On the Relationship between CSR and Financial Performance
An empirical study of US firms

Master's Thesis within Business Administration
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May 2012
We would like to dedicate special big thanks to our supervisor Mona Ericson, who is very meticulous and professional when giving us advice to improve this thesis. With her kind help, we learnt a lot during the several months of writing the thesis. We would like to thank our classmates as well. They helped us to find shortages in our study and kindly offered advice and comments. Thanks to all of you for making our study better!

Peixin Gu & Xiaole Zhang

May 2012, Jönköping
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Key words: corporate social responsibility, corporate financial performance, relationship, stakeholder theory

Abstract

Corporations care more and more about their social responsible performance, and this stands to reason. Conscience, business ethics and pressure of public opinion are playing important roles. Furthermore, some evidence shows that better CSR performance may bring the financial performance of a corporation to a higher stage. The purpose of this study is to investigate the relationship between corporate social responsibility (CSR) and corporate financial performance (CFP). Drawing on the triple bottom line principle and the stakeholder theory, we divided the stakeholders that corporations should take responsibility for into seven categories: shareholders, employees, customers, suppliers, creditors, community and environment (natural environment).

We used a quantitative method to conduct the empirical study. The empirical study is based on samples of 95 US listed firms. We have used seven CSR indicators as independent variables and the CFP index as dependent variable. The independent variables concern CSR performance on shareholders, customers, suppliers, creditors, employees, community and environment. SPSS software was used as a help for investigating the correlation between the dependent variable and each independent variables. We run a multi-index regression using the indexes we calculated or got directly from databases. There is a significant positive short-term relationship between CSR for employees and CFP and a significant negative short-term relationship between CSR for community and CFP. Our main results show that the seven groups of stakeholders (including environment) can be divided into three groups: fast responders, long term responders, and occasional supporter.
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1 Introduction

This thesis investigates the correlation between Corporate Social Responsibility (CSR) and Corporate Financial Performance (CFP). We conduct a study from the perspective of shareholders as owners of a firm whose benefits are directly affected by corporate financial performance.

According to the World Business Council for Sustainable Development, corporate social responsibility refers to the continuing commitment that corporations behave ethically, make a contribution to economic development and try to improve the quality of life of the labors and their families. The term stakeholder was introduced in 1984 by Professor R. Edward Freeman. Freeman defined stakeholder as anyone who is affected by, or can affect, an organization. Stakeholder is normally understood as any individual, group or business organization that has a stake in the success of an organization. A stakeholder is usually concerned with an organization coming to certain results to meet its financial objectives. Frankly speaking, a stakeholder can be one of two types: internal stakeholder as a member within an organization or external stakeholder coming from the outside of an organization. CFP is often measured by a firm’s profitability, market value, or growth (Schuler & Cording, 2006).

Having a clear idea of whether there is a relationship between CSR and CFP is important for the corporate management. According to Cochran and Wood (1984), if a certain behavior tends to be negatively correlated with financial performance, managers might be advised to be cautious in this area. While, if there is a positive correlation, management might be encouraged to enhance the behavior. Normally, the board of directions, composed of shareholders has the right to make decisions. That is to say, if there is a positive relationship between CSR and CFP, the shareholders will tend to push the firm to enhance their social responsibility performance, and vice versa. However, it is not reasonable for a firm to increase their expenses on all kinds of CSR activities as a package in order to get extra financial feedback. A clear picture of how various aspects of CSR performance relate to financial performance will help a lot. That is why we study CSR on different categories rather than as one single CSR rating. Hopefully, the results of our study can help corporations to decide which part of social responsibility behavior they should put emphasis on in their business strategy.

1.1 Why Study CSR

Corporations care more and more about their social responsible performance, and this stands to reason. Conscience, business ethics and pressure of public opinion are playing important roles. Furthermore, some evidence shows that better CSR performance may bring the financial performance of a corporation to a higher stage (Milne & Patten, et al., 2002). In fact, firms benefit from social responsibility by gaining reputation, greater employee loyalty and retention, but people have different definitions when they are talking about CSR. Scholars mainly debate on who the corporate should be responsible for (Freeman, 1984, Cornell & Shapiro, 1987, Bowie, et al., 1988).
Bowen (1953), called the “Father of Corporate Social Responsibility” by Carroll (1999), offered an initial definition of social responsibilities. He said that social responsibilities of a business refer to the obligations of a firm to pursue policies, to make decisions, or to behave according to some lines which bring positive values to society (Carroll, 1999). From then on, corporate social responsibility became a new field to study for both the sake of enterprises and the benefit of the society. Davis (1960, p. 70) kept studying CSR and he presented “businessmen’s decisions and actions taken for reasons at least partially beyond the firm’s direct economic or technical interest”. Although Davis did not clearly identify what should be included in the scope of CSR, he pointed out that other than pursuing profit, firms should also do well to the society. McGuire (1963, p. 144) defined CSR referring to more detailed aspects: “The idea of social responsibilities supposes that the corporation has not only economic and legal obligations but also certain responsibilities to society which extend beyond these obligations”.

CSR Europe, which is a membership organization of large companies across Europe, divides corporate social responsibility into six parts: workplace with employees, marketplace referred to customers and suppliers, environment, community, ethics and human rights. However, those holding the neo-classical view of the business believe that the only social responsibilities corporations have to take are the provision of employment and payment of taxes (Moir, 2001). Holmes (1976, p. 36) described the strongest response of a firm as “in addition to making a profit, business should help to solve social problems whether or not business helps to create those problems even if there is probably no short-run or long-run profit potential.”

From the above, except for the neo-classical opinion, scholars (Moir, et al., 2001) argued that firms have the obligation to be responsible for those groups or individuals that have direct or indirect relationship with them. As CSR is becoming a new important observation of corporate performance, studying CSR-related topics gets more popular both for the sake of scholars and business owners. In this study we define CSR as the social responsibility a corporation must take for their inside and outside stakeholders in order to bring positive value to them. It combines the aspects of social responsibility, referred to by Bowen (1953), Carroll (1999), and McGuire (1963).

1.2 Theories of CSR relative to Stakeholder Theory

There are some theories referring to business performance and social responsibility that can help the reader to better understand the topic of this thesis. Already in this introductory chapter we therefore see important to give a brief introduction of theories such as social contracts theory, legitimacy theory, and transaction cost theory. We have more than one reason for doing so. Firstly, we would like the reader to know that the theories are not in opposition to each other; they have an inner relationship with each other and share the similar opinion but from different aspects. They have a similar core understanding about social responsibility. Secondly, the presentation of the theories could also help the reader to better understand our empirical results. The empirical discussion refers to theories other than stakeholder theory. Furthermore, these theories on CSR help understanding the stakeholder theory from their own aspects. For example, when deciding who the stakeholders are in this thesis, transaction cost theory suggests those who have a contract with the corporations, legitimacy theory argues for those protected by the laws and policies.
As mentioned before, scholars holding a neo-classical view believe that the market is an efficient institution so that the only social responsibility that a corporation should take is making a profit for maximizing shareholders benefit, provision of employment and payment of taxes. Friedman (1970) argued that the so-called applying social responsibility actually means spending someone else’s (shareholders, customers, employees) money without their permission and they could do the same thing if they have the willingness to do so. The neo-classic understanding is a special case among the pool of theories concerning CSR since most other theories believe that CSR is a necessary part of corporation behavior.

In this thesis, we will use the stakeholder theory to study corporate social responsibility. According to the stakeholder theory, stakeholder refers to any individual or group of business with a certain interest in the success of an organization. Firms should be responsible to investors, suppliers, employees, customers, governments, political groups, communities and trade associations. Although the stakeholders can not cover the whole society, they play a very important role in CSR for a firm and we regard the stakeholder theory as the foundation of our study. We will further talk about the theory in details in the theoretical framework chapter, but before that, we would like to introduce some other theories for studying CSR.

The foundation of the social contracts theory is that society provides firms with their legal standing, and attributes and authority to own and use natural resources and human resources (Mathews, 1993). Thus, a corporation can be described as a complex legal entity that has invisible or dominant contracts within or outside the firm. Jensen and Meckling (1976, p. 9) understood a firm as “a legal fiction which acts as a focus for a complex process in which the conflicting objectives of different individuals (some of whom may “represent” other organizations) are brought into equilibrium within a framework of contractual relations”. Contracts occur between corporation owners and managers, managers and employees, debtors and creditors, suppliers and consumers, corporation and government. Under the restriction of the contracts, firms have the obligation to behave well in the society from several aspects and in that way fulfill their social responsibility. Compared to stakeholder theory, we consider those inner or outsider entities to have invisible or dominant contracts as stakeholders of a corporation. In that way, it is easy to see that the two theories are trying to present very similar opinions.

Legitimacy theory can be conceived of as a subsidiary theory of the stakeholder (Campbell et al., 2003) and the theory itself directly relies upon the concept of a “social contract”. Shuman (1995, p. 574) synthesized the large but diverse literature on organizational legitimacy and got an inclusive, broad-based definition of legitimacy as “a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definition”. Legitimacy theory, like a number of other theories such as political economy theory and stakeholder theory, is considered to be a systems-oriented theory which assumes that the entity and society can be influenced by each other (Deegan, 2002). According to legitimacy theory, social disclosure could be used to narrow the legitimacy "gap" between how the corporation wishes to be perceived and how it actually is perceived (Campbell et al., 2003). Legitimating threats may come from media, changing society norms and institutional pressures (Chalmers & Godfrey, 2004).
Similar to the social contracts theory, the transaction cost theory regards a corporation as a bunch of contracts with different organizations or individuals. Transaction costs refer to the costs of negotiating and concluding separate contracts for each exchange activity which takes place on a market. Coase (1937) explained the nature of enterprises by making a distinction between the market mechanic and the corporate mechanic. He argued that “It may be desired to make a long-term contract for the supply of some article or service. This may be due to the fact that if one contract is made for a longer period, instead of several shorter ones, then certain costs of making each contract will be avoid” (p. 391). In short, the reason why corporate mechanic exists is to lower cost of rely on the very high cost market mechanic. Cruz (2008) developed a dynamic framework for the modeling and analyzing of supply chain networks with CSR. One of the conclusions was that the levels of social responsibility activities were allowed to affect not only risk and emission but also the transaction costs (by reducing them, in general) and associated costs. The above conclusion is not difficult to understand. Obviously the better a corporation did on CSR, the easier it became for the firm to encourage consumers to purchase its products. Therefore, less transaction costs occurred in negotiations with consumers. Coming to employees, a corporation which is not good enough on behavior of CSR might have to spend more on salaries and employees’ welfare than those firms with better reputations. However, it is not necessary that the corporations should do as much as possible on CSR, because we have to take shareholder’s interests into consideration. When the increased CSR expenditure exceeds the transaction costs saved, the behavior is hurting shareholders’ benefit especially those called outsiders. If we divide shareholders into two types, one type is insiders, who are affiliated with the corporation and other shareholders such as small individual investors or those who are not affiliated with the firm (Barnea & Rubin, 2006). The other type is outsiders, who care only about the return of their investors, which lead to conflicts between CSR benefit and shareholder interests. The transaction cost theory indicates that the corporation could benefit from a balance between stakeholders.

The theories above play an important role as they construct a theoretical background of our CSR study but we use stakeholder theory as the main theory. All of the theories concern the effect of CSR issues on financial performance of a corporation. This theoretically-related discussion brings us next to the problem and purpose of this thesis.

1.3 Problem

The problem concerns the relationship between corporate social responsibility and corporate financial performance (CFP). We use stakeholder theory to fractionate CSR from the aspects of customers, suppliers, employees, shareholders, creditors, and communities to study whether these aspects of CSR performance have positive, negative or no correlation with the financial performance of the firms within a certain country. With environment (natural environment) added in, we have seven categories of CSR indicators. In our study, we use listed firms of the US as samples to eliminate error caused by national characteristic differences. This topic deserves to be studied because nowadays the corporate social behavior is gaining increasing attention and there is no clear institution for corporations as a guide. Firms have to make their own strategies on social responsible activities. Since the problem is studied from a corporate owner perspective, we care about the firm owner’s target. Better financial performance is always an important goal for a business organization. Hence, firms may use CSR as a tool to pursue better financial performance. To benefit from CSR, a clear knowledge of how CSR is
related to corporate financial performance is necessary for a corporation. Previous research has used different techniques to quantify CSR and CFP; thus they reached quite different results and made the problem more interesting and challenging to us.

1.4 Purpose

This thesis is aimed at investigating the correlation between seven categories of corporate social responsibility and corporate financial performance. We conduct a study from the perspective of shareholders since they are the equity owners of an enterprise and benefit directly from corporate financial performance. Moreover, the board of directors, consisting of shareholders, is usually playing the most influential role in determining the strategic direction and decision-making (Finkelstein & Hambrick, 1996). In this thesis, we present indexes formulating CSR performance on employees, shareholders, customers, suppliers, creditors, community and environment respectively. We also calculate indexes of corporate financial performance with data collected from listed US firms. A modified model based on stakeholder theory and triple bottom line will be used for studying CSR. Hopefully the conclusions of this study can help firm owners in considering the future CSR strategy.

1.5 Delimitation

Institutions and policies and marketing attribute vary by region, thus people understand CSR in different ways. Policies encouraging corporate involvement in social activities are applied only in certain regions. Considering the above regional variation, we only use firms listed in US as our sample. Therefore, the research output may not apply to other countries especially those with clear rules and regulations for corporations and their CSR behavior. For example, Swedish companies have to pay a certain percentage from the income as “social welfare”, which could be understood as a compulsive corporate social responsible activity. Another delimitation is that all the firms we study are from the “US Top 500 enterprises”. It is not necessary that the results are suitable for small, micro enterprise or corporations in other countries.

1.6 Structure of the Thesis

The organization of this thesis is as follows. We develop a theoretical framework in chapter 2, in order to guide the specifications to be employed in the empirical work and the analysis. This chapter also contains research questions. Chapter 3 describes the method including data and variables collection and model specification. Chapter 4 reports some statistics and reports the findings of the regression analysis. Chapter 5 discusses correlation between social responsible performance and financial performance based on the empirical study and the theoretical framework. A final comment and some suggestion for potential future direction for research are also included in chapter 5.
2 Theoretical Framework

In this chapter, triple bottom line, the development of stakeholder theory and relevant, specific applications are introduced. In order to deal with the thesis problem on the relationship between corporate social responsibility and corporate financial performance, we make clear what social responsibility is about. Thereafter we introduce the triple bottom lines principle and explain that corporations should take responsibility for their environment and their stakeholders. It is also important to know who the stakeholders are and what their requirements and abilities are. Thus we also discuss the relationship between stakeholder theory and corporate social responsibility placing the emphasis on CSR requirements of stakeholders and their effects on corporate financial performance.

2.1 Triple Bottom Lines Principle

In 1994, Elkington came up with the term triple bottom line, and this concept started to be commonly accepted until his book “Cannibals with forks: The triple bottom line of 21st century business” was published in 1997. Elkington suggested that sustainable development of corporations will be delivered increasingly through markets, and companies must have competitive advantages for sustainable development without forgetting about the triple bottom line criteria (Elkington, 1997). As Jeurissen (2000) describes, Elkington's made a strong impression on the reader by combining a large number of literature research with his professional experience as a consultant in sustainable development.

According to the theory of triple bottom line, corporations should not only focus on the economic value of enterprises to increase, but should also care about benefit of or damage to the social and environmental value caused by business events. Elkington (1997) argued that business is sustainable when it lives up to the “triple bottom line”, which concerns the economic prosperity, environmental quality and social justice (Elkington, 1997). Organizations such as the Global Reporting Initiative and the Account Ability have embraced and promoted the triple bottom line concept for practical use in the corporate world. Importantly, companies as significant as Shell, AT&T, Dow Chemical and British telecom listened and use triple bottom line terminology in their annual reports and other documents. The concept of triple bottom line spread fast (Norman & MacDonald, 2004).

Savitz and Weber (2006), which are the major scholars in this area, introduced the concept of “Sweet Spot”, which is the area best for a company who wants to keep the corporation developing with sustainability. Apparently, firms with such an objective should take into consideration both the business interest and the stakeholder interest.

The following figure will help to understand how the Sustainability Sweet Spot formed. Savitz and Weber (2006, p. 22) stated that: “Think about sustainability as the common ground shared by your business interests (those of your financial stakeholders) and the interests of the public (your nonfinancial stakeholders). This common area is the so called sustainability sweet spot, which is the place where the pursuit of profit crosses the pursuit of the common good.” The figure shows a balance between social contribution and financial benefit within a corporation. In the shaded area, where the corporation
achieves a good balance between business interests and stakeholder interests, sustainable development of the firm is possible. In this study, we use a narrow view of stakeholder interests including environment.

![Figure 1-1. The Sustainability Sweet Spot (Source: Savitz & Weber, 2006, p. 23)](image)

The triple bottom line reminds corporations to calculate the cost of society and environment rather than only the traditional producing cost. However, the concept of a Triple Bottom Line actually turns out to be a combination of “Good old-fashioned Single Bottom Line and Vague Commitments to Social and Environmental Concerns” (Norman & MacDonald, 2004, p. 256). Corporations tend to include it in the reports to gain a reputation by looking like a firm that takes responsibility in society and social environment when other people do not doubt how much they actually did. In general, the triple bottom line principle had positive effects on the market for driving firms to take into consideration all kinds of stakeholders’ benefit.

In this thesis, we regard the social environment as stakeholder environment and study the stakeholder environment according to the stakeholder theory. We will further study how the efforts that corporations made in the stakeholder environment and natural environment affect corporate financial performance.

### 2.2 Stakeholder Theory vs. CSR

During the recent decades, a large number of scholars have discussed the social responsibility that corporations should take. Several theories on CSR such as stakeholder theory and transaction cost theory have been developed. Although these theories seem to be separated from each other, they share a very similar essence; they all argue that firms have the obligation to take social responsibilities (also see Chapter 1). Stakeholder theory is one of the fundamental theories; it suggests relatively clear and specified objects of study for CSR performance.

The concept of stakeholder has also changed during years of academic discussion. Freeman came up with the word “stakeholder” in 1983 when he raised both a wide and a narrow view of stakeholder. The term “stakeholder” was introduced to the public one year later and since then, it has become widely known. There are different kinds of stakeholders such as internal stakeholders, stakeholders in your value chain, and external stakeholders (Freeman, 1984). Internal stakeholders refer to employees including managers; stakeholders in the value chain include suppliers and customers; external stakeholders is a large group including communities, investors, government agencies, nongovernmental organizations, regulators, the media, and so on, and even future gen-
erations who may be affected by the company’s actions today (Savitz & Weber, 2006). More recent corporate stakeholder theory contends that the value of a firm depends on the cost not only of explicit claims but also of implicit claims (Cornell & Shapiro, 1987).

The stakeholder theory indicates that a corporation is an association of all stakeholders including shareholders, consumers, suppliers, government, investors, and communities. The corporation has the obligation to not only struggle for maximized shareholders benefit but also to benefits for all the other stakeholders and the society. It might be considered that there is a sharp conflict of interest between shareholders and other stakeholders; however, corporations’ behavior of taking social responsibilities is not only a welfare for the society, but also favorable for enterprises themselves. Alexander and Bucholtaz (1978), and Bowman and Haire (1975) suggested that stakeholders and stock-and-bond holders might consider corporate social responsibility as indicating management skill, videlicet, CSR activities could be understood as corporate investment in reputation or social likability (McGuire, Sundgren & Schneeweis, 1988).

Later on, scholars further expanded the definition of stakeholders. Starick (1993) pointed out that corporations exist not only in the economic environment, but also in the natural and social environment. Therefore, the nature itself, people in next several generations and even creatures other than human beings, should be included in the scope of stakeholder. Wheeler and Sillanpaa (1998) agreed with this point of view. Mitchell, Agle and Wood (1997) summarized a chronology of the stakeholder from the year of 1963 to 1995 although the concept “stakeholder” had not actually been put forward until Freeman did in 1983.

The following table illustrates the definitions of stakeholder that scholars suggested from 1963 to 1995. This table was generalized by Mitchell, Agle and Wood (1997).

<table>
<thead>
<tr>
<th>Source</th>
<th>Stakeholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stanford memo, 1963</td>
<td>&quot;those groups without whose support the organization would cease to exist&quot; (cited in Freeman &amp; Reed, 1983, and Freeman, 1984)</td>
</tr>
<tr>
<td>Rhenman, 1964</td>
<td>&quot;are depending on the firm in order to achieve their personal goals and on whom the firm is depending for its existence&quot; (cited in Nasi, 1995)</td>
</tr>
<tr>
<td>Freeman &amp; Reed, 1983: 91</td>
<td>Wider: &quot;can affect the achievement of an organization’s objectives or who is affected by the achievement of an organization’s objectives&quot; Narrow: &quot;on which the organization is dependent for its continued survival&quot;</td>
</tr>
<tr>
<td>Freeman, 1984: 46</td>
<td>&quot;can affect or is affected by the achievement of the organization's objectives&quot;</td>
</tr>
<tr>
<td>Freeman &amp; Gilbert, 1987: 397</td>
<td>&quot;can affect or is affected by a business&quot;</td>
</tr>
<tr>
<td>Cornell &amp; Shapiro, 1987: 5</td>
<td>&quot;claimants&quot; who have &quot;contracts&quot;</td>
</tr>
<tr>
<td>Evan &amp; Freeman, 1988: 75-76</td>
<td>&quot;have a stake in or claim on the firm&quot;</td>
</tr>
<tr>
<td>Evan &amp; Freeman, 1988: 79</td>
<td>&quot;benefit from or are harmed by, and whose rights are violated or respected by, corporate actions&quot;</td>
</tr>
<tr>
<td>Author, Year</td>
<td>Definition</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Bowie, 1988: 112, n. 2</td>
<td>&quot;without whose support the organization would cease to exist&quot;</td>
</tr>
<tr>
<td>Alkhafaji, 1989: 36</td>
<td>&quot;groups to whom the corporation is responsible&quot;</td>
</tr>
<tr>
<td>Carroll, 1989: 57</td>
<td>&quot;asserts to have one or more of these kinds of stakes&quot;-*ranging from an interest to a right (legal or moral) to ownership or legal title to the company's assets or property</td>
</tr>
<tr>
<td>Freeman &amp; Evan, 1990</td>
<td>contract holders</td>
</tr>
<tr>
<td>Thompson et al., 1991: 209</td>
<td>in &quot;relationship with an organization&quot;</td>
</tr>
<tr>
<td>Savage et al., 1991: 61</td>
<td>&quot;have an interest in the actions of an organization and ... the ability to 61 influence it&quot;</td>
</tr>
<tr>
<td>Hill &amp; Jones, 1992: 133</td>
<td>&quot;constituents who have a legitimate claim on the firm ... established through 133 the existence of an exchange relationship&quot; who supply &quot;the firm with critical resources (contributions) and in exchange each expects its interests to be satisfied (by inducements)&quot;</td>
</tr>
<tr>
<td>Brenner, 1993: 205</td>
<td>&quot;having some legitimate, non-trivial relationship with an organization [such as] exchange transactions, action impacts, and moral responsibilities&quot;</td>
</tr>
<tr>
<td>Carroll, 1993: 60</td>
<td>&quot;asserts to have one or more of the kinds of stakes in business* -may be affected or affect ...</td>
</tr>
<tr>
<td>Freeman, 1994: 415</td>
<td>participants in &quot;the human process of joint value creation&quot;</td>
</tr>
<tr>
<td>Wicks et al., 1994: 483</td>
<td>&quot;interact with and give meaning and definition to the corporation&quot;</td>
</tr>
<tr>
<td>Langtry, 1994: 433</td>
<td>the firm is significantly responsible for their well-being, or they hold a moral or legal claim on the firm</td>
</tr>
<tr>
<td>Starik, 1994: 90</td>
<td>“can and are making their actual stakes known”-*&quot;are or might be influenced by, or are or potentially are influencers of, some organization&quot;</td>
</tr>
<tr>
<td>Clarkson, 1994: 5</td>
<td>&quot;bear some form of risk as a result of having invested some form of capital, human or financial, something of value, in a firm&quot; or &quot;are placed at risk as a result of a firm's activities&quot;</td>
</tr>
<tr>
<td>Clarkson, 1995: 106</td>
<td>&quot;have, or claim, ownership, rights, or interests in a corporation and its activities&quot;</td>
</tr>
<tr>
<td>Nasi, 1995: 19</td>
<td>&quot;interact with the firm and thus make its operation possible&quot;</td>
</tr>
<tr>
<td>Brenner, 1995: 76, n. 1</td>
<td>&quot;are or which could impact or be impacted by the firm/organization&quot;</td>
</tr>
<tr>
<td>Donaldson &amp; Preston, 1995: 85</td>
<td>&quot;persons or groups with legitimate interests in procedural and/or substantive aspects of corporate activity&quot;</td>
</tr>
</tbody>
</table>


From the table above, scholars see stakeholder from different aspects. Stanford (1963), Rhenman (1964), Freeman and Reed (1983), Bowie (1988), and Nasi (1995) suggested that without stakeholders, corporation will cease to exist. Cornell and Shapiro (1987), Freeman and Evan (1990), Hill and Jones (1992), Brenner (1993), Langtry (1994) and Donaldson and Preston (1995) argued that stakeholders are those people or organizations that have contracts with or legitimate claim on the firm. Freeman (1984), Freeman and Gilbert (1987), Carroll (1993) and Brenner (1995) suggest that whether the individual or organization can be affected or affect the firm is a standard characteristic of stakeholder.
Stakeholder theory seeks to systematically dig out which groups of stakeholders deserve or require management attention. Evaluation of correlation between corporations and stakeholders based on exchange transactions, power dependencies, legitimacy claims, or other claims (Mitchell et al., 1997) are taken into consideration by stakeholder theory. One important point is that one cannot ignore the differences between a broad view of stakeholder and a narrow view of stakeholder.

### 2.2.1 Broad or Narrow View of Stakeholder

Freeman and Reed (1983) recognized that serious differences exist between broad and narrow definitions of stakeholder. The wide definition includes groups who are friendly or hostile, while the narrow definition is more specific, and captures the essence of the social responsible investment (SRI) definition (Freeman & Reed, 1983, p. 91):

“The Wide Sense of Stakeholder: Any identifiable group or individual who can affect the achievement of an organization’s objectives or who is affected by the achievement of an organization’s objectives. (Public interest groups, protest groups, government agencies, trade associations, competitors, unions, as well as employees, customer segments, shareowners, and others are stakeholders, in this sense.)

Narrow Sense of Stakeholder: Any identifiable group or individual on which the organization is dependent for its continued survival. (Employees, customer segments, certain suppliers, key government agencies, shareowners, certain financial institutions, as well as others are all stakeholders in the narrow sense of the term.)”

The members included in the narrow definition of stakeholder are more direct stakeholders from the perspective of corporations than the wide sense definition of stakeholder. The narrow definition also reverts to the concept pointed to by the Stanford Research Institute (1963) that stakeholder refer to those groups “on which the organization is dependent for its continued survival” (Mitchell, Agle & Wood, 1997, p. 856). Clarkson (1995) offered one of the narrowed definitions to risk; he argued that taking the risk to place some property or assets on a business organization should be considered as a key characteristic of a proper conception of stakeholder. According to Clarkson’s narrow version of stakeholder theory, shareholders risk the loss of their investment, non-payment of dividends, or bankruptcy; creditors risk default of their loans or bonds; employees risk being dismissed or relatively poor salaries comparing to the work they did; suppliers risk nonpayment for the goods and customers risk poor quality of products and other economic interest. Therefore, all the above interest groups should be taken into consideration when studying the corporation stakeholder issues. Clarkson’s theory argued that government and community should not be regarded as stakeholder even if their economic interests can be affected by the corporation. He regarded stake as something that can be lost (also see Mitchell, Agle & Wood, 1997).

We accept the concept of stakeholder as the groups that have effect on a corporation’s survival, which means that if only one of the groups cut of the contractual or no contractual relationship with the firm, the firm can no longer sustain. In reality, firms cannot survive if they ignore the government, no matter of policy, legislation, or resources that gained from or by the government. Community is very difficult to define because con-
sumers, suppliers, and government offices can be members of the community. We regard community as an overall outside social environment of a corporation, including the government. In this way, we consider community together with suppliers, creditors, customers, shareholders and employees as the stakeholders.

### 2.2.2 CSR Requirement of Social and Natural Environment

The stakeholder theory is commonly used these days, and even some of the other theories we have talked about in the introduction were based on, or related to the stakeholder theory. There are many recent instrumental studies of corporate social responsibility, all of which make explicit or implicit reference to stakeholder perspectives, using conventional statistical methodologies (Aupperle, Carroll, & Hatfield, et al., 1985). Other studies are based on direct observation and interviews (Kotter & Heskett, et al., 1992). To further study how the corporation performance can be affected by CSR according to different stakeholders, the questions of “What they need” and “How can they affect the firm” should be answered.

Our study considers six groups namely customers, employees, suppliers, creditors, shareholders and community as stakeholders of a corporation. The natural environment is not a stakeholder of corporation according to the narrow sense of stakeholder definition. Yet, we study CSR from both the aspect of social environment and the aspect of natural environment. That is why we add environment (natural environment) to the CSR indicators. We regard government and community as a whole group since it is difficult to tell them from each other when studying CSR performance in annual reports. Corporations may expend the expenses on charity just to avoid taxes legally. Owners for listed companies, shareholders, have a financial stake in the corporation and their requirement is financial return, and they have the potential effect on the firms by withdrawing or aggrandizing their investment. Employees have their jobs and usually their livelihood at stake, because they usually are not perfectly flexible in the labor market since employees often have specialized skills, which are hard to change (Freeman, 1984). According to Freeman, the requirement of employees include security, wages, benefits and meaningful work in return for their labor, and the corporation’s help in return of their loyalty. The working states of employees can influence the firm’s efficiency, and if some of the employees choose to leave the firm, there will be a large amount of training costs and waste of time. The customer is the hand that feeds the corporation by purchasing products. Improving the quality of products as much as possible at a certain level of price is the most important obligation that a corporation has to the customers. Government has the obligation to supervise the financial state of the firm and collect tax from it according to laws and regulations. Community as considered the large social environment of the corporation, judges the reputation and ethical behavior of the firm. Business issues such as the company acts of charity, the extent of harming the environment, usage of child labor, economic scandal or personal scandals of the famous owner or managers of the firms will all have effects on the stake of community. As a response, members of the community may have effects on the corporation’s reputation by mouth-to-mouth communication and therefore, influence the behavior of other stakeholders. Community members also decide whether or not to offer the firm with location or infrastructure.

Maignan, Ferrell and Ferrell (2005), summarized some stakeholder groups and issues, and listed some potential indicators of corporate impact according to these issues into a
clear table. There are six groups of stakeholder listed in the table; they are employees, customer, investors, suppliers, community and environmental groups.

The table below illustrates several groups of stakeholders’ needs, and indicators show how this needs are satisfied. Take the employees aspect as an example, ratio of the lowest wage to national legal minimum or to local cost of living, indicates the corporation’s willingness to put expenses on human power. Occupational health and safety is another important issue that employees care about. According to Ferrell and Linda (2005), standard injury rates and absentee rates can be used as index to present the safety and health situation. As the degree of safety is often at different levels according to industries, our sample companies will be focused in the US but in vary industries, because using this indicator might be unfair to high risk industries. Environmental groups hope corporations to use clean and less energy, for illustrating that, the amount of electricity purchased by a corporation and the percentage of green electricity consumed can be investigated.

Table 2-2. Examples of stakeholder issues and associated measures of corporate impacts

<table>
<thead>
<tr>
<th>Some stakeholder groups and issues</th>
<th>Potential indicators of corporate impact on these issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees</td>
<td></td>
</tr>
<tr>
<td>1. Compensation and benefits</td>
<td>1. Ratio of the lowest wage to national legal minimum or to local cost of living</td>
</tr>
<tr>
<td>2. Training and development</td>
<td>2. Changes in average years of training of employees</td>
</tr>
<tr>
<td>3. Employee diversity</td>
<td>3. Percentages of employees from different gender and race</td>
</tr>
<tr>
<td>5. Communications with management</td>
<td>5. Availability of open-door policies or ombudsmen</td>
</tr>
<tr>
<td>Customer</td>
<td></td>
</tr>
<tr>
<td>1. Product safety and quality</td>
<td>1. Number of product recalls over time</td>
</tr>
<tr>
<td>2. Management of customer complaints</td>
<td>2. Number of customer complaints and availability of procedures to answer them</td>
</tr>
<tr>
<td>3. Services to disabled customers</td>
<td>3. Availability and nature of the measures taken to insure service to disabled customers</td>
</tr>
<tr>
<td>Investors</td>
<td></td>
</tr>
<tr>
<td>1. Transparency of shareholder communications</td>
<td>1. Availability of procedures to keep shareholders informed about corporate activities</td>
</tr>
<tr>
<td>2. Shareholder rights</td>
<td>2. Litigation involving the violation of shareholder rights (frequency and type)</td>
</tr>
<tr>
<td>Suppliers</td>
<td></td>
</tr>
<tr>
<td>1. Encouraging suppliers in developing countries</td>
<td>1. Fair trade prices offered to suppliers in developed countries</td>
</tr>
<tr>
<td>2. Encouraging minority suppliers</td>
<td>2. Percentage of minority</td>
</tr>
<tr>
<td>Community</td>
<td></td>
</tr>
<tr>
<td>1. Public health and safety protection</td>
<td>1. Availability of an emergency response plan</td>
</tr>
<tr>
<td>2. Conservation of energy and materials</td>
<td>2. Data on reduction of waste produced and comparison to industry</td>
</tr>
<tr>
<td>3. Donations and support of local organisms</td>
<td>3. Annual employee time spent in community</td>
</tr>
<tr>
<td>Environmental groups</td>
<td>service</td>
</tr>
<tr>
<td>----------------------</td>
<td>---------</td>
</tr>
<tr>
<td>1. Minimizing the use of energy</td>
<td>1. Amount of electricity purchased; percentage of green electricity</td>
</tr>
<tr>
<td>2. Minimizing emissions and waste</td>
<td>2. Type, amount, and destination of the waste generated</td>
</tr>
<tr>
<td>3. Minimizing the adverse environmental impacts of products and services</td>
<td>3. Percentage of product weight reclaimed after use</td>
</tr>
</tbody>
</table>

Source: Maignan, Ferrell & Ferrell, 2005, p. 956

Apparently, social responsibility is not an optional choice for corporations; stakeholders will react on the CSR performance of firms in their own way. Thus, it is important for corporation owners to have a clear awareness of how they perform on CSR for different stakeholder groups, and what the stakeholders’ demands are.

### 2.3 Corporate Social Responsibility versus Corporate Financial Performance

After decades of study on the relationship between corporate social responsibility and corporate financial performance, the academic world still has not got a consistent point of view. Those who have suggested a negative relation between social responsibility and financial performance have argued that high CSR may lead to additional costs and bring the corporation an economic disadvantage compared to other firms who take less social responsibility (Bragdon & Marlin, et al., 1972). Several other authors have argued for a positive correlation between CSR and corporate financial performance. They have cited improved employee and customer goodwill as an important outcome of social responsibility (Davis, 1975; Soloman & Hansen, 1985 cited by McGuire, et al).

Ingram (1977) presented a study based on the financial reports from 1970 to 1976 for 287 firms out of the Fortune 500. He found that the reported information on corporate social responsibility had no effect on investment decisions. Twenty years later, McMillan (1996) examined information released by 12 large US companies on corporate social responsibility and marketing reaction. The conclusion he drew was very similar to Ingram’s. Nevertheless, Milne & Patten (2002) made a questionnaire survey including 70 senior accounting personnel in the US and proved that information about corporate social responsibility has value in the long-run for a capital investment decision. It is interesting to note that Griffin and Mahon (1997) made a statistic of 51 research consequences from 1972 to 1997 about how the corporate social responsibility and corporate financial performance related. They found that there were 33 articles showing a positive relationship, 19 articles showing a negative relationship and 9 articles came to the result that there is no relationship between the two.

We will now focus on the relationship between CSR performance on different groups of stakeholders and natural environment.

**Shareholder**

The neo-classical view suggests that firms should only struggle for shareholders’ benefit, and this view triggered a debate about “shareholder or stakeholder”. Although shareholder is not the only group of stakeholders, they are definitely one important part of
stakeholder. Corporations should take responsibility for shareholder’s benefit since they risk the loss of their investment, nonpayment of dividends or bankruptcy of the firm (Orts & Strudler, 2002). CSR on shareholders can be illustrated directly from the financial reports of firms by examining earning per share and dividends. It is reasonable to believe that CSR on shareholders is positively related to CFP. When shareholders feel they are not well treated financially or managerially, it is their option to quit the relationship with the corporation.

**Supplier**

Suppliers as stakeholders have business contracts with the firm and endure certain financial risks. For instance, a corporation may change their suppliers frequently, but the long-term contract makes suppliers feel safe. Another thing suppliers care about is the accounting period to get receivables. According to Freeman (1994), if a corporation treats its supplier as a valued member rather than just a source of materials, suppliers will tend to respond kindly when bad things happen to the corporation. The suppliers may help in the shape of price cuts, accepting late payments and so on. In other words, better CSR behavior on suppliers will bring the corporation itself to a more flexible situation when dealing with source needed. We assume that CSR on suppliers may have a positive correlation with CFP when the firm runs into short-term bad situation.

**Credit**

Different from shareholders, creditors often keep their debt holding for a relatively long period (Barnea & Rubin, 2006). According to Roberts (1992, p. 602), “creditors control access to financial resources that may be necessary for the continued operation of a corporation”. What creditors expect is principal and reasonable interest paid on time, and they normally do not care much about other issues. Since creditors hold important financial resources for a firm, failure to satisfy the creditors may bring trouble. If the corporation does not take responsibility for paying on time, they may have to face a cash chain rupture or difficulty in expansion, which may harm the CFP in long-run.

**Community**

Community is always a group of stakeholder quite difficult to define. In our study, when we mention the word “community”, we mean the whole society environment including the government. Corporations have the obligation to obey laws and regulations, pay taxes to government, participate in community activities and behave as good citizens. Corporation and community rely on each other, and when the corporation mismanages this relationship, it will send itself in the same position as a citizen who commits a crime (Freeman, 1994). Taking responsibility for the government is hardly an optional choice for corporations. However, according to the US tax law, a corporation may choose to spend more on charity in order to avoid tax legally. Those who spend more expenses on charity or other types of community activities tend to gain better reputation. Therefore, we assume that better CSR performance on community may bring better financial performance.
Employee

Employees as the human resource of a firm play a big role in the operation and management of the whole business. A bunch of empirical studies and theories suggest that the way a firm manages its employees have effect on its financial performance (Delery & Doty, et al, 1999, cited by Berman, et al., 1999). According to Ruf, et al., (2001), it is credible that higher employee job satisfaction has a positive effect on productivity. Employees have the ability to affect the corporation with their own behavior. Employees’ perceptions of CSR will trigger emotional, attitudinal, and behavioral reactions (Rupp, et al, 2006), for example, employees may withhold labor by striking (Frooman, 1999). Better CSR performance on employees requires more expenses spent on labor cost, which may do harm for the CFP, but on the other hand, employees will be encouraged to put more effort into their jobs, which tend to have a positive effect on CFP.

Customer

Customers pay for products or services, and they expect the products and services to be offered at a reasonable price, and in good quality. They might also care about the business reputation, which is decided mainly by the CSR performance. Customers are indirectly paying for innovation and development of products and services (Freeman, 1994), so they will be satisfied if the corporation put enough expenses on R&D and product warranty. R&D expenses and product quality are part of the judgment of CSR on customers. The reputation of a corporation has subtle effect on the customers’ perceptions of and feelings for a brand and firm.

Consumer behavior is very complex; scholars argued that improved customer goodwill can be regarded as an important outcome of CSR performance (Davis, 1975; Soloman & Hansen, 1985, cited in McGuire, Sundgren & Schneeweis, 1988). We suggest that CSR on customer can improve the business reputation and bring better revenue to the corporation. However, it is hard to tell how CSR on customer will affect the whole financial performance, because there is a balance between the expenses and the increased revenue.

Environment (Natural Environment)

Booz-Allen and Hamilton conducted a survey and found that 67 percent of the senior executives of large companies regarded environmental issues as “extremely important” to their business (Newman & Breeden, 1992, p. 212). It is quite easy to understand the importance of environment from an ethical aspect, but some scholars suggest a financial reason. Hart (1995) argued that the increasing awareness of natural environment, pollution prevention, product stewardship, and sustainable development has become a more and more important source of competitive advantage. According to Hart (1995), the ability of a corporation to deal with environmental issues could be regarded as an aspect of organizational capability.

Fineman and Clarke (1996) found in their study that corporations usually include environmental issues in their planning processes. Judge and Douglus (1998) argued that there are two major reasons for corporations to look at environmental issues as very important. Firstly, “the environment is significantly threatening the cost structure of many businesses” (Makower, 1993, cited in William & Thomas, 1998, p. 4). Sometimes the
raising standards of the federal and state environment regulations drive corporations to increase their investment on environment. For example, when the tailpipe emission standard upgrade, certain types of auto vehicle get forbidden, so automobile firms have to invest on reducing emissions in advance. The second reason is that the natural environment may bring significant new business opportunities (Cairncross, 1992, cited in William & Thomas, 1998). It is notable that Roper (1990) reported that consumers are willing to pay 6.6 percent for environmentally friendly products. Some former studies argued that properly designed environmental regulations may encourage corporations to innovate and create new markets (Hart, 1995, Porter & Van der Linde, 1995, cited in William & Thomas, 1998).

The above discussion indicates a positive relationship between CSR on natural environment and financial performance. However, the positive relationship appears in a long-term, yet in short-term exceeded expenses on environment issues may bring a negative effect on corporate financial performance.

2.4 Summary

In this chapter, a variety of theories and concepts are described. A summary can help to clarify our theoretical focus in a simple way.

The triple bottom line argues that corporations should take not only financial performance, but also the relationship with social environment and natural environment into consideration. Scholars have also suggested a potential relationship between the CSR on social and natural environment and the financial performance (Roper, et al., 1990). The stakeholder theory is a theoretical basement, telling about which stakeholders corporations should take responsibility for. We take the narrow view of stakeholder theory, which regards as stakeholders those groups or individuals that support a corporation’s existence.

The purpose of our study, as pointed out, is to investigate the correlation between corporate social responsibility and corporate financial performance. We are using the triple bottom line as a framework of studying corporate social responsibility. When we come to the social environment part, we noticed that stakeholder theory fit our study perfectly. Hence, according to the triple bottom line principle and stakeholder theory, we decided the seven groups of objectives of studying CSR. The seven groups are shareholders, customers, community, employees, suppliers, creditors and natural environment (which called environment in the later part of the thesis). We also pointed out that different kinds of CSR behavior are required by different groups of stakeholders, and how those stakeholders may affect the corporate financial performance. Our empirical study is based on the potential correlation between the seven objectives of CSR and corporate financial performance. Our hypothesis is that CSR performance on customers, suppliers, creditors, employees, shareholders, community and environment, have significant effect on CFP respectively. This means that our theoretical discussion leads to the following research questions:
Q1: From the aspects of both social environment and natural environment, who are the stakeholders that corporations should be responsible for and what are their requirements of CSR?

Q2: How will the financial performance of corporations be influenced if corporations become more responsible for each group of stakeholders?
3 Method

In this chapter, we will firstly clarify what kind of method we used, and introduce how we chose the samples and indexes as dependent variables and independent variables. Since the data collection is difficult because of limited time and financial support to get database resources, we have made some changes during the study on sample selection and indexes selection. We will also mention some difficulties we have met during the study, and the way we have dealt with them.

For doing the empirical study, firstly we decided what indexes to use to present the CSR and CFP respectively; secondly, we looked for data and checked if all the data we needed were available. As resources were limited, we made some changes in the calculation and that is why we put sample construction before indexes selection in this chapter.

The empirical study is based on samples of US listed firms. We have used seven CSR indicators as independent variables and the CFP index as dependent variable. The independent variables concern CSR performance on shareholders, customers, suppliers, creditors, employees, community and environment. SPSS software was used as a help of investigating the correlation between the dependent variable and each independent variables. We have run a multi-index regression using the indexes we calculated or got directly from databases. By analyzing the regression result of the data studied, we got a clear picture of how CSR performances on each group of stakeholders have affected CFP.

3.1 Qualitative or Quantitative method

There are two main categories of method: qualitative and quantitative method. According to, Jones, (1995), while there are significant difference between them, the two methods should be regarded as complementary rather than competitive. A qualitative and a quantitative method can be used to study very similar topics, only by raising different types of questions. Hoepfl (1997) stated that researchers use quantitative measures and experimental methods to test hypothetical generalizations. The quantitative studies emphasize the measurement and analysis of causal relationships between variables (Denzin & Lincoln, 1998, cited in Golafshani, 2003). Our empirical study is designed to investigate the correlation between CSR and CSR, including the measurement of relevant indicators. Hence, we are using a quantitative method in this thesis.

The main problem we work on is the relationship between corporate social responsible performance and corporate financial performance. For further studying the dependency, we have to find the appropriate indexes and quantify CSR and financial performance. In this thesis, we will use a quantitative method for setting and measuring relevant indexes representing corporate social responsibility and corporate financial performance. We use the Tobin’s Q as corporate financial performance index. We also have seven CSR indicators based on the aspects of customers, suppliers, employees, creditors, shareholders, community and environment.
Generally speaking, this study is using a quantitative method. The empirical observations are explained by applying stakeholder theory and other relevant theories presented in the theoretical framework (chapter 2) referring to the CSR issue.

3.2 Sample Construction

Before we build up the appropriate function to study the correlation between CSR indexes and corporate financial performance indexes, we would like to consider where to find the samples. Should we focus on a single country or on an industry or else? CSR is a concept, which is getting more and more widely attention of the global, managerial world. However, someone argued that the nationality matters when studying the corporate strategies concerning CSR. The understanding of CSR varies depending on the industry the company belongs to, the regulatory approaches to corporate responsibility, and the differences between state, market and civil society (Gjølberg, 2009).

Gjølberg (2009) pointed out that there are distinct national patterns of CSR, and the nationality of a company matters to its CSR practices and performance. There is an increasing literature on the varieties of capitalizing, focusing on how state, market and civil society relations are organized differently across capitalist systems. Studies demonstrate how divergent capitalist models impact business strategy and behavior differently (Amable, et al., 2006, cited in Gjølberg, 2009). Matten and Moon (2004) further talk about this issue and separately discussed countries with liberal market economies and those from coordinated economies. They deem that firms from liberal, laissez-faire economies choose a more explicit form of CSR since this kind of economies leave a larger share of corporate responsibility issues to the discretion of their companies, while CSR of companies in coordinated economies are embedded in and regulated by institutional and legal frameworks, hence reducing the need of explicitly communicating these companies’ contributions to society (Matten & Moon, 2004, 2009, cited by Gjølberg, 2009). For the identical institution and regulation of CSR, we choose sample enterprises in one certain country.

Are there enough samples, and is the market maturity or market efficiency relatively high? There are the two main points we consider in selecting a country as sample source. In this thesis, the entire samples of companies are listed American firms from the American Securities Market. American Securities Market sprouted during the Independent War and rapidly developed due to the first and second industrial revolution. After the great economic crisis of 1929, the US government strengthened the legislation supervision and control of the securities market thus the whole market entered a standard development stage and the United States Securities market became the world’s biggest stock market very soon. Among the four national level securities markets are NYSE, AMEX, NASDAQ and OTCBB, NYSE is the largest securities market all over the world and has a long history since 1792.

According to Fama (1970), securities market efficiency indicates a lack of return predictability. Chordia, Roll and Subrahmanyam (2008), analyzed the short-horizon predictability on returns for NYSE stocks traded daily from 1993 to 2002. They showed that the degree of NYSE market efficiency has improved over decades because the extent of return predictability declines markedly over the sample period and became quite mature. Therefore, our data collection comes from American listed corporations and
sums up to 95 samples for supporting a multivariate regression to study the correlation between financial performance and multiple aspects of CSR.

By doing literature research, we noticed that a multitude of studies used eight dimensions of CSP to reflect CSR on groups of stakeholders. The eight dimensions scored are product liability, community relations, environmental protection, women's and minority issues, employee relations, nuclear power involvement, military contracting, and South African involvement (Ruf & Muralidhar, et al, 2001). These dimensions were identified and assessed in the Kinder, Lydenberg, and Domini, Inc. (KLD) database and represent the firm relations with employees, consumers, environment, community, and society respectively. Both the concerns and strengths scores offered by KLD are derived from the ratings evaluated for a company in its social and environmental performance. To calculate a final score, the concerns should be subtracted from the strengths. These five attributes “are rated on scales ranging from -2 (major concerns) to neutral to +2 (major strength)” (Waddock & Graves, 1997, p. 307). KLD data were widely used in previous studies on CSR issues. We will use KLD data to represent CSR on community, employee and environment, and build up our own CSR indexes for other stakeholders.

We actually struggled for a long time, to get into the KLD database. We noticed on the MSCI website that the indexes are available directly through MSCI (Morgan Stanley Capital International) or on the WRDS Research Database. However, when we tried to login from our university, we found that our school is not on the organization list. We went to our supervisor, and got her advice of asking the library and other teachers studying CSR issues in our university. Unfortunately, they do not have access to the database. Then, we contacted our bachelor teachers of Shanghai University, including one American PhD. They all tried to help us, but the database is too sensitive for them to get the account. After that, we asked our old classmates who are studying in Australia and America for help. A friend in Boston tried to register on the WRDS research database, but her school only offers the account if she is doing a research required by her university. Finally, one friend of us from Stanford University gained a temporary account valid for only three days for us.

We choose listed firms in the United States as the object of study with the assumption that there are little governmental or regulatory actions that affect the decision of firms. During the data collection, we noticed that some large companies have ACSI (American Customer Satisfaction Index) available and some not. We finally decided to take the crossed part, which is included in FORTUNE 500 and have the ACSI index available for us as samples. Firstly, we came to FORTUNE 500 and the database of American Customer Satisfaction Index (ACSI), and then we picked out 101 companies appearing in both datasets. Secondly, we tried all the 101 companies in the KLD dataset in order to find the KLD index of 2010. It turned out that six of those corporations are not in the KLD dataset, so we kept 95 for further study. We paid attention to the above two datasets because they have authority in the field of CSR study. However, we still had to find other data by looking into the annual reports in order to calculate the Corporate Financial indexes and some of the CSR indexes.

When searching for the database, we noticed a website named “Stock Analysis on.net”. This website collected the annual reports of 100 NYSE Leaders. From this website, we collected three-year information of 45 companies, for the year of 2010 on their current ratio, income tax, EPS (earning per share), asset, total debt, income, market value, in-
ventory, property, plant and equipment, ROE (return of equity), and interest coverage. For the other 50 companies, we looked into their annual reports one by one for the data we needed. The information supported us to get the Tobin’s Q and corporate social responsibility performance on shareholder, creditor and supplier. However, not all annual reports have offered information about employee benefits and salary expenses, or index about social responsibility for customers such as R&D expenses. That is why we needed KLD and ACSI to conquer the shortage of our data collection. We used the KLD index and ACSI as our data, and we calculated Tobin’s Q and other the CSR indexes as principle data.

3.3 Independent Variables: CSR Indexes

The measurement of the corporate social responsibility exponent has always been an important problem to solve in empirical studies.

Much previous relevant research use directly CSR indicators. For example, Gelb and Strawser (2001) used the ratings offered by the Council on Economic Priorities (CEP) as indicators for the degree of social responsibility taken by the sample firms. There is some other CSR index that can be used for empirical studies on CSR, they are Dow Jones Sustainability Index, FTSE4Good, Global 100, UN Global Compact, World Business Council for Sustainable Development (WBCSD), The Global Reporting Initiative (GRI), KMPG International Survey of CSR Reporting, Sustainability’s list of the 100 best sustainability reports and ISO 14001, and so on (Collected by Gjølberg, 2009).

There are some CSR indexes offered by authorities available for our study, using which might be quite convenient and reliable. However, considering the following points, we decided to collect relevant previous research method, and created part of our own CSR Indexes. Firstly, the above indexes provided by authority organizations vary from each other on computing method and the detailing functions are not publicly available. Secondly, those organizations have their own emphasis, for instance, ISO 14001 is an environmental management certification standard, GRI is a reporting standard for triple bottom line reporting based on firms’ self-reporting, UN Global Compact focuses on human rights, labor, together with the environment and anticorruption, and so on. Moreover, most of these standards for evaluation seem to be internationally or globally suitable standards while the accuracy might be questionable considering potential error caused by the local system and regulations or market mechanism differences. As a result, we decided to use KLD indexes and ACSI as data, while coming up with other indexes on our own.

This thesis is based mainly on stakeholder theory so the indexes representing responsibilities that corporations take for each group of stakeholders will also have a theoretical foundation of stakeholder theory. As discussed in chapter 2, modern corporate stakeholder theory (Cornell & Shapiro, 1987) pointed out that not only the cost of explicit claims but also the cost of implicit claims will have effect on the financial performance of a firm. CSR activity is one important influencing factor of implicit claim with government, employees, customers, and so on, and there are no direct data standing for these CSR behaviors. In this study, we will use annual reports as the data resource and classify accounting information according to stakeholder categories. For example, percentage of expenses on salary can be an index to present corporate social responsibility
of employees, and the account payable turnover rate can reflect the responsibility of suppliers to some extent.

From table 2-2 that we introduced in section 2.2.2, we have got some theoretical support and inspiration to design the indexes representing CSR on customer, supplier, employee, creditor, shareholder, and community. Although we finally changed some of the indexes because of lacking database, we introduced the original design. The financial ratios used to represent the CFP and some of the CSR indexes are based on previous studies (James, 1969; Charles & Allard, 2003). The following are the stakeholder groups we focus on in our thesis, and indicators that represent the extent to which their needs were satisfied by the corporations.

**Shareholder**

Shareholders are the owners and main investors of a corporation whose largest requirement is the financial return. Earnings per share (EPS) can be used as an indicator for shareholder benefit. EPS is a company’s profit divided by the number of its outstanding shares. Shares outstanding are shares that have been authorized, issued, and purchased by investors and are held by them. If a company earned $2 million in one year, while having 2 million shares of stock outstanding, its EPS would be $1 per share (Charles & Allard, 2003).

We use earning per share to represent CSR on shareholders, however, shareholders also benefit from the grown stock price in the stock market. To fulfill the first part of shareholder benefit, firm can use assets from its primary mode of business to generate revenues. The later part is depending on the confidence of investors in the stock market referring to the future of the corporation. Stock price is not under the control of the corporation, and that is why we only use earning per share to represent CSR on shareholder.

**Supplier**

Suppliers’ benefits largely depend on the time of payment of the receivables. Current ratio (CR) is an indicator that reflects the ability to deal with short time account payable, and it equals current assets divided by current liabilities, and it is an index that reflects the short-term liquidity of a corporation. Current assets and current liabilities usually can be found in the balance sheet. Account payable is under the category of current liabilities and normally large percentages of payables go to suppliers.

**Creditor**

Creditors offer capital resources to corporations and charge the interest. Interest coverage ratio is the ratio of earnings before interest and taxes (EBIT) divided by interest expense. This ratio indicates a company’s ability to pay interest. The higher the ratio, the easier it is for the firm to cover the debt and interest. Normally, when a corporation’s interest coverage ratio is 1.5 or even lower, its ability to pay interest may be questionable. The ability to cover interest could be understood as a protection to creditors (Kerwin, 2003). The interest coverage ratio reflects whether the firm is facing a financial distress, and indicates its fundamental health situation (Whited, 1992). Creditors always want their capital and interest back in time, hence, the interest coverage ratio can be a good indicator of CSR on creditors.
Community

As we chose the listed firms in the US, the local regulations and policy should be studied before the algorithms of CSR or financial performance indexes are decided on.

The tax law of the United States has allowed a deduction from income for charitable contributions since 1917 in war condition (War Revenue Act of 1917, ch.63 1201(2), 40 State.330). The Act provided a deduction for

"Contributions or gifts actually made...to corporations or associations organized and operated exclusively for religious, charitable, scientific or educational purposes, or to societies for the prevention of cruelty to children or animals, no part of the net income of which inures to the benefit of any private stockholder or individual, to an amount not in excess of fifteen per centum of the taxpayer's taxable net income...."

The original purpose of the tax deduction of charitable contribution might aim to protect philanthropy from the high income-tax rates beginning to emerge at the World War 1 (McNulty, 1984). Since the policy is still used today, it is very difficult to separate the social responsibility for the government from the social responsibility for the community. For that reason, we will create a community index to present the CSR expenses on government and community as a whole.

A corporation’s responsibility for the government should be measured by the pay tax status. The income tax-to-income ratio (TIR) is the percentage of income that the corporations pay to the government. However, the tax deduction policy, referring to the charitable contribution, makes it difficult to separate government and community when studying CSR. Moreover, the charity or community activity expenses are not shown in each annual report. Therefore, we decided to use the KLD community index to represent CSR on community. KLD evaluates corporate social responsible performance on community according to charitable giving, innovative giving, community engagement and community impact.

Employee

Employees expect salary and other benefits in return for their labor. The salary-to-income ratio (SIR) is calculated as total salary expenses divided by total income. The ratio shows how much percentage of income the corporations take out as a return for employees’ work. Welfare for retired employees, salary expenses, the employee structure, securities bought for employees, employee stock ownership, and employee training expenses all reflect the CSR situation for employees. We planned to collect one or two sets of data referring to the above categories, but annual reports do not share a standard emphasis. Some of the reports use employee insurance expenses, some use pension expenses, some use employee claims, and some just do not mention employees. There were not enough data for a regression when we finished looking for relative data. Finally, we used the KLD employee index to replace the original employee index we planned to use.

According to Table 2-2 in chapter 2.2.2, employees call for compensation and benefits, training and development, employee diversity, occupational health and safety, and
communications with management. KLD evaluated the CSR performance on employees according to union relations, cash profit sharing, employee involvement, health and safety, supply chain policies, programs and initiatives, and other benefits and programs. Hence, the KLD employee index covered almost every aspect that employees care for in their work.

Customer

Product quality (PQ) is normally looked at as the minimum condition, or the threshold of product attributes that a corporate has to meet when putting the products or service in competitive markets (Rust, Moorman & Dickson, 2002, et al). Obviously products quality is very important for a corporation’s long-term development and success and many prior studies made similar statements (Buzzell, et al., 1975). PQ is also used by KLD as an index to illustrate the CSR performance for customers.

Nonetheless, it might be farfetched to use PQ as the only reflecting index for judging CSR performance on customer. According to the table 2-2 in chapter 2.2.2, customers also call for well management of customer complaints, service to disabled customers, and so on. Apparently, only the PQ index cannot cover a whole mean of CSR on customers. Fortunately, there is an ACSI (American Customer Satisfaction) available for our study. The ACSI reports use scores on a scale of 0 to 100 at the national (USA) level and the sampled sectors, industries, and companies are broadly representative of the U.S. economy serving American households.

Environment

When talking about corporate social responsibility for the natural environment, people think about waste reduction, pollution issues, recycling network systems, animal protection, and so on. While looking into annual reports, corporations often put one or two paragraphs, telling the public what they did in the past years to protect the environment.

Stansick and Stansick (1998) used the level of pollution emission as the environmental performance index, which concerned air releases, water releases, underground injections, land releases, and so on. The information they got was from the EPA’ Toxic Release Inventory Reports on the top 500 firms. However, in our opinion, using the pollution emission index as CSR on environment index is only suitable for the manufacturing industry. Since our sample companies are from different industries, we do not think it is fair to compare pollution emission of heavy industry and investment industry. Hence, we will use the KLD environment index in our empirical study.

The KLD’s methodology of calculating environment score is very complex with six strengths and seven concerns. The standard for evaluation covers beneficial products and services, pollution prevention, recycling, clean energy, management systems in strengths, and regulatory problems, substantial emissions, climate change, negative impact of products and services, land use and biodiversity, and non-carbon emissions.

3.4 Dependent Variables: Financial Performance Index

For the financial performance of corporations, different scholars have used different measurements. Alford (1992) studied the effect of the choice of matching (comparable)
companies on valuation accuracy when the P/E (P for price and E for earnings) multiple is used. Other studies, including Kaplan and Ruback (1995), Kim and Ritter (1999), and Gilson, Hotchkiss, and Ruback (2000) applied DCF (Discount Cash Flow) and various multiples to value rather narrow subsets of companies, such as those that operate in bankruptcy or carry out initial public offerings (IPOs). Kaplan and Ruback (1995, p. 1067) suggested that “there is no obvious method to determine which measure of performance...is the most appropriate for comparison” and Kim and Ritter (1999, p. 416) stated “there is no clear-cut answer for which multiples should be used” (cited by Lie & Lie, 2002).

ROA (return on assets) is the ratio of annual net income divided by year-end total assets. Accounting-based performance measures were ROA, total assets, sales growth, asset growth, and operating income growth (McGuire, Sundgren & Schneeweis, 1988). Hart and Ahuja (1996) divided corporate performance into two parts: operating performance data and financial performance data. Operating performance data were measured as return on sales (ROS), return on assets (ROA), and financial performance data were measured as return on equity (ROE). Havawini, Subramanian and Verdin (2001), used ROA as the index for firm performance, however, they stated some disadvantages of the ROA measuring. The ROA suffer from some well-known conceptual disadvantages that arise from accounting conventions, for example, asset values are quoted at historic cost and not at their true replacement values, and returns are not adjusted for risk.

Comparing the ROA measurement to Tobin’s Q, the main difference will show as the ROA index reflects the historical performance while Tobin’s Q indicates a forward-looking firm market value, which means a sustainability of profits, or the expected performance in the future (Luo & Bhattacharya, 2006). Some scholars argue that using the stock price as a data resource of the corporate market value might be defective because this kind of data is mainly decided by investors but not equally separated by different stakeholders. However, since we are studying from the perspective of shareholders, or to say corporate owners, this kind of error becomes negligible.

The market-to-book ratio is the ratio of stock price to book value per share. It reflects a firm’s capability to exceed expected returns in the future. It is also used to approximate the stock market’s perception on the value of a firm’s present and future income, and growth potential (Montgomery, Thomas & Kamath, 1984, cited by Cho & Pucik, 2005). A variety of researchers have used it as an indication of a firm’s future performance potential and a measure of long-term firm performance (Combs & Ketchen, 1999, et al.). Different from market-to-book ratio, Tobin’s Q is less prominent and not released to the public. Nonetheless, the reliance of Tobin’s Q on financial statements makes it more effectual for potential investors by showing the corporation’s real performance (Eltayeb, 2011).

As a main technique to evaluate the performance of the listed company, Tobin’s Q can be used to measure the corporation financial performance in this study. The concept Tobin’s Q was firstly introduced in 1969 by James Tobin in the article “A General Equilibrium Approach to Monetary Theory”. Tobin’s Q is calculated as market value of assets divided by replacement value of assets. A Tobin’s Q ratio greater than 1 indicates the firm has done well with its investment decisions. Tobin’s intent was to examine a causal relationship between q (market value divided by replace value) and investment, which is to say, at the margin, if q exceeded unity, firms would have an incentive to invest, be-
cause the value of their new capital investment tend to exceed its cost. It is suggested that if all such investment opportunities were exploited, the marginal value of \( q \) will move toward unity (Lindenberg & Ross, 1981).

In market efficiency premise, Tobin’ \( Q \) links market value with the assets replacement cost of a company, reflecting the status of the certain corporation performance in the market. Generally speaking, the higher value of Tobin’s \( Q \) indicates the higher market investment value of the corporation. Tobin’s \( Q \) is also widely used to observe corporation’s management efficiency, and Lang et al. (1989) suggested that in the financial markets, high Tobin’s \( Q \) companies, which supposed to be well-managed, are taking over those poorly managed low \( Q \) firms.

The dependent variable is the measuring of corporate financial performance, for which we use the Tobin’s \( Q \) to explain. As in Lang and Litzenberger (1989), Tobin’s \( Q \) is defined as the sum of market value of common stock (\( C \)), preferred stock (\( P \)), book value of long-term debt (\( LD \)) and short-term debt (\( SD \)) divided by replacement costs of net plant and equipment and inventories (\( RC \)).

\[
q = \frac{(C+P+SD+LD)}{RC}
\]

For listed companies, we found the market values (\( MV \)) in the annual report. The market value, which can be appropriately understood as the sum of common stock (\( C \)) and preferred stock (\( P \)). Total debt (\( TD \)) is another group of data we directly found in firms’ financial reports, and it equals long-term debt (\( LD \)) plus short-term debt (\( SD \)). The replacement costs (\( RC \)) is equal to the sum of net plant and equipment, and inventories. \( RC \) can be found in reports existing as a whole or separately. Thus, in our study, the function of calculating Tobin’s \( Q \) shows as:

\[
q = \frac{(MV+TD)}{RC}
\]

With the proceeded data, we have conducted correlation prediction study with the help of SPSS software for determining the correlation of each independent variable (each aspect of CSR) with the dependent variable (financial performance).

### 3.5 Control Variable

Size, risk and industry have been suggested in previous studies to have effect on both CSR and CFP (e.g., Ullmann, 1985), and these characteristics have been used as control variables by related studies.

Size is a necessary control variable, because large corporations tend to perform more on CSR than small firms. Small firms put more emphasis on survival and growing, while large companies use CSR as a strategy to gain reputation and business opportunities. According to Burke, et al (1986), corporations attract more attention from the external environment and pay more attention to stakeholder demands as they grow and mature. In this thesis, we use total asset as the size control variable.

Debt-to-equity ratio (DER) reflects the relationship between long-term funds provided by creditors and funds provided by owners. A firm’s debt-to-equity ratio is calculated by dividing long-term debt by owners’ equity. Both items are shown in the balance sheet. A company's debt-to-equity ratio is used to calculate the company’s financial leverage. A
higher ratio is a sign of greater leverage. In other words, higher debt-to-equity ratio indicates higher risk. Thus, this ratio is an appropriate control variable indicating a business’s capacity to repay its debt.

Earlier research (Graves & Waddock, 1994) illustrated clear differences in R&D investment among different industries, and McWilliams and Siegel (2000) suggested the R&D expenses should be used as an individual control variable. We regard R&D as one of the major differences in various industries, together with pollution, contribution by offering jobs, and so on. In our study, 4-digit SIC (Standard Industrial Classification) is used as dummy variables. The standard Industrial Classification is a government system of the US for indicating the company’s type of business since the year of 1937. Graves and Waddock (1994) gave a segmentation of industries according to the SIC index. We put our sample companies in to the categories and come up with the table 3-1 below listing the industries, SIC codes, amount of sample in the category, and average financial performance represented by Tobin’s Q.

Table 3-1. Industries in the sample

<table>
<thead>
<tr>
<th>Industry</th>
<th>SIC</th>
<th>N</th>
<th>Average Tobin’s Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining, Construction</td>
<td>100-1999</td>
<td>1</td>
<td>0.845573</td>
</tr>
<tr>
<td>Food, textiles, apparel</td>
<td>2000-2390</td>
<td>16</td>
<td>3.719056</td>
</tr>
<tr>
<td>Chemicals, pharmaceuticals</td>
<td>2781-2890</td>
<td>3</td>
<td>3.141703</td>
</tr>
<tr>
<td>Computers, autos, aerospace</td>
<td>3570-3990</td>
<td>5</td>
<td>2.897593</td>
</tr>
<tr>
<td>Transportation</td>
<td>3991-4731</td>
<td>5</td>
<td>30.992526</td>
</tr>
<tr>
<td>Telephone, utilities</td>
<td>4732-4991</td>
<td>30</td>
<td>26.195538</td>
</tr>
<tr>
<td>Wholesale, retail</td>
<td>4992-5990</td>
<td>29</td>
<td>1.186816</td>
</tr>
<tr>
<td>Bank, financial services</td>
<td>6021-6700</td>
<td>3</td>
<td>12.964999</td>
</tr>
<tr>
<td>Hotel, entertainment</td>
<td>6800-8051</td>
<td>2</td>
<td>0.975407</td>
</tr>
<tr>
<td>Services, not elsewhere classified</td>
<td>8999</td>
<td>1</td>
<td>4.922429</td>
</tr>
</tbody>
</table>

There are 95 sample corporations doing business in 10 categories of industries included in the table 3-1 above, from which we can see considerable differences among industries on the financial performance. Transportation industry showed the best financial performance, while mining, construction, hotel and entertainment industry held relatively poor figures. The highest Tobin’s Q is 35.6 times larger than the lowest, which indicate the necessity of controlling for industry when investigating the correlation between corporate social responsibility and corporate financial performance.

In our empirical study, corporate size is measured by total asset, risk is measured by debt-to-equity ratio, and industry is controlled by 4-digit SIC presented by dummy variables.

### 3.6 Model Specification

Since there is more than one factor related to CSR that has an effect on corporate financial performance, we use a multi-index regression model to study the relevance between the dependent variable and the seven independent variables. The regression equation we use in our study looks as follows:
Q = β₀ + β₁ * Shareholder + β₂ * Supplier + β₃ * Creditor + β₄ * Community + β₅ * Employee + β₆ * Customer + β₇ * Environment + β₈ * Industry₁ + β₉ * Industry₂ + β₁₀ * Industry₃ + β₁₁ * Industry₄ + β₁₂ * Industry₅ + β₁₃ * Industry₆ + β₁₄ * Industry₇ + β₁₅ * Industry₈ + β₁₆ * Industry₉ + β₁₇ * Industry₁₀ + β₁₈ * Risk + β₁₉ * Size + ε

As we discussed in section 3.3 about the measurements of CSR performance, we use earning per share for measuring CSR for shareholders, current ratio for CSR on suppliers, interest coverage ratio on creditors, ACSI (American Customer Satisfaction Index) for customers, and KLD indexes for community, employees and environment. Since we have many variables in the function, we made a table to illustrate each one of them as follows. Table 3-2 lists the names and description of all dependent, independent and control variables.

Table 3-2. Name and description of variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent</strong></td>
<td>Q</td>
<td>Tobin's Q, which indicates the financial performance of a firm</td>
</tr>
<tr>
<td>Shareholder</td>
<td></td>
<td>CSR performance on shareholders represented by Earning per share</td>
</tr>
<tr>
<td>Supplier</td>
<td></td>
<td>CSR performance on suppliers represented by Current ratio</td>
</tr>
<tr>
<td>Creditor</td>
<td></td>
<td>CSR performance on creditors represented by Interest Coverage Ratio</td>
</tr>
<tr>
<td>Community</td>
<td></td>
<td>CSR performance on community relationship collected from KLD dataset</td>
</tr>
<tr>
<td>Employee</td>
<td></td>
<td>CSR performance on employee relationship collected from KLD dataset</td>
</tr>
<tr>
<td>Environment</td>
<td></td>
<td>CSR performance on environment relationship collected from KLD dataset</td>
</tr>
<tr>
<td>Customer</td>
<td></td>
<td>CSR performance on customers relationship represented by ACSI</td>
</tr>
<tr>
<td><strong>Independent</strong></td>
<td>Size</td>
<td>Corporate size represented by total assets</td>
</tr>
<tr>
<td>Risk</td>
<td></td>
<td>Financial risk of firms represented by debt-to-equity ratio</td>
</tr>
<tr>
<td>Industryᵢ</td>
<td></td>
<td>10 dummy variables showing what industry those sample companies in. If the firm is in certain industry, valued it 1, otherwise, 0</td>
</tr>
</tbody>
</table>

### 3.7 Reliability and Validity

Reliability and validity are important for any study because the trustworthiness of studies are based on them. Reliability measures to what extent the results can be consistently obtained over time under similar circumstances (Watson & Clark, 1991). For a quantitative study, it is important to look at the reliability of data collected and the measurements and analysis.

The data we collected from KLD indexes and ACSI, are expected to have very high level of reliability. KLD data are widely used in CSR relevant studies and they offer the most authoritative measurement of corporate social responsibility. ACSI is the American customer satisfaction index which is quite reliable for an empirical study with all sample companies in the US. Since some of the stakeholder groups in our study are not covered by the KLD dataset, we calculated supplier, creditor, and shareholder CSR in-
dicators. For these indicators, we firstly collected data from annual reports, and then calculated relevant indexes according to previous studies mentioned in the theoretical framework (chapter 2). We collected data from annual reports and processed them according to previous studies. Hence, the data collected, measurement and analysis are of high reliability.

According to Lunenburg and Irby (2008), validity is depended on to what extent the measurement used in the study actually measures what the authors aim to measure. Normally, validity is concerned with the relevance of theoretical concepts and the empirical variables. In our study, the selection of all independent, dependent and control variables has theoretical support from relevant previous studies. We have discussed why these indicators are the best choices for this study in chapter 2 and chapter 3 in details. So the validity of this thesis should be considered high.
4 Analysis and Results

In this chapter, we mainly illustrate the regression analysis result produced with the help of SPSS software. Numeral information such as descriptive statistics, correlation among the key variables, and regression results are showed in the form of tables. We explain the information contained in these tables in order to build up a foundation for the next chapter.

A database was set up in SPSS for Windows version 16.0 (SPSS Inc.), to enter and organize the data we collected. All analyses we present in this chapter were performed using SPSS.

The descriptive data for the main study variables for the entire sample are displayed in tabular form (Table 4-1). Dummy variables describing the category of industries are not included in the table, because we have already discussed details of them in section 3.5 (Table 3-1). We collected Tobin’s Q of the sample corporations in both the year of 2010 and 2011, to investigate how the time lag affects the relationship between CSR and CFP. All the other data collected were from the year of 2010. Community, employee and environment data, were collected from the KLD dataset.

Barnes & Noble hold the minimum Tobin’s Q for both 2010 and 2011 at 0.28 and 0.27 respectively. Highest Tobin’s Q in the year of 2011 came from Pepco Holdings, which do business in the field of energy at 70.38, and Sempra Energy, another energy services holding company had the maximum Tobin’s Q in 2010 at 72.15. The Earning per share ranged from -1.16 up to 8.12 with a mean of 2.3809. There were four corporations having an earning per share less than zero, in ascending order, they are Sprint Nextel Corporation, Rite Aid Corporation, Dole Food Co, and Office Depot, Yahoo had the highest current ratio at 2.7, while AT&T. had the lowest at 0.59, with an average amount at 1.3443. The table 4-1 shows incredibly large differences in the interest coverage ratio, which varied from -1.25 (Sprint Nextel Corporation) up to 166.65 (Morgan Stanley). Seven out of 95 firms got a -1 score of CSR on community and four got the highest score at 3, with a mean of 0.8105. It is notable that six out of seven worse performed companies were in the same industry category: telephone and utilities. Three firms behaved poorly (scored -3) on employee relationship, and eight corporations got the highest score at 2. US Airways and Delta Air Lines received the lowest customer satisfactory at 62 point, while H. J. Heinz Company won the highest point at 88. The average customer satisfactory, 77.0421 point, is almost the mean of the highest and lowest score. Dell was the most environment friendly corporation, which had a score of 5, and the two companies with only -2 were American Electric Power Co and Tyson Foods. Since there were four companies that had negative equity, the debt-to-equity ratio is not suitable for evaluating their risk. In fact, US Airways had the highest risk at 52.38 and the debt-to-equity ratio of Yahoo was zero, because they have no debt at all. AT&T, doing telecom services had the largest total assets at about 268 billion US dollars among our sample corporations, and Winn-Dixie Stores, was the smallest firm with total assets of 1.8 billion US dollars in the food retailer industry.
Before doing regression, we made correlation matrices for the key variables with the help of SPSS (Table 4-2). This table states financial data used as dependent variables, CSR performance indicators used as independent variables, and two control variables. Dummy variables were not analyzed in Table 4-2 since we did some literature research, and followed one article written by Waddock and Graves (1977), which studied a topic similar to ours and excluded dummy variables of industry in correlation matrices. Correlations between independent variables provide no indication that an unacceptable level of multicollinearity exists in the data. Farrar and Glauber (1967) concluded that harmful levels of multicollinearity were not present until bivariate correlations of independent variables reached 0.8 or 0.9. There is not any pair of independent variables in our study that had a correlation larger than 0.5. We also did the correlation test for industry dummy variables and kicked out telephone and utilities industry because of multicollinearity. Since the table including all variables was too large, we followed Waddock and Graves (1977) and excluded industry dummy variables.

The regression analysis was used to test our hypotheses, which suggested that CSR on seven different aspects has a significant relationship with CFP. We firstly used Tobin’s Q of 2010 as the dependent variable, CSR indicators of shareholder, supplier, creditor, community, employee, customer and environment as independent variables, while controlling for size, risk and industry. Then, we did our second regression with Tobin’s Q of 2011 as the dependent variable, employing the same independent variables and control variables. The inspiration of making two regressions came from Waddock and Graves (1997). They suggested in their “implications for future research” that putting a time lag into the study might be helpful to investigate the correlation between CSR and CFP.
Table 4-2. Correlation matrices for the key variables

<table>
<thead>
<tr>
<th></th>
<th>Tobin’s Q 2011</th>
<th>Tobin’s Q 2010</th>
<th>Shareholder</th>
<th>Supplier</th>
<th>Creditor</th>
<th>Community</th>
<th>Employee</th>
<th>Customer</th>
<th>Environment</th>
<th>Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tobin’s Q 2010</td>
<td>0.964</td>
<td>(0.000)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shareholder</td>
<td>0.062</td>
<td>0.029</td>
<td>(0.548)</td>
<td>(0.780)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supplier</td>
<td>-0.278</td>
<td>-0.277</td>
<td>-0.123</td>
<td>(0.006)</td>
<td>(0.007)</td>
<td>(0.234)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creditor</td>
<td>-0.147</td>
<td>-0.154</td>
<td>0.124</td>
<td>0.131</td>
<td>(0.155)</td>
<td>(0.135)</td>
<td>(0.231)</td>
<td>(0.205)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community</td>
<td>-0.334</td>
<td>-0.322</td>
<td>-0.029</td>
<td>0.004</td>
<td>0.089</td>
<td>(0.001)</td>
<td>(0.001)</td>
<td>(0.781)</td>
<td>(0.970)</td>
<td>(0.392)</td>
</tr>
<tr>
<td>Employee</td>
<td>0.210</td>
<td>0.190</td>
<td>-0.085</td>
<td>0.202</td>
<td>-0.006</td>
<td>-0.035</td>
<td>(0.042)</td>
<td>(0.065)</td>
<td>(0.413)</td>
<td>(0.952)</td>
</tr>
<tr>
<td>Customer</td>
<td>-0.363</td>
<td>-0.358</td>
<td>0.106</td>
<td>0.222</td>
<td>0.124</td>
<td>0.192</td>
<td>-0.033</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.308)</td>
</tr>
<tr>
<td>Environment</td>
<td>-0.173</td>
<td>-0.161</td>
<td>0.063</td>
<td>-0.017</td>
<td>0.090</td>
<td>0.413</td>
<td>0.080</td>
<td>0.243</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk</td>
<td>0.087</td>
<td>0.096</td>
<td>0.070</td>
<td>-0.303</td>
<td>0.016</td>
<td>-0.033</td>
<td>-0.020</td>
<td>-0.101</td>
<td>0.100</td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>-0.005</td>
<td>-0.009</td>
<td>0.124</td>
<td>-0.207</td>
<td>0.101</td>
<td>0.133</td>
<td>-0.186</td>
<td>-0.128</td>
<td>0.045</td>
<td>0.259</td>
</tr>
</tbody>
</table>

The top number represents the degree of correlation and the bottom number represents the level of significance.
Table 4-3 presents the results of the regression analysis of both models. Model 1 used Tobin’s Q of 2011 as dependent variable to represent a time lag, and seven CSR indicators as independent variables with size, risk and industry dummy variables as control variables. 42 percent of data in model 1 and 42.6 percent of data in model 2 were explained by the regression result, and both models were significant at p<0.001. The result of Model 1 regression result, conducted with a 1-year lag for financial performance (2011 CFP) and the 2011 CSR data, supported our hypothesis of CSR performance for community and employee, have significant correlation with CFP at p <0.1 and p <0.05 respectively. According to Model 1 regression result, CSR performance on the community has a negative relationship with CFP, while CSR performance on employee has a positive effect on CFP. Model 2 is composed with both financial performance and CSR performance data of 2010. The regression result of Model 2 support our hypothesis of CSR performance on community have a p <0.1 significant relationship with CFP. Similar to Model 1, the result from Model 2 regression also indicated a negative correlation between CSR performance on community and CFP. Regression results for both model rejected our hypothesis that CSR performance on customer, shareholder, creditor, supplier and environment has a significant relationship with CFP.

<table>
<thead>
<tr>
<th>Table 4-3. Regression results</th>
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<tr>
<td>Model 1 (Tobin’s Q 2011)</td>
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<tr>
<td>Beta</td>
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<td>Shareholder</td>
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<td>Supplier</td>
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<td>Creditor</td>
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<td>Community</td>
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<tr>
<td>Employee</td>
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<tr>
<td>Customer</td>
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<tr>
<td>Environment</td>
</tr>
</tbody>
</table>

Control Variables

| Risk | -0.037 | 0.713 | 0.029 | 0.770 |
| Size | -0.110 | 0.261 | -0.114 | 0.239 |
| Industry 1 | -0.087 | 0.316 | -0.103 | 0.233 |
| Industry 2 | -0.409**** | 0.000 | -0.429**** | 0.000 |
| Industry 3 | -0.234** | 0.023 | -0.217** | 0.033 |
| Industry 4 | -0.254** | 0.014 | -0.240** | 0.019 |
| Industry 5 | 0.027 | 0.752 | 0.087 | 0.315 |
| Industry 6 | Excluded by SPSS |
| Industry 7 | -0.541**** | 0.000 | -0.553**** | 0.000 |
| Industry 8 | 0.000 | 0.993 | 0.002 | 0.987 |
| Industry 9 | 0.205** | 0.016 | -0.206** | 0.015 |
| Industry 10 | 0.090 | 0.306 | -0.087 | 0.320 |

R² | 0.531 | 0.536
Ad. R² | 0.420 | 0.426
F | 4.775**** | 4.870****

N = 95; *p < 0.10; **p <0.05; ***p < 0.01; ****p< 0.001
We have stated and described the regression results of our empirical study in this chapter. We will further discuss what these data and regression results indicate in the next chapter.
5 Conclusions and Discussion

In this chapter, we will further discuss the regression results we got from the last chapter. Significant correlations between CSR performance and CFP will be explained. Combining the empirical study results and previous studies, we come up with a new way to categorize the seven stakeholder groups in our study.

This study attempted to investigate the relationship between corporate social responsibility behavior and corporate financial performance. The research questions focus on the classifying of stakeholders, their requirement of CSR, and their effect on CFP. This topic has been widely concerned and studies during recent decades. Normally, scholars employed one CSR index to illustrate how corporations behaved in CSR as a whole, and then used this CSR index to study the correlation between CSR and CFP. Our innovation in this study is to divide CSR performance into seven pieces and study the linkage between each piece and CFP. Since it is not reasonable for a corporation to enhance their expenses on each aspect of social responsible activity, giving a clarified emphasis could be much more helpful. For example, the result of our regression indicated that CSR performance on community had significant negative relationship with CFP, while CSR behavior on employee had significant positive relationship with CFP. Corporations might be encouraged to move the focus on taking responsibility of employees, expecting a better financial feedback than before. Our innovation of putting CSR performance into several categories was supported by Robins et al. (2000) who identified four stages of social responsibility based on to which groups of stakeholder the corporation take responsibility for. At the first stage, the corporations are responsible only for stockholders. At stage two, employee’s benefit was taken into consideration in order to generate high team spirit and overall company morale. At stage three, firms started to satisfy customers and suppliers. At stage four, the company is responsible for the society as a whole.

Since time and data resources are limited, a total of 95 corporations remained in our sample after we eliminated those missing either financial or CSR data. The sample size was not very large, but large enough to do a multi-index linear regression. Cattell (1978) suggested that, the sample size of at least three to six times the number of variables is necessary for doing a multi-index linear regression. In our case, we have seven independent variables, one dependent variable in each model, and 12 control variables (including 10 dummy variables for industries). Thus, a sample size of N=95 is enough for getting reasonable regression results.

5.1 Significant Correlation

As our analysis shows, the regression result of Model 1 (with a time lag) indicated one more significant correlation between independent and dependent variables. CSR on employee was illustrated as having a positive short-term relationship with corporate financial performance at p < 0.05. The positive effect might come from the improved team spirit and overall company morale, caused by good employee welfares, comfortable working place, or opportunity to realize the career goal. Some of the previous research had found the same result. Buchholtz and Carroll (2009) argued that the changing values of society have a visible effect on the workplace, causing the contemporary workforce to be more mobile, less loyal, and more diverse than before. Conlin (2001) stated
that a typical labor force today has had nine different jobs by the age of 30, and that employees regard themselves as “free agents” willing to take jobs offered by the highest bidder. The entire situation above is forcing corporations to take more responsibility for the employees for maintaining a good employee relationship and being competitive in the labor market. To some extent, this helps explain the positive linkage between responsibility for employees taken by a corporation and the firm’s financial performance. Denison (1990) evaluated employee attitudes in 34 listed firms, and correlated aggregated employee attitudes with corporation financial performance for five successive years. He discovered that those corporations with better employee attitude had better short-term financial performance (cited in Schneider, et al. 2003). Similar to Denison’s (1990), our study also indicate a positive short term correlation between CSR performance on employee and CFP.

In the empirical study, regression results of both Model 1 and Model 2 proved that CSR performance on community had significant negative correlation with corporate financial performance at P < 0.1. This short-term negative correlation was not a surprise to us, since the social responsible activity on community was supposed to have a positive effect on financial performance in a long term. Friedman (1970) suggested the feedback of investment in the community will come in the long run, reducing the wage bill, attracting desirable employees, avoiding sabotage and pilferage. Our empirical study only proved that the investment in social responsible community activities do harm to the financial performance in very short time. Actually, it is very complex to define “community” and predict the reaction of community on CSR performance generally.

Dunham, Freeman and Liedtka (2006), divided community into four subcategories, which were community of place, community of interest, community of practice, and community as virtual advocacy group. Community of place is the physical proximity of organization members, reminding corporations to pay attention to the effects of their behavior upon those appearing near them. Communities of interest refer to those “groups that do exhibit a proactive, agenda-driven identity that recognizes the interdependence with business and is willing to engage in productive dialogues, however fraught with tension” (Dunham, Freeman & Liedtka, 2006, p. 33). Community of practice was firstly defined by Lave and Wenger (1991, p. 98) as “an activity system about which participants share understandings concerning what they are doing and what that means in their lives and for their community. Thus, they are united in both action and in the meaning that action has, both for themselves and for the larger collective”. According to Dunham et al., (2006) corporations can be understood as a community of practice, which share both the outcomes achieved for stakeholders, and the personal development and acknowledge of its members. The virtual advocacy groups do not have a special interest in a certain set of issues, clarified desired outcomes, or workable strategies. Corporations might have to figure out how to conduct a win-win relationship with this part of the community. In summary, business organizations have to satisfy different group members of community by taking responsibility for them in different ways. The process could last long since the reaction of the community can be very perceptual and emotional, and requiring time. Although the data we collected was not enough to do a long run investigation of the linkage between CSR performance on community and corporate financial performance, we suggested a negative correlation in the short run and a positive correlation in the long run.
5.2 Element Categories

According to the regression results and the previous studies cited in chapter 2 and 3, we divide the seven groups of stakeholders (including environment) into three groups: fast responders, long term responders, and occasional supporter.

Fast Responder

Significant or not, our regression results, indicated that CSR performance on shareholders, employee and environment have positive linkage with financial performance of the corporation in the short run. We suggest that these groups of stakeholders are fast responders. Large long-term insider shareholders holding the voting right may hold their stock for quite a long time and regard the corporation as their equity. However, there are lots of small stock investors depending on their behavior of purchasing or selling stocks on dividends and fluctuations of stock price. Keim (1978) argued that since the distribution of shareholders is becoming less concentrated, the shareholder demand upon corporations becomes broader. Higher earnings per share is a signal of successful business operation, which gives confidence to the stock investors, and thus drives the stock price high and bring a better financial performance in a short time.

Employee would be encouraged to work more effectively as soon as they notice the improvement of their working place, salary, training programs, and other issues they mind. There is no need for an intermediary to pass related information from the corporation to employees working for the firm. Part of information such as salary amount, welfare, position will be shown publicly on the labor market for potential employees. As a result, social responsibility taken by corporations is reasonable to have a short-term positive effect on the corporate financial performance.

The third fast response element is environment. Normally, we assume that corporations are concerned with risk minimization. In a supply chain, risk refers to the possibility for firms to lose their benefits for their behavior, or for the behavior of their partners. According to Cruz (2008), CSR risk concerns pollution emission, dangerous operations, production of hazardous waste, use of hazardous raw material, and so on, for both business-to-business (B2B) and business-to-consumer (B2C) transaction. Corporations may lose their business reputation brand image, revenue, access to markets and financial investments (Fabian, et al. 2000, cited in Cruz, 2008). Part of benefits from performing well on taking responsibility of environment comes from customers, who are willing to spend money on environment friendly products (as we discussed in chapter 2). Nehrt (1996) argued that the first mover corporations adopting a new pollution reducing technology showed larger net income growth than their competitors in the chemical bleached paper pulp manufacturing industry. Scholars have proved that the more responsibility corporations taken for environment, the better financial performance they will display (Judge & Douglas, 1998). In other words, other factors being equal, companies having better capability to manage the tradeoff between costs and benefit from environment tend to have better financial performance (Wally & Whitehead, 1994). Although the positive correlation of CSR performance on environment and financial performance was proved reasonable, whether it shows in a short run or long run were barely discussed. We suggest the time of response might be depended on the media broadcasting or advertising efforts. The faster information was transferred to their potential partners and customers, the faster a financial performance would be shown, no
matter positive or negative information. In an information developed era, it is not surprising to find that, for CSR performance on environment, CFP is a quick responder.

**Long Term Responder**

We put customers, creditors and community into the “long term responder” group and suggest they have a long run positive relationship with financial performance. As we discussed above, community, a complex element to corporations, has interactions with firms in different ways with the effect showed in a relatively long period of time. We will mainly discuss customers and creditors in this part.

Firstly, we have to admit that our empirical study showed no short-term relationship between CSR performance on customers (represented by ACSI) and financial performance of firms. Our suggestion on the positive linkage is based on other studies. Correlation between these two indicators has been widely studied by scholars. For instance, Heskett et al. (1994) suggested that customer satisfaction has effect on customer loyalty, thus in turn affects the financial performance of a corporation. Yi (1990, p. 104) stated that “many studies found that customer satisfaction influences purchase intentions as well as post-purchase attitude” (cited in Hallowell, 1996). According to Storbacka, Strandvik and Grönroos (1994), making sure to satisfy the customers is a way to receive strong and long customer relationships. Consumer behavior seems to be a habit that will not easily be changed in a short time. Grönhaug and Gilly (1991) stated that because of high switching costs, customers may remain loyal to a firm even if they are not satisfied. There are barriers such as having to try a new product or time limit that may slow consumers down in changing loyalty. Liljander and Strandvik (1995) listed ten bonds between customers and providers and classified them into two groups. They argued that legal, economic, geographical, time, and technological bonds can prevent customers from changing providers even when they offered products or service far from satisfactory. Other bonds, which are knowledge, cultural, social, ideological and psychological bonds, keep customers where they were for not breaking a long-run relationship. As a result, customers were dragged by a variety of objective and subjective conditions in their way to a corporation they actually admire. That is why we suggest that, if a firm treats its customer better, it will receive a better financial report in a relatively long time.

Although not significant, our regression result indicates a short term negative relationship between CSR performance on creditors and CFP. We evaluated the CSR performance on creditors by the interest coverage ratio, which is a guarantee for creditors to get their capital and interest back. Eriotis, Vasiliou and Ventoura-Neokosmidi (2007), suggested that the agency costs of debt should be studied when coming to the lender-borrower relationship. When a creditor provides capital to a corporation, the interest rate charged is settled depending on the creditor’s assessment of the firm’s risk. Yet, this arrangement creates motives for the corporation to increase the risk without changing the cost of current borrowing. According to Eriotis et al., to avoid the situation above, creditors imposed certain monitoring and controlling techniques on corporations. Creditors may clarify the maximum risk that the company could have, or simply raise the interest rate. Hence, the transaction cost increased for borrower firms, and barriers were created. To our understanding, corporations may sacrifice some financial benefits to gain the trust of creditors in order to reach a win-win situation with creditors.
Occasional Supporter

For the last category, we have suppliers regarded as “occasional supporter”. By regarding suppliers as occasional supporters, we have to mention the premise, which is a friendly long-term relationship between suppliers and the corporation. In other words, corporation has to be responsible for those who have contracts with it on the material or equipments. In this way the firm can get their help once it runs into trouble (suggested in section 2.3). From the aspect of transaction cost, if a corporation behaved well for a long time in taking responsibility for its suppliers, trust between them will reduce the transaction cost as long as neither of them breaks the trust. Ganesan (1994) provided a definition of trust based on two distinct components, namely credibility and benevolence. Credibility is depended on the extent to which suppliers believe that the corporation has the required expertise on its business operations. Benevolence refers to the extent to which the corporation has intentions and motives beneficial to the suppliers when faced with new conditions in their environment. Once credibility and benevolence are built between the firm and the suppliers, it is possible for the firm to get help or benefit from suppliers.

5.3 Socially Responsible Investment

Socially responsible investors are those individual or organizations choosing their investment universe depending on whether or not the investments they selected meet a series of financial and social criteria consistent with their values and beliefs (Sauer, 1997). The Social Investment Forum (1995) reported that approximately ten percent of US dollars invested in the United States were subject to some form of social criteria. As the amount of socially responsible investment grows in these years, corporations are encouraged, or pushed to behave well in the CSR area. In countries like the UK and Australia, the size and number of socially responsible investment funds have increased dramatically in recent years (McCann et al., 2003, cited in Sparkes & Cowton, 2004). The UK government even officially announced a plan in 1998 to require all trustees of occupational and local government pension schemes to declare their policy on socially responsible investment from July 2000. This government behavior significantly encouraged many trustees to take care of socially responsible investment policies, and pushed many corporations to pay attention to CSR performance (Solomon et al., 2002, cited in Sparkes & Cowton, 2004). In order to respond to the increasing CSR requirement, many organizations have the tendency to put socially and environment relevant issues into their business strategy. Hence, the interaction between CSR performance and opportunities to gain investment proved that better CSR performance can be an attraction to investment, thus make the firm able to get a better financial performance.

5.4 Final Comments

The purpose of this study is to investigate the correlation between corporate social responsibility and corporate financial performance. Triple bottom line principle suggests that corporations should take responsibility for its financial situation, social environment and natural environment. In accordance with the stakeholder theory, we divided the stakeholders in the social environment of a firm into six categories: shareholder, supplier, creditor, employee, community and customer. We created seven independent variables to represent CSR performance for the six social categories and environment. Tobin’s Q was used as the dependent variable representing corporate financial perfor-
mance. Risk, size and industry indexes were used as control variables in our empirical study. Since the data we collected are for only two years, the regression result was reasonable only for short term. We noticed that CSR performance on shareholder, employee and environment have positive short term effect on financial performance, while the community index had significant negative relationship with CFP.

Combining our regression results and research results of other scholars, we classified the seven stakeholder groups into three groups according to their reactions to positive CSR performance. We suggest that shareholders, employee and environment should be regarded as “fast responders” of CSR behavior, customers, creditors and community as “long term responders”, and suppliers as “occasional supporters”. 

There is location limitation in our study, because the sample companies are all listed firms in the US. Considering the different regulations and policies of businesses in various countries, we are not sure if our study result is suitable for other countries. Because time and money are also limited, a restricted number of databases were available to us. The limited number of sample collected is another limitation. We have included as many as 95 companies. Although, shown in the table 3-1 (section 3.5) that, in certain industries, the sample number is only one, using 95 samples for a multi-index linear regression is reasonable, but not recommended.

5.5 Future Research

The debate on how CSR and CFP relate to each other never stops. Future research in this area could use a subdivision of CSR performance to do a correlation analysis of financial performance. In our opinion, the managers and owners of a corporation need to know where they exactly should place their investment. A subdivision of CSR behavior helps decision makers within a company to make a feasible strategy that takes into account the relationship between CSR and CFP.

We suggest future research to consider the response time of different stakeholders. As we suggested in the thesis, some of the stakeholders respond quite fast to the CSR performance of firms, and some are much slower. It is difficult to draw a conclusion when studying the relationship between CSR and CFP and putting all the stakeholder indicators in the same time period. If possible, a study of long-run relationship between CSR and CFP may offer more reasonable results than a short-term study. We suppose that the quite different conclusions drawn by previous research might be explained by a neglect of the different lengths of time needed for responses among different stakeholders.

Finally, we encourage future studies to be more innovative when it comes to building a theoretical framework for a study of CSR relevant issues. As we argued in the introduction section, most of the main theories in the area of CSR share a similar core opinion. For instance, in our study, we combine the triple bottom line principle with the stakeholder theory, and conduct an empirical study including seven CSR indicators. It is not necessary to focus on a single theory, as long as the problem and research questions can be well solved.
List of References


Appendices

Appendix I

KLD Methodology (Resource: MSCI ESG Research)

Community

- **Strengths**

  **Charitable Giving**

  The company has given 1% or more of trailing three-year net earnings before taxes to charity, or has otherwise been notably generous in its giving.

  **Innovative Giving**

  The company donates 25% or more of its charitable giving to support NGOs involved with affordable housing, access to healthcare, K-12 education, and initiatives to relieve hunger and/or other services to disadvantaged communities.

  **Community Engagement**

  The company has a notable community engagement program concerning involvement of local communities in areas where the firm has major operations.

  **Other Strength**

  The company has either an exceptionally strong in-kind giving program or engages in other notably positive community activities.

- **Concerns**

  **Community Impact**

  This indicator measures the severity of controversies related to a firm’s interactions with communities in which it does business. Factors affecting this evaluation include, but are not limited to, a history of involvement in land use and/or development-related legal cases, widespread or egregious community impacts due to company operations, and criticism by NGOs and/or other third-party observers.

Employee Relations

- **Strengths**

  **Union Relations**

  The company has taken exceptional steps to treat its unionized workforce fairly.

  **Cash Profit Sharing**

  The company has a cash profit-sharing program through which it has recently made distributions to a majority of its workforce.

  **Employee Involvement**

  The company strongly encourages worker involvement and/or ownership through stock options available to a majority of its employees; gain sharing, stock ownership, sharing of financial information, or participation in management decision-making.
**Health and Safety Strength**
The company has strong health and safety programs.

**Supply Chain Policies, Programs & Initiatives**
This indicator measures a firm’s policy commitments and management systems designed to monitor the human and labor rights performance of its suppliers and contractors. Factors affecting this evaluation include, but are not limited to, the protection of supply chain workers’ rights, including freedom of association, freedom from forced labor and child labor, safe working environments and other rights described by the International Labor Organization (ILO) Conventions and other applicable standards, and initiatives towards improving the labor conditions of its supply chain workforce. Factors affecting this evaluation include, but are not limited to, efforts to use purchasing power to improve performance, company-led programs that improve the labor conditions and health of supply chain workers, and participation in multi-stakeholder initiatives.

**Other Benefits & Programs**
The company has strong employee relations initiatives not covered by other MSCI ratings.

- **Concerns**

**Union Relations**
The company has a history of notably poor union relations.

**Health and Safety Concern**
The company recently has either paid substantial fines or civil penalties for willful violations of employee health and safety standards, or has been otherwise involved in major health and safety controversies.

**Supply Chain Controversies**
This indicator measures the severity of controversies related to a firm’s supply chain. Factors affecting this evaluation include, but are not limited to, a history of involvement in supply chain related legal cases, widespread or egregious instances of abuses of supply chain employee labor rights – including forced labor, supply chain employee safety, resistance to improved practices, and criticism by NGOs and/or other third-party observers.

**Labor-Management Relations Controversies**
The company is involved in an employee relations controversy that is not covered by other MSCI ratings.

**Environment**

- **Strengths**

**Beneficial Products and Services**
This indicator measures the positive environmental impact of a firm’s products and/or services. Factors affecting this evaluation include, but are not limited to, products/services that reduce other firms’ and individuals’ consumption of energy, production/consumption of hazardous chemicals, and overall patterns of resource consumption.
Pollution Prevention
This indicator measures a firm’s method of mitigating non-carbon air emissions, water discharges, and solid waste from its operations. Factors affecting this evaluation include, but are not limited to, initiatives to reduce a firm’s non-carbon air emissions from its operations; to reduce the release of raw sewage, industrial chemicals, and other regulated substances; to reduce hazardous and non-hazardous waste; and programs to reduce the use of packaging materials, to support recycling; and to recycle old products such as televisions and other consumer electronics.

Recycling
This indicator measures a firm’s use of recycled materials in its products/services. Factors affecting this evaluation include, but are not limited to: assessment of the volume and recycled content of products made with recycled input materials, including paper, metal, plastic; and any certification of its practices by a third party, such as the Forest Stewardship Council for timber product companies.

Clean Energy
This indicator measures a firm’s policies regarding climate change. Factors affecting this evaluation include, but are not limited to, acknowledgement of direct and/or indirect impacts on operations due to climate change and formal commitments to: reduce greenhouse gas emissions; and initiatives to reduce energy consumption and to increase the use of renewable energy.

Management Systems
This indicator measures a firm’s monitoring and management of its environmental practices. Factors affecting this evaluation include, but are not limited to, the establishment and monitoring of environmental performance targets, the presence of environmental training and communications programs for employees, and stakeholder engagement.

Other Strength
This indicator measures a firm’s environmental management policies. Factors affecting this evaluation include, but are not limited to, a stated commitment to: integrate environmental considerations into all operations; reduce environmental impact of operations, products and services; and comply with regulations.

- Concerns

Regulatory Problems
This indicator measures a firm’s record of compliance with environmental regulations. Factors affecting this evaluation include, but are not limited to, fines/sanctions for causing environmental damage, and/or violations of operating permits.

Substantial Emissions
This indicator measures a firm’s emission of toxic chemicals according to data from the Toxics Release Inventory (TRI), a U.S. Environmental Protection Agency (EPA) database of information on toxic chemical releases and waste management activities. Factors affecting this evaluation include, but are not limited to, how the firm compares to its industry peers.
Climate Change

This indicator measures the severity of controversies related to a firm’s climate change related policies and initiatives. Factors affecting this evaluation include, but are not limited to, a history of involvement in greenhouse gas (GHG)-related legal cases, widespread or egregious impacts due to corporate GHG emissions, resistance to improved practices, and criticism by non-governmental organizations (NGOs) and/or other third-party observers. In addition, factors cover whether a company derives substantial revenues from the sale of coal or oil and its derivative fuel products, or whether the company derives substantial revenues indirectly from the combustion of coal or oil and its derivative fuel products.

Negative Impact of Products & Services

This indicator measures the negative environmental impact of a firm’s products and/or services. Factors affecting this evaluation include, but are not limited to, products/services that involve regulated substances, the production/consumption of hazardous chemicals, and controversial products such as those that use genetically modified organisms or nanotechnology.

Land Use & Biodiversity

This indicator measures the severity of controversies related to a firm’s use or management of natural resources. Factors affecting this evaluation include, but are not limited to, a history of involvement in natural resource-related legal cases, widespread or egregious impacts due to the firm’s use of natural resources, resistance to improved practices, and criticism by NGOs and/or other third-party observers.

Non-Carbon Emissions

This indicator measures the severity of controversies related to a firm’s non-GHG emissions. Factors affecting this evaluation include, but are not limited to, a history of involvement in land, air, or water emissions-related legal cases, widespread or egregious impacts due to corporate non-GHG emissions, resistance to improved practices, and criticism by NGOs and/or other third-party observers.

Other Concern

This indicator measures the severity of controversies related to a firm’s environmental impact. Factors affecting this evaluation include, but are not limited to widespread or egregious environmental impacts, resistance to improved practices, criticism by NGOs and/or other third-party observers, and any other environmental controversies not covered by other environmental ratings.
Appendix 2

ACSI Methodology (Resource: American Customer Satisfaction Index)

The American Customer Satisfaction Index uses customer interviews as input to a multi-equation econometric model developed at the University of Michigan's Ross School of Business. The ACSI model is a cause-and-effect model with indices for drivers of satisfaction on the left side (customer expectations, perceived quality, and perceived value), satisfaction (ACSI) in the center, and outcomes of satisfaction on the right side (customer complaints and customer loyalty, including customer retention and price tolerance).

The indexes (shown in the diagram below) are multivariable components measured by several questions that are weighted within the model. The questions assess customer evaluations of the determinants of each index. Indexes are reported on a 0 to 100 scale. The survey and modeling methodology quantifies the strength of the effect of the index on the left to the one to which the arrow points on the right. These arrows represent "impacts." The ACSI model is self-weighting to maximize the explanation of customer satisfaction (ACSI) on customer loyalty. Looking at the indexes and impacts, users can determine which drivers of satisfaction, if improved, would have the most effect on customer loyalty.

![Diagram of ACSI Methodology](image)

Customer Expectations

Customer expectations is a measure of the customer's anticipation of the quality of a company's products or services. Expectations represent both prior consumption experience, which includes some nonexperiential information like advertising and word-of-mouth, and a forecast of the company's ability to deliver quality in the future.

Perceived Quality

Perceived quality is a measure of the customer's evaluation via recent consumption experience of the quality of a company's products or services. Quality is measured in terms of both customization, which is the degree to which a product or service meets the customer's individual needs, and reliability, which is the frequency with which things go wrong with the product or service.
Perceived Value

Perceived value is a measure of quality relative to price paid. Although price (value for money) is often very important to the customer's first purchase, it usually has a somewhat smaller impact on satisfaction for repeat purchases.

Customer Complaints

Customer complaints are measured as a percentage of respondents who indicate they have complained to a company directly about a product or service within a specified time frame. Satisfaction has a negative relationship with customer complaints, as the more satisfied the customers, the less likely they are to complain.

Customer Loyalty

Customer loyalty is a combination of the customer's professed likelihood to repurchase from the same supplier in the future, and the likelihood to purchase a company’s products or services at various price points (price tolerance). Customer loyalty is the critical component of the model as it stands as a proxy for profitability.