Master Thesis

Jan Tillmann

191470

Topic: The link between sustainability performance and financial performance – An event study on the impact of sustainability index changes on the market value of a company

Supervisor: Prof. Dr. J.R. ter Horst

Abstract

This paper explores the relationship between sustainability performance and financial performance by looking at the impact of sustainability index changes on the market value of a company. We study the price effects of changes in the Dow Jones Sustainability Index (DJSI) and FTSE4Good Index (FTSE). We do not observe statistically significant positive abnormal returns for companies being added to a sustainability index. On the opposite we find negative abnormal returns for companies being deleted from the FTSE, however not in the case of the DJSI. This can be explained by studying the volume effects and the behavior of investment managers. The trading volume increases by approximately 14 percent on the announcement date of changes in the FTSE and the following two trading days, while the trading volume decreases for the DJSI. The results support the existence of price pressures. We find more striking results when the sample is decomposed into industries and countries. Companies from the Oil & Gas industry experience significant negative abnormal returns upon deletion from the DJSI. This can be explained by increased long-term risks and higher discount rates in an industry that is particularly exposed to heavy environmental risks. Classifying companies by country we find that especially companies from Germany experience statistically significant negative abnormal returns when being deleted from the DJSI and FTSE. This paper cannot confirm the trend that the impact of sustainability index changes has risen over time as a consequence of increased interest in CSR by investors.

Acknowledgements

I would like to thank my supervisor Prof. ter Horst and express my sincere gratitude for the continuous support of my master thesis, his valuable input and patience. His guidance helped me in all phases writing the thesis, whether it was in the research phase or writing down the results.

Last but not least, I would also like to thank my parents for their support during my studies at Tilburg University. I really appreciate it a lot.

Table of Contents

Introduction

An increasingly popular investment strategy seeks to satisfy not only maximizing financial returns but also the social good. There are many terms used interchangeably to describe such an investment strategy which considers environmental criteria, social criteria and corporate governance (ESG factors) . Widely known terms are **sustainability investing**, **socially responsible investing (SRI)**, and **ethical investing**.

SRI has turned more and more mainstream in recent years. Investment managers are increasingly considering ESG factors in their financial modeling and investment analysis, primarily as a response to client needs. Banner headlines in media about global warming, climate change, labor conditions in emerging markets etc. lead to an increased awareness and interest of institutional and individual investors in ESG factors. New environmentally themed investment vehicles are launched as a response to growing investor needs to manage opportunities and risks in emerging fields such as green technology and renewable energy. Other drivers are regulatory and legislative developments, which require higher standards on ESG disclosure. The government pension fund of Norway has changed its investment strategy completely from a traditional to a sustainable investment approach.

The popularity is also reflected in rapid growth of assets under management in socially responsible investments (SRI), which was significantly above conventional investment vehicles in recent years. SRI products in the United States grew more than 380 percent from $639 billion in 1995 to $3.07 trillion in 2010, outpacing conventional products, which grew only 260 percent from $7 trillion to $25.2 trillion[1]. Even during the subprime crisis SRI products experienced healthy growth rates whereas the overall product universe remained fairly flat.

The motivation of this paper is to find out whether the positive trend of SRI products can be linked to the ability to generate added value in terms of abnormal returns or whether the investors want to "do something good" by allocating SRI investments. In others words, is there a positive relationship between sustainability performance and financial performance of a company? An event study will be conducted to test whether changes in two sustainability indices have an impact on the market value of a company. Index composition changes are used as a proxy for CSR performance. The Dow Jones Sustainability Index (DJSI) and FTSE4Good Index (FTSE) are taken as they are considered to be the most important global sustainability indices. In case abnormal returns can be observed, the next step would be to explain the results.

[1] Social Investment Forum, 2010, http://www.socialinvest.org/resources/research/documents/2010TrendsES.pdf [accessed 11 Sep 2011]

One possibility would be to explain abnormal returns with the "sustainable value" of a company. Index changes might contain new information, which was previously not priced in the market value of a company. This would mean that markets are not efficient as all index composition criteria are based on publically available information. Another alternative would be to link abnormal returns to the index composition changes and possible price pressures caused by the behavior of fund managers. As most fund managers are evaluated against major indices or benchmarks, index changes are followed closely by market participants in order to control the tracking error.

Definition of Corporate Sustainability and Corporate Social Responsibility

The terms corporate sustainability and corporate social responsibility will be defined and discussed in more detail in this section.

Corporate Sustainability is a vague term for many people due to its ambiguity. There are so many different definitions and perspectives. For instance, some people put the concept of sustainability simply on the same level with good environmental management, which is not true. This paper adopts the definition of SAM Sustainable Asset Management, the investment firm responsible for the composition of the DJSI:

> "Corporate Sustainability is a business approach that creates long-term shareholder value by embracing opportunities and managing risks deriving from economic, environmental and social developments. Corporate sustainability leaders achieve long-term shareholder value by gearing their strategies and management to harness the market's potential for sustainability products and services while at the same time successfully reducing and avoiding sustainability costs and risks." (SAM Sustainable Asset Management)

Corporate Social Responsibility (CSR) is very similar to the concept of sustainability. Both concepts focus on environmental and social criteria. However, corporate sustainability is more a holistic business strategy as it also involves economic criteria. CSR can be considered as an important element of a business strategy. Again, it is difficult to determine a single definition for CSR due to the differences in the nature of businesses and accordingly their responsibilities. A basic general definition is as follows:

> "In essence CSR is a form of self-regulation to contribute to social (including environmental) welfare. This could be in the form of compensation for the business social footprint or additive to social well-being." (Moon, 2007)

The majority of people believe that there must be a trade-off between sustainability investments and profitability. Those people should consider the following statement:

> "Perhaps the most important intellectual breakthrough regarding modern conceptions of CSR is that socially responsible activities can, and should, be used to enhance the bottom line" (Cochran, 2007).

The terms corporate sustainability and CSR will be used interchangeably in the remainder of the paper, unless stated otherwise. It is organized as follows: First, the research question of the paper is presented to the reader. It is followed by a literature review, which includes a introduction to Socially Responsible Investing (SRI), a review of the Link between corporate sustainability and financial performance, and index inclusions and index exclusions and fund manager behavior. Second, the data and methodology for analyzing abnormal returns and abnormal volume is described. In addition the methodology of sustainability indices is illustrated as well as the descriptive statistics are presented. It is followed by the results section, which is split into analysis of action (inclusion/exclusion), year, industry and country. The last section concludes the paper.

Research Question and Hypotheses

The main research question of this paper is as follows:

Is there a relationship between sustainability performance and financial performance of a company?

The inclusions and exclusions from a sustainability index are taken as a proxy for changes in corporate sustainability performance. The two indices used in the paper, the DJSI and FTSE, are widely accepted and believed to be a significant measure for sustainability performance. On the other hand stock price developments of a company are used as a proxy for the financial performance of a company. Stock prices are a good source for the prospects of companies, as they reflect all future earnings. Any action, either inclusions or exclusions, should be observed by investors and is expected to have an impact on the market value of the company. Thus, are changes in sustainability performance, either positive or negative, recognized by the financial markets?

This paper is going to discuss five sub-questions:

1. Is there a positive link between the level of sustainability performance and stock price developments?
2. Is there a change over time regarding the level of impact of sustainability performance on stock prices?
3. Does the magnitude of impact differ between industries?
4. Does the magnitude of impact differ between regions/countries?
5. Is there a difference of impact between the DJSI and the FTSE?

In order to answer the main research question the following five hypotheses are first defined and then tested in the empirical part of this paper:

- H_{1a}= There is no significant positive abnormal return following an inclusion into a sustainability index from 2002 to 2008
- H_{1b}= There is no significant negative abnormal return following an exclusion from a sustainability index from 2002 to 2008
- H_2= There is no significant abnormal return created by index changes in 2002, 2003, 2004, 2005, 2006, 2007, 2008
- H_3= There is no significant abnormal return created by index changes within various industries in the period 2002 to 2008
- H_4= There is no significant abnormal return created by index changes within various countries in the period 2002 to 2008

- H_5= There is no difference in abnormal returns created by index changes between the DJSI and FTSE

Literature Review

Socially Responsible Investing (SRI)

The history of modern SRI can be traced back to the 1960s, when people boycotted companies that were doing business in South Africa due to the white minority regime. “The central idea behind social investing is that it is possible for groups of individuals to have an impact on the practices and policies of firms through market mechanisms.” (Cochran, 2007) By selling or not purchasing the shares or even the products produced or services offered by companies employing practices that are objectionable, each individual can make a small difference. But if a large group of people act the same way, this can have a substantial effect on the boycotted company. Cochran (2007) compares it with political elections: “while it is very unlikely that any single individual can make a difference, the sum of all individuals can make a substantial difference”.

Socially Responsible Investing can be split into three approaches: screening, shareholder advocacy, community investing. *Screening* consists of both positive and negative screening. Positive Screening involves searching for companies applying good practices, whereas negative screening is about looking for companies with objectionable practices and thus excluding them from the investment universe. *Shareholder advocacy* is a second approach, which is about creating a dialogue of socially responsible investors with companies on sustainable issues. The ultimate aim is to improve company practices as well as policies, and to encourage top-management promoting good corporate citizenship. The strategy of *community investing* is to invest into projects that will strengthen local communities. Examples are investments in non-profits, affordable housing and community facilities.

According to the Report on Socially Responsible Investing Trends published by the Social Investment Forum in the United States $ 3.07 trillion were invested in investment vehicles using the approach of SRI in 2010. This is approximately 12.2 percent of all assets under management in the U.S., compared to a number of 10 percent five years before in 2005. SRI experienced a growth rate of 13 percent annually from 2007 to 2010, outperforming by far conventional investment strategies and gaining importance. As of 2010, approximately 493 mutual funds were available in the United States that were screened for sustainable factors.

Moreover, the importance of sustainable indices can be documented by the number of licensees and the assets managed in these portfolios. As of May 31, 2009 Sustainable Asset Management (SAM) reports over 70 licenses in 16 countries for the DJSI with assets under management exceeding 8 billion USD.

The constituent lists and the corresponding index changes of the Dow Jones Sustainability Index and FTSE4Good Index play an important role for fund managers who invest socially responsible. The indices are often used as a benchmark for evaluating the performance of fund managers. A closer look at the behavior of fund managers will be given in a later section about index inclusions and exclusions.

This paper is focused on two strands of literature. The literature on the link between corporate sustainability and financial performance will be reviewed as well as the literature on index inclusions and exclusions and its impact on market value.

Link between corporate sustainability and financial performance

This section on the relationship between corporate sustainability and financial performance is further split into two parts. According to SAM's (see part on *Sustainability Indices*) approach to sustainability the social dimension and the environmental dimension is reviewed separately. Due to the large amount of literature available only the most important papers will be highlighted.

Social dimension (CSR)

Previous research on the link between Corporate Social Responsibility (CSR) and financial performance is ambiguous. Some research papers conclude a positive relationship, whereas other papers remain inconclusive or even propose a negative relationship. A positive effect should be expected in the long-term as a result of corporate investments into strategic ESG activities. The financing of such activities leads to expenses in the short-term, effecting bottom line figures negatively. However, in the long term sustainability strategies are expected to create additional value as a result of stronger consumer perception and brand image. Eventually, there should be a long-lasting positive effect on bottom line figures, overcompensating initial investment outlays while reducing risks.

The different conclusions of authors occur due to methodological differences and problems in defining social and financial performance. Research on the effect of CSR on financial performance is impeded as proper measurement of the variable Corporate Social Performance (CSP) or CSR is difficult.

> "CSP is a multidimensional construct, with behaviors ranging across a wide variety of inputs (e.g., investments in pollution control equipment or other environmental strategies), internal behaviors or processes (e.g., treatment of women and minorities, nature of products produced, relationships with customers), and outputs (e.g., community relations and philanthropic programs). These behaviors also occur across

> a wide range of industries with significantly different characteristics, histories, and performance in the different CSP domains." (Waddock and Graves, 1997)

However, most of the empirical studies so far have been one-dimensional using only small samples. Soana (2009) summarizes five different methods to measure CSR. The first is *content analysis*, which is about analyzing and evaluating publically available documents such as annual reports or sustainability/CSR reports. Despite obtaining valuable information with respect to the behavior of the company, the reports can be biased depending on what information is disclosed or omitted. A second method is the *survey methodology* using questionnaires. While gaining some useful information from top management, the drawback is the inconsistency. Subjective and diverging views on different topics make it difficult for comparison. *Reputational measures* are ratios of companies regarding CSP, getting ranked and as a result indices are constructed. The first scale was developed by Moskowitz (1972), but the most used to date is the Corporate Reputational Index (CRI). Other famous indicators are the Business Ethics 100 index and the ratings are provided by Fortune and KLD. These ratings tend "to be viewed as a measure of overall management of a firm rather than being specific to CSP" (Waddock and Graves, 1997). In addition they exhibit a high correlation with other measures. A fourth method is using *one-dimensional measures* such as pollution ratings and other social aspects like philanthropy. These are just evaluating one facet from CSR and thus cannot be considered representative. *Ethical ratings* are another method for the quantifying social performance of companies.

As substantive literature is available, only the most influential papers will be reviewed below. The terms CSR and CSP[2] are used interchangeably.

The debate of the relationship between CSR and financial performance has been going on since the 1960s. **Arlow and Gannon (1982)** evaluate seven early empirical studies (Sturdivant & Ginter (1977), Parket & Eilbirt (1975), Bowman & Haire (1975), Vance (1975), Folger & Nutt (1975), Alexander & Buchholz (1978), Abbott & Monsen (1979)) and came up with the conclusion: "economic performance is not directly linked, in either a positive or negative fashion, to social responsiveness". **Cochran and Wood (1984)** try to overcome the limitations of earlier studies with an improved methodology. Specifically, each company is compared independently to its industry group. A reputational ranking is used as a CSR measure and accounting data (ratio of operating earnings to assets, ratio of operating earnings to sales, and excess market valuation) for measuring financial performance. The main conclusion of Cochran and Wood (1984) is that the age of corporate assets is

[2] Corporate Social Performance (CSP) is essentially the same as Corporate Social Responsibility (CSR). It can be defined as "a business organization's configuration of principles of social responsibility, processes of social responsiveness, and policies, programs, and observable outcomes as they relate to the firm's societal relationships." (Wood, 1991)

strongly correlated with CSR. This means that a company with older assets corresponds to a lower CSR rating. The authors highlight two possible reasons for the importance of asset age as an explanatory variable for CSP. First, regulatory constraints were less strict when assets were built in the past. In particular, pollution control and environmental issues are gaining importance. Companies are required to reduce their environmental foot-print on society, as this is crucial for maintaining a good reputation and complying with new regulations. Secondly, companies with older assets in place are less flexible regarding social developments compared to newer companies such as start-ups. A possible explanation is the sort of managers that are attracted to both group of companies.

Waddock and Graves (1997) take a different approach and attempt to overcome previous studies, which measured the relationship between CSP and financial performance primarily on a one-dimensional basis, by constructing an advanced index resulting from a multi-dimensional assessment and taking into account eight different attributes of CSP that are assumed to be representative for CSR as a whole. The financial performance is measured by accounting returns (return on assets, return on equity, and return on sales). The authors analyze most of the S&P500 companies with regression analysis. They conclude that there is a positive link between CSP and financial performance, which they call "virtuous circle". This means that the causality runs in both directions: better financial performance leads to better CSP and better CSP leads to better financial performance. So, CSP is "both a predictor and consequence of firm financial performance" (Waddock and Graves, 1997). The authors name these phenomena the *slack resources theory* and *good management theory*. The heart of the slack resources theory is that better financial performance results in the creation of slack resources, such as free cash flows, which the companies could invest in social activities. As a consequence CSP is improved and it can be concluded that "better financial performance would be a predictor of better CSP" (Waddock and Graves, 1997). Proponents of the good management theory suggest that good management practices are highly correlated with CSP, because focus on social activities "improves relationships with key stakeholder groups, resulting in better overall performance" (Waddock and Graves (1997). A good example is increased productivity and customer satisfaction resulting from good employee relations. The positive relationship between CSP and financial performance as well as the importance of stakeholders is confirmed in a later study by **Ruf et al. (2001)** who focus on stakeholder theory as a framework for their analysis. The heart of the stakeholder theory is that shareholders are only one of multiple stakeholder groups that must be considered by managers in a decision making process. The aim is to satisfy the needs of all stakeholder groups. "These stakeholder groups include internal, external, and environmental constituents. Like shareholders, the other stakeholders may place demands upon the firm." (Ruf et al., 2001) If managers do not approach those demands, the company can experience a negative conflict ultimately resulting in boycotts and reduced shareholder value. The purpose of the study by

Ruf et al. (2001) is to investigate the relationship between a change in CSP and a change in financial performance, in terms of accounting measures. The results support the main pillar of the stakeholder theory, which states that shareholders benefit only once the demand of the remaining stakeholders is met. Companies benefit from investing in CSP both in the short-term and in the long-term. Short-term benefits occur as there is a positive association between a change in CSP and growth in sales for the current and subsequent year. Long-term benefits occur as there is a significant positive relationship between a change in CSP and return on sales. Thus, there is an apparent relationship between CSP and CFP. The benefit of CSP in the short-term is objected by **Lopez, Garcia and Rodriguez (2007),** who assume that a negative relationship between CSR and financial performance is caused by the requirement of "budget provisions for new assets for sustainability practices". The authors the financial performance of two groups of 55 companies in the period 1998 to 2004. One group consists of companies with a good CSR performance. The authors take the DJSI as a measure whether or not a company belongs to the group of companies emphasizing CSR activities. The other group consists of companies not included in the DJSI. The conclusion of the paper is that the main reason for investing in companies with sustainable practices routes is the potential for generating long-term value, which on the other hand corresponds to Ruf et al. (2001).

A meta-analyses of 121 empirical studies building upon previous research is conducted by **Wu (2006)** and investigates the relationship between CSP, financial performance and adds the variable company size. The author studies the link between CSP and financial performance in the first set of analysis. He concludes that "the cost of having a high level of corporate social responsibility is minimal and that firms may actually benefit from socially responsible action in terms of employee morale and productivity" (Wu, 2006), which is in line with the stakeholder theory. Conducting subgroup analysis Wu (2006) finds that market-based financial measures[3] are weaker predictors of CSP than measures of profitability[4], growth[5] and asset utilization[6]. Moreover, the author proposes that reputational measures of social performance exhibit the "strongest relationship with CSP" (Wu, 2006), whereas content analysis concerning social concern exhibits the weakest link. Being more precise, the reputational measure provided by Fortune explains social performance better than the KLD rating. The results indicate that studies using "perceptually based measures will report a stronger CSP-financial performance relationship than studies using performance based measures" (Wu, 2006). No significant relationship is found for the link between company size and CSP. Thus, the author comes to the conclusion that company size does not play a role when explaining CSP.

[3] Market-based measures: Stock performance, Market return, Market value to Book value
[4] Profitability measures: Return on Equity (ROE), Return on Sales (ROS), Return on Investment (ROI)
[5] Growth measures: Average profitability, Average asset utilization
[6] Asset utilization measures: Return on Assets (ROA), Asset turnover

A total different concept termed “CSR continuum” with five levels is introducted by **Johnson (2003)**. The author suggests that CSR should be viewed as a “continuum ranging from companies engaged in illegal activities to those striving for social change”. According to Johnson (2003) it should not be trivialized whether CSR activities pay off or not. The focus should be rather on the question *when* to invest in CSR activities. It solely depends where along the CSR continuum a company stands. If a company does not comply with generally accepted conventions and standards (level one), this has a negative impact on profits. If a company only complies with the legal settings (level two) or engages in fragmented CSR activities (level three), there is no significant effect on financial performance. The same applies for companies at level five considering themselves as “agents for social change”. The largest positive relationship between CSR and financial performance occurs at level four where companies make strategic CSR investments.

Environmental dimension

Various academic papers find a positive relationship between environmental performance and financial performance. However, the proxy for environmental performance varies from air and water pollution measures over the disclosure of pollution control information in annual reports to studying the effects of environmental disasters.

Bragdon and Marlin (1972) as well as **Shane and Spicer (1983)** base their research on the environmental ratings from the Council on Economic Priorities (CEP). It is ““the most detailed, consistent, and comparable data bearing on corporate social performance has been published by the CEP. It appears to be the most active external producer of information in this area (p.522).” (Shane and Spicer, 1983). Bragdon and Marlin (1972) take a look at *air and water pollution measures* in the pulp and paper industry. They correlate the financial performance indexes of 17 companies within the industry with pollution control indexes. There is a positive correlation between a low level of pollution and outperforming financial performance. Shane and Spicer (1983) extend their study to 58 companies in four different industries (pulp and paper, iron and steel, electric power, petroleum), which are considered as a significant source of environmental pollution and where the largest amount of expenditures are required in order to comply with environmental regulation. The purpose is to investigate the association between the stock price movements of a particular company and eight major studies released by CEP concerning environmental information of companies. “The reported results indicate that the CEP firms experienced, on average, relatively large negative abnormal returns on the two days immediately prior to newspaper reports on the release of the CEP studies. Moreover, returns for those companies revealed to have low pollution-control performance rankings were found, on average, to have significantly more negative returns than companies with high rankings on the day the news-paper reports were published.” (Shane and Spicer, 1983)

The positive relationship of environmental and financial performance is confirmed by **Belkaoui (1976)** in a later study focusing on the *disclosure of pollution control information* in annual reports of the years 1970 and 1971. His sample consists of 50 companies from different industries. The author assumes that the voluntary disclosure of the expenditures for pollution control has a positive signal to investors and indicates an advantage for the company in the long-term as there is less risk of plant closings by the Environmental Protection Agency. Based on risk-adjusted market returns he finds that companies disclosing pollution information show an outperformance compared to the market average in terms of stock market return. **Blacconiere and Patten (1994)** again take a different way in investigating the relationship between environmental and financial performance as they focus on *environmental disasters*. The idea of the study is to investigate the effect of environmental disasters on stock prices. It differs from previous studies to the extent that a negative event is analyzed and not solely the information about certain environmental disclosures. The authors take the chemical catastrophe of Bhopal in 1984 where 4.000 people were killed and 200.000 were injured. The sample consists of 47 companies in the chemical industry, which are expected to experience a negative stock price reaction upon the disaster news. The results of the study confirm the hypothesis. First, the overall market reaction (upon the disaster news) of companies in the chemical industry and related sectors was indeed negative. Second, those companies disclosing extensive environmental information prior to the chemical disaster experienced a stock market reaction which was less negative compared to companies communicating little concerning environmental matters. A possible reason explaining the result is that investors appreciate extensive disclosures concerning environmental information as the company manages the exposure to regulatory costs in the future well. Third, as expected, companies with a relatively larger exposure to the chemical segment experience a more negative stock price reaction. Summarized, thorough environmental disclosure is positively correlated with stock price performance.

There is a limitation to the extent that all studies mentioned above in this section are based on U.S. data. However, recent studies also cover a UK context. **Thomas (2001)** investigates whether excess stock market returns originate from good environmental management. The results again confirm the conclusions from the U.S. based studies that there is a positive relationship. In particular, Thomas (2001) finds that both prosecution for breaking environmental standards as well as the adoption of an environmental policy have “significant explanatory power in an analysis of excess returns”. Prosecutions with an environmentally-related reason lead to reduced excess returns, while investors benefit from adopting environmental policies.

Index inclusions and exclusions and fund manager behavior

Numerous research has been carried out on price and volume effects associated with changes in major market indices. In particular, the S&P 500 has been focus of attention. It is a value-weighted U.S. market index and considered as one of the most important indices worldwide.

Changes in the composition of major market indices are followed closely by many market participants. Generally, the majority of fund managers are evaluated relative to a specific benchmark. For the U.S. market this would usually be a well-known market index such as the S&P 500 or the MSCI USA. Index investors have to "passively" replicate the index one to one and minimize the tracking error, which measures how closely a portfolio is actually following the index it is benchmarked to. Other investors have to "actively" invest their money by deviating from the benchmark in order to generate active return. Hence, they exhibit higher tracking errors compared to index funds. However, tracking errors of "active" fund managers are often observed to be very low. On the one hand, in particular younger fund managers consider reputation or career concerns, avoiding unsystematic risk and herding into popular sectors (Chevalier and Ellison, 1999). On the other hand, many investment companies want their "active" fund managers to minimize the tracking errors in order to limit the investment risk or sometimes they even impose maximum values for the tracking error.

The tracking error is thus important for both types of investors. Active and passive fund managers adjust their portfolios following index changes, buying stocks being added to the index and selling those being excluded.

According to the **Efficient Market Hypothesis (EMH)** all publically available information is reflected in the stock price. Since changes in the composition of market indices do not convey new information about the future prospects of a stock, this should not have an effect on the stock price. The selection mechanism of indices is independent from forecasting future stock returns. Standard & Poors officially states that "judgments as to the investment appeal of the stocks do not enter into the selection process". Changes are solely based on publically available information and well-known index composition criteria. The purchase or sale of large quantities of stocks should neither have an impact on the stock price. However, abnormal returns can be observed for stocks following index change announcements. According to Harris and Gurel (1986) prices of stocks being added to the S&P 500 in the period 1978-83 exhibit an abnormal price increase of more than three percent mainly due to index investors, immediately following the announcement. The results are confirmed by Lynch and Mendenhall (1997) who document positive abnormal returns of about 3.8 percent for stocks being added to the S&P 500. Significant negative abnormal returns of -12.6 percent are reported for stocks being excluded from the index. Beneish and Whaley (1996) also document a negative

abnormal stock price reaction of -10.8 percent, whereas they find a positive abnormal return of 5.48 percent for the opposite action.

Harris and Gurel (1986) observe an almost full reversal of the stock price increase within the next two weeks following the announcement, whereas Lynch and Mendenhall (1997) report only a partial reversal of "postannouncement abnormal returns". The results are in line with the **Price Pressure Hypothesis (PPH)**. In the short-run "prices will temporarily diverge from their information-efficient values with uninformed shifts in excess demand to compensate those that provide liquidity" (Scholes, 1972), whereas prices in the long-run, like the EMH, should be efficient. Pruitt and Wei (1989) provide additional evidence for the PPH, referring to a positive correlation between index changes in the S&P 500 and institutional ownership changes.

When indices are revised on a regular or irregular basis, fund managers have to adjust their portfolios for the reasons mentioned above. The demand for added stocks is increasing, whereas it is decreasing for deleted stocks. The magnitude of demand shift can be substantial. Harris and Gurel (1986) report a shift in demand of 5.92 percent. This can be tested by the change in trading volume, which is "suggestive of a shift in demand" (Harris and Gurel, 1986). A large increase in trading volume can be observed for stocks being added to the S&P 500 on the first trading day after the index change announcement.

The figures show that markets are not efficient. Fund managers anticipating future changes in index compositions can realize short-term profits at the expense of other market participants.

Sustainability Index inclusions and exclusions

Several current articles have explicitly focused on the price and volume effects associated with changes in sustainability indices. The majority of the papers deal with additions to and deletions from the DJSI. However, two papers focusing on the FTSE and Domini 400 Social Index will be reviewed in the upcoming section as well.

Karlsson and Chakarova (2008) have written the most comprehensive paper and postulate the question whether CSR pays off. They conduct an event study using the index changes of the DJSI from 2002 to 2007 as a proxy of CSR performance. The main conclusion of the paper is that "a positive or negative change in a company's dedication to CSR… does not generate significant abnormal returns". This might be attributed to the belief of investors that the future financial performance of a company is not affected by CSR activities. The results of Karlsson and Chakarova (2008) are confirmed by **Cheung (2009)** who investigates index changes in the DJSI from 2002 to 2007 and postulates that "announcements per se do not have any significant impact on stock return and risk". However, when Karlsson and Chakarova (2008) decompose their sample across a time or a

geographical perspective, the results differ. The level of impact of CSR activities on stock prices varies over *time* and does not exhibit a trend. In some years significant abnormal returns occur, whereas in other years no significance is observed. This is believed to be due to the increased "complexity of the concept of CSR" (Karlsson and Chakarova, 2008). The results are confirmed by **Dilling (2008)**, who carries out a study on index changes in the DJSI in the period 2002 to 2005. Following a positive market reaction on index inclusions in 2002, she observes the reaction becoming "increasingly less" in the years 2003 to 2005. In 2004 and 2005 the market reaction is even negative. According to Karlsson and Chakarova (2008) the level of impact of CSR activities on stock prices also varies *geographically*. In some regions there are significant abnormal returns whereas not in others. In particular, the abnormal returns for Japanese exits, UK entries and US entries are statistically significant. No difference in market reaction for different regions can be observed in the study of Dilling. "However, a significant difference in market reaction can be found for corporations in different industries. More specifically, we report that the share prices of corporations in the consumer product, healthcare, technology, and utilities industry seem to react more positively to the DJSI World inclusion announcement than the share prices of corporations in the basic material, financial, and industrial product industry." (Dilling, 2008)

The *Domini 400 Social Index* covers exclusively U.S. companies and is focus of interest for **Becchetti et al. (2007)**. They investigate the reaction of the stock market to relevant inclusions and exclusions between 1990 and 2004. The first hypothesis tested in this paper is whether those index changes are related to significant abnormal returns. The second hypothesis tested is whether the effect of index change announcements in the Domini 400 Social Index has risen over time. Becchetti et al. (2007) assume an increase in the impact as the interest in CSR and Social Responsible Investment (SRI) in general has increased over the last decades. The ever growing investments into ethical funds have furthermore contributed to the effect. The authors conclude that the impact of socially responsible related events, as calculated by the index inclusions and exclusions, "has risen over time and that the abnormal returns that occur in case of an exit from the index is significantly negative" (Becchetti et al., 2007). Considering both conclusions together, the significantly negative stock price reaction upon an index exclusion results less from a "negative shock on shareholders' value, but from the reaction of ethical funds" (Becchetti et al., 2007).

Curran et al. (2007) investigate the impact of index changes on stock prices in the *FTSE4Good UK Index*. Again, inclusions and exclusions from the index are used as a "proxy measure for good (poor) CSR". A positive announcement (inclusion) brings about a positive reaction on the stock price of the company, whereas a negative announcement (exclusion) brings about a negative reaction on the stock price of the company. However, the results are not statistically significant. The authors

conclude that investors do not yet take into account CSR activities and put the focus on traditional "straightforward financial information" instead of going "through a more complicated thought process to make the link between good CSR, increased financial performance and share price" (Curran et al., 2007). However, companies could benefit in the long run due to a better reputation which results in better financial performance in the future. Summarized, companies as well as stockholders do not benefit from being included in the FTSE4Good UK Index.

Methodology and Data

This section gives an overview to methodology and data. It is followed by a general introduction to the methodology of sustainability indices. Eventually, the descriptive statistics of index changes in the Dow Jones Sustainability Index (DJSI) and FTSE4Good Index (FTSE) will be illustrated.

Methodology

A widely used tool in finance is the **event study methodology**. It is used to measure the effect of an economic event on the market value of a company (MacKinlay, 1997). Assuming an efficient stock market, the impact of a certain event on stock prices can be measured by looking at the change in stock price in a certain window around the event.

According to de Jong (2009) there are three steps necessary in carrying out event studies: 1. Identify the event of interest and in particular the timing of the event; 2. Specify a benchmark model for normal stock return behavior; 3. Calculate and analyze abnormal returns around the event date.

The **first step** in conducting an event study is to define the event of interest and the timing of the event. In our study the event of interest is the announcement of composition changes in two sustainability indices, namely the Dow Jones Sustainability Index (DJSI) and the FTSE4Good Index (FTSE). We are interested in finding possible abnormal returns resulting from those index changes. In our case it is trivial to determine the announcement date as the press release dates are known and publically available on the indices' websites. The DJSI is reviewed annually in the first week of September, whereas the FTSE is reviewed up to four times a year in March, June, September, and December. It is important to adjust for time differences as companies listed in the Asia/Pacific region are present in the dataset. The relevant stock markets in this region are closed when the index changes are announced in Zurich/Switzerland (DJSI) and London/UK (FTSE), so any possible abnormal price reactions are expected to occur the next trading day. Therefore, the dataset is adjusted accordingly.

The **second step** is to specify a benchmark model for the behavior of the normal stock returns. Abnormal returns (AR_{it}) are defined as the actual return (R_{it}) minus the normal return (NR_{it}):

$$AR_{it} = R_{it} - NR_{it}$$

There are several methods for determining the normal returns (NR_{it}): mean-adjusted return model, market-adjusted return model, market model, Capital Asset Pricing Model (CAPM). They differ in terms of the chosen benchmark return model and the estimation window. This paper uses the market model, which is in accordance with previous research in the field of index changes. The main

advantage of the market model is that it accounts for differences in the beta of stocks and it is simple to apply. Normal returns are calculated as follows:

$$NR_{it} = \alpha_i + \beta_i R_{mt}$$

where α_i and β_i are OLS (ordinary least squares) estimates of the regression coefficients.

Some parameters need to be estimated in order to determine normal returns. The estimation is usually performed over a period called estimation window. This estimation window precedes the event window, which is the window where abnormal return behaviour is analyzed. There is no consensus regarding the length of the estimation window used in previous event studies in the field of index changes. Chakarova and Karlsson (2008) use a time span of five calendar months, whereas the estimation window used by Becchetti et al. (2007) is eight calendar months. Cheung (2009) even uses a period of 235 trading days. The estimation window in this study is determined to be 130 trading days, which is equivalent to six calendar months, lasting from [-135] to [-6], taking 0 as the event date. A robustness check is performed using a shorter estimation window of 43 trading days lasting from [-48] to [-6], which is equivalent to two calendar months, to check whether the results are confirmed by a different estimation window. There is a gap of five trading days between the estimation window and the event window to "limit any contamination of the estimation period" (MacKinlay, 1997) such as insider trading.

The **third step** is the calculation and analysis of abnormal returns around the event date. It does not make sense to analyze separately the return data of each company, because the stock price changes might not be caused by the index change but due to some information which is not related to the assessed event. Thus, the analysis is improved by taking average return data of several companies. The cross-sectional *average abnormal returns* (AAR) in a certain period t can be written as:

$$AAR_t = \frac{1}{N}\sum_{i=1}^{N} AR_{it}$$

Abnormal performance is given if there is a large deviation of AAR from zero. "Because these abnormal returns are all centered around one particular event, the average should reflect the effect of that particular event. All other information, unrelated to the event, should cancel out on average." (de Jong, 2009) The average abnormal return gives information about possible abnormal performance in a certain period t. However, very often it is more interesting to analyze the performance in the periods surrounding the event announcement, the event window. The aggregation of abnormal returns during this event window is termed *cumulative abnormal returns* (CAR):

$$CAR_i = AR_{i,t_1} + \cdots + AR_{i,t_2} = \sum_{t=t_1}^{t2} AR_{it}$$

As with abnormal returns, CARs can be averaged over the cross-section of events, obtaining *cumulative average abnormal returns* (CAAR):

$$CAAR = \frac{1}{N}\sum_{i=1}^{N} CAR_i$$

It is also possible to aggregate AARs over the event window to obtain CAAR:

$$CAAR = \sum_{t=t_1}^{t_2} AAR_t$$

The choice of the appropriate event window is very important. Lorraine, Collison and Power (2004) point out that the stock markets show an abnormal performance up to one week following the announcement of environmental performance of a company. However, the longer the event window, the larger is the uncertainty with respect to the cause of the abnormal performance as several events might occur in the same period. This is termed “event clustering”. Thus, event studies are most efficient when the event window is tight surrounding the event date. MacKinlay (1997) propose an event window of two days, comprising the announcement day and the day after. “This approach captures the price effects of announcements occurring after the stock exchange has closed.” (MacKinlay, 1997) This study calculates and analyzes CAAR(0,3) as the main event window. Robustness checks are made using four different event windows: CAAR(-1,0), CAAR(0,1), CAAR(-1,1), and CAAR(-1,3).

Eventually, the calculated abnormal returns need to be tested for significance using t-tests. The significance level is 5% is used to test whether the abnormal returns are significantly different from zero. The t-test is:

$$G = \sqrt{N}\frac{CAAR}{s} \approx N(0,1)$$

where

$$s = \sqrt{\frac{1}{N-1}\sum_{i=1}^{N}(CAR_i - CAAR)^2}$$

This paper is following the methodology of Lynch and Mendenhall (1997) in order to calculate the **abnormal volume**. First, the measure of volume is defined as follows:

$$v_i(\tau) = \log [1 + V_i(\tau)]/\log [1 + E_i(\tau)]$$

where $\mathrm{V_i}(\tau)$ is the traded volume on day τ for stock i in the local currency, and $\mathrm{E_i}(\tau)$ is the value of the outstanding shares (in local currency) of stock *i* on that day. This measure of volume "approximates the … trading volume expressed as a fraction of the value of stock outstanding" (Lynch and Mendenhall, 1997).

Second, the transformed volume $v_i(\tau)$ of stock *i* is regressed on the volume of the country, $v_c(\tau)$:

$$v_i(\tau) = \Phi_{0,\mathrm{i}} + \Phi_{1,\mathrm{i}}\mathrm{v_c}(\tau) + \mathrm{e_i}(\tau)$$

where $\mathrm{v_c}(\tau)$ is $\log[1+\mathrm{V_C}(\tau)]/\log[1+\mathrm{E_c}(\tau)]$ and AD is the announcement date. As proposed by Lynch and Mendenhall (1997) we use an estimated generalized least squares (EGLS) approach for the estimation of the regression coefficients, $\Phi_{0,\mathrm{i}}$ and $\Phi_{1,\mathrm{i}}$ for a certain stock i. We get the "normal" volume of security i on a certain day by using these estimates and "plugging in the values of $\mathrm{v_c}(\tau)$ for the relevant date τ. Subtracting the "normal" volume from the actual volume, we obtain the abnormal volume of security I on day τ, $\mathrm{AV_{i,c}}(\tau)$:

$$AV_{i,c}(\tau) = \mathrm{v_i}(\tau) - [\Phi_{0,\mathrm{i}} + \Phi_{1,\mathrm{i}}\mathrm{v_c}(\tau)]$$

Analoguous to the calculations of different averages of abnormal returns, the mean abnormal volume (MAV) and mean cumulative abnormal volume (MCAV) are obtained.

Data

Our two samples consist of the companies involved in index changes within the DJSI and the FTSE in the period 2002 to 2008. The data required for calculating normal and abnormal returns is collected from two sources: the websites of the indices and the financial database *Datastream*. Information about index inclusions and index exclusions is retrieved directly from the indices' websites. Moreover, the press release dates are taken from the websites which are used as the announcement date. Datastream is used to download relevant time-series data, such as historical stock prices and index developments. Each stock has to be matched with an appropriate benchmark, which is the MSCI Country Index in this case; i.e. a Japanese company is matched with the MSCI Japan Index. This index is considered to be representative of market developments in a single country. In addition, it is important to harmonize indices as there might be differences in the otherwise used broadest market indices. Stock and index returns are easily calculated from historical prices using the following formula:

$$R_{i,t} = \ln (P_{i,t}/P_{i,t-1}),$$

where $R_{i,t}$ is the stock return for company *i* on day *t* and $P_{i,t}$ is the stock price on day *t*.

Despite the provision of industry information on the indices' websites, industry classification will also be harmonized due to the different industry classification codes of the DJSI and FTSE. Thus, the Datastream industry classification code *ICBIN* is used, where each stock is allocated to one of the following ten industries: Basic Materials, Consumer Goods, Consumer Services, Financials, Health Care, Industrials, Oil & Gas, Technology, Telecommunications, and Utilities. Furthermore, the Datastream country code *MSCTRY* is used to retrieve the corresponding location (country) of the companies' headquarters. Each stock is also allocated to one of the following geographical regions: Europe, North America, Japan, Australia, Asia, South Africa, and Latin America. This will simplify the illustration of the descriptive statistics. The FTSE does not include companies from the two latter regions.

Eventually, the data is sorted according to the action (inclusion/exclusion), the year of action, industry classification, country, and the geographical region.

Eliminations from the sample occur if data for a single index change is not complete, and thus cannot be used for the data analysis. There is no data available for three stocks in the DJSI and 24 stocks in the FTSE, which translates into 0.5 percent and 4 percent of the data sample, respectively. This can be considered negligible (Esaiasson et al, 2007).

The required data for the analysis of the trading volumes is retrieved from Bloomberg. The daily trading volumes of the relevant securities and the market is obtained for the period 2002 – 2008 as well as the number of outstanding shares. The problem here is to find a proper stock exchange, as trading volumes are not aggregated and always refer to a single stock exchange. Thus, for this paper the trading volumes of the main national stock exchange is downloaded, i.e. the trading volumes from the London Stock Exchange (LSE) are used for companies headquartered and listed in UK . The complete sample is reduced by 41 actions in the DJSI and 56 actions in the FTSE. Again, the results are sorted according to action, year, industry and country.

Sustainability Indices

A wide range of sustainable indices were constructed during the last two decades in response to an increased interest in sustainability investments. Despite screening eligible companies for environmental performance, social impact and corporate governance, the approaches and methodologies of compiling the indices differ significantly.

There are two basic strategies taking into account the maximization of both the financial return and sustainability performance. **Negative screening** strategies exclude companies from certain industries or based on environmental or/and social criteria. A prominent example is the exclusion of tobacco companies from the investment universe. On the other hand **positive screening** strategies are more advanced in terms of methodology. Investment are only made into companies that employ superior strategies concerning ESG criteria. The goal is to create long-term value by embracing such strategies. Basically, sustainability investors look for profitable companies which positively contribute to society.

The **Domini 400 Social Index** was the first domestic index, launched in 1990 by the North American rating agency KLD. It takes into account environmental, social and governance (ESG) factors and only covers U.S. equities. The DJSI was the first global sustainability index launched in 1999. Two years later in 2001 the FTSE4Good Index was constructed. Table 1 gives an overview of the major sustainability indices.

Index	Launch	Markets Covered
Domini Social Index	1990	U.S.
Dow Jones Sustainability Index	1999	Global
Calvert Social Index	2000	U.S.
E. Capital Partners Ethical Index	2000	Global
Jantzi Social Index	2000	Canada
ARESE Sustainable Performance Indices	2001	Europe
FTSE4Good Index	2001	Global
Humanix Ethical Index	2001	Global
Ethibel Sustainability Index	2002	Global

Table 1: Major Sustainability Indices

This paper is going to focus on the Dow Jones Sustainability Index and the FTSE4Good Index, which are widely recognized as the most important global sustainability indices.

Dow Jones Sustainability Index

The Dow Jones Sustainability Index (DJSI) was launched in 1999 in a cooperation of Dow Jones and Sustainable Asset Management (SAM) in Zurich, Switzerland. It was the first sustainable index covering global equities. The index family consists of four indices with a regional focus on Europe, North America, Asia Pacific and Global markets.

The corporate sustainability assessment applied by SAM includes the three major dimensions of corporate sustainability: the economic, the environmental and the social dimension. This integrated assessment has a strong focus on long-term shareholder value. Table 2 shows the sustainability assessment criteria.

Dimension	**Criteria**
Economic	Codes of Conduct / Compliance / Corruption&Bribery
	Corporate Governance
	Risk & Crisis Management
	Industry Specific Criteria
Environment	Environmental Reporting
	Industry Specific Criteria
Social	Corporate Citizenship/ Philanthropy
	Labor Practice Indicators
	Human Capital Development
	Social Reporting
	Talent Attraction & Retention
	Industry Specific Criteria

Table 2: Sustainability Assessment Criteria of DJSI

Each year a questionnaire is handed out to the 2500 largest companies world-wide in terms of market capitalization. The questionnaires comprise general and industry-specific criteria. The companies are compared against their peers in one of the 57 industry sectors and get ranked accordingly. The top 10% in terms of sustainability performance are then included in the DJSI. This concept is a positive screening strategy and also called the **best-in-class** approach. The questionnaires are not static but dynamic. Sustainability trends are identified of which the research analysts think they could have a growing impact on the long-term success of companies and are subsequently incorporated into the questionnaires. This ensures that companies cannot rest on good results from the past. They have to recognize sustainable trends and find solutions in order to get a good sustainability score year by year to stay top of the peergroup. Example of sustainability trends are: climate change, water scarcity, food, accountability and health (see website of DJSI). In addition to the questionnaires the media and stakeholder analysis constitutes an important source of information. The responsible industry analysts review press releases, articles, media, and stakeholder commentary written about a company over the past year. Additional information sources comprise sustainability reports, annual reports and even personal contact with companies in case of clarification of certain issues.

In the first week of September the results of the assessment are announced on the website of Dow Jones Sustainability Indices. The implementation date of the index changes is Monday in the fourth week of September. Press release (announcement) and implementation dates from 2002-2008 are presented in table 3.

Year	Press Release Dates	Implementation Dates
2002	4th September	23rd September
2003	4th September	22nd September
2004	2nd September	20th September
2005	7th September	19th September
2006	6th September	18th September
2007	6th September	24th September
2008	4th September	22nd September

Table 3: Press release and implementation dates of Dow Jones Sustainability Index, 2002-2008

As mentioned above, SAM follows the best-in-class approach, which also means that precarious sectors in terms of socially responsible investment such as the tobacco and armaments industry can be included in the index.

FTSE4Good Index Series

The FTSE4Good Index (FTSE) series consists of four different regional indices, covering European, U.K., U.S. and Global markets. It was launched in 2001 by the FTSE Group, a London-based index provider. The index series has been designed to "measure the performance of companies that meet globally recognized corporate responsibility standards and to facilitate investment in those companies" (FTSE). The index rules and calculation methodology are publicly available. This makes the FTSE very transparent as all changes in the indices are well documented and can be well understood using the rules and calculation methodology. In particular, deletions from the indices attract the attention of investors as the companies involved apparently either put less focus on corporate responsibility standards, or not longer keep up with economy-wide standards as they evolve, following revised inclusion criteria.

The FTSE4Good Policy Committee is responsible for the management of the index series. It is comprised of experienced independent experts from the fields of fund management, corporate social responsibility, business community and academia. Their primary responsibility is to manage the selection criteria of the FTSE4Good index series. The selection criteria are the main tool to screen eligible companies for meeting "globally recognized and accepted responsible investment" (FTSE)

standards. In order to be included in the indices, companies from the investment universe need to pass all of the eligibility criteria and then automatically become members of the FTSE. The following requirements must be met: working towards environmental sustainability, developing positive relationships with stakeholders, climate change mitigation and adaptation, countering bribery, upholding and supporting universal human rights and labor rights, ensuring good supply chain labor standards. Companies must provide sufficient evidence to show that they meet the criteria. Only official documents such as annual reports or sustainability/CSR reports are accepted, which demonstrates the reliability of the information as it is audited. The selection criteria are revised on a regular basis to remain consistent with the continually evolving corporate responsibility landscape and market expectations. Companies not meeting the updated standards are excluded from the index series. Since the FTSE4Good Index series was launched various criteria have evolved: new supply chain labor standards and countering bribery requirements, tougher human rights and environmental criteria.

Contrary to the best-in-class approach used in the DJSI, the FTSE4Good Index series applies a negative screening strategy. For instance, the tobacco and armaments sectors are entirely excluded from the investment universe. This process is also called an ethical approach, which means that "firms that produce objectionable goods and services, or operate in distasteful industries or countries" (Cochran, 2007) are not considered for the indices.

Furthermore, the FTSE4Good Policy Committee is responsible for the semi-annual review of all FTSE4Good indices which takes place in March and September. Any changes (inclusions or exclusions) resulting from the reviews are published on the FTSE website and implemented after the close of business on the third Friday in March and September. Companies can be deleted from the index in case of unscheduled events or developments in June and December. Exact announcement and implementation dates from 2002-2008 are presented in table 4.

Year	**Announcement Date**	**Implementation Date**
09/2002	17th September	20th September
12/2002	12th December	20th December
03/2003	19th March	21st March
06/2003	12th June	20th June
09/2003	18th September	19th September
12/2003	12th December	19th December
03/2004	12th March	19th March

06/2004	10th June	18th June
09/2004	10th September	17th September
03/2005	10th March	18th March
09/2005	7th September	16th September
03/2006	8th March	17th March
06/2006	9th June	16th June
12/2006	7th December	15th December
03/2007	7th March	16th March
06/2007	7th June	15th June
09/2007	12th September	21st September
12/2007	17th December	21st December
03/2008	13th March	25th March
06/2008	12th June	20th June
09/2008	11th September	19th September
12/2008	10th December	19th December

Table 4: Press release and implementation dates of FTSE4Good Index, 2002-2008

Descriptive Statistics

The descriptive statistics of index changes in the Dow Jones Sustainability Index (DJSI) and FTSE4Good Index (FTSE) will be illustrated in this section.

Dow Jones Sustainability Index

The DJSI sample includes 541 events in the period 2002 to 2008. There are 298 index inclusions (55 percent) and 243 index exclusions (45 percent). The sample distribution by year is shown in table 5 below.

Year	Number of events
2002	121
2003	77
2004	55
2005	93
2006	70
2007	69

2008	56
Total	**541**

Table 5: Distribution by Year (DJSI)

Most index changes occurred in 2002, the first year of the sample. 121 companies were either included or excluded from the DJSI. In the years 2003 to 2008 index changes were significantly lower with an average of 70 events.

The sample distribution by region is shown in table 6 below. The majority of companies are European (42 percent), followed by North American companies (31 percent). Japanese and Australian companies make up 14 percent, respectively 6 percent, of the sample distribution. The remaining companies (6 percent) come from Asia (Ex. Japan), South Africa, and Latin America.

Region	**Number of events**
Europe	229
North America	168
Japan	77
Australia	31
Asia	19
South Africa	10
Latin America	7
Total	**541**

Table 6: Distribution by Region (DJSI)

Companies are assigned to one of ten industries, which are mentioned in the legend of table 7 below. The majority in this category are Industrials (23 percent), followed by companies operating in the Consumer Services industry (15 percent). Consumer Goods and Financials each represent 13 percent of the sample.

Industry	**Number of events**
Basic Materials	48

Consumer Goods	69
Consumer Services	80
Financials	71
Health Care	32
Industrials	122
Oil & Gas	28
Technology	46
Telecommunications	12
Utilities	33
Total	**541**

Table 7: Distribution by Industry (DJSI)

FTSE4Good Index

The sample for the FTSE contains 637 events from 2002 to 2008, of which are 416 index inclusions (65 percent) and 221 index exclusions (35 percent). The distribution of the sample sorted by year is shown in table 8 below.

Year	Number of events
2002	55
2003	109
2004	143
2005	105
2006	41
2007	75
2008	109
Total	**637**

Table 8: Distribution by Year (FTSE)

The peak of index changes occurred in 2004, with an amount of 143 events. Two years later only 41 index inclusions or exclusions took place, which translates into a decrease of 70 percent. In the remaining years the mean was 90 events.

The distribution of the sample sorted by geographical region is depicted in table 9. Most activity occurred with Japanese companies (34 percent), followed by European companies (32 percent) and

North American companies (27 percent). Australian and Asian companies only made up for approximately 6 percent and 2 percent, respectively.

Region	Number of events
Europe	201
North America	169
Japan	219
Australia	37
Asia	11
Total	**637**

Table 9: Distribution by Region (FTSE)

The sample distribution by industry is similar the one from the DJSI. Companies from the Financial and Industrial sector take the largest part from the pie chart with fractions of 20 percent and 19 percent, respectively. Consumer Goods represent 14 percent, followed by Consumer Services and Technology with 12 percent each. A detailed distribution by industry can be found in table 10 below.

Industry	Number of events
Basic Materials	66
Consumer Goods	91
Consumer Services	77
Financials	124
Health Care	33
Industrials	117
Oil & Gas	19
Technology	75
Telecommunications	20
Utilities	15
Total	**637**

Table 10: Distribution by Industry (FTSE)

Lists containing detailed information regarding every single index change (including company name, Datastream code, country, sector, comment, and year) is provided in table 19 and table 20 in the appendix for both the DJSI and FTSE, respectively.

Results

This section tries to present and describe the results, which comprises the cumulative average abnormal returns (CAAR) and the corresponding t-test statistics. The main event window used is CAAR (0,3); the main estimation window is six months. The significance level is 5 percent, which means that CAAR's are significant if the t-statistic is greater than 1,96.

If not otherwise mentioned, tables in this section are based on the event window CAAR (0,3) and an estimation window of six months. Data based on other event windows (-1,0 / 0,1 / -1,1 / -1,3) and an estimation window of two months can be found in table 15 (DJSI) and table 16 (FTSE) in the appendix.

The results from the DJSI and FTSE will be presented in the following order: CAAR by Action, CAAR by Year, CAAR by Industry, and CAAR by Country.

CAAR by Action

A table containing the CAAR's and t-test statistics of the DJSI and FTSE for all five event windows can be found in table 11 below. Relevant data for the alternative estimation window of two months is attached in table 15.2 (DJSI) and table 16.2 (FTSE) in the appendix as mentioned above.

	DJSI		FTSE	
	Add	**Delete**	**Add**	**Delete**
CAAR (-1,0)	-0,00129 (-0,951)	0,001214 (0,681)	0,000515 (0,464)	-0,00537 (-2,082)
CAAR (0,1)	-0,00276 (-2,066)	-0,00161 (-0,921)	-0,00147 (-1,251)	-0,00482 (-1,941)
CAAR (-1,1)	-0,00246 (-1,469)	0,000599 (0,0278)	-0,00068 (-0,474)	-0,0064 (-1,996)
CAAR (0,3)	-0,00371 (-1,952)	-0,00139 (-0,603)	-0,00217 (-1,212)	-0,00109 (-0,322)
CAAR (-1,3)	-0,00341 (-1,553)	0,000824 (0,304)	-0,00138 (-0,707)	-0,00266 (-0,660)

Table 11: CAAR by Action

First, when taking a look at the **DJSI**, the CAAR of the default event window (0,3) is negative for both inclusions and exclusions. The average abnormal return of an inclusion (-0,00371) is greater than the magnitude of an exclusion (-0,00139). The t-test statistic gives (-1,952) and (-0,603), respectively, which means that both CAAR's are not significantly different from zero at the confidence level of 95 percent. However, reducing the confidence level to 90 percent would lift the t -value of inclusions into a statistically significant zone. The remaining event windows show a similar pattern: the CAAR's of exclusions are consistently higher than the CAAR of inclusions. None of them is significantly

different from zero, except inclusions in the event window (0,1), exhibiting a negative CAAR of (-0,00276) with a t-test of (-2,066).

$H_{1a}(DJSI)$= *There is no significant positive abnormal return following an inclusion into the DJSI in the period 2002 to 2008*

The null hypothesis $H_{1a}(DJSI)$ cannot be rejected. This means that companies do not generate positive abnormal performance upon inclusion announcement into the DJSI.

$H_{1b}(DJSI)$= *There is no significant negative abnormal return following an exclusion from the DJSI in the period 2002 to 2008*

The null hypothesis $H_{1b}(DJSI)$ can neither be rejected. It can be concluded that on average there is no significant reaction by the market following an exclusion announcement.

Things change when the shorter estimation window of only two months is used. The average magnitude of an inclusion remains higher than the average magnitude of an exclusion. The CAAR's are highly significant for inclusions using all possible event windows. The CAAR's are also significant for exclusions, except the longer event windows (0,3) and (-1,3).

Turning our focus to the **FTSE**, we observe a slightly more negative CAAR for inclusions compared to exclusions for our default event window (0,3). The average abnormal return of an inclusion (-0,00217) is greater than the magnitude of an exclusion (-0,00109). However, both CAAR's are statistically not significant with t-values of (-1,212) and (-0,322) respectively. For the other four event windows holds that exclusions have a more negative impact compared to inclusions. Companies being excluded from the FTSE show a statistically significant negative reaction upon announcement in the event windows CAAR (-1,0) and CAAR (-1,1). The event window CAAR (0,1) is also very close to being statistically significant.

$H_{1a}(FTSE)$= *There is no significant positive abnormal return following an inclusion into the FTSE in the period 2002 to 2008*

The null hypothesis $H_{1a}(FTSE)$ cannot be rejected. Thus, no significant positive return in measured following an inclusion announcement.

$H_{1b}(FTSE)$= *There is no significant negative abnormal return following an exclusion from the FTSE in the period 2002 to 2008*

The null hypothesis $H_{1b}(FTSE)$ can be rejected for those companies getting excluded from the DJSI with the event windows CAAR(-1,0) and CAAR(-1,1). The null hypothesis for the event window CAAR (0,1) can be rejected when the confidence level is slightly reduced.

The results from the previous paragraph are confirmed by the shorter estimation window of two months. Companies being excluded from the index exhibit a statistically significant negative abnormal return for the two previously mentioned event windows as well as for CAAR (-1,1). Thus, stock prices react negatively upon exclusion announcement closely around the event date.

Summarizing the empirical results from the DJSI and FTSE with respect to CAAR by action, it can be concluded that companies show no significant positive reaction upon an inclusion announcement in the DJSI or FTSE. We observe a statistically significant negative stock market reaction for companies being added to the DJSI in the event window (0,1). This result contradicts our expectations. We expect positive abnormal returns for companies being added to the DJSI. Statistically significant negative abnormal returns upon a inclusion announcement cannot be properly explained as costly investments into a sustainability strategy, which might be a possible reason for negative reactions on the stock market, have already occurred in the past and should have previously been priced by the market, according to the efficient market hypothesis. The result also allows us to conclude that investors do not put their money into sustainability driven products due to expected outperformance, but rather to "do something good". When it comes to exclusion announcements, companies experience a significant negative abnormal performance for the FTSE in the event windows CAAR(-1,0) and CAAR(-1,1), while no significant impact is observed for the DJSI. Thus, the findings of the empirical part regarding CAAR'S by action are ambiguous.

This result does not surprise as previous research does neither agree about the link between corporate sustainability performance and financial performance, as measured in terms of market value. On one hand, this paper does not find any significant impact of index changes in the DJSI and for inclusion announcements in general. This is in line with the results of Arlow and Gannon (1982) who find that "economic performance is not directly linked, in either a positive or negative fashion, to social responsiveness". On the other hand, this paper finds a significant negative abnormal performance for companies getting excluded from the FTSE. This result corresponds with Becchetti et al (2007), who find that there is a significant negative abnormal performance following an exclusion announcement from the Domini 400 Social Index. The authors assign the negative impact on the market value of the company to the reaction of ethical funds rather than "due to an expected shock on shareholders' value" (Becchetti et al., 2007). The mutual fund managers of those ethical funds withdraw their holdings in companies being excluded from the index, leading to a pressure on

stock prices and resulting in negative abnormal performance. This behavior is a possible reason for the negative market reaction following exclusion announcements from the FTSE.

The analysis of daily trading volumes around the announcement date for companies added to or deleted from the FTSE confirm the results of Becchetti (2007). Results are presented in table 18. The mean increase in trading volume on the announcement date is 14.76 percent. On the following two days it is 14.18 percent and 14.72 percent, respectively. On day 3 it is still 9.71 percent above the mean. These figures undermine the conclusion of Becchetti (2007), who postulates that the reaction of socially responsible investment managers lead to a pressure on security prices.

Regarding the trading volumes of the DJSI, we observe a mean increase of 4.78 percent on the announcement date. On the following days the mean abnormal trading volume is negative: -1.10 percent on day 1, -5.00 percent on day 2, and -6.70 percent on day 3. Results can be found in table 17. These numbers might indicate why we do not find any abnormal returns in line with our expectations for the DJSI. There is no pressure on security prices due to the lower trading volumes around the announcement date, which can eventually lead to abnormal returns. The abnormal trading volumes for the FTSE are higher than for the DJSI. Apparently the announcement of index changes in the FTSE are followed by more market participants, explaining abnormal returns by the price pressure hypothesis.

Why is there a significant impact on stock prices when being excluded from the FTSE, but not from the DJSI? The DJSI is supposed to be the sustainability index that is most recognized worldwide due to its' extensive and thorough methodology. Thus, a significant abnormal performance is expected to occur even more likely following changes in the DJSI. Taking the argumentation applied in the previous paragraph, mutual fund managers licensing the DJSI might follow a different investment approach compared to funds focused on the FTSE. This might be attributed to the differences in methodology. Possibly, any significant abnormal performance concerning the DJSI could be observed over a longer event window, including the implementation date which takes place two to three weeks after the announcement date.

To conclude this section, we find some evidence that the impact on stock prices following an index change announcement can be assigned to the behavior of mutual fund managers who are closely following the changes and the holdings of the sustainability indices. This leads to pressures on security prices. The index change announcements apparently do not convey any information with respect to the future cash flows of the company. Thus, there is no "negative shock on shareholders' value" (Becchetti et al., 2007).

CAAR by Year

The CAAR's classified by year are depicted in table 12 below. The data for other event and estimation windows can be found in tables 15.3 and 15.4 for the DJSI and in tables 16.3 and 16.4 for the FTSE.

Year	DJSI		FTSE	
	Add	Delete	Add	Delete
2002	-0,00122 (-0,291)	-0,00194 (-0,355)	0,003806 (0,577)	0,008636 (0,456)
2003	-0,00263 (-0,482)	-0,00547 (-0,985)	-0,00031 (-0,058)	0,003864 (0,492)
2004	0,00051 (0,112)	0,001795 (0,300)	-0,00513 (-1,729)	-0,0024 (-0,415)
2005	0,001651 (0,456)	0,004089 (0,813)	0,004806 (1,493)	-0,00118 (-0,306)
2006	-0,00382 (-1,119)	0,004107 (0,725)	-0,01009 (-2,135)	0,004942 (0,636)
2007	-0,00781 (-1,544)	-0,00946 (-1,773)	-0,02067 (-2,722)	-0,0076 (-1,405)
2008	-0,01575 (-1,853)	-0,00406 (-0,409)	0,001953 (0,403)	-0,00266 (-0,270)

Table 12: CAAR by Year

The results for the **DJSI** are not clear-cut, containing no specific trends with respect to the development over time or spread between inclusion and exclusion. The impact is more positive for inclusions compared to exclusions in the year 2002, 2003, 2007, and 2008, whereas it is the other way around from 2004 to 2006. All numbers are not significantly different from zero. Similar results are obtained using the alternative event windows. Again, none of the numbers are significantly different from zero, except the CAAR (-1,1) for companies included in the DJSI in 2002. The abnormal return is (-0,0087) with a t-test statistic of (-2,196), which is greater than the threshold of (-1,96).

$H_{2a}(DJSI)$= *There is no significant positive abnormal return created by an inclusion into the DJSI in 2002, 2003, 2004, 2005, 2006, 2007, 2008 (individually)*

The null hypothesis $H_{2a}(DJSI)$ cannot be rejected. Companies entering the DJSI did not experience a positive reaction on the stock markets in the individual years 2002, 2003, 2004, 2005, 2006, 2007 and 2008.

$H_{2b}(DJSI)$= *There is no significant negative abnormal return created by an exclusion from the DJSI in 2002, 2003, 2004, 2005, 2006, 2007, 2008 (individually)*

Again, the hypothesis $H_{2b}(DJSI)$ cannot be rejected as none of the t-test statistics is less than -1,96. Therefore, there is no evidence that exclusion announcements caused significant negative abnormal returns.

There are no clear-cut results for the period 2002 to 2005 considering the short estimation window of 2 months. From 2006 to 2008, there is a observable trend for all event windows. Inclusions have a more positive CAAR compared to exclusions with the trend that all CAAR's are becoming more negative. All numbers are statistically significant (2006-2008).

No clear-cut results can be observed from the data for the **FTSE** either. There are neither significant trends over time nor significant trends within event windows. Companies deleted from the index in 2008 experienced a statistically significant negative abnormal return in the event window CAAR (0,1). The same results are obtained using an estimation window of 2 months preceding the event date.

$H_{2a}(FTSE)$= *There is no significant positive abnormal return created by an inclusion into the FTSE in 2002, 2003, 2004, 2005, 2006, 2007, 2008 (individually)*

The null hypothesis $H_{2a}(FTSE)$ cannot be rejected as none of the t-test values is greater than 1,96.

$H_{2b}(FTSE)$= *There is no significant negative abnormal return created by an exclusion from the FTSE in 2002, 2003, 2004, 2005, 2006, 2007, 2008 (individually)*

The hypothesis $H_{2b}(FTSE)$ can be rejected for excluded companies in the year 2008. It can be concluded that those companies experienced a significant negative reaction following an exclusion announcement.

Neither the inclusion into the DJSI nor into the FTSE brought about a significant positive abnormal return in the individual years 2002 to 2008. However, looking at the opposite action, the exclusion from the FTSE in 2008 lead on average to a negative abnormal return in the event window CAAR(0,1). There was no significant negative abnormal return in the other years for the FTSE and the DJSI in the case of an exclusion.

As already mentioned above the change in the estimation window from six to two months in the DJSI results in different findings. Both index inclusions and exclusions in the years 2006, 2007 and 2008 exhibit statistically significant negative abnormal returns.

Summarized, the overall market reaction is not significant when decomposing the dataset into the years 2002 to 2008 with an estimation window of six months. It might be argued that the reaction of the market has slightly changed over time as there is a significant abnormal performance in 2008, which might indicate a trend.

This paper argues that the perception of the market with respect to the level of sustainability activities, as measured by index inclusions and exclusions, has not significantly changed between 2002 and 2008. This contradicts with previous research, which found that the impact of sustainability activities on the market value of a company has risen over time, although in a different periods of time. Among the contradicting papers is Becchetti et al (2007) who investigate index changes in the Domini 400 Social Index in the time period 1990 to 2004. The authors find that the impact has risen over time and explain this trend as a consequence of the increased interest in CSR by investors. When comparing Becchetti et al (2007) to this paper, it has to be considered that the Domini 400 Social Index merely includes domestic companies from the US, whereas the DJSI and FTSE cover companies world-wide. It is a matter of fact that interest in CSR related products has increased over time. As mentioned in the introduction of this paper, the Social Investment Forum in the United States has recorded $ 3.07 trillion investments in vehicles using the approach of SRI in 2010. However, it has to be considered that this massive number includes all three investment approaches (screening, shareholder advocacy, community investing) and is a very broad figure. The DJSI and FTSE might be sustainability indices with thorough research methodologies, which eventually only attract a relatively small fraction of investors compared to the above mentioned total investment volume in SRI (considering direct assets under management and licenses on these indices). Thus, index change announcements of DJSI and FTSE are not expected to be priced by the overall market.

CAAR by Industry

The CAAR's sorted by Industry sectors are presented in table 13 below. The data for other event and estimation windows can be found in tables 15.5 and 15.6 for the DJSI and in tables 16.5 and 16.6 for the FTSE.

Industry	DJSI		FTSE	
	Add	Delete	Add	Delete
Basic Materials	-0,013708722 (-1,668)	-0,005240373 (-0,631)	-0,004043987 (-0,989)	0,005661986 (0,343)
Consumer Goods	-0,002125222 (-0,518)	0,006778409 (0,932)	-0,007654986 (-0,259)	0,002668343 (0,655)
Consumer Services	-4,46421E-06 (0,000)	-0,001726234 (-0,274)	-0,000988689 (-0,893)	0,003980143 (0,381)
Financials	0,000864938 (0,243)	0,005874796 (0,984)	0,005176111 (1,593)	0,003772538 (0,583)
Health Care	-0,002713823 (-0,374)	0,010369289 (1,603)	0,003785652 (0,571)	0,000487467 (0,026)
Industrials	-0,002339592 (-0,539)	-0,004678969 (-1,190)	-0,000946352 (-0,245)	-0,001797546 (-0,200)
Oil & Gas	-0,009476482 (-1,124)	-0,035961584 (-3,265)	0,007006425 (1,049)	-0,011007094 (-1,201)

Technology	-0,010859603 (-1,465)	-0,005857861 (-0,816)	-0,018007902 (-2,869)	-0,015983555 (-1,207)
Telecomm.	0,002179073 (0,475)	0,000920738 (0,072)	0,004151907 (0,081)	-0,013319277 (-1,155)
Utilities	-0,003876485 (-0,559)	0,005096056 (0,722)	0,001274863 (0,158)	-0,001671875

Table 13: CAAR by Industry

Companies from the Oil & Gas industry exhibit a statistically significant (-3,265) negative CAAR of (-0,03596) in the **DJSI**. This result is confirmed by the event window CAAR (-1,3). There are two more events that are statistically significant: Companies from the utilities sector experience a negative abnormal return of (-0,00983) in the event window CAAR (-1,1) following an inclusion; companies from the health care sector experience a positive abnormal return of (0,01431) in the event window CAAR (-1,3) following an exclusion. The two findings in Utilities and Health Care cannot be explained reasonably and are attributed to contingency.

$H_3(DJSI)$= *There is no significant abnormal return created by changes in the DJSI within various industries in the period 2002 to 2008*

The hypothesis $H_3(DJSI)$ can only be rejected for excluded companies from the Oil & Gas industry in the event windows CAAR(0,3) and CAAR(-1,3). This means that the average market reaction is negative in the case that a company from the Oil & Gas industry is excluded from the DJSI.

Considering the shorter estimation period of two months, many more numbers turn statistically significant. We just highlight the most important numbers of tables 15.5 and 15.6 in the appendix. The statistically significant negative abnormal return of companies from the Oil & Gas sector following an exclusion from the DJSI is confirmed. The results for companies from the utilities industry (see above) are confirmed, too. Furthermore, companies from the basic materials industry (CAAR(0,1), CAAR(-1,1)) and financials industry (CAAR(-1,0), CAAR(0,1), CAAR(-1,1)) experience a statistically significant negative abnormal return following an exclusion from the DJSI.

The results of the **FTSE** are rare with significant figures. However, companies from the technology industry show a statistically significant negative CAAR, following an inclusion announcement. The robustness check confirms the results using the short estimation window of two months. As in the case with negative stock market reaction for companies being added to the DJSI in the event window (0,1), this result is not in line with our expectations. Again, we rather expect positive abnormal returns. Costly investments into a sustainability strategy, which might be a possible reason for

negative reactions on the stock market, have already occurred in the past and should have previously been priced by the market, according to the efficient market hypothesis.

$H_3(FTSE)$= *There is no significant abnormal return created by changes in the FTSE within various industries in the period 2002 to 2008*

The hypothesis $H_3(FTSE)$ cannot be rejected. However, companies from the technology sector exhibit a significant negative reaction following an inclusion announcement.

Summarized, when the dataset is sorted according to ten broad industries, we observe a striking result with respect to exclusions from the DJSI. Companies from the Oil & Gas industry exhibit a highly significant negative abnormal performance following an exclusion announcement. This holds for the event windows CAAR(0,3) and CAAR(-1,3). Investors seem to be very sensitive with respect to negative announcements regarding companies in the Oil & Gas industry. This is probably linked to the characteristic of the industry. An index exclusion is a sign of concern as the sustainability strategy appears to be lagging compared to the peer group and threats appear to have increased. Increased environmental or socials threats will have a negative impact on both top line figures and bottom line figures. In case of an environmental or social disaster the brand image and reputation suffers, which will adversely affect top line figures as consumers are suddenly preferring competitors. On the other hand, bottom line figures are affected due to the financial costs of such a disaster. BP is estimated to pay approximately 40 billion US dollars following the Deepwater Horizon oil spill in the Gulf of Mexico in spring 2010. Besides cleaning up the landscape victims have to be compensated. A 20 billion US dollars fund was set up for this purpose[7]. Sustainability investors watch index announcements very closely as an indicator for the risk of cash flows in the future and to minimize costs associated with ESG threats. Hence, an index exclusion increases the risk of a business and leads to a reduced fair value of the stock price as a result of higher discount rates of future cash flows. Johnson (2003) adds that if a company does not comply with generally accepted conventions and standards in an industry, this has a negative impact on profits.

Taking a look at the change in trading volume around the announcement date gives another explanation of the negative abnormal returns in the Oil & Gas industry. The trading volume increases by 28.73 percent on the announcement date. In the following three trading days the figures are still positive: 21.50 percent, 21.50 percent and 20.88 percent, respectively. Investors holding the securities and following a sustainable investment approach sell the holdings while other investors see a good bargain, leading to a mean negative abnormal return of 3.60 percent.

[7] KSDK.com, 2011, http://www.ksdk.com/news/local/story.aspx?storyid=267872 [accessed 11 Sep 2011]

The different results of the Oil & Gas industry obtained for the DJSI and the FTSE might be attributed to differences in index construction methodology. The DJSI is widely considered as the standard in sustainability investing, outpacing the FTSE in terms of disclosure requirements and scale of research. Thus, sustainability investors base their investment decisions to a certain extent on the index information of the DJSI.

There are no other significant results for the other industries concerning the DJSI. Significant abnormal returns are neither reported for index changes in the FTSE when the dataset is decomposed into industries.

CAAR by Country

Table 14 shows the CAAR's classified by country. The data for other event and estimation windows can be found in tables 15.7 and 15.8 for the DJSI and in tables 16.7 and 16.8 for the FTSE.

Country	DJSI		FTSE	
	Add	Delete	Add	Delete
Australia	0,00615 (1,442)	-0,01281 (-1,088)	0,001596 (0,402)	0,00501 (0,877)
Canada	-0,018884 (-1,017)	0,012491 (0,772)	0,04001 (1,336)	-0,00536 (-0,474)
Switzerland	-0,000702 (-0,071)	-0,02868 (-1,801)	0,007275 (0,706)	0,04355 (0,585)
Germany	0,007061 (1,392)	-0,0139 (-1,670)	-0,00394 (-0,869)	-0,02691 (-2,949)
Spain	-0,010231 (-1,327)		-0,01784 (-1,080)	
France	0,011332 (1,978)	0,023643 (1,919)	-0,00034 (-0,056)	-0,02671 (-0,861)
UK	-0,008193 (-2,224)	-0,00038 (-0,060)	0,002187 (0,419)	-0,01393 (-1,288)
Italy	-0,011032 (-0,751)	0,025391 (1,149)	-0,00355 (-0,491)	-0,00138 (-0,329)
Japan	-0,002249 (-0,483)	-0,0069 (-1,657)	-0,004 (-1,431)	0,012557 (1,943)
Netherlands	-0,014606 (-1,209)		0,001519 (0,102)	
US	-0,001241 (-0,270)	-0,00238 (-0,583)	-0,00374 (-0,857)	0,000237 (0,082)

Table 14: CAAR by Country

Companies from Germany seem to be very sensitive to exclusion announcements in the **DJSI**. In four out of five event windows German companies experience statistically significant negative abnormal returns. The same applies for Japanese companies in two event windows (CAAR(0,1), CAAR(-1,1)). French companies react positively (statistically significant) on both inclusion and exclusion announcement.

$H_4(DJSI)$= *There is no significant abnormal return created by changes in the DJSI within various countries in the period 2002 to 2008*

Hypothesis $H_4(DJSI)$ can be rejected regarding excluded companies headquartered in Germany, Japan and Franc in certain event windows mentioned above.

With respect to the short estimation window of two months, two event windows stand out: CAAR (0,1) and CAAR (-1,1). German, British, Japanese and US companies show a negative reaction upon exclusion announcements. Spanish as well as South African companies exhibit statistically significant negative abnormal returns following an inclusion into the DJSI.

Turning to the **FTSE**, German companies exhibit a negative reaction upon an exclusion announcement through all event windows except CAAR (-1,0). In addition, companies from UK show the same reaction in the windows CAAR (-1,0) and CAAR (-1,1). On the other hand, US companies experience the same pattern following an inclusion announcement. The results are confirmed by the robustness check.

$H_4(FTSE)$= *There is no significant abnormal return created by changes in the FTSE within various countries in the period 2002 to 2008*

Hypothesis $H_4(FTSE)$ can be rejected for excluded companies headquartered in Germany, Japan and Franc in certain event windows mentioned above.

As in the case with decomposing the sample into industries, it appears that negative announcements are, again, more interesting to investors than positive news when it comes to classifying CAAR's by country. In particular German companies exhibit a highly significant negative abnormal performance, following exclusion announcements in both the DJSI and FTSE in most event windows. The analysis of trading volumes provides a reason for the behavior of stock prices. The figures for both the DJSI and FTSE are positive on the announcement date and the following three trading days. Sustainable investors sell their holdings and accept a lower price due to the price pressures. Also Japanese companies tend to be punished by the stock markets after getting deleted from the DJSI, whereas French companies get awarded following inclusion announcements. UK companies experience a negative reaction upon exclusion from the FTSE.

Room for future research

Room for future research includes studying the long-term effects. This paper has a relatively small event window of up to three days following the announcement date. The event window does not include the implementation date, which could be of great interest due to the behavior of index fund managers, replicating the indices one to one. In the case of the DJSI the implementation date is on average 10 trading days after the announcement date, in case of the FTSE 5 trading days.

In addition, a multivariate analysis could enrich the analysis by taking into account all kind of explanatory variables. This paper solely focuses on a univariate analysis as opposed to a multivariate analysis which analyzes the correlation between variables and the statistical dependence. Due to the complexity of a multivariate analysis this would exceed the scope of this paper and could be investigated in a separate research paper on the link between sustainability performance and financial performance.

Moreover, the abnormal returns following index changes in sustainability indices other than the DJSI and FTSE could be investigated. Relying on previous studies this paper assumes to be taking the most relevant sustainability indices covering securities world-wide.

Conclusion

This paper explores the relationship between sustainability performance and financial performance by looking at the impact of sustainability index changes on the market value of a company. We study the price effects of changes in the Dow Jones Sustainability Index (DJSI) and FTSE4Good Index (FTSE).

We do not observe statistically significant positive abnormal returns for companies being added to a sustainability index. Linking this result to the positive trend of SRI products in the last decades we can conclude that the trend is not driven by expected outperformance of those products but rather because investors follow the trend of sustainability investing and want to "do something good". On the opposite we find negative abnormal returns for companies being deleted from the FTSE. However, this cannot be observed for companies being excluded from the DJSI. The different results for the FTSE and DJSI can be explained by studying the volume effects and the behavior of investment managers. The trading volume increases by approximately 14 percent on the announcement date of changes in the FTSE and the following two trading days, while the trading volume decreases for the DJSI. The results support the existence of price pressures. The behavior of investment managers play an important role in analyzing the change in trading volumes upon index change announcements as they follow closely index constituents and corresponding changes of those indices they are evaluated against. Due to reputation and career concernsmost investment managers keep a low tracking error. They buy those securities that are added to their benchmark index and sell those that are deleted and hence do not deviate much from the constituents of the benchmark index.

This paper cannot confirm the trend that the impact of sustainability index changes has risen over time as a consequence of increased interest in CSR by investors. We do not find a change in abnormal returns when the sample is decomposed into the years 2002-2008. However, we find striking results when the sample is decomposed into industries and countries. Companies from the Oil & Gas industry experience significant negative abnormal returns upon deletion from the DJSI. This can be explained by increased long-term risks and higher discount rates in an industry that is particularly exposed to heavy environmental risks. An index exclusion is a sign of concern as the sustainability strategy appears to be lagging compared to the peer group and threats appear to have increased. Increased environmental or socials threats will have a negative impact on both top line figures and bottom line figures. Classifying companies by country we find that especially companies from Germany experience statistically significant negative abnormal returns when being deleted from the DJSI and FTSE.

It appears that negative announcements are more interesting to investors than positive news with respect to sustainability. The membership in a sustainability index is an indicator whether a company

complies with generally accepted conventions and standards in an industry. If a company is deleted from an index it has a negative impact on profits**.**

References

Arlow, P. and Gannon, M.J., "Social Responsiveness, Corporate Structure, and Economic Performance", *The Academy of Management Review*, Vol. 7, 1982, pp. 235-241

Becchetti, L., Ciciretti, R., Hasan, I., "Corporate Social Responsibility and Shareholder's Value: An Event Study Analysis", FRB of Atlanta Working Paper, 2007

Belkaoui, A., "The impact of the disclosure of the environmental effects of organizational behavior on the market", *Financial Management*, Vol. 5, 1976, pp. 26-31

Beneish, M.D., Whaley, R.E., "An anatomy of the" S & P game": The effects of changing the rules", *The Journal of Finance*, Vol. LI, 1996, pp. 1909-1930

Blacconiere, W.G., Patten, D.M., "Environmental disclosures, regulatory costs, and changes in firm value", *Journal of Accounting and Economics*, Vol. 18, 1994, pp. 357-377

Bragdon, J.H., Marlin, J.A.T., "Is Pollution Profitable?", *Risk Management*, Vol. 19, 1972, pp. 9-18

Chakrabarti, R., Huang, W., Jayaraman, N., Lee, J., "Price and Volume Effects of Changes in MSCI Indices – Nature and Causes", *Journal of Banking & Finance*, Vol. 29, 2005, pp. 1237-1264

Cheung, W.K.A, "Do stock investors value corporate sustainability? Evidence from an event study", Working Paper, Griffith University (Australia), 2009

Chevalier, J., Ellison, G., "Career Concerns of Mutual Fund Managers", *The Quarterly Journal of Economics*, Vol. 114, 1999, pp. 389-432

Cochran, P.L. and Wood, R.A., "Corporate Social Responsibility and Financial Performance", *Academy of Management Journal*, Vol. 27, 1984, pp. 42-56

Cochran, P.L., "The evolution of corporate social responsibility", *Business Horizons*, Vol. 50, 2007, pp. 449-454

Curran, M.M., and Moran, D., "Impact of the FTSE4Good Index on firm price: An event study", *Journal of Environmental Management*, Vol. 82, 2007, pp. 529-537

Dilling, P.F.A, "The effect of the inclusion to the Dow Jones Sustainability World Index on Firm value – an empirical event study", EABR & TLC Conferences Proceedings, 2008

Esaiasson, P., "Electoral Losers Revisited. Is There Really A Winner-Loser Gap?", Conference Paper, University of Gothenburg, 2007

Harris, L. and Gurel, E., “Price and Volume Effects Associated with Changes in the S&P 500 List: New Evidence for the Existence of Price Pressures”, *The Journal of Finance*, Vol. 41, 1986, pp. 815-829

Johnson, H.H., “Does it pay to be good? Social responsibility and financial performance”, *Business Horizons*, Vol. 46, 2003, pp. 34-40

de Jong, F., de Goeij, P.,“Event Study Methodology”, Lecture notes, Tilburg University, 2009

Karlsson, J. and Chakarova, Y., “Does Corporate Social Responsibility Pay off?”, Advanced Level Thesis, Göteborg University, 2008

Lopez, M.V., Garcia, A., Rodriguez,L., “Sustainable Development and Corporate Performance: A Study Based on the Dow Jones Sustainability Index”, *Journal of Business Ethics*, Vol. 75, 2007, pp. 285-300

Lorraine, N.H.J., Collison, D.J., Power, D.M., “An analysis of the stock market impact of environmental performance information”, *Accounting Forum*, Vol. 28, 2004, pp.7-26

Lynch, A.W. and Mendenhall, R.R., “New Evidence on Stock Price Effects Associated with Changes in the S & P 500 Index”, *The Journal of Business*, Vol. 70, 1997, pp.351-383

MacKinlay, A.C., “Event Studies in Economics and Finance”, *Journal of Economic Literature*, Vol. XXXV, 1997, pp. 13-39

Moon, J., “The Contribution of Corporate Social Responsibility to Sustainable Development2007”, *Sustainable Development*, Vol. 15, 2007, pp. 296-306

Moskowitz, M., “Choosing socially responsible stocks”, *Business and Society Review*, Vol.1, 1972, pp. 71-75

Pruitt, S.W., Wei, K.C., “Institutional ownership and changes in the S&P 500”, *The Journal of Finance*, Vol. XLIV, 1989, pp. 509-513

Ruf, B.M, Muralidhar, K., Brown, R.M., Janney, J.J., Paul, K., “An Empirical Investigation of the Relationship Between Change in Corporate Social Performance and Financial Performance: A Stakeholder Theory Perspective”, *Journal of Business Ethics*, Vol. 32, 2001, pp. 143-156

Scholes, M., “The market for corporate securities: Substitution versus price pressure and the effects of information on share price”, *Journal of Business*, Vol. 45, 1972, pp. 179-211

Shane, P.B., Spicer, B.H., “Market response to environmental information produced outside the firm”, *The Accounting Review*, Vol. LVIII, 1983, pp. 521-538

Soana, M.G., “The relationship between corporate social performance and corporate financial performance in the banking sector”, *Journal of Business Ethics*, 2009

Thomas, A., “Corporate environmental policy and abnormal stock price returns: An empirical investigation”, *Business Strategy and the Environment*, Vol. 10, 2001, pp. 125-134

Waddock, S.A. and Graves, S.B., “The Corporate Social Performance-Financial Performance Link”, *Strategic Management Journal*, Vol. 18, 1997, pp. 303-319

Wu, M.L., “Corporate Social Performance, Corporate Financial Performance, and Firm Size: A Meta-Analysis”, *Journal of American Academy of Business*, Vol. 8, 2006, pp. 163-171

Appendix

Table 15: Cumulative average abnormal returns (CAAR) and t-tests around the announcement date for companies added to or deleted from the Dow Jones Sustainability Index, 2002-2008

Table 15.1: CAAR by Action (estimation window 6 months)

	Add	**Delete**
CAAR (-1,0)	-0,00129 (-0,951)	0,001214 (0,681)
CAAR (0,1)	-0,00276 (-2,066)	-0,00161 (-0,921)
CAAR (-1,1)	-0,00246 (-1,469)	0,000599 (0,0278)
CAAR (0,3)	-0,00371 (-1,952)	-0,00139 (-0,603)
CAAR (-1,3)	-0,00341 (-1,553)	0,000824 (0,304)

Table 15.2: CAAR by Action (estimation window 2 months)

	Add	**Delete**
CAAR (-1,0)	-0,00996 (-5,992)	-0,00671 (-3,341)
CAAR (0,1)	-0,00974 (-6,164)	-0,00835 (-4,140)
CAAR (-1,1)	-0,01607 (-7,344)	-0,01298 (-5,089)
CAAR (0,3)	-0,00536 (-2,217)	-0,00126 (-0,470)
CAAR (-1,3)	-0,01169 (-4,225)	-0,00589 (-1,932)

Table 15.3: CAAR by Year (estimation window 6 months)

	CAAR (-1,0)		**CAAR (0,1)**		**CAAR (-1,1)**		**CAAR (0,3)**		**CAAR (-1,3)**	
	Add	**Delete**	**Add**	**Delete**	**Add**	**Delete**	**Add**	**Delete**	**Add**	**Delete**
2002	-0,0025716 (-0,777)	0,0052025 (1,098)	-0,0051972 (-1,684)	-0,002074 (-0,393)	-0,0087 (-2,196)	0,003336 (0,570)	-0,00122 (-0,291)	-0,00194 (-0,355)	-0,00472 (-0,937)	0,003468 (0,566)
2003	-0,0064117 (-1,372)	-0,0015102 (-0,259)	-0,0073341 (-1,809)	-0,0057807 (-1,336)	-0,00606 (-1,292)	-0,00164 (-0,264)	-0,00263 (-0,482)	-0,00547 (-0,985)	-0,00136 (-0,242)	-0,00133 (-0,212)
2004	0,0025646 (0,883)	0,0007387 (0,259)	0,0004068 (0,112)	-0,0038758 (-0,826)	0,002825 (0,685)	-0,00303 (-0,664)	0,00051 (0,112)	0,001795 (0,300)	0,002928 (0,610)	0,002646 (0,478)
2005	-0,0003413 (-0,123)	-0,0006494 (-0,163)	0,000442 (0,144)	0,0032351 (1,100)	0,000518 (0,139)	0,002404 (0,601)	0,001651 (0,456)	0,004089 (0,813)	0,001726 (0,406)	0,003258 (0,510)
2006	0,0018217 (0,510)	0,0032488 (0,732)	-0,0002859 (-0,504)	0,0009104 (0,312)	0,002845 (-0,674)	0,002178 (0,521)	-0,00382 (-1,119)	0,004107 (0,725)	-0,00069 (-0,407)	0,005374 (0,889)
2007	-0,0007767 (-0,167)	-0,0042277 (-1,472)	-0,0037578 (-0,880)	-0,0036204 (-0,762)	-0,00406 (-0,805)	-0,00474 (-0,853)	-0,00781 (-1,544)	-0,00946 (-1,773)	-0,00811 (-1,453)	-0,01057 (-1,741)
2008	-0,0019283 (-0,343)	0,004082 (0,765)	-0,0012137 (-0,241)	-0,0018428 (-0,337)	0,00051 (0,072)	0,002335 (0,295)	-0,01575 (-1,853)	-0,00406 (-0,409)	-0,01403 (-1,227)	0,000118 (0,009)

Table 15.4: CAAR by Year (estimation window 2 months)

	CAAR (-1,0)		CAAR (0,1)		CAAR (-1,1)		CAAR (0,3)		CAAR (-1,3)	
	Add	**Delete**	**Add**	**Delete**	**Add**	**Delete**	**Add**	**Delete**	**Add**	**Delete**
2002	-0,0220537 (-5,926)	-0,0149716 (-3,207)	-0,00544 (-1,713)	-0,00235 (-0,435)	-0,03677 (-7,584)	-0,02745 (-4,702)	0,013704 (2,970)	0,016088 (2,806)	-0,01762 (-3,177)	-0,00902 (-1,460)
2003	-0,0001629 (-0,034)	0,0047345 (0,790)	-0,00932 (-2,265)	-0,00781 (-1,796)	-0,00074 (-0,154)	0,002474 (0,398)	-0,00421 (-0,746)	-0,0072 (-1,192)	0,004363 (0,786)	0,003092 (0,485)
2004	0,0112905 (4,574)	0,0107353 (3,357)	0,009448 (2,745)	0,00366 (0,778)	0,017186 (4,519)	0,009173 (2,071)	0,013923 (3,148)	0,014725 (2,529)	0,021661 (4,646)	0,020238 (3,754)
2005	0,0072369 (2,545)	0,0062886 (1,502)	0,002036 (0,640)	0,004199 (1,413)	0,009006 (2,498)	0,009852 (2,505)	0,012376 (3,212)	0,014794 (3,002)	0,019347 (4,588)	0,020446 (3,387)
2006	-0,0120061 (-5,554)	-0,0099799 (-2,230)	-0,01906 (-7,464)	-0,01722 (-5,656)	-0,01804 (-6,179)	-0,01785 (-4,264)	-0,0263 (-5,225)	-0,01886 (-2,672)	-0,02528 (-5,457)	-0,0195 (-2,549)
2007	-0,011454 (-2,862)	-0,0133859 (-4,355)	-0,01964 (-4,471)	-0,02084 (-3,763)	-0,03295 (-5,737)	-0,03117 (-4,851)	-0,0162 (-2,857)	-0,01861 (-3,596)	-0,02951 (-4,335)	-0,02893 (-4,718)
2008	-0,0404671 (-8,639)	-0,0322491 (-5,418)	-0,03122 (-5,199)	-0,03042 (-4,047)	-0,04112 (-6,018)	-0,03717 (-3,761)	-0,04507 (-4,728)	-0,03283 (-3,093)	-0,05498 (-4,610)	-0,03958 (-2,920)

Table 15.5: CAAR by Industry (estimation window 6 months)

	CAAR (-1,0)		CAAR (0,1)		CAAR (-1,1)		CAAR (0,3)		CAAR (-1,3)	
	Add	**Delete**	**Add**	**Delete**	**Add**	**Delete**	**Add**	**Delete**	**Add**	**Delete**
Basic Materials	-0,002141014 (-0,491)	0,001463765 (0,320)	-5,31417E-05 (-0,010)	-0,009728574 (-1,735)	-0,003648022 (-0,593)	-0,005378636 (-0,841)	-0,013708722 (-1,668)	-0,005240373 (-0,631)	-0,017303603 (-1,758)	-0,000890435 (-0,087)
Consumer Goods	0,002517153 (0,764)	-0,001914507 (-0,446)	-0,002270566 (-0,818)	0,002201075 (0,484)	-7,16978E-05 (-0,019)	0,001951214 (0,396)	-0,002125222 (-0,518)	0,006778409 (0,932)	7,36455E-05 (0,014)	0,006528549 (0,839)
Consumer Services	0,001948151 (0,331)	0,001996091 (0,442)	-0,002392346 (-0,492)	-0,003169608 (-0,622)	0,001781881 (0,287)	-0,000983811 (-0,170)	-4,46421E-06 (0,000)	-0,001726234 (-0,274)	0,004169763 (0,567)	0,000459563 (0,066)
Financials	-0,001741122 (-0,595)	-0,00597834 (-1,428)	-0,000572904 (-0,166)	-0,00288297 (-0,811)	-0,000607586 (-0,131)	-0,005393691 (-0,980)	0,000864938 (0,243)	0,005874796 (0,984)	0,000830256 (0,183)	0,003364075 (0,452)
Health Care	-0,002193955 (-0,505)	0,004640859 (1,112)	-0,006661695 (-1,799)	0,009497204 (1,210)	-0,005293549 (-1,267)	0,013440135 (1,527)	-0,002713823 (-0,374)	0,010369289 (1,603)	-0,001345676 (-0,185)	0,014312221 (2,117)
Industrials	-0,002108545 (-0,839)	0,005157863 (1,358)	-0,003450267 (-1,267)	-0,00209679 (-0,880)	-0,003260102 (-1,017)	0,004033909 (0,950)	-0,002339592 (-0,539)	-0,004678969 (-1,190)	-0,002149428 (-0,467)	0,001230468 (0,245)
Oil & Gas	-0,001034383 (-0,185)	-0,013422331 (-1,379)	-0,000723475 (-0,185)	-0,004242856 (-0,637)	0,002928145 (0,466)	-0,015166527 (-1,724)	-0,009476482 (-1,124)	-0,035961584 (-3,265)	-0,005824862 (-0,626)	-0,046885255 (-3,879)
Technology	-0,003119195 (-0,554)	0,004574756 (0,482)	-0,006375071 (-1,148)	-0,005749975 (-0,649)	-0,007433201 (-1,150)	-0,001150126 (-0,116)	-0,010859603 (-1,465)	-0,005857861 (-0,816)	-0,011917733 (-1,460)	-0,001258011 (-0,156)
Telecomm.	-0,009149724 (-0,864)	0,011197282 (1,695)	-0,003512943 (-0,276)	0,002088804 (0,253)	-0,008687839 (-0,527)	0,012027984 (1,731)	0,002179073 (0,475)	0,000920738 (0,072)	-0,002995824 (-0,347)	0,010859917 (1,101)
Utilities	-0,004024141 (-0,914)	-0,002008573 (-0,374)	-0,005334487 (-1,375)	0,005314239 (0,904)	-0,009827119 (-2,189)	-0,000894858 (-0,109)	-0,003876485 (-0,559)	0,005096056 (0,722)	-0,008369117 (-1,079)	-0,001113041 (-0,113)

Table 15.6: CAAR by Industry (estimation window 2 months)

	CAAR (-1,0)		CAAR (0,1)		CAAR (-1,1)		CAAR (0,3)		CAAR (-1,3)	
	Add	**Delete**	**Add**	**Delete**	**Add**	**Delete**	**Add**	**Delete**	**Add**	**Delete**
Basic Materials	-0,011137553 (-1,750)	-0,009758089 (-1,786)	-0,012390201 (-1,833)	-0,020538799 (-3,283)	-0,019979001 (-2,392)	-0,022930957 (-3,000)	-0,02158882 (-1,918)	-0,007916179 (-0,735)	-0,029177621 (-2,204)	-0,010308337 (-0,836)
Consumer Goods	-0,003127758 (-0,993)	-0,007564652 (-0,341)	-0,007738204 (-1,339)	-0,00328627 (-1,149)	-0,010889671 (-1,572)	-0,006908784 (-1,353)	-0,001401473 (0,542)	0,005190177 (0,271)	-0,00455294 (0,119)	0,001567662 (-0,196)
Consumer Services	-0,005258767 (0,331)	-0,001813716 (0,442)	-0,007130568 (-0,492)	-0,006317834 (-0,622)	-0,009862414 (0,287)	-0,009677448 (-0,170)	0,003538792 (0,000)	0,001799186 (-0,274)	0,000806945 (0,567)	-0,001560428 (0,066)
Financials	-0,011771621 (-3,203)	-0,020531464 (-4,509)	-0,012579418 (-3,673)	-0,020468361 (-4,149)	-0,017491387 (-3,366)	-0,031091333 (-4,745)	-0,009354396 (-2,107)	-0,00272396 (-0,409)	-0,014266364 (-2,675)	-0,013346932 (-1,822)
Health Care	-0,005976722 (-1,204)	-0,000419595 (-0,087)	-0,010516812 (-2,811)	0,007741133 (0,910)	-0,014517994 (-2,741)	0,002870744 (0,301)	-0,001790788 (-0,196)	0,015149143 (2,039)	-0,00579197 (-0,662)	0,010278754 (1,424)
Industrials	-0,012428483 (-3,590)	-0,004181148 (-1,163)	-0,010553435 (-2,791)	-0,006302423 (-1,997)	-0,017718724 (-3,628)	-0,008836034 (-1,793)	-0,003277693 (-0,546)	0,000239813 (-0,097)	-0,010442983 (-1,600)	-0,002348794 (-0,365)
Oil & Gas	-0,009360481 (-1,299)	-0,035055925 (-3,104)	-0,012230654 (-2,182)	-0,018616856 (-4,313)	-0,015351689 (-1,625)	-0,046504356 (-4,137)	-0,016999903 (-1,533)	-0,056591077 (-2,998)	-0,020120937 (-1,697)	-0,084478576 (-4,678)
Technology	-0,015670257 (-1,980)	-0,002314896 (-0,214)	-0,003157373 (-0,546)	-0,01521741 (-1,536)	-0,0183686 (-1,868)	-0,019675967 (-1,645)	0,001569897 (0,193)	-0,003794674 (-0,446)	-0,01364133 (-1,372)	-0,008253231 (-0,864)
Telecomm.	-0,02112813 (-2,130)	0,01215419 (1,631)	-0,002438247 (-0,279)	-0,005258731 (-0,375)	-0,014235625 (-1,263)	0,009166852 (0,638)	2,32287E-05 (0,003)	-0,004540396 (-0,301)	-0,01177415 (-0,754)	0,009885188 (0,656)
Utilities	-0,010226888 (-2,443)	-0,005499034 (-0,739)	-0,0117335 (-2,540)	0,003782915 (0,523)	-0,022230656 (-3,655)	-0,00573325 (-0,592)	-0,005173204 (-0,710)	0,006342716 (0,708)	-0,01567036 (-1,857)	-0,00317345 (-0,268)

Table 15.7: CAAR by Country (estimation window 6 months)

	CAAR (-1,0)		CAAR (0,1)		CAAR (-1,1)		CAAR (0,3)		CAAR (-1,3)	
	Add	**Delete**	**Add**	**Delete**	**Add**	**Delete**	**Add**	**Delete**	**Add**	**Delete**
Australia	-0,00149 (-0,450)	0,000221 (0,030)	-0,00311 (-0,947)	-0,00829 (-1,105)	-0,0055048 (-1,301)	-0,00649 (-0,610)	0,00615 (1,442)	-0,01281 (-1,088)	0,003757 (0,809)	-0,01101 (-0,717)
Canada	-0,01422 (-1,406)	0,013879 (0,871)	-0,0095 (-0,796)	0,012094 (0,744)	-0,0150959 (-1,228)	0,012853 (0,834)	-0,018884 (-1,017)	0,012491 (0,772)	-0,02448 (-1,093)	0,01325 (0,736)
Switzerland	-0,00464 (-0,896)	-0,00333 (-0,274)	-0,00333 (-0,402)	-0,01232 (-0,730)	-0,0072913 (-0,693)	-0,01096 (-0,611)	-0,000702 (-0,071)	-0,02868 (-1,801)	-0,00466 (-0,414)	-0,02732 (-1,503)
Germany	0,004506 (0,664)	-0,02118 (-2,553)	0,00259 (0,612)	-0,01738 (-2,935)	0,00454707 (0,683)	-0,02534 (-3,082)	0,007061 (1,392)	-0,0139 (-1,670)	0,009018 (1,324)	-0,02187 (-2,337)
Spain	-0,00863 (-1,770)		-0,00681 (-1,295)		-0,0083983 (-1,143)		-0,010231 (-1,327)		-0,01181 (-1,242)	
Finland	-0,01154 (-1,108)	0,020566 (1,532)	-0,01422 (-1,306)	0,006625 (1,022)	-0,0224081 (-1,889)	0,021709 (1,940)	-0,028691 (-1,316)	0,014193 (1,903)	-0,03688 (-1,366)	0,029277 (2,109)
France	0,007125 (1,428)	0,024654 (1,858)	0,004076 (0,930)	0,026805 (2,893)	0,00802846 (1,377)	0,03733 (2,594)	0,011332 (1,978)	0,023643 (1,919)	0,015285 (2,081)	0,034168 (2,297)
UK	-0,00059 (-0,177)	0,001536 (0,538)	-0,00577 (-1,494)	-0,00358 (-0,994)	-0,0031543 (-0,658)	-0,00446 (-1,231)	-0,008193 (-2,224)	-0,00038 (-0,060)	-0,00558 (-1,320)	-0,00126 (-0,198)
Italy	-0,00388	0,024073	-0,00565	0,023802	-0,0051048	0,035431	-0,011032	0,025391	-0,01048	0,03702

	(-0,403)	(1,422)	(-0,784)	(1,587)	(-0,535)	(1,328)	(-0,751)	(1,149)	(-0,635)	(1,096)
Japan	0,003383 (1,066)	-0,00527 (-1,474)	0,004008 (1,185)	-0,00701 (-2,049)	0,00725406 (1,976)	-0,00789 (-1,995)	-0,002249 (-0,483)	-0,0069 (-1,657)	0,000996 (0,202)	-0,00778 (-1,660)
Netherlands	-0,00193 (-0,377)		-0,01436 (-1,676)		-0,011354 (-1,064)		-0,014606 (-1,209)		-0,0116 (-0,863)	
Sweden	-0,00122 (-0,158)	0,000909 (0,170)	-0,00422 (-0,527)	7,14E-05 (0,013)	-0,002145 (-0,183)	0,004236 (0,765)	-0,009287 (-0,579)	0,009654 (0,978)	-0,00721 (-0,360)	0,013819 (1,626)
US	-0,00172 (-0,479)	0,00202 (0,646)	-0,00241 (-0,819)	-0,00232 (-0,822)	-0,0033395 (-0,874)	0,001339 (0,370)	-0,001241 (-0,270)	-0,00238 (-0,583)	-0,00217 (-0,426)	0,001275 (0,257)
South Africa	-0,02252 (-2,826)	0,00535 (0,445)	-0,01897 (-1,289)	0,008225 (0,841)	-0,0285137 (-2,828)	0,018996 (1,290)	-0,040064 (-6,139)	0,024049 (1,117)	-0,04961 (-3,120)	0,03482 (1,290)

Table 15.8: CAAR by Country (estimation window 2 months)

	CAAR (-1,0)		**CAAR (0,1)**		**CAAR (-1,1)**		**CAAR (0,3)**		**CAAR (-1,3)**	
	Add	**Delete**	**Add**	**Delete**	**Add**	**Delete**	**Add**	**Delete**	**Add**	**Delete**
Australia	-0,00444 (-1,033)	-0,00533 (-0,709)	-0,00531 (-1,881)	-0,00706 (-0,885)	-0,0108541 (-2,379)	-0,00725 (-0,669)	0,002799 (0,635)	-0,01858 (-1,337)	-0,00275 (-0,654)	-0,01876 (-1,071)
Canada	-0,02429 (-1,883)	0,000854 (0,067)	-0,01988 (-1,518)	0,007876 (0,433)	-0,0314584 (-2,243)	-0,00496 (-0,420)	-0,039078 (-1,347)	0,001825 (0,067)	-0,05065 (-1,547)	-0,01101 (-0,387)
Switzerland	-0,0086 (-0,867)	-0,01206 (-0,826)	-0,00584 (-0,716)	-0,01661 (-0,864)	-0,0127991 (-0,794)	-0,02352 (-1,072)	0,003984 (0,431)	-0,02432 (-1,311)	-0,00297 (-0,196)	-0,03123 (-1,510)
Germany	-0,00153 (-0,287)	-0,01749 (-1,673)	-0,00883 (-1,919)	-0,02158 (-3,154)	-0,0102525 (-1,476)	-0,0281 (-2,436)	-0,002372 (-0,382)	-0,01678 (-1,769)	-0,0038 (-0,468)	-0,0233 (-1,873)
Spain	-0,02472 (-4,195)	0,02299	-0,02503 (-3,258)	-0,00381	-0,0364142 (-3,638)	0,016339	-0,020734 (-2,098)	-0,00381	-0,03212 (-2,630)	0,016339
Finland	-0,01786 (-1,119)	0,010301 (0,495)	-0,02247 (-1,280)	-0,00656 (-0,573)	-0,0369335 (-1,711)	0,005151 (0,249)	-0,033285 (-1,166)	0,001307 (0,078)	-0,04775 (-1,345)	0,013016 (0,493)
France	-0,01267 (-1,912)	0,005261 (0,250)	-0,01358 (-2,148)	0,004849 (0,271)	-0,0243354 (-2,842)	0,005453 (0,213)	0,005151 (0,864)	0,012566 (0,723)	-0,0056 (-0,630)	0,01317 (0,606)
UK	-0,00848 (-2,642)	-0,00627 (-1,332)	-0,01268 (-3,438)	-0,01562 (-2,946)	-0,015509 (-3,138)	-0,01977 (-2,697)	-0,008366 (-1,910)	-0,00373 (-0,532)	-0,0112 (-2,365)	-0,00789 (-1,006)
Italy	-0,00664 (-0,502)	0,02089 (0,833)	-0,00421 (-0,406)	0,015674 (0,767)	-0,01227 (-0,710)	0,029022 (0,797)	-0,005711 (-0,326)	0,017836 (0,652)	-0,01377 (-0,587)	0,031184 (0,720)
Japan	-0,00787 (-2,328)	-0,01495 (-3,953)	0,005565 (1,369)	-0,0094 (-2,223)	0,00120073 (0,287)	-0,01455 (-3,357)	0,006746 (0,928)	-0,00201 (-0,409)	0,002381 (0,339)	-0,00716 (-1,406)
Netherlands	-0,00147 (-0,117)	0,009832	-0,01328 (-1,492)	0,001966	-0,0119284 (-0,642)	0,007869	-0,009109 (-0,674)	0,05726	-0,00776 (-0,357)	0,063163
Sweden	-0,02622 (-1,652)	-0,01036 (-1,412)	-0,03595 (-2,437)	-0,01772 (-1,953)	-0,0493061 (-2,009)	-0,0176 (-1,593)	-0,028503 (-1,372)	-0,00151 (-0,193)	-0,04186 (-1,380)	-0,00139 (-0,124)
US	-0,00544 (-1,293)	-0,00534 (-1,669)	-0,0079 (-2,631)	-0,00775 (-2,660)	-0,0150567 (-3,126)	-0,01498 (-3,828)	0,002077 (0,397)	0,003054 (0,709)	-0,00508 (-0,943)	-0,00417 (-0,867)
South Africa	-0,03096 (-5,177)	-0,00627 (-0,463)	-0,04006 (-2,913)	-0,00633 (-0,572)	-0,0558516 (-6,091)	-0,00581 (-0,345)	-0,074025 (-4,549)	0,018714 (0,642)	-0,08981 (-4,428)	0,019233 (0,564)

Table 16: Cumulative average abnormal returns (CAAR) and t-tests around the announcement date for companies added to or deleted from the FTSE4Good Index, 2002-2008

Table 16.1: CAAR by Action (estimation window 6 months)

	Add	**Delete**
CAAR (-1,0)	0,000515 (0,464)	-0,00537 (-2,082)
CAAR (0,1)	-0,00147 (-1,251)	-0,00482 (-1,941)
CAAR (-1,1)	-0,00068 (-0,474)	-0,0064 (-1,996)
CAAR (0,3)	-0,00217 (-1,212)	-0,00109 (-0,322)
CAAR (-1,3)	-0,00138 (-0,707)	-0,00266 (-0,660)

Table 16.2: CAAR by Action (estimation window 2 months)

	Add	**Delete**
CAAR (-1,0)	0,000687 (0,603)	-0,0054 (-2,104)
CAAR (0,1)	-0,00147 (-1,225)	-0,00501 (-2,027)
CAAR (-1,1)	-0,00051 (-0,340)	-0,00666 (-2,077)
CAAR (0,3)	-0,00167 (-0,918)	-0,00012 (-0,034)
CAAR (-1,3)	-0,00072 (-0,358)	-0,00177 (-0,429)

Table 16.3: CAAR by Year (estimation window 6 months)

	CAAR (-1,0)		**CAAR (0,1)**		**CAAR (-1,1)**		**CAAR (0,3)**		**CAAR (-1,3)**	
	Add	**Delete**	**Add**	**Delete**	**Add**	**Delete**	**Add**	**Delete**	**Add**	**Delete**
2002	-0,000952 (-0,298)	-0,0232523 (-2,388)	-0,0031529 (-0,724)	-0,01603 (-1,264)	-0,00417 (-0,839)	-0,03108 (-2,238)	0,003806 (0,577)	0,008636 (0,456)	0,002791 (0,407)	-0,00641 (-0,313)
2003	0,0033663 (1,361)	-0,0029067 (-0,437)	0,0051685 (1,724)	0,007765 (1,089)	0,005886 (1,754)	0,006459 (0,868)	-0,00031 (-0,058)	0,003864 (0,492)	0,000405 (0,079)	0,002558 (0,325)
2004	0,0007994 (0,446)	-0,0005245 (-0,117)	-0,0022582 (-1,078)	-0,00442 (-0,713)	0,000122 (0,048)	-0,00354 (-0,413)	-0,00513 (-1,729)	-0,0024 (-0,415)	-0,00275 (-0,856)	-0,00152 (-0,196)
2005	0,0025037 (1,174)	-0,0012098 (-0,422)	0,0019602 (1,011)	-0,00112 (-0,409)	-0,0007 (-0,272)	-0,00181 (-0,659)	0,004806 (1,493)	-0,00118 (-0,306)	0,002142 (0,600)	-0,00187 (-0,470)
2006	-0,0081417 (-1,824)	-0,0023933 (-0,755)	-0,0038118 (-0,864)	0,002221 (0,449)	-0,00633 (-1,255)	-0,00015 (-0,037)	-0,01009 (-2,135)	0,004942 (0,636)	-0,01261 (-2,369)	0,002568 (0,334)
2007	-0,0030174 (-0,673)	-0,0081396 (-2,000)	-0,0104144 (-2,456)	-0,00468 (-1,147)	-0,01026 (-1,816)	-0,00976 (-1,707)	-0,02067 (-2,722)	-0,0076 (-1,405)	-0,02052 (-2,345)	-0,01269 (-1,657)
2008	0,0008011 (0,177)	-0,0058255 (-0,743)	-0,0057414 (-1,458)	-0,01414 (-2,310)	0,000243 (0,046)	-0,01141 (-1,295)	0,001953 (0,403)	-0,00266 (-0,270)	0,007938 (1,247)	7,35E-05 (0,006)

Table 16.4: CAAR by Year (estimation window 2 months)

	CAAR (-1,0)		CAAR (0,1)		CAAR (-1,1)		CAAR (0,3)		CAAR (-1,3)	
	Add	**Delete**	**Add**	**Delete**	**Add**	**Delete**	**Add**	**Delete**	**Add**	**Delete**
2002	-0,0004579 (-0,137)	-0,0244222 (-2,516)	-0,0029671 (-0,663)	-0,01399 (-1,132)	-0,00352 (-0,669)	-0,02899 (-2,107)	0,003493 (0,513)	0,004296 (0,246)	0,00294 (0,412)	-0,01071 (-0,551)
2003	0,003554 (1,432)	-0,0036525 (-0,560)	0,0053945 (1,756)	0,008564 (1,236)	0,006503 (1,937)	0,006175 (0,849)	-3E-05 (-0,005)	0,004511 (0,595)	0,001079 (0,209)	0,002122 (0,274)
2004	0,0011553 (0,593)	-0,0008236 (-0,183)	-0,0019082 (-0,875)	-0,00446 (-0,713)	0,000413 (0,137)	-0,00402 (-0,458)	-0,00427 (-1,438)	-0,00237 (-0,406)	-0,00195 (-0,553)	-0,00194 (-0,247)
2005	0,0024503 (1,114)	-0,0008645 (-0,319)	0,0019023 (0,973)	-0,00148 (-0,579)	-0,00084 (-0,319)	-0,00189 (-0,699)	0,005105 (1,597)	-0,00151 (-0,409)	0,002359 (0,655)	-0,00193 (-0,476)
2006	-0,0084879 (-1,828)	-0,0031295 (-0,998)	-0,0035915 (-0,789)	0,001664 (0,342)	-0,00633 (-1,234)	-0,00137 (-0,344)	-0,0091 (-1,840)	0,006749 (0,816)	-0,01183 (-2,192)	0,003719 (0,468)
2007	-0,0030308 (-0,706)	-0,0085162 (-2,102)	-0,0104381 (-2,586)	-0,00503 (-1,237)	-0,01012 (-1,903)	-0,01028 (-1,804)	-0,02071 (-2,735)	-0,00759 (-1,409)	-0,02039 (-2,361)	-0,01284 (-1,694)
2008	0,0010307 (0,225)	-0,0046802 (-0,597)	-0,0068721 (-1,736)	-0,01534 (-2,492)	-0,00028 (-0,053)	-0,01176 (-1,326)	0,002993 (0,580)	0,00151 (0,146)	0,009582 (1,488)	0,005093 (0,403)

Table 16.5: CAAR by Industry (estimation window 6 months)

	CAAR (-1,0)		CAAR (0,1)		CAAR (-1,1)		CAAR (0,3)		CAAR (-1,3)	
	Add	**Delete**	**Add**	**Delete**	**Add**	**Delete**	**Add**	**Delete**	**Add**	**Delete**
Basic Materials	-0,000409624 (-0,148)	0,003159842 (0,515)	-0,00191241 (-0,731)	-0,005419855 (-0,820)	-0,000613902 (-0,176)	0,002626181 (0,429)	-0,004043987 (-0,989)	0,005661986 (0,343)	-0,002745478 (-0,590)	0,013708021 (0,692)
Consumer Goods	0,002335529 (-0,827)	-0,004305716 (-0,816)	-0,002260415 (-0,732)	-0,00576828 (-0,752)	-0,001306587 (-0,822)	-0,008689968 (-1,038)	-0,007654986 (-0,259)	0,002668343 (0,655)	-0,006701158 (-0,430)	-0,000253344 (0,129)
Consumer Services	-0,00186552 (0,777)	-0,005645645 (-0,871)	-0,001735767 (-0,522)	-0,005062028 (-0,953)	-0,002488933 (-0,349)	-0,008236965 (-1,280)	-0,000988689 (-0,893)	0,003980143 (0,381)	-0,001741855 (-0,836)	0,000805205 (-0,033)
Financials	0,002605235 (0,925)	-0,005601902 (-1,036)	-0,000984267 (-0,334)	0,001633681 (0,315)	0,001167035 (0,402)	-0,00331578 (-0,475)	0,005176111 (1,593)	0,003772538 (0,583)	0,007327413 (1,863)	-0,001176923 (-0,260)
Health Care	0,005041176 (1,183)	0,005914076 (0,377)	-0,00247973 (-1,028)	0,004538402 (0,370)	0,001357283 (0,372)	0,007645553 (0,761)	0,003785652 (0,571)	0,000487467 (0,026)	0,007622665 (1,134)	0,003594618 (0,296)
Industrials	0,002516772 (0,866)	-0,005173754 (-0,625)	0,001376311 (0,464)	-0,009563461 (-1,618)	0,003848651 (1,036)	-0,010317583 (-1,112)	-0,000946352 (-0,245)	-0,001797546 (-0,200)	0,001525988 (0,354)	-0,002551668 (-0,205)
Oil & Gas	-0,003286393 (-0,742)	-0,016508741 (-1,548)	0,003054325 (0,856)	-0,003332657 (-0,248)	-5,08195E-05 (-0,009)	0,003596567 (0,939)	0,007006425 (1,049)	-0,011007094 (-1,201)	0,003901281 (0,467)	-0,00407787 (-0,366)
Technology	-0,002951689 (-0,851)	-0,01187374 (-1,567)	-0,00639141 (-1,437)	-0,014199317 (-1,620)	-0,00770345 (-1,433)	-0,020261018 (-1,740)	-0,018007902 (-2,869)	-0,015983555 (-1,207)	-0,019319942 (-2,682)	-0,022045255 (-1,439)
Telecomm.	0,00136549 (-0,532)	-0,006720644 (-0,313)	0,002791435 (0,012)	0,008640437 (0,458)	0,003043517 (-0,247)	0,016874994 (0,669)	0,004151907 (0,081)	-0,013319277 (-1,155)	0,004403989 (-0,093)	-0,00508472 (-0,400)
Utilities	0,000860818 (0,180)	-0,028248482	-0,00350814 (-0,651)	-0,024275363	-0,005048539 (-0,859)	-0,02633223	0,001274863 (0,158)	-0,001671875	-0,000265536 (-0,034)	-0,003728741

Table 16.6: CAAR by Industry (estimation window 2 months)

	CAAR (-1,0)		CAAR (0,1)		CAAR (-1,1)		CAAR (0,3)		CAAR (-1,3)	
	Add	**Delete**	**Add**	**Delete**	**Add**	**Delete**	**Add**	**Delete**	**Add**	**Delete**
Basic Materials	0,000914353 (0,266)	0,0048319 (0,766)	-0,000778042 (-0,248)	-0,005426929 (-0,813)	0,001746806 (0,333)	0,004180752 (0,666)	-0,003118449 (-0,795)	0,008363824 (0,437)	-0,000593602 (-0,107)	0,017971504 (0,793)
Consumer Goods	0,002714278 (-0,868)	-0,003980678 (-0,883)	-0,002733986 (-0,648)	-0,006708715 (-0,708)	-0,001271726 (-0,833)	-0,009614728 (-1,115)	-0,005991466 (-0,171)	0,006282073 (0,607)	-0,004529206 (-0,402)	0,003376061 (-0,063)
Consumer Services	-0,001957171 (0,935)	-0,006105631 (-0,812)	-0,001576137 (-0,630)	-0,004792446 (-1,109)	-0,002577731 (-0,351)	-0,009035594 (-1,397)	-0,000653888 (-0,676)	0,003827071 (0,919)	-0,001655482 (-0,549)	-0,000416076 (0,439)
Financials	0,002222249 (0,773)	-0,005277959 (-0,990)	-0,002179023 (-0,760)	0,00134303 (0,259)	0,000151791 (0,104)	-0,003410329 (-0,491)	0,005614493 (1,651)	0,003690038 (0,563)	0,007945307 (2,015)	-0,001063321 (-0,250)
Health Care	0,005572384 (1,254)	0,001561408 (0,096)	-0,002016232 (-0,763)	0,004324368 (0,347)	0,00205867 (0,559)	0,004138545 (0,386)	0,003445812 (0,506)	-0,002000218 (-0,110)	0,007520714 (1,056)	-0,00218604 (-0,192)
Industrials	0,002594207 (0,889)	-0,005083812 (-0,616)	0,001708422 (0,575)	-0,010334684 (-1,785)	0,004069103 (1,093)	-0,011360925 (-1,246)	8,17667E-05 (0,021)	0,00076911 (0,088)	0,002442448 (0,560)	-0,000257131 (-0,021)
Oil & Gas	-0,001745794 (-0,385)	-0,015097009 (-1,625)	0,004872308 (1,344)	-0,002191821 (-0,176)	0,001606973 (0,254)	0,005906928 (1,329)	0,007313913 (1,091)	-0,009953881 (-1,203)	0,004048578 (0,488)	-0,001855132 (-0,166)
Technology	-0,003499045 (-1,000)	-0,012753858 (-1,705)	-0,006510378 (-1,521)	-0,013627233 (-1,569)	-0,007748031 (-1,463)	-0,019621987 (-1,683)	-0,0184828 (-2,957)	-0,017192754 (-1,351)	-0,019720453 (-2,735)	-0,023187508 (-1,540)
Telecomm.	0,003155456 (-0,253)	-0,007216541 (-0,336)	0,000880843 (-0,110)	0,009319427 (0,497)	0,001901988 (-0,285)	0,017526814 (0,699)	0,0037401 (0,035)	-0,014529096 (-1,264)	0,004761245 (-0,084)	-0,006321709 (-0,481)
Utilities	-8,16425E-06 (-0,002)	-0,026666074	-0,003473551 (-0,631)	-0,023328058	-0,006097381 (-0,963)	-0,025056134	0,00160765 (0,194)	-0,001404626	-0,001016179 (-0,133)	-0,003132703

Table 16.7: CAAR by Country (estimation window 6 months)

	CAAR (-1,0)		CAAR (0,1)		CAAR (-1,1)		CAAR (0,3)		CAAR (-1,3)	
	Add	**Delete**	**Add**	**Delete**	**Add**	**Delete**	**Add**	**Delete**	**Add**	**Delete**
Australia	-0,00302 (-0,775)	0,000431 (0,112)	-0,00237 (-0,551)	0,005322 (0,898)	-0,00495 (-0,996)	0,0035 (0,579)	0,001596 (0,402)	0,00501 (0,877)	-0,00098 (-0,192)	0,003188 (0,498)
Canada	0,011454 (0,938)	0,000851 (0,111)	0,02121 (1,238)	-0,00331 (-0,298)	0,020236 (1,124)	-0,00509 (-0,386)	0,04001 (1,336)	-0,00536 (-0,474)	0,039036 (1,327)	-0,00714 (-0,534)
Switzerland	0,003984 (0,333)	0,003061 (0,276)	2,21E-05 (0,004)	-0,03025 (-1,099)	0,002115 (0,162)	-0,00178 (-0,117)	0,007275 (0,706)	0,04355 (0,585)	0,009368 (0,570)	0,072022 (0,766)
Germany	0,008061 (1,163)	-0,01963 (-1,728)	-0,00349 (-0,661)	-0,02476 (-3,125)	0,000266 (0,034)	-0,02993 (-2,872)	-0,00394 (-0,869)	-0,02691 (-2,949)	-0,00018 (-0,027)	-0,03208 (-2,190)
Spain	-0,00333 (-1,336)		0,000339 (-2,283)		-0,0022 (-1,836)		-0,01784 (-1,080)		-0,02038 (-0,964)	
France	0,003942 (0,915)	-0,01991 (-1,555)	-0,0008 (-0,195)	-0,02641 (-1,251)	0,001753 (0,297)	-0,02861 (-1,807)	-0,00034 (-0,056)	-0,02671 (-0,861)	0,002211 (0,286)	-0,02892 (-1,082)
UK	0,003183 (0,688)	-0,02243 (-2,674)	0,003219 (0,855)	-0,02231 (-1,879)	0,004858 (0,907)	-0,02991 (-2,328)	0,002187 (0,419)	-0,01393 (-1,288)	0,003827 (0,553)	-0,02152 (-1,779)
China	0,007236 (1,614)		-0,00572 (-0,407)		-0,00026 (-0,023)		0,014926 (0,553)		0,020395 (0,860)	
Italy	-0,00286	-0,00126	-0,00453	-0,00578	-0,0047	-0,0068	-0,00355	-0,00138	-0,00372	-0,0024

	(-0,756)	(-0,158)	(-0,708)	(-0,676)	(-0,917)	(-0,578)	(-0,491)	(-0,329)	(-0,580)	(-0,267)
Japan	0,001545 (0,961)	0,006714 (1,146)	-0,00209 (-1,077)	0,004602 (0,981)	-0,00036 (-0,169)	0,008422 (1,163)	-0,004 (-1,431)	0,012557 (1,943)	-0,00227 (-0,759)	0,016377 (1,954)
Netherlands	0,010711 (1,566)		0,005315 (0,922)		0,005894 (1,063)		0,001519 (0,102)		0,002098 (0,157)	
New Zealand	0,011216 (0,561)		0,000125 (0,020)		0,015451 (0,607)		-0,01778 (-1,663)		-0,00245 (-0,097)	
US	-0,00886 (-2,747)	-0,00663 (-1,314)	-0,0045 (-1,288)	-0,00522 (-1,349)	-0,0091 (-2,047)	-0,00955 (-1,632)	-0,00374 (-0,857)	0,000237 (0,082)	-0,00834 (-1,672)	-0,00409 (-0,587)

Table 16.8: CAAR by Country (estimation window 2 months)

	CAAR (-1,0)		**CAAR (0,1)**		**CAAR (-1,1)**		**CAAR (0,3)**		**CAAR (-1,3)**	
	Add	**Delete**	**Add**	**Delete**	**Add**	**Delete**	**Add**	**Delete**	**Add**	**Delete**
Australia	-0,00278 (-0,679)	0,002428 (0,682)	-0,00204 (-0,478)	0,005964 (1,278)	-0,00408 (-0,815)	0,003511 (0,588)	0,002314 (0,582)	0,002734 (0,587)	0,000273 (0,052)	0,000282 (0,048)
Canada	0,014029 (1,158)	-0,00138 (-0,186)	0,022202 (1,216)	-0,00578 (-0,513)	0,021679 (1,134)	-0,00866 (-0,654)	0,041364 (1,332)	-0,00587 (-0,517)	0,040841 (1,336)	-0,00874 (-0,656)
Switzerland	0,002315 (0,207)	0,005123 (0,456)	-0,00086 (-0,198)	-0,03132 (-1,036)	0,000302 (0,026)	-0,00161 (-0,105)	0,006831 (0,654)	0,049038 (0,566)	0,007996 (0,498)	0,078748 (0,728)
Germany	0,009178 (1,394)	-0,01953 (-1,665)	-0,00236 (-0,505)	-0,02645 (-3,314)	0,00275 (0,420)	-0,03197 (-3,194)	-0,003118 (-0,727)	-0,02533 (-2,427)	0,001994 (0,317)	-0,03084 (-1,813)
Spain	-0,00398 (-0,833)		-0,00029 (-0,064)		-0,00317 (-0,506)		-0,018581 (-0,757)		-0,02146 (-0,958)	
France	0,00669 (1,135)	-0,0185 (-1,399)	0,000482 (0,090)	-0,02534 (-1,188)	0,006399 (0,636)	-0,02677 (-1,657)	-0,000961 (-0,166)	-0,02438 (-0,759)	0,004956 (0,495)	-0,0258 (-0,921)
UK	0,002827 (0,615)	-0,0213 (-2,696)	0,001943 (0,492)	-0,02304 (-1,921)	0,003626 (0,649)	-0,0302 (-2,360)	0,003534 (0,588)	-0,00377 (-0,351)	0,005216 (0,710)	-0,01093 (-0,899)
China	0,011322 (2,467)		-0,00622 (-0,432)		0,003166 (0,439)		0,010385 (0,374)		0,019767 (0,930)	
Italy	-0,00354 (-0,892)	-0,00039 (-0,053)	-0,00718 (-1,199)	-0,00281 (-0,324)	-0,00795 (-1,544)	-0,00406 (-0,333)	-0,00765 (-1,116)	0,000228 (0,049)	-0,00842 (-1,282)	-0,00102 (-0,110)
Japan	0,001635 (1,006)	0,006698 (1,135)	-0,00183 (-0,931)	0,003727 (0,777)	-0,00024 (-0,110)	0,008022 (1,086)	-0,003052 (-1,080)	0,013771 (2,041)	-0,00146 (-0,482)	0,018065 (2,061)
Netherlands	0,0106 (1,563)		0,004226 (0,679)		0,005281 (0,863)		0,000837 (0,056)		0,001892 (0,141)	
New Zealand	0,011763 (0,583)		0,00155 (0,254)		0,016373 (0,633)		-0,016922 (-1,650)		-0,0021 (-0,083)	
US	-0,00899 (-2,767)	-0,00685 (-1,348)	-0,00504 (-1,486)	-0,00505 (-1,321)	-0,00944 (-2,146)	-0,00921 (-1,573)	-0,003351 (-0,748)	-0,00046 (-0,060)	-0,00776 (-1,537)	-0,00462 (-0,674)

Table 17: Mean Changes in Daily Trading Volumes around the announcement date for companies added to or deleted from the Dow Jones Sustainability Index, 2002-2008

		Day 0	Day 1	Day 2	Day 3	n
All	Mean increase	4,78%	-1,10%	-5,00%	-6,70%	494
	STD	69,19%	55,94%	69,60%	53,89%	
	Percent > 0	40,94%	39,43%	31,60%	31,78%	
Action	Add	4,65%	0,52%	-1,73%	-5,56%	268
	Delete	4,92%	-3,02%	-8,92%	-8,06%	226
Year	2002	0,37%	8,71%	-7,67%	-25,10%	110
	2003	24,81%	6,36%	-9,85%	1,77%	71
	2004	-5,98%	-11,67%	-28,50%	-0,39%	47
	2005	13,59%	-4,95%	28,68%	-0,78%	85
	2006	-11,18%	-8,96%	-24,81%	-18,55%	68
	2007	-9,64%	-16,49%	-13,79%	-16,12%	67
	2008	23,68%	15,94%	6,05%	38,05%	46
Industry	Automobiles & Parts	14,31%	30,94%	42,44%	21,03%	7
	Banks	12,48%	-3,04%	41,56%	5,31%	5
	Basic Resources	4,14%	1,22%	-17,38%	-2,64%	35
	Chemicals	-4,30%	-12,31%	4,69%	-6,79%	14
	Construction & Materials	56,83%	25,62%	45,28%	33,98%	17
	Financial Services	-7,57%	-20,70%	-25,36%	-21,23%	54
	Food & Beverage	23,63%	-6,52%	-22,86%	-21,20%	7
	Health Care	-21,03%	-19,87%	-19,33%	-20,38%	29
	Industrial Goods & Services	7,75%	-1,59%	-3,48%	-5,88%	105
	Insurance	28,18%	78,28%	-28,34%	8,87%	3
	Media	-11,10%	2,62%	26,82%	-11,06%	13
	Oil & Gas	28,73%	21,50%	20,88%	12,10%	22
	Personal & Household Goods	-2,04%	-2,54%	-17,42%	-15,04%	78
	Real Estate	15,60%	-2,87%	62,66%	57,08%	3
	Retail	37,24%	25,73%	28,24%	0,72%	12
	Technology	14,83%	7,66%	13,99%	-3,01%	42
	Telecommunications	12,96%	-1,61%	-12,71%	-22,79%	9
	Travel & Leisure	-5,85%	-10,74%	6,45%	-5,17%	7
	Utilities	18,88%	-8,07%	-21,80%	-5,03%	32
Country	Australia	1,95%	-5,97%	-12,98%	-28,52%	30
	Belgium	-46,31%	-40,47%	88,76%	-54,39%	2
	Brazil	-21,40%	-48,43%	-44,44%	-6,66%	2
	Canada	-17,74%	-10,64%	-0,86%	-6,17%	15
	Chile	0,00%	107,11%	-32,08%	112,59%	1
	China	-4,60%	-35,35%	-34,51%	-49,94%	6
	Denmark	-37,60%	-39,65%	-25,07%	-42,90%	2
	Finland	16,69%	-8,49%	-22,61%	3,00%	12
	France	17,82%	17,61%	-3,56%	-7,52%	33
	Germany	15,02%	17,32%	35,85%	30,77%	24
	Ireland	0,00%	0,00%	-94,54%	-82,52%	1
	Italy	-21,51%	-9,24%	-9,39%	-7,31%	9
	Japan	19,23%	6,24%	50,39%	7,08%	77
	Malaysia	92,11%	-35,40%	-6,31%	46,72%	3
	Netherlands	40,02%	21,91%	-6,72%	14,08%	10
	Norway	-77,32%	270,14%	-0,76%	82,93%	2
	Portugal	-12,96%	15,33%	13,87%	21,17%	1
	South Africa	20,90%	21,25%	-13,78%	17,97%	10
	Spain	6,27%	-8,58%	-21,72%	-16,81%	17
	Sweden	34,25%	13,06%	-5,38%	-1,07%	17
	Switzerland	-22,07%	-6,18%	-19,28%	-7,93%	11
	UK	-0,42%	-3,49%	-28,91%	-8,47%	70
	USA	-1,44%	-7,15%	-10,70%	-7,75%	139

Table 18: Mean Changes in Daily Trading Volumes around the announcement date for companies added to or deleted from the FTSE4Good Index, 2002-2008

		Day 0	Day 1	Day 2	Day 3	n
All	Mean increase	14,76%	14,18%	14,72%	9,71%	429
	STD	84,43%	80,38%	73,30%	77,37%	
	Percent > 0	44,05%	46,39%	46,63%	43,10%	
Action	Add	19,37%	13,50%	20,26%	6,87%	295
	Delete	4,79%	15,69%	2,42%	15,73%	134
Year	2002	4,37%	6,64%	5,43%	39,83%	37
	2003	11,85%	44,14%	16,46%	13,64%	76
	2004	54,43%	2,18%	37,25%	-3,43%	97
	2005	-9,32%	13,13%	1,36%	3,76%	69
	2006	-1,34%	8,31%	2,96%	9,99%	28
	2007	9,09%	12,28%	6,73%	-9,31%	54
	2008	1,04%	6,94%	9,71%	26,62%	68
Industry	Basic Materials	28,28%	32,92%	15,02%	-0,43%	47
	Consumer Goods	11,37%	19,51%	25,17%	11,88%	65
	Consumer Services	4,76%	-0,25%	-3,43%	-3,46%	52
	Financials	17,66%	21,96%	6,97%	11,10%	81
	Health Care	14,68%	6,15%	48,47%	34,03%	30
	Industrials	10,11%	7,22%	16,70%	-1,83%	71
	Oil & Gas	34,79%	4,79%	8,71%	46,89%	10
	Technology	3,29%	0,87%	6,30%	6,30%	49
	Telecommunications	54,32%	40,54%	27,26%	61,58%	16
	Utilities	1,35%	8,57%	17,89%	12,23%	8
Country	Australia	11,43%	15,54%	-3,73%	-5,95%	21
	Austria	118,97%	283,32%	-0,21%	-9,75%	3
	Belgium	-33,22%	33,92%	-6,24%	50,71%	3
	Canada	24,19%	22,02%	18,28%	42,24%	19
	China	3,81%	-38,61%	-14,64%	-23,50%	7
	Denmark	-42,43%	-67,42%	12,29%	127,85%	2
	Finland	16,60%	46,47%	-14,57%	3,39%	4
	France	9,00%	-3,71%	2,48%	-2,98%	20
	Germany	36,85%	21,30%	13,01%	20,47%	12
	Greece	-48,20%	4,50%	-30,11%	-22,56%	4
	Ireland	-51,17%	-79,26%	-31,96%	-67,28%	1
	Italy	-2,91%	-4,73%	10,01%	27,47%	12
	Japan	30,39%	16,21%	33,23%	13,30%	178
	Netherlands	44,29%	-3,02%	-27,85%	-6,49%	2
	New Zealand	-17,20%	80,08%	-35,12%	86,55%	5
	Norway	-11,25%	19,49%	38,46%	5,64%	4
	Portugal	-8,76%	-23,32%	-28,40%	-38,94%	4
	Singapore	5,61%	66,69%	71,37%	98,91%	2
	Spain	11,26%	-3,39%	19,73%	7,32%	4
	Sweden	-15,26%	-7,98%	-2,26%	-33,20%	6
	Switzerland	15,74%	15,74%	24,15%	92,84%	8
	UK	0,07%	8,49%	9,40%	4,46%	9
	USA	-2,97%	10,17%	0,30%	-4,87%	99

Table 19: Index Changes in Dow Jones Sustainability Index

Name	Datastream code	Country	Sector	Comment	Year
ABB Ltd.	S:ABB	Switzerland	Industrial Goods & Services	Delete	2008
Abbott Laboratories	U:ABT	USA	Healthcare	Add	2005
Abertis Infraestructuras S.A.	E:ACE	Spain	Industrial Goods & Services	Add	2004
Acciona S.A.	E:ANA	Spain	Construction & Materials	Add	2007
Accor S.A.	F:BRL	France	Personal & Household Goods	Add	2002
Actividades de Construccion y Servicios S.A.	E:ACS	Spain	Construction & Materials	Add	2007
Adobe Systems Inc.	@ADBE	USA	Technology	Add	2003
Adobe Systems Inc.	@ADBE	USA	Technology	Delete	2006
Advanced Micro Devices Inc.	U:AMD	USA	Technology	Add	2002
Advent Software Inc.	@ADVS	USA	Technology	Delete	2002
Aegis Group PLC	AGS	UK	Media	Delete	2005
Aeon Co. Ltd.	J:JT@N	Japan	Retail	Add	2004
Aetna Inc.	U:AET	USA	Healthcare	Add	2003
Aetna Inc.	U:AET	USA	Healthcare	Delete	2007
African Bank Investments Ltd.	R:ABLJ	South Africa	Financial Services	Add	2006
African Bank Investments Ltd.	R:ABLJ	South Africa	Financial Services	Delete	2007
AGL Energy Ltd.	A:AGKX	Australia	Utilities	Delete	2008
Air France-KLM	F:UTA	France	Travel & Leisure	Add	2005
Air Products & Chemicals Inc.	U:APD	USA	Chemicals	Add	2003
Air Products & Chemicals Inc.	U:APD	USA	Chemicals	Delete	2007
Aixtron AG	D:AIXA	Germany	Industrial Goods & Services	Delete	2003
Akzo Nobel N.V.	H:AKZO	Netherlands	Chemicals	Add	2005
Alcatel S.A.	F:CGE	France	Technology	Add	2005
Alcatel-Lucent	F:CGE	France	Technology	Delete	2008
Alcoa Inc.	U:AA	USA	Basic Resources	Add	2006
Alcoa Inc.	U:AA	USA	Basic Resources	Delete	2008
Alcoa Inc.	U:AA	USA	Basic Resources	Delete	2005
Alexander & Baldwin Inc.	U:AXB	USA	Industrial Goods & Services	Delete	2002
Allied Irish Banks PLC	ALBK	Ireland	Financial Services	Delete	2002
Alumina Ltd.	A:AWCX	Australia	Basic Resources	Delete	2003
Amcor Ltd.	A:AMCX	Australia	Industrial Goods & Services	Delete	2004
Amcor Ltd.	A:AMCX	Australia	Industrial Goods & Services	Add	2008
AMEC PLC	AMEC	UK	Construction & Materials	Add	2004
Amgen Inc.	@AMGN	USA	Healthcare	Add	2006
Amgen Inc.	@AMGN	USA	Healthcare	Delete	2008
Amgen Inc.	@AMGN	USA	Healthcare	Add	2002
Amgen Inc.	@AMGN	USA	Healthcare	Delete	2004
AMP Ltd.	A:AMPX	Australia	Financial Services	Add	2003
Anglo American Platinum Corp. Ltd.	R:AMSJ	South Africa	Basic Resources	Delete	2002
Anglo American PLC	AAL	UK	Basic Resources	Add	2003
AngloGold Ltd.	R:ANGJ	South Africa	Basic Resources	Delete	2002
AOL Time Warner Inc.	U:TWX	USA	Personal & Household Goods	Add	2002
Applied Materials Inc.	@AMAT	USA	Technology	Delete	2005

Aracruz Celulose S/A Pref B	U:ARA	Brazil	Basic Resources	Add	2005
Arcelor	H:MT	France	Basic Resources	Add	2005
Asahi Breweries Ltd.	J:ASBR	Japan	Food & Beverage	Delete	2008
Asahi Glass Co. Ltd.	J:AG@N	Japan	Industrial Goods & Services	Delete	2002
Asahi Glass Co. Ltd.	J:AG@N	Japan	Construction & Materials	Add	2004
ASML Holding N.V.	H:ASML	Netherlands	Technology	Add	2004
ASX Ltd.	A:ASXX	Australia	Financial Services	Add	2007
Atlas Copco AB Series A	W:SR@G	Sweden	Industrial Goods & Services	Delete	2004
Atlas Copco AB Series A	W:SR@G	Sweden	Industrial Goods & Services	Add	2007
Atos Origin	F:ATO	France	Technology	Delete	2003
AXA S.A.	F:MIDI	France	Insurance	Add	2007
BAE Systems PLC	BA.	UK	Industrial Goods & Services	Add	2003
Balfour Beatty PLC	BBY	UK	Construction & Materials	Delete	2004
Balfour Beatty PLC	BBY	UK	Construction & Materials	Add	2003
Balfour Beatty PLC	BBY	UK	Industrial Goods & Services	Add	2006
Ballard Power Systems Inc.	C:BLD	Canada	Automobiles & Parts	Delete	2005
Baloise Holding AG	S:BALN	Switzerland	Financial Services	Add	2002
Banca Monte dei Paschi di Siena S.p.A.	I:BMPS	Italy	Financial Services	Add	2002
Banca Monte dei Paschi di Siena S.p.A.	I:BMPS	Italy	Financial Services	Delete	2006
Banco Bradesco S/A Pref	BR:DC4	Brazil	Financial Services	Add	2006
Bank of America Corp.	U:BAC	USA	Banks	Delete	2003
Bank of America Corp.	U:BAC	USA	Financial Services	Add	2002
BarCo N.V.	B:BAR	Belgium	Industrial Goods & Services	Delete	2002
Barloworld Ltd.	R:BAWJ	South Africa	Industrial Goods & Services	Delete	2005
Barrick Gold Corp.	C:ABX	Canada	Basic Resources	Add	2008
BCE Emergis Inc.	C:BCE	Canada	Technology	Delete	2003
Beckman Coulter Inc.	U:BEC	USA	Healthcare	Add	2003
Beckman Coulter Inc.	U:BEC	USA	Healthcare	Delete	2002
Beckman Coulter Inc.	U:BEC	USA	Healthcare	Delete	2004
Becton Dickinson & Co.	U:BDX	USA	Healthcare	Add	2006
Becton, Dickinson & Co.	U:BDX	USA	Healthcare	Delete	2002
Benesse Corp.	J:ENES	Japan	Retail	Add	2005
Berkeley Group Holdings PLC	BKG	UK	Personal & Household Goods	Delete	2005
Berkeley Group PLC	BKG	UK	Personal & Household Goods	Delete	2002
Berkeley Group PLC	BKG	UK	Personal & Household Goods	Add	2004
BHP Billiton Ltd.	A:BHPX	Australia	Basic Resources	Add	2002
BHP Billiton PLC	BLT	UK	Basic Resources	Add	2002
Bidvest Group Ltd.	R:BVTJ	South Africa	Financial Services	Add	2002
Bidvest Group Ltd.	R:BVTJ	South Africa	Industrial Goods & Services	Delete	2008
Bluescope Steel Ltd.	A:BSLX	Australia	Basic Resources	Add	2007
BNP Paribas S.A.	F:BNP	France	Financial Services	Add	2002
Boeing Co.	U:BA	USA	Industrial Goods & Services	Delete	2003
Boeing Co.	U:BA	USA	Industrial Goods & Services	Add	2002
Bombardier Inc. Cl B SV	C:BBD.B	Canada	Industrial Goods & Services	Add	2007
Brambles Industries Ltd.	A:BXBX	Australia	Industrial Goods & Services	Add	2003
Brambles Industries PLC	A:BXBX	UK	Industrial Goods & Services	Add	2003

Brambles Ltd.	A:BXBX	Australia	Industrial Goods & Services	Delete	2008
Bristol-Myers Squibb Co.	U:BMY	USA	Healthcare	Delete	2003
British Airways PLC	BAY	UK	Travel & Leisure	Delete	2005
British American Tobacco (Malaysia)	L:ROTM	Malaysia	Personal & Household Goods	Add	2002
British American Tobacco (Malaysia)	L:ROTM	Malaysia	Personal & Household Goods	Delete	2008
British American Tobacco PLC	BATS	UK	Personal & Household Goods	Add	2002
Cable & Wireless PLC	CW.	UK	Telecommunications	Delete	2003
Canadian Imperial Bank of Commerce	C:CM	Canada	Financial Services	Add	2002
Canon Inc.	J:CN@N	Japan	Technology	Delete	2007
Capstone Turbine Corp.	@CPST	USA	Industrial Goods & Services	Delete	2002
Carrefour S.A.	F:CRFR	France	Personal & Household Goods	Add	2002
Castellum AB	W:CAST	Sweden	Financial Services	Add	2007
Castellum AB	W:CAST	Sweden	Real Estate	Delete	2008
Cattles PLC	CTLS	UK	Financial Services	Add	2006
Celesio AG	D:CLS1	Germany	Personal & Household Goods	Delete	2006
Centex Corp.	U:CTX	USA	Personal & Household Goods	Delete	2002
Centrica PLC	CNA	UK	Utilities	Add	2003
CFS Gandel Retail Trust	A:CFXX	Australia	Financial Services	Add	2004
China Mobile Ltd.	K:CHT	China	Telecommunications	Add	2008
Ciba Specialty Chemicals Holding Inc.	S:CIBN	Switzerland	Chemicals	Delete	2003
Ciba Specialty Chemicals Holding Inc.	S:CIBN	Switzerland	Chemicals	Add	2005
Ciba Specialty Chemicals Holding Inc.	S:CIBN	Switzerland	Chemicals	Delete	2007
Cisco Systems Inc.	@CSCO	USA	Technology	Add	2006
Coca-Cola Hellenic Bottling Co. S.A.	G:EEEK	Greece	Food & Beverage	Add	2008
Colgate-Palmolive Co.	U:CL	USA	Personal & Household Goods	Delete	2006
Colgate-Palmolive Co.	U:CL	USA	Personal & Household Goods	Add	2005
Commonwealth Property Office Fund	A:CPAX	Australia	Financial Services	Add	2003
Compagnie de Saint-Gobain S.A.	F:GOB	France	Construction & Materials	Delete	2004
Compagnie Generale des Etablissements Michelin	F:MCL	France	Personal & Household Goods	Delete	2002
Compagnie Generale des Etablissements Michelin	F:MCL	France	Automobiles & Parts	Add	2005
Compania Cervecerias Unidas S.A.	U:CCU	Chile	Personal & Household Goods	Delete	2002
Continental AG	D:CON	Germany	Personal & Household Goods	Delete	2002
Continental Airlines Inc. Cl B	U:CAL	USA	Personal & Household Goods	Delete	2002
Criteria CaixaCorp S.A.	E:CRCA	Spain	Financial Services	Add	2008
Cummins Inc.	U:CMI	USA	Industrial Goods & Services	Add	2005
Dai Nippon Printing Co. Ltd.	J:DP@N	Japan	Media	Add	2005
Daikin Industries Ltd.	J:DA@N	Japan	Industrial Goods & Services	Add	2002
DaimlerChrysler AG NA	D:DAI	Germany	Automobiles & Parts	Delete	2003
DaimlerChrysler AG NA	D:DAI	Germany	Automobiles & Parts	Add	2005
Daito Trust Construction Co. Ltd.	J:DITC	Japan	Industrial Goods & Services	Delete	2002
Danisco A/S	DK:DAO	Denmark	Personal & Household Goods	Add	2002
Debenhams PLC	DEB	UK	Personal & Household Goods	Add	2002
Delphi Corp.	@DPHIQ	USA	Automobiles & Parts	Add	2003
Delphi Corp.	@DPHIQ	USA	Automobiles & Parts	Delete	2005

Deutsche Boerse AG	D:DB1	Germany	Financial Services	Add	2005
Deutsche Lufthansa AG	D:LHA	Germany	Travel & Leisure	Delete	2005
Deutsche Lufthansa AG	D:LHA	Germany	Personal & Household Goods	Add	2006
Dollar Tree Stores Inc.	@DLTR	USA	Personal & Household Goods	Delete	2002
Domtar Inc.	U:UFS	Canada	Basic Resources	Delete	2005
Dow Chemical Co.	U:DOW	USA	Basic Resources	Add	2006
Dow Chemical Co.	U:DOW	USA	Chemicals	Delete	2005
DSM N.V.	H:DSM	Netherlands	Chemicals	Add	2003
Duke Energy Corp.	U:DUK	USA	Utilities	Delete	2003
E.ON AG	D:EOAN	Germany	Utilities	Add	2007
East Japan Railway Co.	J:EAJR	Japan	Industrial Goods & Services	Delete	2003
Eastman Kodak Co.	U:EK	USA	Personal & Household Goods	Delete	2006
Ebara Corp.	J:EB@N	Japan	Industrial Goods & Services	Delete	2005
EDP-Energias de Portugal S.A.	P:ECP	Portugal	Utilities	Add	2008
Electrolux AB B	W:SE@G	Sweden	Personal & Household Goods	Delete	2004
Electrolux AB Series B	W:SE@G	Sweden	Personal & Household Goods	Add	2007
Embraer-Empresa Brasileiras de Aeronautica S/	BR:EA3	Brazil	Industrial Goods & Services	Delete	2004
Enagas S.A.	E:ENAG	Spain	Utilities	Add	2008
Enbridge Inc.	C:ENB	Canada	Oil & Gas	Delete	2003
Enbridge Inc.	C:ENB	Canada	Utilities	Add	2005
Enbridge Inc.	C:ENB	Canada	Utilities	Delete	2006
EnCana Corp.	C:ECA	Canada	Oil & Gas	Add	2006
Endesa S.A.	E:ELE	Spain	Utilities	Add	2002
Enel S.p.A.	I:ENEL	Italy	Utilities	Add	2004
ENI S.p.A.	I:ENI	Italy	Oil & Gas	Add	2007
ENSCO International Inc.	U:ESV	USA	Oil & Gas	Add	2002
ENSCO International Inc.	U:ESV	USA	Oil & Gas	Delete	2005
Entergy Corp.	U:ETR	USA	Utilities	Add	2002
Essilor International S.A.	F:EI	France	Healthcare	Add	2007
Euronext N.V.	U:NYX	France	Financial Services	Add	2005
Experian PLC	EXPN	UK	Industrial Goods & Services	Delete	2008
Fairchild Semiconductor International Inc.	U:FCS	USA	Technology	Add	2002
Fairchild Semiconductor International Inc.	U:FCS	USA	Technology	Delete	2007
Fannie Mae	U:FNM	USA	Financial Services	Add	2003
Fannie Mae	U:FNM	USA	Financial Services	Delete	2002
Fannie Mae	U:FNM	USA	Financial Services	Delete	2005
FedEx Corp.	U:FDX	USA	Industrial Goods & Services	Delete	2002
FMC Technologies Inc.	U:FTI	USA	Oil & Gas	Add	2007
Fomento de Construcciones y Contratas	E:FCC	Spain	Construction & Materials	Add	2008
Ford Motor Co.	U:F	USA	Personal & Household Goods	Delete	2006
Ford Motor Co.	U:F	USA	Personal & Household Goods	Add	2002
Fortis N.V.	B:FORT	Netherlands	Financial Services	Add	2003
Fortum Oyj	M:FORT	Finland	Utilities	Add	2003
Fraport AG	D:FRA	Germany	Industrial Goods & Services	Add	2007
Friends Provident PLC	FP.	UK	Insurance	Add	2004
Fuji Electric Holdings Co. Ltd.	J:FJHO	Japan	Industrial Goods & Services	Add	2005

Gamesa Corporacion Tecnologica S.A.	E:GAM	Spain	Industrial Goods & Services	Add	2007
Gannett Co. Inc.	U:GCI	USA	Media	Add	2003
Gannett Co. Inc.	U:GCI	USA	Media	Delete	2004
Gap Inc.	U:GPS	USA	Retail	Add	2003
Gap Inc.	U:GPS	USA	Personal & Household Goods	Delete	2002
Gap Inc.	U:GPS	USA	Retail	Delete	2007
Gas Natural SDG S.A.	E:CTG	Spain	Utilities	Add	2005
Geberit AG Reg.	S:GEBN	Switzerland	Industrial Goods & Services	Add	2002
Geberit AG Reg.	S:GEBN	Switzerland	Construction & Materials	Delete	2003
General Electric Co.	U:GE	USA	Industrial Goods & Services	Add	2004
Genzyme Corp.	@GENZ	USA	Healthcare	Delete	2008
Genzyme Corp.	@GENZ	USA	Healthcare	Add	2004
Georg Fischer AG	S:FI.N	Switzerland	Industrial Goods & Services	Delete	2002
Goldman Sachs Group Inc.	U:GS	USA	Financial Services	Delete	2006
Goldman Sachs Group Inc.	U:GS	USA	Financial Services	Add	2005
GPT Group	A:GPTX	Australia	Financial Services	Add	2005
Grupo Ferrovial S.A.	E:FER	Spain	Industrial Goods & Services	Add	2002
H&R Block Inc.	U:HRB	USA	Personal & Household Goods	Delete	2006
H&R Block Inc.	U:HRB	USA	Retail	Add	2005
H&R Block Inc.	U:HRB	USA	Retail	Add	2007
H.J. Heinz Co.	U:HNZ	USA	Food & Beverage	Add	2003
H.J. Heinz Co.	U:HNZ	USA	Personal & Household Goods	Delete	2002
H.J. Heinz Co.	U:HNZ	USA	Food & Beverage	Delete	2005
Hachijuni Bank Ltd.	J:HABT	Japan	Banks	Delete	2005
Halliburton Co.	U:HAL	USA	Oil & Gas	Delete	2002
Health Net Inc.	U:HNT	USA	Healthcare	Add	2007
Heidelberger Druckmaschinen AG	D:HDD	Germany	Industrial Goods & Services	Delete	2003
Heineken N.V.	H:HB	Netherlands	Food & Beverage	Add	2005
Henkel KGaA Pfd.	D:HEN	Germany	Personal & Household Goods	Delete	2005
Henkel KGaA Pfd.	D:HEN	Germany	Personal & Household Goods	Add	2007
Hennes & Mauritz AB Series B	W:HMBF	Sweden	Retail	Delete	2007
Herman Miller Inc.	@MLHR	USA	Personal & Household Goods	Delete	2003
Herman Miller Inc.	@MLHR	USA	Personal & Household Goods	Add	2004
Hewlett-Packard Co.	U:HPQ	USA	Technology	Add	2003
Hewlett-Packard Co.	U:HPQ	USA	Technology	Delete	2002
Hitachi Chemical Co. Ltd.	J:LK@N	Japan	Chemicals	Add	2005
Hitachi Chemical Co. Ltd.	J:LK@N	Japan	Chemicals	Delete	2007
Hitachi Ltd.	J:HC@N	Japan	Industrial Goods & Services	Delete	2006
Hochtief AG	D:HOT	Germany	Industrial Goods & Services	Add	2006
Holcim Ltd. Reg	S:HOLN	Switzerland	Construction & Materials	Add	2003
Home Depot Inc.	U:HD	USA	Retail	Delete	2005
Honeywell International Inc.	U:HON	USA	Industrial Goods & Services	Delete	2002
Huhtamaki Oyj	M:HUIF	Finland	Industrial Goods & Services	Add	2003
Huhtamaki Oyj	M:HUIF	Finland	Industrial Goods & Services	Delete	2005
Humana Inc.	U:HUM	USA	Healthcare	Add	2007
Hypo Real Estate Holding AG	D:HRX	Germany	Financial Services	Delete	2004

Hypo Real Estate Holding AG	D:HRX	Germany	Financial Services	Add	2005
Hypo Real Estate Holding AG	D:HRX	Germany	Financial Services	Delete	2007
Iberia Lineas Aereas de Espana S.A.	E:IBL	Spain	Personal & Household Goods	Add	2006
Inditex S.A.	E:IND	Spain	Personal & Household Goods	Add	2002
Indra Sistemas S.A.	E:IDR	Spain	Technology	Add	2006
Insurance Australia Group Ltd.	A:IAGX	Australia	Financial Services	Add	2006
InterContinental Hotels Group PLC	IHG	UK	Travel & Leisure	Delete	2005
International Business Machines Corp.	U:IBM	USA	Technology	Add	2005
International Personal Finance PLC	IPFI	UK	Financial Services	Delete	2008
Investec Ltd.	R:INLJ	South Africa	Financial Services	Add	2006
Investec PLC	INVP	UK	Financial Services	Add	2006
Investors Financial Services Corp.	@FIFS	USA	Financial Services	Delete	2006
Investors Financial Services Corp.	@FIFS	USA	Financial Services	Add	2005
Italcementi S.p.A.	I:IT	Italy	Construction & Materials	Add	2007
Itausa-Investimentos Itau S/A Pref	BR:IS4	Brazil	Financial Services	Add	2003
Itausa-Investimentos Itau S/A Pref	BR:IS4	Brazil	Banks	Delete	2005
Itausa-Investimentos Itau S/A Pref	BR:IS4	Brazil	Financial Services	Add	2006
Itochu Corp.	J:ITCN	Japan	Industrial Goods & Services	Add	2003
Itochu Corp.	J:ITCN	Japan	Industrial Goods & Services	Delete	2005
Itochu Corp.	J:ITCN	Japan	Industrial Goods & Services	Add	2006
James Hardie Industries N.V.	A:JHXX	Australia	Industrial Goods & Services	Add	2002
James Hardie Industries N.V.	A:JHXX	Australia	Construction & Materials	Delete	2003
Jarvis PLC	JRVS	UK	Industrial Goods & Services	Add	2002
Jarvis PLC	JRVS	UK	Industrial Goods & Services	Delete	2004
JCDecaux S.A.	F:JCDE	France	Media	Add	2007
Johnson & Johnson	U:JNJ	USA	Healthcare	Delete	2007
Johnson Controls Inc.	U:JCI	USA	Automobiles & Parts	Add	2005
Johnson Matthey PLC	JMAT	UK	Basic Resources	Delete	2002
Kansai Electric Power Co. Inc.	J:KE@N	Japan	Utilities	Delete	2003
Kao Corp.	J:KA@N	Japan	Personal & Household Goods	Add	2008
Karstadt Quelle AG	D:ARO	Germany	Retail	Delete	2005
Kawasaki Kisen Kaisha Ltd.	J:KK@N	Japan	Industrial Goods & Services	Add	2003
Kawasaki Kisen Kaisha Ltd.	J:KK@N	Japan	Industrial Goods & Services	Delete	2005
KBC Bankverzekeringsholding N.V.	B:KB	Belgium	Financial Services	Delete	2002
Kesko Oyj B	M:KESK	Finland	Retail	Add	2005
Kimberly-Clark Corp.	U:KMB	USA	Personal & Household Goods	Delete	2003
Kimberly-Clark Corp.	U:KMB	USA	Personal & Household Goods	Add	2002
Kimberly-Clark Corp.	U:KMB	USA	Personal & Household Goods	Add	2005
Kingfisher PLC	KGF	UK	Personal & Household Goods	Add	2002
Kirin Holdings Co. Ltd.	J:KB@N	Japan	Food & Beverage	Delete	2007
Klepierre S.A.	F:LOI	France	Financial Services	Add	2004
Komatsu Ltd.	J:KM@N	Japan	Industrial Goods & Services	Add	2002
Komatsu Ltd.	J:KM@N	Japan	Industrial Goods & Services	Delete	2005
Komatsu Ltd.	J:KM@N	Japan	Industrial Goods & Services	Add	2006
Koninklijke Ahold N.V.	H:AH	Netherlands	Personal & Household Goods	Delete	2004
Koninklijke Philips Electronics N.V.	H:PHIL	Netherlands	Personal & Household Goods	Add	2002

Kowloon Motor Bus Holdings Ltd.	K:KOWL	China	Personal & Household Goods	Add	2002
Kraft Foods Inc. Cl A	U:KFT	USA	Personal & Household Goods	Add	2006
Kubota Corp.	J:KU@N	Japan	Industrial Goods & Services	Delete	2005
Kuoni Reisen Holding AG Series B	S:KUNN	Switzerland	Personal & Household Goods	Delete	2002
Kyocera Corp.	J:CQ@N	Japan	Industrial Goods & Services	Delete	2005
L.M. Ericsson Telephone Co. Series B	W:SL@G	Sweden	Technology	Delete	2007
Lafarge S.A.	F:LFG	France	Industrial Goods & Services	Delete	2006
Land Securities PLC	LAND	UK	Financial Services	Add	2002
Lear Corp.	U:LEA	USA	Personal & Household Goods	Delete	2002
Legal & General Group PLC	LGEN	UK	Insurance	Add	2003
Lend Lease Corp. Ltd.	A:LLCX	Australia	Construction & Materials	Delete	2005
Lend Lease Corp. Ltd.	A:LLCX	Australia	Financial Services	Add	2006
Li & Fung Ltd.	K:FUNG	China	Personal & Household Goods	Delete	2006
Liberty International PLC	LII	UK	Real Estate	Add	2008
London Stock Exchange Group PLC	LSE	UK	Financial Services	Delete	2007
London Stock Exchange PLC	LSE	UK	Financial Services	Add	2005
Lonmin PLC	LMI	UK	Basic Resources	Add	2005
L'Oreal S.A.	F:OR@F	France	Personal & Household Goods	Delete	2002
L'Oreal S.A.	F:OR@F	France	Personal & Household Goods	Add	2004
L'Oreal S.A.	F:OR@F	France	Personal & Household Goods	Delete	2005
Macquarie Office Trust	A:MOFX	Australia	Financial Services	Add	2005
Macquarie Office Trust	A:MOFX	Australia	Financial Services	Delete	2006
Man Group PLC	EMG	UK	Financial Services	Add	2005
Man Group PLC	EMG	UK	Financial Services	Add	2007
Man Group PLC	EMG	UK	Financial Services	Delete	2006
Marks & Spencer PLC	MKS	UK	Personal & Household Goods	Add	2002
Marubeni Corp.	J:MRBU	Japan	Industrial Goods & Services	Delete	2003
Marubeni Corp.	J:MRBU	Japan	Industrial Goods & Services	Add	2008
Mattel Inc.	U:MAT	USA	Personal & Household Goods	Delete	2005
McDonald's Corp.	U:MCD	USA	Travel & Leisure	Add	2005
MDS Inc.	C:MDS	Canada	Healthcare	Add	2008
MeadWestvaco Corp.	U:MWV	USA	Basic Resources	Delete	2002
MeadWestvaco Corp.	U:MWV	USA	Basic Resources	Add	2004
Mentor Graphics Corp.	@MENT	USA	Technology	Delete	2005
Metso Corp.	M:MEO	Finland	Industrial Goods & Services	Delete	2005
Mitchells & Butlers PLC	MAB	UK	Travel & Leisure	Delete	2005
Mitsubishi Corp.	J:ZJ@N	Japan	Industrial Goods & Services	Add	2002
Mitsubishi Corp.	J:ZJ@N	Japan	Industrial Goods & Services	Delete	2008
Mitsubishi Materials Corp.	J:LM@N	Japan	Industrial Goods & Services	Delete	2003
Mitsui & Co. Ltd.	J:MT@N	Japan	Industrial Goods & Services	Add	2004
Mitsui & Co. Ltd.	J:MT@N	Japan	Industrial Goods & Services	Delete	2007
Mitsui Fudosan Co. Ltd.	J:MIFU	Japan	Financial Services	Add	2006
Mitsui Fudosan Co. Ltd.	J:MIFU	Japan	Financial Services	Delete	2007
Mitsui O.S.K. Lines Ltd.	J:MO@N	Japan	Industrial Goods & Services	Add	2003
Mondi PLC	MNDI	UK	Basic Resources	Delete	2008
Motorola Inc.	U:MOT	USA	Technology	Delete	2006

Motorola Inc.	U:MOT	USA	Technology	Add	2004
Motorola Inc.	U:MOT	USA	Technology	Add	2007
MTR Corp. Ltd.	K:MTRC	China	Industrial Goods & Services	Add	2002
Murata Manufacturing Co. Ltd.	J:SM@N	Japan	Industrial Goods & Services	Add	2007
Nalco Holding Co.	U:NLC	USA	Industrial Goods & Services	Add	2008
National Australia Bank Ltd.	A:NABX	Australia	Banks	Add	2003
National Express Group PLC	NEX	UK	Industrial Goods & Services	Add	2002
National Express Group PLC	NEX	UK	Travel & Leisure	Delete	2008
National Grid Transco PLC	NG.	UK	Utilities	Add	2003
NEC Corp.	J:NJ@N	Japan	Technology	Add	2002
NEC Corp.	J:NJ@N	Japan	Technology	Delete	2004
NEC Corp.	J:NJ@N	Japan	Technology	Add	2005
NEC Electronics Corp.	J:NECE	Japan	Technology	Add	2005
NEC Electronics Corp.	J:NECE	Japan	Technology	Delete	2006
Neste Oil Oyj	M:NEST	Finland	Oil & Gas	Delete	2005
Neste Oil Oyj	M:NEST	Finland	Oil & Gas	Add	2007
Nestle (Malaysia) Bhd	L:NEST	Malaysia	Personal & Household Goods	Delete	2002
New World Development Co. Ltd.	K:NWDV	China	Financial Services	Delete	2002
Newmont Mining Corp.	U:NEM	USA	Basic Resources	Add	2007
Newmont Mining Corp. of Canada Ltd.	C:NMC	Canada	Basic Resources	Add	2007
Newport Corp.	@NEWP	USA	Industrial Goods & Services	Delete	2002
Nicor Inc.	U:GAS	USA	Utilities	Delete	2002
Nippon Television Network Corp.	J:TV@N	Japan	Media	Delete	2005
Nippon Yusen K.K.	J:NY@N	Japan	Industrial Goods & Services	Add	2003
NiSource Inc.	U:NI	USA	Utilities	Delete	2005
Noble Corp.	U:NE	USA	Oil & Gas	Add	2004
Nomura Holdings Inc.	J:NM@N	Japan	Financial Services	Add	2005
Noranda Inc.	C:NIF.UN	Canada	Basic Resources	Delete	2002
Nortel Networks Corp.	C:NT	Canada	Technology	Delete	2002
NOVA Chemicals Corp.	C:NCX	Canada	Basic Resources	Delete	2002
Novell Inc.	@NOVL	USA	Technology	Delete	2003
Novell Inc.	@NOVL	USA	Technology	Add	2002
Omnicom Group Inc.	U:OMC	USA	Media	Add	2003
Omnicom Group Inc.	U:OMC	USA	Media	Delete	2004
Orica Ltd.	A:ORIX	Australia	Chemicals	Delete	2003
Outokumpu Oyj	M:OUTO	Finland	Basic Resources	Add	2007
Parametric Technology Corp.	@PMTC	USA	Technology	Delete	2004
Pearson PLC	PSON	UK	Personal & Household Goods	Add	2002
Pennon Group PLC	PNN	UK	Utilities	Delete	2005
Pennon Group PLC	PNN	UK	Utilities	Add	2003
PepsiCo Inc.	U:PEP	USA	Food & Beverage	Add	2007
Pfizer Inc.	U:PFE	USA	Healthcare	Delete	2007
Pirelli & C. Ord	I:PCI	Italy	Industrial Goods & Services	Add	2005
Pitney Bowes Inc.	U:PBI	USA	Technology	Delete	2003
Plantronics Inc.	U:PLT	USA	Technology	Delete	2003
Plum Creek Timber Co. Inc. REIT	U:PCL	USA	Real Estate	Add	2008

POSCO	KO:PIS	South Korea	Basic Resources	Add	2005
PPG Industries Inc.	U:PPG	USA	Basic Resources	Delete	2002
Praxair Inc.	U:PX	USA	Chemicals	Add	2003
Premier Farnell PLC	PFL	UK	Industrial Goods & Services	Add	2004
Premier Farnell PLC	PFL	UK	Industrial Goods & Services	Delete	2006
Procter & Gamble Co.	U:PG	USA	Personal & Household Goods	Delete	2008
ProLogis	U:PLD	USA	Real Estate	Add	2008
ProSieben SAT.1 Media AG	D:PSM	Germany	Personal & Household Goods	Delete	2002
Provident Financial PLC	PFG	UK	Financial Services	Add	2005
Pulte Homes Inc.	U:PHM	USA	Personal & Household Goods	Delete	2006
Puma AG Rudolf Dassler Sport	D:PUM	Germany	Personal & Household Goods	Add	2006
Qantas Airways Ltd.	A:QANX	Australia	Personal & Household Goods	Delete	2002
Quest Diagnostics Inc.	U:DGX	USA	Healthcare	Add	2004
Randstad Holding N.V.	H:RAND	Netherlands	Industrial Goods & Services	Add	2004
Rautaruukki Oyj K	M:RRUK	Finland	Basic Resources	Add	2008
Reckitt Benckiser PLC	BN:460	UK	Personal & Household Goods	Delete	2005
Reckitt Benckiser PLC	BN:460	UK	Personal & Household Goods	Delete	2007
Reckitt Benckiser PLC	BN:460	UK	Personal & Household Goods	Add	2003
Reckitt Benckiser PLC	BN:460	UK	Personal & Household Goods	Add	2006
Red Electrica de Espana S.A.	E:REE	Spain	Utilities	Add	2006
Reed Elsevier N.V. Cert.	H:ELS	Netherlands	Media	Add	2003
Reed Elsevier PLC	REL	UK	Media	Add	2003
Renault	F:RENU	France	Personal & Household Goods	Add	2006
Rentokil Initial PLC	RENT	UK	Industrial Goods & Services	Add	2005
Repsol YPF S.A.	E:REP	Spain	Oil & Gas	Add	2006
Rhodia S.A.	F:RHA	France	Chemicals	Add	2008
Ricoh Co. Ltd.	J:RH@N	Japan	Technology	Add	2002
Rio Tinto Ltd.	A:RIOX	Australia	Basic Resources	Add	2002
Roche Holding AG Part. Cert.	S:ROG	Switzerland	Healthcare	Delete	2002
Roche Holding AG Part. Cert.	S:ROG	Switzerland	Healthcare	Add	2004
Rodamco Europe N.V.	F:UBL	Netherlands	Financial Services	Delete	2002
Rohm Co. Ltd.	J:ROHM	Japan	Technology	Delete	2002
Rohm Co. Ltd.	J:ROHM	Japan	Technology	Add	2008
Rolls-Royce PLC	RR.	UK	Industrial Goods & Services	Add	2002
Royal Caribbean Cruises Ltd.	U:RCL	USA	Personal & Household Goods	Delete	2004
RSA Insurance Group PLC	RSA	UK	Insurance	Add	2008
Samsung SDI Co. Ltd.	KO:SCT	South Korea	Industrial Goods & Services	Add	2004
Sandvik AB	W:SAND	Sweden	Industrial Goods & Services	Add	2008
Sanofi-Aventis S.A.	F:SQ@F	France	Healthcare	Add	2007
Sasol Ltd.	R:SOLJ	South Africa	Oil & Gas	Add	2008
Schering AG	U:SGP	Germany	Healthcare	Delete	2004
Schneider Electric S.A.	F:QT@F	France	Industrial Goods & Services	Add	2002
Seat-Pagine Gialle S.p.A.	I:SGPS	Italy	Personal & Household Goods	Add	2002
Seat-Pagine Gialle S.p.A.	I:SGPS	Italy	Media	Delete	2003
Seiko Epson Corp.	J:SEEP	Japan	Technology	Add	2008
Sekisui Chemical Co. Ltd.	J:EK@N	Japan	Personal & Household Goods	Add	2006

Severn Trent PLC	SVT	UK	Utilities	Add	2007
Severn Trent PLC	SVT	UK	Utilities	Delete	2006
Severn Trent PLC	SVT	UK	Utilities	Delete	2008
Shaftesbury PLC	SHFT	UK	Financial Services	Add	2007
Siam Cement PCL	Q:SCQT	Thailand	Construction & Materials	Add	2004
Sime Darby Bhd	L:SIME	Malaysia	Industrial Goods & Services	Delete	2004
Singapore Airlines Ltd.	T:SAIR	Singapore	Personal & Household Goods	Delete	2003
SK Telecom Co. Ltd.	KO:SKT	South Korea	Telecommunications	Add	2008
Skanska AB B	W:SKBF	Sweden	Construction & Materials	Delete	2003
Skanska AB B	W:SKBF	Sweden	Construction & Materials	Add	2004
Skanska AB Series B	W:SKBF	Sweden	Industrial Goods & Services	Delete	2006
Smith & Nephew PLC	SN.	UK	Healthcare	Add	2002
Smith International Inc.	U:SII	USA	Oil & Gas	Add	2006
Smith International Inc.	U:SII	USA	Oil & Gas	Delete	2008
Smiths Group PLC	SMIN	UK	Industrial Goods & Services	Add	2002
Smiths Group PLC	SMIN	UK	Industrial Goods & Services	Delete	2003
Societe Generale S.A.	F:SGE	France	Banks	Delete	2008
Sodexho Alliance S.A.	VX:SW	France	Travel & Leisure	Add	2005
Sonoco Products Co.	U:SON	USA	Industrial Goods & Services	Delete	2002
Sony Corp.	J:SO@N	Japan	Personal & Household Goods	Delete	2008
SSL International PLC	SSL	UK	Healthcare	Add	2002
SSL International PLC	SSL	UK	Personal & Household Goods	Delete	2006
Stagecoach Group PLC	SGC	UK	Personal & Household Goods	Add	2004
Stagecoach Group PLC	SGC	UK	Travel & Leisure	Delete	2005
Stagecoach Group PLC	SGC	UK	Personal & Household Goods	Delete	2003
Standard Bank Group Ltd.	R:SBKJ	South Africa	Financial Services	Delete	2006
Staples Inc.	@SPLS	USA	Retail	Add	2004
State Street Corp.	U:STT	USA	Financial Services	Add	2006
Statoil ASAEnergy	N:STL	Norway	Oil & Gas	Add	2002
Stockland	A:SGPX	Australia	Financial Services	Add	2007
Stora Enso Oyj R	M:EGR	Finland	Basic Resources	Delete	2006
Suez	F:LE	France	Utilities	Add	2002
SUEZ	F:LE	France	Utilities	Delete	2004
Sulzer AG	S:SUN	Switzerland	Industrial Goods & Services	Add	2008
Sumitomo Corp.	J:UJ@N	Japan	Industrial Goods & Services	Delete	2005
Sumitomo Corp.	J:UJ@N	Japan	Industrial Goods & Services	Add	2006
Sumitomo Electric Industries Ltd.	J:SUEL	Japan	Industrial Goods & Services	Add	2007
Sumitomo Forestry Co. Ltd.	J:SFOR	Japan	Personal & Household Goods	Add	2005
Suncor Energy Inc.	C:SU	Canada	Oil & Gas	Delete	2008
Svenska Handelsbanken A	W:SVK	Sweden	Financial Services	Delete	2002
Swire Pacific Ltd. A	K:SWPA	China	Industrial Goods & Services	Delete	2005
Symantec Corp.	@SYMC	USA	Technology	Add	2008
Syngenta AG	S:SYNN	Switzerland	Basic Resources	Add	2006
Taisei Corp.	J:TC@N	Japan	Industrial Goods & Services	Add	2002
Taisei Corp.	J:TC@N	Japan	Construction & Materials	Delete	2004
Taisei Corp.	J:TC@N	Japan	Construction & Materials	Add	2005

Taisei Corp.	J:TC@N	Japan	Industrial Goods & Services	Delete	2006
Target Corp.	U:TGT	USA	Retail	Delete	2008
Target Corp.	U:TGT	USA	Retail	Add	2007
Tata Consultancy Services Ltd.	IN:TSE	India	Technology	Add	2008
Tata Steel Ltd.	IN:TIS	India	Basic Resources	Add	2008
TDK Corp.	J:TD@N	Japan	Industrial Goods & Services	Add	2002
Technip S.A.	F:TEC	France	Oil & Gas	Add	2003
Teijin Ltd.	J:TJ@N	Japan	Chemicals	Delete	2005
Telecom Italia Media S.p.A.	I:TME	Italy	Technology	Delete	2003
Telecom Italia S.p.A.	I:TIT	Italy	Telecommunications	Add	2004
Telefonica S.A.	E:TEF	Spain	Telecommunications	Delete	2003
Telefonica S.A.	E:TEF	Spain	Telecommunications	Add	2004
Telenor ASA	N:TEL	Norway	Telecommunications	Add	2002
Telia AB	W:TLSN	Sweden	Telecommunications	Delete	2002
TeliaSonera AB	W:TLSN	Sweden	Telecommunications	Delete	2003
TeliaSonera AB	W:TLSN	Sweden	Telecommunications	Add	2006
TeliaSonera AB	W:TLSN	Sweden	Telecommunications	Delete	2008
Telstra Corp. Ltd.	A:TLSX	Australia	Telecommunications	Delete	2002
Temple-Inland Inc.	U:TIN	USA	Industrial Goods & Services	Delete	2008
Tesco PLC	TSCO	UK	Retail	Add	2005
Tetra Tech Inc.	@TTEK	USA	Industrial Goods & Services	Add	2002
Tetra Tech Inc.	@TTEK	USA	Industrial Goods & Services	Delete	2005
Texas Instruments Inc.	U:TXN	USA	Technology	Delete	2004
Thomson	F:TMS	France	Media	Add	2008
TietoEnator Oyj	M:TIET	Finland	Technology	Delete	2005
Time Warner Inc.	U:TWX	USA	Media	Delete	2007
TNT N.V.	H:TNT	Netherlands	Industrial Goods & Services	Add	2005
Tokyo Electric Power Co. Inc.	J:TE@N	Japan	Utilities	Delete	2002
Tokyo Gas Co. Ltd.	J:TZ@N	Japan	Utilities	Delete	2006
Tokyu Corp.	J:JR@N	Japan	Industrial Goods & Services	Delete	2002
Tomra Systems ASA	N:TOM	Norway	Industrial Goods & Services	Delete	2007
Toray Industries Inc.	J:TRAY	Japan	Chemicals	Add	2007
Torstar Corp. Cl B	C:TS.B	Canada	Personal & Household Goods	Delete	2002
Total S.A.	F:TAL	France	Oil & Gas	Add	2004
Toto Ltd.	J:TOTO	Japan	Construction & Materials	Add	2005
Toto Ltd.	J:TOTO	Japan	Construction & Materials	Delete	2007
Toyota Motor Corp.	J:TYMO	Japan	Automobiles & Parts	Add	2003
TransAlta Corp.	C:TA	Canada	Utilities	Delete	2007
TransCanada PipeLines Ltd.	C:TCA.PR.Y	Canada	Oil & Gas	Add	2002
Transocean Inc.	U:RIG	USA	Oil & Gas	Delete	2002
Transport International Holdings Ltd.	K:KOWM	China	Travel & Leisure	Delete	2007
Transurban Group	A:TCLX	Australia	Industrial Goods & Services	Add	2006
Travis Perkins PLC	TPK	UK	Personal & Household Goods	Add	2002
Trend Micro Inc.	J:REND	Japan	Technology	Add	2002
Trend Micro Inc.	J:REND	Japan	Technology	Delete	2003
Trend Micro Inc.	J:REND	Japan	Technology	Add	2004

TUI AG	D:TUI1	Germany	Personal & Household Goods	Delete	2002
TUI AG	D:TUI1	Germany	Personal & Household Goods	Add	2006
TXU Corp.	@TXUE	USA	Utilities	Delete	2002
Tyco International Ltd.	U:TYC	USA	Industrial Goods & Services	Delete	2002
Unibail-Rodamco S.A.	F:UBL	France	Real Estate	Add	2008
Union Fenosa S.A.	E:UNF	Spain	Utilities	Add	2006
Unisys Corp.	U:UIS	USA	Technology	Add	2002
Unisys Corp.	U:UIS	USA	Technology	Delete	2007
United Microelectronics Corp.	TW:UTD	Taiwan	Technology	Add	2008
United Parcel Service Inc. Cl B	U:UPS	USA	Industrial Goods & Services	Add	2002
United Parcel Service Inc. Cl B	U:UPS	USA	Industrial Goods & Services	Delete	2007
United Utilities PLC	UU.	UK	Utilities	Add	2002
United Utilities PLC	UU.	UK	Utilities	Delete	2004
United Utilities PLC	UU.	UK	Utilities	Add	2007
UPM-Kymmene Oyj	M:UPM	Finland	Basic Resources	Add	2002
UPM-Kymmene Oyj	M:UPM	Finland	Basic Resources	Delete	2006
Valora Holding AG	S:VALN	Switzerland	Personal & Household Goods	Delete	2002
Valora Holding AG	S:VALN	Switzerland	Retail	Add	2003
Valora Holding AG	S:VALN	Switzerland	Retail	Delete	2005
Veolia Environnement S.A.	F:VIE	France	Utilities	Add	2003
Veolia Environnement S.A.	F:VIE	France	Utilities	Delete	2004
Veolia Environnement S.A.	F:VIE	France	Utilities	Add	2006
Vestas Wind Systems A/S	DK:VEW	Denmark	Industrial Goods & Services	Delete	2007
Vinci S.A.	F:DG@F	France	Industrial Goods & Services	Add	2006
Vinci S.A.	F:DG@F	France	Construction & Materials	Delete	2007
Vinci S.A.	F:DG@F	France	Construction & Materials	Add	2008
Visteon Corp.	@VSTN	USA	Personal & Household Goods	Delete	2006
Volkswagen AG	D:VOW	Germany	Automobiles & Parts	Delete	2005
Volkswagen AG	D:VOW	Germany	Automobiles & Parts	Add	2007
Walt Disney Co.	U:DIS	USA	Personal & Household Goods	Add	2006
Waste Management Inc.	U:WMI	USA	Industrial Goods & Services	Add	2005
Wesfarmers Ltd.	A:WESX	Australia	Basic Resources	Add	2002
West Japan Railway Co.	J:WJR	Japan	Industrial Goods & Services	Delete	2003
Weyerhaeuser Co.	U:WY	USA	Basic Resources	Delete	2002
Whirlpool Corp.	U:WHR	USA	Personal & Household Goods	Add	2005
Whirlpool Corp.	U:WHR	USA	Personal & Household Goods	Delete	2007
Whole Foods Market Inc.	@WFMI	USA	Personal & Household Goods	Delete	2006
Whole Foods Market Inc.	@WFMI	USA	Retail	Add	2005
Wolters Kluwer N.V.	H:WSG	Netherlands	Media	Add	2007
Woodside Petroleum Ltd.	A:WPLX	Australia	Oil & Gas	Add	2003
Woodside Petroleum Ltd.	A:WPLX	Australia	Oil & Gas	Delete	2006
Woodside Petroleum Ltd.	A:WPLX	Australia	Oil & Gas	Add	2007
WPP Group PLC	WPP	UK	Media	Delete	2007
Xstrata PLC	XTA	UK	Basic Resources	Add	2006
Yamaha Corp.	J:IN@N	Japan	Personal & Household Goods	Add	2002
Yamaha Corp.	J:IN@N	Japan	Personal & Household Goods	Delete	2003

Yell Group PLC	YELL	UK	Media	Add	2004
Zimmer Holdings Inc.	U:ZMH	USA	Healthcare	Delete	2002

Table 20: Index Changes in FTSE4Good Index

Name	Sedol	Region	Sector	Comment	Year	Month
3M CO.	2595708	North America	Industrials	Add	2003	3
3COM CORP.	2890005	North America	Technology	Add	2003	9
ACCENTURE LTD.	2763958	North America	Industrials	Add	2005	9
ACOM COMPANY LTD.	6049784	Japan	Financials	Delete	2005	3
ADC TELECOM.INCO.	2554635	North America	Technology	Delete	2002	12
ADVD.MICRO DEVC.INCO.	2007849	North America	Technology	Delete	2007	9
ADVANTEST CORPORATION	6870490	Japan	Technology	Add	2004	3
AEGIS GROUP PLC.	965756	Europe	Consumer Services	Add	2003	9
AEON COMPANY LTD.	6480048	Japan	Consumer Services	Add	2003	9
AEON CR.SERVICE CO.LTD.	6037734	Japan	Financials	Add	2005	3
AEON MALL CO.LTD.	6534202	Japan	Financials	Add	2005	3
AETNA INCO.	2695921	North America	Health Care	Delete	2007	3
AFLAC INCO.	2026361	North America	Financials	Delete	2005	3
AGFA-GEVAERT NV	5689051	Europe	Industrials	Delete	2008	9
AGILENT TECHS.INCO.	2520153	North America	Industrials	Delete	2007	9
AICHI STEEL CORP.	6010207	Japan	Basic Materials	Add	2005	3
AICHI STEEL CORP.	6010207	Japan	Basic Materials	Delete	2008	9
AIFUL CORP.	6019419	Japan	Financials	Add	2008	9
AIOI INSURANCE CO.LTD.	6251169	Japan	Financials	Add	2004	3
AIR FRANCE-KLM	4916039	Europe	Consumer Services	Add	2005	3
AISIN SEIKI CO.LTD.	6010702	Japan	Consumer Goods	Delete	2007	9
AJINOMOTO CO.INCO.	6010906	Japan	Consumer Goods	Add	2004	3
AKZO NOBEL NV	5458314	Europe	Basic Materials	Add	2006	3
ALCATEL-LUCENT	5975006	Europe	Technology	Delete	2007	3
ALFA LAVAL AB	7332687	Europe	Industrials	Add	2008	3
ALLERGAN INCO.	2017213	North America	Health Care	Add	2003	9
ALLIED IRISH BANKS PLC.	4020684	Europe	Financials	Delete	2003	9
ALTEC SA INFO.& COMM.SY.	5078682	Europe	Technology	Delete	2003	9
ALTERA CORP.	2021690	North America	Technology	Delete	2004	9
ALUMINA LTD.	6954985	Australia	Basic Materials	Add	2003	3
ALUMINA LTD.	6954985	Australia	Basic Materials	Delete	2003	9
AMBAC FINANCIAL GP.INCO.	2023737	North America	Financials	Delete	2006	3
AMCOR LTD.	6066608	Australia	Industrials	Add	2006	3
AMERICAN EXPRESS CO.	2026082	North America	Financials	Add	2004	3
AMERICAN INTL.GP.INCO.	2027342	North America	Financials	Delete	2004	3
AMERIPRISE FINL.INCO.	B0J7D57	North America	Financials	Delete	2007	3
ANHEUSER-BUSCH INBEV SA	2033004	Europe	Consumer Goods	Delete	2004	3
APPLE INCO.	2046251	North America	Technology	Add	2004	9
ARCELORMITTAL	7281875	Europe	Basic Materials	Add	2004	3
ARM HOLDINGS PLC.	59585	Europe	Technology	Delete	2003	9
ARROW ELECTRONICS INCO.	2051404	North America	Industrials	Delete	2002	9
ASAHI BREWERIES LTD.	6054409	Japan	Consumer Goods	Add	2002	9
ASAHI GLASS COMPANY LTD.	6055208	Japan	Industrials	Add	2002	9
ASAHI GLASS COMPANY LTD.	6055208	Japan	Industrials	Delete	2008	3
ASAHI KASEI CORP.	6054603	Japan	Basic Materials	Add	2004	3
ASKUL CORP.	6294498	Japan	Industrials	Add	2005	3

ASKUL CORP.	6294498	Japan	Industrials	Delete	2007	9
ASSA ABLOY AB	5698789	Europe	Industrials	Add	2004	3
ATLAS COPCO A	4050971	Europe	Industrials	Add	2004	3
ATLAS COPCO B	4050982	Europe	Industrials	Add	2004	3
AUCKLAND INTL.ARPT.LTD.	6123707	Australia	Industrials	Add	2008	3
AUTODESK INCO.	2065159	North America	Technology	Add	2008	9
AUTO.DATA PROC.INCO.	2065308	North America	Industrials	Delete	2007	3
AVNET INCO.	2066505	North America	Industrials	Delete	2003	6
AVON PRODUCTS INCO.	2066721	North America	Consumer Goods	Delete	2004	3
AWB LIMITED	6388960	Australia	Consumer Goods	Add	2005	3
AWB LIMITED	6388960	Australia	Consumer Goods	Delete	2008	9
BALLARD POWER SYS.INCO.	2072717	North America	Consumer Goods	Add	2003	3
BALLARD POWER SYS.INCO.	2072717	North America	Consumer Goods	Delete	2003	9
BANCA MONTE DEI PASCHI	7128541	Europe	Financials	Add	2003	3
BBV.ARGENTARIA SA	5501906	Europe	Financials	Add	2003	9
BANCO BPI SA	5721759	Europe	Financials	Delete	2004	3
BANCO DE SABADELL SA	B1X8QN2	Europe	Financials	Add	2008	3
BANCO ESPIRITO SANTO SA	4058061	Europe	Financials	Add	2007	9
BANCO SANTANDER SA	5705946	Europe	Financials	Add	2003	3
BANK OF AMERICA CORP.	2295677	North America	Financials	Add	2003	9
THE BANK OF KYOTO LTD.	6075756	Japan	Financials	Add	2008	3
BARRATT DEVS.PLC.	81180	Europe	Consumer Goods	Add	2008	3
BARRATT DEVS.PLC.	81180	Europe	Consumer Goods	Delete	2008	9
BB&T CORP.	2830904	North America	Financials	Delete	2005	9
BBA AVIATION PLC.	B1FP891	Europe	Industrials	Delete	2008	9
BCE INCO.	2453260	North America	Telecommunications	Delete	2002	12
BCE INCO.	2453260	North America	Telecommunications	Add	2004	9
BEIERSDORF AG	5107401	Europe	Consumer Goods	Add	2004	9
BEKAERT SA	5827431	Europe	Industrials	Delete	2003	9
BENETTON	7128563	Europe	Consumer Goods	Delete	2004	9
BHP BILLITON LIMITED	6144690	Australia	Basic Materials	Add	2002	9
BHP BILLITON PLC.	56650	Europe	Basic Materials	Add	2002	9
BIC	5298781	Europe	Consumer Goods	Add	2005	9
THE BLACK & DECKER CORP.	2101503	North America	Consumer Goods	Add	2002	9
BLUESCOPE STEEL LTD.	6533232	Australia	Basic Materials	Delete	2005	3
BORAL LTD.	6218670	Australia	Industrials	Add	2005	3
BOSTON PROPERTIES INCO.	2019479	North America	Financials	Add	2005	3
BRAMBLES LIMITED	6120009	Australia	Industrials	Add	2004	3
BRIDGESTONE CORPORATION	6132101	Japan	Consumer Goods	Add	2006	3
BRISA-AUTSDS.DE PORTUGAL	5803925	Europe	Industrials	Add	2005	9
BURBERRY GROUP PLC.	3174300	Europe	Consumer Goods	Add	2005	3
CABLEVISION SYS.CORP.	2162243	North America	Consumer Services	Delete	2007	3
CADENCE DESIGN SYS.INCO.	2302232	North America	Technology	Delete	2005	3
CAIRN ENERGY PLC.	3239931	Europe	Oil & Gas	Add	2005	3
CAIRN ENERGY PLC.	3239931	Europe	Oil & Gas	Delete	2008	3
CANADIAN PACIFIC RY.LTD.	2793115	North America	Industrials	Add	2004	3
CANADIAN TIRE CORP.LTD.	2172286	North America	Consumer Services	Delete	2004	9
CANON INCO.	6172323	Japan	Technology	Add	2002	9
CAPITAL ONE FINL.CORP.	2654461	North America	Financials	Delete	2007	9
CAPITAL ONE FINL.CORP.	2654461	North America	Financials	Add	2008	9
CAPITAMALL TRUST	6420129	Asia	Financials	Add	2007	9
CARLSBERG A/S	4169208	Europe	Consumer Goods	Delete	2002	9
CARLSBERG B	4169219	Europe	Consumer Goods	Delete	2004	3

CARNIVAL CORP.	2523044	North America	Consumer Services	Add	2006	3
CARREFOUR SA	5641567	Europe	Consumer Services	Add	2004	9
CASINO GUICHARD-P	4178419	Europe	Consumer Services	Add	2005	9
CELESIO AG	5105182	Europe	Consumer Services	Delete	2008	3
CELESTICA INCO.	2263362	North America	Industrials	Delete	2007	12
CENTRAL JAPAN RAILWAY CO	6183552	Japan	Consumer Services	Delete	2003	9
CENTURYTEL INCO.	2185046	North America	Telecommunications	Add	2005	9
CHT.SEMICON.MNFG.LTD.	6180917	Asia	Technology	Add	2004	9
CHIBA BANK LIMITED (THE)	6190563	Japan	Financials	Delete	2003	9
CHIYODA CORPORATION	6191704	Japan	Industrials	Add	2005	3
CHRISTIAN DIOR	4061393	Europe	Consumer Goods	Add	2003	9
THE CHUBB CORP.	2195722	North America	Financials	Delete	2007	9
CIBA HOLDING AG	5196744	Europe	Basic Materials	Add	2002	9
CIBA HOLDING AG	5196744	Europe	Basic Materials	Delete	2008	9
CIRCLE K SUNKUS CO.LTD.	B02FK91	Japan	Consumer Services	Add	2004	9
COCA-COLA WEST CO.LTD.	6163286	Japan	Consumer Goods	Add	2005	3
COMCAST CORP.	2044545	North America	Consumer Services	Add	2003	3
COMCAST CORP.	2044545	North America	Consumer Services	Delete	2007	9
COMMERZBANK AG	4325538	Europe	Financials	Delete	2004	3
COMMONWEALTH PR.OFFE.FD.	6150664	Australia	Financials	Add	2005	9
CONEXANT SYSTEMS INCO.	2309932	North America	Technology	Delete	2002	12
CONOCOPHILLIPS	2685717	North America	Oil & Gas	Add	2003	3
CONOCOPHILLIPS	2685717	North America	Oil & Gas	Delete	2003	9
CONTACT ENERGY LTD.	6152529	Australia	Utilities	Add	2004	3
CONTINENTAL AG	4598589	Europe	Consumer Goods	Add	2003	3
CORIO NV	4929286	Europe	Financials	Add	2008	3
MAPFRE SA	7160628	Europe	Financials	Add	2006	3
CPRT.EXPRESS AUS.LIMITED	6558699	Australia	Industrials	Add	2007	3
COSMO OIL COMPANY LTD.	6226338	Japan	Oil & Gas	Add	2003	3
COSTCO WHOLESALE CORP.	2701271	North America	Consumer Services	Delete	2005	3
COUNTRYWIDE INS.CO.	2229676	North America	Financials	Delete	2007	3
COVIDIEN PLC.	B1YR434	North America	Health Care	Add	2008	3
CREDIT AGRICOLE SA	7262610	Europe	Financials	Add	2005	9
CRH PLC.	4182249	Europe	Industrials	Add	2006	3
CSK HDG.CORP.	6215552	Japan	Technology	Add	2004	9
CSX CORP.	2160753	North America	Industrials	Add	2002	9
CVS CAREMARK CORP.	2577609	North America	Consumer Services	Delete	2005	3
CYPRESS SEMICON.CORP.	2244549	North America	Technology	Delete	2002	12
DAIDO STEEL CO.LTD.	6250627	Japan	Basic Materials	Add	2004	9
DAIHATSU MOTOR CO.LTD.	6250304	Japan	Consumer Goods	Add	2004	9
DAIICHI SANKYO CO.LTD.	B0J7D91	Japan	Health Care	Delete	2007	9
DAIMARU ENAWIN CO.LTD.	6250768	Japan	Utilities	Add	2004	9
DAINIPPON SUMIT.PHA.CTD.	6250865	Japan	Health Care	Add	2003	9
DAINIPPON SCRN.MNFG.CTD.	6251028	Japan	Technology	Add	2004	9
DAIWA HOUSE IND.CO.LTD.	6251363	Japan	Consumer Goods	Add	2005	3
DANISCO A/S	4155586	Europe	Consumer Goods	Add	2002	9
DANSKE BANK A/S	4588825	Europe	Financials	Delete	2004	3
DARDEN RESTAURANTS INCO.	2289874	North America	Consumer Services	Delete	2006	3
DASSAULT SYSTEMES SA	5330047	Europe	Technology	Add	2005	3
DCC PLC.	4189477	Europe	Industrials	Add	2003	3
DELL INCO.	2261526	North America	Technology	Add	2007	9
DELPHI CORPORATION	2385998	North America	Consumer Goods	Delete	2004	3
DENSO CORP.	6640381	Japan	Consumer Goods	Delete	2004	3

DEUTSCHE POST AG	4617859	Europe	Industrials	Add	2003	9
DEUTSCHE POSTBANK AG	B018CX9	Europe	Financials	Add	2005	3
DIAMOND OFFS.DRL.INC	2261021	North America	Oil & Gas	Delete	2003	9
DISCO CORPORATION	6270948	Japan	Industrials	Add	2004	9
DOWA HDG.CO.LTD.	6278306	Japan	Basic Materials	Add	2005	3
DOWA HDG.CO.LTD.	6278306	Japan	Basic Materials	Delete	2007	9
DRAX GROUP PLC.	B1FGRL9	Europe	Utilities	Add	2007	3
DSG INTERNATIONAL PLC.	47245	Europe	Consumer Services	Delete	2008	9
KONINKLIJKE DSM	5773987	Europe	Basic Materials	Add	2004	9
EASTMAN CHEMICAL CO.	2298386	North America	Basic Materials	Add	2004	9
EASTMAN CHEMICAL CO.	2298386	North America	Basic Materials	Delete	2008	3
EBARA CORP.	6302700	Japan	Industrials	Add	2002	9
EDB BUSINESS PARTNER ASA	5266045	Europe	Technology	Delete	2003	9
ELAN CORPORATION PLC.	4305507	Europe	Health Care	Delete	2003	3
ELECTROCOMP.PLC.	309644	Europe	Industrials	Delete	2008	9
ELISA OYJ	5701513	Europe	Telecommunications	Delete	2003	9
ELPIDA MEMORY INCO.	B035F62	Japan	Technology	Add	2008	9
EMC CORP.	2295172	North America	Technology	Add	2005	3
EMPORIKI BK.OF GREECE SA	4212823	Europe	Financials	Delete	2005	9
EMPORIKI BK.OF GREECE SA	4212823	Europe	Financials	Add	2007	3
ENEL SPA	7144569	Europe	Utilities	Add	2003	3
ENI	7145056	Europe	Oil & Gas	Add	2003	3
ENI	7145056	Europe	Oil & Gas	Delete	2004	3
ENI	7145056	Europe	Oil & Gas	Add	2007	9
ENIRO AB	4466802	Europe	Consumer Services	Add	2004	3
ENIRO AB	4466802	Europe	Consumer Services	Delete	2004	9
ENTERPRISE INNS PLC.	B1L8B62	Europe	Consumer Services	Add	2008	3
EQUITY RESD.	2319157	North America	Financials	Add	2005	3
ERSTE GROUP BANK AG	5289837	Europe	Financials	Delete	2003	9
ESSILOR INTERNATIONAL	7212477	Europe	Health Care	Add	2003	9
EULER HERMES	5950661	Europe	Financials	Add	2007	3
EZAKI GLICO CO.LTD.	6327703	Japan	Consumer Goods	Add	2003	3
FAIRFAX FINL.HDG.LTD.	2566351	North America	Financials	Delete	2003	9
FAMILYMART CO.LIMITED	6331276	Japan	Consumer Services	Add	2003	9
FANUC LIMITED	6356934	Japan	Industrials	Add	2004	3
FIBERWEB PLC.	B1FMH06	Europe	Industrials	Delete	2007	9
FIFTH THIRD BANCORP	2336747	North America	Financials	Delete	2005	9
FINNING INTL.INCO.	2339177	North America	Industrials	Delete	2004	3
FIRST HORIZON NAT.CORP.	2341484	North America	Financials	Delete	2005	9
FIRST SOLAR INCO.	B1HMF22	North America	Oil & Gas	Add	2008	9
FONDIARIA-SAI RNC	5975987	Europe	Financials	Add	2004	3
FORD MTR.CO.	2615468	North America	Consumer Goods	Add	2002	9
FORESTAR GROUP INCO.	B29YGD1	North America	Financials	Delete	2008	12
FOSTERS GROUP LIMITED	6349268	Australia	Consumer Goods	Delete	2004	3
FOSTERS GROUP LIMITED	6349268	Australia	Consumer Goods	Add	2005	3
FRAPORT AG	7107551	Europe	Industrials	Add	2006	3
FRED OLSEN ENERGY ASA	5344101	Europe	Oil & Gas	Delete	2003	3
FREDDIE MAC	2334150	North America	Financials	Delete	2007	3
FRIENDS PRVT.GROUP PLC.	3055977	Europe	Financials	Add	2005	3
FUJITSU LIMITED	6356945	Japan	Technology	Add	2002	9
FUJITSU LIMITED	6356945	Japan	Technology	Delete	2008	9
FURUKAWA ELEC.CTD.(THE)	6357562	Japan	Industrials	Add	2004	3
FURUKAWA ELEC.CTD.(THE)	6357562	Japan	Industrials	Delete	2005	9

FUTABA CORPORATION	6357733	Japan	Industrials	Add	2004	9
FUTABA CORPORATION	6357733	Japan	Industrials	Delete	2007	9
GAMESA CORPN.TEGC.SA	B01CP21	Europe	Oil & Gas	Add	2005	3
GANNETT CO.INCO.	2360304	North America	Consumer Services	Delete	2007	3
GEBERIT AG	5696192	Europe	Industrials	Add	2007	3
GECINA	7742468	Europe	Financials	Add	2005	9
GENERAL GW.PROPS.INCO.	2363422	North America	Financials	Add	2005	3
GENERALI SPA	4056719	Europe	Financials	Delete	2005	3
GENERALI DTL.HLDG.AG	5335075	Europe	Financials	Delete	2004	3
TELECINCO SA	B01G2K0	Europe	Consumer Services	Add	2008	3
THE GOLDMAN SACHS GPIN.	2407966	North America	Financials	Delete	2004	3
THE GOLDMAN SACHS GPIN.	2407966	North America	Financials	Add	2006	3
GOODRICH CORP.	2377809	North America	Industrials	Delete	2004	3
GOOGLE INCO.	B020QX2	North America	Technology	Add	2008	3
GREAT WEST LIFE CO.INCO.	2384951	North America	Financials	Delete	2004	9
GRUPO FERROVIAL SA	5678822	Europe	Industrials	Add	2005	9
GUARANTY FINL.GP.INCO.	B29XX15	North America	Financials	Delete	2008	12
GUNMA BANK LIMITED (THE)	6398088	Japan	Financials	Delete	2003	9
GUNZE LIMITED	6398709	Japan	Consumer Goods	Add	2004	3
H LUNDBECK A/S	7085259	Europe	Health Care	Add	2005	9
HAFSLUND ASA	5067561	Europe	Utilities	Delete	2003	3
HAMAMATSU PHOTONICS KK	6405870	Japan	Industrials	Add	2005	3
HARRIS CORP.	2412001	North America	Technology	Add	2003	9
HAYS PLC.	416102	Europe	Industrials	Add	2005	9
HEIDELB.DRUCKMASCHINEN	5367227	Europe	Industrials	Add	2005	3
HEIDELB.DRUCKMASCHINEN	5367227	Europe	Industrials	Delete	2008	9
HEIDELBERGCEMENT AG	5120679	Europe	Industrials	Add	2005	9
HEIDELBERGCEMENT AG	5120679	Europe	Industrials	Delete	2008	3
HEINEKEN HLDG.	7792537	Europe	Consumer Goods	Add	2005	3
HELLENIC EXS.HDG.SA	4108278	Europe	Financials	Delete	2003	9
HELLENIC TELECOM.ORG.SA	5051605	Europe	Telecommunications	Add	2008	9
HENKEL AG & CO.KGAA	5002465	Europe	Consumer Goods	Add	2002	9
HERMES INTERNATIONAL	5253973	Europe	Consumer Goods	Add	2006	3
HEWLETT-PACKARD CO.	2424006	North America	Technology	Add	2003	9
HIGO BANK LIMITED	6426042	Japan	Financials	Add	2008	3
HITACHI CAPITAL CORP.	6429159	Japan	Financials	Add	2004	3
HITACHI CHEMICAL CO.LTD.	6429126	Japan	Basic Materials	Add	2004	3
HIT.HIGH - TECHS.CORP.	6642804	Japan	Technology	Add	2004	3
HITACHI KOKI CO.LTD.	6429182	Japan	Industrials	Add	2008	3
HITACHI MAXELL LIMITED	6429386	Japan	Technology	Add	2004	3
HITACHI METALS LIMITED	6429201	Japan	Basic Materials	Add	2003	9
HITACHI METALS LIMITED	6429201	Japan	Basic Materials	Delete	2008	3
HIT.SFTW.ENGR.CO.LTD.	6429502	Japan	Technology	Add	2004	9
HOLCIM LTD.	7110753	Europe	Industrials	Add	2004	9
HOLMEN AB	5036066	Europe	Basic Materials	Add	2005	9
HONDA MOTOR CO.LTD.	6435145	Japan	Consumer Goods	Delete	2007	9
HK.EXS.& CLEAR.LTD.	6267359	Asia	Financials	Add	2005	9
HOSPIRA INCO.	B00PWV9	North America	Health Care	Add	2004	9
HUTCHISON WHAMPOA LTD.	6448068	Asia	Industrials	Delete	2004	3
HYAKUGO BANK LIMITED THE	6659666	Japan	Financials	Add	2005	3
HYSAN DEV.CO.LTD.	6449629	Asia	Financials	Add	2008	9
I2 TECHNOLOGIES INCO.	2896081	North America	Technology	Delete	2002	9
IBIDEN COMPANY LIMITED	6456102	Japan	Industrials	Add	2004	9

INCITEC PIVOT LIMITED	6673042	Australia	Basic Materials	Add	2005	3
INCITEC PIVOT LIMITED	6673042	Australia	Basic Materials	Delete	2006	3
INDITEX SA	7111314	Europe	Consumer Services	Add	2003	3
INDUSTRIVARDEN AB	5463460	Europe	Financials	Add	2002	9
INFORM P LYKOS SA	5113345	Europe	Industrials	Delete	2003	9
INSURANCE AUS.GROUP LTD.	6271026	Australia	Financials	Add	2005	3
INTL.PSNL.FINANCE PLC.	B1YKG04	Europe	Financials	Delete	2008	9
INTERNATIONAL POWER PLC.	632016	Europe	Utilities	Add	2004	3
INTESA SANPAOLO	4076836	Europe	Financials	Add	2007	9
INTRACOM HOLDINGS SA	5482023	Europe	Technology	Delete	2003	9
INTUIT INCO.	2459020	North America	Technology	Delete	2007	3
INVENSYS PLC.	B19DVX6	Europe	Technology	Add	2008	3
ITOCHU TECHNO-SLTN.CORP.	6200194	Japan	Technology	Add	2007	9
J FRONT RETAILING CTD.	B23TC12	Japan	Consumer Services	Delete	2008	9
JANUS CAPITAL GP.INCO.	2605555	North America	Financials	Delete	2006	3
JAPAN AIRLINES CORP.	6544933	Japan	Consumer Services	Add	2005	9
JARDINE LLOYD THMP.PLC.	520337	Europe	Financials	Add	2005	3
JCDECAUX SA	7136663	Europe	Consumer Services	Add	2005	3
JDS UNIPHASE CORP.	B1G2LX6	North America	Technology	Delete	2007	9
JFE HOLDINGS INCO.	6543792	Japan	Basic Materials	Add	2004	3
JOHNSON MATTHEY PLC.	476407	Europe	Basic Materials	Add	2003	9
JOHNSTON PRESS PLC.	476968	Europe	Consumer Services	Add	2005	3
JOHNSTON PRESS PLC.	476968	Europe	Consumer Services	Delete	2008	9
JS GROUP CORPORATION	6900212	Japan	Industrials	Delete	2005	3
SKY PERFECT JSAT HDG.	6269184	Japan	Consumer Services	Add	2005	3
SKY PERFECT JSAT HDG.	6269184	Japan	Consumer Services	Add	2008	3
THE JUROKU BANK LTD.	6479983	Japan	Financials	Add	2004	9
KAJIMA CORPORATION	6481320	Japan	Industrials	Add	2003	9
KANSAI PAINT CO.LTD.	6483746	Japan	Basic Materials	Add	2004	9
KAO CORP.	6483809	Japan	Consumer Goods	Add	2008	3
KAWASAKI KN.KAI.LTD.	6484686	Japan	Industrials	Add	2003	3
KDDI CORP.	6248990	Japan	Telecommunications	Add	2004	3
KESA ELECTRICALS PLC.	3304011	Europe	Consumer Services	Delete	2006	3
KEYCORP	2490911	North America	Financials	Delete	2005	9
KIKKOMAN CORPORATION	6490809	Japan	Consumer Goods	Add	2003	9
KIWI INCOME PR.TRUST	6495172	Australia	Financials	Add	2004	9
KLEPIERRE	7582556	Europe	Financials	Add	2005	3
KOBAYASHI PHARM.CO.LTD.	6149457	Japan	Health Care	Add	2005	3
KOBAYASHI PHARM.CO.LTD.	6149457	Japan	Health Care	Delete	2008	3
KOHL'S CORP.	2496113	North America	Consumer Services	Delete	2005	3
KOITO MNFG.CO.LTD.	6496324	Japan	Consumer Goods	Add	2006	3
KOKUYO COMPANY LIMITED	6496506	Japan	Consumer Goods	Add	2004	3
KONICA MINOLTA HDG.INCO.	6496700	Japan	Consumer Goods	Add	2003	3
KOSE CORPORATION	6194468	Japan	Consumer Goods	Add	2004	9
KUBOTA CORP.	6497509	Japan	Industrials	Add	2002	9
KURITA WATER INDS.LTD.	6497963	Japan	Industrials	Add	2004	3
KYORIN CO.LTD.	6149996	Japan	Health Care	Add	2006	3
KYOWA HAKKO KIRIN CTD.	6499550	Japan	Health Care	Add	2004	3
LAFARGE SA	4502706	Europe	Industrials	Add	2003	3
LAGARDERE GROUPE	4547213	Europe	Consumer Services	Delete	2008	9
LANXESS AG	B05M8B7	Europe	Basic Materials	Delete	2008	3
LAWSON INCO.	6266914	Japan	Consumer Services	Add	2002	9
LEGRAND	B11ZRK9	Europe	Industrials	Add	2007	9

LEHMAN BROS.HDG.INCO.	2510723	North America	Financials	Delete	2004	3
LEVEL 3 COMMS.INCO.	2155919	North America	Telecommunications	Delete	2008	3
LI & FUNG LTD.	6286257	Asia	Consumer Goods	Add	2005	9
Liberty Media A	683434	Europe	Financials	Add	2005	3
LINTEC CORPORATION	6330080	Japan	Basic Materials	Add	2007	3
LION CORPORATION	6518808	Japan	Consumer Goods	Add	2008	3
LIVE NATION INCO.	B0T7YX2	North America	Consumer Services	Delete	2006	12
LIZ CLAIBORNE INCO.	2519861	North America	Consumer Goods	Delete	2006	3
LOGICA PLC.	522708	Europe	Technology	Add	2003	9
LOUISIANA PACIFIC CORP.	2535243	North America	Industrials	Add	2006	3
LOUISIANA PACIFIC CORP.	2535243	North America	Industrials	Delete	2007	12
LVMH	4061412	Europe	Consumer Goods	Delete	2007	3
MACQUARIE OFFICE TRUST	6703994	Australia	Financials	Add	2006	3
MAN GROUP PLC.	294405	Europe	Financials	Add	2005	3
MANPOWER INCO.	2562490	North America	Industrials	Add	2008	3
MANULIFE FINANCIAL CORP.	2492519	North America	Financials	Delete	2004	3
MARUBENI CORP.	6569464	Japan	Industrials	Add	2002	9
MAZDA MOTOR CORP.	6900308	Japan	Consumer Goods	Add	2005	3
MAZDA MOTOR CORP.	6900308	Japan	Consumer Goods	Delete	2008	9
MBIA INCO.	2547044	North America	Financials	Delete	2007	9
MCAFEE INCO.	2553201	North America	Technology	Add	2007	9
MDS INCO.	2559696	North America	Health Care	Delete	2008	12
MEDIASET SPA	5077946	Europe	Consumer Services	Delete	2005	3
MEDIOBANCA	4574813	Europe	Financials	Delete	2003	9
MEMC ELT.MATERIALS INCO.	2580113	North America	Technology	Add	2007	9
MERCK KGAA	4741844	Europe	Health Care	Add	2008	9
METLIFE INCO.	2573209	North America	Financials	Delete	2007	9
METSO OYJ	5713422	Europe	Industrials	Add	2002	9
MIRVAC GROUP	6161978	Australia	Financials	Add	2006	3
MISYS PLC.	385785	Europe	Technology	Delete	2008	9
MITSUB.GAS CHM.CO.INCO.	6596923	Japan	Basic Materials	Add	2004	3
MITSUBISHI RAYON CO.LTD.	6597164	Japan	Basic Materials	Add	2004	9
MITSUB.UFJ FINL.GP.INCO.	6335171	Japan	Financials	Add	2006	3
MITSUB.UFJ LSE.& FIN.CO.	6268976	Japan	Financials	Add	2008	9
MITSUI & CO.LTD.	6597302	Japan	Industrials	Add	2004	9
MITSUI FUDOSAN CO.LTD.	6597603	Japan	Financials	Add	2007	3
MITSUI OSK LINES LTD.	6597584	Japan	Industrials	Add	2003	9
MIT.SUMIT.IN.GHG.INCO.	6870122	Japan	Financials	Add	2002	9
MLP AG	5720273	Europe	Financials	Delete	2003	9
MONDI PLC.	B1CRLC4	Europe	Basic Materials	Add	2008	3
MONEYGRAM INTL.INCO.	B01K428	North America	Financials	Add	2004	9
MONEYGRAM INTL.INCO.	B01K428	North America	Financials	Delete	2007	12
MOTOROLA INCO.	2606600	North America	Technology	Add	2006	3
MTR CORPORATION LTD.	6290054	Asia	Consumer Services	Add	2002	9
THE NANTO BANK LIMITED	6621524	Japan	Financials	Add	2008	3
NATIONAL GRID PLC.	3122387	Europe	Utilities	Add	2002	9
NATIONAL BANK OF CANADA	2077303	North America	Financials	Delete	2004	3
NCR CORP.	2632650	North America	Technology	Add	2004	3
NEC CORPORATION	6640400	Japan	Technology	Add	2002	9
NEC FIELDING LIMITED	6542755	Japan	Technology	Add	2004	9
NEW YORK TIMES CO.	2632003	North America	Consumer Services	Delete	2006	3
NEWS CORP. A	B03DQ41	North America	Consumer Services	Delete	2005	3
NEWS CORP. B	B03DLY6	North America	Consumer Services	Delete	2005	3

NGK INSULATORS LIMITED	6619507	Japan	Industrials	Add	2004	9
NGK INSULATORS LIMITED	6619507	Japan	Industrials	Delete	2007	9
NGK SPARK PLUG CO.LTD.	6619604	Japan	Consumer Goods	Add	2003	9
NHK SPRING COMPANY LTD.	6619648	Japan	Consumer Goods	Add	2005	3
NICHICON CORPORATION	6638546	Japan	Industrials	Add	2004	9
NICHICON CORPORATION	6638546	Japan	Industrials	Delete	2008	9
NICHIREI CORPORATION	6640864	Japan	Consumer Goods	Add	2003	9
NIKON CORPORATION	6642321	Japan	Consumer Goods	Add	2004	3
TAIYO NIPPON SANSO CORP.	6640541	Japan	Basic Materials	Add	2004	3
NPN.SHOKUBAI CO.LTD.	6470588	Japan	Basic Materials	Add	2003	9
NPN.SHOKUBAI CO.LTD.	6470588	Japan	Basic Materials	Delete	2008	9
NIPPON TV.NETWORK CORP	6644060	Japan	Consumer Services	Add	2004	9
NIPPON YUSEN KBKH.	6643960	Japan	Industrials	Add	2003	3
NIPPONKOA IN.CO.LTD.	6643380	Japan	Financials	Add	2003	9
NISHIMATSU CON.CO.LTD.	6640983	Japan	Industrials	Add	2003	3
NISHIMATSU CON.CO.LTD.	6640983	Japan	Industrials	Delete	2007	9
NISSHIN SEIFUN GP.INCO.	6640961	Japan	Consumer Goods	Add	2002	9
NISSHINBO HOLDINGS INCO.	6642923	Japan	Consumer Goods	Add	2004	9
NORANDA INC.FD.	2641322	North America	Basic Materials	Add	2003	3
NORANDA INC.FD.	2641322	North America	Basic Materials	Delete	2003	9
NORDSTROM INCO.	2641827	North America	Consumer Services	Delete	2006	3
NORITSU KOKI CO.LTD.	6648783	Japan	Consumer Goods	Add	2004	9
NORS.SKOGINDUSTRIER ASA	7070396	Europe	Basic Materials	Add	2002	9
NORS.SKOGINDUSTRIER ASA	7070396	Europe	Basic Materials	Delete	2008	9
NORTEL NETWORKS CORP.	2583877	North America	Technology	Delete	2004	3
NORTHERN TRUST CORP.	2648668	North America	Financials	Delete	2006	3
NORTHERN TRUST CORP.	2648668	North America	Financials	Add	2007	3
NOVELL INCO.	2650793	North America	Technology	Delete	2002	9
NSK LTD.	6641544	Japan	Consumer Goods	Add	2002	9
NTN CORP.	6651189	Japan	Industrials	Add	2002	9
NTT DATA CORP.	6125639	Japan	Technology	Add	2004	3
NTT URBAN DEV.CORP.	B031SG1	Japan	Financials	Add	2008	9
NYSE EURONEXT	B1VJYW2	North America	Financials	Add	2007	9
OBAYASHI CORPORATION	6656407	Japan	Industrials	Add	2004	9
OFFICE DEPOT INCO.	2655981	North America	Consumer Services	Delete	2008	12
OJI PAPER CO.	6657701	Japan	Basic Materials	Add	2003	9
OKI ELEC.IND.CO.LTD.	6657682	Japan	Technology	Add	2003	9
OMRON CORP.	6659428	Japan	Industrials	Delete	2004	3
ORACLE CORP.	2661568	North America	Technology	Add	2003	9
ORICA LIMITED	6458001	Australia	Basic Materials	Add	2004	3
ORIGIN ENERGY LTD.	6214861	Australia	Utilities	Add	2003	9
OTSUKA CORP.	6267058	Japan	Technology	Add	2005	3
PANAHOME CORP.	6625720	Japan	Consumer Goods	Add	2004	9
PAPERLINX LTD.	6222206	Australia	Basic Materials	Add	2005	3
PARAMETRIC TECH.CORP.	2670058	North America	Technology	Delete	2002	9
PARTYGAMING PLC.	B0B3SV4	Europe	Consumer Services	Add	2008	9
PAYCHEX INCO.	2674458	North America	Industrials	Delete	2007	9
PCCW LTD.	6574071	Asia	Telecommunications	Add	2003	3
PENNEY JC CO.INCO.	2680303	North America	Consumer Services	Delete	2007	9
PETRO-CANADA	2684316	North America	Oil & Gas	Add	2002	9
PETRO-CANADA	2684316	North America	Oil & Gas	Delete	2004	9
PEUGEOT SA	7103526	Europe	Consumer Goods	Add	2006	3
PIRELLI & CO.SPA	4689900	Europe	Consumer Goods	Add	2002	9

PMC-SIERRA INCO.	2807492	North America	Technology	Delete	2002	12
PMI GROUP INCO.(THE)	2704032	North America	Financials	Delete	2008	12
PORSCHE AML.HLDG.SE	7101069	Europe	Consumer Goods	Add	2005	3
PORT OF TAURANGA LTD.	6695767	Australia	Industrials	Add	2008	3
PORTUGAL TELECOM SGPS SA	5817186	Europe	Telecommunications	Add	2004	3
POTASH CORP.OF SASKAT.	2696980	North America	Basic Materials	Add	2005	3
PROLOGIS	2790611	North America	Financials	Add	2005	3
PROMISE COMPANY LIMITED	6703295	Japan	Financials	Add	2008	9
PUBLIC STORAGE INCO.	2852533	North America	Financials	Add	2005	3
PUMA RUDOLF DASSLER SOT.	5064722	Europe	Consumer Goods	Add	2005	3
QBE INSURANCE GROUP LTD.	6715740	Australia	Financials	Add	2003	3
QLT INCO.	2715090	North America	Health Care	Delete	2003	9
QP CORPORATION	6714509	Japan	Consumer Goods	Add	2004	9
QUEST DIAGNOSTICS INCO.	2702791	North America	Health Care	Add	2005	3
RADIOSHACK CORP.	2871505	North America	Consumer Services	Delete	2006	3
RANDSTAD HOLDING NV	5228658	Europe	Industrials	Add	2007	9
RANK GROUP PLC.	724076	Europe	Consumer Services	Delete	2004	3
RECKITT BENCKISER GP.PLC	727871	Europe	Consumer Goods	Add	2002	9
RED EL.DE ESPANA SA	5723777	Europe	Utilities	Add	2008	3
REPSOL YPF SA	5669354	Europe	Oil & Gas	Add	2003	3
RESOLUTION LTD.	434256	Europe	Financials	Add	2008	3
RICOH CO.LTD.	6738220	Japan	Technology	Add	2004	3
RINNAI CORPORATION	6740582	Japan	Consumer Goods	Add	2004	9
RIO TINTO PLC.	718875	Europe	Basic Materials	Add	2007	9
RIO TINTO LIMITED	6220103	Australia	Basic Materials	Add	2007	9
ROBERT HALF INTL.INCO.	2110703	North America	Industrials	Add	2008	9
ROCHE HOLDING AG	7108918	Europe	Health Care	Add	2002	9
ROCHE HOLDING AG	7108918	Europe	Health Care	Delete	2008	9
ROHM COMPANY LIMITED	6747204	Japan	Technology	Add	2004	3
RTL GROUP	4061490	Europe	Consumer Services	Add	2005	9
SANDVIK AB	5963108	Europe	Industrials	Add	2004	3
SANFORD LTD.	6774183	Australia	Consumer Goods	Add	2003	9
SANFORD LTD.	6774183	Australia	Consumer Goods	Delete	2006	3
SANKEN ELECTRIC CO.LTD.	6774785	Japan	Technology	Add	2007	9
SANKEN ELECTRIC CO.LTD.	6774785	Japan	Technology	Delete	2008	9
SANKYO CO.LTD.	6775283	Japan	Consumer Services	Add	2003	9
SANMINA-SCI CORP.	2780366	North America	Industrials	Delete	2002	9
SANOFI-AVENTIS	5671735	Europe	Health Care	Add	2003	9
SANYO CHEMICAL INDS.LTD.	6776800	Japan	Basic Materials	Add	2003	9
SAPPORO HOKUYO HDG.	6335472	Japan	Financials	Add	2008	3
SAPPORO HOLDINGS LTD.	6776907	Japan	Consumer Goods	Add	2004	9
GR SARANTIS SA	7124958	Europe	Consumer Goods	Delete	2003	9
SCANIA AB	5038932	Europe	Industrials	Add	2003	9
SCANIA AB	5038932	Europe	Industrials	Delete	2008	9
SCHERING-PLOUGH CORP.	2778844	North America	Health Care	Add	2008	3
CHARLES SCHWAB CORP.	2779397	North America	Financials	Delete	2005	9
SCRIPPS E W CO.(THE)	2862532	North America	Consumer Services	Delete	2005	3
SEARS CANADA INCO.	2787259	North America	Consumer Services	Delete	2003	9
SEAT PAGINE GIALLE	5843642	Europe	Consumer Services	Add	2003	3
SECOM CO.LTD.	6791591	Japan	Industrials	Add	2003	9
SEIKO EPSON CORP.	6616508	Japan	Technology	Add	2004	3
SEKISUI CHM.CO.LTD.	6793821	Japan	Consumer Goods	Add	2003	9
SEKISUI HSE.LTD.	6793906	Japan	Consumer Goods	Add	2004	9

SHARP CORP.	6800602	Japan	Consumer Goods	Add	2002	9
SHAW COMMS.INCO.	2801836	North America	Consumer Services	Delete	2005	3
THE SHIGA BANK LIMITED	6804240	Japan	Financials	Add	2004	9
SHIMADZU CORP.	6804369	Japan	Industrials	Add	2005	9
SHIN-ETSU CHM.CO.LTD.	6804585	Japan	Basic Materials	Add	2003	3
SHINKO ELEC.INDS.CO.LTD.	6804927	Japan	Technology	Add	2005	3
SHIONOGI & COMPANY LTD.	6804682	Japan	Health Care	Add	2003	9
SHISEIDO CO.LTD.	6805265	Japan	Consumer Goods	Add	2007	3
THE SHIZUOKA BANK LTD.	6805328	Japan	Financials	Add	2004	9
SHOWA DENKO KK	6805469	Japan	Basic Materials	Add	2004	9
SHOWA SHELL SEKIYU KK	6805544	Japan	Oil & Gas	Add	2004	9
SIMON PR.GP.INCO.	2812452	North America	Financials	Add	2004	9
SINGAPORE AIRLINES LTD.	6811734	Asia	Consumer Services	Add	2003	3
SKANSKA AB	7142091	Europe	Industrials	Add	2003	3
SLM CORP.	2101967	North America	Financials	Delete	2007	9
SMITHFIELD FOODS INCO.	2816238	North America	Consumer Goods	Add	2006	3
SMITHS GROUP PLC.	B1WY233	Europe	Industrials	Add	2008	3
SNAM RETE GAS	7251470	Europe	Utilities	Add	2002	9
SNS REAAL	B14SR61	Europe	Financials	Add	2007	3
SOFTBANK CORPORATION	6770620	Japan	Telecommunications	Add	2007	9
SOHGO SECS.CO.LTD.	6546359	Japan	Industrials	Add	2007	9
SOLVAY SA	4821100	Europe	Basic Materials	Add	2004	3
SONIC HEALTHCARE LIMITED	6821120	Australia	Health Care	Add	2008	3
SPECTRA ENERGY CORP.	B1L60G9	North America	Utilities	Add	2007	3
SPIRENT COMMS.PLC.	472609	Europe	Technology	Delete	2003	6
SPX CORP.	2787185	North America	Industrials	Delete	2007	9
SSAB AB	4847195	Europe	Basic Materials	Add	2002	9
SSAB AB	4847195	Europe	Basic Materials	Delete	2007	9
ST.GOBAIN	7380482	Europe	Industrials	Add	2006	3
THE ST.JOE CO.	2768663	North America	Financials	Delete	2005	9
STANDARD LIFE PLC.	B16KPT4	Europe	Financials	Add	2008	3
STANLEY ELEC.CO.LTD.	6841106	Japan	Consumer Goods	Add	2004	9
STARBUCKS CORP.	2842255	North America	Consumer Services	Add	2004	3
STARWOOD H&R.WWD.INCO.	2371436	North America	Consumer Services	Delete	2006	3
STATOILHYDRO ASA	7133608	Europe	Oil & Gas	Add	2003	3
STOCKLAND	6850856	Australia	Financials	Add	2008	3
STRAUMANN HLDG.AG	7156832	Europe	Health Care	Add	2005	9
THE STUDENT LN.CORP.	2855725	North America	Financials	Add	2006	3
SUMCO CORP.	B0M0C89	Japan	Technology	Add	2008	3
SUMCO CORP.	B0M0C89	Japan	Technology	Add	2008	9
SUMISHO CMP.SYS.CORP.	6858474	Japan	Technology	Add	2008	3
SUMIT.BAKELITE CO.LTD.	6858504	Japan	Basic Materials	Add	2006	3
SUMITOMO CHM.CO.LTD.	6858560	Japan	Basic Materials	Add	2004	3
SUMITOMO FOREST CO.LTD.	6858861	Japan	Consumer Goods	Add	2004	9
SUMITOMO METAL INDS.LTD.	6858827	Japan	Basic Materials	Add	2004	3
SUMITOMO METAL INDS.LTD.	6858827	Japan	Basic Materials	Delete	2007	3
SUMITOMO MITSUI FINL.GP.	6563024	Japan	Financials	Add	2003	9
SUMITOMO RUB.INDS.LTD.	6858991	Japan	Consumer Goods	Add	2005	3
SUNCORP-METWAY LTD.	6585084	Australia	Financials	Delete	2003	9
SUNTRUST BANKS INCO.	2860990	North America	Financials	Delete	2003	3
SURUGA BANK LTD.	6864329	Japan	Financials	Add	2007	9
SUZUKEN COMPANY LIMITED	6865560	Japan	Health Care	Add	2004	9
THE SWATCH GROUP AG	7184725	Europe	Consumer Goods	Delete	2002	9

THE SWATCH GROUP AG	7184725	Europe	Consumer Goods	Add	2005	9
THE SWATCH GROUP AG	7184725	Europe	Consumer Goods	Delete	2008	3
SYMANTEC CORP.	2861078	North America	Technology	Add	2007	3
SYNGENTA AG	4356646	Europe	Basic Materials	Add	2005	9
SYNOVUS FINL.CORP.	2158974	North America	Financials	Delete	2005	9
SYSCO CORP.	2868165	North America	Consumer Services	Add	2003	9
SYSMEX CORP.	6883807	Japan	Health Care	Add	2008	9
TAISEI CORPORATION	6870100	Japan	Industrials	Add	2004	3
TAISHO PHARM.CO.LTD.	6870144	Japan	Health Care	Add	2003	9
TAISHO PHARM.CO.LTD.	6870144	Japan	Health Care	Delete	2008	9
TAIYO YUDEN COMPANY LTD.	6870564	Japan	Industrials	Add	2004	9
TAKEDA PHARM.CO.	6870445	Japan	Health Care	Add	2005	9
TARGET CORP.	2259101	North America	Consumer Services	Delete	2007	9
TATE & LYLE PLC.	875413	Europe	Consumer Goods	Add	2002	9
TATE & LYLE PLC.	875413	Europe	Consumer Goods	Delete	2007	3
TEIJIN LIMITED	6880507	Japan	Basic Materials	Add	2004	3
TELE2 AB	5065060	Europe	Telecommunications	Add	2004	9
TELE2 AB	5065060	Europe	Telecommunications	Delete	2008	9
TELECOM CORP.OF NZ.LTD.	6881436	Australia	Telecommunications	Add	2004	3
TELECOM ITALIA	5297506	Europe	Telecommunications	Add	2002	9
TELECOM ITALIA MEDIA	5843642	Europe	Consumer Services	Delete	2004	9
TELEFONICA SA	5732524	Europe	Telecommunications	Add	2002	9
TEL.& DATA SYS.INCO.	2881430	North America	Telecommunications	Add	2008	9
TEL.& DATA SYS.INCO.	2881430	North America	Telecommunications	Delete	2008	12
TELIASONERA AB	5978384	Europe	Telecommunications	Add	2003	3
TELIASONERA AB	5978384	Europe	Telecommunications	Delete	2008	9
TELLABS INCO.	2881537	North America	Technology	Delete	2007	9
TELLABS INCO.	2881537	North America	Technology	Add	2008	9
TELLABS INCO.	2881537	North America	Technology	Delete	2008	12
TELUS CORP.	2381134	North America	Telecommunications	Add	2002	9
TEMPLE INLAND INCO.	2883395	North America	Industrials	Add	2002	9
TEMPLE INLAND INCO.	2883395	North America	Industrials	Delete	2008	12
TEN NETWORK HDG.LTD.	6108373	Australia	Consumer Services	Add	2008	9
TENET HLTHCR.CORP.	2626879	North America	Health Care	Delete	2003	3
TERNA SPA	B01BN57	Europe	Utilities	Add	2005	9
TERUMO CORPORATION	6885074	Japan	Health Care	Add	2002	9
TERUMO CORPORATION	6885074	Japan	Health Care	Delete	2004	3
TEXAS INSTS.INCO.	2885409	North America	Technology	Delete	2007	9
THOMSON	5988930	Europe	Consumer Services	Delete	2008	9
TIETO CORPORATION	5479702	Europe	Technology	Delete	2008	9
TIME WARNER INCO.	2712165	North America	Consumer Services	Delete	2004	9
TOHO GAS COMPANY LIMITED	6895222	Japan	Utilities	Add	2008	3
TOKAI RIKA COMPANY LTD.	6894025	Japan	Consumer Goods	Add	2005	3
TOKUYAMA CORPORATION	6895761	Japan	Basic Materials	Add	2004	3
TOKUYAMA CORPORATION	6895761	Japan	Basic Materials	Delete	2008	3
TOKYO ELECTRON LIMITED	6895675	Japan	Technology	Add	2003	9
TOKYO GAS COMPANY LTD.	6895448	Japan	Utilities	Add	2003	3
TOKYO SEIMITSU CO.LTD.	6894304	Japan	Technology	Add	2006	3
TOKYO SEIMITSU CO.LTD.	6894304	Japan	Technology	Delete	2008	9
TOKYU CORPORATION	6896548	Japan	Consumer Services	Add	2003	9
TOKYU CORPORATION	6896548	Japan	Consumer Services	Delete	2008	3
TOKYU LAND CORPORATION	6895084	Japan	Financials	Add	2007	9
TOMKINS PLC.	896265	Europe	Industrials	Add	2003	9

TOMRA SYSTEMS ASA	4730875	Europe	Industrials	Delete	2003	9
TOPPAN FORMS CO.LTD.	6105028	Japan	Industrials	Add	2004	9
TORONTO-DOMINION BANK	2897222	North America	Financials	Delete	2005	3
TOSHIBA CORPORATION	6894887	Japan	Industrials	Add	2004	9
TOSHIBA CORPORATION	6894887	Japan	Industrials	Delete	2008	3
TOSOH CORPORATION	6900289	Japan	Basic Materials	Add	2003	9
TOSOH CORPORATION	6900289	Japan	Basic Materials	Delete	2007	9
TOYO SEIKAN LTD.	6900267	Japan	Industrials	Add	2004	9
TOYODA GOSEI CO.LTD.	6900557	Japan	Consumer Goods	Add	2004	9
TOYOTA AUTO BODY CO.LTD.	6900621	Japan	Consumer Goods	Add	2004	9
TOYOTA INDUSTRIES CORP.	6900546	Japan	Consumer Goods	Add	2003	9
TOYOTA MOTOR CORP.	6900643	Japan	Consumer Goods	Delete	2007	9
TOYOTA MOTOR CORP.	6900643	Japan	Consumer Goods	Add	2008	9
TRANSCAN.CORP.	2665184	North America	Oil & Gas	Delete	2004	3
TRANSOCEAN LTD.	2821287	North America	Oil & Gas	Delete	2002	9
TRANSPORT INTL.HDG.LTD.	6081162	Asia	Consumer Services	Delete	2006	3
TRANSURBAN GROUP	6200882	Australia	Industrials	Add	2004	9
TRAVIS PERKINS PLC.	773960	Europe	Industrials	Add	2005	3
TRAVIS PERKINS PLC.	773960	Europe	Industrials	Delete	2008	9
TRINITY MIRROR PLC.	903994	Europe	Consumer Services	Add	2005	3
TRINITY MIRROR PLC.	903994	Europe	Consumer Services	Delete	2008	9
TUI AG	5666292	Europe	Consumer Services	Add	2004	3
TV ASAHI CORP.	6287410	Japan	Consumer Services	Add	2004	9
UBE INDUSTRIES LIMITED	6910705	Japan	Basic Materials	Add	2004	3
ULVAC INCORPORATED	6599483	Japan	Industrials	Add	2007	9
UMICORE SA	4005001	Europe	Basic Materials	Add	2002	9
UNIBAIL-RODAMCO	7076242	Europe	Financials	Add	2005	3
UNI CHARM CORPORATION	6911485	Japan	Consumer Goods	Add	2004	3
UNITED PARCEL SER.INCO.	2517382	North America	Industrials	Add	2004	3
UNVL.HEALTH SVS.INCO.	2923785	North America	Health Care	Add	2008	3
US BANCORP	2736035	North America	Financials	Delete	2005	9
USHIO INCORPORATED	6918981	Japan	Industrials	Add	2004	9
VA TECHNOLOGIE AG	4921635	Europe	Industrials	Add	2002	9
VA TECHNOLOGIE AG	4921635	Europe	Industrials	Delete	2003	9
VEOLIA ENVIRONNEMENT	4031879	Europe	Utilities	Add	2004	9
VOESTALPINE AG	4943402	Europe	Basic Materials	Delete	2003	9
VOLKSWAGEN AG	5497168	Europe	Consumer Goods	Add	2006	3
WALGREEN CO.	2934839	North America	Consumer Services	Delete	2005	9
WANADOO	4066611	Europe	Technology	Add	2004	3
WARTSILA OYJ	4525189	Europe	Industrials	Add	2008	3
WASHINGTON MUTUAL INCO.	2942188	North America	Financials	Delete	2006	3
WELLA AG	5728567	Europe	Consumer Goods	Add	2005	3
WESTERN UNION CO.(THE)	B1F76F9	North America	Financials	Delete	2008	3
WESTFIELD GP.	B01BTX7	Australia	Financials	Add	2008	9
WILLIAM HILL PLC.	3169889	Europe	Consumer Services	Add	2005	9
WING TAI HOLDINGS LTD.	6972385	Asia	Financials	Delete	2003	9
WOLSELEY PLC.	976402	Europe	Industrials	Add	2006	3
WOOLWORTHS LTD.	6981239	Australia	Consumer Services	Delete	2005	3
XEROX CORP.	2985202	North America	Technology	Add	2008	3
YAHOO JAPAN CORPORATION	6084848	Japan	Technology	Add	2007	9
YAMATAKE CORPORATION	6985543	Japan	Industrials	Add	2007	3
YAMATO HOLDINGS CO.LTD.	6985565	Japan	Industrials	Add	2006	3
YASKAWA ELECTRIC CORP.	6986041	Japan	Industrials	Add	2004	3

YELL GROUP PLC.	3171806	Europe	Consumer Services	Add	2006	3
YELL GROUP PLC.	3171806	Europe	Consumer Services	Delete	2008	9
YOKOHAMA RUBBER CO.LTD.	6986461	Japan	Consumer Goods	Add	2005	3
YOSHINOYA HDG.CO.LTD.	6211851	Japan	Consumer Services	Add	2004	9
YOSHINOYA HDG.CO.LTD.	6211851	Japan	Consumer Services	Delete	2008	9
ZARLINK SEMICON.INCO.	2597102	North America	Technology	Delete	2002	12
ZEON CORP.	6644015	Japan	Basic Materials	Add	2004	3
ZEON CORP.	6644015	Japan	Basic Materials	Delete	2008	9