2(\text{Lev}) + \beta_3(\text{OwnCon}) + \beta_4(\text{Size}) + \beta_5(\text{YearsListed}) + \beta_6(\text{Prof}) + \beta_7(\text{FoundFirm}) + \text{Fixed year effects} + \text{Fixed industry effects} + \epsilon
\]

To test our quantitative research questions we use following model:

\[
\text{DiscWords} = \beta_0 + \beta_1(\text{FirmVis}) + \beta_2(\text{Lev}) + \beta_3(\text{OwnCon}) + \beta_4(\text{Size}) + \beta_5(\text{YearsListed}) + \beta_6(\text{Prof}) + \beta_7(\text{FoundFirm}) + \text{Fixed year effects} + \text{Fixed industry effects} + \epsilon
\]

Where:
\(\beta_1 - \beta_3\) = Test variables
\(\beta_4 - \beta_07\) = Control variables
\(\epsilon\) = Error term
As aforementioned, there might be unmeasured factors common to all firms that influence the DiscScore and DiscWords to the same degree, i.e. systematic factors such as seasonal fluctuations (Greene, 2012). We, therefore, include fixed (year and industry) effects in the models. We create dummies for each Year (2007 to 2013) and for each Industry (Manufacturing, Trade, Services and Finance).

4.7 Sample adjustments and tests

Winsorizing

Measurement errors and outliers are frequently encountered in practice (Watson, 1990). Winsorizing is a commonly used method for handling these measurement errors and outliers in accounting research (e.g. Depoers, 2000; Broberg et al. 2009). We identified a few extreme observations and we use winsorizing to eliminate the influence of these outliers. We set a limit of 1% and winsorizing is performed by moving the extreme observations below the first and above the 99th percentile. Variables thus affected are profitability (Prof) and leverage (Lev).

Multicollinearity

There is no hard rule established in the literature for at which value multicollinearity causes a problem, but some scholars suggest a VIF value of maximum 10 to when multicollinearity issues arise (e.g. Myers 1990). None of the pairwise correlations (Appendix 1) among the variables FirmVis, OwnCon and Lev is above this acceptable boundary. The collinearity statistics, Variance Inflation Factor (VIF), ranges between 1.141 and 2.781. Size is the variable that has the highest value of 2.781. The next highest value is FirmVis with a value of 2.150, which is relatively low and we conclude that collinearity is not a serious problem. We present the full results from the multicollinearity test in Appendix 1.
5. Empirical results

5.1 Descriptive statistics

We find empirical results that show differences regarding how firms apply the requirements in IAS 1:122 and IAS 1:125. The major part of the annual reports in our sample has critical assumptions and estimations as a separate disclosure. However, approximately 30 percent have critical assumptions and estimations included in the first note “Accounting principles”. There is no requirement that firms must have a separate disclosure, but when firms apply the presentation of the information inconsistently, it might prevent comparability as well as understandability. Surprisingly, 6 percent (91) of the annual reports in our sample do not have a separate section with critical assumptions and estimations as they incorporated the information in other contexts in the annual report.

On average, there are 2,65 subheadings in the disclosure per annual report, which ranges from 0 to 24 in the full sample. As can be seen in Table VII, the most frequent sub-headings that firms disclose are intangible assets (24%) and deferred taxes (19%). Firms disclose these sub-headings more than twice as many times as employee benefit (9%), contingencies and provisions (9%) and property, plant and equipment (7%). Our findings that intangible assets is the most recurring sub-heading that firms disclose is not surprising since it is a difficult area to assess. The least frequent sub-headings that firms disclose are financial instruments (3%), leased assets (1%), share-based payments (0.3 %).

Table VII, presents the distribution of the disclosure index. Overall, there are 91 reports (6%) in disclosure index group 1, 366 reports (24%) in index group 2, 248 reports (16%) in index group 6, 77 reports (5%) in index group 8, 254 reports (17%) in index group 9, 283 reports (19%) in disclosure index group 12 and 200 reports (13%) in disclosure index group 16. As can be seen in Table VII, these figures indicate a problem with how firms disclose judgment and uncertainties in their annual reports. As mentioned, there is also a problem that a large amount of firms (32,3%) does not provide any sub-headings. These results indicate an inconsistent application of the requirement in IAS 1:122 and IAS 1:125, which might prevent understandability and comparability between firms (Barth et al. 2008). A further problem is that 491 annual reports (32,3%) in our sample do not provide any sub-headings, which means that the first quartile (25th percentile), index group 1 (Table VII), are only those annual reports that do not provide any sub-headings. Consequently, it is impossible to end up in
index group 4. Notable is that 30 percent of the annual reports in our sample are categorized in disclosure index 1 to 4. Still, Table VII illustrate that the number of annual reports categorised in index group 0 decrease over time and the number of annual reports categorised in index group 9 increase over time. Worth noting, is that the average numbers of words firms disclose increase with 28 percent from 2007 to 2013.

Table VII. Headlines and Disclosure Score breakdown per year

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Headline categories</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intangibles</td>
<td>123</td>
<td>142</td>
<td>139</td>
<td>137</td>
<td>136</td>
<td>136</td>
<td>134</td>
<td>947</td>
<td>24%</td>
</tr>
<tr>
<td>Deferred taxes</td>
<td>87</td>
<td>106</td>
<td>109</td>
<td>116</td>
<td>111</td>
<td>116</td>
<td>109</td>
<td>754</td>
<td>19%</td>
</tr>
<tr>
<td>Employee benefits</td>
<td>45</td>
<td>49</td>
<td>53</td>
<td>55</td>
<td>52</td>
<td>53</td>
<td>52</td>
<td>359</td>
<td>9%</td>
</tr>
<tr>
<td>PPE</td>
<td>42</td>
<td>36</td>
<td>38</td>
<td>34</td>
<td>36</td>
<td>39</td>
<td>36</td>
<td>261</td>
<td>7%</td>
</tr>
<tr>
<td>Financial instruments</td>
<td>22</td>
<td>18</td>
<td>18</td>
<td>14</td>
<td>22</td>
<td>23</td>
<td>16</td>
<td>133</td>
<td>3%</td>
</tr>
<tr>
<td>Revenue recognition</td>
<td>22</td>
<td>23</td>
<td>25</td>
<td>26</td>
<td>24</td>
<td>24</td>
<td>27</td>
<td>171</td>
<td>4%</td>
</tr>
<tr>
<td>Receivables</td>
<td>17</td>
<td>25</td>
<td>27</td>
<td>31</td>
<td>35</td>
<td>38</td>
<td>35</td>
<td>208</td>
<td>5%</td>
</tr>
<tr>
<td>Inventories</td>
<td>20</td>
<td>23</td>
<td>24</td>
<td>25</td>
<td>28</td>
<td>29</td>
<td>29</td>
<td>178</td>
<td>4%</td>
</tr>
<tr>
<td>Share-based payments</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>0</td>
<td>14</td>
<td>0.3%</td>
</tr>
<tr>
<td>Contingencies</td>
<td>41</td>
<td>50</td>
<td>54</td>
<td>53</td>
<td>54</td>
<td>59</td>
<td>58</td>
<td>369</td>
<td>9%</td>
</tr>
<tr>
<td>Lease assets</td>
<td>7</td>
<td>4</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>35</td>
<td>1%</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>22</td>
<td>30</td>
<td>33</td>
<td>28</td>
<td>27</td>
<td>28</td>
<td>30</td>
<td>198</td>
<td>5%</td>
</tr>
<tr>
<td>Other</td>
<td>42</td>
<td>51</td>
<td>60</td>
<td>63</td>
<td>65</td>
<td>61</td>
<td>45</td>
<td>387</td>
<td>10%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>492</td>
<td>558</td>
<td>588</td>
<td>589</td>
<td>598</td>
<td>614</td>
<td>575</td>
<td>4014</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Disclosure Score</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>16</td>
<td>15</td>
<td>13</td>
<td>13</td>
<td>12</td>
<td>10</td>
<td>12</td>
<td>91</td>
<td>6%</td>
</tr>
<tr>
<td>2</td>
<td>60</td>
<td>56</td>
<td>54</td>
<td>47</td>
<td>51</td>
<td>51</td>
<td>47</td>
<td>366</td>
<td>24%</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>6</td>
<td>39</td>
<td>35</td>
<td>42</td>
<td>40</td>
<td>30</td>
<td>31</td>
<td>31</td>
<td>248</td>
<td>16%</td>
</tr>
<tr>
<td>8</td>
<td>12</td>
<td>14</td>
<td>13</td>
<td>14</td>
<td>9</td>
<td>7</td>
<td>8</td>
<td>77</td>
<td>5%</td>
</tr>
<tr>
<td>9</td>
<td>40</td>
<td>44</td>
<td>35</td>
<td>30</td>
<td>35</td>
<td>35</td>
<td>35</td>
<td>254</td>
<td>17%</td>
</tr>
<tr>
<td>12</td>
<td>30</td>
<td>39</td>
<td>42</td>
<td>50</td>
<td>43</td>
<td>38</td>
<td>41</td>
<td>283</td>
<td>19%</td>
</tr>
<tr>
<td>16</td>
<td>23</td>
<td>25</td>
<td>27</td>
<td>26</td>
<td>28</td>
<td>38</td>
<td>33</td>
<td>200</td>
<td>13%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>220</td>
<td>227</td>
<td>226</td>
<td>220</td>
<td>208</td>
<td>210</td>
<td>207</td>
<td>1518</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table VIII, presents the characteristics of the sample. The table summarizes the descriptive statistics (Nr of observations per year, Min, Max, Mean, Median and Standard deviation) over the 7- year period (2007-2013). Leverage and profit are winsorized values. Looking at the values over time, show that the dependent variables (DiscScore and DiscWords) do not have
any major fluctuations during the 7-year period. Notable is that the mean can be interpreted as the ratio of firms that is a founding firm, which is approximately 32%.

Table VIII. Descriptive sample statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Nr of observations</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Median</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Independent variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm Visibility</td>
<td>1519</td>
<td>1.00</td>
<td>10.0</td>
<td>5.53</td>
<td>6.00</td>
<td>2.85</td>
</tr>
<tr>
<td>Ownership Concentration</td>
<td>1519</td>
<td>0.02</td>
<td>0.93</td>
<td>0.34</td>
<td>0.28</td>
<td>0.22</td>
</tr>
<tr>
<td>Leverage</td>
<td>1519</td>
<td>0.02</td>
<td>0.98</td>
<td>0.50</td>
<td>0.53</td>
<td>0.20</td>
</tr>
<tr>
<td><strong>Control Variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Profitability</td>
<td>1519</td>
<td>-0.97</td>
<td>0.33</td>
<td>0.02</td>
<td>0.05</td>
<td>0.17</td>
</tr>
<tr>
<td>Years Listed</td>
<td>1519</td>
<td>0.00</td>
<td>4.73</td>
<td>2.46</td>
<td>2.48</td>
<td>0.93</td>
</tr>
<tr>
<td>Founding Firm</td>
<td>1519</td>
<td>0.00</td>
<td>1.00</td>
<td>0.31</td>
<td>0.00</td>
<td>0.46</td>
</tr>
<tr>
<td>Size</td>
<td>1519</td>
<td>1.42</td>
<td>5.57</td>
<td>3.34</td>
<td>3.21</td>
<td>0.86</td>
</tr>
<tr>
<td><strong>Dependent variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disclosure Group</td>
<td>1519</td>
<td>1.00</td>
<td>16.0</td>
<td>7.77</td>
<td>8.00</td>
<td>4.89</td>
</tr>
<tr>
<td>Words</td>
<td>1428</td>
<td>2.64</td>
<td>8.19</td>
<td>5.58</td>
<td>5.54</td>
<td>0.80</td>
</tr>
</tbody>
</table>

For variables definitions refer to Table V

5.2 Correlation analysis

We perform a bivariate analysis to establish any relationships between the variables. Table IX presents the calculations of a pairwise correlations (Pearson correlation) matrix together with their level of significance. The scale is between -1 to +1 and we interpret a correlation of 0 as no correlation between the corresponding variables.

We present the correlations between the disclosure measures DiscScore and DiscWords and different determinants of disclosures In Table IX. There are significant correlations between most of these, especially in DiscWords. The significant correlations indicate that the determinants included in the hypotheses are associated with IAS 1:122 and IAS 1:125
disclosures. The correlation coefficients between the dependent variable DiscScore and the independent variables FirmVis and Lev are 0.251 and 0.190 respectively and indicate a positive correlation. Both these correlations are statistically significant (p<0.010). The third independent variable OwnCon is -0.061 and statistically significant (p<0.050), which indicate a negative relationship.

As depicted in Table IX, the correlation coefficients between the second dependent variable DiscWords and the two independent variables FirmVis and Lev are 0.288 and 0.169 respectively. These results indicate significant positive correlations between DiscWords and FirmVis and Lev. The correlation coefficient for the third independent variable OwnCon is -0.79, which indicate a significant negative correlation with DiscWords. All these results are statistically significant (p<0.010).

There are also significant correlations between some of the variables e.g. Size and FirmVis and OwnCon and FoundFirm. The highest correlation is between FirmVis and Size, which correlate with 72.2%. This result is, however, not surprising given that Size is a commonly proxy to measure FirmVis (Watts and Zimmerman, 1986, p. 235). We test a regression model where we exclude Size to examine if the Size has an impact on the level of significance for FirmVis. The variables OwnCon and FoundFirm have a significant (p<0.010) correlation (0.512), which might be a problem. Therefore, we also exclude FoundFirm in one model. The remaining coefficients correlate within acceptable levels. Existence of pairwise correlation between a dependent and an independent variable does not necessarily mean that the dependent variable and the independent variables correlate in a multivariate context. Therefore, to further identify underlying relationships between the variables, we perform a regression analysis.
### Table IX. Correlations (DiscScore  n = 1519; DiscWords  n = 1428)

| Variable    | DiscScore | DiscWords | FirmVis | OwnCon | Lev  | YearListed | Prof  | FoundFirm | Size 
|-------------|-----------|-----------|---------|--------|------|------------|-------|-----------|-------
| DiscScore   | Pearson Cor | 1.000     |         |        |      |            |       |           |       
| DiscWords   | Pearson Cor | 0.779**   | 1.000   |        |      |            |       |           |       
| FirmVis     | Pearson Cor | 0.251**   | 0.288** | 1.000 |      |            |       |           |       
| OwnCon      | Pearson Cor | -0.061*   | -0.079**| 0.010 | 1.000|            |       |           |       
| Lev         | Pearson Cor | 0.190**   | 0.169** | 0.198**| -0.041| 1.000     |       |           |       
| YearListed  | Pearson Cor | 0.146**   | 0.212** | 0.307**| 0.165**| 0.034     | 1.000 |           |       
| Prof        | Pearson Cor | 0.060*    | 0.012   | 0.142**| 0.132**| -0.004    | 0.020 | 1.000     |       
| FoundFirm   | Pearson Cor | -0.119**  | -0.176**| 0.001 | 0.512**| -0.058*   | 0.102**| 0.179**   | 1.000 |
| Size        | Pearson Cor | 0.255**   | 0.365** | 0.722**| 0.147**| 0.310**   | 0.427**| 0.261**   | 0.032|

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).
5.3 Regressions
To test our hypotheses we perform two multivariate regression analyses with DiscScore and DiscWords as dependent variables. We control for fixed year and fixed industry effects in all models. We controlled this by using dummy variables that capture the year and industry effects common to all firms between the years 2007 to 2013.

We present the results from the first multivariate regression analysis with DiscScore as a dependent variable in Table X. In Model 1a, we use the independent variable FirmVis together with the control variable YearsListed. As can be seen in Table X, the FirmVis demonstrate a significant (p-value < 0.01) positive relationship (0.420). Thus, there is a positive relationship between FirmVis and DiscScore, which the correlation analysis in Table IX supports. We predict that there is a positively relationship between visibility and disclosure quality and Model 1a support that prediction. More practically, when firms are subject to high media visibility, the information firms disclose is of high quality. These results are in line with the results that Cieselak et al. (2014) found.

Model 2a demonstrate an insignificant negative association (-0.564) between DiscScore and OwnCon. Therefore, we are not able to draw any conclusions from Model 2a. Thus, Model 2a does not support our prediction that firms with high ownership concentration disclose information of less quality.

Model 3a supports the results from the correlation analysis, i.e. we observe a significant (p<0.01) positive relationship (3.772) between DiscScore and Lev. These results indicate that when debt increases, firms disclose information of higher quality. These results confirm our prediction that debt have a positive impact on disclosure quality.

In Model 4a, all three independent variables (FirmVis, OwnCon and Lev) are included. The results from Model 4 (Table X) remain approximately the same as the results from the three previous models. Thus, FirmVis retain a significant positive relationship with DiscScore. Lev also retains a positive significant association with DiscScore. Furthermore, OwnCon still indicates a negative association with DiscScore, and continues to be insignificant. Notable is
also that YearsListed indicate a significant positive relationship in all Models (Model 1a to Model 4a).

In Model 5a, we use the settings from the last Model except from adding Prof as a control variable. As depicted in Table X, the results do not dramatically change. The added control variable Prof shows a significant (p<0.01) positive relationship (1.792) with DiscScore.

In Model 6a, we add FoundFirm as a control variable. FirmVis indicate a significant (p<0.01) positive relationship (0.358) with DiscScore. Lev depicts a significant (p<0.01) positive relationship (2.568) with DiscScore. Notable is that OwnCon get the opposite predicted sign (0.923), however remain insignificant. Looking at Table X, we observe a high correlation between OwnCon and FoundFirm, which might explain the results in Model 6a. The control variable Prof still indicates a positive relationship with DiscScore. We predict a relationship between disclosure quality and visibility and leverage. These results give support to hypothesis 1 and 3. These results are in line with previous studies (e.g. Watson et al. 2002; Cormier and Magnan, 1999). In hypothesis 3, we predicted a negative relationship between OwnCon and DiscScore. Our results are depicts a negative relationship but the results are insignificant. Thus, our findings do not support Hypothesis 3.

In the last model (Model 7a), we add Size as a control variable. Consequently, all three independent variables (FirmVis, OwnCon and Lev) are included as well as all the control variables (Profit, FoundFirm, YearsListed and Size). From Table X, it is observable that FirmVis shows a, somewhat weaker, positive relation (0.121) to DiscScore than before. The significance level is also lower (p<0.05) than in the previous models. The correlation between Size and FirmVis, depicted in Table IX, demonstrate a high correlation between FirmVis and Size. Size is a common measure of political costs (Watts & Zimmerman, 1978), which might be why they correlate. OwnCon still get the opposite predicted sign (0.463) but is insignificant. Lev demonstrates a positive relationship (1.211) with DiscScore, but show a weaker significance level (p<0.10) than before.
<table>
<thead>
<tr>
<th>Model</th>
<th>(1a)</th>
<th>(2a)</th>
<th>(3a)</th>
<th>(4a)</th>
<th>(5a)</th>
<th>(6a)</th>
<th>(7a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FirmVis (+)</td>
<td>0.420</td>
<td>0.376</td>
<td>0.358</td>
<td>0.358</td>
<td>0.121</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.047)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OwnCon (-)</td>
<td>-0.564</td>
<td>-0.257</td>
<td>-0.442</td>
<td>0.923</td>
<td>0.463</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.314)</td>
<td>(0.635)</td>
<td>(0.417)</td>
<td>(0.137)</td>
<td>(0.455)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lev (+)</td>
<td></td>
<td>3.772</td>
<td>2.663</td>
<td>2.735</td>
<td>2.586</td>
<td>1.211</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.056)</td>
<td></td>
</tr>
<tr>
<td>YearsListed</td>
<td>0.343</td>
<td>0.744</td>
<td>0.669</td>
<td>0.355</td>
<td>0.361</td>
<td>0.385</td>
<td>0.137</td>
</tr>
<tr>
<td></td>
<td>(0.009)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.008)</td>
<td>(0.006)</td>
<td>(0.003)</td>
<td>(0.320)</td>
</tr>
<tr>
<td>Prof</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.792</td>
<td>2.173</td>
<td>0.888</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.009)</td>
<td>(0.002)</td>
<td>(0.216)</td>
</tr>
<tr>
<td>FoundFirm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-1.293</td>
<td>-1.134</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.000)</td>
<td>(0.000)</td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.348</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.000)</td>
</tr>
<tr>
<td>(Intercept)</td>
<td>5.294</td>
<td>6.721</td>
<td>4.832</td>
<td>4.236</td>
<td>4.289</td>
<td>4.220</td>
<td>2.399</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
</tr>
<tr>
<td>Industry effects</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Year effects</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Adjusted R2</td>
<td>0.171</td>
<td>0.118</td>
<td>0.141</td>
<td>0.181</td>
<td>0.184</td>
<td>0.194</td>
<td>0.210</td>
</tr>
<tr>
<td>n</td>
<td>1519</td>
<td>1519</td>
<td>1519</td>
<td>1519</td>
<td>1519</td>
<td>1519</td>
<td>1519</td>
</tr>
<tr>
<td>(p-value in parentheses)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The results from the second multivariate regression analyses is presented in Table XI, when we use the, somewhat, less subjective dependent variable DiscWords.

In Model 1b, DiscWords is regressed using FirmVis as independent variable together with YearsListed as control variable and with fixed year and industry effects. As can be seen, there is a significant (p<0.01) positive relationship (0.074) between DiscWords and FirmVis. The correlation analysis gives support this relationship (Table IX). In addition, YearsListed demonstrate a significant positive relationship with DiscWords.

In Model 2b, DiscWords is regressed using OwnCon as independent variable together with YearsListed as control variable and with fixed year and industry effects. The regression results indicate a significant (p<0.01) negative relationship (-0.315) between DiscWords and OwnCon. Interestingly, these results are in contrast with the results from the first regression analyses when we use DiscScore as dependent variable (Model 2a, Table X). Thus, the results from Model 2b support the prediction that ownership concentration have a negative relationship with disclosure quality. These results are in contrast to the results from the first regression analysis, but in accordance with Dumontier and Raffournier (1998) and Lajili (2007) results.

In Model 3b, Table XI, the settings are consistent with the two previous Models (Model 1b and 2b) except that DiscWords is regressed with Lev. In Model 3b, we investigate whether leverage has an impact on disclosures. As can be seen, the results indicate a significant (p<0.01) positive relationship between DiscWords and Lev (Table XI). With support from the correlation analysis from Table IX, YearsListed demonstrate a significant (p<0.01) positive relationship (0.612) with DiscWords. These results are in accordance with the results from regression analyses in Table X.

In Model 4b all three independent variables (i.e. FirmVis, OwnCon and Lev) are included together with the control variable YearsListed and we also control for fixed year and industry effects. The results in Model 4b depict similar results for FirmVis, OwnCon and Lev as we find in Model 1b to Model 3b. The results show that both FirmVis and Lev demonstrates significant positive relationships with DiscWords and OwnCon still demonstrate a significant negative relationship with DiscWords.
In Model 5b, we include one more control variable (Prof) compared to Model 4b. As can be seen in Table XI, results remain consistent with the results from Model 4b. FirmVis and Lev still have significant positive relationship with DiscWords, and OwnCon still have a significant negative relationship with DiscWords.

In Model 6b, we add FoundFirm to our model. As depicted in Table XI, the previous negative relationship between OwnCon and DiscWords is back to its predicted sig again and now demonstrate a positive, however, insignificant relationship with DiscWords. Referring to the correlation analysis in Table X, the sudden change in predicted sign for OwnCon might stem from the high correlation between OwnCon and FoundFirm. YearsListed show a significant (p<0.01) negative relationship (-0.316) with DiscWords. These results are similar to what we found in Model 6a (Table X).

In Model 7b, we include the last control variable, Size. The results from Model 7b differ remarkably from the results in Model 1b to 6b (Table XI). Both FirmVis and Lev shows the opposite predicted signs, while OwnCon reverse the unpredicted sign and get the predicted sign again. However, all relationships between DiscWords and the independent variables are insignificant. Size, however, demonstrate a significant (p<0.01) positive relationship (0.438) with DiscWords.
Table XI. DiscWords Analysis (N = 1428)

<table>
<thead>
<tr>
<th>Model</th>
<th>(1b)</th>
<th>(2b)</th>
<th>(3b)</th>
<th>(4b)</th>
<th>(5b)</th>
<th>(6b)</th>
<th>(7b)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FirmVis (+)</td>
<td>0.074</td>
<td>0.067</td>
<td>0.066</td>
<td>0.066</td>
<td>-0.011</td>
<td>-0.011</td>
<td>0.290</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.290)</td>
<td>(0.290)</td>
<td>(0.290)</td>
</tr>
<tr>
<td>OwnCon (-)</td>
<td>-0.315</td>
<td>-0.292</td>
<td>-0.303</td>
<td>0.028</td>
<td>-0.116</td>
<td>-0.116</td>
<td>-0.266</td>
</tr>
<tr>
<td></td>
<td>(0.001)</td>
<td>(0.002)</td>
<td>(0.001)</td>
<td>(0.795)</td>
<td>(0.266)</td>
<td>(0.266)</td>
<td>(0.266)</td>
</tr>
<tr>
<td>Lev (+)</td>
<td></td>
<td>0.612</td>
<td>0.408</td>
<td>0.414</td>
<td>0.380</td>
<td>-0.052</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.621)</td>
<td></td>
</tr>
<tr>
<td>YearsListed</td>
<td>0.094</td>
<td>0.172</td>
<td>0.150</td>
<td>0.104</td>
<td>0.105</td>
<td>0.113</td>
<td>0.030</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.184)</td>
</tr>
<tr>
<td>Prof</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.097</td>
<td>0.181</td>
<td>-0.242</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.000)</td>
<td>(0.127)</td>
<td>(0.043)</td>
</tr>
<tr>
<td>FoundFirm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.316</td>
<td>-0.266</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.000)</td>
<td>(0.000)</td>
</tr>
<tr>
<td>Size</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.438</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.000)</td>
</tr>
<tr>
<td>(Intercept)</td>
<td>4.934</td>
<td>5.237</td>
<td>4.885</td>
<td>4.829</td>
<td>4.831</td>
<td>4.804</td>
<td>4.208</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
</tr>
<tr>
<td>Industry effects</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Year effects</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Adjusted R2</td>
<td>0.152</td>
<td>0.098</td>
<td>0.114</td>
<td>0.166</td>
<td>0.166</td>
<td>0.189</td>
<td>0.254</td>
</tr>
<tr>
<td>n</td>
<td>1428</td>
<td>1428</td>
<td>1428</td>
<td>1428</td>
<td>1428</td>
<td>1428</td>
<td>1428</td>
</tr>
</tbody>
</table>
(p-value in parentheses)
Taken together, our first hypothesis is accepted. *FirmVis* shows a significant positive relation with both *DiscScore* and *DiscWords* through all of our regression models except when *Size* is included (Table X and Table XI). Interestingly, when the control variable *Size* is added (Model 7a and Model 7b) the independent variable *FirmVis* indicates a weaker relationship and become less significant in Model 7a (Table X). Additionally, in Model 7b (Table XI), *FirmVis* get the opposite predicted sign, but is not significant. It is plausible that size, as a theoretical construct for many different factors (Bujaki & Richardson, 1997), including firm visibility, might capture some of the coefficient of determination of *FirmVis*. As can be seen in Model 7a (Table X) and in Model 7b (Table XI), *Size* depicts a strong positive relationship with *DiscScore* and *DiscWords* and is significant (p<0.01) in both models.

The results from Table X, where we use *DiscScore* as dependent variable, show a negative relationship (Model 1a-7a) with *OwnCon*, but none of the coefficients is significant. The results from Table XI, where we use *DiscWords* as dependent variable (Model 1b to 5b), demonstrate a significant negative relationship. However, when *FoundFirm* is included in Model 6b (Table XI), the previous negative relationship is now positive, although insignificant. The change in predicted sign might stem from the high correlation (Table IX) between the two variables. This results is surprising and not in line with our predictions. Hypothesis 2 is therefore not accepted. These findings are in line with Bushee and Noe (2000) who also have empirically studied the relationship between disclosure quality and ownership concentration and they found no relationship either.

For our third and last hypothesis, the results from both regression analyses (Table X and Table XI) demonstrate a significant positive relation between *Lev* and both dependent variables, *DiscScore* and *DiscWords*. These results are consistent in all models except in Model 7b, however the result in Model 7b is insignificant (Table XI). Supported by the correlation analysis, hypothesis 3 is accepted. These results are in line with prior research that has studied the relationship between disclosure quality and leverage (e.g. Watson, Shrives & Marston, 2002; Broberg et al. 2009).
5.4 The effect of firm characteristics on disclosures

Most previous studies have found a positive relationship between firm visibility and disclosure quality (e.g. Cormier & Magnan, 2003; Magnan & Van Velthoven 2005, Leventis & Weetman, 2004; Cieselak et al. 2014). These studies support our first hypothesis that we investigate in Table X and Table XI. All coefficients, together with a significant positive correlation (Table IX and Table XI), indicate a significant positive relationship between visibility in the press and disclosure quality.

As theorised in the political cost theory, managements have the discretion to decide what information to disclose (Watts & Zimmerman, 1978). There are concerns that firms utilizing their discretion to disclose certain information as means to affect stakeholders in a way that is beneficial for the firm (Watts & Zimmerman, 1986, p. 185). As our findings support, when firms become visible in the press and incur scrutiny of their actions, firms disclose extensive information to justify their actions (Watts & Zimmerman, 1978). The justification is to avoid both government intrusion and to avoid that their stakeholders start to question their practices and our findings confirm this proposition (Watts & Zimmerman, 1986, p. 226).

The significant positive results are also in line with agency theory. For instance, Core et al. (2008) discuss the role media plays by aggregating information and then communicate it to the public. In terms of information asymmetry, media thus have the ability to reduce agency costs by facilitate access to otherwise costly information (Core et al. 2008). Our empirical findings also support Watson et al. (2002) argument that when firms become visible for the public they also attractive scrutiny, which motivates firms to disclose high quality information. Thus, our first hypothesis is accepted.

The question whether firms with concentrated ownership disclose information of less quality compared to widely held firms has been given a lot of attention (e.g. Dumontier & Raffournier, 1998; Abraham & Cox, 2007). Scholars (e.g. Cormier et al. 2005) debate whether large owners are able to acquire the information they require from sources other than through disclosures. With reference to political cost theory, Watts and Zimmerman (1978) argue that firms disclose information to convince stakeholders that they act in accordance with stakeholder preferences. However, studies show diverse results and are still inconclusive whether any of this is true or not. Our empirical findings support prior inconclusive results and our findings are in contrast to the findings of (e.g. Lajili, 2007 & Kajuter, 2006), but in
accordance with Bushee and Noe (2000). Therefore, we are not able to accept our second hypothesis.

From an agency perspective, previous research demonstrates that creditors complement owners in a monitoring role (Ang et al. 2000). Creditors require that firms disclose information of high quality to assess whether firms are behaving opportunistic (Jensen & Meckling, 1976; Watts & Zimmerman, 1986, p. 185). Previous research also found support from political cost theory. The theory posits that firms with high indebtedness disclose exhaustive information to justify their actions (Deegan & Gordon, 1996; Watts & Zimmerman, 1986, p. 196). Moreover, firms disclose information to assure stakeholders that they are not involved in irregularities might end up in costly regulations imposed by authorities (Watts & Zimmerman, 1978). Our empirical results support these propositions and our prediction is accepted, i.e. that firms with high debt levels disclose information of better quality than firms with low levels of debt. These significant positive results are consistent with other studies have found (e.g. Watson, Shrives and Marston, 2002; Broberg et al. 2009). Hence, our third hypothesis is accepted.

Due to requirements in IFRS, together with the demand from stakeholders, firms are required to disclose comprehensive information that is firm-specific, i.e. firms should disclose all important considerations that, alone, or aggregated could become material by being left out (IFRS Foundation, 2014). Information should, according to IAS 1:122 and IAS 1:125, be presented in a systematic manner that facilitates stakeholders understanding and comparability among firms. Our empirical results show that there are problems with the way firms disclose information required by IAS 1:122 and IAS 1:125. First six percent of the companies do not provide the required information in a way that is easy to find. By embedding information in other notes in other parts of the annual report is not to present information in a systematic manner and reduce comparability and understanding (EC, 2011; IFRS Foundation, 2014). Moreover, the considerable amount of approximately thirty percent of the annual reports does not include subheadings. These findings reinforce the concern expressed by the European enforces about weak fulfilment of disclosure requirements by firms, which have enacted the on-going Disclosure Initiative (CESR, 2007, 2010).
6. Conclusions

The aim of this study was to investigate the quality of listed Swedish publicly listed firms’ disclosures and thereby increase the understanding of the underlying initiatives for providing information in disclosures. We examined to which degree firm characteristics (Firm visibility, Ownership concentration and Leverage) influence firms decision to disclose high quality information in their annual reports based on political cost theory and agency theory. Through an OLS regression analysis, we contribute to the existing literature on disclosures and show what initiatives that drive firms decision to disclose information in concert with the requirements in IAS 1:122 and 1:125.

We find evidence that support the political cost theory and are in line with prior studies that found that more visible firms have stronger incentives to disclosure higher quality. Firms that is object for high media attention leads to greater visibility and consequently faced with a higher level of scrutiny from the public, which gives incentives to increase disclosure quality. Our findings also support debt-associated agency problems and are also in line with prior studies that found a positive relationship between disclosure quality and the degree of leverage, which indicates that disclosures reduces the information gap.

Rather surprising we got ambiguous results on whether ownership concentration has a negative relationship with disclosure quality. The regression models indicate both a positive and a negative relationship. Meanwhile, other regression models did not indicate results with significance to support our hypothesis. Yet, we find a significant negatively correlation between high ownership concentration and the amount of words firms disclose but our regressions do not give support enough to conclude whether ownership concentration affect disclosure quality.

As pointed out in several CESR reports there have been difficulties to implement the IAS 1 requirements in Europe after the date of introduction in 2005. Notably, our findings indicate an inconsistent application of IAS 122 and 125 among the firms. Surprisingly, six percent of the annual reports did not have a heading with the critical assumptions and estimations at all and just incorporated it in other contexts in the annual reports. Our findings support the suggestion by IASB to clarify the materiality requirements in IAS 1 to emphasise that, firms
shall not aggregate or disaggregate information in a manner that hides useful information. In addition, it complicates the comparability among the annual reports, which is one of the qualitative characteristics of IFRS. The results of this thesis might be useful for regulators, firms, non-controlling owners and other stakeholders that have an interest in disclosures in various ways. It provides insight to what factors that affects the quality of the IAS 1, paragraphs 122 and 125 disclosures.

Although this thesis contributes in several aspects, there are also some limitations. We test the disclosure quality by sorting the annual reports into index groups with a self-constructed disclosure index. There is a risk of biased results due to subjective interpretations that might give rise to validity issues. However, to strengthen our result we also used a less subjective measure in forms of disclosure quantitative that confirm our findings. When collecting data for firm visibility some firms have names that capture other phenomenon’s that is not firm specific. In those cases, we made an estimation of the number of occasions they occur in the press, which also might affect the validity. Still, this was only the case of barely six percent of the total sample. We recognize that a weakness in this study is that adjusted R-squared is approximately 20% (approximately 20% in the second regression) in the models. This means that approximately 80% of the variation in disclosures might explained by other, systematic or unsystematic, factors that have not been identified in this study.

An interesting idea for further research would be to do a comparative study on other contexts, i.e. it would be interesting to investigate if visibility influence other disclosures in the annual reports, for instance, Social Corporate Responsibility (CSR) disclosures. Thus, how visible a firm is in media might also affect the quality of CSR disclosures. Finally, there is a need for more research of IAS 1:122 and 1:125 since it is a relatively unexplored area. One possible avenue for future research could be to elaborate on firm visibility in media and distinguish visibility between good and bad news. Such research could probably provide a further dimension about firm’s incentives to disclose high quality disclosures.
References


Rajab, B. 2009, “Corporate risk Disclosure: its determinants and its impact on the company’s cost of equity capital”. School of Accounting, Economics and Statistics, the Business School, Edinburgh Napier University, UK


**Annual reports**


**Books**


**Legal texts**

Online Available (login required): http://eifrs.ifrs.org/eifrs/Menu  
Acquired: 2015-05-10

IAS 1:122, International Accounting Standards 1 – Presentation of Financial Statements.  
Online Available (login required): http://eifrs.ifrs.org/eifrs/Menu  
Acquired: 2015-03-03

IAS 1:125, International Accounting Standards 1 – Presentation of Financial Statements.  
Online Available (login required): http://eifrs.ifrs.org/eifrs/Menu  
Acquired: 2015-03-03

Online Available (login required): http://eifrs.ifrs.org/eifrs/Menu  
Acquired: 2015-03-03


**Reports**


Developed by Kairos Future and issued by FAR. https://www.far.se/PageFiles/10453/FAR_rapport_Kairos%20Future_ensidig.pdf Acquired: 2015-03-07


IFRS Foundation, 2014. Disclosure Initiative Proposed amendments to IAS 1, ED/2104/1  


## Appendix 1

### Multicollinearity Analysis

<table>
<thead>
<tr>
<th></th>
<th>DiscScore</th>
<th>DiscWords</th>
<th>DiscScore</th>
<th>DiscWords</th>
</tr>
</thead>
<tbody>
<tr>
<td>FirmVis</td>
<td>2.150</td>
<td>2.146</td>
<td>0.465</td>
<td>0.466</td>
</tr>
<tr>
<td>OwnCon</td>
<td>1.430</td>
<td>1.410</td>
<td>0.699</td>
<td>0.709</td>
</tr>
<tr>
<td>Lev</td>
<td>1.143</td>
<td>1.141</td>
<td>0.875</td>
<td>0.877</td>
</tr>
<tr>
<td>Prof</td>
<td>1.141</td>
<td>1.143</td>
<td>0.877</td>
<td>0.875</td>
</tr>
<tr>
<td>YearListed</td>
<td>1.278</td>
<td>1.278</td>
<td>0.782</td>
<td>0.783</td>
</tr>
<tr>
<td>Size</td>
<td>2.781</td>
<td>2.786</td>
<td>0.360</td>
<td>0.359</td>
</tr>
<tr>
<td>FoundFirm</td>
<td>1.399</td>
<td>1.384</td>
<td>0.715</td>
<td>0.722</td>
</tr>
</tbody>
</table>