The association between board composition and different types of voluntary disclosure

A quantitative study of Chinese and Swedish listed companies
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Abstract

Company’s annual report has been widely used by stakeholders such as investors, employees, suppliers, customers and creditors. Information included in annual report consists of both mandatory information required by law, regulations as well as accounting standard and voluntary information depended on management’s judgments. We find that voluntary information vary from company to company. From corporate governance field, we find that the company’s board of directors plays an important role in monitoring the management’s performance and have an impact on management’s judgment, including their decision to disclose information in annual report. Board of directors comprises inside and independent directors. Both of them have incentives to disclose information in annual report.

In this study, we use quantitative method to examine the association between board composition and different types of voluntary disclosure in listed companies in the Shanghai stock exchange (SSE) of China and OMX Nordic Exchange Stockholm. The board composition is measured by the proportion of independent directors to total number of directors on the board. Voluntary disclosure has been classified into three categories: Strategic information, non-financial information and financial information.

The results show that there is no significant association between board composition and voluntary disclosure from our samples Chinese and Swedish companies. However, we find association between different types of voluntary disclosure and firm characteristics. We find significant negative association between strategic information and financial leverage for Chinese companies. We find significant negative association between financial information and equity-based management compensation in Swedish companies. On comparison, we find that Swedish companies is inclined to disclose more financial information than Chinese companies while Chinese companies would like to disclose more strategic information than Swedish companies.
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1. Introduction

_In the introduction, we present the background to our research, research question, and the purpose with the study._

1.1 Problem Background

Recently, annual report has been commonly used by investors and it will represent the company’s image. All stakeholders, such as investors, employees, suppliers, customers and creditors, are able to access to the company’s annual report. It is necessary for the company to provide its information to fulfill their needs and build their own style of company image, since annual report represents the company and the company would like to be attractive for investors. Information contained in the company’s annual report consists of both mandatory and voluntary information. The company has to follow laws, regulations and accounting standard to provide the mandatory information while voluntary information is depended on management’s judgment to be included in the annual report. It is really mattered what kind of voluntary information the company has disclosed as they have to consider the benefit and risk of providing information to the public. We found that each company has provided different voluntary information in their annual reports. For instance, some companies focus more on their strategy and marketing plan; some companies provide much information regarding their social and environmental concern.

From the company’s structure, the management of the company is monitored by the board of directors. The board of directors has impact to management’s performance as well as other factors. The board of directors is comprised of both inside directors and independent directors. Inside directors are those experts, and they are highly knowledgeable about the company’s operation and they know exactly what is really happening inside the company (Bhagat and Black, 1999), so they potentially want to provide more information for the companies. Independent directors, however, have incentives to disclose information voluntarily to protect their reputation in terms of decision control, setting of executive compensation and searching for replacements for senior managers (Lim et al., 2007). We make an assumption that both inside and independent directors have incentives to disclose voluntary information. If we take these together, it will imply there is a link between voluntary disclosure and board composition.

While voluntary disclosure has become an important issue of much concern for both Chinese and Swedish companies nowadays. China is widely regarded as a new growth and an indispensable participant in global economy. Transparency of corporate disclosure has become one of essential components of corporate governance principles issued by organizations worldwide (Qu and Leung, 2006). The transparency of corporate disclosure made by Chinese listed companies has always been an issue and they are criticized for lack of transparency and corporate scandals in
recent years further strengthen this point of view (Qu and Leung, 2006). In order to build good corporate information disclosure system, companies are encouraged to voluntarily disclose all the information that may have a material effect on the decision for shareholders. The proportion of independent directors on board may affect the level of voluntary information that company disclosed. Thus, we suggest there is some link between board composition and voluntary disclosure in Chinese companies.

Compared with China, the quality of accounting rule is high in Sweden which means transparency in Swedish Company is high as well and they disclose more information in annual reports. When it comes to board, Swedish guidelines emphasize the main duty of the board is to improve shareholder’s interests and maximize shareholder value. This guideline, however, convey greater need for non-executive director representation in particular as firm size increases; meanwhile it makes recommendations on the size of the board. According to Törnqvist (1999), Multinational corporations have a particular important motivation for voluntary information disclosure is that more policy and future-oriented information may better influence investors in the context of growing globalization of securities market, therefore Sweden choose to reflect their strategic information as voluntary disclosure in annual reports. Thus, the association between board composition and voluntary disclose is highly expected in Swedish companies.

We choose Chinese and Swedish companies as our research aim comes from our mutual interest. In the economy viewpoint, China’s booming economy makes us interests on what kind of voluntary information they will present. China’s stock market has been established since 1991, and it has developed rapidly as a booming market. Stock market development in China appears advanced relative to the overall level of economic development throughout the past two decades. The emergence and development of China’s stock markets can be regarded as one of the major achievements during China’s transition from a planned economy to a market economy. Until the end of year 2007, China has 860 companies listed on Shanghai stock exchange (SSE) market (China Securities Regulatory Commission, 2008). Compared with Sweden, Stockholm stock exchange founded in 1863 and then it was acquired by OMX in 1998 (wikipedia, 2008). According to information in OMX Nordic Exchange Stockholm, there are 270 companies with 306 shares traded in the Stockholm stock market as of July 18th, 2008 (OMX Nordic Exchange, 2008). In corporate governance point of view, Swedish companies they have longer history of corporate governance than Chinese companies. These two reasons for both economy and corporate governance viewpoints drive us to examine the differences of the association of voluntary disclosure between these two countries.

In our review, prior studies had investigated the association between board composition and different types of voluntary disclosure among a variety of countries and areas, such as Australia, Singapore, China, Hong Kong, etc. Most of previous studies implied that more independent directors on the board disclosed more
voluntary information on their corporate strategy in annual reports. So it makes us interested to explore the study for searching the relation between board composition and the level of voluntary disclosure both in Swedish and Chinese companies.

1.2 Research Question

- What are the association of board composition and the level of voluntary disclosure in annual reports of companies in each country (Sweden and China)?
- What are the differences in those associations between companies in Sweden and China?

1.3 Research purpose

The main purpose of this study is to examine the association between board composition and the level of voluntary disclosure in annual reports between two counties and evaluate the effect of the proportion of independent director in the board to the three types of voluntary disclosure: Strategic information, non-financial information and financial information. By comparing and analyzing with the difference of voluntary disclosure between two countries, we will examine both China and Sweden their motivation and try to explain why each country discloses different voluntary information.

1.4 Disposition

Chapter one: Introduction
Content: We present the background to our research problem and the purpose with the study.

Chapter two: Research Methodology
Content: In this chapter, we introduce what methods of the research strategy, research approach, research design we used, and how we collected the data and analyzed.

Chapter three: Theoretical Framework and Literature review
Content: We present the theories which we using in our thesis, including corporate governance main issue, Board composition overview both in Sweden and in China, and Voluntary disclosure types and association with board composition. Ultimately, an overview of prior empirical study related to our study will be outlined.

Chapter four: Empirical study
Content: In this chapter, we will use the data collected from annual report to do our research both from Sweden and China. These data collection will help us to analysis the association between board composition and voluntary disclosure both in Swedish and Chinese Companies.
Chapter five: Analysis and results  
Content: In this part, we will compare and analysis the data collection from chapter four by using the statistic model and equation in order to find out the relation between different variables.

Chapter Six: Conclusion and further consideration  
Content: Finally, we will draw our conclusion and personal reflection of this study and connected to our research questions, and provide some further research consideration.
2. Research Methodology

In the research methodology part, we go through our choice of subject and what preconception we had when we started with this study. Further, we present the research approach and scientific approach we use. A discussion of the credibility of the study including reliability and validity is included.

2.1 Choice of subject

The choice of subject was initially comes from when we were reading the article “The association between board composition and different types of voluntary disclosure” (European Accounting Review, Vol. 16, 2007). We found this topic was quite fascinating, relevant and challenging, which inspire us to identify as an important research area between board composition and the extent of voluntary disclosure.

The choice of subject also comes from our interesting both in corporate governance course and accounting course, which motivated us to explore the link between board composition and voluntary disclosure in this field. Since the voluntary disclosure has a variety of presenting types, it is now turning toward a characteristic of many orientated companies with disclosing management forecast, financial analysis, industry experts. Therefore, it is interesting to study what kind of company will disclose what kind of voluntary information. Another concern is we choose Chinese and Swedish companies as our samples due to the fact that very few studies have documented corporate voluntary disclosure in China and Sweden, thus it is very exciting to explore this field without many prior studies, at least make some small contribution by us. Finally, we want to examine the gap between those two countries when it comes to voluntary disclosure.

2.2 Preconceptions

Both of us are the students of Master’s program in accounting, and our thesis is done from real figure from annual reports and we believe individual preconceptions will not be biased on the results of the research.

2.3 Research Approach

In business and management area, qualitative and quantitative methods are the choices for analysis. As Bryman and Bell (2007) said “quantitative research can be construed as a research strategy that emphasizes quantification in the collection and analysis of data”. According to Trochim (2006), quantitative methods are in numerical form and it contains confirmatory and deductive approach. By contrast, “qualitative research can be construed as a research strategy that usually emphasizes words rather than quantification in the collection and analysis of data.” (Bryman and Bell, 2007).
During the process of our research, we use annual reports as our data resources and dealing with number, adopt with statistic analysis and draw our conclusion. According to the condition above, quantitative method is applied in our study.

2.4 Scientific approach

Regarding the scientific approach, deductive and inductive approaches are rational processes used by scientists (Graziano and Raulin, 2004). In respect of deductive approach, the researcher aim to test their developed theory and hypothesis by exploring the abstract or general idea. Deductive approach entails a process from theory to findings (Bryman A and Bell E, 2007). Hence, it is very normally used in scientific studies focusing on quantifiable data.

Inductive approach, however, is reversed to deductive approach. Regarding to inductive approach, it entails a process from finding to theory. (Bryman and Bell, 2007). For inductive approach, the empirical data will be observed and analyzed in order to develop new theory or make predictions (Saunders et. al, 2000; Graziano and Raulin, 2004).

The principle orientation in our thesis is deductive approach. Our purpose is not to build a new theory, and we do some research and get the result, therefore, deductive approach is appropriate method for our study.

2.5 Choice of theories

Our theoretical part has been based on three objectives. One objective is to create an understanding of how board comprise in China and Sweden currently and provided the corporate governance regulation of related to these two countries. Second, we provide different types of voluntary disclosure and show the benefit and drawback of providing voluntary disclosure inside and outside companies. Finally, we will implicate there is an association between board composition and voluntary disclosure based on previous studies.

The theories we selected is from corporate governance which dealing with the principal-agent problem. For the choice of theories we also orientated ourselves on previous studies done on this topic.

2.6 Selection of sources and criticism

The majority of sources in this thesis consist of scientific articles that we have found in the database Business Source Premier and Emerald at the library of Umeå University. We also use some existing articles from previous course such as corporate governance. With highest credibility, these articles have been examined, reviewed, and published in scientific journals. We found a lot of research has been done regarding to
board composition and voluntary disclosure, however, it is impossible to cover all studies published in this topics, thus, we had to limit our selection to articles that we found particularly interesting, reliable and relevant to our subject.

We are sure that we can achieve our standards also with the existing articles by choosing to illustrate in the present research. All of these articles were issues by good reputation publishers around the world. The information obtained from official company’s website is accurate, reliable and relevant.

2.7 Validity

As Bryman and Bell (2007) mentioned, validity is an important criterion in the research, and “Validity is concerned with the integrity of the conclusions that are generated from a piece of research.” Validity is a way of a measurement of whether the researcher is observing, identifying, or measuring the data coinciding with what he/she should do (Bryman and Bell, 2007).

According to Bryman and Bell (2007), there are four types of validity: measurement validity, internal validity, external validity and ecological validity. Measurement validity related to the issue of whether or not an indicator that is devised to estimate a concept really measures that concept. Internal validity is come up with the question of whether a conclusion incorporates a causal relationship between two or more variables. (Bryman and Bell, 2007) External validity, however, is a outcome of a specific study which might be generalized beyond the specific research. Finally, ecological validity is concerned with social environment, social settings and people’s routine life (Bryman and Bell, 2007).

With respect to our study, we mainly focus on measurement validity in terms of using different control variables, and try to examine if each control variable can reflect an association with voluntary disclosure. Furthermore, our internal validity reflects from our correlation test between different variables and tries to examine the relationship between them. We believe our data are of validity. All of the data we used are extracting from companies annual reports, and they have a high level of credibility and accountability.

2.8 Reliability

Reliability is come up with whether the results of a study are repeatable, and it is particularly in connection with quantitative research (Bryman and Bell, 2007).

All the data we used is collected from published annual reports, and we are sure of achieving a high reliability. The model we used has been tested with certain times by prior researchers, and it was a mature model. With using SPSS, we think the processing of data is accurate, controllable and reliable. We are therefore sure of transparency, relevance and reliability for our thesis.
3. Theoretical Framework and Literature Review

In this chapter we present the theoretical framework which this study is based on. We present the voluntary disclosure issue and give an introduction to the principle-agent problem in corporate governance field, and further present the board composition overview. Finally, this chapter ends up with prior empirical studies regarding to our subject.

3.1 Voluntary disclosure

Voluntary disclosures are information disclosed in the company’s annual report in excess of requirement which represent free choices of the company’s management in order to provide the users with the information related to their decision making (Meek et al., 1995; Eng and Mak, 2003; Cheng and Courtenay, 2006; Chen and Jaggi, 2000). In addition to the regulated financial report, some companies include voluntary communications such as management forecast, analyst’s presentation and conference calls, press releases, internet and other corporate reports as well as voluntary disclosures such as financial analysts, industry experts and the financial press (Healy and Palepu, 2001).

Voluntary disclosure is able to measure by the amount and detail of non-mandatory information in the company’s annual report (Eng and Mak, 2003)

In the study of Meek et al. (1995), they mentioned the understanding of the voluntary disclosure in Multinational Corporation could be useful for preparers to provide complete information to be competitive for funds on stock market and for users of disclosed information to analyze financial statement as well as for policy-making bodies to deliberate disclosure regulations.

3.1.1 Development of voluntary disclosure

The dissatisfaction with mandatory financial reporting of the investors, financial market and the demand for increased stakeholder reporting which is resulted for the increasing popularity of the stakeholder have led to demand companies to voluntarily provide more comprehensive information about their long-term strategies and performance (Boesso and Kumar, 2007).

As Boesso and Kumar (2007) mentioned, the difference in voluntary disclosure practices should be carefully considered with regard to the actions of the government, regulators and other stakeholders due to differences in country contexts.

Since the tasks of the company’s management is not only take on activities expected by its stakeholders but also to report on those activities to the stakeholders, the accountability of the company extends beyond its financial and market performance
and then it will choose to voluntarily disclose information about their stakeholder management efforts beyond mandatory requirement (Boesso and Kumar, 2007).

3.1.2 The classification of the content of voluntary disclosures

In order to analyze the voluntary disclosure of the company, another important step is to classify the content of information disclosed. Boesso and Kumar (2007) have classified disclosures in their study in terms of type of information as financial, non-financial and information on outlook, forward looking and historical. They mentioned that this classification allowed them to recognize the effectiveness of voluntary disclosure as a tool for stakeholder management.

Some studies classified voluntary disclosure into three categories as strategic information, financial information and non-financial information (Meek, 1995; Eng and Mak, 2003; Lim et al., 2007). These types are directed at different users of the annual report such as investors and other stakeholders (Lim et al., 2007). Strategic and financial information have been recognized as decision-relevance to investors while non-financial information is recognized as a company’s accountability and targeted on a broader group of stakeholders than the owners and investors (Meek et al., 1995).

Another study is from Xiao and Yuan (2007) regarding the impact of ownership structure and board composition on voluntary disclosures of listed companies in China. In their study, they classified the voluntary disclosures as background information, business information, financial information and non-financial information.

3.1.3 Role of disclosure in the capital market

In the study of Healy and Palepu (2001), they examine the role of disclosure in the modern capital market. They found that information disclosure is able to solve both information problem and principle-agent problem.

The first problem, information or lemon problem arises from an imbalance or asymmetry of information and conflicting incentives between investors and management of the company (Healy and Palepu, 2001). Concerning this problem, the investor in the capital market may value all companies at an average level, thereby undervalue a good company and overvalue a bad company (Healy and Palepu, 2001). They suggest that regulations which require the managers to fully disclose their information may help to solve the information problem.

The second problem is principle-agent problem. They suggest that this problem is able to solve to by optimal contracts between managers and investors which help to align the interests of the managers with those of the investors and require the managers to disclose relevant information to the investors (Healy and Palepu, 2001).
Another solution is the board of directors who have responsibilities to monitor managers on behalf of the investors (Healy and Palepu, 2001)

3.1.4 Benefits and drawback for the company

The company has a motivation to disclose more information than the mandatory requirement. Meek et al. (1995) stated the company had incentives to provide voluntary disclosure. According to their study, companies have to be competitive in the stock market. The investors demand information to value the company and make other investment decisions such as choosing a portfolio of securities (Meek et al., 1995). The voluntary disclosure also helps to attract new investors as well as maintain a demand in the company’s shares and a stock price in the high level (Cooke, 1989).

Healy and Palepu (2001) discussed the economic consequences of voluntary disclosure and three types of capital market affects for the firms that provide the extent of voluntary disclosure in their study. First, the company will improve liquidity for their stock in the capital market since voluntary disclosure reduce information asymmetries among investors and then help them to gain confidence in the company with high levels of voluntary disclosure can create (Healy and Palepu, 2001). Second, concerning to the lemon problem or imbalance information between investors and managers, it create incentive to the managers to provide voluntary disclosure to reduce cost of capital for the company (Healy and Palepu, 2001). They stated that the company with high level of disclosure and low information risk is likely to have a lower cost of capital. Third, voluntary disclosure will increase following by financial analyst because voluntary disclosure will lower the cost of information acquisition for analysts and increase their supply (Healy and Palepu, 2001).

However, there are also cost associated with disclosure which should be considered such as information collection and processing costs, litigation costs and proprietary costs (Meek et al., 1995). Proprietary costs occur when disclosed information potentially damages the company as result in competitive disadvantage and government regulation (Meek et al., 1995). The company has concern for disclosure of forward-looking information, particularly quantitative earnings forecasts, because the possibility of the forecast error, thereby costing management legal exposure and loss of reputation for accuracy (Kasznik, 1999).

3.1.5 Impact of the extent of voluntary disclosure to the society

The studies of the extent of voluntary disclosure not only provide benefits to the company bust also bring benefits to the policy-maker. The knowledge of the extent of voluntary disclosure is able to assist policy-makers to evaluate whether the current mandatory disclosure is sufficient for the users (Cooke, 1989). The understanding of relation between the characteristics of the company and the type of voluntary
disclosure information may assist the policy-makers to improve the current mandatory disclosure and set accounting standards (Cooke, 1989).

### 3.1.6 Motives and credibility for voluntary disclosure

As voluntary disclosure depend upon management’s judgment, Healy and Palepu (2001) discussed management motives for making decision on voluntary disclosures for capital market reasons. They provide instances of company which tend to provide more voluntary disclosure such as a company, which expects to issue the new share or public debt, will concern about investors’ perceptions of the company and consequently tend to disclose more information to reduce the problem of information asymmetry and reduce the company's cost of external financing (Healy and Palepu, 2001). In contrast, a company, which concerns that disclosures can damage their competitive position in product markets, tends not to disclose their information.

Also, managers whose risk of job loss have been aligned with poor stock and earning performance or managers who receive stock compensation have incentives to provide more voluntary disclosure to avoid the investors undervalue the company and explain away poor earning performance (Healy and Palepu, 2001). Another motivation is a threat of shareholder litigation which can have two affects on manager’s disclosure decisions both increasing voluntary disclosure to avoid legal actions for inadequate or untimely disclosure and decreasing managers’ incentives to provide disclosure like forward-looking information (Healy and Palepu, 2001).

Healy and Palepu (2001) also mentioned credibility of voluntary disclosure in order to ensure that management disclosures are credible since managers have incentives to make self-serving voluntary disclosure. They suggested two mechanisms for increasing the credibility of voluntary disclosures (Healy and Palepu, 2001). The first one is third-party intermediaries which are able to provide the quality assurance of management’s disclosure (Healy and Palepu, 2001). Another one is financial reporting which can prove prior management’s disclosure such as forecasts of revenues and earning (Healy and Palepu, 2001). The second mechanism will work effectively with adequate penalties from legal system or board monitoring for managers who disclose incorrect information on purpose (Healy and Palepu, 2001).

### 3.2 Corporate governance and Principle-agent problem

Corporate governance is the mechanism for holding management accountable for a company’s performance (OECD Economic Surveys: Australia, 1998). The main goal of corporate governance is to contribute low cost of capital for companies so that investors can have greater confidence that management will act in their interests, particularly, seeking to maximize profits (Becht et al., 2005). Thus there is a problem with the separation of ownership and control. However, this kind of decision control made by owners, and managers have incentives to deviate from shareholders’ interests,
which makes decisions that maximize their own wealth as opposed to the shareholders’ (Becht et al., 2005). This consequence arises because the separation of ownership and control in light of information asymmetry between management and shareholders. This situation is known as the principal-agent problem (Kim and Nofsinger, 2007).

Solution to this problem is inclined to come in two categories, incentives and monitoring. The incentive solution is to tie the wealth of the executive to the wealth of the shareholders, so that executives and shareholders want the same thing, which is called aligning executive incentives with shareholder desires (Kim and Nofsinger, 2007). The second solution is to build mechanism for monitoring the behavior of managers (Kim and Nofsinger, 2007).

3.3 Board composition overview

3.3.1 Board composition

Generally speaking, board composition can be defined from various perspectives, including race/ethnic background, nationality, gender and age, educational background, board size, industry background, ownership structure and relative experience (Van der Walt et al., 2006; Kang et al., 2007). Specifically, Shamser and Annuar (1993) defined “Board Composition” as “the proportion of outside directors to the total number of directors”, which means the board size. In this thesis, when it mentioned the board composition, we mainly focus on board size. Specifically, Shamser and Annuar (1993) defined “Board Composition” as “the proportion of outside directors to the total number of directors” then in this thesis, when we mentioned the board composition, we mainly focus on the proportion of the board. Boards of directors are categorized into inside directors and independent directors (Andres et al., 2005). Independent directors are those members who meet the criteria like: he or she is not otherwise employed by the company, is not participate in the business by the company, and is not a family member (Becht et al., 2005). Additionally, we regard independent directors as those who do not have formal relationship with the company. Meanwhile, Lim et al. (2007) mentioned independent directors are professional managers with expertise and they can make decision control for the company. Alternatively, inside directors play the roles as executive directors for managing and organizing daily operation and its activities (Andres et al., 2005).

3.3.2. Independent directors and inside directors

Independent directors refer to ensure that the board, as the final internal monitor of decision-making and they protects the interests of the security holders (Fama, 1980). Cheng and Courtenay (2006) viewed that independent directors have a strong incentives to perform their decision-making so as to maintain their reputation. Beasley (1996) pointed out board with higher percentage of independent directors probably
have less financial statement fraud. More importantly, the function of independent directors is to carry out the task which including principle-agent problem between inside directors and shareholders, thus we expected independent directors are regarded as contributing to corporate governance effectiveness.

O’Higgins (2002) mentioned that, as independent directors, they play their roles by the following: providing an unbiased view; providing a counterbalance to control the executives of company; risk management; seeing issues in their totality, from a broader perspective—“thinking the unthinkable”; giving the external view; enhancing networks and external relations of the company; as well as providing special skills and knowledge to supplement that of executives.

Inside directors are those members of board of directors who are also members of companies’ management, almost always company officers, and they enjoy seats on boards for their equity in the company. (http://en.wikipedia.org/wiki/Inside_director).

Inside directors are highly knowledgeable about the company’s operation and they know exactly what is really happening inside the company. Meanwhile, they are familiar with the industry which their company related to. Inside directors might be better at strategic planning decisions (Bhagat and Black, 1999).

3.3.3 Function of the board

Kim and Nofsinger (2007) refers to that generally board of directors is charged with five broad functions: to hire, evaluate perhaps even fire top management, with the position of CEO being the most important to consider; to vote on major operating proposals; to vote on major financial decisions; to offer expert advice to management and to make sure the firm’s activities and financial condition are accurately reported to its shareholders.

Andres et al. (2005) suggested that we should take a look at internal functioning of the board. They underline two of the internal function: the board committee structures and the frequency of board meetings. The committees are nominated by board delegation and represent a method of task for which directors are responsible, hence, the large the firm, the more significant their roles. However, the committee structure is an issue given the scarcity of available information and the reduction of sample size it imposes. Meetings are the most usual occasion to discuss and exchange ideas in order to monitor managers, which means the more frequent the meetings, the more detailed the control of the managers, and greater the shareholder wealth (Andres et al., 2005). However, given the fact that the CEO is charged with fixing the agenda of the meetings, that the time of the independent directors is scarce and that routine tasks take up a large proportion of the time, more meetings do not necessarily imply better monitoring.
3.3.4. Board size

Kim and Nofsinger (2007) suggested a board with fewer members may be a better board. Previous research has shown that smaller boards are more effective, active and dynamic than larger boards. Empirically, firm valuation is negatively when it comes to the size of the board, which means the smaller the board, the better. Oversized boards were supposed to lead to worse performance according to Yermack (1996). With respect to the size of the board, Cheng and Courtenay (2006) found that too large board actually has diminished monitoring capabilities. Eisenberg et al. (1998) concluded that there was a negative relationship between board size and profitability extends to small and midsize Finnish firms. However, Bhagat and Black (1999) found that the inverse correlation between board size and performance is not strong related to performance measure. John and Senbet (1998) suggested that limiting the size of the board might improve efficiency and improve corporate governance. Thus, there seems no theory of prior evidence to find the association between board size and levels of voluntary disclosure.

3.4 Board composition in China

Our thesis orientation is influenced by different cultural environment among countries. According to Chow et al. (1995), Chinese society is dominated by high level of collectivism and power distance, which indicated that Chinese are inclined to comply with law and regulations, and disclose less information voluntarily in their annual reports (Xiao and Yuan, 2007).

3.4.1 Board size

In Chinese system of corporate governance, companies shall define the number of directors in their articles of association. More specifically, inside directors shall not exceed half of the total directors. It mentioned that companies are encouraged to employ directors from outside professionals (CSRC, 2003).

3.4.2 Duties of board

Given the central role boards in Chinese system of corporate governance, the responsibilities of the board of directors shall be clearly defined in the articles of association of companies.

The board of directors shall formulate standard procedures of convening of board of directors, rules of procedure and voting procedures, which shall be approved by the shareholders’ meeting and reported to the dispatched offices of the CSRC (the Provisional Code of Corporate Governance for Securities Companies) of the local district where the company’s domicile and principal place of business are located.
3.4.3 **Independent Directors**

Companies shall introduce independent directors to their board of directors in accordance with the regulations of the CSRC.

Independent directors should have the basic knowledge of securities market and be familiar with the relevant laws and regulations. They shall be honest and accountable, with more than 5 years’ working experience in the related fields (CSRC, 2003).

The independent directors have rights to perform duties in addition to having the functions and powers vested in the directors in accordance with the Company Law of the People’s Republic of China. These duties including: the independent directors propose to the board of directors convening the extraordinary general meeting. And propose to the supervisory committee convening the extraordinary general meeting in case the board of directors objects such proposal; they propose convening the board of directors meeting; they employ audit or consulting agency for performance of duties; they give independent opinions on such matters as the remuneration plan or incentive plan for the directors and management personnel of the company; they issue independent opinions on the major affiliated transactions, and submit a report to the dispatched offices of the CSRC of the local district where the company’s domicile and principal place of business are located whenever deemed necessary. Where the board of directors of companies establishes special committees on related transactions or on the senior management personnel’s remuneration, such committees shall be chaired by the independent directors. The independent directors shall submit the work report at the annual general meeting. In case the independent directors fail to perform theirs duties, they shall bear the relevant responsibilities (CSRC, 2003).

3.5 **Board Composition in Sweden**

Board composition of a public company in Sweden has been defined by the Swedish Company Act (2005:551) and Swedish Code of Corporate Governance. According to the Swedish corporate governance code (2005), all Swedish companies which have their shares traded on OMX Nordic Exchange Stockholm and have market value exceed SEK 3 billion are required to follow the Swedish corporate governance code and issue an annual corporate governance statement (OMX Nordic exchange 2008). Otherwise, companies are subject to the corporate governance code of their home country. The Swedish corporate governance board issued the revision of the Swedish code of corporate governance (2008) effected from July 1st, 2008. The revision is applicable for all Swedish companies whose shares are listed on OMX Nordic Exchange Stockholm (OMX Nordic exchange 2008).

However, the Swedish Code of Corporate Governance has adopted the principle “Comply or explain”. With this principle, it provides the flexible approach for the company to deal with the corporate governance. However, it has been stated that there
is no requirement to evaluate an explanation has been established. The Code provides an example for the company listed in the stock market that the investors or other actors will decide on that explanation whether it is acceptable.

3.5.1 Board size

According to the law, a company should have a board of directors comprising one or more members while a board of directors of a public company should comprise not less than three members and the chairman of the board of directors may not be the managing director of the company.

3.5.2 Board composition

Swedish Code of Corporate Governance point to various qualifications and experience needed to manage the company such as exhibiting diversity and breadth in the director’s qualifications, experience and background. It also mentioned an equal gender distribution on the board and only one person from senior management is able to be a member of the board.

The Swedish Company Act requires having employee representative on the board which is equated with members of the board of directors. Two employee representatives and two deputy members are appointed for a company with at least 25 employees and three representative and two deputies are appointed for a company with at least 1,000 employees.

3.5.3 Duties of the board

The law states that the board of directors is responsible for the organization of the company and the management of the company’s affairs. They should make an ongoing assessment of financial position of the company. They should ensure that accounting, management of funds and the company’s finance are properly monitored. Also, the board is responsible for the mandatory part in the financial report to be in accordance with the law, the relevant accounting standards and other requirements for listed companies as mentioned in the Swedish Code of Corporate Governance.

3.5.4 Independent directors

Swedish Code of Corporate Governance provides the several specific criteria concerning an independent director. According to the criteria, they restrict the managing director, employees of the company, consultants, partnership, auditor of the company, twelve-year member of the board, close relative or family associate of the senior management to be consider as an independent director.

For companies listed in the OMX Nordic Exchange Stockholm, it has been mentioned
that more than half of the members of the board who elected by the shareholders should be independent of the company and the management of the company. In addition, companies must have at least two members of the board of directors, elected by the shareholders, who are independent of the company’s major shareholders and also independent of the company and its management.

3.5.5 Corporate Governance report

According to Swedish Code of Corporate Governance, the company’s annual report has to include a special report on corporate governance. The report should contain information on the corporate governance in the company and the explanation for the departed rules. Concerning to board composition, the report include the procedures to appoint the board of directors, the division of work among directors, the composition, tasks and decision-making authority of board committees as well as information of each members in on the board such as age, education, working experience, work performed for the company, number of share held by the directors and independence of each member.

3.6 Independent directors, inside directors and voluntary disclosure

As mentioned by Healy and Palepu (2001) with regard to information asymmetry and agency conflicts between managers and outside investors, financial reporting and disclosures have been created in order to facilitate credible disclosure between managers and investors as well as play an important role in mitigating these problems. Chau and Gray (2002) discussed on the principal–agent problem that have an affect on information disclosure by the principal would effectively monitor their economic interest while the managers can show that they act on the best interest of the owners.

Recent studies investigated that the higher proportion of independent directors on boards, the more information they would like to disclose to outside investors (Eng and Mak, 2003). Ajinkya et al. (2005) found that companies with more independent directors are more likelihood to provide a forecast in their annual reports. The consequences seems like independent directors could mitigate the information asymmetry between management and shareholders with providing more voluntary disclosure (Lim et al, 2007). Thus, we will expect that higher proportion of independent directors on board will result in more voluntary disclosure.

Voluntary disclosure and independent directors have been viewed as the control mechanism in corporate governance to reduce the principal-agent problem between the shareholders and the manager (Patelli and Prencipe, 2007). The board of directors, who have been delegated the authority from the shareholders to work on their behalf and make decision in the company’s operations, play the crucial role in the control mechanism to monitor and supervise the management (Patelli and Prencipe, 2007).
Inside directors also play an important role in educating independent directors and in providing boards with more detailed information (Baysinger and Hoskisson, 1990). Inside directors also have other reasons to provide more voluntary disclosure such as their remuneration incentives, to protect their jobs and to protect their reputation from the firm failure or poor performance (Lim et al., 2007).

Researchers found that inside directors, however, they potentially want to provide more information to boards as they are familiar with company’s operation better than independent directors (Fama and Jensen, 1983). In order to reduce litigation risk, inside directors would like to disclose more information in the annual reports (Lim et al., 2007). While inside directors, who are more familiar with the company’s operation, are able to provide more information than those from independent directors (Lim et al., 2007).

3.7 The association between the board composition and voluntary disclosure in prior empirical study review

The previous research conducted by Lim et al. (2007) examined the relationship between board composition and voluntary disclosure. Moreover, the study provided evidence on the relation between the total voluntary disclosure and the components of voluntary disclosure, such as forward looking, strategic, non-financial and historical financial disclosures and board composition. They had hand-collected 67 items from annual report in Australia to find out the total voluntary disclosure index and the sub-indices of voluntary disclosure (Lim et al., 2007). They use two-stage multivariate analyses, and the finding is that there is a positive association between board composition and voluntary disclosure in annual reports. Another finding is that independent boards provide more voluntary disclosure of forward looking information and strategic information (Lim et al., 2007).

Another previous research mentioned by Cheng and Courtenay (2005) examined the association between board monitoring and the level of voluntary disclosure. The samples were based on 104 firms listed on the Singapore Stock Exchange in the year 2000. As the author found “The result is indicating that firms with boards with a majority of independent directors have higher levels of voluntary disclosure than firms with boards that do not have a majority of independent directors. This study is also examined the degree of influence that the regulatory regime has on board monitoring and voluntary disclosure (Cheng and Courtenay, 2005). The finding is the positive association between the proportion of independent directors and voluntary disclosure is highly significant and about two or three times stronger under a disclosure-based regulatory regime than under a merit-based regulatory regime. This study also showed that board size and CEO duality are not related with the level of voluntary disclosure (Cheng and Courtenay, 2005).

Previous research conducted by Xiao and Yuan (2007) examined the impact of
ownership structure and board composition on voluntary disclosure of listed companies in China. The sample is from listed on the SSE of China at the end of 2002, composed of 559 firms. This paper tested the association among ownership structure, board composition and the level of voluntary disclosure (Xiao and Yuan, 2007). The findings including: higher block holder ownership and foreign listing ownership is related to increased disclosure. Independent directors’ increases corporate disclosure and CEO duality decreases the corporate disclosure. The finding also indicated that larger firms had greater disclosure; however, firms with growth opportunities are reluctant to disclose voluntarily (Xiao and Yuan, 2007).

Gul and Leung (2004) previously study the linkages between board leadership structures in terms of CEO duality (CEOs who jointly serve as board chairs), the proportion of expert independent outside directors and voluntary corporate disclosures. The samples are based on 385 Hong Kong listed companies for 1996. The result was showing like followings: Firms with CEO duality are associated with lower voluntary disclosure than firms without CEO duality (Gul and Leung, 2004). While, firms with a higher proportion of expertise of non-executive directors are associated with lower levels of voluntary disclosure. Finally, expertise of non-executive directors moderates the negative association between CEO duality and corporate disclosures; the negative association between CEO duality and disclosure is weaker for firms with a higher proportion of expertise of non-executive directors (Gul and Leung, 2004).

Eng and Mak (2003) examined the association between ownership structure which is divided into managerial ownership, block holder ownership and government ownership, board composition and voluntary disclosure. They hypothesize that managerial ownership and block holder ownership have negative impact to the level of voluntary disclosure while government ownership and the proportion of independent directors have positive impact (Eng and Mak, 2003). They use an aggregated disclosure score to measure voluntary disclosure of strategic, non-financial and financial information (Eng and Mak, 2003). Their sample is financial and non-financial companies listed in the Stock Exchange of Singapore at the end of 1995. As a result, they find that lower managerial ownership and significant government ownership are associated with increased voluntary disclosure (Eng and Mak, 2003). Total block holder ownership is not related to disclosure (Eng and Mak, 2003). An increase in independent directors reduces voluntary disclosure (Eng and Mak, 2003).

Chen and Jaggi (2000) examined the association between independent non-executive directors, family control and comprehensive mandatory financial disclosures on the companies in Hong Kong. They use the disclosure instruments which contain 30 items of mandatory financial disclosure (Chen and Jaggi, 2000). They found out that there is a positive association between the proportion of independent directors on corporate boards and comprehensiveness of financial disclosure (Chen and Jaggi, 2000).
4. Empirical study

In this chapter, we present our research design, sample and data collection, voluntary disclosure checklist and select control variables through this study.

4.1 Research design

Research design provides a framework for the collection and analysis of data. Our research design is comparative design. As Bryman and Bell (2007) pointed out, comparative design consists of two or more contrasting cases, and it includes the logic of comparison. We collected data both from China and Sweden, compared with each other and then detailed examine into each country.

4.2 Sample and data collection

Our samples for Chinese companies are collected from companies listed on the Shanghai stock exchange (SSE) of China in May 2008. We choose the special criteria of selecting by the 50 companies which are leading share index on the SSE. These 50 companies are representatives of largest scales with good liquidity, which are star companies currently listed on the Chinese capital market. Companies with the financial sectors such as banks and insurance are excluded, for they have to submit to other disclosure requirements in China. Finally, we obtained a total of 24 companies’ observations for our testing. The companies range from different industry sectors, with 13 companies in manufacturing; 4 companies in transport, 2 companies in real estate, 2 companies in information technology, 1 company in public utility, 1 company in retail and 1 company in telephone communication. We selected the year 2007 and obtained the annual reports from SSE.

For Sweden, we selected companies listed in OMX Nordic Exchange Stockholm and include in the list OMX Stockholm 30 in May 2008. The OMX Stockholm 30 is leading share index. It consists of 30 most actively traded stocks. We excluded companies in financial sector. We also excluded companies which have parent company located outside Sweden since they do not follow Swedish Corporate Governance code. Instead, they follow corporate governance code of their home country. Finally, we have 21 companies as samples in our study. We selected the companies’ annual report for the year 2007 by downloading from the companies’ website.

Financial data, voluntary disclosure information and board composition information have been hand – collected from the companies’ annual reports of the sample companies.

Our voluntary disclosure score are counted from the number of voluntary disclosure items which have been provided by the companies and disclosed in the companies’
annual reports.

4.3 Dependent variables/Voluntary disclosure checklist

A voluntary disclosure checklist is used to examine companies’ annual reports on voluntary disclosure information. We started the checklist with the one in the study of Lim et al. (2007). Then, we excluded some mandatory items according to Chinese and Swedish Laws and regulations. Since we have time limitation for our study, we selected only some items from that checklist and we also adjusted some items to make it more practical for our study.

The voluntary disclosure checklist consists of 15 items in Appendix 1. The checklist is classified into three categories: Strategic information, non-financial information and financial information. Strategic information and financial information relate to the decision making of the investor while non-financial information has been used by all stakeholders and been considered as a company’s social accountability (Meek et al., 1995). Specifically, Strategic information will reveal the future of the company, and from strategic information we realize the history of the company and the strategy they preferred. For instance, it is more beneficial if investors and stakeholder to get more information such as organizational structures and companies’ general strategies, since this kind of information will reflect companies’ national and international status as well as their future consideration. Non-financial information mainly related to employees and other concerns such as environmental consideration and charity donation, which can be regarded as a company’s social responsibility. It is common for the employees to know if the companies would like to provide staff training in terms of employee concern, and it would also interested to notice if the companies have the sense of environmental concern issue as reducing pollution has become a crucial issue nowadays. With financial information, we can figure out how the company performed by computing the financial ratio. Liquidity ratio is the ratio of current assets to current liabilities. This ratio uses to measure company’s ability to pay-off short time obligations. Leverage ratio measure the capital structure of company with the ratio of non-current liabilities to equity which is of interest to creditor and investor. Also, financial history or summary - three or more years are useful for investors to review compared figure and convenient to calculate ratios themselves since they do not have to spend time to summarize figures.

Both of weighted score and unweighted score have been adopted in prior study. Weighted score was based on the level of strategic, non-financial and financial information from annual reports (Eng and Mak, 2003). However, we consider using weighted score may bring a certain degree of bias since companies may reflect more significant types of information only judged by them. In addition, weighted score may not represent real economic consequences to the subjects (Chow and Wong-Boren, 1987). In order to minimize the bias, we decide to use unweighted score in our study. In the checklist, each item scores 1 if it is disclosed and 0 if it is not disclosed (Gul
DSCORE is the total of scores awarded for each item in the voluntary disclosure checklist (Gul and Leung, 2004).

4.4 Control variables

Based on previous studies in chapter 3, we selected some firm characteristics as control variables in our regression model. We provide definition of each control variables. We also present findings from previous studies related to our control variables as follows:

Country (COUNTRY) = 1 for company in China and 0 for company in Sweden

Board composition (BC) = The proportion of independent directors to total number of directors in the board.

There are several related studies found that there is a positive correlation between the proportion of independent directors on the board and the amount of voluntary information disclosed by the companies in their annual reports (Patelli and Prencipe, 2007; Xiao and Yuan, 2007; Cheng and Courtenay, 2006; Chen and Jaggi, 2000). Moreover, Lim et al. (2007) found that boards composed of largely independent directors voluntarily disclose more forward looking quantitative and strategic information.

In contrast, the study of Eng and Mak (2003) and Ho and Wong (2001) found that the level of voluntary disclosure reduce when the proportion of independent board increase.

Firm size (SIZE) = Log of total assets. Several studies use firm size to measure level of voluntary disclosure. They find that firm size has a positive association with voluntary disclosure (Chow and Wong-Boren, 1987; Meek et al., 1995; Lim et al., 2007; Eng and Mak, 2003; Ho and Wong, 2001; Boesso and Kumar, 2007; Xiao and Yuan, 2007; Gul and Leung, 2004).

Larger firms are likely to make more voluntary disclosures because of the greater demand for outside capital, lower average costs of collecting and disseminating information, and greater demand for information by financial analysts (Hossain et al., 1995).
Firm size has been considered as the one of the three most important variables in the study of Meek et al. (1995) and they mention that large firms have additional incentive to disclose more information. These large firms may have lower production costs. Moreover, the wide ownership structure in large firm is taken into account (Meek et al, 1995). Skinner (1995) stated that from legal point of view, larger firms would disclose more information since the payout for damages in litigation is a function of firm size.

In the study of Ahmed and Courtis, 1999, on disclosure levels in annual reports by integrate 29 prior disclosure studies, found a significant association between firm size and disclosure level.

Industry (IND_1) = 

1 for manufacturing industry, 0 for services industry and 0 for other industry.

Meek et al. (1995) mention that types of industry have influence on volume of companies’ voluntary disclosure and voluntary disclosure items. For example, environmental related company such as oil, chemicals, mining tends to disclose more non-financial information concerning to its social accountability (Meek et al., 1995) and manufacturing industry would like to disclose more voluntary disclosure information than non-manufacturing firms (Cooke, 1992; Lim et al., 2007)

In contrast, the study of Ferguson et al., 2002, found only little support for an industry effect to voluntary disclosure.

Industry (IND_2) = 

0 for manufacturing industry, 1 for services industry and 0 for other industry

Financial Leverage (LEV) = 

Ratio of non-current liabilities to shareholder’s equity. Financial Leverage has been used in the prior studies (Eng and Mak, 2003; Ho and Wong, 2001; Ferguson et al., 2002). Chau and Gray (2002) stated that long-term creditors would require more information from their borrowers to minimize the risks. Meek et al. (1995) also state in their study that company with high leverage is expected to disclose more information.

Ahmed and Courtis (1999) found a significant positive association between leverage and disclosure levels. Firms with high debt levels are expected to incur higher monitoring costs and they would like to reduce these costs by disclosing more
Return on assets (ROA) = \[\text{ROA} = \frac{\text{Net Profit}}{\text{Total Assets}}\]

Return on assets is used to measure profitability of the company (Eng and Mak, 2003)

Meek et al. (1995) describe that well-performed company has incentive to disclose more accounting information to attract interest of investors. Firms with high profitability might have incentives to make more corporate disclosures in order to communicate their good performance to investors (Rafournier, 1995).

Ahmed and Courtis (1999) examine the association between a firm’s profitability and annual report disclosure of 12 studies and they found a positive association between voluntary disclosure levels and profitability of a firm which was measure by either net profit to equity (ROE) or net profit to total assets (ROA). Based on Lim et al., (2007), ROA is only significant with historical financial information disclosure.

Ownership concentration (OWN) = \[\text{OWN} = \frac{\text{Shares Outstanding} \times \text{Share Price}}{\text{Total Assets}}\]

The percentage of shares outstanding held by the largest shareholder. This measure has been used in several studies (Gedajlovic and Shapiro, 1998; Bozec and Bozec, 2007; Dolgopiatova, 2007; Grosfeld and Hashi, 2007; Ding et al., 2007)

Banghøj and Plenborg (2008) mentioned about two possibilities of an impact of ownership concentration in the company. First, a higher level of ownership concentration might provide less voluntary disclosure since the shareholders have an inside way of getting information. In contrast, large shareholder may monitor management to provide more voluntary disclosure in order to reduce a problem of information asymmetry.
Gedajlovic and Shapiro (1998) also calculate ownership concentration by using the same approach. This measure is considered as an accurate measure and easy to interpret (Gedajlovic and Shapiro, 1998). Ding et al. (2007) investigated the association between firms’ ownership structure and in earnings management by Chinese companies. They used “shareholder percentage of the largest shareholder” as a measure of companies’ ownership concentration (Ding et al., 2007).

Haniffa and Cooke (2002) described that there is a significant positive relationship between the proportion of shares held by the top ten shareholders and voluntary disclosure in their study on Malaysian listed companies. Eng and Mak (2003) also found the association between ownership structure and voluntary disclosure. They found that lower managerial ownership and significant government ownership are associated with increased voluntary disclosure. Xiao and Yuan (2007) mentioned that higher block holder ownership and significant foreign listing/shares ownership is associated with increased-voluntary disclosure.

Barako et al. (2006) indicated that the extent of voluntary disclosure is influenced by firms’ ownership structure. The study found that the level of institutional and foreign ownership have a significantly negatively associated with voluntary disclosure. The ownership structure has an impact to the voluntary disclosure as described by Chau and Gray (2002) that the family company has less demand for corporate disclosure compared to the company with diverse shareholder population since that family company has all information on hand.

Lim et al. (2007) use the proportion of top 20 shareholders’ equity to total equity in their study on voluntary disclosure. They also found that shareholder concentration is one of drivers for voluntary disclosure.

Audit firm (BIG 4) = 1 for Big 4 audit firm and 0 for non-Big 4 audit firm. Type of audit firm has been used in several studies (Wallace and Naser, 1995; Chan and Jaggi, 2000; Chau and Gray, 2002; Camfferman and Cooke, 2002; Eng and Mak, 2003; Gul and Leung, 2004; Xiao and Yuan, 2007; Lim et al., 2007)

DeAngelo (1981) and Chow and Wong-Boren (1986) thought that Big 6 audit firms would like to protect their reputation so
that they encourage clients to disclose a greater amount of information in annual reports, indicating that the level of voluntary disclosure is likely to be higher for companies audited by big 6 audit firms.

In the study of Hossain and Taylor (2007), which investigate the relationship between firm-specific characteristics (Banking companies) and extend of voluntary disclosure, they found a positive relationship to the audit firm with linked with international audit firm.

Raffournier (1995) found that companies audited by Big 6 firms disclose significantly more information than clients of less-known auditors. Camfferman and Cooke (2002) found the significant association to Big 6 audit firm which indicate greater comprehensiveness of disclosure.

Ahmed and Courtis (1999) found that there is no significant association between a size of audit firm and level of voluntary disclosure but they found a significant association between a large audit firm and mandatory disclosure. Craswell and Taylor (1992) found that no significant association between type of auditor and the extent of voluntary disclosure.

\[
\text{Equity-based management compensation (MANCOMP) =}
\]

Equity-based management compensation. 1 where equity-based compensation is offered. 0 where it is not.

Healy and Palepu (2001) describe that stock-based compensation plan such as stock options grants and stock appreciation rights provide incentive to managers to disclose voluntary information since managers, as inside traders, have to disclose information to meet the requirement of inside trading rules. In addition, managers, as existing shareholders, tend to provide additional disclosure to reduce the risk of misvaluation of the company by outside investors which lead to decreasing in stock price.

Lim et al. (2007) found that management compensation has a positive association with voluntary disclosure of strategic information. Aboody and Kasznik (2000) found that CEOs make opportunistic voluntary disclosure decision which maximizes their stock option compensation. Nagar et al.(2003) mentioned firms’ disclosures are positively related to the proportion of CEO compensation affected by stock price and the value of shares held by the CEO.
4.5 Regression Model

A linear regression model is used to examine the association between board composition and the level of voluntary disclosure. In the model, not only the proportion of independent board of director has been included but we also take others control variables which have been used in the previous studies related to voluntary disclosure into account.

The following model is estimated:

\[
DSCORE = \beta_0 + \beta_1 \text{COUNTRY} + \beta_2 \text{BC} + \beta_3 \text{SIZE} + \beta_4 \text{IND}_1 + \beta_5 \text{IND}_2 + \\
\beta_6 \text{LEV} + \beta_7 \text{ROA} + \beta_8 \text{OWN} + \beta_9 \text{BIG4} + \beta_{10} \text{MANCOMP}
\]

Where:

- **DSCORE** = percentage total voluntary disclosure out of all items;
- **COUNTRY** = 1 for Chinese company and 0 for Swedish company;
- **BC** = proportion of independent directors to total number of directors in the board;
- **SIZE** = log of total assets;
- **IND_1** = 1 for manufacturing industry, 0 for services industry and 0 for other industry;
- **IND_2** = 0 for manufacturing industry, 1 for services industry and 0 for other industry;
- **LEV** = ratio of non-current liabilities to shareholder’s equity;
- **ROA** = return on assets;
- **OWN** = percentage of shares outstanding held by the largest shareholder;
- **BIG 4** = 1 for Big 4 audit firm and 0 for non-Big 4 audit firm;
- **MANCOMP** = 1 where equity-based compensation is offered, 0 where it is not.
5. Analysis and Results

In this part, we analyze and discuss the results based on our paper, both from China and Sweden, including descriptive statistics, correlation test and regression test.

5.1 Descriptive Statistics

We report descriptive statistics in Appendix 2 for the sample companies both for China and Sweden in terms of the independent and control variables for 2007.

5.1.1 China

Appendix 2 for Chinese companies contains descriptive statistics for the dependent and independent variables for our samples in China. The voluntary mean disclosure varies from 82.50% for strategic information to 35.83% for financial information. The average ratio of independent directors to total number of directors in the board is 33.72%, based on highest ratio 42.86%, lowest ratio 14.29%, respectively. Across the 24 Chinese companies, the mean percentage of financial leverage (LEV) is about 28.97%, roughly from the highest point 97.86% to lowest point 0. Return on Assets (ROA) ranges from -.0.97% to 34.43%, with the average of 9.57%. Ownership concentration varied from 8.25% to 86.29%, and the mean percentage is 47.55%.

5.1.2 Sweden

Appendix 2 for Swedish companies reports the descriptive statistics for our samples in Sweden. The voluntary mean disclosure varies from 57.14% in the case of non-financial information to 69.52% in the case of financial information. The average ratio of independent directors to total number of directors in the board is 62.08% while the highest ratio is 100% and the lowest ratio is 30%. For the financial characteristics variables, Financial leverage (LEV) ranges from 2.51% to 286% while the average LEV is 79.80%. Return on Assets (ROA) ranges from -3.64% to 32.56% while the average ROA is 9.37%. For the ownership concentration represented the percentage of shares outstanding held by the largest shareholder, the average ratio is 18.07% while the highest ratio is 37.44% and the lowest is 5.09%.

5.1.3 Overview

Examination of Appendix 2 reveals the similarity and difference in terms of firm characteristics. The results show that Chinese companies and Swedish companies are similar, on average, in terms of firm size. With respect to the proportion of independent directors to total number of directors on boards, we realize Swedish companies have more independent directors on boards than their Chinese counterparts. However, a significant finding concerns the ownership concentration of the sample companies. As reflected in Appendix 2, the average percentage of shares outstanding
held by the largest shareholder of China and Sweden in 2007 was 47.55% and 18.07%, respectively. This implicates that the ownership in China is considerably concentrated. As regarding to leverage ratio, China and Sweden have dramatically different was 28.97% and 79.80%, respectively. This presents that capital structure of companies in Sweden have higher proportion of non-current liabilities to equity than companies in China. As regards ROA, they were relatively similar.

By comparison the different types of voluntary disclosure in these two countries, the results in appendix 2 shows that the overall mean disclosure between two countries are quite similar, they did not differ substantially. Interestingly, they differ from three categories strategic information, non financial information, and financial information. With the exception of non-financial information and strategic information, the levels of financial information for China and Sweden were extremely different, Sweden disclosed as twice much as China does, and Swedish companies prefer to disclose this type of voluntary information. Both of countries have almost the same level of disclosing the non-financial information. The results in appendix 1 gave us a clear picture of disclosed scores showing the differences between China and Sweden regarding to three categories of voluntary disclosure. Interestingly, all of Chinese companies in our sample firms are more likely to disclose brief history of company, organizational structures, and statement of strategy within the categories of strategic information than their Sweden counterparts. Chinese companies are in favor of providing more forecast of sales as parts of strategic information than Swedish companies. Conversely, Swedish companies would like to provide much more information regarding to market share analysis and stock price at the end of year as their financial information than Chinese companies. Dramatically, we could not find any Chinese company would like to provide stock price at the end of year. When it comes to non-financial information, all of Chinese companies highly considered the importance to provide educational background of employees’ information; however, Swedish companies by no means disclose about this.

5.2 Correlation test

Appendix 3 and 4 reports the Spearman’s rho correlation indices for all test variables. It has been suggested by Bryman and Cramer (2007) that Spearman’s rho is a powerful non-parametric method dealing with data, which means they can be used in a wide variety of contexts since they make fewer assumptions about variables. Spearman’s rho is very commonly used by researchers. Since we have a small group of samples, it is better to get the clear result of using Spearman’s rho.

5.2.1 China

Appendix 3 reports bivariate statistical correlations between all variables in Chinese companies. The analysis shows that voluntary disclosure scores (DSCORE) are not significantly associated with board composition (BC). The disclosure levels are
positively correlated with firm size (SIZE), this correlation statistics are consistent with the prior studies (Chow and Wong-Boren, 1987; Meek et al., 1995; Lim et al., 2007; Eng and Mak, 2003; Ho and Wong, 2001; Boesso and Kumar, 2007; Xiao and Yuan, 2007; Gul and Leung, 2004). Furthermore, voluntary disclosures (DSCORE) are positively related to financial leverage (LEV), return on assets (ROA), ownership concentration (OWN), big four audit firm (BIG 4) and equity-based management compensation (MANCOMP) as well. Specially, we find a significant relation between firm size (SIZE) and ownership concentration (OWN), this result implicates that the higher ratio of shares outstanding held by the largest shareholder the larger the firm is. We also examine these 24 samples of Chinese companies once again, and then we find the highest ratio of shares outstanding held by the largest shareholder is state-owned in most cases. It is obviously to say state-owned companies are usually larger such as Sinopec, China airline and China United Telecommunications, etc. Another finding shows there is significant relationship between firm size (SIZE) and big four audit firm (BIG 4), one possible explanation is larger firm would like to engage with big four by their reputation. However, we find no important association between disclosure and big four audit firm, and it might be auditors in BIG 4 likely ensure that companies have complied with mandatory disclosure requirements; they still do not actively encourage companies to disclose information beyond what is mandatory.

5.2.2 Sweden

As shown in Appendix 4, we do not find significant correlation between voluntary disclosure variables and board composition in Swedish companies. This disclosure levels are also positively associated with firm size (SIZE), leverage (LEV), return on asset (ROA) and slight negatively associated with, ownership concentration (OWN) and equity-based management compensation (MANCOMP). However, we find positive correlation between financial information disclosure (DFIN) and financial leverage (LEV). It is consistent with the previous studies of Ahmed and Courtis (1999) which found a significant positive association between leverage and disclosure levels since firm with high debt tend to reduce their monitoring cost by disclosing more information in annual reports. In contrast, we find that financial information disclosure is negatively correlated to equity-based management compensation offering in the company which is inconsistent with the previous studies.

5.3 The main results

As shown in Appendix 5 the multiple regression model for 2007 Chinese companies reported the F value of 0.495 for the level of overall disclosure. The coefficient of determination ($R^2$) for the level of overall disclosure was 0.241. The $R^2$ value is the proportion of variance in the dependent variable that is explained by the regression model (Corston and Colman, 2000). It means the regression model explains 24.10% of the variance in the dependent variable, DSCORE, in perceived stress for Chinese
companies. The maximum variance inflation factor (VIF) is 4.217 represented that our model does not have problem with multicollinearity. VIF values above 10 indicate that the multiple correlation with other variables is high and lead to the possibility of multicollinearity (Pallant, 2005).

Beta under standardized coefficients represents values of each variable which have been converted to the same scale for comparison and these beta values are used for contracting a regression equation (Pallant, 2005). The absolute value of beta value indicates the unique contribution to explaining the dependent variable, when the variance explained by all other variables in the model is controlled for (Pallant, 2005). This mean LEV makes the strongest unique contribution to explaining the dependent variable, strategic information. Also, IND_2 is the largest beta for the non-financial information dependent variable as well as OWN for both financial information and total disclosure.

Similarly, the F value of Swedish companies in 2007 as shown in Appendix 5 is 0.514 for the level of overall disclosure. The coefficient of determination ($R^2$) for the level of overall disclosure in 2007 is 0.255. It means the regression model explains 25.50% of the variance in the dependent variable, DSCORE, in perceived stress for Swedish companies. The maximum variance inflation factor (VIF) is 2.551 represented that our model does not have problem with multicollinearity.

Beta values indicate that SIZE makes the strongest unique contribution to explaining the dependent variable, strategic information. Also, ROA is the largest beta for the non-financial information dependent variable, MANCOMP for financial information and LEV for total disclosure.

Significant coefficient, presented in Appendix 5, indicates how variable make a statistically significant unique contribution to the equation (Pallant, 2005). This mean variable with significant less than 0.05 makes a significant unique contribution to the prediction of the dependent variable while variable with significant greater 0.05 does not make a significant unique contribution to the prediction of the dependent variable (Pallant, 2005).

Thus, these multiple regression models were not that highly significant. However, there were some obvious differences in the information types between China and Sweden as shown by $R^2$. The amount of explained variation in disclosure for Chinese companies in 2007 ranged from 35.7% for financial information, 13.6% for non-financial information and 40.9% for strategic information. In comparison, amount from explained variation in disclosure for Swedish companies in 2007 ranging from -30.3% for strategic information, 12.8% for non-financial information and finally 60.2% for financial information.
5.3.1 China

As presented in Appendix 5, the coefficient for financial leverage (LEV) was significant at 0.05 level for strategic information. Financial leverage (LEV) has negative relationship with strategic information. These results could be due to the fact that companies with lower financial leverage ratio are ‘happier’ to provide strategic information than companies with higher financial leverage ratio. One possible explanation might be Chinese companies are lack of confidence to disclose more strategic information in their annual reports when they have higher financial leverage ratio.

5.3.2 Sweden

As shown in Appendix 5, the coefficient for equity-based management compensation (MANCOMP) was significant at 0.05 level for financial information exclusively. However, it is negative association between equity-based management compensation and financial information. These findings are not consistent with most of prior studies as mentioned previously.

5.3.3 Overview

Appendix 6 is a combined table of Sweden and China. The coefficient of determination ($R^2$) for the level of overall disclosure in 2007 is 0.185. It means the regression model explains 18.50% of the variance in the dependent variable, DSCORE, in perceived stress for both companies. The maximum variance inflation factor (VIF) is 4.913 represented that our model does not have problem with multicollinearity.

Beta values indicate that COUNTRY makes the strongest unique contribution to explaining the dependent variables, both strategic information and financial information. OWN is the largest beta for the non-financial information dependent variable and BC is the largest beta for total disclosure.

We find the F-value of 6.935 for financial information. Even this F-value is not extremely high, it represent that this model reach statistical significance by given significant at 0.000. The result show negative significant association between financial information and COUNTRY at significant 0.01 level which implicates Sweden is inclined to disclose more financial information than China. Importantly, the positive association between financial leverage (LEV) and financial information are significantly high at 0.05 level, which indicates that companies with high financial leverage provide more financial information disclosure in their annual report than the lower ones.

Compared with China and Sweden, there is a positive significant relationship between
country and strategic information disclosure, which means China would like to disclose more strategic information than Sweden. One reason might be Chinese companies highly consider the importance of disclosing the strategic information in their annual reports in order to appeal investors.

As we have small amount of samples and a quite large number of variables in our study, we also run our results with fewer variables, exclusively with the most significant variables such as board composition (BC), firm size (SIZE), financial leverage (LEV), ownership concentration (OWN) and country (COUNTRY). Our aim is to re-examine the extent of differences in the magnitude of disclosures between China and Sweden through further insight. Appendix 7 shown that significant relationship between country (COUNTRY) and strategic information is established at 0.01 level, and F test is significant at 0.05 level, which implicated Chinese companies are much more eager to disclose strategic information than Swedish companies, since it is common for investors to know the companies’ history and their future strategy before investment in China. Additionally, negatively significant relationship between country (COUNTRY) and financial information is established at 0.01 level, and F test is significantly high at 0.01 level, which means Sweden particularly like to disclose more this type of information rather than China as mentioned above, probably because of Swedish companies, in order to meet their users’ demand, are likely to provide financial figures, ratios, stock prices as financial information. The results from this regression are consistent with the results we find from the full regression above.
6. Conclusion and Further Consideration

This chapter presents the conclusion drawn from analyses and connected to our research question and theory part. The conclusions will end up with suggestions for future research in the area.

In this study, we examined the association between board composition and the level of voluntary disclosure in annual reports. Our study is based on a sample of 24 Chinese companies, 21 Swedish companies, respectively. We use regression design to examine the association between total voluntary disclosure, voluntary disclosure of strategic information, voluntary disclosure of non-financial information and voluntary disclosure of financial information and board composition. We do not find any association between board composition and level of voluntary disclosure in companies’ annual report of each country. Furthermore, we do not find any association between the proportions of independent director in the board and the three types of voluntary disclosure: Strategic information, non-financial information and financial information.

We find the total extent of voluntary disclosure between two countries is quite similar. China has more motivation to disclose more strategic information than Sweden, while Sweden has more motivation to disclose more financial information than China. Both of them have almost the same level of disclosing the non-financial information.

Other drivers of voluntary disclosure of information in company annual reports are firm size, industry classification, financial leverage, return on asset, ownership concentration, audit firm and equity-based management compensation. We find significant relationship between firm size and ownership concentration in Chinese companies, as well as significant association between firm size and audit firm within Chinese companies. We also find significant association between financial leverage and financial information disclosure in Swedish companies. The result shows negative association between equity-based management compensation and financial information within Swedish companies. Another finding is negatively significant association between financial leverage and strategic information in Chinese companies.

There are some limitations in our study. First, our samples are comprised of 24 companies listed on SSE and 21 companies listed in OMX Nordic Exchange Stockholm which exclusively represents small percentage of companies listed the stock markets. Thus, the results might not be applied to all listed companies. Second, our voluntary disclosure checklist consist of 15 voluntary disclosure items and does not cover all voluntary disclosures in annual reports as used in prior studies since we have time limitation in our study.
Future studies could be a study to examine factors which contribute to the change of corporate voluntary disclosure. Additionally, a larger sample or extending the current by comparing samples in China, Sweden and other western countries are highly expected in the future.
References

Books


Articles


**Working paper**


**Website**


OANDA, the currency site, Source for exchange rate, accessed 15/10/2008 at [http://www.oanda.com/convert/classic](http://www.oanda.com/convert/classic)


Legislation

The Swedish Company Act (2005:551)
Appendix 1: Voluntary Disclosure Checklist with number of company disclosed each item

<table>
<thead>
<tr>
<th>Strategic information</th>
<th>Number of company</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Brief history of company</td>
<td>24</td>
</tr>
<tr>
<td>2. Organizational structures</td>
<td>24</td>
</tr>
<tr>
<td>3. Statement of strategy and objectives - general</td>
<td>24</td>
</tr>
<tr>
<td>4. Company policies on research and development</td>
<td>10</td>
</tr>
<tr>
<td>5. Forecast of sales</td>
<td>17</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-financial information</th>
<th>Number of company</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Statement of employee training</td>
<td>9</td>
</tr>
<tr>
<td>8. Educational background of employees</td>
<td>24</td>
</tr>
<tr>
<td>9. Environmental concerns</td>
<td>16</td>
</tr>
<tr>
<td>10. Charity/donation</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Financial information</th>
<th>Number of company</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. Liquidity ratios</td>
<td>3</td>
</tr>
<tr>
<td>12. Leverage ratios</td>
<td>10</td>
</tr>
<tr>
<td>13. Financial history or summary- three or more years</td>
<td>22</td>
</tr>
<tr>
<td>14. Market share analysis general</td>
<td>8</td>
</tr>
<tr>
<td>15. Stock price at year end</td>
<td>0</td>
</tr>
</tbody>
</table>

Note: Our study consists of 24 Chinese companies and 21 Swedish companies.
Appendix 2: Descriptive Statistic

Descriptive Statistics on dependent variables (the different types of voluntary disclosure)

<table>
<thead>
<tr>
<th></th>
<th>Strategic information (%)</th>
<th>Non-financial information (%)</th>
<th>Financial information (%)</th>
<th>Total disclosure (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disclosure scores</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Chinese companies</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>60.00</td>
<td>40.00</td>
<td>20.00</td>
<td>40.00</td>
</tr>
<tr>
<td>Maximum</td>
<td>100.00</td>
<td>100.00</td>
<td>60.00</td>
<td>80.00</td>
</tr>
<tr>
<td>Mean</td>
<td>82.50</td>
<td>65.83</td>
<td>35.83</td>
<td>61.39</td>
</tr>
<tr>
<td>S.D.</td>
<td>14.82</td>
<td>19.98</td>
<td>17.67</td>
<td>11.29</td>
</tr>
<tr>
<td>Disclosure scores</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Swedish companies</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>20.00</td>
<td>20.00</td>
<td>40.00</td>
<td>40.00</td>
</tr>
<tr>
<td>Maximum</td>
<td>100.00</td>
<td>80.00</td>
<td>80.00</td>
<td>80.00</td>
</tr>
<tr>
<td>Mean</td>
<td>64.76</td>
<td>57.14</td>
<td>69.52</td>
<td>63.81</td>
</tr>
<tr>
<td>S.D.</td>
<td>18.87</td>
<td>18.21</td>
<td>12.03</td>
<td>10.66</td>
</tr>
</tbody>
</table>

Descriptive Statistics on independent variables (firm characteristics)

<table>
<thead>
<tr>
<th></th>
<th>BC (%)</th>
<th>SIZE Million SEK</th>
<th>LEV (%)</th>
<th>ROA (%)</th>
<th>OWN (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinese companies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>14.29</td>
<td>8.45</td>
<td>0.00</td>
<td>-0.97</td>
<td>8.25</td>
</tr>
<tr>
<td>Maximum</td>
<td>42.86</td>
<td>13.68</td>
<td>97.86</td>
<td>34.43</td>
<td>86.29</td>
</tr>
<tr>
<td>Mean</td>
<td>33.72</td>
<td>10.33</td>
<td>28.97</td>
<td>9.57</td>
<td>47.55</td>
</tr>
</tbody>
</table>

|                      |        |                  |         |         |         |
| Swedish companies    |        |                  |         |         |         |
| Minimum              | 30.00  | 9.71             | 2.51    | -3.64   | 5.09    |
| Maximum              | 100.00 | 12.68            | 286.12  | 32.56   | 37.44   |
| Mean                 | 62.09  | 10.96            | 79.80   | 9.37    | 18.07   |
| S.D.                 | 22.45  | 0.85             | 65.73   | 7.29    | 10.66   |
## Appendix 3: Spearman’s rho correlation matrix for Chinese companies

<table>
<thead>
<tr>
<th></th>
<th>DSCORE</th>
<th>DSTRAT</th>
<th>DNFIN</th>
<th>DFIN</th>
<th>BC</th>
<th>SIZE</th>
<th>IND_1</th>
<th>IND_2</th>
<th>LEV</th>
<th>ROA</th>
<th>OWN</th>
<th>BIG4</th>
<th>MANCOMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSCORE</td>
<td>1.000</td>
<td>.563(**)</td>
<td>.745(**)</td>
<td>.587(**)</td>
<td>-0.011</td>
<td>0.359</td>
<td>0.102</td>
<td>-0.061</td>
<td>0.068</td>
<td>0.021</td>
<td>0.393</td>
<td>0.216</td>
<td>0.058</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.004</td>
<td>0.000</td>
<td>0.003</td>
<td>0.960</td>
<td>0.085</td>
<td>0.637</td>
<td>0.778</td>
<td>0.751</td>
<td>0.921</td>
<td>0.058</td>
<td>0.311</td>
<td>0.789</td>
<td></td>
</tr>
<tr>
<td>DSTRAT</td>
<td>.563(**)</td>
<td>1.000</td>
<td>0.201</td>
<td>0.027</td>
<td>-0.202</td>
<td>0.076</td>
<td>0.141</td>
<td>-0.129</td>
<td>-0.326</td>
<td>0.084</td>
<td>0.185</td>
<td>-.072</td>
<td>0.253</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.004</td>
<td>.346</td>
<td>0.902</td>
<td>0.344</td>
<td>0.724</td>
<td>0.512</td>
<td>0.549</td>
<td>0.121</td>
<td>0.695</td>
<td>0.387</td>
<td>0.739</td>
<td>0.234</td>
<td></td>
</tr>
<tr>
<td>DNFIN</td>
<td>.745(**)</td>
<td>0.201</td>
<td>1.000</td>
<td>0.154</td>
<td>-0.007</td>
<td>0.119</td>
<td>0.092</td>
<td>0.056</td>
<td>0.065</td>
<td>0.065</td>
<td>0.179</td>
<td>0.077</td>
<td>-.103</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.000</td>
<td>0.346</td>
<td>.473</td>
<td>0.975</td>
<td>0.581</td>
<td>0.668</td>
<td>0.794</td>
<td>0.764</td>
<td>0.762</td>
<td>0.404</td>
<td>0.721</td>
<td>0.632</td>
<td></td>
</tr>
<tr>
<td>DFIN</td>
<td>.587(**)</td>
<td>0.027</td>
<td>0.154</td>
<td>1.000</td>
<td>0.048</td>
<td>.418(*)</td>
<td>0.027</td>
<td>-0.065</td>
<td>0.303</td>
<td>-0.070</td>
<td>0.341</td>
<td>0.263</td>
<td>0.088</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.003</td>
<td>0.902</td>
<td>0.473</td>
<td>.824</td>
<td>0.680</td>
<td>0.153</td>
<td>0.343</td>
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<td>-0.202</td>
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<td>-0.089</td>
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<td>0.975</td>
<td>0.824</td>
<td>.680</td>
<td>0.153</td>
<td>0.343</td>
<td>0.833</td>
<td>0.235</td>
<td>0.090</td>
<td>0.147</td>
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<tr>
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<td>0.076</td>
<td>0.119</td>
<td>.418(*)</td>
<td>-0.089</td>
<td>1.000</td>
<td>0.131</td>
<td>-0.152</td>
<td>.516(**)</td>
<td>-0.133</td>
<td>.534(**)</td>
<td>.562(**)</td>
<td>0.000</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
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<td>.543</td>
<td>0.477</td>
<td>0.010</td>
<td>0.535</td>
<td>0.007</td>
<td>0.004</td>
<td>1.000</td>
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<tr>
<td>IND_1</td>
<td>0.102</td>
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<td>0.092</td>
<td>0.027</td>
<td>-0.301</td>
<td>0.131</td>
<td>1.000</td>
<td>-.828(**)</td>
<td>0.019</td>
<td>0.149</td>
<td>0.168</td>
<td>-0.022</td>
<td>-0.115</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.637</td>
<td>0.512</td>
<td>0.668</td>
<td>0.900</td>
<td>0.153</td>
<td>0.543</td>
<td>.000</td>
<td>0.931</td>
<td>0.486</td>
<td>0.433</td>
<td>0.920</td>
<td>0.591</td>
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<tr>
<td>IND_2</td>
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<td>-0.129</td>
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<td>-0.086</td>
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<tr>
<td>Sig. (2-tailed)</td>
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<td>0.477</td>
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<td>.249</td>
<td>0.854</td>
<td>0.689</td>
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<td>1.000</td>
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<td>0.248</td>
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<td>0.764</td>
<td>0.151</td>
<td>0.833</td>
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<td>-0.070</td>
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<td>0.040</td>
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<td>1.000</td>
<td>0.342</td>
<td>0.133</td>
<td>0.057</td>
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<tr>
<td>Sig. (2-tailed)</td>
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<td>0.695</td>
<td>0.764</td>
<td>0.746</td>
<td>0.235</td>
<td>0.535</td>
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<td>0.854</td>
<td>0.096</td>
<td>.102</td>
<td>0.536</td>
<td>0.793</td>
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<td>0.341</td>
<td>-0.354</td>
<td>.534(**)</td>
<td>0.168</td>
<td>-0.086</td>
<td>0.029</td>
<td>0.342</td>
<td>1.000</td>
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<td>0.038</td>
<td>0.248</td>
<td>0.133</td>
<td>.477(*)</td>
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**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
### Appendix 4: Spearman’s rho correlation matrix for Swedish companies

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<th>DNFIN</th>
<th>DFIN</th>
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<th>IND_1</th>
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<th>LEV</th>
<th>ROA</th>
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<td>.527</td>
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<td>.053</td>
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<td>0.019</td>
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<td>0.877</td>
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<td>.012</td>
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<td>.147</td>
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<td>.461</td>
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<td>0.923</td>
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<td>0.016</td>
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<td>0.461</td>
<td>0.109</td>
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<td>0.075</td>
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<td>0.524</td>
<td>0.241</td>
<td>0.945</td>
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<td>0.039</td>
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**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).
Appendix 5: Regression results - The relation between voluntary disclosure, board composition and firm characteristics.

\[
DSCORE = \beta_0 + \beta_1 BC + \beta_2 SIZE + \beta_3 IND_1 + \beta_4 IND_2 + \beta_5 LEV + \\
\beta_6 ROA + \beta_7 OWN + \beta_8 BIG4 + \beta_9 MANCOMP
\]

Regression result for Chinese companies

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<th>Total disclosure</th>
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| Intercept           | 1.218                 | 0.213                     | -0.467                | 0.380           |

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Regression result for Swedish companies

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<td>0.255</td>
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| Intercept           | -0.372                | 0.703                     | 1.607                 | 0.663           |

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<td>2.551</td>
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</table>

The table shows standardized coefficients and t statistics for the respective independent variable in the model.

** Significant at 0.01 level
* Significant at 0.05 level
Appendix 6: Regression results - The relation between voluntary disclosure, country, board composition and firm characteristics.

\[
DSCORE = \beta_0 + \beta_1 \text{COUNTRY} + \beta_2 \text{BC} + \beta_3 \text{SIZE} + \beta_4 \text{IND}_1 + \beta_5 \text{IND}_2 + \\
\beta_6 \text{LEV} + \beta_7 \text{ROA} + \beta_8 \text{OWN} + \beta_9 \text{BIG4} + \beta_{10} \text{MANCOMP}
\]

Regression result for Chinese and Swedish companies

<table>
<thead>
<tr>
<th></th>
<th>Strategic information</th>
<th>Non-financial information</th>
<th>Financial information</th>
<th>Total disclosure</th>
</tr>
</thead>
<tbody>
<tr>
<td>R(^2)</td>
<td>0.335</td>
<td>0.114</td>
<td>0.671</td>
<td>0.185</td>
</tr>
<tr>
<td>Adjusted R(^2)</td>
<td>0.140</td>
<td>-0.147</td>
<td>0.574</td>
<td>-0.054</td>
</tr>
<tr>
<td>F statistic</td>
<td>1.714</td>
<td>0.436</td>
<td>6.935 **</td>
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<tr>
<td>Significance</td>
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<td>0.918</td>
<td>0.000</td>
<td>0.653</td>
</tr>
<tr>
<td>Intercept</td>
<td>0.218</td>
<td>1.105</td>
<td>0.888</td>
<td>1.188</td>
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</table>

<table>
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<tr>
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<th>t-Stat</th>
<th>Coeff</th>
<th>t-Stat</th>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COUNTRY</td>
<td>0.649</td>
<td>2.093 *</td>
<td>0.136</td>
<td>0.381</td>
<td>-0.674</td>
<td>-3.093 **</td>
<td>-0.013</td>
<td>-0.039</td>
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<tr>
<td>BC</td>
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<td>1.121</td>
<td>0.150</td>
<td>0.620</td>
<td>0.056</td>
<td>0.384</td>
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<td>1.135</td>
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<td>SIZE</td>
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<td>-0.058</td>
<td>-0.229</td>
<td>0.126</td>
<td>0.826</td>
<td>0.199</td>
<td>0.826</td>
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<td>IND_1</td>
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<td>1.349</td>
<td>0.066</td>
<td>0.282</td>
<td>0.088</td>
<td>0.613</td>
<td>0.258</td>
<td>1.146</td>
</tr>
<tr>
<td>IND_2</td>
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<tr>
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<td>-0.107</td>
<td>0.055</td>
<td>0.281</td>
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<td>0.201</td>
<td>1.068</td>
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<tr>
<td>ROA</td>
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<td>0.038</td>
<td>0.087</td>
<td>0.464</td>
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<td>0.100</td>
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<tr>
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</table>

The table shows standardized coefficients and t statistics for the respective independent variable in the model.

** Significant at 0.01 level
* Significant at 0.05 level
Appendix 7: Regression results - The relation between voluntary disclosure, country, board composition, firm size, financial leverage and ownership concentration.

\[ \text{DScore} = \beta_0 + \beta_1 \text{COUNTRY} + \beta_2 \text{BC} + \beta_3 \text{SIZE} + \beta_4 \text{LEV} + \beta_5 \text{OWN} \]

Regression result for Chinese and Swedish companies

<table>
<thead>
<tr>
<th></th>
<th>Strategic information</th>
<th>Non-financial information</th>
<th>Financial information</th>
<th>Total disclosure</th>
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<tbody>
<tr>
<td>R^2</td>
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<td>0.104</td>
<td>0.657</td>
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</tr>
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<td>Adjusted R^2</td>
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<td>-0.011</td>
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<td>0.037</td>
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<tr>
<td>F statistic</td>
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<td>** 1.336</td>
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</table>

The table shows standardized coefficients and t statistics for the respective independent variable in the model.

** Significant at 0.01 level
* Significant at 0.05 level