THE EFFECT OF GLOBAL DIVERSIFICATION OF OPERATIONS, AND FINANCING TO THE CORPORATE VOLUNTARY DISCLOSURE

TESIS

Diajukan sebagai salah satu syarat untuk memperoleh gelar
Magister dalam Ilmu Akuntansi

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UNIVERSITAS INDONESIA
FAKULTAS INDONESIA
PROGRAM STUDI ILMU AKUNTANSI
JAKARTA
JANUARI 2009

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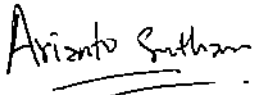

(Arianto Suthan)

UCAPAN TERIMA KASIH

Puji syukur saya panjatkan kepada Tuhan Yang Maha Esa, karena atas berkat dan rahmat-Nya, saya dapat menyelesaikan tesis ini. Penulisan tesis ini dilakukan dalam rangka memenuhi salah satu syarat untuk mencapai gelar Magister Sains Akuntansi pada Fakultas Ekonomi Universitas Indonesia. Saya menyadari bahwa, tanpa bantuan dan bimbingan dari berbagai pihak, dari masa perkuliahan sampai pada penyusunan tesis ini, sangatlah sulit bagi saya untuk menyelesaikan tesis ini. Oleh karena itu, saya mengucapkan terima kasih kepada:

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Arianto Suthan

ABSTRACT

Name : Arianto Suthan
Study Program: Master of Science in Accounting
Title : The Effect of Global Diversification of Operations, and Financing to the Corporate Voluntary Disclosure

This study is a replication of the previous studies of Cahan et.al (2005), mainly confined to validate the role of diversification on voluntary disclosure in the context of international setting. The study examines whether a firm's level of voluntary disclosure varies with its level of global diversification. It examines whether firms characterized by operation that is more global and financing combat information asymmetry and agency costs arising from greater globalization, by providing greater voluntary disclosure. Global diversification of operations is measure by factor-analyzing foreign shareholdings and foreign debt, and global diversification of financing is measure by factor-analyzing foreign sales and foreign subsidiaries. Using a sample of 288 firms from 31 countries selected from Fortune's 2008 Global 500 list and Francis et al. (2008) disclosure index, the study find that companies which have more globalize operations and financing provide higher levels of voluntary disclosure

Keywords:
Globalization; Global diversification; Voluntary disclosures

ABSTRAK

Nama : Arianto Suthan
Program Studi: Magister Sains Ilmu Akuntansi
Judul : Pengaruh Diversifikasi Global dari Kegiatan Operasional dan Pendanaan terhadap Praktek Pengungkapan Sukarela.

Tesis ini berkenaan dengan replikasi dari penelitian sebelumnya oleh Cahan et al (2005), yang bertujuan untuk menvalidasi peranan atas diversifikasi terhadap pengungkapan sukarela dalam perspektif internasional. Penelitian ini membahas apakah tingkat pengungkapan sukarela dari perusahaan bervariasi dengan tingkat diversifikasi globalnya. Diversifikasi global dari kegiatan operasional di ukur dengan analisis faktor atas kepemilikan saham di luar negeri dan hutang di luar negeri, dan diversifikasi global dari kegiatan pendanaan di ukur dengan analisis faktor atas penjualan di luar negeri dan anak perusahaan di luar negeri. Dengan 288 sampel perusahaan dari 31 negara yang dipilih berdasarkan daftar Fortune's 2008 Global 500, dan dengan menggunakan *disclosure-index* dari Francis et al. (2008), penelitian ini menyimpulkan bahwa perusahaan dengan tingkat operasional dan pendanaan global yang lebih besar menyediakan tingkat yang lebih tinggi pula atas pengungkapan sukarelanya.

Kata kunci:
Globalisasi; Diversifikasi global; Pengungkapan sukarela

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CHAPTER 1
INTRODUCTION

1.1. Statement of the Problem

An extensive amount of disclosure research exists on the international setting. For example, Rahman, Tay, Ong, and Cai (2007) find in an international setting that quarterly reporting is associated with higher analyst following and with high price volatility. Ahmeda, Beatty, and Bettinghaus (2004) documents evidence on the efficacy of maturity-gap disclosures of commercial banks in indicating their net interest income that exposed to interest-rate risk. Douthett, Duchac, Haw, and Lim (2003) find that higher levels of disclosure may relate to lower discount rates and higher earnings response coefficients (ERCs). However, to date, there is very little knowledge about how disclosure practices change as firms become more international. Only a few studies have examined the association between the degree of globalization and disclosure level.

Early studies include Choi (1974) who find the existence of a direct relationship between improved financial disclosure and entry into the international capital markets. Hossain, Perera, and Rahman (1995), who find that voluntary disclosures are higher for firms listed internationally. Khanna, palepu, and Srinivasan (2004) examine the disclosures of non-U.S. firms that interact with the U.S. markets. Their results show that non-U.S. firms with more interaction with U.S. capital, product, and labor markets are more likely to adopt U.S. disclosure practices.

More recently, Cahan, Rahman, and Perera (2005) examines whether a firm's level of voluntary disclosure varies with its level of global diversification. Their results show that the level of voluntary disclosure positively related to the extent of global operations, but is not relate to the extent of global financing.

On the other hand, Cahan et al (2005) analysis has at least three limitations. First, They use the Botosan (1997) disclosure index, which was developed for U.S. firms, can understate the level of voluntary disclosure for firms in countries with lower levels of required disclosures than U.S. Second, they use a data of the firms from the period in financial crisis (at least for some countries in Asia), and before the major fraudulent cases on financial statements exploded in U.S. which leads to the more stringent disclosure regulation for firms around the world (Gordon, Loeb, Lucyshyn, and Sohail, 2006; Leuz, and Wysocki, 2007).
Thus, this study is a replication with some extension of the previous studies, mainly confined to validate the role of diversification on voluntary disclosure in the context of international setting.

1.2. Motivation for the Study

Since the pioneering study of Stigler (1964) and Jarrell (1981) in disclosure regulation on the Securities Act of 1933 and the Exchange Act of 1934, a considerable body of research has developed in investigating the relationship between disclosure and the value of information for the user of financial statements. Accounting disclosure and determinants analysis is a major issue in accounting research. Chavent, Ding, Fuc, Stolowy, Wang (2005) noted that researchers try to answer two major questions. First, what attitude do firms take towards accounting disclosure, either general or specific? For example, disclosure on business segments, R&D activities, environmental projects, and social responsibility.

Second, why do some firms disclose more (or less) information than others? The first research question leads to what known as "disclosure level evaluation", and the second, "disclosure determinants analysis".

Chavent et al. (2005) also noted that there are three categories of studies in the literature. First, in voluntary disclosure studies, the researcher examines the link between voluntary publication of information and certain determinants. This is a classic, "natural" research question, and these studies seem to represent the majority of past research. Second, in mandatory disclosure studies, studying this aspect may appear less logical.

If publication of certain information is mandatory, how can there be differences between firms' disclosures? However, in fact, even when disclosures are mandatory, researchers have found that firms still have some flexibility in the way they report the information.

This is referred to as "disclosure extensiveness of each item of mandatory disclosure" (Chen and Jaggi, 2000). Third, in mandatory and voluntary disclosure studies, numerous studies cover both types of item (Cooke, 1990). This study relates to the first category.

To date, not many attempts examine the influence of global diversification on voluntary disclosure by firms. Recent research examined only on the international differences in disclosure and securities regulation and their economic impact on markets, including cost of capital for firms (Hail and Leuz, 2006)

Hail and Leuz (2006) examine international differences in firms' cost of equity capital across 40 countries and their association with the quality of countries' legal institutions and securities regulation. They concluded that firms from countries with more extensive disclosure requirements, stronger securities regulation, and stricter enforcement mechanisms have a significantly lower cost of capital.

They also show that the cost of capital effects of strong legal institutions is much smaller as capital markets become globally more integrated. Conversely, the effects are large and economically meaningful for countries with segmented capital markets.

Francis, Khurana, Pereira (2005) document a link between cost of capital and firms' disclosure for firms from a range of countries. They revealed that the effect driven by firm-level factors and firms' voluntary disclosure choices appear to operate independently of country-level regulations. Therefore, the results are more similar in spirit to purely domestic cross-sectional studies where it is difficult to draw conclusions about the aggregate economy-wide effect of disclosure regulations (Leuz, and Wysocki, 2007).

The International Context. The adequacy of information disclosure by a company in its annual report depends on the local circumstances. The divergence observed in disclosure adequacy internationally has arisen naturally from the different accounting objectives, standards, policies, and techniques used in different countries (Yuan, 2002).

Two current developments have stimulated the debate about financial reporting and disclosure regulations and the "convergence" of accounting rules around the world (Leuz, and Wysocki, 2007). First, international financial crises and corporate scandals have lead to intense examination of firms and bring securities regulation reforms and greater reporting and disclosure requirements. The recent U.S Financial Crisis in 2008 and the U.S. SEC move to up-date and modernize the disclosure requirement for foreign companies offering securities in U.S. markets (SEC, 2008) are two recent important examples. Second, both stock exchanges and accounting standards bodies from numerous countries around the world have adopted International Financial Reporting Standards (IRFS) to achieve the stated goal of "harmonization" and "convergence" of accounting

rules. The adoption of International Accounting Standards in the European Union on 2005 to achieve the EU single market is one of the examples.

Global diversity in institution, economic, political, legal, and culture factors may limit the effectiveness of a "one-size-fits-all" set of global accounting standards and disclosure regulations.

To date very little information about how disclosure practices change as firms become more international. The recent study by Cahan et al. (2005) examine whether a firm's level of voluntary disclosure varies with its level of global diversification. They find that the level of voluntary disclosure is positively related to the extend of global operations, but is not related to the extend of global financing. By replicating the process with some extension, and different samples, this study will validate the Cahan et al. (2005) results.

Because of global diversification is of growing importance and disclosure by firms diversifying across country boundaries is attracting attention by standard setters and policy makers, then is important to understand how global diversification, in terms of operations, and financing can influence corporate disclosures.

This study assesses the effect of business diversification on the voluntary disclosure process of firm annual report in international setting. It examines whether firms characterized by more global operations and financing combat information asymmetry arising from greater globalization, by providing greater voluntary disclosure.

In the context of current situation of the global businesses, this study investigates the following issues:

1. Whether global diversification of operations is significantly, relate to voluntary disclosure.
2. Whether global diversification of financing is significantly, relate to voluntary disclosure.

1.3. Overview of the Research

This study attempts to replicate and validate a model of global diversification influence on the relationship with the voluntary disclosure practices. The theoretical framework that describes the relationships is developed in chapter two. Theoretical work identifies a number of mechanisms by which an increase in disclosure can reduce information asymmetry, which leads to an increase in liquidity and a reduction in the firms' cost of capital. lower cost of capital and, hence, higher share prices (Diamond and Verrecchia, 1991). Present theory hypothesize that adverse selection costs due to information asymmetry create a divergence between the costs of debts and the costs of equity, thus constraining firms in their ability to fund investments projects (see Hubbard, 1998; Stein, 2001).

Verrecchia (1983), and Dye (1985) contend that firms use accounting disclosures to overcome adverse selection. Favorably distinguished, firms with above average performance use disclosure from other firms, thus increasing demand for its securities and lowering its cost of capital.

In addition, adverse selection can distort investors' trading decisions and result in inefficient and costly asset allocations in the economy for which investors need to compensate with a higher expected rate of return or cost of capital (Garleanu and Pedersen, 2004). Prior studies argue that firms, by providing more informative disclosure, increased demand of debt and equity issues and thus lower its cost of

capital (Verrecchia, 1983; Dye, 1985; Benston, 1986). Thus, information asymmetry also translates into a higher cost of raising capital.

Merton (1987) develops a model where (some) investors have incomplete information. Consequently, risk sharing is incomplete and inefficient. Disclosures by these lesser-known firms can make investors aware of their existence and enlarge the investor base, which in turn improves risk sharing and lowers the cost of capital. In addition to these direct effects on the cost of capital, corporate disclosures have the potential to change firm value by influencing managers' decisions and hence altering the distribution of future cash flows (Leuz, and Wysocki, 2007). That is, information asymmetry and adverse selection, which known as the agency problems, increases the degree of uncertainty in decision making by investor.

Many studies in agency theory suggest that more transparency and better corporate governance can increase firm value by improving managers' decisions or by reducing the amount that managers appropriate for themselves (Shleifer and Wolfenzon, 2002). In summary, the role of disclosure in reducing agency problems and improving investment efficiency is likely to have a first-order effect on firm value.

1.4. Contribution of the Study

The study contributes to several areas of research. First, the study contributes to an emerging line of research that examines the global diversification consequences on corporate voluntary disclosure. Second, the study will definitely contribute to the literature of globalization and multinational firms. Most of the research focuses on U.S. multinational.

Third, the findings of this study would provide further evidence of the separate effects of the current situation of financial and operational globalization on disclosures practices by validating the results of Cahan et al. (2005). For example, the results might indicate that global diversification has a significant positive impact on the voluntary disclosure, so analysts could improve the forecast accuracy to help investors to make better decisions. Four, the results of this research could also answer questions arising from conflicting results of prior research. Fifth, the findings of the study can also help the user of the financial statements to improve the use of voluntary disclosure information provided by the firms in order to achieve the user objectives.

Further potential of the findings be placed in their contributions to knowledge of how disclosure practices can best be implemented. In detailed, benefits may take place along the following ways:

1. The disclosure as a part of financial information will be effective in informing the firm performance to the user of financial statements if the firm is intelligent to minimize the conflict of interest in the process of the preparation of disclosure information by providing the voluntary disclosure information.
2. The firm might produce a "right information" if the firm is able to create interactions among users of financial statements that are in line with the objectives of the firms.
3. Minimization of the information asymmetries and agency costs arising from the global diversification of operations and financing will increase the incentives for firms to voluntary disclose at a higher level.
4. The voluntary disclosure as an instruments of alternative information source will be effective and more useful to investors to gain an access to on timely financial information that can help them make better informed investment decisions, and thus, prevent a legal liability, especially of an adverse nature, have a lower probability of being sued by investors.

Finally, it is expected and anticipated that the findings of this study, with its particular reference to the effect of global diversification on the voluntary disclosure, will update and expand the already-existing body of literature on disclosure practices.

1.5. Overview of the Thesis

Chapter two presents a review of the relevant literature that links global diversification, and corporate voluntary disclosure. The theoretical framework of previous voluntary disclosure studies explained in brief. An information asymmetries and agency costs provides the theoretical foundation for specifying the link between voluntary disclosure practices and global diversification. This chapter structured along the following lines.
First, a review of research in corporate mandated or regulated disclosure and voluntary disclosure is provided. Then the links between the voluntary disclosure and the global diversification is discussed. This is followed by an examination of the role of global diversification on the corporate voluntary disclosure. The research hypotheses that follow from the discussion are then presented.

Chapter three describes the research design, the data collection procedures, and the measurement of variables. The chapter comprises four sections. Section one presents the data collection procedures. Section two discusses methodological issues. Followed by variable measurement in section three. Finally, section four describes the statistical analysis method that is in use.

The results of the study are presented in chapter four. The first section shows the descriptive statistics for dependent and independent variables. The second section provides the results of preliminary analyses which contains the factor analysis to extract factor loadings of the globalization variables, and the breaking-down of the disclosure scores by country, and by industry.

The third section presents the factor analysis. The fourth section present Pearson correlation. Section fifth presents the test of the assumptions of Regression analysis. Finaly, section sixth presents the results with regard to the tests of the hypotheses.

Finally, chapter six is organized into three sections. Section one describes the summary of the study. Limitations of study reviewed in section two, and opportunities for future research discussed in the last section.

CHAPTER 2
LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

This chapter provides a review of the relevant literature that links the corporate disclosure to global diversification. The theoretical framework of previous disclosure studies will be explained in brief. The structure of this chapter is as follows. First a review of research in corporate mandated or regulated disclosure and voluntary disclosure is provided. Then the links between the voluntary disclosure and the global diversification is discussed. This is followed by an examination of the role of information asymmetries and agency costs on the corporate voluntary disclosure. The theoretical developments that follow from the discussion are then presented. To conclude, the last section describe the development of research hypotheses.

2.1. Theoretical Framework of Traditional Disclosure Studies

Disclosure is defined as the information or a fact that is made known or public that was previously secret or private (Oxford, 2000). In the accounting terms (Collin, 2007), disclosure consist of adequate disclosure and continuous disclosure. Adequate disclosure defined as a comprehensive presentation of statistics in financial statements, in such a way that can be used to inform investment decisions. Continuous disclosure is defined as the practice of ensuring that complete, timely, accurate and balanced information about a public company to be made available to the shareholders.

In the profession of accounting, and researcher, adequate disclosure is synonyms with the mandated or regulated disclosure, while the continuous disclosure can be interpreted as the voluntary disclosure. The sum of mandated and voluntary would be a full disclosure.

Accounting can be seen as a social system. Harrison and McKinnon (1986) discusses accounting as a social system. They describe social systems in terms of three elements: interdependence, norms and values, and cultural determinants of behavior. They model social change within the context of culture, intrusive events, intra-systems activity, and trans-system activity. Accounting exists along with other systems, such as political systems and economic systems.

Systems within a country share a cultural environment. Culture influences what goes on within each system as well as how the systems interact with one another. Intra-systems activity refers to interactions among elements of a system. Trans-system activity refers to interactions among different systems. Intrusive events combine with these interactions to produce system change.

Archambault and Archambault (2003) based on Harrison and McKinnon (1986) model the corporate disclosure, as can be seen in Figure 2.1.

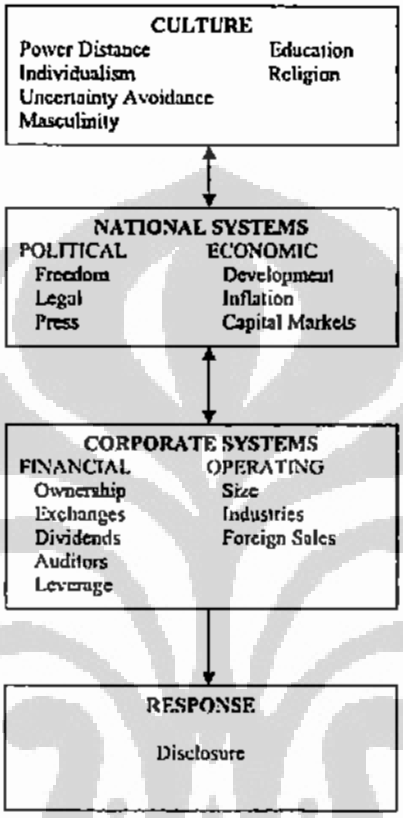

Figure 2.1. Theoritical Framework of Factors that Influence Disclosure at Corporate Level.

Source: Archambault and Archambault (2003)

The above model is used in the study to examine the factors that influence disclosure at the corporate level. The model incorporates national culture, national political systems, national economic systems, and corporate systems. These systems are all shown to interact with one another in the model, resulting in a corporation's response about the amount of information to disclose.

The individual systems and operational variables within those systems used in the empirical tests are discussed in the next section which is drawn mostly from Archambault and Archambault (2003).

2.1.1. National culture

Archambault and Archambault (2003) have mentioned that culture influences how people perceive situations and organize institutions. Hofstede (1991) have identifies the five cultural dimensions: power distance, individualism, uncertainty avoidance, masculinity, and long-term orientation.

Power distance represents the extent to which people tolerate unequal distribution of power within society. A high power distance index score means that people have a high tolerance for power inequality.
Individualism refers to the extent to which people are independent as opposed to collectivism, in which people are organized into strong groups.
Uncertainty avoidance represents the extent to which people feel threatened by unknown situations.
Masculine societies stress achievement, heroism, assertiveness, and material success. Feminine societies stress relationships, modesty, caring for the weak, and quality of life.
Long-term orientation consists of education and religion. Doupnik and Salter (1995) observed that as the level of education increases, the number of financial statement users may be expected to increase. Consequently, the amount of corporate disclosure may increase with the level of education.

2.1.2. National systems

Archambault and Archambault (2003) discussed that national systems include institutions that affect all companies within the country. The political and economic systems chosen by a country are influenced by and influence that country's culture. Thus, culture interacts with the national systems as they in turn influence corporate-level decisions.

Political systems. Belkaoui (1983) argues that disclosure increases with political freedom. Political freedom can be measured by political rights and civil liberties. Political rights are the ability to participate in the political process through such means as voting. Political system consists of legal system and press (Archambault and Archambault, 2003).

Legal system. Archambault and Archambault (2003) noted that country's legal system may influence the financial reporting system. Salter and Doupnik (1992) classify countries into the common law family and the Romano-Germanic family and demonstrate that the legal system is related to accounting practices. The common law family is characterized by solutions to specific cases. The Romano-Germanic family is characterized by codified laws, including national accounting standards. Common law may create an environment, such as a shareholder-oriented corporate governance model, where corporate disclosure is increased to satisfy the specific needs, including information asymmetry, of individual corporations (Ball, Kothari, & Robin, 2000). Doupnik and Salter (1995) report that common law countries have higher disclosure scores than code law countries. Jaggi and Low (2000) report similar results at the individual firm level.

Press. Cooke and Wallace (1990) list financial press as a factor that influences accounting regulation. Newspapers are a significant source of information. Societies that desire more information may support more newspapers. Companies may respond to this desire for more information by increasing the amount of

information they disclose. A country's political system is described here in terms of the freedom of citizens, the form of the legal system, and the influence of the press.

These factors are expected to have a significant relationship with the amount of corporate disclosure (Archambault and Archambault, 2003).

2.1.3. Economic systems

Archambault and Archambault (2003) confered that economic systems influence how companies and investors relate to one another. These systems provide structures that influence the information that needs to be disclosed. Economic system, as described below, consists of economic development, inflation, and the capital markets.

Economic development. As an economy becomes more developed, firms need to raise more capital. As a result, the need for financial reporting increases. Salter (1998) finds that average firm disclosure is higher in developed countries than in emerging markets. Similarly, Adhikari and Tondkar (1992), using stock exchange disclosure scores, find marginal evidence that disclosure is lower in agrarian economies (see Archambault and Archambault 2003).

Inflation. Meek and Saudagaran (1990) identify inflation as an environmental factor that influences accounting. Inflation violates the historical cost assumption. Companies that operate in environments with high inflation may be more likely to use price-level accounting (Archambault & Archambault, 1999). They may also increase disclosure to further assist investors. Doupnik and Salter (1995) report a positive correlation between inflation and disclosure among countries with a macroeconomic orientation (see Archambault and Archambault 2003).

Capital markets. Capital markets provide opportunities for investors to trade securities. The nature of capital markets will then influence the information requirements of investors. Adhikari and Tondkar (1992) and Doupnik and Salter (1995) find that disclosure increases with capital market size. Therefore, companies from countries with large capital markets should disclose more information than companies from countries with small capital markets. (see Archambault and Archambault 2003).

2.1.4. Corporate systems

In addition to national systems that affect all companies within a country, individual corporations engage in a number of social systems that result in each corporation being unique. These unique responses, however, are determined within the cultural and national systems that the corporation operates in. Likewise, the corporate finance and operating decisions can create changes in the national and cultural systems (see Archambault and Archambault 2003).

2.1.4.1. Financial systems

Financial systems deal with the capital-generation process. It is consists of ownership, exchange listings, dividends, auditor, and leverage.

Ownership. Archambault and Archambault (2003) discussed that investors are a primary beneficiary of corporate disclosure. However, investors who own a large percentage of a company are more able to obtain information directly from the company. Companies with such large block owners are also less reliant on smaller investors. As a result, the need for corporate disclosure may decrease.

Exchange listings. Archambault and Archambault (2003) noted that exchanges establish disclosure regulations. Adhikari and Tondkar (1992) report disclosure scores for leading exchanges. A company's disclosure policy is expected to be influenced by the disclosure policies of the exchanges it trades on. Ownership dispersion may increase with the number of exchanges on which a firm is listed, increasing a firm's disclosure.

Dividends. Dividends provide information to investors about the amount and timing of future cash flows (Miller and Rock, 1985). The information provided by dividends may substitute for other forms of corporate disclosure.
This is especially true in instances where capital markets are less developed and subject to manipulation in the trading of securities (Previts and Bricker, 1994). As a result, firms that pay dividends may reduce corporate disclosure (see Archambault and Archambault, 2003).

Auditor. Wallace et al. (1994) suggest that the contents of annual reports may be influenced by auditors. Larger audit firms may try to improve the perceived quality of the annual reports by having clients disclose more information.
As a result, firms audited by one of the Big Six accounting firms may disclose more information than other firms. However, Wallace et al. find no significant relation between auditor size and disclosure among Spanish firms. Similarly, based on a meta-analysis, Ahmed and Courtis (1999) find no relation between auditor size and disclosure (see Archambault and Archambault, 2003).

Leverage. Meek et al. (1995) and Wallace et al. (1994) predict that highly leveraged firms disclose more information in order to reduce the agency costs of debt.Wallace et al. find no effect of leverage on disclosure. Meek et al. find that disclosure decreases with leverage.
Zarzeski (1996) predicts that disclosure decreases with leverage because creditors may be able to obtain private information. She also finds that disclosure decreases with leverage. Ahmed and Courtis (1999) conclude from their meta-analysis that

disclosure increases with leverage. Jaggi and Low (2000) find that disclosure increases with leverage in common law systems and has no significant relation in code law systems. Thus, various studies have reported conflicting results (see Archambault and Archambault, 2003).

2.1.4.2. Operating systems

Companies make a number of operating decisions that may control the information needs of financial-statement users. The operating system may consists of firm size, number of industries, and foreign sales.

Firm size. Archambault and Archambault (2003) documented that disclosure increases with firm size (see Ahmed and Courtis, 1999; Meek et al., 1995; Wallace et al., 1994; and Zarzeski, 1996). However, the theoretical reason for this relationship is less clear. Zarzeski (1996) claims it may be due to public demand for information and international resource dependence. Other possible explanations could be that large companies disclose more to reduce political pressure or that large companies have the resources to produce more disclosures. Whatever the reason, large firms are expected to disclose more information than small firms.

Number of industries. The disclosure needs of firms may increase as the firm operates in a larger number of industries in order to satisfy the information needs associated with obtaining a broader set of resources (Zarzeski, 1996). In addition, the competitive costs of disclosure (Verrecchia, 1983) may decrease as a firm becomes more diversified. Therefore, firms may increase disclosure as they increase the number of industries in which they operate (see Archambault and Archambault, 2003).

Foreign sales. Archambault and Archambault (2003) conclude that companies with foreign sales are likely to require foreign resources, such as labor and capital, to support those operations. Zarzeski (1996) finds that companies will disclose more information if they have large relative foreign sales in order to acquire the necessary resources.

Based on the above discussions of the theoretical framework of factors that influence disclosure at corporate level, it can be concluded that culture, national system and corporate system affect each other to influence disclosure at the corporate level. As the results, the corporate response the amount of information to be disclosed.

2.2. Research in Traditional Corporate Disclosure

Accounting disclosure and determinants analysis is a major issue in accounting research. Past accounting research contains an extensive range of disclosure and determinants. Chavent, Ding, Fu, Stolowy, Wang (2005) documented that researchers try to answer two major questions. The first question is what attitude do firms take towards accounting disclosure, either general or specific. The second question is why do some firms disclose more (or less) information than others? The first research question leads to what is known as "disclosure level evaluation", and the second, "disclosure determinants analysis". More details about the methodological approach and the issues will be discussed in Chapter 3.

Research by Healy and Palepu (2001), and a discussion by Core (2001), provide a broad overview of the empirical disclosure literature. More explicitly, many researchers have taken an interest in the corporate characteristics that could predict a firm's disclosure level. Chavent, et.al. (2005) summarize the research in disclosure that can be seen on table 2.2. below.

Table 2.2. Summary of Disclosure Studies

	Object of study	Country	Year	No. of firms (or obs.)	No. of disclosure items	Dependent variables	Main independent variables	Research design	Results
Singhvi (1968)	Extent of disclosure (generalist approach)	India	1963-65	45	34	Index (see Cerf), weighted items	Size, rate of return, earnings margin, audit firm, type of management, number of stockholders	Univariate	Size, management, number of stockholders
Singhvi and Desai (1971)	Extent of disclosure (generalist approach)	USA	1965	155	34	Index (see Cerf), weighted items	Size, number of shareholders, listing status, size of auditing firm, rate of return and earnings margin	Univariate Multivariate (linear regression)	Listing status
Buzby (1975)	Extent of disclosure (generalist approach)	USA	1970 or 1971	88	39	Index, weighted items	Size, listing status	Two matched samples Univariate	Size
Stanga (1976)	Extent of disclosure (generalist approach)	USA	1972or 1973	80	79	Index, weighted items	Size, industry	Univariate Multivariate (linear regression)	Size, industry
Firth (1979)	Voluntary disclosure	UK	1976	180	48	Index, weighted items	Size, listing status, audit firm	Univariate	Size, listing status
McNally et al. (1982)	Voluntary disclosure	New Zealand	1979	103	41	Index, weighted items	Financial characteristics (size, rate of return, growth), audit firm, industry	Univariate	Size
Firth (1984)	Voluntary disclosure	UK	1977	100	48	Disclosure index, weighted	Stock market risk	Linear regression	No significant relation
Chow and Wong-Boren (1987)	Extent of voluntary disclosure	Mexico	1982	32	34	Two scores: one weighted, one unweighted	Size, leverage, proportion of assets in place	Multivariate (linear regression)	Size
Cooke (1989a)	Extent of disclosure (mandatory and voluntary)	Sweden	1985	90	224	Disclosure index (unweighted)	Listing status, parent company relationship, size, number of shareholders	Multivariate Three regression models	Listing status, size

Cooke (1989b)	Extent of voluntary disclosure	Sweden	1985	90	146	Index (actual disclosure/possible disclosure), unweighted items	Size, listing status, parent company relationship, industry	Univariate Multivariate (linear regression – stepwise)	Listing status
Tsui et al. (1990)	Mandatory disclosure	Hong Kong	1987	76	11	Index additive (unweighted)	Size, industry, audit firm	Univariate	Size
Cooke (1991)	Voluntary disclosure	Japan	1988	48	106	Disclosure index (relative) (unweighted)	Size, listing status, industry	Univariate Multivariate Three regression models	Size
Cooke (1992)	Mandatory and voluntary disclosure	Japan	1988	35	165	Disclosure index (relative) (unweighted)	Size, listing status, industry	Multivariate (linear regression) Factor analysis of size variables.	Size, listing status, industry
Cooke (1993)	Extent of voluntary disclosure	Japan	1988	48	195	Index, unweighted items	Listing status	Univariate	Listing status
Coy, Tower, and Dixon (1993)	Tertiary education annual reports	New Zealand	1985-90	33	43	Two scores: unweighted and weighted ("Accountability Disclosure Score")	No variable	No analysis	-
Malone et al. (1993)	All financial disclosure in oil and gas industry	USA	1986	125	129	Weighted disclosure index	Size, listing status, leverage, profitability, audit firm	Stepwise regression model	Exchange listing status, ratio of debt to total equity, number of shareholders
Ahmed and Nicholls (1994)	Mandatory disclosure	Bangladesh	1988	63	94	Disclosure index (relative) (unweighted) (Cooke)	Size, leverage, audit firm, multinationality, qualification of the chief accountant	Univariate Multivariate (two regression models) (stepwise)	Multinationality, accountant's qualification, size
Hossain et al. (1994)	Voluntary disclosure	Malaysia	1991	67	78	Disclosure index (relative) (unweighted) (Cooke)	Size, ownership structure, leverage, assets-in-place, audit firm, listing status	Univariate Multivariate	Size, ownership structure, listing status
Wallace et al. (1994)	Mandatory and voluntary disclosure	Spain	1991	50	79	Disclosure index (unweighted)	Size, listing status, leverage, profitability, audit firm, liquidity	Multivariate (pool OLS regression)	Size (+), listing status (+), liquidity (-)

Patton and Zelenka (1997)	Extent of disclosure (generalist approach) Joint stock companies	Czech republic	1993	50	37+12+17	Index (three levels of indexes) (unweighted items)	Size, performance, risk factors, other monitoring factors (listing status, big six auditing firms, industry)	Univariate analyses and multiple linear regressions No collinearity problem (VIF, condition indexes)	Type of auditor, number of employees
Owusu-Ansah (1998)	Mandatory disclosure	Zimbabwe	1994	49	214	Relative disclosure index (unweighted)	Size, ownership, age, multinational affiliation, profitability, audit, industry, liquidity	Multivariate: four regressions: OLS, rank OLS, without influential observations, robust	Size, ownership, age, multinational affiliation, profitability
Entwistle (1999)	R&D disclosure environment	Canada	1994 (or 1993 or 1995)	113	-	Content analysis (number if sentences)	R&D expense proportion, capitalization of R&D, cross-listing status, industry, capital structure, firm size	Multiple linear regression	R&D intensity, cross listing and industry
Williams (1999)	Voluntary environmental and social disclosure	Seven Asia-Pacific nations	1993	336	-	Content analysis (number if sentences)	Culture, political and civil system, legal system, level of economic development, equity market, control variables	Three linear regressions	Uncertainty avoidance, masculinity, political and civil systems
Chen and Jaggi (2000)	Mandatory disclosure	Hong Kong	1993, 1994	87	142	Disclosure index (unweighted) (see Wallace and Naser, 1995)	Independent non-executive directors, family control, profitability, leverage, size, audit firm	OLS regression	Independent non-executive directors
Depoers (2000)	Voluntary disclosure (generalist approach)	France	1995	102	65	Disclosure score (unweighted)	Firm size, foreign activity, ownership structure, leverage, size of auditing, proprietary costs related to competition, labor pressure	Multiple linear regression (two OLS regressions to avoid collinearity problems with the high correlation between size and barriers to entry) Stepwise procedure	Foreign activity and size
Jaggi and Low (2000)	Mandatory and voluntary disclosure	28 countries	1991	78	90	Relative disclosure index (unweighted)	Cultural, legal and financial variables	Univariate, multivariate (six regression models)	Common law, culture
Gray et al. (2001)	Social and environmental disclosure	UK	1998-1995	100	-	Eight measures of disclosure (CSEAR Social and Environmental Disclosure Database)	Profit, turnover, capital employed, industry classification, number of employees	Eight OLS regressions	No unique and stable relationship
Ho and Wong (2001)	Voluntary disclosure	Hong Kong	1998	98	30	Relative disclosure index (weighted items)	Independent non-executive directors, audit committee, dominant personalities, family-control variables	Multivariate (linear regression)	Audit committee, family
Hujaki and McConomy (2002)	Voluntary disclosure	Canada	1997	272	25	Disclosure index	Financial condition, leverage, share issue, unrelated directors, regulated industries, medium, size	Linear regression	Unrelated directors, leverage
Chau and Gray (2002)	Voluntary disclosure	Hong Kong Singapore	1997	62	approx. 110	Disclosure index (unweighted) (three scores)	Ownership structure, size, leverage, audit firm, profitability, multinationality, industry	Multivariate (linear regression)	Ownership structure
Ferguson et al. (2002)	Voluntary disclosure	Hong Kong	1995/96	142	93	Disclosure index Gray et al. (2001), Meek et al. (1995) Unweighted	Firm type, Size, leverage, industry, listing status	Univariate Multivariate (linear regression) Total score, Replication with partition: strategic, non-financial, financial information	Firm type, leverage (type of disclosure)
Haniffa and Cooke (2002)	Voluntary disclosure	Malaysia	1995	167	65	Disclosure index (unweighted)	Corporate governance, cultural and firm-specific	Linear regression (31 variables) Restricted model.	Family members sitting on board, non-executive chairman
Archambault and Archambault (2003)	Voluntary and non-voluntary disclosure	33 countries	1992, 1993	621	85	Disclosure index (unweighted)	Culture, national financial systems	Multivariate (linear regression)	Many factors.

Sources: Chavent, Ding, Fu, Stolowy, Wang (2005)

2.2.1. Framework of the theory of firms' disclosure choices and disclosure regulation

Leuz, and Wysocki (2007) proposed framework to outline the theory of firms' disclosure choices and the theory of disclosure regulation. They identifies and discusses it into three level. The first one is the possible firm-specific benefits and costs arising from firms' voluntary disclosure activities. The second one, the possible market-wide benefits and costs of firms' voluntary disclosure activities, and lastly, the aggregate costs and benefits of the regulation and enforcement of firms' financial reporting and disclosure choices in global capital markets.
In another words, the framework first identifies the possible firm-specific and market-wide benefits and costs of firms' disclosure activities in the absence of disclosure regulation, and then followed by the overlay of potential effects of regulation. The discussion below are in use mostly from Leuz, and Wysocki (2005).

There are two relevancy of the firm-specific and market-wide effects for evaluating the economics consequences of reporting and disclosure regulations. First, the convergence of firm-specific benefits and costs will influence a firm's voluntary disclosure choices. However, the simple existence of (net) benefits to voluntary disclosure is not sufficient to justify mandatory disclosure because a firm already has incentives to voluntarily provide information if the benefits exceed the costs. That is, in the situation where the firm-specific benefits exceed the costs, it is not clear whether it would need a regulation.

Unfortunately, debates about disclosure and financial reporting regulation often incorrectly focus on the firm-specific (net) benefits of firms' voluntary disclosure choices rather than the aggregate effects of regulation. However, the firm-specific effects of disclosure can still be relevant in regulatory debates if the following two question can be answered.

The first question is, how mandated disclosure may differentially affect firms (i.e., the potential for wealth transfers among firms). For the second question, which firms may lobby for or against a proposed regulation based how it may differentially affect firms.

Second, the market-wide effects of firms' disclosures (in the absence of regulation) are relevant because they capture the aggregate costs and benefits that firms may ignore or not fully internalize when making their individual disclosure decisions. Knowledge of these market-wide effects then provides a basis for identifying the costs and benefits of regulating and enforcing corporate financial reports and disclosures (Leuz, and Wysocki , 2007).

2.2.1.1. Firm-Specific Benefits of Corporate Disclosures

Leuz, and Wysocki (2007) contend that the firm-specific benefit of disclosure best supported by theory is market liquidity (Verrecchia, 2001). Because information asymmetries among investors introduce adverse selection into share markets, less informed investors have to concern about trading with privately or better informed investors.

As a result, uninformed investors lower (increase) the price at which they are willing to buy (sell) to protect against the losses from trading with an informed counterparties.

Leuz, and Wysocki (2007) noted that corporate disclosure can mitigate the adverse selection problem and increase market liquidity by leveling the playing field among investors (see also Verrecchia, 2001). Its effect is twofold. First, more information in the public domain makes it more difficult and costly to become privately informed. As a result, fewer investors are likely to be privately informed, which reduces the probability of trading with a better informed counter party. Second, more disclosure reduces the uncertainty about firm value, which in turn reduces the potential information advantage that an informed trader might have.

Both effects reduce the extent to which uninformed investors need to price protect and hence increase market liquidity.

Next, Leuz, and Wysocki (2007) documented that there are theories that provide a direct link between disclosure and the cost of capital (or firm value), without reference to market liquidity (and adverse selection costs). For example, Merton (1987) develops a model where (some) investors have incomplete information and are not aware of all firms in the economy. As a result, risk sharing is incomplete and inefficient. Disclosures by these lesser known firms can make investors aware of their existence and enlarge the investor base, which in turn improves risk sharing and lowers the cost of capital. This effect is likely to be less relevant for large firms with a substantial analyst and investor following. Moreover, the investor base effect is susceptible to arbitrage if some investors know which of the stocks are not known by all investors (Merton, 1987; Easley and O'Hara, 2004).

In addition Leuz, and Wysocki (2007) also documented that the direct effects on the cost of capital may affect corporate disclosures to potentially change firm value by affecting managers' decisions and hence altering the distribution of future cash flows. Studies in agency theory suggest that more transparency and better corporate governance can increase firm value by improving managers' decisions or by reducing the amount that managers appropriate for themselves (Shleifer and Wolfenzon, 2002).
There can also be an indirect effect on the cost of capital. If better disclosure reduces the amount of managerial appropriation, this effect generally reduces a firm's cost of capital (Leuz, and Wysocki, 2007).

In summary, the role of disclosure in reducing agency problems and improving investment efficiency is likely to have a first-order effect on firm value.

2.2.1.2. Firm-Specific Costs of Corporate Disclosures

Leuz, and Wysocki (2007) noted that the direct costs of corporate disclosures include the preparation and dissemination of accounting reports. The direct costs of certain disclosures can be substantial, especially when one includes the opportunity costs of those involved in the disclosure process. Furthermore, fixed disclosure costs induce economies of scale and can make certain disclosures particularly burdensome for smaller firms.

Leuz, and Wysocki (2007) noted that disclosures also have indirect or proprietary costs because information provided to capital market participants can be used by other parties (i.e. competitors, labor unions, tax authorities, etc.). The fact that other parties may use public information to a firm's disadvantage can dampen a firm's disclosure incentives (Verrecchia, 1983). However, a competitive threat may not always induce firms to withhold information. Analytical models show that the relation between disclosures and proprietary costs is complex and depends on the type of competition (Verrecchia, 1990).

A related argument is that more transparency can be costly to existing financing relationships, especially with banks. Relationship financing requires some private information flows between a firm and its bank in order to protect relationship-specific investments that make financing arrangements viable where a firm pays above market in good times but in return obtains credit in bad times. If disclosures put outside financiers on a level-playing field, the relationship is unlikely to survive the forces of competition in good times. Thus, firms that have or seek such financing relationships are likely to be reluctant to provide full disclosure (Leuz, and Wysocki, 2007).

2.2.1.3. Market-Wide Benefits of Corporate Disclosure

In addition to the firm-specific effects of disclosure, there are possible market-wide benefits to an individual firm's disclosure activities. Some of these market-wide benefits arise as the flip-side of the firm-specific disclosure costs identified in Section 2.2.1.2. While the firm specific costs and market-wide benefits may just represent a zero-sum game, the aggregate market-wide benefits may actually exceed the costs faced by a disclosing firm (Leuz, and Wysocki, 2007).

A firm's disclosures can also create economy-wide benefits by helping investors make more efficient capital market allocations. For example, adverse selection can distort economy wide risk sharing because investors with relatively high risk tolerance will hold smaller positions (i.e., bear less risk) than they would otherwise because they anticipate the trading costs of liquidating larger positions in a market with information asymmetry among traders. This effects, leaves more risk to be borne by less risk tolerant investors, leading to a higher risk premium (Leuz, and Wysocki, 2007).

There are also potential economy-wide valuation benefits from an individual firm's disclosures. Admati and Pfleiderer (2000) advance the idea that corporate disclosures have positive externalities in the form of information transfers and liquidity spillovers. As firm values and cash flows are likely to be correlated, the disclosure of one firm is useful to investors in valuing other firms and increases the investors' demand for shares in other firms.

The reason is that each firm's disclosure has a (small) impact on investors' assessed covariance of other firms, which in turn lowers the estimation risk and cost of capital of other firms. While this positive externality is likely to be small individually, it could be large across all firms in the economy (Leuz, and Wysocki, 2007).

Finally, one firm's disclosure activities can have information spillover benefits that help minimize agency problems in other firms and improve investors' monitoring of these firms. For example, a firm's disclosures of its operating

performance, expected payouts, or governance arrangements can help investors assess other firms' relative managerial efficiency or potential agency conflicts. Therefore, the information disclosure by one firm leads to more informed, efficient, and lower cost monitoring by investors of other firms' relative managerial performance and governance (Leuz, and Wysocki, 2007).

2.2.1.4. Market-Wide Costs of Corporate Disclosures

In addition to the firm-specific disclosure costs, there are also market-wide spillover costs that can arise from an individual firm's disclosures. In markets that are not perfectly competitive, this effect lowers the price efficiency of other firms and creates a negative externality. This insight can also be extended to apply across markets or countries. Again, if markets that are not perfectly competitive, then high average disclosure in one market can drain off investors and lower the price efficiency in other markets (Leuz, and Wysocki, 2007).

2.2.1.5. Costs of Mandated/Regulated Reporting and Disclosure

Leuz, and Wysocki (2007) noted, the existence of (net) benefits to voluntary disclosure is not sufficient to justify mandatory disclosure because firms have incentives to voluntarily provide information if the benefits exceed the costs. In addition, an economic justification of mandatory disclosure has to show that a market solution is unlikely to produce a socially desirable level of disclosure. Thus, a market failure alone is not sufficient to justify regulation.

2.2.1.6. Benefits of Mandated/Regulated Reporting and Disclosure

Leuz, and Wysocki (2007) observed that the literature commonly appeals to the following arguments to justify the regulation of firms' financial reporting and disclosure activities. First, the existence of externalities. Second, economy-wide cost savings from regulation. And third, strict sanctions serving as a commitment device.

The first motivation for regulation is that corporate disclosures can create several externalities, i.e., situations in which the social and private values of information differ. In these situations, firms may only trade off the private (or firm-specific) costs and benefits and hence do not provide the socially optimal level of disclosure. In principle, the social value of disclosure can greater or less than the private value of disclosure and, as a consequence, firms may provide too much or too little information (Leuz, and Wysocki , 2007).

A second argument put forth to justify disclosure regulation is that a mandatory regime serves as a commitment device. A mandatory regime can be beneficial if it is limited to disclosures that almost all firms are willing to provide voluntarily. The requirement saves firms the cost of negotiating disclosures when the result does not vary much across firms and hence the costs of complying with a one-size-fits-all regime are relatively low (Leuz, and Wysocki , 2007).

A third argument is that privately producing a sufficient level of disclosure commitment can be very expensive and in many cases even impossible. The penalties that private contracts can impose are generally quite limited. Thus, a mandatory disclosure regime can be beneficial if it offers access to criminal penalties or other remedies that are not available to private contracts (Leuz, and Wysocki, 2007)

2.2.1.7. The regulation and enforcement of firms' financial reporting and disclosure choices

The aggregate costs and benefits of the regulation and enforcement of firms' financial reporting and disclosure choices are numerous and complex. The above framework identifies the important benefits and costs of firms' voluntary disclosure decisions, as well as the potential costs and benefits of regulating these decisions. However, assessing the net effect of a given disclosure regulation and the necessary form of an efficient regulatory regime are largely empirical questions (Leuz, and Wysocki, 2007).

2.3. Research in Disclosure

Prior disclosure research surveys by Healy and Palepu (2001), Core (2001), and Leuz, and Wysocki (2007) review the empirical literature based on the potential costs and benefits of firms' information disclosure policies. In other words, empirical disclosure studies are generally motivated by the firm-specific costs and benefits of corporate disclosures.

Given this motivation, most empirical studies explore the association between firms' voluntary disclosure choices and various costs and benefits of these choices across firms. Below the outline of the types of voluntary disclosures examined in empirical studies and then summarize the empirical findings on the benefits and costs of firms' voluntary disclosures choices.

2.3.1. Types of Voluntary Disclosures and the Quality Accounting Numbers

Corporate disclosures are frequently qualitative and narrative in nature which makes objective measurement difficult for empiricists.

Furthermore, theoretical research provides little guidance on which types, quantity, frequency, and quality of disclosure are relevant for outside stakeholders. Regardless of these challenges, empirical researchers have developed innovative ways to measure disclosure quantity and quality.

Leuz, and Wysocki (2007) documented that a widely-used disclosure measure is based on the annual survey of financial analysts' rankings of U.S. firms' disclosure activities by the Association for Investment Management and Research (AIMR). These survey rankings arguably capture the usefulness of firms' disclosures as perceived by expert users of this information. The disclosure rankings capture a broad range of disclosure activities including annual report information, voluntary disclosures in quarterly reports, and more diffuse disclosures arising from investor relations activities. The limitations of the AIMR rankings are that they are only applicable to a subset of large U.S. firms ranked in the survey during the 1980 and 1990's. Moreover, there are questions about potential bias in the rankings based on sell-side analysts' objectives in assigning disclosure ratings. It is also possible that analysts simply assign higher ratings to firms with better prospects and financial performance (see Leuz, and Wysocki, 2007).

Other studies use self-constructed measures of disclosure activities. These self-constructed measures generally use a check-list of information disclosures in firms' annual reports. Annual report information is also used to construct the international CIFAR index of average accounting disclosure activity of large firms across a range of countries and the Standard and Poor's scores of international firms' disclosures (see, for example, Khanna, Palepu, and Srinivasan, 2004).
The limitations of these types of measures are that the selection and coding of the relevant disclosures are subjective, that they generally capture the existence of particular disclosures, rather than their quality, and that the construction of a single index assigns particular weights to the different disclosure items. Moreover, these measures often do not capture other disclosure activities that can

complement and/or substitute for financial report disclosures (see Leuz, and Wysocki, 2007).

Other studies focus on the timing and frequency of firms' disclosures such as management forecasts of earnings and conference calls. While it is difficult to objectively quantify the information issued with management forecasts and during conference calls, these studies highlight the fact that these disclosure events generally reveal useful qualitative and contextual information to outside investors (see Leuz, and Wysocki, 2005).

More recent studies have made a more direct attempt to measure the "quality" of accounting information provided to outside investors by analyzing the properties of a firm's reported earnings. Other research suggests that conservative accounting reports and information releases (i.e., firms release bad news in a timely fashion to outside investors) can capture another important dimension of a firm's discretionary information quality (Leuz, and Wysocki, 2007).

2.3.2. Benefits of Voluntary Disclosures and High Quality Financial Information

Leuz, and Wysocki (2007) documented that at least there are two benefits of voluntary disclosure regarding with the high quality financial information. First, a possible direct benefit of voluntary disclosure is greater liquidity of a firm's securities. Second, another possible benefit of corporate disclosures is that they lower firms' cost of capital.

2.3.2.1. Liquidity Benefits of Voluntary Disclosures

There are several mechanisms by which an increase in corporate disclosures can manifest in a lower cost of capital. At present, however, the literature has primarily focused on establishing the link between disclosure and the cost of capital and has provided relatively little evidence on the mechanism.

Other cross-sectional studies attempt to directly quantify the cost of capital benefits of greater voluntary disclosure. One of the first studies in this vein is Botosan (1997). She creates a self-constructed index of voluntary annual report disclosures for a sample of U.S. companies and links it to an ex ante imputed cost of capital measure. In her overall sample, she does not find a significant relation between voluntary disclosure and equity cost of capital. However, firms with low analyst following do exhibit the predicted negative relation between disclosure and cost of equity capital.

Follow-up research by Botosan and Plumlee (2002) finds a significant negative relation between cost of equity capital and annual report disclosures. However, they find contradictory evidence suggesting that the cost of capital is higher for firms with more timely voluntary disclosures, and no association between the cost of capital and firms' investor relations activities.

Francis, LaFond, Olsson and Schipper (2005) examine the link between cost of equity capital and the "quality" of a firm's accruals. They find a strong negative relation between their measure of accruals quality and various cost of capital measures including P/E ratios, market betas, and observed stock returns, suggesting that the cost of capital decreases when earnings quality increases.

Recent studies also examine the association between cost of debt capital and voluntary disclosures. Sengupta (1998) uses AIMR rankings of firms' disclosures to examine the relation between cost of debt and voluntary disclosure. He documents an inverse relation between disclosure and the effective interest cost of

raising debt. A major difficulty of tests involving the cost of debt is to control for the specifics of firms' debt contracts, such as the covenants, and their impact on the cost of debt.

Another issue is that voluntary disclosure studies likely face a self-selection problem, which makes estimating the marginal effects of voluntary disclosures on the cost of capital (and other outcomes such as liquidity) very difficult. The fact that many studies do not address this issue may also contribute to the lack of consistent findings and implies that we should use caution when interpreting the findings (see, e.g., Leuz and Verrecchia, 2000; Core, 2001; Nikolaev and van Lent, 2005; Larcker and Rusticus, 2005).

2.3.3. Research in Voluntary Disclosure

The fallowing discussion will be based on empirical evidence on the costs of voluntary disclosures. This section is drawn mostly from Leuz, and Wysocki (2007).

2.3.3.1. Empirical Evidence on the Costs of Voluntary Disclosures

There is a general paucity of empirical evidence on the direct costs and out of pocket expenses of disclosure. It is often difficult to quantify the direct costs associated with disclosure activities especially if they come in the form of opportunity costs such as managerial time.

However, the empirical literature suggests that there are fixed costs to information production and dissemination than induce economies of scale in disclosure. Empirical disclosure studies consistently find that larger firms have better average disclosure quality.

2.3.3.2. Regulatory Implications of Research on Voluntary Reporting and Disclosure

While cross-sectional empirical studies generally support the existence of firm-specific costs and benefits of corporate disclosures, these studies provide few insights into the desirability, efficiency, or expected aggregate outcomes of regulating these disclosures. However, these studies do demonstrate strong interactions between firms' voluntary disclosure choices, numerous other firm-level and market-level factors, and observed capital market outcomes.
These interactions suggest that: (i) knowledge of the across-firm differences in disclosure benefits and costs can help assess the distributional impact of a proposed regulation and anticipate potential lobbying by the differentially affected firms, and (ii) disclosure regulations cannot be considered in isolation from other institutional factors and implementation issues.

2.4. Relationship between Corporate Disclosure and the Global Diversification

Regulations in other countries can affect domestic outcomes therefore it is important to evaluate domestic disclosure and reporting regulations in the context of integrated global markets (Leuz, and Wysocki , 2007).

In an international context, Hail (2003) examines a sample of Swiss firms where mandated disclosure is low and there is large variation in firms' voluntary disclosure policies. He finds that more forthcoming firms enjoy around a 2.5% cost advantage over the least forthcoming firms. His strong findings suggest that different institutional factors in Swiss and U.S. markets affect the outcomes of firms' disclosure policies. These findings also reinforce the possible interactive effects between firms' disclosure policies, institutional factors, and ultimately the impact of disclosure regulation (Leuz, and Wysocki , 2007).

2.5. Information Asymmetries and Agency Costs in the Voluntary Disclosure

Theory suggest that information asymmetry and the adverse selection problems of nondisclosure can flow back to the firm's share issuance decision and translate into a higher cost of raising capital. Consistent with this conjecture, research documents a positive link between external capital raising activities and disclosure quantity and quality (Lang and Lundholm, 2000).

2.6. Hypotheses Development

This paper examines the impact of global diversification of operations and financing on voluntary disclosure by firms.

Global diversification of operations is measured by the foreign subsidiaries, and foreign sales. The foreign subsidiaries is the percentage of the number of foreign subsidiaries reported in the company annual report with the company total number of subsidiaries. The foreign sales are define as the percentage of foreign sales reported in the company annual report with total sales.

When the foreign subsidiaries and foreign sales is high, there is a greater information asymmetries and agency problem.
That is, the management (in this case the firms) has greater incentives to consume perks (or bonus) and therefore reducing incentives to maximize job performance. Consequently outside shareholders (in this case the investors as the user of financial statements) will increase monitoring of management's behavior to reduce information asymmetries and agency problem (Jensen and Meckling, 1976). Monitoring by outside shareholders increases cost-of-debt capital and cost-of-equity capital of the firms. However, monitoring by outside shareholders may be reduced if managements can provide voluntary disclosure. That is, voluntary disclosure is a substitute for monitoring.

Empirical evidence in Khanna et. al (2004) confirms that interactions with a product market outside the home country can increase disclosure level. Cahan et.al (2005) shows that foreign subsidiaries and foreign sales to be positively related to voluntary disclosure. Hence, it is expected that voluntary disclosures increases with increases in foreign subsidiaries and foreign sales.

The above discussion is the basis for the following hypotheses:

H1: Greater global diversification of operations will be associated with greater voluntary disclosure.

Global diversification of financing is represented by foreign-held equity and foreign debt. The foreign-held equity is the percentage of foreign common shares in large blocks held by foreign shareholders with the total common shares.
In addition, the foreign debt is the percentage of foreign debt reported in the company annual report with total debt.

Foreign-held equity and foreign debt who are aligned to management may be more inclined to encourage firms to disclose more information to global investors. That is, a positive relation between proportion of foreign-held equity and foreign debt with voluntary disclosure is expected. Stulz (1999) find that when company issuing equity on the global basis, management must convince a larger set of investor about the expected cash flows the investor will receive. In other word, information asymmetries and agency problems exist at a domestics level are likely to be exacerbated when firms access global equity markets.
Doukas and Patzalis (2003) observe that the increase in information asymmetry and agency costs arising from geographically diverse operations can also increase debt-related agency costs. Because of the global investors' vested interest in the information and the conflicting objectives faced by the management, there may be greater need for communication through additional information. For this reason, there may be greater disclosure for global investors than domestics investors.

Explicitly, global diversification can intensify conflicts between the managements and debt holders because debt holders find it is more difficult to monitor firms with a wide geographic spread. Thus, it hypothesized that the proportion of foreign-held equity and foreign debt is positively associated with the level of voluntary disclosure. Based on this argument, the following hypotheses are proposed:

H2: Greater global diversification of financing will be associated with greater voluntary disclosure.

From the above discussion, it is clear that global diversification has a significant influence on the corporate voluntary disclosures practices.

CHAPTER 3
RESEARCH METHODOLOGY

This chapter describes the research design, the data collection procedures, and the measurement of variables. The chapter comprises five sections. Section one presents the sample and data collection procedures. Section two discusses other methodological issues. Characteristics of variables is described in section three followed by variable measurement in section four. Finally, section five describes the statistical analysis methods which are in use.

3.1. Sample and Data Collection

This study uses a quantitative technique to obtain data in the study. Formal hypothesis testing is based on quantitative data.

To test the effect of global diversification on voluntary disclosure practices, three separate data sources are required. First, for the dependent variables, an extensive data set of corporate voluntary disclosure is needed to quantify the disclosure level. Second, for the independent variable, a way is needed to reliably measure of how globalization affects disclosure. Third, for control variable, one needs to control for firms characteristic that can affect voluntary disclosure levels in the cross-section analysis.

3.1.1. Sample

The sample of firms selected are taken from the Fortune magazines's 2008 Global 500, which represents the 500 largest companies in the worl based on total revenues. The reason that because it is in large enterprises that accounting is more complex, and the resulting annual reports thus provide a more comprehensive presentation of different types of voluntary disclosures information. Annual reports are a primary medium in which listed companies communicate with the public. Further, the annual reports for each firms were for the 2007 or 2006 fiscal year, and gathered from each firms' offcial web-site, and OSIRIS databases. Samples used comprises large listed companies in the world, because of the reasons that the accounting practices in large enterprises is more complex, and thus the resulting annual reports provided a more comprehensive presentation of different types of accounting information.

To avoid bias, the sample is excluded for the firm from financial industry (such as: finance, bangking, and insurance industries), given that it is a higly regulated industry. The firms with annual reports in a language other than English and Indonesia is also excluded. The annual reports of the firms must disclose information on their foreign subsidiaries, foreign sales, foreign shareholder, and foreign debt, since the foregoing information are used to proxy the global diversification of operations, and financing, respectively.

To avoid translation fidelity issue, no translation processes (for example with the help of Google.com) on the annual reports of the firms are made.

3.2. Data Collection

The following sub-section discusses the data collection which consists of dependent, independen, and control variables. Other methodological issues and scoring index of disclosure is also discussed.

3.2.1. Dependent Variables

The dependent variable for this study is the total voluntary disclosure provided by the firm (VDISC). For voluntary disclosure, all of the data are hand collected from the firms annual reports.

3.2.2. Independent Variables

The independent variable for this study is the global diversification which is consists of global operating diversification (GLOBAL_OPR) and global financing diversification (GLOBAL_FIN). Global operating diversification consist of foreign subsidiaries and foreign sales. Data on foreign subsidiaries and foreign sales are collected from OSIRIS, and company annual report, respectively.

3.2.3. Control Variables

The control variables for this study consist of analyst following (ANALYST), shareholder concentration (SHARE_SPREAD), growth (GROWTH), firm size (SIZE), and firm performance (ROA). All of the above control variables are collected from OSIRIS.

3.2.4. Other Methodological Issues

This section deals with certain concerns about the administration and design of quantifying the disclosure levels as the dependent variables.

3.2.4.1 Disclosure Score

The disclosure index was used to quantify the disclosure levels. The disclosure index based on Francis et. al (2008), which consist of 11 index item, that can be grouped for financial disclosure (consist of 3 index item), and non financial disclosure (consist of 8 index item). A list of the 11-disclosure index item can be seen on appendix D.

3.3. Variable Measurement

Voluntary disclosure is measured by the amount and detail of non-mandatory information that is contained in the annual report. Based on disclosure score-sheet, and each sample firms annual report is scored on the level of strategic, non-financial and financial information that is voluntarily disclosed. The disclosure score is an aggregate of the points scored by the sample firm. (Eng, and Mak, 2003).

3.3.1. Research variabel

Research variabel consists of three independent variables and four control variables. The conceptual model are as follows:

$$Y = f(X1,X2,X3,X4,X5,X6,X7)$$

Where:

Dependent Variables

The total voluntary disclosures (Y) is quantified using the disclosure index developed by Francis et. al (2008). Given that the index was developed for world wide companies, whereas the disclosure requirements differs between countries. Consequently, the country indicator variables are included to control for differences in regulatory requirements.

Independent Variables

Global diversification variables consists of global operating (X1), global investing (X2), and global financing diversification (X3).

Global operating diversification is measured with a factor score from the factor analysis of foreign subsidiaries and foreign sales.

Global investments diversifications is measured with Global financing diversification is measured with the factor score from a factor analysis of foreign-held shares and foreign debt.

Control variables

Prior research suggested that analyst following (X3), shareholder concentration (X4), growth (5), performance (X6), and firm size (X7) are related to voluntary disclosure level, for that reason these variables are included in multivariate test as control variables.

Operational Model:

Voluntary Disclosure Level = b_0 + b_1GLOBAL_OPR + b_2GLOBAL_FIN + b_3ANALYST+ b_4SHARE_SPREAD + b_5GROWTH + b_6SIZE + b_7ROA + INDUSTRY_INDICATORS + COUNTRY_INDICATORS + COUNTRY INDICATORS * U.S. LISTING INDICATOR

Variable definitions:

Voluntary disclosure (VDISC) level is define as the total voluntary disclosure, financial disclosure, and non financial disclosure. Global Operations (GLOBAL_OPR) consists of factor score from the factor analysis of foreign subsidiaries (FOR_SUBS) and foreign sales (FOR_SALES). Global Financing (GLOBAL_FIN) consists of factor score from the factor analysis of foreign-held equity (FOR_SHS), and foreign debt (FOR_DEBT). Analyst (ANALYST) is define as the mean adjusted number of analysts following the firm.. Share spread is the level of independence of the firm from controlling interest such as parent company and controlling shareholders

Growth, a restricted form of Tobin's Q to measure growth, i.e., sum of market value of equity book value of long-term debt devided by book value of plant property and equipment.(long-term assets). Size is mean adjusted total assets. Return on assets (ROA) is net income divided by total assets

The predicted signs of the coefficients are:

$$b1 > 0, b2 > 0, b3 > 0, b4 > 0, b5 > 0, b6 > 0, b7 > 0, b7 \neq 0$$

3.4. Statistical Analysis

This section discusses the statistical tools used in the study. The first section is factor analysis, and then followed by pearson correlation coefficient, ordinary regression analysis, and finally the discussion for the assumptions used in the regression analysis.

3.4.1 Factor Analysis

Factor analysis attempts to identify underlying variables, or factors, that explain the pattern of correlations within a set of observed variables (SPSS, 2007). Factor analysis is often used in data reduction to identify a small number of factors that explain most of the variance that is observed in a much larger number of manifest variables.

Factor analysis can also be used to generate hypotheses regarding causal mechanisms or to screen variables for subsequent analysis (for example, to identify collinearity prior to performing a linear regression analysis).

Data. The variables should be quantitative at the interval or ratio level. Categorical data (such as religion or country of origin) are not suitable for factor analysis. Data for which Pearson correlation coefficients can sensibly be calculated should be suitable for factor analysis.

Assumptions. The data should have a bivariate normal distribution for each pair of variables, and observations should be independent. The factor analysis model specifies that variables are determined by common factors (the factors estimated by the model) and unique factors (which do not overlap between observed variables); the computed estimates are based on the assumption that all unique factors are uncorrelated with each other and with the common factors.

The Factor Analysis procedure has several extraction methods for constructing a solution. For data reduction, the principal components method of extraction begins by finding a linear combination of variables (a component) that accounts for as much variation in the original variables as possible. It then finds another component that accounts for as much of the remaining variation as possible and is uncorrelated with the previous component, continuing in this way until there are as many components as original variables. Usually, a few components will account for most of the variation, and these components can be used to replace the original variables. This method is most often used to reduce the number of variables in the data file.
With any extraction method, the two questions that a good solution should try to answer are "How many components (factors) are needed to represent the variables?" and "What do these components represent?" (see SPSS, 2007,and MINITAB 2006).

3.4.2. Pearson correlation coefficient

Pearson's correlation coefficient is a part of the Bivariate Correlations that computes the pairwise associations for a set of variables and displays the results in a matrix with its significance levels (SPSS, 2007). It is useful for determining the strength and direction of the association between two scale or ordinal variables. Correlations measure how variables orders are related. Pearson's correlation coefficient is a measure of linear association. Two variables can be perfectly related, but if the relationship is not linear, Pearson's correlation coefficient is not an appropriate statistic for measuring their association.

Therefore, before calculating a correlation coefficient, the screening process of the data for outliers (which can cause misleading results) and evidence of a linear relationship is in needed.

Assumptions. Pearson's correlation coefficient assumes that each pair of variables is bivariate normal.

The Pearson correlation coefficient is used when data are symmetric quantitative variables, and normally distributed variables. The correlation coefficient is used to compare how well different distributions fit into the data. A correlation of +1 indicates that there is a perfect positive relationship between items. A correlation of -1 indicates that there is a perfect negative linear relationship between items. A correlation value of 0 means there is no linear relationship between the two items. When interpreting the results, any cause-and-effect conclusions are limited due to a significant correlation.

Test of Significance. If the direction of association is known in advance, it use One-tailed. Otherwise, Two-tailed.
Flag significant correlations. Correlation coefficients significant at the 0.05 level are identified with a single asterisk, and those significant at the 0.01 level are identified with two asterisks.

The correlation coefficient measures the strength of the linear relationship between the X and Y variables on a probability plot. If the distribution fits the data well, then the plot points will fall on a straight line and the correlation coefficient will approach 1. If the distribution does not fit the data well, then the data will not fall on a straight line and the correlation coefficient will be closer to zero. The correlation coefficient is used as a relative measure of fit by comparing the values from several distributions (see SPSS, 2007, and MINITAB, 2006)

3.4.3. Ordinary Linear Regression

Linear Regression estimates the coefficients of the linear equation, involving one or more independent variables, that best predict the value of the dependent variable.

Data. The dependent and independent variables should be quantitative. Linear regression is used to model the value of a dependent scale variable based on its linear relationship to one or more predictors.

The linear regression model assumes that there is a linear, or "straight line," relationship between the dependent variable and each predictor. This relationship is described in the following formula.

$$y_i = b_0 + b_1 x_{i1} + \ldots + b_p x_{ip} + e_i$$

where

y_i is the value of the ith case of the dependent scale variable

p is the number of predictors

b_j is the value of the j^{th} coefficient, j=0,...,p

x_{ij} is the value of the i^{th} case of the j^{th} predictor

e^i is the error in the observed value for the i^{th} case

The model is linear because increasing the value of the j^{th} predictor by 1 unit increases the value of the dependent by b_i units. Note that b_0 is the intercept, the model-predicted value of the dependent variable when the value of every predictor is equal to 0 (see SPSS, 2007,and MINITAB 2006).

3.4.3.1. Assumptions of Regression Analysis

Assumptions. For each value of the independent variable, the distribution of the dependent variable must be normal. . The relationship between the dependent variable and each independent variable should be linear, and all observations should be independent.

It deals with a method for examining patterns of causation among a set of variables Causal assumptions are a crucial role in the application of regression analysis. For the purpose of testing hypotheses about the values of model parameters, the structural equations in the model are subject to certain statistical assumptions. These assumptions are discussed in the following sections.

3.4.3.2. Zero Expected Values for Residuals

The error term has a normal distribution with a mean of 0. That is, the residuals have a zero mean.

3.4.3.3. Normality

These assumptions states residual are normally distributed. It is assumed that the differences between the obtained and predicted dependent variable scores are normally distributed. If the residuals are form a normal distribution, the plotted values should fall roughly along the line.

3.4.3.4. Linearity

In assessing whether linearity assumptions are satisfied, it is important to plot residuals againts predicted values and againt the independent variable; namely scatterplots of residuals. The study used standardized residuals and predicted value in the plots.

3.4.3.5. Homoscedasticity

This assume that the residual variance around the line of regression be constant across all combinations of levels of independent variables. In other word, The variance of the error term is constant across cases and independent of the variables in the model. An error term with non-constant variance is said to be heteroscedastic. The validity of these assumptions was assessed in refreshing the absolute value of regression residuals on the value of the independent variable. The F statistics is highly significant; it implies that each independent variable makes a meaningful contribution to the fit of the model.

3.4.3.6. Auto-correlation of Residuals

The value of the error term for a given case is independent of the values of the variables in the model and of the values of the error term for other cases. This assumption states residual are not correlated across equations. Auto-correlations of the residuals usually occur when regression analysis involves time series data, which is not the case in this study.

3.4.3.7. Multicollinearity

This assumptions refers to a situation in which the independent variables are highly correlated with each other. However, objects to this arbitrary value since it focuses only on the correlation among pairs of independent variables and fails to considers how each independent variables at once. According to Berry and Feldman (1985, p.43), "the most reasonable test for multicollinearity is to regress each independent variable in the equation on all other independent variables, and look at the R^2 for these regressions; if any are close to 1.00, there is a high degree of multicollinearity present". This latter procedure was used to assess the existence of multicollinearity in this study.

The collinearity statistics – tolerance and variance inflation factor (VIP) are also used for identifying the multicollinearity. Values of tolerance range from 0 to 1. When its value is small (close to 0), the variable is almost a linear combination of the other independent variables; so the estimate of the variable's regression coefficient is unstable. The VIP is the reciprocal of tolerance. So, by definition the variable here with low tolerance have larger variance inflation factor. In addition the study also used the collinearity diagnostics for identifying the multicollinearity. An indication of how many distinct dimension are among the independent variables is provided by eigenvalues. When several eigenvalues are close to 0, the variables are highly intercorrelated and the matrix is said to be ill-conditioned. A condition index greater than 15 indicates a possible problem and an index greater than 30 suggest a serious problem with multicollinearity.

The multicollinearity can also be seen from the variance proportions in collinearity diagnostics table. The variance proportions are the proportions of the variance of the estimate accounted for by each principal component associated with each of the eigenvalues. The collinearity is problem when a component associated with a high condition index contributes substantially to the variance of two or more variables. Again, the variance proportions for the variables indicate no violation of this assumptions (see SPSS, 2007,and MINITAB 2006).

CHAPTER 4
STATISTICAL RESULTS

This chapter presents the results of the statistical analysis. The first section summarizes the sample selection process, country, and industry disclosure statistics. The second section presents an overview of the descriptive statistics. The third section presents the factor analysis. The fourth section present Pearson correlation. Section fifth presents the test of the assumptions of Regression analysis. Finally, section sixth presents the results with regard to the tests of the hypotheses.

4.1. Sample Selection Process

The sample selected for 288 firms from the Fortune magazine's 2008 Global 500, which represents the 500 largest companies in the world based on total revenues. The sample selection process is summarized in table 4.1.

Table 4.1. Sample Selection Process

	n	No Countries
Fortune 2008 Global 500	500	35
Excluded Industries:		
Banks: Commercial and Savings	67	
Diversified Financials	7	
Insurance: Life, Health (mutual)	8	
Insurance: Life, Health (stock)	19	
Insurance: Property and Casualty (mutual)	3	
Insurance: Property and Casualty (stock)	15	
Securities	4	
	377	
Excluded company without annual reports	58	
Excluded annual reports in a language other than English:	25	
	294	
Excluded for non information on OSIRIS.	6	
Selected Sample	288	31

The company annual reports are taken from the company's official web-sites. Depending on the company's balance sheet date, the annual reports were for the 2007 or 2008 fiscal year. Out of the 500 reports collected, I deleted 123 companies from the banking, financial, insurance and securities industry, 58 companies without downloaded-able annual reports, 25 companies with annual reports in a language other than English. Another six were deleted because the companies are not included in the OSIRIS databases. The total countries listed on Fortune 2008 Global 500 are 35 countries. The final company samples are from 31 countries. The complete detailed list of the companies as a sample can be seen on Appendix A, table A.1.

Table 4.1.2 provides a breakdown of the disclosure scores by country. Of the 288 companies in the sample, over 35.8 percent are U.S. companies, 18.1 percent are Japanese companies, 8.7 percent are German companies, 7.6 percent are Frecnh companies, 6.3 percent are U.K companies, 0.7 percent are Chinese companies, and 1 % are South Korea companies. Even though not exactly representative of the countries represented in the Global 500, the selected samples' distribution of countries is similar to that of the Global 500's distribution. For example, based on all Global 500 companies, the largest percentage of companies come from the U.S., Japan, France, Germany, U.K.with 30.6 percent, 12.8 percent, 7.8 percent, 7.4 percent, 6.8 percent, respectively. However, China, and South Korea are considerably underrepresented in the selected sample as the percentages for these countries range from 6 percent to 3 percent for the full set of Global 500 companies. The complete list of the selected samples by countries is available on Appendix A, Table 1.2.

The median raw score disclosure scores for the 31 countries indicate that Austria and Italy had the highest VDISC, followed by Norway and Finland. Austria and Italy also has the highest scores for the non financial disclosures. The other category where it has a lower rank is financial disclosure, where Germany, Switzerland, and Turkeyhas the highest score. Nevertheless, one should not draw

too many conclusions from Table 4.1.2. as many countries have very few companies in the sample.

Table 4.1.3. provides a breakdown of the disclosure scores by SIC industry classification. Thirty-six percent of the companies selected as a sample are from the services sectors, 29.5 percent from the general-manufacturing industries, 13.5 percent from the wholesale-manufacturing industries, 7.3 percent are from services- manufacturing industries, followed by retail and wholesale industries, accounted for 6.6 percent and 2.4 percent, respectively. Overall, the total manufacturing sector, contribute 50.3 percent of the selected samples.

Wholesales-services-manufacturing had the highest median score of 7 for VDISC, followed by retail-wholesale, and services-wholesale accounted for 6 and 5, respectively. The lowest median score is 1 for the service-retail. Of the two category of VDISC, the category that show the most variation between industries are the non financial disclosure. Again, one should not pull out too many conclusions from Table 4.1.3. as many countries have very few companies in the sample. To supplement, the complete and detailed list of the selected samples by industries according Fortune Global classification is available on Appendix A, Table A.3..

Table 4.1.2. Country Disclosure Statistics

Country	n	VDISC Median	Financial Median	Index1 Median	Index2 Median	Index3 Median	Non Financial Median	Index4 Median	Index5 Median	Index6 Median	Index7 Median	Index8 Median	Index9 Median	Index10 Median	Index11 Median
Australia	2	4.5	1	0.5	0	0.5	3.5	0	0.5	0	0.5	1	0.5	0.5	0.5
Austria	1	6	1	0	0	1	5	1	0	0	1	1	0	1	1
Belgium	1	4	1	1	0	0	3	0	0	0	1	0	1	1	0
Brazil	2	4	0.5	0	0.5	0	3.5	0.5	0.5	0.5	1	0.5	0	0	0.5
Britain	18	5	1	0	0	1	3	1	0	0	1	1	0	0	0
Canada	5	3	1	1	0	0	3	0	0	0	0	1	0	0	0
China	2	2	0	0	0	0	2	0	0.5	0	1	0.5	0	0	0
Denmark	1	3	1	1	0	0	2	1	0	0	0	1	0	0	0
Finland	2	5.5	0.5	0	0	0.5	5	1	0.5	0.5	1	0.5	0.5	0.5	0.5
France	22	5	1	1	0	1	4	1	0.5	0	1	0	0	0	0
Germany	25	5	2	1	0	1	3	1	0	0	1	0	0	0	0
India	6	1.5	0	0	0	0	1.5	0.5	0	0	1	0	0	0	0
Italy	5	6	1	0	0	1	5	1	0	0	1	1	1	0	0
Japan	52	4	1	1	0	0	3	1	0	0	0.5	1	0	0	0
Luxembourg	1	1	0	0	0	0	1	0	0	0	0	0	0	0	1
Mexico	2	2.5	1	0.5	0	0.5	1.5	0	0	0	0	0.5	0.5	0	0.5
Netherlands	7	5	1	0	0	1	4	1	0	0.5	0	1	0	0	0
Norway	2	5.5	1	0	0	1	4.5	0.5	0.5	0	1	1	0	0.5	1
Poland	1	2	0	0	0	0	2	0	0	0	1	0	1	0	0
Portugal	1	4	1	0	0	1	3	1	0	1	1	0	0	0	0
Russia	3	3	1	1	0	0	2	1	0	0	0	1	0	0	0
Singapore	1	4	1	0	0	1	3	1	0	0	0	1	1	0	0
South Korea	3	3	0	0	0	0	3	0	0	0	1	1	0	1	1
Spain	6	5	1	0	0	1	4	1	1	0	1	0.5	0	0	0
Sweden	3	3	1	0	0	1	3	1	0	0	1	0	0	0	1
Switzerland	7	5	2	1	0	1	3	0	0	0	0	0	0	1	1
Taiwan	3	1	0	0	0	0	1	0	0	0	0	0	1	0	0
Turkey	1	5	2	0	1	1	3	1	0	1	1	0	0	0	0
U.S.	103	3	0	0	0	0	2	1	0	0	0	0	0	0	0
Total	288														

See Table 4..2.1. for variable definitions

Table 4.1.3. Industry Disclosure Statistics

Industry	n	VDISC Median	Financial Median	Index1 Median	Index2 Median	Index3 Median	Non Financial Median	Index4 Median	Index5 Median	Index6 Median	Index7 Median	Index8 Median	Index9 Median	Index10 Median	Index11 Median
Manufacturing	85	3	1	0	0	0	3	1	0	0	1	0	0	0	0
Manufacturing; Retail	3	3	1	0	0	1	2	0	0	0	1	0	0	0	0
Manufacturing; Services	21	4	1	0	0	1	3	1	0	0	1	0	0	0	0
Manufacturing; Wholesale	39	4	1	0	0	0	3	1	0	0	0	1	0	0	0
Manufacturing; Wholesale; Retail	4	2	1	0	0	0	2	0	0	0	1	1	0	0	0
Manufacturing; Wholesale; Retail; Services	2	4	1	0	0	1	4	1	0	0	1	1	0	0	1
Manufacturing; Wholesale; Services	1	7	2	1	0	1	5	1	0	1	0	1	0	1	1
Retail	19	3	0	0	0	0	3	1	0	0	0	0	0	0	0
Retail; Services	3	2	0	0	0	0	2	0	0	0	1	0	1	0	0
Retail; Wholesale	1	6	2	1	0	1	4	0	1	0	1	1	0	0	1
Services	88	4	1	0	0	1	3	1	0	0	0	0	0	0	0
Services; Manufacturing	5	3	1	1	0	0	2	0	0	0	0	1	0	0	0
Services; Retail	1	1	0	0	0	0	1	0	0	0	0	0	1	0	0
Services; Wholesale	4	5	1	1	0	1	4	1	1	0	1	1	0	0	1
Wholesale	7	3	0	0	0	0	3	1	0	0	0	0	0	1	0
Wholesale; Retail	2	2	1	1	0	0	1	1	0	0	0	1	0	0	0
Wholesale; Services	3	4	1	0	0	1	4	0	0	0	0	0	1	1	1
Total	288														

See Table 4..2.1. for variable definitions

4.2. Descriptive Statistics

Table 4.2. shows the descriptive statistics for VDISC and independent variables. In spite of all firms being Global 500 firms, there is wide variation in many of the variables. The mean for VDISC is 3.76 with a range from 0 to 8. Of the two components of VDISC, Non_Financial disclosures make up 78 percent of the mean of the VDISC score. For the global operation variable, which is consists of FOR_SUBS and FOR_SALES, the variation is considerable. For example, the proportion of foreign subsidiaries ranges from 0 to 95 percent, with a mean of 29 percent. The percentage of total sales derived from foreign operations ranges from 0 to 100 percent, with a mean of approximately 37 percent.

There is also a fair amount of variation in the global financing variables coming primarily from the percentage of common shares variables, which ranges from 0 to 100 percent with a mean of 30 percent. There is much less variation in the foreign debt variable, which ranges from 0 to 73 percent with a mean of 7 percent. Finally, the control variables also exhibit a fair amount of variation, particularly GROWTH, SIZE, and ROA.

Table 4.2. Descriptive Statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
VDISC	288	0	8	3.76	1.834
Financial_Disc	288	0	3	.81	.757
Index1	288	0	1	.35	.479
Index2	288	0	1	.01	.117
Index3	288	0	1	.44	.497
Non_Financial_Disc	288	0	7	2.95	1.475
Index4	288	0	1	.69	.461
Index5	288	0	1	.19	.396
Index6	288	0	1	.17	.376
Index7	288	0	1	.49	.501
Index8	288	0	1	.43	.496
Index9	288	0	1	.31	.464
Index10	288	0	1	.31	.461
Index11	288	0	1	.35	.477
FOR_SUBS	288	.000	.947	.29362	.302201
FOR_SALES	288	.003	1.000	.37448	.263868
FOR_SHS	288	.001	1.000	.30243	.227354
FOR_DEBT	288	.001	.737	.07712	.082510
ANALYST	288	.000	63.000	17.86111	9.606626
SHARE_SPREAD	288	.000	9.000	7.22917	3.089194
GROWTH	288	.015	90.183	3.14640	7.649880
SIZE	288	257	292312	38813.94	42585.594
ROAnet	288	-.461	.556	.05896	.073336
Valid N (listwise)	288				

Variable definitions:

Dependent Variable

VDISC = total disclosure score from annual repirt as per Francis et al.(2008) index;

Financial_Disc = total disclosure of financial items for free cash flows, economic profits, and cost of capital;

Non_Financial_Disc = disclosure of non-financial items, which is consists of, number of employees, average compensation per employee, percentage of sales or services designed or introduced in past 3–5 years, ,market share, units sold, unit selling price, growth in units sold, growth in investment;

Primary Variables

FOR_SUBS = number of foreign subsidiaries divided by total number of subsidiaries;

FOR_SALES = foreign sales divided by total sales;

FOR_SHS = percentage common shares in large blocks held by foreign shareholders;

FOR_DEBT = amount of foreign debt divided by total assets;

Control Variables

ANALYST = mean adjusted number of analyst following the company;

SHARE_SPREAD = level of independence of the firm from controlling interest such as parent company and controlling shareholders;

GROWTH = a restricted form of Tobin's Q to measure growth, sum of market value of equity and book value of long-term debt divided by book value of plant property and equipment (long-term assets).

SIZE = mean adjusted total assets.

ROAnet = net income divided by total assets.

4.2.1 Scatterplot to Determine the Linearity of Model

Before running the regression, a scatterplot of VDISC is examined by the independent variables to determine whether a linear model is reasonable for these variables. All test resulted with a linearity between dependent and independent variables.

4.3. Factor Analysis

Table 4.3. provides the factor loadings of the globalization variables extracted through factor analysis. These extracted variables represent global diversification of operations (GLOBAL_OPR) and global diversification of financing (GLOBAL_FIN).

To reduce the FOR_SUBS and FOR_Sales into factor loading of GLOBAL_OPR, the principal component analysis was used.

Table 4.3.1.1. GLOBAL_OPR: Communalities

Communalities

	Initial	Extraction
FOR_SUBS	1.000	.528
FOR_SALES	1.000	.528

Extraction Method: Principal Component Analysis.

Communalities indicate the amount of variance in each variable that is accounted for. Initial communalities are estimates of the variance in each variable accounted for by all components or factors. For principal components extraction, this is always equal to 1.0 for correlation analyses. Extraction communalities are estimates of the variance in each variable accounted for by the components. The communalities in the table 4.2.1 are all high, which indicates that the extracted components represent the variables well.

The variance explained by the initial solution, extracted components, and rotated components is displayed. This first section of the table 4.2.2 below shows the Initial Eigenvalues.

Table 4.3.1.2. GLOBAL_OPR: Total Variance Explained

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.055	52.769	52.769	1.055	52.769	52.769
2	.945	47.231	100.000			

Extraction Method: Principal Component Analysis.

The total column gives the Eigenvalue, or amount of variance in the original variables accounted for by each component. The % of Variance column gives the ratio, expressed as a percentage, of the variance accounted for by each component to the total variance in all of the variables. The Cumulative % column gives the percentage of variance accounted for by the first n components. For the initial solution, there are as many components as variables, and in a correlations analysis, the sum of the eigenvalues equals the number of components. Because the eigenvalues greater than 1 be extracted, so the first two principal components form the extracted solution.

The second section of the table shows the extracted components. They explain nearly 53% of the variability in the original two variables, so by reducing the complexity of the data set by using only FOR_SUBS component, with only a 47% loss of information.

To help to determine what components represent, the rotated component matrix is used. As can be seen on Table 4.3.1.3 the first component is most highly correlated with FOR SUBS .This suggests that, for further analyses, FOR_SUBS can be functioning as GLOBAL_OPR loading.

Table 4.3.1.3. GLOBAL_OPR: Component Matrix

Component Matrix[a]

	Component
	1
FOR_SUBS	.726
FOR_SALES	-.726

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

In determining factor loading of GLOBAL_FIN from the FOR_DEBT and FOR_SHS , the principal component analysis was used. The communalities in the table 4.3.2.1 are all above 50 %, which indicates that the extracted components represent the variables well.

Table 4.3.2.1. GLOBAl_FIN: Communalities

Communalities

	Initial	Extraction
FOR_DEBT	1.000	.536
FOR_SHS	1.000	.536

Extraction Method: Principal Component Analysis.

The variance explained by the initial solution, extracted components, and rotated components is displayed. This first section of the table 4.2.3 below shows the Initial Eigenvalues.

Table 4.3.2.2. GLOBAL_FIN: Total Variance Explained

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.071	53.552	53.552	1.071	53.552	53.552
2	.929	46.448	100.000			

Extraction Method: Principal Component Analysis.

The second section of the table shows the extracted components. They explain approximately 54% of the variability in the original two variables, so by reducing the complexity of the data set by using only FOR_DEBT component, with only a 46% loss of information.

To determine what the components represent, the rotated component matrix is used. As can be seen on Table 4.3.2.3 the first component is most highly correlated with FOR_ DEBT. This suggests that, for further analyses, FOR_DEBT can be functioning as GLOBAL_FIN loading.

Table 4.3.2.3. GLOBAL_FIN: Component Matrix

Component Matrix[a]

	Component
	1
FOR_DEBT	.732
FOR_SHS	-.732

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

The complete SPSS output for factor loading for global diversification variables can be seen on appendix B.

In summary, the table 4.3.3. below represent factor loading for global diversification variables.

Table 4.3.3. Factor Loading for Global Diversification Variables

	GLOBAL_OPR Loading	GLOBAL_FIN Loading
FOR_SUBS	0.726	
FOR_SALES	-0.726	
FOR_DEBT		0.732
FOR_SHS		-0.732
% of variation explained	52.769	53.552

Variable definitions:

GLOBAL_OPR = factor score from the factor analysis of foreign subsidiaries FOR_SUBS), and foreign sales (FOR_Sales).

GLOBAL_FIN = factor score from the factor analysis of foreign-held equity (FOR_SHS), and foreign debt (FOR_DEBT).

Table 4.3.3., Column 2 shows the loadings for GLOBAL_OPR. FOR_SUBS has loadings for positive 0.528 and explains 52.769 percent of the variations of FOR_SUBS and FOR_SALES. Table 4.3.3., Column 3 provides the loadings for GLOBAL_FIN. FOR_DEBT has loadings for positive 0.732. GLOBAL_FIN explains 53.552 percent of the variation in FOR_DEBT and FOR_SHS.

4.4. Pearson Correlation

Table 4.4. contains the Pearson pairwise correlation coefficients for the disclosure variables, global diversification variables and the control variables. VDISC is positively associated with GLOBAL_OPR and GLOBAL_FIN. FINANCIAL_DISC is also significantly correlated with GLOBAL_FIN, but is not significantly correlated with GLOBAL_OPR. NON_FINANCIAL_DISC is also significantly correlated with the GLOBAL_FIN, but not the GLOBAL_OPR.

Several of the independent variables are significantly associated. Most notably, the degree of global operations and global finance has relatively high correlations with ANALYST. Consequently, the variance inflation factors (VIFs) is computed before running the regression. As can be seen on the section five, Table 4.5.1. Most VIFs were within the range of 1 and 2 and none exceed 2. A VIF greater than 2 is regarded as an indication of high multicolinearity between independent variables. Section 4.5. review this matter in detail.

Correlations

		VDISC	FINANCIAL_ DISC	NON FINANCIAL_ DISC	GLOBAL_ OPR	GLOBAL_FIN	ANALYST	SHARE SPREAD	GROWTH	SIZE	ROAnet
VDISC	Pearson Correlation	1.000	.634**	.918**	.060	.198**	.230**	.020	-.142*	.053	.018
	Sig. (2-tailed)		.000	.000	.307	.001	.000	.739	.016	.366	.757
	N	288	288	288	288	288	288	288	288	288	288
FINANCIAL_DISC	Pearson Correlation	.634**	1.000	.275**	.087	.165**	.160**	-.011	-.073	.011	.037
	Sig. (2-tailed)	.000		.000	.141	.005	.002	.852	.218	.857	.534
	N	288	288	288	288	288	288	288	288	288	288
NON_FINANCIAL_DISC	Pearson Correlation	.918**	.275**	1.000	.030	.162**	.194**	.030	-.139*	.061	.004
	Sig. (2-tailed)	.000	.000		.607	.006	.001	.610	.018	.302	.948
	N	288	288	288	288	288	288	288	288	288	288
GLOBAL_OPR	Pearson Correlation	.060	.087	.030	1.000	.102	.272**	.388**	.048	.003	.055
	Sig. (2-tailed)	.307	.141	.607		.086	.000	.000	.416	.954	.357
	N	288	288	288	288	288	288	288	288	288	288
GLOBAL_FIN	Pearson Correlation	.198**	.165**	.162**	.102	1.000	.206**	.024	.018	.054	.087
	Sig. (2-tailed)	.001	.005	.006	.086		.000	.691	.761	.364	.139
	N	288	288	288	288	288	288	288	288	288	288
ANALYST	Pearson Correlation	.230**	.160**	.194**	.272**	.206**	1.000	.297**	-.043	.150*	.196**
	Sig. (2-tailed)	.000	.002	.001	.000	.000		.000	.464	.011	.001
	N	288	288	288	288	288	288	288	288	288	288
SHARE_SPREAD	Pearson Correlation	.020	-.011	.030	.388**	.024	.297**	1.000	-.024	-.047	.030
	Sig. (2-tailed)	.739	.852	.610	.000	.691	.000		.689	.426	.617
	N	288	288	288	288	288	288	288	288	288	288
GROWTH	Pearson Correlation	-.142*	-.073	-.139*	.048	.018	-.043	-.024	1.000	.000	.064
	Sig. (2-tailed)	.016	.218	.018	.416	.761	.464	.689		.992	.277
	N	288	288	288	288	288	288	288	288	288	288
SIZE	Pearson Correlation	.053	.011	.061	.003	.054	.150*	-.047	.000	1.000	-.032
	Sig. (2-tailed)	.366	.857	.302	.954	.364	.011	.426	.992		.589
	N	288	288	288	288	288	288	288	288	288	288
ROAnet	Pearson Correlation	.018	.037	.004	.055	.087	.196**	.030	.064	-.032	1.000
	Sig. (2-tailed)	.757	.534	.948	.357	.139	.001	.617	.277	.589	
	N	288	288	288	288	288	288	288	288	288	288

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

4.4.1. Test of Assumptions of Regression Analysis

Assumptions used by regression analysis is, that for each value of the independent variable, the distribution of the dependent variable must be normal. The relationship between the dependent variable and each independent variable should be linear, and all observations should be independent.

It deals with a method for examining patterns of causation among a set of variables Causal assumptions are a crucial role in the application of regression analysis. For the purposes of testing hypotheses about the values of model parameters, the structural equations in the model are subject to certain statistical assumptions. These assumptions are discussed in the following sections.

4.4.2. Coefficients and Collinearity Statistics

The table 4.4.2. shows the coefficients of the regression line. It states that the expected VDISC score is equal to 0.031*GLOBAL_OPR + 0.293*GLOBAL_FIN + ANALYSt*0.039 - SHARE_SPREAD*0.032 – 0.033*GROWTH + 1.031E-6*SIZE – 0.659*ROAnet + 3.407.

Table 4.4.2. Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	3.407	.343		9.944	.000		
	GLOBAL_OPR	.031	.115	.017	.266	.791	.815	1.227
	GLOBAL_FIN	.293	.107	.160	2.740	.007	.949	1.054
	ANALYST	.039	.012	.207	3.249	.001	.794	1.259
	SHARE_SPREAD	-.032	.038	-.054	-.848	.397	.799	1.251
	GROWTH	-.033	.014	-.136	-2.383	.018	.987	1.013
	SIZE	4.442E-7	.000	.010	.178	.858	.963	1.038
	ROAnet	-.659	1.456	-.026	-.453	.651	.949	1.054

a. Dependent Variable: VDISC

Even though the model fit looks positive, the first section of the coefficients table shows that there are too many predictors in the model. There are several non-significant coefficients, indicating that these variables do not contribute much to the model.

The second section of the coefficients table shows that there is no problem with multicollinearity. The tolerance is the percentage of the variance in a given predictor that cannot be explained by the other predictors. Thus, the large tolerances show that 1% - 21% of the variance in a given predictor can be explained by the other predictors. When the tolerances are close to 0, there is high multicollinearity and the standard error of the regression coefficients will be inflated. A variance inflation factor greater than 2 is usually considered problematic, and the smallest VIF in the table is 1.013.

4.4.3. Collinearity diagnostics

The collinearity diagnostics confirm that there are no serious problems with multicollinearity.

Table 4.4.3. Collinearity Diagnostics

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions (Constant)	GLOBAL_OPR	GLOBAL_FIN	ANALYST	SHARE SPREAD	GROWTH	SIZE	ROAnet
1	1	3.959	1.000	.01	.00	.00	.01	.01	.01	.02	.02
	2	1.108	1.890	.00	.37	.40	.00	.00	.00	.00	.00
	3	.915	2.080	.00	.40	.53	.00	.00	.01	.01	.00
	4	.832	2.182	.00	.01	.01	.00	.00	.93	.02	.00
	5	.592	2.585	.00	.00	.00	.00	.00	.01	.34	.59
	6	.401	3.143	.02	.03	.01	.03	.05	.00	.56	.35
	7	.133	5.465	.04	.00	.04	.92	.22	.01	.02	.02
	8	.060	8.098	.93	.18	.00	.04	.72	.02	.05	.01

a. Dependent Variable: VDISC

The first section of the table 4.4.3 shows that all eigenvalues are not close to 0, indicating that the predictors are highly not intercorrelated and that small changes in the data values may not lead to large changes in the estimates of the coefficients.

The condition indices are computed as the square roots of the ratios of the largest eigenvalue to each successive eigenvalue. Values greater than 15 indicate a possible problem with collinearity; greater than 30, a serious problem. All of these indices are not larger than 9, suggesting there is no collinearity problem.

4.4.4. ANOVA

The ANOVA, as can be seen on table 4.4.4., tests the acceptability of the model from a statistical perspective. The Regression row displays information about the variation accounted for by the model. The Residual row displays information about the variation that is not accounted for by the model. The regression and residual sums of squares are not approximately equal, which indicates that about fully of the variation in VDISC is not explained by the model. The significance value of the F statistic is less than 0.05, which means that the variation explained by the model is not due to chance. The ANOVA table is a useful test of the model's ability to explain any variation in the dependent variable.

Table 4.4.4. ANOVA

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	95.184	7	13.598	4.377	.000[a]
	Residual	869.802	280	3.106		
	Total	964.986	287			

a. Predictors: (Constant), ROAnet, SHARE_SPREAD, SIZE, GROWTH, GLOBAL_FIN, GLOBAL_OPR, ANALYST

b. Dependent Variable: VDISC

4.4.5. Test of Normality

A residual is the difference between the observed and model-predicted values of the dependent variable. A histogram or P-P plot of the residuals will help to check the assumption of normality of the error term.

The shape of the histogram should approximately follow the shape of the normal curve. As can be seen on Figure 4.4.5. The below histogram is acceptably close to the normal curve.

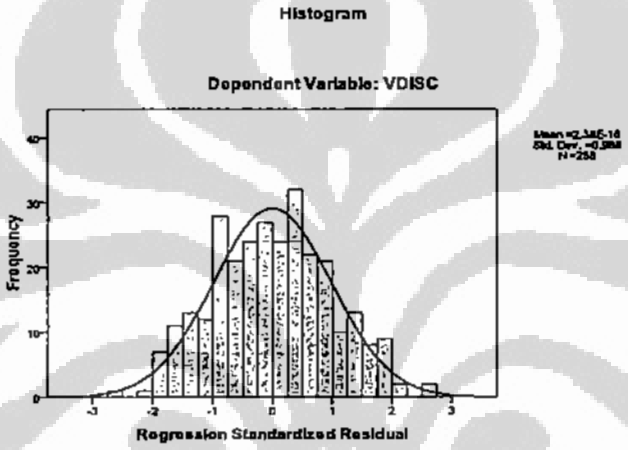

Figure 4.4.5. Histogram

The P-P plotted residuals follow the 45-degree line. This indicate that the normality assumptions is on the way with the regression analysis assumptions.

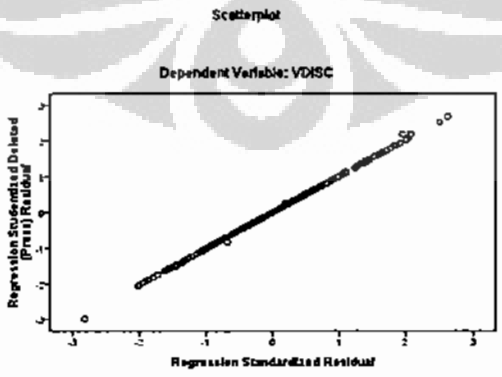

Figure 4.4.5.1. Scatterplot

The plot of residuals by the predicted values shows that the variance of the errors increases with increasing predicted VDISC score. There is, otherwise, good scatter.

Therefore, neither the histogram nor the P-P plot and nor scatterplot indicates that the normality assumption is violated.

4.5. Results

This section presents the results of statistical tests and an analysis of results relating to the hypotheses.

4.5.1. Analysis of Correlations

The hypotheses are:

H1: Greater global diversification of operations will be associated with greater voluntary disclosure.

H2: Greater global diversification of financing will be associated with greater voluntary disclosure.

The model summary on Table 4.5.1. reports the strength of the relationship between the model and the dependent variable.

Table 4.5.1. Analysis of Correlations: Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.314[a]	.099	.076	1.763	.099	4.377	7	280	.000

a. Predictors: (Constant), ROAnet, SHARE_SPREAD, SIZE, GROWTH, GLOBAL_FIN, GLOBAL_OPR, ANALYST

For multiple regression analysis, R, the multiple correlation coefficient, is the linear correlation between the observed and model-predicted values of the dependent

variable. Its large value indicates a strong relationship. R Square, the coefficient of determination, is the squared value of the multiple correlation coefficient. For this study, the correlation between voluntary disclosure (VDISC) and global operations (GLOBAL_OPR), between voluntary disclosure (VDISC) and global financing (GLOBAL_FIN). The R-value of the coefficient correlation between voluntary disclosure shows that about only 31.4 % the variation in VDISC is explained by the model. R^2 is the square of this correlation. For this correlation, $R^2 = 0.099$. Meaning that global operations and global financing explains almost 9.9 % of the variability of voluntary disclosure.

The F statistics is highly significant, indicating that the simultaneous test that each coefficient is 0 is rejected. F is large when the independent variable helps to explain the variation in the dependent varaiable. Here, F value is high (F= 4.377) and the linear relation is higly significant (the p value for the F is less than < 0.0005, see table 4.4.4.). As presented in table 4.4.2., the estimate of the model coefficients β_0 (intercept), β_1 and β_2 (slope) are, 3.407, 0.031, and 0.293, respectively.

Next are t statistics. The first row of t statistics (9.944) tests the significance of the constant. The second row of t statistics (0.266) tests the significance of the slope, and equivalent to testing the significance of the correlation between, which in these case is not significant. The third row of t statistics (2.740) indicate the significance of the slope.

As a further measure of the strength of the model fit, I compare the standard error of the estimate in the model summary table to the standard deviation of time reported in the descriptive statistics table.

Table 4.5.1.2. Analysis of Correlations: Descriptive Statistics

Descriptive Statistics

	N	Mean	Std. Deviation
VDISC	288	3.76	1.834
Valid N (listwise)	288		

Without prior knowledge of the primary variables (GLOBAL_OPR and GILOBAI_FIN) and control variables (ANALYST, SHARE_SPREAD, GROWTH, SIZE, and ROAnet), the best guess for the VDISC would be about 3.76 scores, with a standard deviation of 1.834. With the linear regression model, the error of the estimate is considerably lower, about 1.763.

To gain more insight into the relation between global diversification of operations and financing and the different types of voluntary disclosure, the VDISc is replaced with Financial_Disc and Non_Financial_Disc the two separate models. The SPSS output for Financial_Disc and Non_Financial_Disc models is presented in appendix C.

GLOBAL_OPR is positively related to FINANCIAL_DISC and NON_FINANCIAL_DISC, indicating consistent with H1, financial and non financial disclosure are greater for firms with more globalized operations (see Table 4.5.1.3.).
In similarity, GLOBAL_FIN is positively related to FINANCIAL_DISC and NON_FINANCIAL_DISC which provide support for H2.
When FINANCIAL_DISC and NON_FINANCIAL_DISC is employed as the dependent variable. Some limited support for H1 since companies with more globalized operations tend to provide greater FINANCIAL_DISC, but not greater NON_FINANCIAL_DISC. GLOBAL_FIN is positively related to FINANCIAL_DISC and NON_FINANCIAL_DISC which in these case support for H2. Specifically, companies with more globalized financing tend to provide greater FINANCIAL_DISC and NON_FINANCIAL_DISC.

The summary for the all model are presented in table.

Table 4.5.1.3. Regression Results for Full Sample

		VDISC			FINANCIAL_DISC			NON_FINANCIAL_DISC		
	Exp. Sign	Std.Beta	t	Sig.	Std.Beta	t	Sig.	Std.Beta	t	Sig.
(Constant)			9.944	0		5.439	0		9.388	0
GLOBAL_OPR	+	0.017	0.266	0.791	0.069	1.074	0.284	-0.015	-0.23	0.819
GLOBAL_FIN	+	0.16	2.74	0.007	0.129	2.177	0.03	0.132	2.237	0.026
ANALYST	+	0.207	3.249	0.001	0.164	2.522	0.012	0.173	2.682	0.008
SHARE_SPREAD	+	-0.054	-0.848	0.397	-0.092	-1.42	0.156	-0.02	-0.31	0.761
GROWTH	+	-0.136	-2.383	0.018	-0.073	-1.26	0.209	-0.132	-2.27	0.024
SIZE	+	0.01	0.178	0.858	-0.026	-0.43	0.665	0.028	0.443	0.658
ROA net	+/-	-0.026	-0.453	0.651	-0.004	-0.06	0.951	-0.031	-0.52	0.601
Model Summary		Adj. R^2	F	p	Adj. R^2	F	p	Adj. R^2	F	p
		0.076	4.377	.000	0.039	2.678	.011	0.051	3.182	0.003

p-levels are based on one-tailed tests where a sign is predicted
Coefficients for the Indicator variables are not tabulated
See Tables for variable definitions

Contrary, with the finding of Cahan et.al (2005), which conclude that the level of voluntary disclosure is positively related to the extend of global operations, but is not related to the extent of global financing. Taken as a whole, this study finds that GLOBAL_OPR and GLOBAL_FIN is positively and significantly, except for GLOBAL_OPR, related to the levels of voluntary disclosure. Therefore, they support H1 and H2: thus, it can be concluded that greater greater global diversification of operations and financing will be associated with greater voluntary disclosure.

This is driven by significant relations between GLOBAL_FIN and FINANCIAL_DISC, and GLOBAL_FIN and NON_FINANCIAL_DISC. The GLOBAL_OPR is not significant, but positively related to voluntary disclosure, due to the effect of NON_FINANCIAL_DISCLOSURE. Overall, the model is significant and explains 7.6 % percent of the variation in VDISC.

4.6. Robustness tests

This section presents the robustness checks of statistical tests. First, because the sample is dominated by U.S. (35.7%), Japan (18.1%), companies, then, it is possible that the results moght be driven by country effects involving one or more of these countries. Several sensitivity tests is conducted to determine whether companies from these countries are driving the results. First, the full sample tests is repeated with only two country and listing indicators, i.e., U.S., JAPAN, and USLIST. The results, as can be seen on appendix F, indicate U.S., JAPAN, are positively and significantly associated with VDISC ($p < 0.05$).

Second, the slope of coefficients for the GLOBAL_OPR and GLOBAL_FIN is varying by including the following interaction variables between GLOBAL_OPR with U.S., and JAPAN, and between GLOBAL_FIN with U.S., and JAPAN. All of the interaction variables is significantly, and positively associated with VDIS ($p > 0.05$).

The robustness results are similar to the prior results; even with 53.8 % of the sample omitted, the H1 and H2 is supported. Thus, the relations between GLOBAL_OPR, and GLOBAL_FIN with the voluntary disclosure measures are the same for the all companies in the sample

CHAPTER 5
CONCLUSIONS, LIMITATIONS, AND SCOPE FOR FUTURE RESEARCH

The purpose of this chapter is to summarize the study and offer suggestions for future research. First, the conclusions of the study are stated. Then, it followed by the identification and description of the limitations. Finally, the scope for future research is outlined.

5.1. Summary and Conclusion

This study assesses the effect of business diversification on the corporate voluntary disclosure process of firm annual report in international setting. It examines whether firms characterized by more global operations and financing combat information asymmetry arising from greater globalization, by providing greater voluntary disclosure. It is argue that information asymmetries and agency costs arising from diversification of global operations and financing increase the incentives for companies to disclose at a higher level. Additional or voluntary disclosure will help the investor to monitor management and thereby reduce investors' transaction costs and the companies' cost of capital.

Using a sample drawn from 31 countries and a comprehensive disclosure index based on Francis et. al (2008), this study finds evidence which indicates that companies which have more globalize operations and financing provide higher levels of voluntary disclosure, which support for H1 and H2.

Results of the study complement with the work of Cahan et al. (2005). Contrary to Cahan et.al. (2005), this study find a positive and significant association between globalized financing and voluntary disclosure levels. The association between

globalized financing and voluntary disclosure levels. The association between globalize operations and voluntary disclosure levels is not significant but have a positive association. The difference might be due to Cahan et.al.'s (2005) measure of disclosure. They use Botosan (1997) disclosure index, which was developed for U.S. companies, whereas this study use Francis et. al (2008) disclosure index, which was developed specifically to measure voluntary disclosure levels world wide.

The results of this study contain basic validation for viewing the voluntary disclosure from an international perspective, which may include consideration of global influence of operations and financing.

The study contributes to several areas of research. First, the study contributes to an emerging line of research that examines the global diversification consequences on corporate voluntary disclosure. Second, the study will definitely contribute to the literature of globalization and multinational firms.
Most of the research focuses on U.S. multinational. Third, the findings of this study would provide further evidence of the separate effects of the current situation of financial and operational globalization on disclosures practices by validating the results of Cahan et al. (2005). Four, the results of this research could also answer questions arising from conflicting results of prior research. Fifth, the findings of the study can also help the user of the financial statements to improve the use of voluntary disclosure information provided by the firms in order to achieve the user objectives.

5.2. Limitation

The results in this study should be viewed in the light of certain limitations. First, there is the possibility that dependent and independent variables are infected by uncontrolled extraneous environmental variables.

As a result, the measures of the independent variables cannot be sufficiently sensitive to capture all the effects on the dependent variables. Measurement of the dependent variables also could fail to capture all the variance caused by the independent variables. In another words, global diversification is a complex variable.

Although the model aimed to capture the essence of global diversification by using the composite measures, the power of the conclusions depends on the level to which the factor variables represent global diversification.
The analogous reasons also apply that the selected voluntary disclosure variables cannot be guaranteed to capture all voluntary disclosure made by the firm.

Second, for the reasons of accessibility of data, and in terms of globalization terminology and because it was carrying out through the Fortune's Global 500 largest firms list in the world, firms selection for this study was not random. Therefore, the results cannot be generalize-able to smaller or medium firms.

Third, the sample taken is biased toward long-lived surviving firms that report in English. This will, absolutely, affects the generalize-ability of the results.

Fourth, because of the manually hand collected data, evidence can only from one period. As a result, the study are not time specific, and only at one particular point of time. A longitudinal design would have facilitated inter-temporal comparisons of the degree of voluntary disclosure practices.

Fifth, because of the using of standard disclosure index to quantify the disclosure level, the study cannot be certain that every item in voluntary disclosure index is voluntary in every country in the sample selected.

Sixth, accounting diversity can be considered as an important barrier for the international comparability of financial reporting, because of different accounting principles, assumptions, and estimation used by firms in the preparation of financial statements in different industries, different countries, and different periods might cause the differences of the firms disclosures practices. This concerns are frequently expressed as "apple and orange" problems (see i.e. Fox, Grinyer, Russel, 2003; King, and Langil, 1998; Lainez and Callao, 2000).

Seven, in developing the disclosure index, the level of detail of the disclosure requirements need to be considered. It was recognized that some disclosure items may represent pieces of information that are themselves composed of many sub-elements. For example, two stock exchanges, A and B, may both require companies seeking listing to disclose information on directors; however, stock exchange A may require the names of the directors, while stock exchange B may require the names, salaries, and outside affiliations of the directors. While both stock exchanges would meet the disclosure index criterion for information on company directors, it is clear that the disclosure required by stock exchange B is more detailed than that required by stock exchange A. An attempt is in need to break down information items in the disclosure index into sub-elements as much as possible. In such cases, the items' weights were distributed among the sub-elements to facilitate granting of variable credit.

Finally, the disclosures rating process is subjective to the researcher's perceptions of corporate disclosure practices.
Further Leuz and Wysocki (2007) conclude that the selection and coding of the relevant disclosures are subjective, that it only capture the existence of particular disclosures, rather than their quality, and that the construction of a single index assigns particular weights to the different disclosure items. Moreover, these measures often do not capture other disclosure activities that can complement or substitute for financial report disclosures.

5.3. Scope of Future Research

Future research should be directed toward improving the deficiencies of this study and extending the conceptual framework.

This study could be extended in several ways. First, the design could be extended to other types of investor-focused communications such as media releases or conference calls.

Second, using a time-series analysis would help develop a stronger causal link between globalization and voluntary disclosures. Third, if better proxies can be developed, one could explore the relative effects of capital, product, and labor market involvement on voluntary disclosures. Fourth, and perhaps most important, globalization could be included in other tests that use cross-country differences in legal environment as an explanatory variable.

The effect of global diversification in the voluntary disclosure process may demonstrate different patterns across cultural norms such as organization type, size, legal environment, and politics. This study's evaluations were based on the list of a Fortune's Global 500 largest firms. A more diverse range of sample might be forthcoming in a study using firms in a wider cross-section of size and type. It is to be expected that other scholars will take up the baton and pursue these avenue in future research.

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Appendix A

COMPANIES, COUNTRIES, AND INDUSTRIES

Table A.1:
List of the companies selected

Country	Company			Total
Australia	Woolworths	Coles Group		2
Austria	OMV Group			1
Belgium	Delhaize Group			1
Brazil	CVRD	Petrobras		2
Britain	BAE Systems	Compass Group	BP	18
	British Airways	Marks & Spencer	GlaxoSmithKline	
	SABMiller	Royal Mail Holdings	AstraZeneca	
	Tesco	Rio Tinto Group	Kingfisher	
	J. Sainsbury	Anglo American	British American Tobacco	
	William Morrison Supermarkets	Wolseley	Scottish & Southern Energy	
Canada	Bombardier	EnCana	Petro-Canada	5
	George Weston	Magna International		
China	Jardine Matheson	Sinochem		2
Denmark	A.P. Møller-Mærsk Group			1
Finland	Stora Enso	Nokia		2
France	Thales Group	Groupe Danone	Total	22
	Saint-Gobain	Sodexo	Sanofi-Aventis	
	Lafarge	Foncière Euris	France Télécom	
	Schneider Electric	Alstom	Vivendi	
	Vinci	Peugeot	Électricité de France	
	Bouygues	Renault	Gaz de France	
	Eiffage	Michelin		
	Carrefour	Alcatel-Lucent		
Germany	Lufthansa Group	Metro	MAN Group	25
	BASF	Henkel	ZF Friedrichshafen	
	Bayer	Deutsche Post	Arcandor	
	Linde Group	ThyssenKrupp	Otto Group	
	Siemens	TUI	Deutsche Telekom	
	E.ON	Volkswagen	Energie Baden-Württemberg	
	RWE	BMW	Franz Haniel	
	Hochtief	Robert Bosch		
	Bertelsmann	Continental		
India	Tata Steel	Indian Oil	Bharat Petroleum	6
	Oil & Natural Gas	Reliance Industries	Hindustan Petroleum	
Italy	Finmeccanica	Fiat	Telecom Italia	5
	Poste Italiane	ENI	Enel	

Appendix A
(continue)

Country	Company			Total
Japan	Mitsubishi Chemical Holdings	Kobe Steel	Mitsui OSK Lines	52
	Fujitsu	Fujifilm Holdings	Nippon Telegraph & Telephone	
	NEC	Toyota Motor	KDDI	
	Canon	Honda Motor	Softbank	
	Ricoh	Nissan Motor	Japan Tobacco	
	Hitachi	Denso	Mitsubishi	
	Matsushita Electric Industrial	Suzuki Motor	Mitsui	
	Sony	Mazda Motor	Marubeni	
	Toshiba	Bridgestone	Sumitomo	
	Mitsubishi Electric	Aisin Seiki	Itochu	
	Sharp	Mitsubishi Motors	Tokyo Electric Power	
	Sumitomo Electric Industries	Toyota Industries	Kansai Electric Power	
	Sanyo Electric	Isuzu Motors	Chubu Electric Power	
	Seven & I Holdings	Nippon Oil	Medíceo Paltac Holdings	
	AEON	Nippon Mining Holdings		
	Mitsubishi Heavy Industries	Idemitsu Kosan		
	Komatsu	Cosmo Oil		
	Nippon Steel	East Japan Railway		
	JFE Holdings	Nippon Yusen		
Luxembourg	ArcelorMittal			1
Mexico	Cemex	Pemex		2
Netherlands	Unilever	LyondellBasell Industries	Royal Dutch Shell	7
	EADS	Royal Philips Electronics	SHV Holdings	
	Heineken Holding	GasTerra		
	Akzo Nobel	Royal Ahold		
Norway	Norsk Hydro	Statoil Hydro		2
Poland	PKN Orlen Group			1
Portugal	Galp Energia			1
Russia	Gazprom	Lukoil	Rosneft Oil	3
Singapore	Flextronics International			1
South Korea	Samsung Electronics	LG	KT	3
Spain	ACS	Fomento de Construcciones	Cepsa	6
	Grupo Ferrovial	Repsol YPF	Telefónica	
Sweden	Skanska	L.M. Ericsson		3
	Volvo			
Switzerland	Holcim	Xstrata	Adecco	7
	Alliance Boots	Roche Group		
	Nestlé	Novartis		
Taiwan	Quanta Computer	Asustek Computer	CPC	3
Turkey	Koç Holding			1

Appendix A
(continue)

Country	Company			Total
U.S.	Boeing	Archer Daniels Midland	Goodyear Tire & Rubber	103
	United Technologies	Bunge	Motorola	
	Lockheed Martin	Tyson Foods	Exxon Mobil	
	Honeywell International	McDonald's	Chevron	
	Northrop Grumman	International Paper	ConocoPhillips	
	General Dynamics	Weyerhaeuser	Valero Energy	
	Raytheon	Wal-Mart Stores	Marathon Oil	
	AMR	Target	Sunoco	
	UAL	Sears Holdings	Murphy Oil	
	Delta Air Lines	Macy's	Pfizer	
	AutoNation	J.C. Penney	Abbott Laboratories	
	Coca-Cola	UnitedHealth Group	Merck	
	Coca-Cola Enterprises	WellPoint	Wyeth	
	Dow Chemical	Aetna	Bristol-Myers Squibb	
	DuPont	Humana	Eli Lilly	
	Oracle	Cigna	Enterprise GP Holdings	
	Hewlett-Packard	Medco Health Solutions	Plains All American Pipeline	
	Dell	HCA	Intel	
	Apple	Express Scripts	Home Depot	
	Xerox	Procter & Gamble	Costco Wholesale	
	Tyco International	Kimberly-Clark	Best Buy	
	Emerson Electric	Caterpillar	TJX	
	Whirlpool	Deere	AT&T	
	Constellation Energy	International Business Machines	Sprint Nextel	
	Time Warner	Electronic Data Systems	Comcast	
	Walt Disney	U.S. Postal Service	Manpower	
	News Corp.	United Parcel Service	Altria Group	
	CVS Caremark	Alcoa	Exelon	
	Kroger	United States Steel	Ingram Micro	
	Walgreen	Freeport-McMoRan Copper & Gold	Tech Data	
	Supervalu	3M	CHS	
	Rite Aid	Schlumberger	McKesson	
	Publix Super Markets	General Motors	Cardinal Health	
	PepsiCo	Ford Motor	AmerisourceBergen	
	Kraft Foods	Delphi		

Appendix A
(continue)

Table A.2:
List of the samples selected by countries

Country	# of GLOBAL* 500 Companies*	%	Selected Sample	%	Selected / Total 500
Australia	8	2%	2	1%	25%
Austria	2	0%	1	0%	50%
Belgium	5	1%	1	0%	20%
Brazil	5	1%	2	1%	40%
Britain	34	7%	18	6%	53%
Canada	14	3%	5	2%	36%
China	29	6%	2	1%	7%
Denmark	2	0%	1	0%	50%
Finland	2	0%	2	1%	100%
France	39	8%	22	8%	56%
Germany	37	7%	25	9%	68%
India	7	1%	6	2%	86%
Ireland	2	0%	0	0%	0%
Italy	10	2%	5	2%	50%
Japan	64	13%	52	18%	81%
Luxembourg	1	0%	1	0%	100%
Malaysia	1	0%	0	0%	0%
Mexico	5	1%	2	1%	40%
Netherlands	15	3%	7	2%	47%
Norway	2	0%	2	1%	100%
Poland	1	0%	1	0%	100%
Portugal	1	0%	1	0%	100%
Russia	5	1%	3	1%	60%
Saudi Arabia	1	0%	0	0%	0%
Singapore	1	0%	1	0%	100%
South Korea	15	3%	3	1%	20%
Spain	11	2%	6	2%	55%
Sweden	6	1%	3	1%	50%
Switzerland	14	3%	7	2%	50%
Taiwan	6	1%	3	1%	50%
Thailand	1	0%	0	0%	0%
Turkey	1	0%	1	0%	100%
U.S.	153	31%	103	36%	67%
Total	500	100%	288	100%	58%

*From the July 21, 2008 issue

Appendix A
(continue)

Table A.3:
List of the samples selected by Industry - Fortune classification

Industry	# of GLOBAL* 500 Companies'	%	Selected Sample	%	Selected / Total 500
Aerospace and Defense	12	2%	12	4%	100%
Airlines	7	1%	5	2%	71%
Automotive Retailing, Services	2	0%	2	1%	100%
Banks: Commercial and Savings	67	13%	0	0%	0%
Beverages	5	1%	3	1%	60%
Building Materials, Glass	5	1%	4	1%	80%
Chemicals	11	2%	7	2%	64%
Computer Software	2	0%	1	0%	50%
Computers, Office Equipment	11	2%	10	3%	91%
Diversified Financials	7	1%	0	0%	0%
Electronics, Electrical Equipment	17	3%	16	6%	94%
Energy	6	1%	4	1%	67%
Engineering, Construction	14	3%	8	3%	57%
Entertainment	4	1%	4	1%	100%
Food and Drug Stores	21	4%	19	7%	90%
Food Consumer Products	5	1%	5	2%	100%
Food Production	3	1%	3	1%	100%
Food Services	3	1%	3	1%	100%
Forest and Paper Products	3	1%	3	1%	100%
General Merchandisers	8	2%	7	2%	88%
Health Care: Insurance and Mana	5	1%	5	2%	100%
Health Care: Pharmacy and Othe	3	1%	3	1%	100%
Household and Personal Products	4	1%	3	1%	75%
Industrial and Farm Equipment	7	1%	5	2%	71%
Information Technology Services	3	1%	2	1%	67%
Insurance: Life, Health (mutual)	8	2%	0	0%	0%
Insurance: Life, Health (stock)	19	4%	0	0%	0%
Insurance: Property and Casualty	3	1%	0	0%	0%
Insurance: Property and Casualty	15	3%	0	0%	0%
Mail, Package and Freight Delive	7	1%	3	1%	43%
Metals	13	3%	9	3%	69%
Mining, Crude-oil production	11	2%	8	3%	73%
Miscellaneous	6	1%	5	2%	83%
Motor Vehicles and Parts	33	7%	28	10%	85%
Network and Other Communicati	5	1%	4	1%	80%
Petroleum Refining	39	8%	30	10%	77%
Pharmaceuticals	12	2%	11	4%	92%
Pipelines	2	0%	2	1%	100%
Railroads	3	1%	1	0%	33%
Securities	4	1%	0	0%	0%
Semiconductors and Other Electr	3	1%	2	1%	67%
Shipping	4	1%	3	1%	75%
Specialty Retailers	10	2%	7	2%	70%
Telecommunications	21	4%	12	4%	57%
Temporary Help	2	0%	2	1%	100%
Tobacco	3	1%	3	1%	100%
Trading	10	2%	7	2%	70%
Utilities	19	4%	9	3%	47%
Wholesalers: Electronics and Offi	3	1%	2	1%	67%
Wholesalers: Food and Grocery	4	1%	1	0%	25%
Wholesalers: Health Care	6	1%	5	2%	83%
	500	100%	288	100%	58%

*From the July 21, 2008 issue

Appendix B

FACTOR ANALYSIS FOR GLOBAL DIVERSIFICATION VARIABLES

Factor Loading for GLOBAL OPR

Communalities

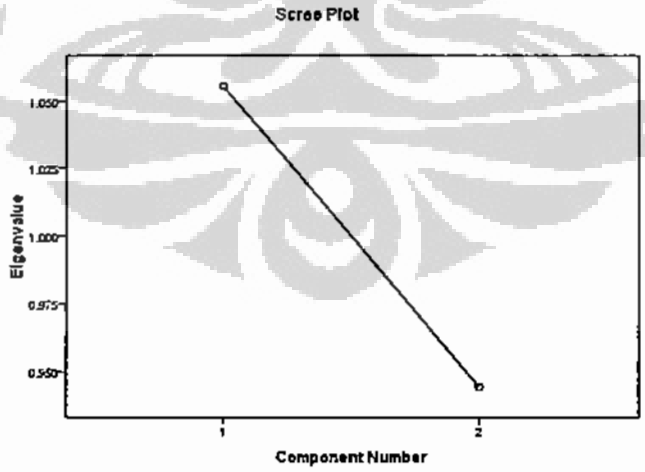
	Initial	Extraction
FOR_SUBS	1.000	.528
FOR_SALES	1.000	.528

Extraction Method: Principal Component Analysis.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.055	52.769	52.769	1.055	52.769	52.769
2	.945	47.231	100.000			

Extraction Method: Principal Component Analysis.



Appendix B
(continue)

Component Matrix[a]

	Component
	1
FOR_SUBS	.726
FOR_SALES	-.726

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

Component Score Coefficient Matrix

	Component
	1
FOR_SUBS	.688
FOR_SALES	-.688

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Component Scores.

Component Score Covariance Matrix

Co...	1
1	1.000

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Component Scores.

Appendix B
(continue)

Factor Loading for GLOBAL FIN

Communalities

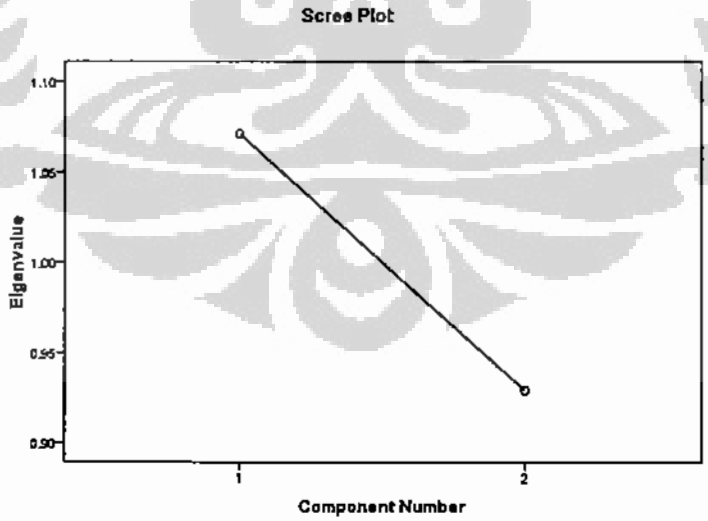
	Initial	Extraction
FOR_DEBT	1.000	.536
FOR_SHS	1.000	.536

Extraction Method: Principal Component Analysis.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.071	53.552	53.552	1.071	53.552	53.552
2	.929	46.448	100.000			

Extraction Method: Principal Component Analysis.



Appendix B
(continue)

Component Matrix[a]

	Component
	1
FOR_DEBT	.732
FOR_SHS	-.732

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

Component Score Coefficient Matrix

	Component
	1
FOR_DEBT	.683
FOR_SHS	-.683

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Component Scores.

Component Score Covariance Matrix

Co...	1
1	1.000

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Component Scores.

Appendix C

REGRESSION RESULTS

Dependent: Voluntary Disclosure

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	ROAnet, SHARE_SPREAD, SIZE, GROWTH, GLOBAL_FIN, GLOBAL_OPR, ANALYST[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: VDISC

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.314[a]	.099	.076	1.763	2.028

a. Predictors: (Constant), ROAnet, SHARE_SPREAD, SIZE, GROWTH, GLOBAL_FIN, GLOBAL_OPR, ANALYST

b. Dependent Variable: VDISC

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	95.184	7	13.598	4.377	.000[a]
	Residual	869.802	280	3.106		
	Total	964.986	287			

a. Predictors: (Constant), ROAnet, SHARE_SPREAD, SIZE, GROWTH, GLOBAL_FIN, GLOBAL_OPR, ANALYST

b. Dependent Variable: VDISC

Appendix C
(continue)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	3.407	.343		9.944	.000		
	GLOBAL_OPR	.031	.115	.017	.266	.791	.815	1.227
	GLOBAL_FIN	.293	.107	.160	2.740	.007	.949	1.054
	ANALYST	.039	.012	.207	3.249	.001	.794	1.259
	SHARE_SPREAD	-.032	.038	-.054	-.848	.397	.799	1.251
	GROWTH	-.033	.014	-.136	-2.383	.018	.987	1.013
	SIZE	4.442E-7	.000	.010	.178	.858	.963	1.038
	ROA net	-.659	1.456	-.026	-.453	.651	.949	1.054

a. Dependent Variable: VDISC

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions							
				(Constant)	GLOBAL_OPR	GLOBAL_FIN	ANALYST	SHARE_SPREAD	GROWTH	SIZE	ROA net
1	1	3.959	1.000	.01	.00	.00	.01	.01	.01	.02	.02
	2	1.108	1.890	.00	.37	.40	.00	.00	.00	.00	.00
	3	.915	2.080	.00	.40	.53	.00	.00	.01	.01	.00
	4	.832	2.182	.00	.01	.01	.00	.00	.93	.02	.00
	5	.592	2.585	.00	.00	.00	.00	.00	.01	.34	.59
	6	.401	3.143	.02	.03	.01	.03	.05	.00	.56	.35
	7	.133	5.465	.04	.00	.04	.92	.22	.01	.02	.02
	8	.060	8.098	.93	.18	.00	.04	.72	.02	.05	.01

a. Dependent Variable: VDISC

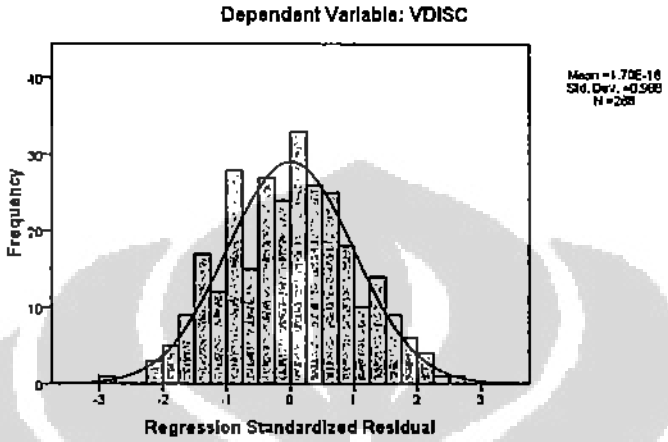
Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	.65	6.20	3.76	.576	288
Std. Predicted Value	-5.394	4.240	.000	1.000	288
Standard Error of Predicted Value	.125	1.194	.260	.136	288
Adjusted Predicted Value	.35	6.82	3.75	.604	288
Residual	-4.971	4.618	.000	1.741	288
Std. Residual	-2.820	2.620	.000	.988	288
Stud. Residual	-2.942	2.652	.001	1.002	288
Deleted Residual	-5.409	4.731	.004	1.793	288
Stud. Deleted Residual	-2.983	2.681	.001	1.005	288
Mahal. Distance	.453	130.638	6.976	13.536	288
Cook's Distance	.000	.134	.004	.011	288
Centered Leverage Value	.002	.455	.024	.047	288

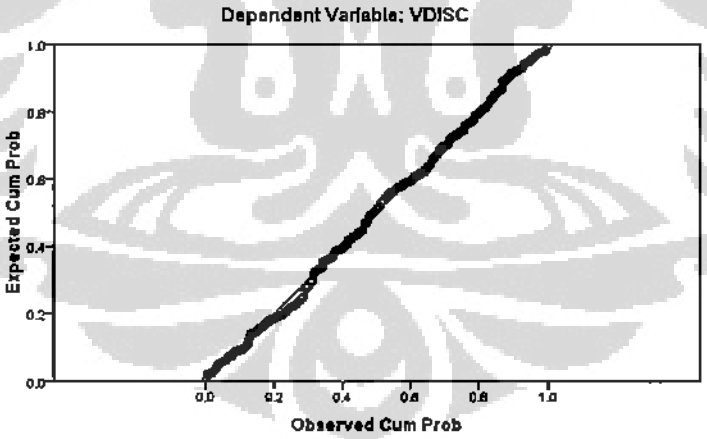
a. Dependent Variable: VDISC

Appendix C
(continue)

Histogram



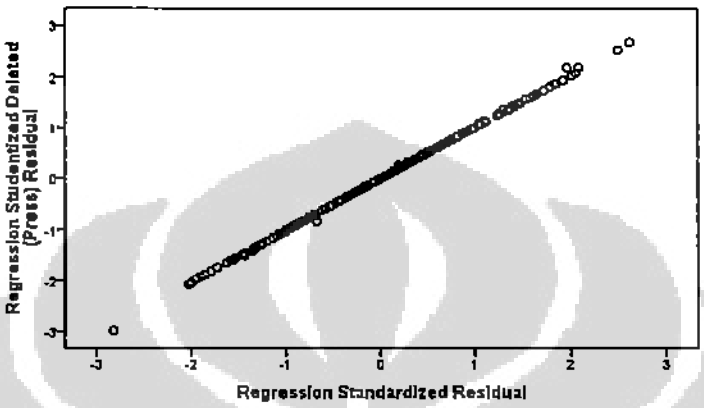
Normal P-P Plot of Regression Standardized Residual



Appendix C
(continue)

Scatterplot

Dependent Variable: VDISC



Dependent: Financial Disclosure

Variables Entered/Removed[b]

Mode l	Variables Entered	Variables Removed	Method
1	ROA net, SHARE_SPREAD, SIZE, GROWTH, GLOBAL_FIN, GLOBAL_OPR, ANALYST[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: FINANCIAL_DISC

Model Summary[b]

Mode l	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.250[a]	.063	.039	.742	1.871

a. Predictors: (Constant), ROA net, SHARE_SPREAD, SIZE, GROWTH, GLOBAL_FIN, GLOBAL_OPR, ANALYST

b. Dependent Variable: FINANCIAL_DISC

Appendix C
(continue)

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.321	7	1.474	2.678	.011[a]
	Residual	154.176	280	.551		
	Total	164.497	287			

a. Predictors: (Constant), ROA net, SHARE_SPREAD, SIZE, GROWTH, GLOBAL_FIN, GLOBAL_OPR, ANALYST

b. Dependent Variable: FINANCIAL_DISC

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.785	.144		5.439	.000		
	GLOBAL_OPR	.052	.049	.069	1.074	.284	.815	1.227
	GLOBAL_FIN	.098	.045	.129	2.177	.030	.949	1.054
	ANALYST	.013	.005	.164	2.522	.012	.794	1.259
	SHARE_SPREAD	-.023	.016	-.092	-1.424	.156	.799	1.251
	GROWTH	-.007	.006	-.073	-1.259	.209	.987	1.013
	SIZE	-4.547E-7	.000	-.026	-.434	.665	.963	1.038
	ROA net	-.038	.613	-.004	-.062	.951	.949	1.054

a. Dependent Variable: FINANCIAL_DISC

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions							
				(Constant)	GLOBAL_OPR	GLOBAL_FIN	ANALYST	SHARE_SPREAD	GROWTH	SIZE	ROA net
1	1	3.959	1.000	.01	.00	.00	.01	.01	.01	.02	.02
	2	1.108	1.890	.00	.37	.40	.00	.00	.00	.00	.00
	3	.915	2.080	.00	.40	.53	.00	.00	.01	.01	.00
	4	.832	2.182	.00	.01	.01	.00	.00	.93	.02	.00
	5	.592	2.585	.00	.00	.00	.00	.00	.01	.34	.59
	6	.401	3.143	.02	.03	.01	.03	.05	.00	.56	.35
	7	.133	5.465	.04	.00	.04	.92	.22	.01	.02	.02
	8	.080	8.098	.93	.18	.00	.04	.72	.02	.05	.01

a. Dependent Variable: FINANCIAL_DISC

Casewise Diagnostics[a]

Case Nu...	Std. Residual	FINANCIAL_DISC	Predicted Value	Residual
175	3.171	3	.65	2.353

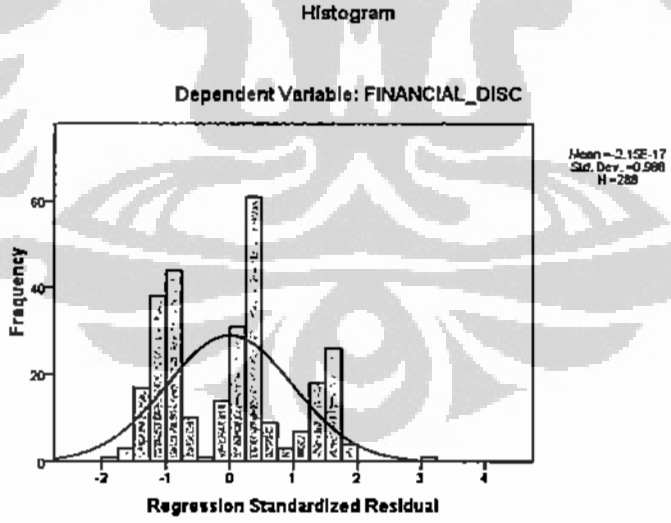
a. Dependent Variable: FINANCIAL_DISC

Appendix C
(continue)

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	.11	1.59	.81	.190	288
Std. Predicted Value	-3.680	4.114	.000	1.000	288
Standard Error of Predicted Value	.053	.503	.110	.057	288
Adjusted Predicted Value	.21	1.65	.81	.191	288
Residual	-1.364	2.353	.000	.733	288
Std. Residual	-1.839	3.171	.000	.988	288
Stud. Residual	-1.949	3.196	.000	1.001	288
Deleted Residual	-1.533	2.390	.000	.754	288
Stud. Deleted Residual	-1.959	3.250	.001	1.004	288
Mahal. Distance	.453	130.638	6.976	13.536	288
Cook's Distance	.000	.086	.004	.008	288
Centered Leverage Value	.002	.455	.024	.047	288

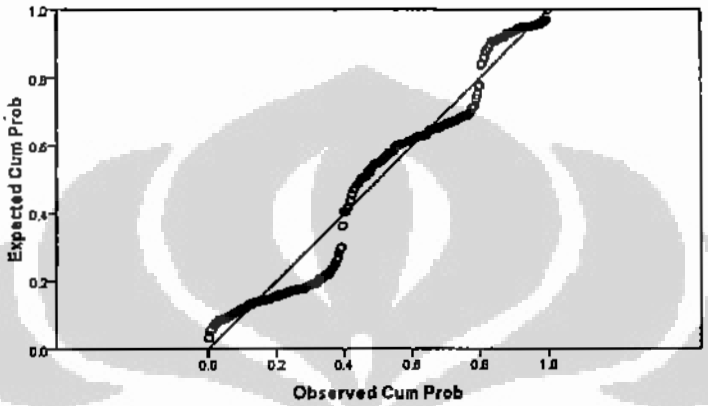
a. Dependent Variable: FINANCIAL_DISC



Appendix C
(continue)

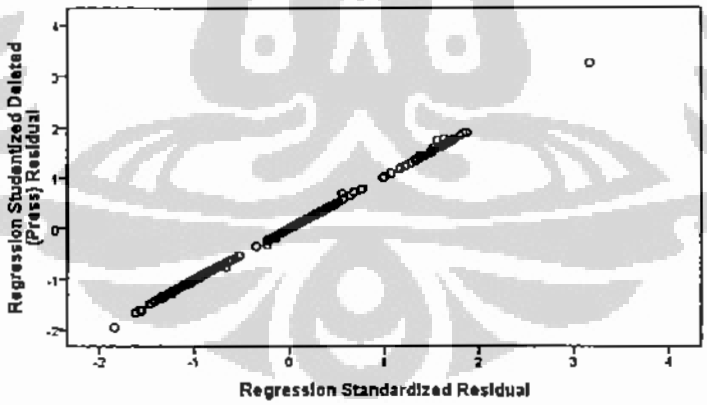
Normal P-P Plot of Regression Standardized Residual

Dependent Variable: FINANCIAL_DISC



Scatterplot

Dependent Variable: FINANCIAL_DISC



Appendix C
(continue)

Dependent: Non Financial Disc

Variables Entered/Removed[b]

Mode l	Variables Entered	Variables Removed	Method
1	ROA net, SHARE_ SPREAD, SIZE, GROWTH, GLOBAL_FIN, GLOBAL_ OPR, ANALYST[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: NON_FINANCIAL_DISC

Model Summary[b]

Mode l	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.271[a]	.074	.051	1.437	2.098

a. Predictors: (Constant), ROA net, SHARE_SPREAD, SIZE, GROWTH, GLOBAL_FIN, GLOBAL_OPR, ANALYST

b. Dependent Variable: NON_FINANCIAL_DISC

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	46.002	7	6.572	3.182	.003[a]
	Residual	578.217	280	2.065		
	Total	624.219	287			

a. Predictors: (Constant), ROA net, SHARE_SPREAD, SIZE, GROWTH, GLOBAL_FIN, GLOBAL_OPR, ANALYST

b. Dependent Variable: NON_FINANCIAL_DISC

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	2.623	.279		9.388	.000		
	GLOBAL_OPR	-.021	.094	-.015	-.228	.819	.815	1.227
	GLOBAL_FIN	.195	.087	.132	2.237	.026	.949	1.054
	ANALYST	.027	.010	.173	2.682	.008	.794	1.259
	SHARE_SPREAD	-.009	.031	-.020	-.305	.761	.799	1.251
	GROWTH	-.025	.011	-.132	-2.273	.024	.987	1.013
	SIZE	8.989E-7	.000	.026	.443	.658	.963	1.038
	ROA net	-.621	1.187	-.031	-.523	.601	.949	1.054

a. Dependent Variable: NON_FINANCIAL_DISC

Appendix C
(continue)

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions							
				(Constant)	GLOBAL_OPR	GLOBAL_FIN	ANALYST	SHARE SPREAD	GROWTH	SIZE	ROAnet
1	1	3.959	1.000	.01	.00	.00	.01	.01	.01	.02	.02
	2	1.108	1.890	.00	.37	.40	.00	.00	.00	.00	.00
	3	.915	2.080	.00	.40	.53	.00	.00	.01	.01	.00
	4	.832	2.182	.00	.01	.01	.00	.00	.93	.02	.00
	5	.592	2.585	.00	.00	.00	.00	.00	.01	.34	.59
	6	.401	3.143	.02	.03	.01	.03	.05	.00	.56	.35
	7	.133	5.465	.04	.00	.04	.92	.22	.01	.02	.02
	8	.060	8.098	.93	.18	.00	.04	.72	.02	.05	.01

a. Dependent Variable: NON_FINANCIAL_DISC

Residuals Statistics[a]

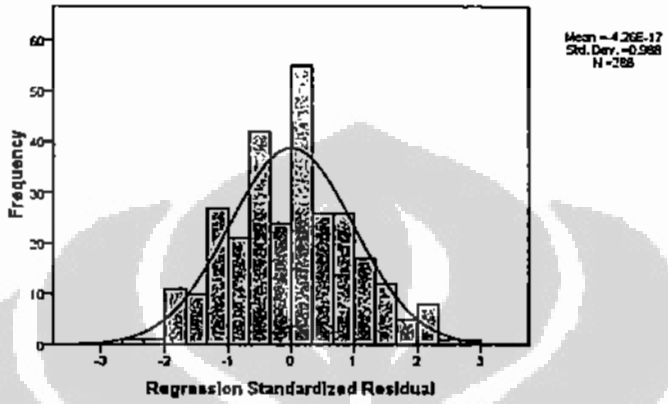
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	.49	4.61	2.95	.400	288
Std. Predicted Value	-6.135	4.150	.000	1.000	288
Standard Error of Predicted Value	.102	.973	.212	.111	288
Adjusted Predicted Value	.08	5.44	2.94	.437	288
Residual	-3.814	4.136	.000	1.419	288
Std. Residual	-2.654	2.878	.000	.988	288
Stud. Residual	-2.769	2.904	.001	1.003	288
Deleted Residual	-4.151	4.212	.004	1.465	288
Stud. Deleted Residual	-2.803	2.944	.002	1.006	288
Mahal. Distance	.453	130.638	6.976	13.536	288
Cook's Distance	.000	.122	.004	.012	288
Centered Leverage Value	.002	.455	.024	.047	288

a. Dependent Variable: NON_FINANCIAL_DISC

Appendix C
(continue)

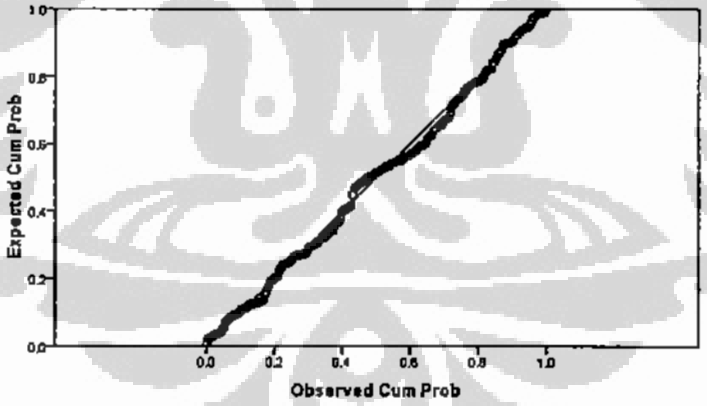
Histogram

Dependent Variable: NON_FINANCIAL_DISC

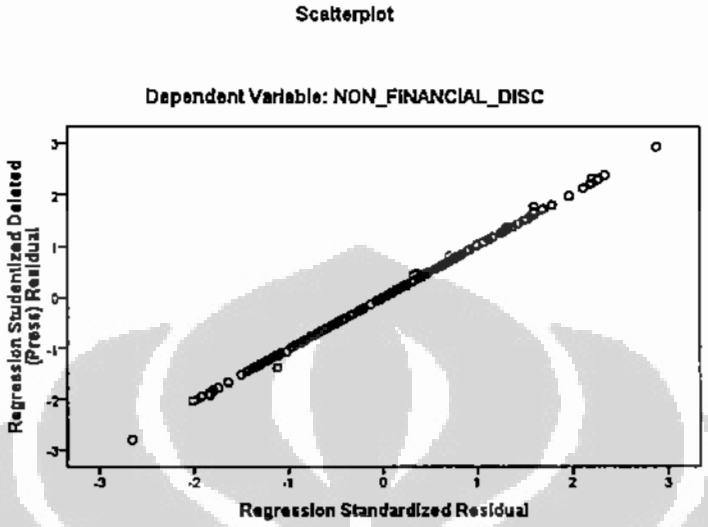


Normal P-P Plot of Regression Standardized Residual

Dependent Variable: NON_FINANCIAL_DISC



Appendix C
(continue)



Appendix D

DISCLOSURE INDEX

Disclosure index based on Francis et al. (2008).	
Index no.	Coding scheme used to compute VDISC:
A. Other Financial measures	
1	Free cash flow (or cash flow other than that reported in the Statement of Cash Flows)
2	Economic profit, residual income type measure
3	Cost of capital (WACC, hurdle rate, EVA target rate)
B. Non-financial measures	
4	Number of employees
5	Average compensation per employee
6	Percentage of sales or services designed or introduced in past 3–5 years
7	Market share
8	Units sold (or other output measure, e.g., production, customers serviced)
9	Unit selling price (or other price measure, e.g., hourly rate)
10	Growth in units sold (or growth in other output measure)
11	Growth in investment (expansion plans, number of outlets, etc.)

Disclosure index based on Francis et al. (2008).	
Index no.	Coding scheme used to compute VDISC:
A. Other Financial measures	
1	Free cash flow (or cash flow other than that reported in the Statement of Cash Flows)
2	Economic profit, residual income type measure
3	Cost of capital (WACC, hurdle rate, EVA target rate)
B. Non-financial measures	
4	Number of employees
5	Average compensation per employee
6	Percentage of sales or services designed or introduced in past 3–5 years
7	Market share
8	Units sold (or other output measure, e.g., production, customers serviced)
9	Unit selling price (or other price measure, e.g., hourly rate)
10	Growth in units sold (or growth in other output measure)
11	Growth in investment (expansion plans, number of outlets, etc.)

Appendix E

DATA

Disclosure Rating Data

No	Country	Company	Index1	Index2	Index3	Index4	Index5	Index6	Index7	Index8	Index9	Index10	Index11
1	Australia	Coles Group	0	0	0	0	0	0	1	1	1	1	0
2	Australia	Woolworths	1	0	1	0	1	0	0	1	0	0	1
3	Austria	OMV Group	0	0	1	1	0	0	1	1	0	1	1
4	Belgium	Delhaize Group	1	0	0	0	0	0	0	0	1	1	0
5	Brazil	CVRD	0	1	0	1	1	1	1	1	0	0	0
6	Brazil	Petrobras	0	0	0	0	0	0	0	0	0	0	1
7	Britain	Anglo American	0	0	1	1	0	0	1	1	1	1	0
8	Britain	AstraZeneca	0	0	0	1	0	1	0	1	0	0	0
9	Britain	BAE Systems	1	0	0	1	0	0	0	1	0	0	1
10	Britain	BP	1	0	0	0	0	0	1	1	0	0	0
11	Britain	British Airways	0	0	1	1	1	1	0	1	0	1	1
12	Britain	British American Tobacco	1	0	1	0	0	0	0	0	1	1	1
13	Britain	Compass Group	1	0	1	1	0	1	1	0	0	0	1
14	Britain	GlaxoSmithKline	1	0	1	1	0	0	0	1	0	0	0
15	Britain	J. Sainsbury	0	0	1	1	0	0	0	0	1	0	0
16	Britain	Kingfisher	0	0	1	1	0	0	1	0	0	1	0
17	Britain	Marks & Spencer	0	0	1	1	0	1	0	1	0	0	0
18	Britain	Rio Tinto Group	1	0	1	1	0	0	1	1	0	0	0

No	Country	Company	Index1	Index2	Index3	Index4	Index5	Index6	Index7	Index8	Index9	Index10	Index11
19	Britain	Royal Mail Holdings	0	0	0	1	1	0	0	0	1	1	1
20	Britain	SABMiller	0	0	1	1	1	1	0	1	0	1	0
21	Britain	Scottish & Southern Energy	0	0	1	1	1	0	1	1	0	0	0
22	Britain	Tesco	0	0	1	1	1	0	1	0	0	0	0
23	Britaln	William Morrison Supermarkets	0	0	0	1	0	0	1	0	0	0	1
24	Britain	Wolseley	1	0	1	1	0	0	0	1	0	0	0
25	Netherlands	Unilever	1	0	1	1	0	1	1	1	0	0	0
26	Canada	Bombardier	1	0	1	1	1	0	0	1	0	0	0
27	Canada	EnCana	1	0	0	0	0	0	0	1	1	0	0
28	Canada	George Weston	1	0	1	0	0	1	0	1	0	0	1
29	Canada	Magna International	0	0	0	1	0	0	1	1	0	1	0
30	Canada	Petro-Canada	0	0	0	0	0	0	0	0	1	0	0
31	China	Jardine Matheson	0	0	0	0	0	0	1	1	0	0	0
32	China	Sinochem	0	0	0	0	1	0	1	0	0	0	0
33	Denmark	A.P. Møller-Mærsk Group	1	0	0	1	0	0	0	1	0	0	0
34	Finland	Nokia	0	0	0	1	0	1	0	1	1	0	1
35	Finland	Stora Enso	0	0	1	1	1	0	1	0	0	1	0
36	France	Alcatel-Lucent	0	0	0	1	0	0	0	1	0	0	0
37	France	Alstom	1	0	1	1	0	0	1	1	1	0	1
38	France	Bouygues	1	0	1	1	1	0	1	0	0	0	0

No	Country	Company	Index1	Index2	Index3	Index4	Index5	Index6	Index7	Index8	Index9	Index10	Index11
39	France	Carrefour	1	0	0	0	0	0	0	1	0	1	0
40	France	Eiffage	1	0	0	1	0	1	1	0	1	0	0
41	France	Électricité de France	1	0	1	1	1	0	0	0	0	0	1
42	France	Foncière Euris	0	0	1	1	1	0	0	0	1	0	0
43	France	France Télécom	0	0	0	0	1	0	1	0	0	1	0
44	France	Gaz de France	0	0	1	1	1	0	1	0	0	0	0
45	France	Groupe Danone	1	0	1	1	0	0	0	1	1	0	0
46	France	Lafarge	1	0	1	1	0	1	0	0	0	0	1
47	France	Michelin	1	0	1	1	0	0	0	1	0	0	0
48	France	Peugeot	0	0	0	1	1	0	0	1	0	1	0
49	France	Renault	1	0	0	1	0	0	0	1	0	0	1
50	France	Saint-Gobain	1	0	1	1	1	0	0	1	1	0	0
51	France	Sanofi-Aventis	0	0	0	1	0	0	0	1	0	0	1
52	France	Schneider Electric	1	0	1	1	1	1	1	0	0	0	0
53	France	Sodexo	1	0	0	1	1	0	0	1	1	0	0
54	France	Thales Group	1	0	1	1	0	1	0	0	0	1	1
55	France	Total	0	0	0	1	1	0	0	0	0	0	0
56	France	Vinci	0	0	0	1	1	0	0	0	1	0	0
57	France	Vivendi	0	0	1	1	0	0	0	0	0	0	0
58	Germany	Arcandor	1	0	0	1	0	0	0	0	0	0	0
59	Germany	BASF	1	0	1	1	0	0	1	1	0	1	1
60	Germany	Bayer	0	0	1	1	0	0	0	1	0	1	1

No	Country	Company	Index1	Index2	Index3	Index4	Index5	Index6	Index7	Index8	Index9	Index10	Index11
61	Germany	Bertelsmann	0	0	1	1	0	0	1	0	0	0	0
62	Germany	BMW	1	0	1	1	1	1	0	1	0	0	1
63	Germany	Continental	1	0	1	1	0	0	1	0	1	0	1
64	Germany	Deutsche Post	1	0	1	1	0	0	0	0	0	0	1
65	Germany	Deutsche Telekom	1	0	1	1	1	0	1	1	0	0	1
66	Germany	E.ON	0	0	1	1	0	0	1	0	1	0	0
67	Germany	Energie Baden-Württemberg	1	0	1	1	1	1	0	1	0	0	1
68	Germany	Franz Haniel	0	0	1	1	0	0	0	0	0	0	0
69	Germany	Henkel	1	0	1	1	0	0	1	1	0	1	1
70	Germany	Hochtief	1	0	1	1	0	0	0	0	0	0	0
71	Germany	Linde Group	1	0	0	1	1	0	1	0	1	0	0
72	Germany	Lufthansa Group	1	0	1	1	1	0	1	1	0	0	0
73	Germany	MAN Group	1	0	1	1	1	0	1	1	1	0	0
74	Germany	Metro	0	0	1	1	0	0	0	0	0	0	1
75	Germany	Otto Group	1	0	0	1	1	0	1	0	0	0	1
76	Germany	Robert Bosch	0	0	1	1	0	0	0	1	1	0	0
77	Germany	RWE	1	0	1	1	0	1	1	0	0	0	0
78	Germany	Siemens	1	0	1	1	0	0	0	1	0	0	0
79	Germany	ThyssenKrupp	1	0	1	1	1	0	1	1	0	0	0
80	Germany	TUI	0	0	1	1	0	0	0	0	1	0	1
81	Germany	Volkswagen	0	0	1	1	1	1	1	1	0	0	1
82	Germany	ZF Friedrichshafen	1	0	0	1	0	0	0	0	0	0	0

No	Country	Company	Index1	Index2	Index3	Index4	Index5	Index6	Index7	Index8	Index9	Index10	Index11
83	India	Bharat Petroleum	0	0	0	0	0	0	0	0	0	0	0
84	India	Hindustan Petroleum	0	0	0	1	0	0	1	0	0	0	0
85	India	Indian Oil	0	0	0	0	0	0	0	0	0	0	0
86	India	Oil & Natural Gas	0	0	0	0	0	0	0	0	1	0	0
87	India	Reliance Industries	0	0	0	1	1	0	0	0	0	0	0
88	India	Tata Steel	0	0	0	1	1	0	1	1	0	0	0
89	Italy	Enel	0	0	0	0	0	0	0	0	1	0	0
90	Italy	ENI	1	0	1	1	0	0	0	1	1	1	1
91	Italy	Fiat	0	0	0	1	0	0	0	1	0	0	0
92	Italy	Finmeccanica	0	0	1	1	0	1	0	0	0	1	1
93	Italy	Telecom Italia	0	0	1	1	1	0	0	1	1	0	0
94	Japan	AEON	0	0	0	0	0	0	1	0	0	0	1
95	Japan	Aisin Seiki	0	0	0	1	0	0	1	1	0	1	0
96	Japan	Bridgestone	0	0	0	0	0	0	0	1	1	0	0
97	Japan	Canon	1	0	0	1	0	0	0	0	1	1	0
98	Japan	Chubu Electric Power	1	0	0	1	1	0	0	1	0	0	0
99	Japan	Cosmo Oil	0	0	0	1	0	0	0	1	0	0	0
100	Japan	Denso	0	0	0	1	0	0	0	1	0	1	0
101	Japan	East Japan Railway	1	0	0	1	0	1	0	1	0	0	0
102	Japan	Fujifilm Holdings	0	0	1	1	0	0	0	0	1	1	1
103	Japan	Fujitsu	1	0	0	1	0	0	1	1	0	0	0

No	Country	Company	Index1	Index2	Index3	Index4	Index5	Index6	Index7	Index8	Index9	Index10	Index11
104	Japan	Hitachi	0	0	1	1	0	0	0	1	1	0	0
105	Japan	Honda Motor	0	0	1	1	0	1	0	1	0	0	0
106	Japan	Idemitsu Kosan	0	0	0	1	0	0	0	0	0	0	0
107	Japan	Isuzu Motors	0	0	0	0	0	0	1	1	0	0	0
108	Japan	Itochu	0	0	0	1	0	0	0	1	0	0	0
109	Japan	Japan Tobacco	1	0	0	1	0	1	0	1	1	0	0
110	Japan	JFE Holdings	1	0	0	0	0	0	0	0	0	1	1
111	Japan	Kansai Electric Power	1	0	0	1	0	0	0	1	0	0	0
112	Japan	KDDI	1	0	0	1	0	0	0	0	0	1	0
113	Japan	Kobe Steel	0	0	0	1	0	0	0	1	0	0	0
114	Japan	Komatsu	0	0	0	1	0	0	1	0	0	0	0
115	Japan	Marubeni	1	0	1	0	0	0	0	0	0	1	1
116	Japan	Matsushita Electric Industrial	1	0	1	1	0	1	0	1	0	0	0
117	Japan	Mazda Motor	1	0	0	1	0	0	0	1	0	0	0
118	Japan	Mediceo Paltac Holdings	0	0	0	1	0	0	1	0	1	1	0
119	Japan	Mitsubishi	1	0	1	1	0	0	0	1	1	0	0
120	Japan	Mitsubishi Chemical Holdings	1	0	0	1	0	1	0	1	0	0	0
121	Japan	Mitsubishi Electric	1	0	0	0	0	0	1	1	0	1	1
122	Japan	Mitsubishi Heavy Industries	0	0	0	1	0	0	0	1	0	0	0

No	Country	Company	Index1	Index2	Index3	Index4	Index5	Index6	Index7	Index8	Index9	Index10	Index11
123	Japan	Mitsubishi Motors	0	0	0	1	0	0	0	1	1	0	0
124	Japan	Mitsui	1	0	0	1	0	0	0	0	0	0	0
125	Japan	Mitsui OSK Lines	1	0	0	0	0	0	1	1	0	0	1
126	Japan	NEC	0	0	0	1	0	0	0	1	0	1	1
127	Japan	Nippon Mining Holdings	0	0	0	1	0	0	0	1	0	0	0
128	Japan	Nippon Oil	0	0	0	1	1	0	0	0	1	1	1
129	Japan	Nippon Steel	0	0	0	1	1	0	0	1	0	0	0
130	Japan	Nippon Telegraph & Telephone	1	0	0	1	0	0	0	1	1	0	0
131	Japan	Nippon Yusen	0	0	0	0	0	0	1	0	0	1	1
132	Japan	Nissan Motor	1	0	0	1	0	0	0	1	0	1	0
133	Japan	Ricoh	1	0	0	0	0	0	1	1	1	0	1
134	Japan	Sanyo Electric	1	0	0	1	0	0	0	1	0	0	0
135	Japan	Seven & I Holdings	1	0	0	1	0	0	0	1	0	0	0
136	Japan	Sharp	0	0	0	1	0	0	1	0	1	0	0
137	Japan	Softbank	1	0	1	1	1	0	0	1	0	1	1
138	Japan	Sony	1	0	0	1	0	1	0	1	0	1	1
139	Japan	Sumitomo	1	0	1	1	0	0	0	0	1	0	0
140	Japan	Sumitomo Electric Industries	1	0	0	1	0	0	0	1	0	0	0
141	Japan	Suzuki Motor	0	0	0	0	0	0	1	0	0	1	1
142	Japan	Tokyo Electric	1	0	0	1	0	0	0	1	1	0	0

No	Country	Company	Index1	Index2	Index3	Index4	Index5	Index6	Index7	Index8	Index9	Index10	Index11
		Power											
143	Japan	Toshiba	1	0	0	1	0	1	0	1	0	0	0
144	Japan	Toyota Industries	0	0	0	1	0	0	0	1	0	0	0
145	Japan	Toyota Motor	1	0	0	1	0	0	0	1	1	0	0
146	Luxembourg	ArcelorMittal	0	0	0	0	0	0	1	0	0	0	1
147	Mexico	Cemex	1	0	1	0	0	0	0	1	0	0	1
148	Mexico	Pemex	0	0	0	0	0	0	1	0	1	0	0
149	Netherlands	Akzo Nobel	0	0	1	1	1	1	0	1	0	1	0
150	Netherlands	EADS	1	0	1	1	1	0	0	1	1	0	0
151	Netherlands	Royal Ahold	0	0	1	1	0	1	0	1	0	0	1
152	Netherlands	Royal Dutch Shell	0	0	0	0	0	0	0	0	0	0	0
153	Netherlands	Royal Philips Electronics	0	0	1	1	1	1	0	1	0	0	0
154	Netherlands	SHV Holdings	0	0	0	0	0	0	0	1	0	0	0
155	Norway	Norsk Hydro	0	0	1	1	1	0	0	1	0	1	1
156	Norway	Statoil Hydro	0	0	1	0	0	0	0	1	0	0	1
157	Poland	PKN Orlen Group	0	0	0	0	0	0	0	0	1	0	0
158	Portugal	Galp Energia	0	0	1	1	0	1	0	0	0	0	0
159	Russia	Gazprom	0	0	0	1	0	0	0	1	0	0	0
160	Russia	Lukoil	1	0	1	0	0	0	0	1	0	0	0
161	Russia	Rosneft Oil	1	0	0	1	0	0	0	0	1	0	0
162	Singapore	Flextronics International	0	0	1	0	0	0	0	1	1	0	0

No	Country	Company	Index1	Index2	Index3	Index4	Index5	Index6	Index7	Index8	Index9	Index10	Index11
163	South Korea	KT	0	0	0	0	1	1	0	1	0	1	1
164	South Korea	LG	0	0	0	0	0	0	0	0	0	1	1
165	South Korea	Samsung Electronics	0	0	0	0	0	0	0	1	0	0	0
166	Spain	ACS	0	0	1	1	1	0	0	0	1	0	0
167	Spain	Cepsa	0	0	0	1	0	0	0	1	0	0	0
168	Spain	Fomento de Construcciones	0	0	0	1	1	0	0	0	1	0	1
169	Spain	Grupo Ferrovial	0	0	1	1	1	1	0	0	0	1	0
170	Spain	Repsol YPF	0	0	1	1	0	0	0	1	0	0	1
171	Spain	Telefónica	1	0	1	1	1	0	0	1	0	0	0
172	Sweden	L.M. Ericsson	0	0	1	1	0	0	0	0	1	1	1
173	Sweden	Skanska	0	0	1	1	0	1	0	0	0	0	0
174	Sweden	Volvo	0	0	0	1	0	0	0	0	0	0	1
175	Switzerland	Adecco	1	1	1	0	1	0	0	0	0	0	1
176	Switzerland	Alliance Boots	0	0	1	0	0	0	0	0	0	1	0
177	Switzerland	Holcim	1	0	1	1	0	1	0	1	0	1	1
178	Switzerland	Nestlé	0	0	0	0	0	0	0	0	1	1	1
179	Switzerland	Novartis	1	0	1	0	0	0	0	0	0	0	0
180	Switzerland	Roche Group	0	0	0	1	1	0	0	1	0	1	1
181	Switzerland	Xstrata	1	0	1	1	1	0	0	0	1	0	0
182	Taiwan	Asustek Computer	0	0	0	1	0	0	0	0	1	0	0
183	Taiwan	CPC	0	0	0	0	0	0	0	0	0	0	0

No	Country	Company	Index1	Index2	Index3	Index4	Index5	Index6	Index7	Index8	Index9	Index10	Index11
184	Taiwan	Quanta Computer	0	0	0	0	0	0	0	0	1	0	0
185	Turkey	Koç Holding	0	1	1	1	0	1	0	0	0	0	0
186	U.S.	3M	0	0	0	1	0	0	1	0	1	0	0
187	U.S.	Abbott Laboratories	0	0	1	1	1	0	0	0	0	1	1
188	U.S.	Aetna	0	0	1	0	0	0	0	0	0	0	0
189	U.S.	Alcoa	0	0	1	1	0	0	0	0	1	0	0
190	U.S.	Altria Group	0	0	0	1	0	0	0	0	0	0	0
191	U.S.	AmerisourceBergen	0	0	0	0	0	0	0	0	0	1	1
192	U.S.	AMR	0	0	0	1	0	0	0	0	0	0	0
193	U.S.	Apple	0	0	0	0	0	0	1	1	1	1	1
194	U.S.	Archer Daniels Midland	0	0	0	1	0	0	0	0	0	0	0
195	U.S.	AT&T	1	0	1	1	0	1	0	0	1	1	1
196	U.S.	AutoNation	0	0	0	0	0	0	0	0	0	0	0
197	U.S.	Best Buy	0	0	0	1	0	0	0	0	0	0	0
198	U.S.	Boeing	0	0	0	0	0	0	1	0	0	0	0
199	U.S.	Bristol-Myers Squibb	0	0	1	1	0	0	0	0	1	0	0
200	U.S.	Bunge	0	0	1	0	0	0	0	0	0	0	0
201	U.S.	Cardinal Health	0	0	0	1	0	1	0	1	0	0	0
202	U.S.	Caterpillar	0	0	0	1	0	0	1	0	0	0	0
203	U.S.	Chevron	0	0	0	1	1	1	0	0	1	1	1
204	U.S.	CHS	0	0	0	1	0	0	0	0	0	0	0

No	Country	Company	Index1	Index2	Index3	Index4	Index5	Index6	Index7	Index8	Index9	Index10	Index11
205	U.S.	Cigna	0	0	1	0	0	0	0	1	0	0	0
206	U.S.	Coca-Cola	0	1	1	0	0	1	0	0	1	1	1
207	U.S.	Coca-Cola Enterprises	1	0	1	0	0	0	0	0	0	1	1
208	U.S.	Comcast	0	0	0	0	0	0	0	0	0	0	0
209	U.S.	ConocoPhillips	0	0	0	0	0	0	1	0	1	1	1
210	U.S.	Constellation Energy	0	0	0	0	0	0	0	0	0	0	0
211	U.S.	Costco Wholesale	0	0	0	1	0	0	0	1	0	0	0
212	U.S.	CVS Caremark	1	0	0	1	0	0	0	0	0	0	0
213	U.S.	Deere	0	0	1	1	0	1	0	0	0	0	0
214	U.S.	Dell	0	0	1	1	0	0	0	0	0	0	0
215	U.S.	Delphi	0	0	0	1	0	0	1	1	0	1	0
216	U.S.	Delta Air Lines	0	0	1	1	0	0	0	0	0	0	0
217	U.S.	Dow Chemical	0	0	1	1	0	1	0	0	0	0	0
218	U.S.	DuPont	0	0	0	1	0	0	0	0	1	0	0
219	U.S.	Electronic Data Systems	1	0	1	1	0	0	0	0	0	1	0
220	U.S.	Eli Lilly	0	0	1	1	1	0	0	1	0	1	1
221	U.S.	Emerson Electric	1	0	0	1	0	0	1	0	0	0	1
222	U.S.	Enterprise GP Holdings	0	0	1	0	0	1	0	0	0	1	1
223	U.S.	Exelon	0	0	1	0	0	0	0	0	0	0	0

No	Country	Company	Index1	Index2	Index3	Index4	Index5	Index6	Index7	Index8	Index9	Index10	Index11
224	U.S.	Express Scripts	0	0	0	0	0	0	1	0	0	0	0
225	U.S.	Exxon Mobil	0	0	0	0	0	0	0	1	0	0	0
226	U.S.	Ford Motor	0	0	1	1	0	1	0	0	1	1	1
227	U.S.	Freeport-McMoRan Copper & Gold	0	0	0	1	0	0	0	1	1	0	0
228	U.S.	General Dynamics	1	0	0	1	1	1	0	0	0	0	0
229	U.S.	General Motors	0	0	1	0	0	0	0	0	0	1	1
230	U.S.	Goodyear Tire & Rubber	0	0	0	1	0	0	0	0	0	0	0
231	U.S.	HCA	0	0	0	0	0	0	0	1	0	0	0
232	U.S.	Hewlett-Packard	0	0	1	1	0	1	0	0	0	0	0
233	U.S.	Home Depot	0	0	0	0	0	0	0	0	0	0	0
234	U.S.	Honeywell International	1	0	0	0	0	0	0	0	0	0	0
235	U.S.	Humana	0	0	1	1	0	0	0	0	1	0	0
236	U.S.	Ingram Micro	0	0	0	0	0	0	0	1	0	0	0
237	U.S.	Intel	0	0	0	1	0	0	0	0	0	1	0
238	U.S.	International Business Machines	1	0	1	1	0	1	0	1	0	1	1
239	U.S.	International Paper	0	0	1	1	0	0	0	0	0	0	0
240	U.S.	J.C. Penney	0	0	0	0	0	0	0	0	1	0	0
241	U.S.	Kimberly-Clark	1	0	0	0	0	0	1	0	0	0	1
242	U.S.	Kraft Foods	0	0	0	1	0	0	0	1	1	0	0

No	Country	Company	Index1	Index2	Index3	Index4	Index5	Index6	Index7	Index8	Index9	Index10	Index11
243	U.S.	Kroger	1	0	1	0	0	0	0	0	0	0	1
244	U.S.	Lockheed Martin	0	0	1	0	0	0	0	1	0	0	0
245	U.S.	Macy's	0	0	0	1	0	0	0	0	0	1	0
246	U.S.	Manpower	0	0	0	0	0	0	0	0	0	0	0
247	U.S.	Marathon Oil	0	0	1	1	0	0	0	1	0	0	0
248	U.S.	McDonald's	0	0	0	0	0	1	1	0	0	0	1
249	U.S.	McKesson	0	0	0	0	0	0	0	1	0	0	0
250	U.S.	Medco Health Solutions	0	0	0	1	0	0	0	0	0	0	0
251	U.S.	Merck	0	0	0	1	0	1	0	0	0	1	0
252	U.S.	Motorola	0	0	0	1	0	0	0	1	0	1	0
253	U.S.	Murphy Oil	0	0	1	1	0	0	0	0	0	1	1
254	U.S.	News Corp.	0	0	0	0	0	0	0	0	1	0	0
255	U.S.	Northrop Grumman	1	0	1	1	0	0	0	1	0	0	0
256	U.S.	Oracle	1	0	1	1	0	1	0	0	0	1	1
257	U.S.	PepsiCo	0	0	1	1	0	0	0	0	0	1	1
258	U.S.	Pfizer	0	0	0	1	0	0	1	0	0	0	0
259	U.S.	Plains All American Pipeline	0	0	1	0	0	0	0	0	0	0	0
260	U.S.	Procter & Gamble	1	0	1	0	1	0	0	1	0	1	1
261	U.S.	Publix Super Markets	0	0	0	0	1	0	0	0	0	0	0
262	U.S.	Raytheon	1	0	1	1	0	0	0	0	0	0	0

No	Country	Company	Index1	Index2	Index3	Index4	Index5	Index6	Index7	Index8	Index9	Index10	Index11
263	U.S.	Rite Aid	0	0	1	0	0	0	0	0	0	0	0
264	U.S.	Schlumberger	0	0	0	1	0	0	0	1	0	1	1
265	U.S.	Sears Holdings	0	0	0	0	0	0	0	0	0	0	0
266	U.S.	Sprint Nextel	1	0	1	0	0	0	0	0	1	1	1
267	U.S.	Sunoco	0	0	0	1	0	0	0	0	0	0	0
268	U.S.	Supervalu	0	0	0	0	0	0	0	0	0	0	0
269	U.S.	Target	0	0	0	0	0	0	0	0	0	0	0
270	U.S.	Tech Data	0	0	0	0	0	0	0	0	0	1	1
271	U.S.	Time Warner	0	0	0	1	0	1	0	0	0	0	0
272	U.S.	TJX	0	0	0	0	0	0	1	0	0	0	0
273	U.S.	Tyco International	1	0	0	0	0	0	0	0	0	0	0
274	U.S.	Tyson Foods	0	0	0	0	0	0	0	0	0	0	0
275	U.S.	UAL	0	0	1	1	0	0	0	0	0	0	0
276	U.S.	United Parcel Service	0	0	1	1	0	0	1	1	0	1	1
277	U.S.	United States Steel	1	0	0	1	0	0	0	0	0	0	0
278	U.S.	United Technologies	0	0	0	1	0	0	0	0	0	0	0
279	U.S.	UnitedHealth Group	0	0	1	0	0	0	0	0	1	0	0
280	U.S.	Valero Energy	1	0	0	1	0	0	0	0	0	1	1
281	U.S.	Walgreen	0	0	1	0	0	0	0	0	0	0	0
282	U.S.	Wal-Mart Stores	1	0	0	0	0	0	1	1	0	1	0
283	U.S.	Walt Disney	1	0	1	0	0	0	0	0	0	1	1

No	Country	Company	Index1	Index2	Index3	Index4	Index5	Index6	Index7	Index8	Index9	Index10	Index11
284	U.S.	WellPoint	0	0	0	0	0	0	0	0	0	0	0
285	U.S.	Weyerhaeuser	0	0	1	1	1	0	0	0	0	0	1
286	U.S.	Whirlpool	0	0	0	1	0	0	0	0	0	0	0
287	U.S.	Wyeth	0	0	0	1	0	0	0	0	0	1	1
288	U.S.	Xerox	0	0	1	1	0	0	1	0	0	1	1

Appendix E
(continue)

Primary and Control variables Data

No.	Country	Company	FOR SUBS	FOR SALES	FOR SHS	FOR DEBT	ANALYST	SHARE_SPREAD	GROWTH	SIZE	ROA net	BvDEPIndepInd SHARE_SPREAD
1	Australia	Coles Group	0.000	0.310	0.020	0.022	0	0	3.15	45,985	0.077	D
2	Australia	Woolworths	0.714	0.570	0.240	0.030	13	9	0.53	51,684	0.006	A+
3	Austria	OMV Group	0.000	0.200	0.130	0.079	20	6	1.40	23,036	0.074	B+
4	Belgium	Delhaize Group	0.184	0.337	0.592	0.021	23	9	1.17	41,331	0.046	A+
5	Brazil	CVRD	0.000	0.809	0.053	0.367	0	0	5.12	42,308	0.070	D
6	Brazil	Petrobras	0.000	0.360	0.120	0.150	15	0	1.01	76,283	0.093	D
7	Britain	Anglo American	0.000	0.574	0.190	0.247	23	6	2.33	9,556	0.163	B+
8	Britain	AstraZeneca	0.794	0.737	0.691	0.189	40	9	4.05	6,361	0.117	A+
9	Britain	BAE Systems	0.615	0.305	0.281	0.063	16	9	1.59	13,729	0.044	A+
10	Britain	BP	0.000	1.000	0.403	0.072	39	6	2.00	181,758	0.088	B+
11	Britain	British Airways	0.124	0.098	0.818	0.078	21	9	0.66	32,199	0.061	A+
12	Britain	British American	0.000	0.145	0.150	0.213	15	6	5.07	16,798	0.114	B+

No.	Country	Company	FOR SUBS	FOR SALES	FOR SHS	FOR DEBT	ANALYST	SHARE_SPREAD	GROWTH	SIZE	ROA net	BvDEPIndepInd SHARE_SPREAD
		Tobacco										
13	Britain	Compass Group	0.834	0.078	0.285	0.048	21	9	2.24	41,252	0.080	A+
14	Britain	GlaxoSmithKline	0.591	0.094	0.449	0.230	28	9	10.63	7,794	0.168	A+
15	Britain	J. Sainsbury	0.000	1.000	0.150	0.018	19	6	0.75	34,204	0.033	B+
16	Britain	Kingfisher	0.730	0.350	0.701	0.029	25	9	0.49	35,568	0.029	A+
17	Britain	Marks & Spencer	0.791	0.250	0.190	0.091	24	9	1.46	40,078	0.115	A+
18	Britain	Rio Tinto Group	0.722	0.306	0.514	0.246	16	9	4.75	47,073	0.072	A+
19	Britain	Royal Mail Holdings	0.000	0.100	0.140	0.014	0	0	1.27	45,275	(0.148)	D
20	Britain	SABMiller	0.000	0.291	0.860	0.119	18	6	1.11	18,505	0.056	B+
21	Britain	Scottish & Southern Energy	0.792	0.240	0.567	0.057	9	9	2.05	26,526	0.062	A+
22	Britain	Tesco	0.669	0.510	0.356	0.045	28	9	1.50	5,508	0.070	A+
23	Britain	William Morrison Supermarkets	0.739	0.100	0.190	0.043	21	9	1.10	39,091	0.073	A+
24	Britain	Wolseley	0.639	0.249	0.268	0.029	16	9	1.19	33,920	0.007	A+
25	Canada	Bombardier	0.000	0.430	0.570	0.018	13	0	1.63	33,756	0.014	D
26	Canada	EnCana	0.000	0.134	0.110	0.185	24	6	1.57	7,344	0.084	B+
27	Canada	George Weston	0.000	0.433	0.570	0.017	4	0	1.87	35,708	0.028	D
28	Canada	Magna International	0.000	0.110	0.808	0.025	18	0	0.65	38,975	0.043	D
29	Canada	Petro-Canada	0.032	0.636	0.110	0.129	15	9	1.43	30,178	0.115	A+
30	China	Jardine Matheson	0.000	0.453	0.880	0.094	5	2	1.89	32,105	0.082	C
31	China	Sinochem	0.000	0.925	0.833	0.021	1	0	4.92	52,447	0.046	D
32	Denmark	A.P. Møller-Mærsk	0.000	0.250	0.089	0.063	19	0	0.77	10,214	0.054	D

No.	Country	Company	FOR SUBS	FOR SALES	FOR SHS	FOR DEBT	ANALYST	SHARE_SPREAD	GROWTH	SIZE	ROA net	BvDEPIndepInd SHARE_SPREAD
		Group										
33	Finland	Nokia	0.683	0.010	0.653	0.141	63	9	9.17	1,032	0.192	A+
34	Finland	Stora Enso	0.000	0.070	0.895	0.014	21	6	0.75	31,779	(0.014)	B+
35	France	Alcatel-Lucent	0.794	0.217	0.309	0.195	35	9	1.14	4,516	(0.104)	A+
36	France	Alstom	0.000	0.230	0.150	0.050	21	6	3.02	20,567	0.040	B+
37	France	Bouygues	0.000	0.991	0.160	0.046	16	6	1.91	5,108	0.041	B+
38	France	Carrefour	0.407	0.513	0.082	0.027	30	9	1.46	22,132	0.048	A+
39	France	Eiffage	0.947	0.080	0.041	0.079	14	9	10.75	17,369	0.040	A+
40	France	Électricité de France	0.000	0.690	0.180	0.094	20	0	6.33	219,712	0.030	D
41	France	Foncière Eurls	0.000	0.100	0.196	0.006	0	2	0.09	16,797	0.006	C
42	France	France Télécom	0.000	0.675	0.237	0.119	34	6	0.94	94,634	0.062	B+
43	France	Gaz de France	0.000	0.120	0.102	0.090	25	6	2.15	13,661	0.054	B+
44	France	Groupe Danone	0.599	0.088	0.148	0.284	33	9	1.79	13,723	0.152	A+
45	France	Lafarge	0.000	0.514	0.430	0.108	19	6	1.77	12,645	0.067	B+
46	France	Michelin	0.358	0.698	0.266	0.046	18	9	6.31	30,103	0.047	A+
47	France	Peugeot	0.000	0.142	0.204	0.015	24	6	0.83	47,220	0.011	B+
48	France	Renault	0.802	0.361	0.103	0.066	28	9	0.92	46,077	0.039	A+
49	France	Saint-Gobain	0.769	0.080	0.045	0.034	24	9	1.39	6,242	0.036	A+
50	France	Sanofi-Aventis	0.374	0.496	0.185	0.180	31	9	1.19	51,547	0.073	A+
51	France	Schneider Electric	0.287	0.387	0.085	0.091	21	9	1.75	20,065	0.068	A+
52	France	Sodexo	0.000	0.647	0.163	0.026	11	6	2.73	42,398	0.040	B+
53	France	Thales Group	0.000	0.285	0.188	0.072	13	6	1.65	28,267	0.050	B+
54	France	Total	0.834	0.531	0.114	0.096	37	9	3.04	112,826	0.116	A+

No.	Country	Company	FOR SUBS	FOR SALES	FOR SHS	FOR DEBT	ANALYST	SHARE_SPREAD	GROWTH	SIZE	ROA net	BvDEPIndepInd SHARE_SPREAD
55	France	Vinci	0.889	0.120	0.040	0.048	20	9	0.73	18,617	0.029	A+
56	France	Vivendi	0.902	0.060	0.375	0.121	28	9	1.07	12,043	0.058	A+
57	Germany	Arcandor	0.000	0.290	0.110	0.001	12	0	1.36	34,169	0.001	D
58	Germany	BASF	0.159	0.624	0.089	0.070	34	9	2.84	14,580	0.087	A+
59	Germany	Bayer	0.612	0.063	0.248	0.144	36	9	8.62	21,316	0.092	A+
60	Germany	Bertelsmann	0.000	0.939	0.005	0.012	0	0	3.12	22,261	0.010	D
61	Germany	BMW	0.582	0.656	0.299	0.056	34	9	0.86	76,695	0.035	A+
62	Germany	Continental	0.323	0.260	0.286	0.061	24	9	2.48	13,485	0.037	A+
63	Germany	Deutsche Post	0.000	0.339	0.049	0.021	27	6	10.78	292,312	0.006	B+
64	Germany	Deutsche Telekom	0.613	0.050	0.165	0.009	42	9	0.85	123,312	0.005	A+
65	Germany	E.ON	0.912	0.295	0.052	0.105	36	9	1.54	147,793	0.052	A+
66	Germany	Energie Baden-Württemberg	0.000	0.604	0.065	0.092	1	6	1.64	12,489	0.048	B+
67	Germany	Franz Haniel	0.000	0.047	0.005	0.024	0	0	3.16	28,248	0.039	D
68	Germany	Henkel	0.000	0.041	0.189	0.070	26	0	1.11	35,110	0.071	D
69	Germany	Hochtief	0.000	0.090	0.648	0.009	19	3	3.16	38,629	0.013	C+
70	Germany	Linde Group	0.564	0.733	0.144	0.075	31	9	0.91	17,581	0.038	A+
71	Germany	Lufthansa Group	0.414	0.013	0.185	0.074	25	9	0.93	21,460	0.074	A+
72	Germany	MAN Group	0.581	0.210	0.120	0.073	15	9	0.01	48,082	0.556	A+
73	Germany	Metro	0.000	0.390	0.039	0.013	29	6	1.33	4,455	0.024	B+
74	Germany	Otto Group	0.000	0.027	0.667	0.006	0	0	1.85	53,643	0.263	D
75	Germany	Robert Bosch	0.000	0.248	0.049	0.060	0	0	2.16	17,179	0.057	D
76	Germany	RWE	0.791	0.772	0.122	0.062	33	9	10.14	68,796	0.032	A+

No.	Country	Company	FOR SUBS	FOR SALES	FOR SHS	FOR DEBT	ANALYST	SHARE_SPREAD	GROWTH	SIZE	ROA net	BvDEPIndepInd SHARE_SPREAD
77	Germany	Siemens	0.189	0.150	0.036	0.048	39	9	2.58	75,498	0.042	A+
78	Germany	ThyssenKrupp	0.000	0.330	0.528	0.041	28	6	13.20	332	0.055	B+
79	Germany	TUI	0.863	0.548	0.112	0.008	16	9	0.73	30,316	0.011	A+
80	Germany	Volkswagen	0.000	0.295	0.102	0.038	33	6	2.91	159,662	0.028	B+
81	Germany	ZF Friedrichshafen	0.000	0.025	0.015	0.040	0	0	1.78	42,553	0.064	D
82	India	Bharat Petroleum	0.000	0.320	0.180	0.016	12	0	1.13	45,718	0.057	D
83	India	Hindustan Petroleum	0.000	0.220	0.210	0.012	12	0	0.90	46,798	0.051	D
84	India	Indian Oil	0.000	0.270	0.130	0.034	6	0	1.67	30,427	0.076	D
85	India	Oil & Natural Gas	0.000	0.125	0.150	0.205	21	0	1.83	28,916	0.160	D
86	India	Reliance Industries	0.174	0.485	0.350	0.135	20	9	3.94	10,561	0.112	A+
87	India	Tata Steel	0.000	0.510	0.658	0.117	23	0	0.23	53,180	0.084	D
88	Italy	Enel	0.858	0.568	0.138	0.091	31	9	1.49	127,852	0.032	A+
89	Italy	ENI	0.744	0.848	0.105	0.114	38	9	1.96	95,042	0.099	A+
90	Italy	Fiat	0.000	0.826	0.150	0.033	25	0	0.91	34,209	0.032	D
91	Italy	Finmeccanica	0.000	0.344	0.167	0.033	15	6	1.40	18,917	0.020	B+
92	Italy	Telecom Italia	0.252	0.414	0.436	0.077	32	9	0.70	74,381	0.028	A+
93	Japan	AEON	0.191	0.260	0.191	0.009	13	9	6.65	24,487	0.016	A+
94	Japan	Aisin Seiki	0.148	0.913	0.391	0.034	12	9	1.31	36,996	0.033	A+
95	Japan	Bridgestone	0.361	0.663	0.185	0.039	12	9	1.24	24,850	0.039	A+
96	Japan	Canon	0.447	0.528	0.235	0.109	19	9	1.35	14,733	0.108	A+
97	Japan	Chubu Electric Power	0.000	0.700	0.833	0.029	10	9	0.77	5,854	0.016	A+
98	Japan	Cosmo Oil	0.052	0.430	0.448	0.012	4	9	1.08	40,895	0.017	A+
99	Japan	Denso	0.132	0.578	0.149	0.061	13	9	1.19	22,315	0.054	A+

No.	Country	Company	FOR SUBS	FOR SALES	FOR SHS	FOR DEBT	ANALYST	SHARE_SPREAD	GROWTH	SIZE	ROA net	BvDEPIndepInd SHARE_SPREAD
100	Japan	East Japan Railway	0.016	0.650	0.258	0.070	10	9	0.73	4,909	0.025	A+
101	Japan	Fujifilm Holdings	0.296	0.450	0.150	0.037	18	9	0.64	21,686	0.032	A+
102	Japan	Fujitsu	0.462	0.729	0.115	0.009	11	9	5.19	16,136	0.013	A+
103	Japan	Hitachi	0.202	0.810	0.058	0.005	13	9	1.32	50,886	(0.006)	A+
104	Japan	Honda Motor	0.318	0.259	0.167	0.050	18	9	3.11	71,712	0.048	A+
105	Japan	Idemitsu Kosan	0.040	0.410	0.333	0.001	6	9	0.80	34,486	0.018	A+
106	Japan	Isuzu Motors	0.000	0.947	0.721	0.039	9	6	2.61	41,871	0.061	B+
107	Japan	Itochu	0.396	0.730	0.073	0.076	10	9	3.01	1,816	0.042	A+
108	Japan	Japan Tobacco	0.000	0.916	0.359	0.092	9	6	1.66	3,496	0.047	B+
109	Japan	JFE Holdings	0.413	0.450	0.162	0.074	12	9	1.48	12,658	0.063	A+
110	Japan	Kansai Electric Power	0.017	0.740	0.467	0.032	9	9	0.76	3,712	0.022	A+
111	Japan	KDDI	0.127	0.120	0.676	0.061	13	9	1.03	25,554	0.076	A+
112	Japan	Kobe Steel	0.120	0.610	0.248	0.042	9	9	0.90	31,051	0.038	A+
113	Japan	Komatsu	0.111	0.909	0.395	0.093	17	9	3.23	33,287	0.097	A+
114	Japan	Marubeni	0.200	0.201	0.077	0.035	10	9	2.58	12,896	0.024	A+
115	Japan	Matsushita Electric Industrial	0.222	0.500	0.118	0.031	19	9	1.12	20,044	0.038	A+
116	Japan	Mazda Motor	0.000	0.210	0.629	0.026	15	6	0.79	34,482	0.046	B+
117	Japan	Mediceo Paltac Holdings	0.033	0.170	0.500	0.012	5	9	2.00	45,538	0.018	A+
118	Japan	Mitsubishi	0.260	0.080	0.068	0.077	13	9	4.89	63,109	0.039	A+
119	Japan	Mitsubishi Chemical Holdings	0.180	0.619	0.126	0.056	12	9	2.41	34,608	0.043	A+

No.	Country	Company	FOR SUBS	FOR SALES	FOR SHS	FOR DEBT	ANALYST	SHARE_SPREAD	GROWTH	SIZE	ROA net	BvDEPIndepInd SHARE_SPREAD
120	Japan	Mitsubishi Electric	0.028	0.698	0.152	0.039	12	9	3.83	24,974	0.036	A+
121	Japan	Mitsubishi Heavy Industries	0.084	0.500	0.234	0.019	11	9	5.72	9,191	0.014	A+
122	Japan	Mitsubishi Motors	0.265	0.100	0.136	0.013	9	9	1.99	38,240	0.022	A+
123	Japan	Mitsui	0.279	0.260	0.089	0.071	13	9	7.20	42,494	0.042	A+
124	Japan	Mitsui OSK Lines	0.213	0.610	0.166	0.098	14	9	1.50	35,331	0.100	A+
125	Japan	NEC	0.229	0.580	0.186	0.005	12	9	1.09	19,085	0.006	A+
126	Japan	Nippon Mining Holdings	0.239	0.180	0.250	0.025	7	9	0.63	31,828	0.044	A+
127	Japan	Nippon Oil	0.026	0.820	0.316	0.023	7	9	0.67	8,421	0.032	A+
128	Japan	Nippon Steel	0.000	0.280	0.158	0.074	12	0	2.25	8,887	0.066	D
129	Japan	Nippon Telegraph & Telephone	0.000	0.430	0.152	0.059	12	6	0.66	130,685	0.034	B+
130	Japan	Nippon Yusen	0.415	0.805	0.235	0.044	13	9	1.01	36,167	0.030	A+
131	Japan	Nissan Motor	0.000	0.285	0.229	0.045	20	6	1.22	64,958	0.042	B+
132	Japan	Ricoh	0.318	0.595	0.182	0.048	12	9	1.70	35,249	0.050	A+
133	Japan	Sanyo Electric	0.050	0.337	0.084	0.014	10	9	9.53	37,565	(0.023)	A+
134	Japan	Seven & I Holdings	0.154	0.160	0.585	0.023	14	9	0.89	17,206	0.034	A+
135	Japan	Sharp	0.153	0.370	0.514	0.030	19	9	1.24	23,616	0.033	A+
136	Japan	Softbank	0.000	0.190	0.211	0.039	12	6	1.85	8,774	0.024	B+
137	Japan	Sony	0.659	0.337	0.099	0.042	24	9	2.64	45,269	0.011	A+
138	Japan	Sumitomo	0.159	0.420	0.084	0.065	9	9	0.84	17,340	0.025	A+
139	Japan	Sumitomo Electric Industries	0.250	0.140	0.125	0.035	9	9	0.98	32,391	0.040	A+

No.	Country	Company	FOR SUBS	FOR SALES	FOR SHS	FOR DEBT	ANALYST	SHARE_SPREAD	GROWTH	SIZE	ROA net	BvDEPIndepInd SHARE_SPREAD
140	Japan	Suzuki Motor	0.056	0.230	0.282	0.023	16	9	2.07	30,250	0.033	A+
141	Japan	Tokyo Electric Power	0.356	0.520	0.220	0.027	12	9	0.55	60,611	0.022	A+
142	Japan	Toshiba	0.248	0.272	0.083	0.017	15	9	1.66	4,980	0.021	A+
143	Japan	Toyota Industries	0.153	0.695	0.271	0.040	8	9	0.70	23,839	0.017	A+
144	Japan	Toyota Motor	0.210	0.344	0.062	0.065	22	9	1.12	269,941	0.053	A+
145	Luxembourg	ArcelorMittal	0.000	0.800	0.056	0.099	31	6	1.92	79,307	0.078	B+
146	Mexico	Cemex	0.627	0.670	0.747	0.110	11	9	0.72	4,409	0.048	A+
147	Mexico	Pemex	0.000	0.983	1.000	0.016	0	0	0.12	48,960	0.014	D
148	Netherlands	Unilever	0.000	0.503	0.270	0.097	36	0	1.95	595	0.104	D
149	Netherlands	Akzo Nobel	0.453	0.006	0.070	0.691	25	9	1.22	25,990	0.485	A+
150	Netherlands	EADS	0.000	0.151	0.141	0.110	26	6	2.35	56,761	(0.006)	B+
151	Netherlands	Royal Ahold	0.772	0.179	0.212	0.079	31	9	3.76	33,791	0.210	A+
152	Netherlands	Royal Dutch Shell	0.783	0.134	0.070	0.088	40	9	0.95	215,152	0.116	A+
153	Netherlands	Royal Philips Electronics	0.379	0.038	0.126	0.154	34	9	1.02	817	0.115	A+
154	Netherlands	SHV Holdings	0.815	0.402	0.100	0.037	0	7	0.06	43,888	0.080	A-
155	Norway	Norsk Hydro	0.000	0.048	0.260	0.176	21	6	1.22	37,304	0.198	B+
156	Norway	Statoil Hydro	0.000	0.465	0.210	0.084	33	0	2.22	35,002	0.091	D
157	Poland	PKN Orlen Group	0.549	0.461	0.451	0.036	12	9	1.18	35,365	0.052	A+
158	Portugal	Galp Energia	0.000	0.330	0.480	0.061	13	6	4.21	45,853	0.135	B+
159	Russia	Gazprom	0.000	0.176	0.128	0.195	19	6	1.36	222,408	0.097	B+
160	Russia	Lukoil	0.000	0.792	0.173	0.142	19	0	0.92	5,314	0.159	D
161	Russia	Rosneft Oil	0.000	0.891	0.112	0.355	19	0	2.00	20,487	0.172	D
162	Singapore	Flextronics International	0.409	0.223	0.220	0.230	19	9	0.78	41,976	0.041	A+

No.	Country	Company	FOR SUBS	FOR SALES	FOR SHS	FOR DEBT	ANALYST	SHARE_SPREAD	GROWTH	SIZE	ROA net	BvDEPIndepInd SHARE_SPREAD
163	South Korea	KT	0.125	0.080	0.400	0.057	21	9	1.19	28,544	0.044	A+
164	South Korea	LG	0.349	0.150	0.197	0.036	10	9	0.24	3,454	0.017	A+
165	South Korea	Samsung Electronics	0.037	0.100	0.482	0.075	25	9	1.06	45,432	0.079	A+
166	Spain	ACS	0.609	0.800	0.053	0.073	18	9	1.14	18,689	0.031	A+
167	Spain	Cepsa	0.000	0.021	0.521	0.040	6	6	2.54	40,420	0.079	B+
168	Spain	Fomento de Construcciones	0.000	0.429	0.079	0.052	17	3	2.61	19,409	0.031	C+
169	Spain	Grupo Ferrovial	0.000	0.205	0.690	0.050	19	0	0.75	21,624	0.014	D
170	Spain	Repsol YPF	0.714	0.814	0.482	0.065	33	9	1.67	15,113	0.068	A+
171	Spain	Telefónica	0.646	0.003	0.301	0.158	41	9	2.21	101,538	0.084	A+
172	Sweden	L.M. Ericsson	0.534	0.096	0.370	0.116	48	9	1.34	16,099	0.089	A+
173	Sweden	Skanska	0.000	0.301	0.070	0.030	15	6	3.07	42,009	0.052	B+
174	Sweden	Volvo	0.782	0.256	0.218	0.052	24	9	2.10	4,167	0.046	A+
175	Switzerland	Adecco	0.000	0.241	0.747	0.035	17	6	2.38	42,167	0.089	B+
176	Switzerland	Alliance Boots	0.000	0.035	0.111	0.001	0	0	1.14	34,547	0.038	D
177	Switzerland	Holcim	0.828	0.294	0.112	0.143	21	9	1.35	11,482	0.080	A+
178	Switzerland	Nestlé	0.521	0.196	0.076	0.099	27	9	2.48	47,556	0.093	A+
179	Switzerland	Novartis	0.401	0.233	0.224	0.300	36	9	1.77	21,134	0.158	A+
180	Switzerland	Roche Group	0.000	0.789	0.061	0.202	29	6	2.34	15,148	0.125	B+
181	Switzerland	Xstrata	0.000	0.819	0.520	0.191	21	6	2.61	2,069	0.106	B+
182	Taiwan	Asustek Computer	0.286	0.390	0.380	0.037	19	9	2.77	42,425	0.072	A+
183	Taiwan	CPC	0.000	0.210	0.125	0.015	0	0	0.13	35,915	0.020	D
184	Taiwan	Quanta Computer	0.125	0.270	0.170	0.024	20	9	2.52	44,272	0.057	A+

No.	Country	Company	FOR SUBS	FOR SALES	FOR SHS	FOR DEBT	ANALYST	SHARE_SPREAD	GROWTH	SIZE	ROA net	BvDEPIndepInd SHARE_SPREAD
185	Turkey	Koç Holding	0.000	0.150	0.252	0.045	11	6	0.76	2,939	0.038	B+
186	U.S.	3M	0.467	0.549	0.458	0.167	16	9	5.87	29,624	0.166	A+
187	U.S.	Abbott Laboratories	0.047	0.163	0.413	0.139	17	9	4.74	14,604	0.091	A+
188	U.S.	Aetna	0.805	0.230	0.813	0.066	18	9	0.08	3,593	0.036	A+
189	U.S.	Alcoa	0.765	0.965	0.489	0.083	23	9	1.55	15,515	0.066	A+
190	U.S.	Altria Group	0.448	0.542	0.236	0.257	14	9	4.94	2,893	0.171	A+
191	U.S.	AmerisourceBergen	0.419	0.160	0.140	0.007	16	9	2.93	42,007	0.038	A+
192	U.S.	AMR	0.773	0.619	0.050	0.022	13	9	0.45	25,747	0.018	A+
193	U.S.	Apple	0.355	0.843	0.350	0.146	29	9	6.77	28,971	0.138	A+
194	U.S.	Archer Daniels Midland	0.755	0.782	0.543	0.049	10	9	4.87	17,262	0.049	A+
195	U.S.	AT&T	0.795	0.320	0.137	0.100	29	9	0.79	221,326	0.043	A+
196	U.S.	AutoNation	0.000	0.160	0.125	0.016	14	6	0.73	45,838	0.033	B+
197	U.S.	Best Buy	0.621	0.320	0.500	0.035	25	9	3.83	41,560	0.110	A+
198	U.S.	Boeing	0.054	0.251	0.262	0.061	24	9	4.07	4,668	0.069	A+
199	U.S.	Bristol-Myers Squibb	0.054	0.250	0.325	0.108	17	9	4.38	28,146	0.083	A+
200	U.S.	Bunge	0.144	0.386	0.014	0.021	8	7	3.84	32,327	0.034	A-
201	U.S.	Cardinal Health	0.175	0.470	0.207	0.022	18	9	4.31	30,869	0.055	A+
202	U.S.	Caterpillar	0.149	0.170	0.191	0.079	21	9	14.16	1,814	0.063	A+
203	U.S.	Chevron	0.536	0.317	0.414	0.089	16	9	1.74	94,468	0.126	A+
204	U.S.	CHS	0.181	0.050	0.012	0.044	0	7	0.16	47,624	0.112	A-
205	U.S.	Coca-Cola Enterprises	0.000	0.228	0.350	0.034	12	6	1.14	30,272	0.030	B+
206	U.S.	Cigna	0.946	0.030	0.928	0.063	18	9	0.19	14,253	0.028	A+
207	U.S.	Coca-Cola	0.873	0.015	0.265	0.207	15	9	4.29	11,049	0.138	A+

No.	Country	Company	FOR SUBS	FOR SALES	FOR SHS	FOR DEBT	ANALYST	SHARE_SPREAD	GROWTH	SIZE	ROA net	BvDEPIndepInd SHARE_SPREAD
208	U.S.	Comcast	0.000	0.170	0.101	0.084	24	6	0.43	59,099	0.023	B+
209	U.S.	ConocoPhillips	0.371	0.323	0.352	0.067	14	9	1.01	123,439	0.067	A+
210	U.S.	Constellation Energy	0.333	0.040	0.160	0.039	12	9	11.08	32,372	0.037	A+
211	U.S.	Costco Wholesale	0.281	0.282	0.300	0.017	20	9	0.11	31,926	-	A+
212	U.S.	CVS Caremark	0.679	0.030	0.280	0.035	21	9	0.69	404	0.048	A+
213	U.S.	Deere	0.148	0.961	0.387	0.076	18	9	0.23	15,742	0.047	A+
214	U.S.	Dell	0.044	0.172	0.380	0.048	28	9	16.41	26,757	0.107	A+
215	U.S.	Delphi	0.718	0.481	0.098	0.117	0	9	0.16	40,651	(0.224)	A+
216	U.S.	Delta Air Lines	0.346	0.807	0.260	0.084	11	9	0.25	21,895	0.050	A+
217	U.S.	Dow Chemical	0.701	0.163	0.213	0.054	15	9	1.91	5,517	0.059	A+
218	U.S.	DuPont	0.190	0.230	0.210	0.097	7	9	0.27	52,863	(0.069)	A+
219	U.S.	Electronic Data Systems	0.000	0.759	0.006	0.032	5	0	0.96	35,094	0.037	D
220	U.S.	Eli Lilly	0.776	0.715	0.472	0.158	17	9	4.69	27,530	0.110	A+
221	U.S.	Emerson Electric	0.848	0.704	0.124	0.095	18	9	4.55	34,638	0.109	A+
222	U.S.	Enterprise GP Holdings	0.000	0.110	0.110	0.004	9	0	0.51	30,593	0.005	D
223	U.S.	Exelon	0.073	0.080	0.547	0.145	19	9	3.04	8,424	0.060	A+
224	U.S.	Express Scripts	0.040	0.190	0.480	0.031	26	9	12.74	49,061	0.108	A+
225	U.S.	Exxon Mobil	0.515	0.117	0.197	0.109	14	9	3.25	187,764	0.168	A+
226	U.S.	Ford Motor	0.000	0.644	0.525	0.016	12	6	2.37	224,946	(0.010)	B+
227	U.S.	Freeport-McMoRan Copper & Gold	0.169	0.847	0.803	0.167	18	9	1.81	13,657	0.068	A+
228	U.S.	General Dynamics	0.751	0.210	0.483	0.076	22	9	2.50	28,585	0.081	A+
229	U.S.	General Motors	0.387	0.090	0.104	0.212	13	9	3.31	94,565	(0.260)	A+

No.	Country	Company	FOR SUBS	FOR SALES	FOR SHS	FOR DEBT	ANALYST	SHARE_SPREAD	GROWTH	SIZE	ROA net	BvDEPIndepInd SHARE_SPREAD
230	U.S.	Goodyear Tire & Rubber	0.095	0.247	0.416	0.029	9	9	0.45	37,127	0.035	A+
231	U.S.	HCA	0.000	0.160	0.001	0.033	0	0	87.79	32,093	0.064	D
232	U.S.	Hewlett-Packard	0.776	0.422	0.177	0.070	26	9	3.23	34,381	0.082	A+
233	U.S.	Home Depot	0.633	0.360	0.300	0.052	24	9	2.90	9,994	0.099	A+
234	U.S.	Honeywell International	0.608	0.829	0.192	0.071	18	9	6.27	20,513	0.072	A+
235	U.S.	Humana	0.043	0.180	0.430	0.033	19	9	2.57	41,438	0.065	A+
236	U.S.	Ingram Micro	0.698	0.143	0.659	0.008	8	9	1.17	45,343	0.031	A+
237	U.S.	Intel	0.072	0.165	0.627	0.182	35	9	1.57	1,333	0.125	A+
238	U.S.	International Business Machines	0.752	0.154	0.156	0.105	21	9	9.23	66,114	0.087	A+
239	U.S.	International Paper	0.510	0.110	0.854	0.052	14	9	6.34	30,159	0.048	A+
240	U.S.	J.C. Penney	0.583	0.260	0.330	0.056	14	9	90.18	40,009	0.078	A+
241	U.S.	Kimberly-Clark	0.061	0.184	0.461	0.100	14	9	8.13	35,878	0.099	A+
242	U.S.	Kraft Foods	0.121	0.250	0.287	0.070	20	9	1.06	13,675	0.038	A+
243	U.S.	Kroger	0.458	0.120	0.270	0.017	14	9	2.02	32,019	0.053	A+
244	U.S.	Lockheed Martin	0.326	0.070	0.682	0.072	22	9	4.22	25,392	0.105	A+
245	U.S.	Macy's	0.553	0.190	0.130	0.034	16	9	1.10	26,529	0.032	A+
246	U.S.	Manpower	0.139	0.039	0.254	0.024	16	9	3.26	47,093	0.067	A+
247	U.S.	Marathon Oil	0.061	0.570	0.338	0.066	17	9	1.45	11,572	0.093	A+
248	U.S.	McDonald's	0.712	0.135	0.505	0.103	17	9	3.06	24,926	0.081	A+
249	U.S.	McKesson	0.413	0.350	0.240	0.010	18	9	2.99	29,715	0.040	A+
250	U.S.	Medco Health Solutions	0.281	0.330	0.390	0.020	25	9	3.26	38,100	0.056	A+
251	U.S.	Merck	0.094	0.140	0.341	0.135	16	9	6.63	5,967	0.068	A+

No.	Country	Company	FOR SUBS	FOR SALES	FOR SHS	FOR DEBT	ANALYST	SHARE_SPREAD	GROWTH	SIZE	ROA net	BvDEPIndepInd SHARE_SPREAD
252	U.S.	Motorola	0.312	0.410	0.553	0.001	28	9	3.09	19,506	(0.001)	A+
253	U.S.	Murphy Oil	0.700	0.500	0.250	0.042	15	9	2.45	43,782	0.073	A+
254	U.S.	News Corp.	0.000	0.700	0.148	0.120	27	6	2.63	7,990	0.086	B+
255	U.S.	Northrop Grumman	0.667	0.530	0.190	0.056	22	9	1.10	20,945	0.054	A+
256	U.S.	Oracle	0.245	0.170	0.208	0.237	26	9	5.06	7,050	0.117	A+
257	U.S.	PepsiCo	0.339	0.752	0.125	0.143	15	9	5.46	19,690	0.163	A+
258	U.S.	Pfizer	0.196	0.112	0.187	0.168	17	9	1.93	60,950	0.071	A+
259	U.S.	Plains All American Pipeline	0.233	0.874	0.830	0.018	13	9	1.14	44,412	0.029	A+
260	U.S.	Procter & Gamble	0.111	0.410	0.121	0.135	16	9	1.72	89,674	0.083	A+
261	U.S.	Publix Super Markets	0.000	0.310	0.667	0.051	0	6	9.49	46,264	0.147	B+
262	U.S.	Raytheon	0.431	0.508	0.330	0.115	19	9	1.49	31,037	0.151	A+
263	U.S.	Schlumberger	0.844	0.231	0.781	0.222	23	9	5.67	26,464	0.186	A+
264	U.S.	Rite Aid	0.031	0.150	0.242	0.044	11	9	0.40	42,830	(0.097)	A+
265	U.S.	Sears Holdings	0.000	0.240	0.580	0.016	7	2	1.44	26,921	0.030	C
266	U.S.	Sprint Nextel	0.826	0.180	0.198	0.737	27	9	1.20	9,791	(0.461)	A+
267	U.S.	Sunoco	0.566	0.130	0.745	0.021	17	9	2.11	41,892	0.072	A+
268	U.S.	Supervalu	0.303	0.250	0.284	0.013	12	9	0.70	33,256	0.028	A+
269	U.S.	Target	0.078	0.320	0.550	0.045	19	9	8.11	9,758	0.064	A+
270	U.S.	Tech Data	0.200	0.360	0.110	0.005	8	9	2.35	49,097	0.021	A+
271	U.S.	Time Warner	0.935	0.200	0.180	0.094	21	9	0.91	79,512	0.033	A+
272	U.S.	TJX	0.013	0.230	0.490	0.041	16	9	12.71	47,718	0.117	A+
273	U.S.	Tyco International	0.000	0.199	0.111	0.046	13	0	1.12	21,503	(0.053)	D

No.	Country	Company	FOR SUBS	FOR SALES	FOR SHS	FOR DEBT	ANALYST	SHARE_SPREAD	GROWTH	SIZE	ROA net	BvDEPIndepInd SHARE_SPREAD
274	U.S.	Tyson Foods	0.000	0.280	0.750	0.010	14	0	1.06	44,091	0.026	D
275	U.S.	UAL	0.647	0.181	0.410	0.020	12	9	0.53	30,098	0.016	A+
276	U.S.	United Parcel Service	0.555	0.784	0.489	0.008	17	9	4.14	15,276	0.010	A+
277	U.S.	United States Steel	0.366	0.912	0.529	0.052	16	9	6.53	38,686	0.056	A+
278	U.S.	United Technologies	0.726	0.730	0.185	0.077	19	9	3.37	257	0.077	A+
279	U.S.	UnitedHealth Group	0.849	0.190	0.312	0.062	20	9	1.85	3,419	0.091	A+
280	U.S.	Wal-Mart Stores	0.000	0.370	0.810	0.034	21	6	2.03	109,196	0.078	B+
281	U.S.	Valero Energy	0.346	0.110	0.483	0.054	18	9	1.87	11,596	0.123	A+
282	U.S.	Walgreen	0.627	0.180	0.892	0.038	18	9	1.91	31,907	0.096	A+
283	U.S.	Walt Disney	0.665	0.270	0.428	0.131	27	9	1.63	6,610	0.077	A+
284	U.S.	WellPoint	0.130	0.130	0.638	0.055	21	9	1.35	2,258	0.064	A+
285	U.S.	Weyerhaeuser	0.730	0.680	0.506	0.047	17	9	2.04	30,512	0.033	A+
286	U.S.	Whirlpool	0.050	0.191	0.467	0.033	6	9	1.63	40,309	0.046	A+
287	U.S.	Wyeth	0.500	0.727	0.833	0.206	15	9	0.91	11,600	0.108	A+
288	U.S.	Xerox	0.343	0.668	0.245	0.066	10	9	0.13	30,775	0.048	A+

Appendix E
(continue)

Additional Data.

No.	Country	Company	Industry	US SIC no	US SIC	Main activity
1	Australia	Coles Group	Food and Drug Stores	541	Grocery stores	Retail
2	Australia	Woolworths	Food and Drug Stores	531	Department stores	Retail; Wholesale
3	Austria	OMV Group	Petroleum Refining	131	Crude petroleum and natural gas	Manufacturing; Wholesale; Retail
4	Belgium	Delhaize Group	Food and Drug Stores	541	Grocery stores	Retail
5	Brazil	CVRD	Mining, Crude-oil production	106	Ferroalloy ores, except vanadium	Manufacturing
6	Brazil	Petrobras	Petroleum Refining	131	Crude petroleum and natural gas	Manufacturing
7	Britain	Anglo American	Mining, Crude-oil production	124	Coal mining services	Manufacturing
8	Britain	AstraZeneca	Pharmaceuticals	283	Drugs	Manufacturing; Wholesale
9	Britain	BAE Systems	Aerospace and Defense	372	Aircraft and parts	Manufacturing
10	Britain	BP	Petroleum Refining	291	Petroleum refining	Manufacturing; Wholesale; Retail
11	Britain	British Airways	Airlines	451	Air transportation, scheduled and air courier services	Services
12	Britain	British American Tobacco	Tobacco	211	Cigarettes	Manufacturing; Wholesale

No.	Country	Company	Industry	US SIC no	US SIC	Main activity
13	Britain	Compass Group	Food Services	581	Eating and drinking places	Services
14	Britain	GlaxoSmithKline	Pharmaceuticals	283	Drugs	Manufacturing
15	Britain	J. Sainsbury	Food and Drug Stores	541	Grocery stores	Retail; Services
16	Britain	Kingfisher	Specialty Retailers	533	Variety stores	Retail
17	Britain	Marks & Spencer	General Merchandisers	531	Department stores	Retail
18	Britain	Rio Tinto Group	Mining, Crude-oil production	109	Miscellaneous metal ores	Manufacturing
19	Britain	Royal Mail Holdings	Mail, Package and Freight Delivery	431	United States postal service	Services
20	Britain	SABMiller	Beverages	208	Beverages	Manufacturing
21	Britain	Scottish & Southern Energy	Utilities	491	Electric services	Services
22	Britain	Tesco	Food and Drug Stores	541	Grocery stores	Retail
23	Britain	William Morrison Supermarkets	Food and Drug Stores	541	Grocery stores	Retail
24	Britain	Wolseley	Miscellaneous	507	Hardware, and plumbing and heating equipment and supplies wholesale dealing in	Wholesale
25	Canada	Bombardier	Aerospace and Defense	379	Miscellaneous transportation equipment	Manufacturing; Services
26	Canada	EnCana	Mining, Crude-oil production	138	Oil and gas field services	Services; Manufacturing
27	Canada	George Weston	Food and Drug Stores	209	Miscellaneous food preparations and kindred products	Manufacturing; Services

No.	Country	Company	Industry	US SIC no	US SIC	Main activity
28	Canada	Magna International	Motor Vehicles and Parts	371	Motor vehicles and motor vehicle equipment	Manufacturing
29	Canada	Petro-Canada	Petroleum Refining	131	Crude petroleum and natural gas	Services; Manufacturing
30	China	Jardine Matheson	Automotive Retailing, Services	671	Holding offices	Services
31	China	Sinochem	Trading	289	Miscellaneous chemical products	Manufacturing
32	Denmark	A.P. Møller-Mærsk Group	Shipping	473	Arrangement of transportation of freight and cargo	Services
33	Finland	Nokia	Network and Other Communications Equipment	366	Communications equipment	Manufacturing
34	Finland	Stora Enso	Forest and Paper Products	262	Paper mills	Manufacturing
35	France	Alcatel-Lucent	Network and Other Communications Equipment	481	Telephone communications	Services
36	France	Alstom	Industrial and Farm Equipment	871	Engineering, architectural, and surveying services	Manufacturing
37	France	Bouygues	Engineering, Construction	162	Heavy construction, except highway and street construction	Services
38	France	Carrefour	Food and Drug Stores	541	Grocery stores	Retail
39	France	Eiffage	Engineering,	154	General building contractors-nonresidential	Services

No.	Country	Company	Industry	US SIC no	US SIC	Main activity
			Construction		buildings	
40	France	Électricité de France	Utilities	491	Electric services	Services
41	France	Fonclère Euris	General Merchandisers	653	Real estate agents and managers	Services
42	France	France Télécom	Telecommunications	481	Telephone communications	Services
43	France	Gaz de France	Utilities	492	Gas production and distribution	Services; Wholesale
44	France	Groupe Danone	Food Consumer Products	202	Dairy products	Services
45	France	Lafarge	Building Materials, Glass	324	Cement, hydraulic	Manufacturing
46	France	Michelin	Motor Vehicles and Parts	301	Tires and inner tubes	Manufacturing
47	France	Peugeot	Motor Vehicles and Parts	371	Motor vehicles and motor vehicle equipment	Services
48	France	Renault	Motor Vehicles and Parts	371	Motor vehicles and motor vehicle equipment	Manufacturing; Wholesale
49	France	Saint-Gobain	Building Materials, Glass	321	Flat glass	Manufacturing; Wholesale
50	France	Sanofi-Aventis	Pharmaceuticals	283	Drugs	Manufacturing; Wholesale
51	France	Schneider Electric	Electronics, Electrical Equipment	362	Electrical industrial apparatus	Manufacturing
52	France	Sodexo	Food Services	581	Eating and drinking places	Services
53	France	Thales Group	Aerospace and Defense	381	Search, detection, navigation, guidance,	Manufacturing;

No.	Country	Company	Industry	US SIC no	US SIC	Main activity
					aeronautical and nautical systems and instruments	Wholesale
54	France	Total	Petroleum Refining	131	Crude petroleum and natural gas	Services
55	France	Vinci	Engineering, Construction	154	General building contractors-nonresidential buildings	Services
56	France	Vivendi	Telecommunications	489	Communications services, not elsewhere specified	Services
57	Germany	Arcandor	Specialty Retailers	531	Department stores	Services
58	Germany	BASF	Chemicals	289	Miscellaneous chemical products	Manufacturing
59	Germany	Bayer	Chemicals	283	Drugs	Manufacturing
60	Germany	Bertelsmann	Entertainment	483	Radio and television broadcasting stations	Services
61	Germany	BMW	Motor Vehicles and Parts	371	Motor vehicles and motor vehicle equipment	Manufacturing
62	Germany	Continental	Motor Vehicles and Parts	301	Tires and inner tubes	Manufacturing; Wholesale
63	Germany	Deutsche Post	Mail, Package and Freight Delivery	431	United States postal service	Services
64	Germany	Deutsche Telekom	Telecommunications	489	Communications services, not elsewhere specified	Services
65	Germany	E.ON	Energy	491	Electric services	Services
66	Germany	Energie Baden-Württemberg	Utilities	491	Electric services	Services
67	Germany	Franz Haniel	Wholesalers: Health	517	Petroleum and petroleum products wholesale	Services

No.	Country	Company	Industry	US SIC no	US SIC	Main activity
			Care		dealing in	
68	Germany	Henkel	Household and Personal Products	284	Soap, detergents and cleaning preparations, perfumes, cosmetics and other toilet preparations	Manufacturing
69	Germany	Hochtief	Engineering, Construction	161	Highway and street construction, except elevated highways	Services
70	Germany	Linde Group	Chemicals	281	Industrial inorganic chemicals	Manufacturing; Wholesale
71	Germany	Lufthansa Group	Airlines	451	Air transportation, scheduled and air courier services	Services
72	Germany	MAN Group	Motor Vehicles and Parts	615	Business credit institutions	Services
73	Germany	Metro	Food and Drug Stores	531	Department stores	Services
74	Germany	Otto Group	Specialty Retailers	735	Miscellaneous equipment rental and leasing	Services
75	Germany	Robert Bosch	Motor Vehicles and Parts	354	Metalworking machinery and equipment	Manufacturing
76	Germany	RWE	Energy	491	Electric services	Services
77	Germany	Siemens	Electronics, Electrical Equipment	366	Communications equipment	Services
78	Germany	ThyssenKrupp	Metals	331	Steel works, blast furnaces and rolling and finishing	Manufacturing
79	Germany	TUI	Miscellaneous	472	Arrangement of passenger transportation	Services
80	Germany	Volkswagen	Motor Vehicles and	371	Motor vehicles and motor vehicle equipment	Manufacturing;

No.	Country	Company	Industry	US SIC no	US SIC	Main activity
			Parts			Services
81	Germany	ZF Friedrichshafen	Motor Vehicles and Parts	559	Automotive dealers, not elsewhere classified	Manufacturing
82	India	Bharat Petroleum	Petroleum Refining	138	Oil and gas field services	Manufacturing
83	India	Hindustan Petroleum	Petroleum Refining	131	Crude petroleum and natural gas	Manufacturing; Wholesale
84	India	Indian Oil	Petroleum Refining	299	Miscellaneous products of petroleum and coal	Manufacturing
85	India	Oil & Natural Gas	Mining, Crude-oil production	138	Oil and gas field services	Manufacturing
86	India	Reliance Industries	Petroleum Refining	282	Plastics materials and synthetic resins, synthetic rubber, cellulosic and other manmade fibers, except glass	Manufacturing
87	India	Tata Steel	Metals	331	Steel works, blast furnaces and rolling and finishing	Manufacturing
88	Italy	Enel	Utilities	491	Electric services	Services
89	Italy	ENI	Petroleum Refining	131	Crude petroleum and natural gas	Manufacturing
90	Italy	Fiat	Motor Vehicles and Parts	371	Motor vehicles and motor vehicle equipment	Manufacturing
91	Italy	Finmeccanica	Aerospace and Defense	372	Aircraft and parts	Services
92	Italy	Telecom Italia	Telecommunications	489	Communications services, not elsewhere specified	Services

No.	Country	Company	Industry	US SIC no	US SIC	Main activity
93	Japan	AEON	Food and Drug Stores	541	Grocery stores	Services
94	Japan	Aisin Seiki	Motor Vehicles and Parts	371	Motor vehicles and motor vehicle equipment	Manufacturing; Wholesale
95	Japan	Bridgestone	Motor Vehicles and Parts	301	Tires and inner tubes	Manufacturing
96	Japan	Canon	Computers, Office Equipment	357	Computer and office equipment	Manufacturing
97	Japan	Chubu Electric Power	Utilities	491	Electric services	Services
98	Japan	Cosmo Oil	Petroleum Refining	291	Petroleum refining	Manufacturing
99	Japan	Denso	Motor Vehicles and Parts	371	Motor vehicles and motor vehicle equipment	Manufacturing
100	Japan	East Japan Railway	Railroads	401	Railroads	Services
101	Japan	Fujifilm Holdings	Miscellaneous	386	Photographic equipment and supplies	Services
102	Japan	Fujitsu	Computers, Office Equipment	357	Computer and office equipment	Manufacturing; Services
103	Japan	Hitachi	Electronics, Electrical Equipment	362	Electrical industrial apparatus	Manufacturing
104	Japan	Honda Motor	Motor Vehicles and Parts	375	Motorcycles, bicycles and parts	Manufacturing; Wholesale
105	Japan	Idemitsu Kosan	Petroleum Refining	291	Petroleum refining	Manufacturing
106	Japan	Isuzu Motors	Motor Vehicles and	371	Motor vehicles and motor vehicle equipment	Manufacturing

No.	Country	Company	Industry	US SIC no	US SIC	Main activity
			Parts			
107	Japan	Itochu	Trading	509	Miscellaneous durable goods wholesale dealing in	Wholesale
108	Japan	Japan Tobacco	Tobacco	211	Cigarettes	Manufacturing; Wholesale
109	Japan	JFE Holdings	Metals	332	Iron and steel foundries	Services; Manufacturing
110	Japan	Kansai Electric Power	Utilities	491	Electric services	Services
111	Japan	KDDI	Telecommunications	489	Communications services; not elsewhere specified	Services
112	Japan	Kobe Steel	Metals	331	Steel works, blast furnaces and rolling and finishing	Manufacturing; Wholesale
113	Japan	Komatsu	Industrial and Farm Equipment	353	Construction, mining and materials handling machinery and equipment	Manufacturing
114	Japan	Marubeni	Trading	511	Paper and paper products wholesale dealing in	Wholesale
115	Japan	Matsushita Electric Industrial	Electronics, Electrical Equipment	363	Household appliances	Manufacturing; Wholesale
116	Japan	Mazda Motor	Motor Vehicles and Parts	371	Motor vehicles and motor vehicle equipment	Manufacturing
117	Japan	Medipeo Paltac Holdings	Wholesalers: Health Care	512	Drugs, drug proprietaries, and druggists' sundries wholesale dealing in	Wholesale

No.	Country	Company	Industry	US SIC no	US SIC	Main activity
118	Japan	Mitsubishi	Trading	509	Miscellaneous durable goods wholesale dealing in	Manufacturing; Services
119	Japan	Mitsubishi Chemical Holdings	Chemicals	289	Miscellaneous chemical products	Services
120	Japan	Mitsubishi Electric	Electronics, Electrical Equipment	369	Miscellaneous electrical machinery, equipment and supplies	Manufacturing
121	Japan	Mitsubishi Heavy Industries	Industrial and Farm Equipment	355	Special industry machinery, except metalworking machinery	Manufacturing
122	Japan	Mitsubishi Motors	Motor Vehicles and Parts	371	Motor vehicles and motor vehicle equipment	Manufacturing; Retail
123	Japan	Mitsui	Trading	356	General industrial machinery and equipment	Wholesale
124	Japan	Mitsui OSK Lines	Shipping	441	Deep sea foreign transportation of freight	Services
125	Japan	NEC	Computers, Office Equipment	357	Computer and office equipment	Manufacturing
126	Japan	Nippon Mining Holdings	Petroleum Refining	517	Petroleum and petroleum products wholesale dealing in	Manufacturing; Wholesale
127	Japan	Nippon Oil	Petroleum Refining	517	Petroleum and petroleum products wholesale dealing in	Manufacturing
128	Japan	Nippon Steel	Metals	331	Steel works, blast furnaces and rolling and finishing	Manufacturing
129	Japan	Nippon Telegraph &	Telecommunications	481	Telephone communications	Services; Wholesale

No.	Country	Company	Industry	US SIC no	US SIC	Main activity
		Telephone				
130	Japan	Nippon Yusen	Shipping	441	Deep sea foreign transportation of freight	Services
131	Japan	Nissan Motor	Motor Vehicles and Parts	371	Motor vehicles and motor vehicle equipment	Manufacturing
132	Japan	Ricoh	Computers, Office Equipment	357	Computer and office equipment	Manufacturing; Wholesale
133	Japan	Sanyo Electric	Electronics, Electrical Equipment	366	Communications equipment	Manufacturing
134	Japan	Seven & I Holdings	Food and Drug Stores	541	Grocery stores	Wholesale; Retail
135	Japan	Sharp	Electronics, Electrical Equipment	367	Electronic components and accessories	Manufacturing; Wholesale
136	Japan	Softbank	Telecommunications	504	Professional and commercial equipment and supplies wholesale dealing in	Services; Wholesale
137	Japan	Sony	Electronics, Electrical Equipment	365	Household audio and video equipment, and audio recordings	Manufacturing
138	Japan	Sumitomo	Trading	509	Miscellaneous durable goods wholesale dealing in	Wholesale; Services
139	Japan	Sumitomo Electric Industries	Electronics, Electrical Equipment	335	Rolling, drawing and extruding of nonferrous metals	Manufacturing
140	Japan	Suzuki Motor	Motor Vehicles and Parts	371	Motor vehicles and motor vehicle equipment	Manufacturing; Wholesale

No.	Country	Company	Industry	US SIC no	US SIC	Main activity
141	Japan	Tokyo Electric Power	Utilities	491	Electric services	Services
142	Japan	Toshiba	Electronics, Electrical Equipment	366	Communications equipment	Manufacturing
143	Japan	Toyota Industries	Motor Vehicles and Parts	355	Special industry machinery, except metalworking machinery	Manufacturing; Wholesale
144	Japan	Toyota Motor	Motor Vehicles and Parts	371	Motor vehicles and motor vehicle equipment	Manufacturing; Services
145	Luxembourg	ArcelorMittal	Metals	332	Iron and steel foundries	Manufacturing; Wholesale
146	Mexico	Cemex	Building Materials, Glass	327	Concrete, gypsum and plaster products	Services; Manufacturing
147	Mexico	Pemex	Mining, Crude-oil production	131	Crude petroleum and natural gas	Manufacturing
148	Netherlands	Akzo Nobel	Chemicals	283	Drugs	Manufacturing
149	Netherlands	EADS	Aerospace and Defense	372	Aircraft and parts	Manufacturing; Wholesale
150	Netherlands	Royal Ahold	Food and Drug Stores	541	Grocery stores	Retail
151	Netherlands	Royal Dutch Shell	Petroleum Refining	291	Petroleum refining	Manufacturing; Wholesale; Retail
152	Netherlands	Royal Philips Electronics	Electronics, Electrical Equipment	363	Household appliances	Manufacturing
153	Netherlands	SHV Holdings	Trading	517	Petroleum and petroleum products wholesale	Manufacturing;

No.	Country	Company	Industry	US SIC no	US SIC	Main activity
					dealing in	Wholesale
154	Netherlands	Unilever	Food Consumer Products	209	Miscellaneous food preparations and kindred products	Manufacturing; Wholesale
155	Norway	Norsk Hydro	Metals	138	Oil and gas field services	Manufacturing
156	Norway	Statoil Hydro	Petroleum Refining	131	Crude petroleum and natural gas	Services; Wholesale
157	Poland	PKN Orlen Group	Petroleum Refining	291	Petroleum refining	Manufacturing; Wholesale; Retail
158	Portugal	Galp Energia	Petroleum Refining	138	Oil and gas field services	Manufacturing; Wholesale
159	Russia	Gazprom	Energy	461	Pipelines, except natural gas	Manufacturing; Wholesale
160	Russia	Lukoil	Petroleum Refining	138	Oil and gas field services	Manufacturing; Wholesale
161	Russia	Rosneft Oil	Petroleum Refining	138	Oil and gas field services	Manufacturing; Wholesale
162	Singapore	Flextronics International	Semiconductors and Other Electronic Components	367	Electronic components and accessories	Services
163	South Korea	KT	Telecommunications	489	Communications services, not elsewhere specified	Services
164	South Korea	LG	Electronics, Electrical Equipment	289	Miscellaneous chemical products	Services
165	South Korea	Samsung	Electronics, Electrical	367	Electronic components and accessories	Manufacturing

No.	Country	Company	Industry	US SIC no	US SIC	Main activity
		Electronics	Equipment			
166	Spain	ACS	Engineering, Construction	154	General building contractors-nonresidential buildings	Services
167	Spain	Cepsa	Petroleum Refining	291	Petroleum refining	Manufacturing; Wholesale; Retail; Services
168	Spain	Fomento de Construcciones	Engineering, Construction	161	Highway and street construction, except elevated highways	Manufacturing; Services
169	Spain	Grupo Ferrovial	Engineering, Construction	161	Highway and street construction, except elevated highways	Services
170	Spain	Repsol YPF	Petroleum Refining	131	Crude petroleum and natural gas	Manufacturing; Wholesale; Retail; Services
171	Spain	Telefónica	Telecommunications	489	Communications services, not elsewhere specified	Services
172	Sweden	L.M. Ericsson	Network and Other Communications Equipment	366	Communications equipment	Manufacturing; Services
173	Sweden	Skanska	Engineering, Construction	152	General building contractors-residential buildings	Services
174	Sweden	Volvo	Motor Vehicles and Parts	371	Motor vehicles and motor vehicle equipment	Manufacturing; Services
175	Switzerland	Adecco	Temporary Help	736	Personnel supply services	Services

No.	Country	Company	Industry	US SIC no	US SIC	Main activity
176	Switzerland	Alliance Boots	Food and Drug Stores	591	Drug stores and proprietary stores	Manufacturing; Retail
177	Switzerland	Holcim	Building Materials, Glass	324	Cement, hydraulic	Manufacturing; Wholesale
178	Switzerland	Nestlé	Food Consumer Products	209	Miscellaneous food preparations and kindred products	Manufacturing
179	Switzerland	Novartis	Pharmaceuticals	283	Drugs	Manufacturing
180	Switzerland	Roche Group	Pharmaceuticals	283	Drugs	Manufacturing
181	Switzerland	Xstrata	Mining, Crude-oil production	109	Miscellaneous metal ores	Manufacturing
182	Taiwan	Asustek Computer	Computers, Office Equipment	357	Computer and office equipment	Manufacturing
183	Taiwan	CPC	Petroleum Refining	138	Oil and gas field services	Manufacturing
184	Taiwan	Quanta Computer	Computers, Office Equipment	357	Computer and office equipment	Manufacturing
185	Turkey	Koç Holding	Motor Vehicles and Parts	371	Motor vehicles and motor vehicle equipment	Services
186	U.S.	3M	Miscellaneous	329	Abrasive, asbestos and miscellaneous nonmettalic mineral products	Manufacturing
187	U.S.	Abbott Laboratories	Pharmaceuticals	283	Drugs	Manufacturing
188	U.S.	Aetna	Health Care: Insurance and Managed Care	630	Insurance carriers	Services
189	U.S.	Alcoa	Metals	333	Primary smelting and refining of	Manufacturing

No.	Country	Company	Industry	US SIC no	US SIC	Main activity
					nonferrous metals	
190	U.S.	Altria Group	Tobacco	211	Cigarettes	Services
191	U.S.	AmerisourceBergen	Wholesalers: Health Care	512	Drugs, drug proprietaries, and druggists' sundries wholesale dealing in	Wholesale; Services
192	U.S.	AMR	Airlines	451	Air transportation, scheduled and air courier services	Services
193	U.S.	Apple	Computers, Office Equipment	357	Computer and office equipment	Manufacturing; Wholesale
194	U.S.	Archer Daniels Midland	Food Production	204	Grain mill products	Manufacturing; Services
195	U.S.	AT&T	Telecommunications	481	Telephone communications	Services
196	U.S.	AutoNation	Automotive Retailing, Services	551	Motor vehicle dealers (new and used)	Retail; Services
197	U.S.	Best Buy	Specialty Retailers	573	Radio, television, consumer electronics, and music stores	Retail
198	U.S.	Boeing	Aerospace and Defense	372	Aircraft and parts	Manufacturing
199	U.S.	Bristol-Myers Squibb	Pharmaceuticals	283	Drugs	Manufacturing
200	U.S.	Bunge	Food Production	209	Miscellaneous food preparations and kindred products	Manufacturing; Services
201	U.S.	Cardinal Health	Wholesalers: Health Care	512	Drugs, drug proprietaries, and druggists' sundries wholesale dealing in	Services
202	U.S.	Caterpillar	Industrial and Farm	353	Construction, mining and materials	Manufacturing

No.	Country	Company	Industry	US SIC no	US SIC	Main activity
			Equipment		handling machinery and equipment	
203	U.S.	Chevron	Petroleum Refining	131	Crude petroleum and natural gas	Manufacturing; Services
204	U.S.	CHS	Wholesalers: Food and Grocery	204	Grain mill products	Services
205	U.S.	Cigna	Health Care: Insurance and Managed Care	631	Life insurance	Services
206	U.S.	Coca-Cola	Beverages	208	Beverages	Manufacturing; Wholesale
207	U.S.	Coca-Cola Enterprises	Beverages	208	Beverages	Manufacturing; Wholesale
208	U.S.	Comcast	Telecommunications	484	Cable and other pay television services	Services
209	U.S.	ConocoPhillips	Petroleum Refining	291	Petroleum refining	Manufacturing
210	U.S.	Constellation Energy	Energy	493	Combination electric and gas, and other utility services	Services
211	U.S.	Costco Wholesale	Specialty Retailers	539	Miscellaneous general merchandise stores	Retail
212	U.S.	CVS Caremark	Food and Drug Stores	591	Drug stores and proprietary stores	Services
213	U.S.	Deere	Industrial and Farm Equipment	352	Farm and garden machinery and equipment	Manufacturing
214	U.S.	Dell	Computers, Office Equipment	357	Computer and office equipment	Manufacturing
215	U.S.	Delphi	Motor Vehicles and	371	Motor vehicles and motor vehicle	Manufacturing;

No.	Country	Company	Industry	US SIC no	US SIC	Main activity
			Parts		equipment	Wholesale
216	U.S.	Delta Air Lines	Airlines	451	Air transportation, scheduled and air courier services	Services
217	U.S.	Dow Chemical	Chemicals	282	Plastics materials and synthetic resins, synthetic rubber, cellulosic and other manmade fibers, except glass	Manufacturing; Wholesale
218	U.S.	DuPont	Chemicals	679	Miscellaneous investing	Services
219	U.S.	Electronic Data Systems	Information Technology Services	737	Computer programming, data processing, and other computer related services	Services
220	U.S.	Eli Lilly	Pharmaceuticals	283	Drugs	Manufacturing
221	U.S.	Emerson Electric	Electronics, Electrical Equipment	382	Laboratory apparatus and analytical, optical, measuring, and controlling instruments	Manufacturing
222	U.S.	Enterprise GP Holdings	Pipelines	517	Petroleum and petroleum products wholesale dealing in	Wholesale; Services
223	U.S.	Exelon	Utilities	493	Combination electric and gas, and other utility services	Services
224	U.S.	Express Scripts	Health Care: Pharmacy and Other Services	591	Drug stores and proprietary stores	Services
225	U.S.	Exxon Mobil	Petroleum Refining	131	Crude petroleum and natural gas	Manufacturing; Services
226	U.S.	Ford Motor	Motor Vehicles and	371	Motor vehicles and motor vehicle	Manufacturing;

No.	Country	Company	Industry	US SIC no	US SIC	Main activity
			Parts		equipment	Services
227	U.S.	Freeport-McMoRan Copper & Gold	Mining, Crude-oil production	102	Copper ores	Manufacturing
228	U.S.	General Dynamics	Aerospace and Defense	379	Miscellaneous transportation equipment	Manufacturing; Services
229	U.S.	General Motors	Motor Vehicles and Parts	371	Motor vehicles and motor vehicle equipment	Manufacturing
230	U.S.	Goodyear Tire & Rubber	Motor Vehicles and Parts	301	Tires and inner tubes	Manufacturing
231	U.S.	HCA	Health Care: Pharmacy and Other Services	806	Hospitals	Services
232	U.S.	Hewlett-Packard	Computers, Office Equipment	357	Computer and office equipment	Manufacturing; Services
233	U.S.	Home Depot	Specialty Retailers	521	Lumber and other building materials dealers	Retail; Services
234	U.S.	Honeywell International	Aerospace and Defense	372	Aircraft and parts	Manufacturing
235	U.S.	Humana	Health Care: Insurance and Managed Care	633	Fire, marine, and casualty insurance	Services
236	U.S.	Ingram Micro	Wholesalers: Electronics and Office Equipment	504	Professional and commercial equipment and supplies wholesale dealing in	Wholesale
237	U.S.	Intel	Semiconductors and	367	Electronic components and accessories	Manufacturing

No.	Country	Company	Industry	US SIC no	US SIC	Main activity
			Other Electronic Components			
238	U.S.	International Business Machines	Information Technology Services	874	Management and public relations services	Manufacturing; Wholesale; Services
239	U.S.	International Paper	Forest and Paper Products	262	Paper mills	Manufacturing
240	U.S.	J.C. Penney	General Merchandisers	531	Department stores	Services; Retail
241	U.S.	Kimberly-Clark	Household and Personal Products	262	Paper mills	Manufacturing
242	U.S.	Kraft Foods	Food Consumer Products	202	Dairy products	Manufacturing
243	U.S.	Kroger	Food and Drug Stores	541	Grocery stores	Retail
244	U.S.	Lockheed Martin	Aerospace and Defense	372	Aircraft and parts	Manufacturing; Services
245	U.S.	Macy's	General Merchandisers	531	Department stores	Retail
246	U.S.	Manpower	Temporary Help	736	Personnel supply services	Services
247	U.S.	Marathon Oil	Petroleum Refining	291	Petroleum refining	Manufacturing; Wholesale
248	U.S.	McDonald's	Food Services	581	Eating and drinking places	Services
249	U.S.	McKesson	Wholesalers: Health Care	512	Drugs, drug proprietaries, and druggists' sundries wholesale dealing in	Services; Manufacturing
250	U.S.	Medco Health	Health Care: Pharmacy	591	Drug stores and proprietary stores	Services

No.	Country	Company	Industry	US SIC no	US SIC	Main activity
		Solutions	and Other Services			
251	U.S.	Merck	Pharmaceuticals	283	Drugs	Manufacturing; Wholesale
252	U.S.	Motorola	Network and Other Communications Equipment	366	Communications equipment	Manufacturing; Services
253	U.S.	Murphy Oil	Petroleum Refining	291	Petroleum refining	Services
254	U.S.	News Corp.	Entertainment	271	Newspapers: publishing or publishing and printing	Services
255	U.S.	Northrop Grumman	Aerospace and Defense	372	Aircraft and parts	Manufacturing; Services
256	U.S.	Oracle	Computer Software	737	Computer programming, data processing, and other computer related services	Services
257	U.S.	PepsiCo	Food Consumer Products	208	Beverages	Manufacturing; Wholesale
258	U.S.	Pfizer	Pharmaceuticals	283	Drugs	Manufacturing
259	U.S.	Plains All American Pipeline	Pipelines	517	Petroleum and petroleum products wholesale dealing in	Services
260	U.S.	Procter & Gamble	Household and Personal Products	284	Soap, detergents and cleaning preparations, perfumes, cosmetics and other toilet preparations	Manufacturing; Wholesale

No.	Country	Company	Industry	US SIC no	US SIC	Main activity
261	U.S.	Publix Super Markets	Food and Drug Stores	541	Grocery stores	Retail
262	U.S.	Raytheon	Aerospace and Defense	381	Search, detection, navigation, guidance, aeronautical and nautical systems and instruments	Manufacturing; Services
263	U.S.	Rite Aid	Food and Drug Stores	591	Drug stores and proprietary stores	Retail
264	U.S.	Schlumberger	Miscellaneous	138	Oil and gas field services	Services
265	U.S.	Sears Holdings	General Merchandisers	533	Variety stores	Retail
266	U.S.	Sprint Nextel	Telecommunications	481	Telephone communications	Services
267	U.S.	Sunoco	Petroleum Refining	291	Petroleum refining	Manufacturing; Wholesale
268	U.S.	Supervalu	Food and Drug Stores	514	Groceries and related products wholesale dealing in	Wholesale; Retail
269	U.S.	Target	General Merchandisers	533	Variety stores	Retail
270	U.S.	Tech Data	Wholesalers: Electronics and Office Equipment	504	Professional and commercial equipment and supplies wholesale dealing in	Wholesale
271	U.S.	Time Warner	Entertainment	484	Cable and other pay television services	Services
272	U.S.	TJX	Specialty Retailers	565	Family clothing stores	Retail
273	U.S.	Tyco International	Electronics, Electrical Equipment	489	Communications services, not elsewhere specified	Services
274	U.S.	Tyson Foods	Food Production	201	Meat products	Manufacturing; Wholesale
275	U.S.	UAL	Airlines	451	Air transportation, scheduled and air	Services

No.	Country	Company	Industry	US SIC no	US SIC	Main activity
					courier services	
276	U.S.	United Parcel Service	Mail, Package and Freight Delivery	451	Air transportation, scheduled and air courier services	Services
277	U.S.	United States Steel	Metals	331	Steel works, blast furnaces and rolling and finishing	Manufacturing
278	U.S.	United Technologies	Aerospace and Defense	358	Refrigeration and service industry machinery	Manufacturing
279	U.S.	UnitedHealth Group	Health Care: Insurance and Managed Care	631	Life insurance	Services
280	U.S.	Valero Energy	Petroleum Refining	291	Petroleum refining	Manufacturing; Retail
281	U.S.	Walgreen	Food and Drug Stores	591	Drug stores and proprietary stores	Retail
282	U.S.	Wal-Mart Stores	General Merchandisers	531	Department stores	Retail
283	U.S.	Walt Disney	Entertainment	483	Radio and television broadcasting stations	Services
284	U.S.	WellPoint	Health Care: Insurance and Managed Care	631	Life insurance	Services
285	U.S.	Weyerhaeuser	Forest and Paper Products	242	Sawmills and planing mills	Manufacturing; Services
286	U.S.	Whirlpool	Electronics, Electrical Equipment	363	Household appliances	Manufacturing
287	U.S.	Wyeth	Pharmaceuticals	283	Drugs	Manufacturing
288	U.S.	Xerox	Computers, Office Equipment	386	Photographic equipment and supplies	Manufacturing