The impact of Social Responsibility on productivity and efficiency of US listed companies¹

Leonardo Becchetti
University of Rome Tor Vergata

Stefania Di Giacomo University of Rome Tor Vergata

Damiano Pinnacchio University of Rome Tor Vergata

Abstract

We investigate whether inclusion and permanence in the Domini social index affects corporate performance on a sample of around 1000 firms in a 13-year interval by controlling for size, industry, business cycle and time invariant firm idiosyncratic characteristics. Our results find partial support to the hypothesis that corporate social responsibility (CSR) generates a *transfer of wealth* from shareholders to stakeholders. On the one side, the combination of entry and permanence into the Domini is shown to increase (reduce) significantly total sales per employee (returns on equity). On the other side, lower returns on equity seem nonetheless to be accompanied by relatively lower conditional volatility and lower reaction to extreme shocks of Domini stocks with respect to the control sample.

The first two econometric findings match intrinsic characteristics since they are paralleled by significant differences in fixed effects between the control sample and firms which will become Domini affiliated in the sample period. Our conclusion is that Domini affiliation significantly reinforces traits of corporate identity which were already in place before entry.

We also show that exit from Domini has strong negative effects on total sales per employee, returns on equity, investment and capital employed. An explanation for the "transfer of wealth" effect, suggested by the inspection of Domini criteria, is that social responsibility implies, on the one side, decisions leading to higher cost of labour and of intermediate output, but may, on the other side, enhance involvement, motivation and identification of the workforce with company goals with positive effects on productivity.

Manca test garch vedere descrittive

Key words: social responsibility, stakeholders, corporate performance.

JEL classification codes: M14, L25.

⁻

¹ Paper presented ad the XIII Tor Vergata Financial Conference. Support from the *Veritatis Splendor* Research Project on Social responsibility is acknowledged. The authors thank Helen Alford, Michele Bagella, Iftekhar Hasan, James Lothian, Ferruccio Marzano, Francesco Nucci, Alberto Pozzolo for useful comments and suggestions and Laura Boccardelli, Saverio De Santo and Osea Giuntella for their precious research assistance. The usual disclaimer applies.

1. Introduction

A first minimal definition of social responsibility is generally related to the corporate choice of not breaching laws and regulations when pursuing shareholders' wealth maximisation goals. A second approach considers that CSR is more than just following the law (McWilliams & Siegel, 2001), as it also involves actions which are expected to affect positively an identifiable social stakeholder's welfare. Our analysis is aimed at measuring the impact of this second definition of CSR on corporate performance.

The debate on the relevance and effects of this second type of corporate social responsibility is polarised around two opposite perspectives. A first one considers it as a violation of manager's responsibility to shareholders, leading to arbitrary management of "free cash flow" and to higher expenditures which reduce shareholders' wealth (Friedman, 1962).² The reasoning of Friedman (1962) implies an efficient balance of powers between profit maximizing firms and social welfare maximizing institutions, which is far from the reality of our economic systems. Asymmetric information, agency costs and conflicts of interests are so widespread that institutions are distant from the benevolent planners depicted by theoretical models of some decades ago. In the current "three-pillar" (institutions, corporations and the civil society) system what we observe is stakeholders creating bottom up pressures on corporations in order to compensate institutional weaknesses in designing rules which should align firm behaviour to the goal of socially and environmentally sustainable development (Adriani and Becchetti, 2004). This pressure induces corporations to signal their social responsibility in order to minimize attrition with stakeholders. In this framework, CSR is often originated not from an autonomous decision of managers, but by external pressures of institutions of or consumers.

_

² "Few trends could so thoroughly undermine the very foundations of our free society as the acceptance by the corporate officials of a social responsibility other than to make as much money for their shareholders as possible".

Well aware of these linkages between corporations, institutions and consumers, a completely different and broader perspective considers the social role of corporations and their relationship not just with shareholders, but with the larger set of firm stakeholders (Freeman, 1984). Freeman emphasizes that, if stakeholders have voice, the socially responsible behaviour of corporations may be a rational strategy to minimize conflicts and optimize sinergies in their complex network of relationships with various stakeholders (local communities, consumers, environmentalist associations, subcontractors, etc.).

An additional argument for the relevance of CSR comes from the observation that, in a society riddled by conflicts of interests and informational asymmetries, with weak institutions and incomplete contracts, the tenet of shareholders wealth maximization may be untenable if corporate power is not offset by proper checks and balances from institutional action.

In addition to it, we must not forget that maximization of shareholders wealth is a quite narrow goal also from an aggregate point of view. Shareholder wealth maximization does not coincide with value creation, while it already implies criteria on how the value created must be redistributed. Paradoxically, shareholders wealth maximisation may lead to negative externalities and to lower value creation than the adoption of a socially responsible behaviour. We may, for instance, have a firm with lower return on equity (because of its higher concern for stakeholders), but higher added value and contribution to aggregate output (for superior worker's identification with SR goals) against another one with higher return on equity and lower value added and contribution to aggregate output. In the case of banks this trade-off may be even clearer, with a bank maximizing returns on equity and, for this reason, not financing projects whose return is above the risk adjusted opportunity cost, but below its return on equity target. On the other side, we may have some banks, such as microfinance institutions, which, by lending to uncollateralized producers with projects

^(...)If businessmen do have social responsibility other than making maximum profits for stockholders, how are they to know what it is? Can self private individuals decide what the social interest is?" (Friedman, 1962)

whose return is above the opportunity costs, significantly enlarge the set of profitable ideas financed, thereby positively contributing to aggregate growth.³

On this line Tirole (2001) argues that the concept of stakeholder value recognizes that corporate activity may create negative externalities that need to be counterbalanced, either by institutional rules or by corporations themselves. In such case, creating shareholders value is not enough to maximize total welfare and management should aim at "maximizing the sum of various stakeholder surpluses." He is though sceptical on the possibility of creating incentives inducing managers to behave in a socially responsible way. First, he observes that the difficulty of measuring SR fosters managerial opportunistic behaviour. Second, he argues that a SR company with relatively low return on equity may be object of a takeover from a profit maximising raider.

A first reply to Tirole (2001) is that several social labelling organisations have born to overcome informational asymmetries in this field. Hence, a corporation considered as being socially responsible not just when it claims to be as such, but only if complies with a set of externally fixed behavioural criteria. In addition to it, bottom-up pressure from SR consumers and investors is the best substitute for autonomous corporate action fostering CSR. The second Tirole's objection (takeover risk) is an interesting one and is the object of this empirical research aimed at verifying whether SR firms are relatively less or more profitable than the rest of the economy.

Overall, the best reply to the above mentioned objections on CSR is that CSR may definitely be a superior corporate behaviour in terms of social welfare if the expected reduction of negative externalities is accompanied by a creation of value (and not merely shareholder return) equal or superior to that of non socially responsible firms. If this is true, a powerful incentive for corporations to adopt a SR attitude, beyond enlightened altruism, exists. This is why the evaluation of the effects of SR on corporate performance is a relevant issue in the current debate.

³

³ The well known Galor-Moav (2004) growth model emphasizes that, while in a first phase of physical capital accumulation growth is negatively related with equality, in a second phase in which human capital has predominant role, growth is enhanced by equality, when equality means giving also to liquidity constrained individuals the opportunity to invest in human capital.

Our paper focuses on this issue and is divided into seven sections (including introduction and conclusions). The second section discusses expected costs and benefits arising from the adoption of a SR behaviour. The third section briefly surveys the empirical literature on the effects of SR on corporate performance. The fourth section analyses Domini criteria, focusing in particular on their potentially cost increasing and productivity enhancing characteristics. The fifth section presents and comments our descriptive and econometric findings. The sixth section analyses whether the lower return on equity of SR firms is compensated by reduced conditional volatility.

2. Expected costs and gains from socially responsible behaviour

Before testing directly the impact of SR on corporate performance we briefly survey theoretical grounds which might support the hypothesis of a non negative relationship between SR and corporate performance. As a starting point we must consider - as it will be clear from the analysis of the characteristics of Domini criteria - that SR involves the undertaking of a set of actions which are potentially cost increasing (such as higher attention to labour conditions within the firm and in subcontracting companies, adoption of more environmentally, and often more costly, productive processes, etc.).

These sources of additional costs need to be compensated by some potential benefits to be economically sustainable. A first one, already mentioned, is represented by the creation of reputational capital which may help the company to obtain more favorable terms of trade when negotiating with various stakeholders (Cornell and Shapiro, 1987; Bowen et al., 1995; Jones, 1995). A second one considers that SR may positively affect workers productivity if we move away from the standard microeconomic approach which regards labour productivity as mainly related to individual skills, human capital and expected remunerations. In this perspective, a new strand of the literature starts modeling workers productivity as being affected not just by the usual set of individual worker variables, but also by intrinsic motivation, coworkers behaviour or working

conditions, and by the worker identification with the goals of their firm (Agell and Lundberg, 1999; Bewley, 1999, Campbell and Kamlani, 1999). Social preferences⁴ (Fehr- Schmidt, 1999; Fehr and Schmidt, 2001; Sobel 2001) and gift exchange are two leading fields in this literature ((Akerlof, 1982)).

In this perspective, the move to (exit from) CSR may significantly increase (reduce) intrinsic workers motivation, thereby affecting positively (negatively) their productivity. This hypothesis will be tested in the empirical analysis which follows.

3. The empirical literature on the impact of CSR

A huge number of empirical papers have tested in the past the relationship between social responsibility and corporate performance. Strangely enough, almost all of these papers have been published in the business and not in the economics literature, even though the topic of CSR is obviously relevant for both.

This "anomaly" gives us the advantage to provide a contribution to this specific field by testing the relationship between the two variables with methodological approaches which are standard in economics, but are not always used in the business literature.

With some approximation we can divide the existing empirical papers into three groups. The first finds a positive relationship between CSR and corporate performance. Soloman and Hansen (1985) find that the costs of having a high level of CSR are more than compensated by benefits in employee morale and productivity. Pava and Krausz (1996) and Preston and O'Bannon (1997) observe that CSR is positively associated with financial performance, while positive synergies between corporate performance and good stakeholders relationships are found by Stanwick and

6

⁴ According to a definition of Fehr and Falk (2002) "a person exhibits social preferences if it does not only care about the material resources allocated to it but also cares about the material resources allocated to other relevant reference agents" (Fehr-Falk, 2002).

Stanwick (1998) and by Verschnoor (1998). Ruf et al. (2001) find that change in CSR is positively associated with growth in sales and that return on sales are positively associated with CSR for three financial periods. Simpson and Kohers (2002) document a positive link between social and financial performance on a sample of banking firms.

A second group of papers finds no significant direction in the link between CSR and corporate performance. Mc Williams and Siegel (2001) find that the financial performance of Domini constituents is not significantly different from that of a control sample when per capita R&D expenditure is added among regressors. Other papers finding inconclusive results are those of Anderson and Frankle (1980), Freedman and Jaggi (1986), Aupperle, Caroll and Hatfield (1985). A third group of contributions documents a negative relationship and does not reject the managerial opportunism hypothesis. Preston and O'Bannon (1997) suggest that managers reduce expenditures on social performance to increase short-term profitability and their personal compensation, but when financial performance is poor they divert attention by expenditures on social programs. Other papers documenting a negative relationship are those of Freedman and Jaggi (1982), Ingram and Frazier (1983), Waddock and Graves (1997).

How to interpret these controversial results? In the well known story about the blind men and the elephant each blind man can get only a part of the truth by touching a part of the body of the elephant. The group acquires reasonable knowledge of the phenomenon under investigation (the elephant) only when partial and insufficient information collected by each individual is pooled.

The story suggests that the above described differences in findings across the four groups of papers do not necessarily reflect mistakes or inaccuracies, but, most often, differences in perspective (observation periods, companies included in the sample, measures of corporate performance and methodological approaches adopted for the empirical analysis). It also suggests that the combination of them, or an empirical research broadening the scope of the analysis and integrating many of these perspectives, may give us a more complete picture of the effects of SR on corporate performance (our "elephant").

Our paper goes in this direction as it aims to implement the existing research in the field from several points of view. First, it uses panel data and takes into account a significantly long time period, accounting specifically for business cycle effects with year dummies. Second, it introduces firm specific intercepts (fixed effects), thereby separating the impact of CSR from time invariant, firm idiosyncratic, characteristics. Third, it explores the impact of exit from CSR with specific reference to a range of motivations (labour, sales of weapons, governance, environment) on corporate performance. Fourth, it proxies the relative risk of holding CSR stocks by testing for the difference in conditional volatility and in its reaction to shocks between CSR and control sample stocks.

4. The Social domini criteria

The Domini Social Index 400 (DSI 400) is a portfolio of SR companies developed by Kinder, Lydenberger and Domini.

The index methodology presents advantages and drawbacks. Its advantages are that it reflects historical concerns of investors, keeps track of CSR evolution in time and includes all dimensions identified as important in CSR. Its limit is in the absence of a measure of intensity in corporate performance. Another important problem with the index is in the adoption of a "best in class process" in which relative, but not absolute, best SR performers in some industries have been included with the specific aim of keeping the index sufficiently diversified, thereby allowing ethical fund investors to adopt well diversified passive investment strategies. Finally, a third limit is that the index must have a constant number of constituents. Therefore, for any exit a new entry is needed, with the effect that entry timing is determined not solely by firm progress on CSR, but also by rebalancing needs.

Social domini criteria are divided into eight big domains: i) community; ii) corporate governance; iii) diversity; iv) employee relations; v) environment; vi) human rights; vii) product quality; viii)

controversial business issues. For each of them the Domini index identifies strengths and weaknesses, and lists a series of corporate actions falling under one of the two (see Appendix 1).

4.1 Domini requirements with cost increasing potential

The inspection of these criteria immediately shows that there are no "free lunches" in SR, revealing how several SR actions are clearly cost-increasing. In the community section we find as strengths charitable giving, support for education and support for housing. In the diversity section we find work benefits (the company has outstanding employee benefits or other programs addressing work/life concerns, e.g. childcare, eldercare or flextime). In the employee relations section we find as strengths cash profit sharing programs, health and safety strength and strong retirement benefit programs. In the environment section we find as strengths clean air programs. This item is for companies which have taken significant measures to reduce its impact on climate change and air pollution through use of renewable energy and clean fuels or through energy efficiency or for companies that have demonstrated a commitment to promoting climate-friendly policies and practices outside its own operations. The impact of these measures on costs is not necessarily positive, but it is highly suspected to be so. In the human right section we find the item of Indigenous Peoples Relations Strength (the company has established relations with indigenous peoples near its proposed or current operations -either in or outside the U.S- that respect the sovereignty, land, culture, human rights and intellectual property of the indigenous peoples) and Labor Rights Strength (the company has outstanding transparency on overseas sourcing disclosure and monitoring or has particularly good union relations outside the U.S.). Here again, good relationships with local workers and stakeholders are expected to have some costs in terms of missed opportunities of labour costs reductions.

4.2 Domini requirements with cost decreasing potential

Against all these potentially cost increasing factors we find only one clearly cost-decreasing SR initiative in the corporate governance section (the limited compensation of the manager).

On the other hand, our inspection of Domini affiliation also suggests that CSR may increase workers participation and productivity. First, limits to managerial compensation may increase workers satisfaction. Second, the presence of a program of *Work/Life Benefits* (the company has outstanding employee benefits or other programs addressing work/life concerns, e.g. childcare, eldercare or flextime) may increase workers involvement with the company.

Last but not least, a positive reaction of workers in terms of productivity may also be generated by strength factors in the employee relations section. These are: i) Cash Profit Sharing (the company has a cash profit-sharing program through which it has recently made distributions to a majority of its workforce); ii) Employee Involvement (the company strongly encourages worker involvement and/or ownership through stock options available to a majority of its employees, gain sharing, stock ownership, sharing of financial information, or participation in management decision-making); iii) Health and Safety Strength (the company is noted by the US Occupational Health and Safety Administration for its safety programs); iv) Retirement Benefits Strength (the company has a notably strong retirement benefits program); v) Union Relations (the company has a history of notably strong union relations); vi) Other Strength (the company has strong employee relations initiatives not covered by other KLD ratings).

The goal of our paper is to test whether the cost increasing factors related to CSR (and, specifically, to Domini affiliation) prevail over the factors which should increase workers motivation and lead to higher productivity. Furthermore, we want to evaluate whether, as it is implicit in its same goals, the CSR choice may lead to some forms of redistribution of corporate value from shareholders to stakeholders.

5. The econometric model

In order to test the impact of Domini affiliation on corporate performance we choose the following specification:

$$Y_{it} = \alpha_0 + u_i + \alpha_1 \log(Size) + \alpha_2 Do \min i + \alpha_3 Entry + \alpha_4 \log(Postexit) + \sum_{k=1}^{4} \beta_k \operatorname{Re} asexit_k + \sum_{t=1}^{m} \delta_t Year_t + \varepsilon_{it}$$

(1)

where Yit is a chosen performance variable (eg. return on equity, return on investment, total sales per employee), u_i is the time invariant firm idiosyncratic effect, Size is the number of firm employees, Domini is a dummy for affiliation to the Domini 400 index; Entry is a dummy which takes the value of one in the year of entry into the Domini 400 index; Postexit is a variable measuring the number of years following exit from the Domini 400 index; Reasexit_k are k dummies taking the value of one in the year of exit when the exit rationale (Military, Environment, Productquality, Badgovnce and Badlabour) applies, Year, are dummies picking up year effects. In our estimate we therefore try to disentangle the effects of corporate social responsibility (proxied by Domini affiliation) from business cycle effects (year dummies) and idiosyncratic characteristics (e.g. management quality) of each firm (proxied by the fixed effect measured through the firm specific intercept component u_i). To give an example, it may be that the association of Domini affiliation with a positive performance in a given dependent variable depends from the fact that high performers are more likely to search for Domini affiliation than low performers. In this case the causation would be reversed with good performance causing Domini affiliation and not vice versa. In our estimate fixed effects should capture differences in ex ante characteristics and the Domini variable should measure just the net effect of CSR.

The use of fixed effect controls for measurement errors arising from the use of industry dummies as well. The identification of firm specific characteristics goes in fact deeper than the identification of industry characteristics, since industry classifications are becoming always more imperfect taxonomies for firms with increasingly diversified product mix.

Descriptive findings on the variable used for the econometric analysis show that the median value for ROI (ROE) is around 10 (15) percent and that more than 5 (10) percent of ROI (ROE) observations are negative [CHECK R&D ZERO]. When we look at descriptive findings on the difference between Domini and non Domini constituents we find that the former have higher mean values for total sales, return on equity and return on investment (??).

A first important result of the estimates presented in table 3.1 shows that the joint insignificance of the fixed effects is rejected, confirming that idiosyncratic factors matter and their omission is likely to bias empirical findings.

Our empirical findings document that entry into Domini index is associated with 13 percent higher total sales per employee (16 percent if large capitalisation firms are excluded from the sample, see table 3.2) after controlling for size, business cycle effects and idiosyncratic firm characteristics. The positive total sales performance is consistent (even though not coincident) with findings from Stanwick and Stanwick (1998), Verschnoor (1998) and Ruf et al. (2001) mentioned in section 3. In the same estimate we find that doubling the years after Domini exit reduces total sales per employee by 22 percent in the overall sample (but not when large capitalisation firms are excluded) and is associated with a significantly reduced performance (around 26 percent for each of the three profitability indicators, ROI, ROE and ROCE).

Moreover, exit for non compliance with the criteria on governance reduces total sales per employee by 31 percent in general (table 3.1) and by 37 percent if large capitalisation firms are excluded from sample (table 3.2), while the opportunity of obtainin higher (lower) total sales per employee when abandoning military (labour) social responsibility criteria seems to be available only when large capitalisation firms are excluded.

Columns 2 to 4 show that Domini affiliation is associated with a reduction of return on investment, return on equity and return on capital employed of around 10 percent (the effect is stronger if large capitalisation firms are excluded from the sample shown in table 3.2). This negative effect is

compensated by the positive impact of entry into Domini index on ROI and ROCE in the estimate in which large caps are excluded from the sample (table 3.2)

General negative post exit effects on profitability indicators seem to exist (and to be stronger) for non large capitalisation firms (around 57 percent lower return on capital invested and 61 percent lower return on investment).

When we reestimate the model for non R&D investing firms only the results of the overall sample are confirmed with some slight differences: i) the positive effects of entry into the Domini index on total sales per worker are significant at 10 percent and only for large capitalisation firms in this subsample (tables 3.3 and 3.4); ii) there is evidence of weak positive significance of Domini affiliation on total sales per worker (tables 3.3 and 3.4); iii) the negative effects of Domini affiliation and post-exit on profitability indicators are stronger in this subsample (tables 3.3 and 3.4).

We finally report estimates of the model for the subsample of R&D investing firms (about ¼ of the total sample, tables 3.5 and 3.6). We find again a significant and positive effect of entry into the Domini index on total sales per worker and a negative effect of Domini affiliation on ROI, ROE and ROCE which is compensated by a positive entry effect on ROI and ROCE. Hence, once again, the indicator which is more negatively affected by social responsibility is the one measuring shareholders returns.

On the overall, findings reported in tables 3.1-3.6 outline a picture in which SR is associated to a transfer of wealth from shareholders to stakeholders. SR firms productivity is equal or, in some cases, significantly higher than in the control sample while, at the same time, return on equity is significantly lower. These findings clearly match with our interpretation of SR criteria described in section 4. Such criteria are shown to increase transfers to stakeholders and workers, but are also interpreted as having the potential effect of increasing workers motivation and productivity.

To control further for endogeneity and reverse causation we wonder whether some permanent characteristics distinguish Domini affiliated firms from the control sample or, in other terms, if firms which will be included in the Domini index are idiosyncratically different in quality with respect to the control sample.

We therefore test whether average fixed effects for the control sample and for firms which are in the Domini index at some time of our sample interval are significantly different. On the overall, our findings (tables 3.1-3.6) show that SR firms have lower returns on equity and on investment before controlling for size and industry effects (in all of the six estimated samples), while they tend to have significantly higher total sales per worker after controlling for size and industry effects (non R&D investing firms with and without large caps, and R&D investing without large caps). Our interpretation is that Domini affiliation significantly reinforces traits of corporate identity which were already in place before entry. Therefore, i) SR firms have ex ante higher total sales per worker and belong to industries with relatively lower return on investment and equity, ii) their entry into the Domini index generates a new significant independent effect in the two directions (higher total sales per worker and lower return on equity).

6. Domini affiliation and conditional stock return volatility

The relatively lower ROE of SR firms does not necessarily mean that SR stocks are a good business. The comparative performance of equities must be obviously evaluated on the risk-return perspective. In this perspective, relatively lower returns on equity of SR firms may be compensated by relatively lower risk. Following Boccardelli and De Santo (2005) we test the relative risk of holding CSR stocks vis a vis those of our control sample by building an index of stock returns for the two subsamples and estimate their conditional volatility with a simple GARCH (1,1) (Nelson, 1989; Engle, 1990; Engle and Ng, 1993).

The chosen specification for stock return behaviour (mean equation) is:

$$R_{t} = \partial_{0} + \sum_{i} \gamma_{i} R_{t-i} \sum_{j} \beta_{j} DW_{j} + \delta DJ + \varepsilon_{t}$$
(2)

where R_t is the average subgroup (SR or control sample) one-day compounded return, DW_j are the dummies for "day of the week" effects, DJ is the dummy for "January" effect and ε_t is the error term.

The standard specification adopted for testing the asset market volatility in the second equation of a GARCH (1,1) model is given by:

$$h_{t} = b_{0} + b_{1} \varepsilon_{t-1}^{2} + b_{2} h_{t-1}$$
(3)

where h_t is the conditional variance, ε_{t-1}^2 are the news about volatility from the previous period, measured as the lag of the squared residual from the mean equation while h_{t-1} is the last period's forecast variance.

The base equations for the two (Domini and control sample) indexes (table 4) have some common elements. One lag daily log returns of the own market have small but significant effects on the dependent variable. Moreover, the control sample (non SR firms) exhibits also a negative and significant Monday effect, consistently with several previous results in literature (Taylor, 1986).

Kurtosis and skewness tests, performed on the residuals obtained from the best estimation of the base equations, show that the distribution is not normal variate. The existence of excess kurtosis confirms the "stylized fact" of thick tails for financial time series, which was firstly observed by Mandelbrot (1963 a, b). The sum of the ARCH and GARCH coefficients is very close to one, indicating that volatility shocks are quite persistent.

The main differences between the two indexes are that the Monday effect is significant and negative only in the control sample index and that the intercept in the second equation is significantly lower (at 90 percent) for the Domini index. Figure 1 plots conditional volatility for the two indexes and confirms that the conditional volatility of the Domini index is almost always lower than that of the control sample index.

The quality of the SR index is not just that of having relatively lower conditional volatility but also that of having a significantly reduced volatility reaction to large shocks. In Table 4 the model is

reestimated by adding a dummy which tests the change in conditional volatility after the burst of the Nasdaq stock market bubble in March 2000. The findings show that the impact is significantly lower in the social responsibility index.

6. Conclusions

Corporate social responsibility is a multifaceted complex phenomenon involving a set of actions which are expected to affect significantly cost structures and workers participation to productive activity. As a consequence, the scope of empirical investigations on the effects of CSR on corporate performance must be such that the highest number of hidden dimensions of the problem can be discovered and analysed.

This paper tries to do so by enlarging the observed estimation period, by discriminating among different reasons for entry or exit from a selected measure of CSR and by controlling for business cycle effects and for time invariant idiosyncratic characteristics of the observed firms.

Our empirical approach allows us to disclose many unexplored dimensions of the CSR/corporate performance relationship and provides rationales for some of the empirical puzzles of the previous empirical literature.

Our findings identify the existence of a "transfer of wealth" effect which appears to be consistent with the hypothesis that CSR is expected, in principle, to redirect the focus of corporate activity from the maximization of shareholders to that of stakeholders interests. We observe in fact that CSR workers produce "larger cakes" (total sales per employee are significantly higher), but a smaller portion of these cakes goes to shareholders (returns on equity are significantly lower). The "penalty" that SR responsibility imposes on shareholders (relatively lower return one equity) is partially compensated by reduced conditional volatility of SR vis à vis the control sample.

The unobserved, complementary effect, is likely to be that higher slices of the cake must be earned by other stakeholders (subcontractors, employees, local communities) given that Domini affiliation is associated with a series of actions going in such direction.

The "transfer of wealth" effect well matches some of the time invariant idiosyncratic characteristics of CSR and non CSR firms, where the former are relatively more productive firm types (whose productivity if further enhanced by the CSR choice) and belong to industries and size classes in which the return on equity is relatively lower.

A second robust finding is the significantly negative impact (both in terms of productivity and return on equity) of exit from the Domini index. This result documents negative consequences arising when a CSR stance is abandoned. Given limitations of our information, it is not possible to verify whether the event reveals an exogenous negative shock on firm competitiveness which also leads to exclusion from the Domini or whether the shock depends on reduced productivity of workers or on sanctions imposed by socially responsible consumers.

References

Adriani F. Becchetti L., 2002, Fair trade: a "third generation welfare" mechanism to make globalisation sustainable, in J.Whalley (ed.) Globalisation, MIT Press (forthcoming) and CEIS Working Paper, n. 171.

Anderson J., Frankle A. (1980), "Voluntary Social Report: An Iso-Beta Portfolio Analysis", *Accounting Review* 55: 468-479

Aupperle K. E., Caroll A.B., Hatfield J.B. (1985), "An empirical examination of the relationship between corporate social responsibility and profitability", *Academy of Management Journal* 28: 446-463

Boccardelli L. De Santo S., 2004, Social responsibility and reaction to stock market shocks, mimeo

Bowen, R. M., L. DuCharme and D. Shores: 1995, 'Stakeholders' Implicit Claims and Accounting Method hoice', *Journal of Accounting and Economics* 20, 255–295.

Cornell B., Shapiro A. (1987), "Corporate Stakeholder Theory and Corporate Finance", *Financial Management* 16:5-14 Deci E. (1975), "Intrinsic Motivation", Plenum Press, New York

Engle, R. F. (1990) Stock volatility and the crash of '87: discussion, Review of Financial Studies, 3(1), 103-6.

Engle, R. F. and Ng, V. (1993) Measuring and testing the impact of news on volatility, *Journal of Finance*, 48(5) 1749-78. Fehr E., Falk.. (2002), ...

Freedman M. and Jaggi B. (1986), "An analysis of the impact of corporate pollution disclosures included in Annual Financials Statements on investors' decisions", in *Advances in public interest accounting*

Freeman R.E. (1984), "Strategic Management": a Stakeholder approach", Pitman, Boston

Friedman M. (1962), "Capitalism and Freedom", Chicago University Press

Galor O. and Moav O. (2004), "From Physical to Human capital accumulation: Inequality and the process of Development", <u>Review of Economic Studies</u>, Blackwell Publishing, vol. 71(4), pages 1001-1026, 10

Ingram, R. and K. Frazier: 1980, 'Environmental Performance and Corporate Disclosure', *Journal of Accounting Research* 18, 614–622.

Jones, T. M.: 1995, 'Instrumental Stakeholder Theory: A Synthesis of Ethics and Economics', *Academy of Management Review* (April), 404–437.

Mandelbrot B. (1963 a) The variation of certain speculative prices, Journal of Business, 36, 394-419.

Mandelbrot B. (1963 b) New methods in statistical economics, Journal of Political Economy, 71, 421-440.

McWilliams A., Siegel D. (2001), "Corporate social responsibility and financial performance: correlation or misspecification?", *Strategic Management Journal* 21(5): 603-609

Nelson, D. B. (1989) Price volatility, international market links, and their implications for regulatory policies: commentary, *Journal of Financial Services Research*, 3(2-3), 247-54.

Pava L., Krausz J. (1996), "The association between corporate social responsibility and financial performance, *Journal of Business Ethics* 15: 321-357

Preston L., O'Bannon D. (1997), "The corporate social-financial performance relationship", *Business and Society* 36(1): 5-31

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

Simpson W.G. and Kohers T., (2002), The Link Between Corporate Social and Financial Performance: Evidence from the Banking Industry, Journal of Business Ethics, 35, 97-109.

Soloman R., Hansen K. (1985), "It's Good Business", Atheneum, New York

Stanwick P.A. and Stanwick S.D. (1998), The Relationship Between Corporate Social Performance, and Organizational Size, Financial Performance, and Environmental Performance: An Empirical Examination, Journal of Business Ethics, 17, 195-204. Taylor D. (1986), Modelling Financial Time Series, Wiley and Sons, London

Tirole J. (2001), "Corporate Governance", *Econometrica*, 69 (1)

Verschnoor (1998)

Table 1 Distribution of variables selected for the empirical analysis

	TOTALSALES				
Centile	(millions of \$)	R&D	ROI	ROE	ROCE
1%	6.678	0.055	-31.820	-72.540	-0.022
5%	16.493	0.202	-5.200	-17.230	-0.001
10%	30.917	0.387	1.100	-3.250	0.000
25%	110.821	1.049	5.940	7.980	0.000
50%	274.595	4.279	10.305	15.190	0.001
75%	902.441	24.731	16.640	22.020	0.004
90%	4415.063	120.051	24.580	33.300	0.012
95%	11724.880	592.727	31.690	45.250	0.027
99%	56790.850	3629.195	58.670	129.600	0.169

<u>Legend of variables</u>: *TOTALSALES*: total sales per employee; *R&D*: Research and Development per employee; *ROI*: Return on Investment; *ROE*: Return on Equity; *ROCE*: Return on Capital Employed.

Table 2 Descriptive statistics of variables used in the empirical analysis

variable	Obs	Mean	Std. Dev.	Min	Max
sempredomini					
TOTAL SALES	2651	2846.29	13785.27	0.94	334750.90
R&D	654	122.11	516.36	0.02	5290.91
ROI	2589	11.86	14.10	-85.59	156.32
ROE	2645	16.95	130.83	-4170.86	3955.56
ROCE	2496	0.01	0.05	-0.27	1.02
domini					
TOTAL SALES	3935	2592.07	12715.38	0.94	334750.90
R&D	984	179.34	1118.19	0.00	16300.00
ROI	3692	11.54	14.32	-144.35	156.32
ROE	3877	19.10	222.12	-4170.86	12033.33
ROCE	3698	0.01	0.04	-0.27	1.02
non domini					
TOTAL SALES	3288	2297.24	13520.69	0.02	235851.60
R&D	1005	201.20	1092.90	0.00	20521.90
ROI	3278	10.13	48.02	-1043.76	1299.31
ROE	3614	13.31	108.01	-4562.21	2124.72
ROCE	3196	0.00	0.12	-3.10	3.09

<u>Legend of the dependent variables</u>: *TOTALSALES*: total sales per employee; *R&D*: Research and Development per employee; *ROI*: Return on Investment; *ROE*: Return on Equity; *ROCE*: Return on Capital Employed.

Table 3.1 The impact of Domini affiliation on performance indicators

Var. \Dep.	TotSales	ROI	ROE	ROCE	R&D
Domini	0.033	-0.106	-0.075	-0.106	0.021
	(0.97)	(-2.70)	(-1.73)	(-2.90)	(0.93)
Entry	0.131	0.043	0.051	0.077	-0.053
	(2.29)	(0.72)	(0.76)	(1.33)	(-1.42)
Log(Postexit)	-0.219	-0.251	-0.270	-0.269	-0.026
	(-3.34)	(-3.30)	(-3.44)	(-4.00)	(-0.61)
Military	0.331	0.005	-0.025	0.155	0.276
	(1.42)	(0.02)	(-0.09)	(0.67)	(1.81)
Environment	-0.237	0.222	0.315	0.317	-0.040
	(-1.22)	(1.08)	(1.41)	(1.63)	(-0.32)
Product quality	0.128	0.030	-0.242	-0.181	-0.130
	(0.70)	(0.15)	(-1.15)	(-1.02)	(-1.08)
Badgov.nce	-0.311	0.163	-0.036	0.138	0.020
	(-1.67)	(0.84)	(-0.18)	(0.80)	(0.17)
Badlabour	-0.238	0.385	0.462	0.461	0.037
	(-1.41)	(2.14)	(2.17)	(2.59)	(0.34)
Log(Size)	-0.305	-0.048	-0.075	-0.028	-0.199
	(-27.06)	(-3.72)	(-4.99)	(-2.30)	-(26.94)
Constant	8.943	3.468	3.664	3.438	3.119
	(59.75)	(3.25)	(19.64)	(21.21)	(31.79)
R ² within	0.263	0.032	0.020	0.033	0.119
R ² between	0.267	0.001	0.001	0.000	0.083
R ² overall	0.243	0.006	0.002	0.010	0.091
F-test on the	187.87	12.85	8.55	14.25	70.99
joint signif. of fixed effect					
Number of obs.	13179	9817	10385	10499	13179
Number of obs.					
		Fixed ef	fects		
Domini sample	13.197	10.247*	15.496*	10.464	1.398
Non domini			- / - /		
sample	13.435	10.475*	15.815*	10.709	1.378
	Fiz	xed effects net of	industry and size		
			Ž		1.399*
Domini sample	13.355	10.309	15.595	10.534	1.07.4%
Non domini sample	13.025	10.299	15.533	10.537	1.374*
bumpic	15.025	10.277	10.000	10.557	

<u>Legend of the dependent variables</u>: *Totsales*: total sales per worker; *R&D*: Research and Development per worker; *ROI*: return on investment; *Roe* Return on Equity, *Roce*: Return on Capital Employed.

<u>Legend of the regressors</u>: *Domini*: dummy for affiliation in the Domini 400 index; *Entry*: dummy for entri into the Domini 400 index; lAfter- number of years after exit from the Domini 400 index; *Military*, *Environment*, *Productquality*, *Badgov.nce and Badlabour*: dummies taking value of one the year of exit when the exit rationale applies, Size: number of firm employees.

Table 3.2 The impact of Domini affiliation on performance indicators (large capitalisation firms excluded from the sample)

Var. \Dep.	TotSales	ROI	ROE	ROCE	R&D
Domini	0.042	-0.193	-0.157	-0.135	-0.033
	(0.98)	(-3.81)	(-2.93)	(-2.93)	(-1.18)
Entry	0.164	0.184	0.091	0.152	-0.032
	(2.32)	(2.39)	(1.10)	(2.11)	(-0.69)
Log(Postexit)	-0.097	-0.608	-0.173 (-	-0.571	-0.010
	(-0.87)	(-4.24)	1.30)	(-4.74)	(-0.15)
Military	0.575	-0.159	-0.372	-0.149	0.416
	(1.99)	(-0.55)	(-1.13)	(-0.52)	(2.19)
Environment	-0.321	0.358	0.227	0.519	-0.197
	(-1.48)	(1.49)	(0.91)	(2.38)	(-1.38)
Product quality	0.025	0.118	-0.562	-0.212	-0.032
	(0.10)	(0.39)	(-2.00)	(-0.86)	(-0.20)
Badgov.nce	-0.371	0.134	-0.109	0.149	-0.035
	(-2.02)	(0.68)	(-0.54)	(0.85)	(-0.29)
Badlabour	-2.933	-	-0.300	-	0.137
	(-4.09)		(-0.39)		(0.29)
Log(Size)	-0.289	-0.052	-0.074	-0.027	-0.199
	(-22.97)	(-3.48)	(-4.31)	(-1.86)	(-24.07)
Constant	7.477	4.255	3.836	3.584	2.908
	(43.78)	(3.46)	(17.57)	(18.72)	(25.88)
R ² within	0.244	0.036	0.023	0.035	0.127
R ² between	0.321	0.000	0.000	0.001	0.096
R ² overall	0.269	0.006	0.004	0.011	0.102
F-test on the joint signif. of fixed effect	126.98	11.17	7.26	11.84	57.41
Number of obs.	9887	7323	7819	7827	9887
		Fixed e	ffects		
Domini sample	10.215	9.785*	14.805*	10.289*	1.356
Non domini					
sample	10.454	10.267*	15.564*	10.644*	1.366
		Fixed effects net of	industry and size		
Domini sample	10.339	9.914	15.014	10.381	1.364
Non domini sample	10.114	9.924	14.999	10.402	1.341

<u>Legend of the dependent variables</u>: *Totsales*: total sales per worker; *R&D*: Research and Development per worker; *Roi return on investment; Roe* Return on Equity, *Roce*: Return on Capital Employed.

<u>Legend of the regressors</u>: *Domini*: dummy for affiliation in the Domini 400 index; *Entry*: dummy for entri into the Domini 400 index; lAfter- number of years after exit from the Domini 400 index; *Military, Environment, Productquality, Badgov.nce and Badlabour*: dummies taking value of one the year of exit when the exit rationale (*Military, Environment, Productquality, Badgov.nce and Badlabour*) applies, Size. Number of firm employees.

Table 3.3 The impact of Domini affiliation on performance indicators (non R&D investing firms)

Var. \Dep. Var.	TotSales	ROI	ROE	ROCE
Domini	0.068	-0.159	-0.097 (-	-0.157
	(1.55)	(-3.21)	1.86)	(-3.54)
Entry	0.118	0.051	0.059	0.165
	(1.62)	(0.69)	(0.71)	(2.37)
Log(Postexit)	-0.156	-0.365	-0.130	-0.289
	(-1.46)	(-2.50)	(-1.13)	(-2.80)
Military	0.285	0.375	-0.180	0.067
	(0.87)	(0.96)	(-0.43)	(0.21)
Environment	-0.509	0.170	0.485	0.072
	(-1.44)	(0.43)	(1.28)	(0.22)
Product quality	-0.186	0.180	-0.344	-0.287
	(-0.74)	(0.65)	(-1.32)	(-1.27)
Badgov.nce	-0.224	0.239	-0.013	0.161
	(-0.99)	(1.04)	(-0.06)	(0.80)
Badlabour	-0.062	0.696	0.560	0.629
	(-0.23)	(2.29)	(1.88)	(2.19)
Log(Size)	-0.292	-0.028	-0.067	-0.014
	(-19.91)	(-1.67)	(-3.66)	(-0.90)
Constant	5.386	2.504	3.343	2.372
	(38.97)	(6.82)	(19.20)	(15.95)
R ² within	0.247	0.032	0.019	0.035
R ² between	0.282	0.002	0.001	0.001
R ² overall	0.255	0.011	0.002	0.011
F-test on the	115.87	8.47	5.52	10.52
joint signif. of fixed effect				
Number of obs.	9194	6565	7271	7311
		Fixed effects		
Domini sample	13.197	10.247*	15.486*	10.464*
Non domini sample	13.436	10.475*	15.815*	10.708*
	Fiz	xed effects net of indus	stry and size	
Domini sample	12.885	10.236	15.256	10.517*
Non domini sample	12.553	10.257	15.210	10.548*
sample	12.333	10.237	13.210	10.348

<u>Legend of the dependent variables</u>: *Totsales*: total sales per worker; *R&D*: Research and Development per worker; *Roi return on investment; Roe* Return on Equity, *Roce*: Return on Capital Employed.

<u>Legend of the regressors</u>: *Domini*: dummy for affiliation in the Domini 400 index; *Deletion*, dummy for exit from the Domini 400 index; *Entry*: dummy for entri into the Domini 400 index; lAfter- number of years after exit from the Domini 400 index; *Military*, *Environment*, *Productquality*, *Badgov.nce and Badlabour*: dummies taking value of one the year of exit when the exit rationale (*Military*, *Environment*, *Productquality*, *Badgov.nce and Badlabour*) applies, Size. Number of firm employees.

[spiegaz estesa]

Table 3.4 The impact of Domini affiliation on performance indicators (non R&D investing

firms -large capitalisation firms are excluded from the sample)

				<u>r</u> /	
Var. \Dep.	TotSales		ROI	ROE	ROCE
Domini		0.089	-0.230	-0.194	-0.167
		(1.71)	(-3.90)	(-3.11)	(-3.17)
Entry		0.121	0.211	0.090	0.197
		(1.43)	(2.36)	(0.95)	(2.42)
Log(Postexit)		0.058	-0.429	0.039	-0.489
		(0.39)	(-2.33)	(0.22)	(-3.56)
Military		0.495	0.381	-0.267	-0.070
		(1.25)	(0.99)	(-0.64)	(-0.19)
Environment	-0.725	(-	3	0.251	0.162
		1.74)		(0.57)	(0.43)
Product quality	-0.337	(-	0.052	-0.568	-0.383
		1.07)	(0.15)	(-1.75)	(-1.37)
Badgov.nce	-0.286	(-	0.179	-0.124	0.201
		1.28)	(0.77)	(-0.53)	(1.00)
Badlabour		-	-	-	-
Log(Size)		-0.260	-0.052	-0.062	-0.024 (-
208(2220)		(-15.89)	(-2.64)	(-2.91)	1.31)
Constant		4.879	2.510	3.283	2.450
		(31.90)	(6.01)	(16.37)	(14.25)
R ² within		0.228	0.038	0.021	0.040
R ² between		0.363	0.002	0.000	0.002
R ² overall		0.285	0.009	0.005	0.014
F-test on the joint signif. of fixed effect		84.13	8.06	4.88	9.89
Number of obs.		7101	5094	5625	5654
			Fixed effects		
	10.201		10.004%	1.4.00.4%	10.550%
Domini sample	10.381		10.084*	14.894*	10.559*
Non domini	10.464		10.520*	15 726*	10.012*
sample	10.464		10.538*	15.736*	10.913*
	T	Fixed effe	cts net of industry a	nd size	
Domini sample	10.496*		10.206	15.119	10.644*
Non domini					
sample	10.175*		10.247	15.165	10.708*

<u>Legend of the dependent variables</u>: *Totsales*: total sales per worker; *R&D*: Research and Development per worker; *Roi return on investment*; *Roe* Return on Equity, *Roce*: Return on Capital Employed.

<u>Legend of the regressors</u>: *Domini*: dummy for affiliation in the Domini 400 index; *Entry*: dummy for entri into the Domini 400 index; lAfter- number of years after exit from the Domini 400 index; *Military*, *Environment*, *Productquality*, *Badgov.nce and Badlabour*: dummies taking value of one the year of exit when the exit rationale (*Military*, *Environment*, *Productquality*, *Badgov.nce and Badlabour*) applies, Size. Number of firm employees.

Table 3.5 The impact of Domini affiliation on performance indicators (R&D investing firms only)

• • • • • • • • • • • • • • • • • • • •				
Var. \Dep.	TotSales	ROI	ROE	ROCE
Domini	0.042	-0.193	-0.157	-0.135
	(0.97)	(-3.81)	(-2.93)	(-2.92)
R&D	0.000	-0.000	-0.000	-0.000
	(5.68)	(-1.54)	(-0.10)	(-1.19)
Entry	0.164	0.184	0.091	0.151
	(2.32)	(2.39)	(1.10)	(2.09)
Log(Postexit)	-0.096	-0.609	-0.173	-0.572
	(-0.86)	(-4.25)	(-1.30)	(-4.76)
Military	0.571	-0.157	-0.372	-0.148
	(1.98)	(-0.54)	(-1.13)	(-0.51)
Environment	-0.324	0.359	0.227	0.521
	(-1.49)	(1.49)	(0.91)	(2.39)
Product		0.119	-0.562	-0.211
quality	0.023	(0.39)	(-2.00)	(-0.86)
	(0.09)			
Badgov.nce	-0.372	0.135	-0.109	0.148
	(-2.02)	(0.68)	(-0.54)	(0.85)
Badlabour	-2.956	-	-0.299	-
T (01)	(-4.13)	0.055	(-0.39)	0.020
Log(Size)	-0.283	-0.055	-0.074	-0.028
G 4 4	(-22.47)	(-3.61)	(-4.31)	(-1.96)
Constant	5.156	2.510	3.378	2.482
	(43.71)	(6.33)	(20.90)	(18.28)
R ² within	0.246	0.036	0.023	0.036
R ² between	0.320	0.000	0.000	0.001
R ² overall	0.269	0.006	0.004	0.011
F-test on the	123.45	10.79	6.96	11.89
joint signif. of				
fixed effect				
NT 1 6 1	9887	7323	7819	7827
Number of obs.				
		Fixed effects		
- · · ·	10.665	0.004*	15 1044	10.422*
Domini sample	10.665	9.984*	15.104*	10.433*
Non domini		10.220*	15 7014	10.607*
sample	10.891	10.339*	15.721*	10.697*
	Fix	ed effects net of indust	try and size	
Domini access	10.026*	10.094	15 202	10.506
Domini sample	10.826*	10.084	15.302	10.506
Non domini	10.506*	10 104	15 206	10.529
sample	10.506*	10.104	15.286	10.538

<u>Legend of the dependent variables</u>: *Totsales*: total sales per worker; *R&D*: Research and Development per worker; *Roi return on investment*; *Roe* Return on Equity, *Roce*: Return on Capital Employed.

<u>Legend of the regressors</u>: *Domini*: dummy for affiliation in the Domini 400 index; *Entry*: dummy for entri into the Domini 400 index; lAfter- number of years after exit from the Domini 400 index; *Military, Environment, Productquality, Badgov.nce and Badlabour*: dummies taking value of one the year of exit when the exit rationale (*Military, Environment, Productquality, Badgov.nce and Badlabour*) applies, Size. Number of firm employees.

Table 3.6 The impact of Domini affiliation on performance indicators (R&D investing firms only –large capitalisation firms excluded from the sample)

Var. \Dep. TotSales			
---------------------	--	--	--

		ROI	ROE	ROCE
Domini	0.042	-0.193	-0.157	-0.135
	(0.97)	(-3.81)	(-2.93)	(-2.92)
R&D	0.000	-0.001 (-	-0.001 (-	-0.001 (-
	(5.68)	1.54)	0.10)	1.19)
Entry	0.164	0.184	0.091	0.151
	(2.32)	(2.39)	(1.10)	(2.09)
Log(Postexit)	-0.096	-0.609	-0.173	-0.572
	(-0.86)	(-4.25)	(-1.30)	(-4.76)
Military	0.571	-0.157	-0.372	-0.148
	(1.98)	(-0.54)	(-1.13)	(-0.51)
Environment	-0.324 (-	0.359	0.227	0.521
	1.49)	(1.49)	(0.91)	(2.39)
Product quality	0.023	0.119	-0.562	-0.211
	(0.09)	(0.39)	(-2.00)	(-0.86)
Badgov.nce	-0.372	0.135	-0.109	0.148
D 11 1	(-2.02)	(0.68)	(-0.54)	(0.85)
Badlabour	-2.956	-	-0.299	-
T (C!)	(-4.13)	0.055	(-0.39)	0.020
Log(Size)	-0.283	-0.055	-0.074	-0.028
Constant	(-22.47) 5.156	(-3.61) 2.510	(-4.31) 3.378	(-1.96) 2.482
Constant	(43.71)	(6.33)	(20.90)	(18.28)
2			, , ,	
R ² within	0.246	0.036	0.023	0.036
R ² between	0.320	0.000	0.000	0.001
R ² overall	0.269	0.006	0.004	0.011
F-test on the	123.45	10.73	6.96	11.89
joint signif. of				
fixed effect				
Number of obs.	9887	7323	7819	7827
		Fixed effects		
Domini gampla	10.655*	9.984*	15.140*	10.433*
Domini sample Non domini	10.055**	ブ.ブ0 ^{4**}	15.140**	10.433**
sample	10.891*	10.339*	15.731*	10.697*
sample			•	10.071
	Fixed effective	cts net of industry a	nd size	
Domini sample	10.825*	10.084	15.285	10.505
Non domini				

<u>Legend of the dependent variables</u>: *Totsales*: total sales per worker; *R&D*: Research and Development per worker; *Roi return on investment*; *Roe* Return on Equity, *Roce*: Return on Capital Employed.

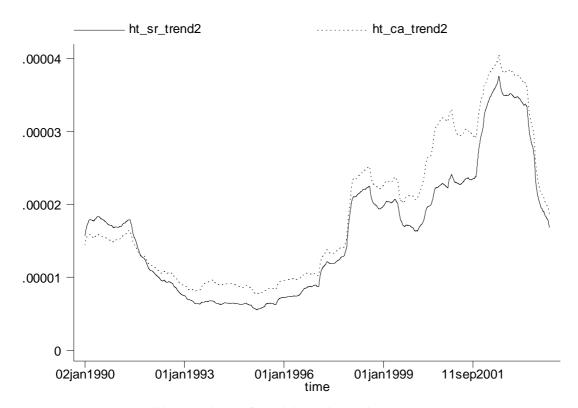
<u>Legend of the regressors</u>: *Domini*: dummy for affiliation in the Domini 400 index; *Entry*: dummy for entri into the Domini 400 index; lAfter- number of years after exit from the Domini 400 index; *Military, Environment, Productquality, Badgov.nce and Badlabour*: dummies taking value of one the year of exit when the exit rationale (*Military, Environment, Productquality, Badgov.nce and Badlabour*) applies, Size. Number of firm employees.

Table 4. GARCH (1,1) estimated conditional volatility for SR firms and the control sample

	MEAN RETUI	RN EQUATION	
DEPENDENT: RT			
VARIABLES	DOMINI INDEX		
	CONSTITUENTS	VARIABLES	CONTROL GROUP
Rt-1	0.1283**	Rt-1	0.1250*
	[7.4931]		[7.0795
DJUN	-7.75E-05	DJUN	-0.0002
	[-0.4258]		[-0.8587
DMONDAY	-0.0002	DMONDAY	-0.0004**
	[-1.2607]		[-2.3157
DTHURSDAY	-0.0002	DTHURSDAY	-0.0003
	[-1.3785]		[-1.6532]
DWEDNESDAY	7.80E-05	DWEDNESDAY	0.0002
	[0.4824]		[1.0250]
DFRIDAY	-4.60E-05	DFRIDAY	-4.35E-05
	[0.3026]		[-0.2566]
constant	0.0003**	constant	0.0004**
	[2.9580]		[3.4081]
	VARIANCE	EQUATION	L
Dependent: h_{t}			
	DOMINI INDEX		
VARIABLES	CONSTITUENTS	VARIABLES	CONTROL GROUP
2.	0.0883**	2.	0.0864**
\mathcal{E}_{t-1}^2 -SR	[5.9167]	\mathcal{E}_{t-1}^2 -CA	[13.699]
	0.9026**		0.8979**
h_{t-1} -SR	[147.909]	h_{t-1} -CA	[126.947]
Constant-SR	1.84E-07**	Constant-CA	2.97E-07*
	[5.9168]		[7.2819]
R ² adjusted	0.0028	R ² adjusted	0.0048
Skewness	-0.5080	Skewness	-0.5241
Kurtosis	5.4774	Kurtosis	5.3890
Obs	3651	Obs	3651

<u>Legend of the variables</u>: ht: conditional variance estimated in the GARCH (1,1) model; \mathcal{E}_{t-1}^2 : arch term; h_{t-1} : garch term.T-stats are in square brackets. ** 95 percent significance, * 90 percent significance. Source: Boccardelli-De Santo (2005)

Figure 1 Conditional variance (SR firms vs control sample)



Legend: ht_sr_trend2: conditional variance of Domini constituents index stock returns; ht_ca_trend2: conditional variance of control group index stock returns. Source: Boccardelli-De Santo (2005)

Table 5 The impact of the speculative bubble burst on stock volatility in a GARCH model (the event date is March 10, 2000)

	Dependent: R_{t}					
VARIABLES	SR-MR	SR-PI	CA-MR	CA-PI		
R_{t-1}	0.1315**	0.1349**	0.1281**	0.1510**		
	[7.3757]	[7.5870]	[7.0439]	[8.3195]		
DJanuary	-5.89E-05	8.93E-06	-0.0001	6.26E-05		
	[-0.3212]	[0.0491]	[-0.7688]	[0.3160]		
DMonday	-0.0001	-0.0001	-0.0003**	-0.0003*		
	[-1.1273]	[-1.0777]	[-2.1652]	[-1.8530]		
DThuesday	-0.0001	-0.0001	-0.0002*	-0.0002		
	[-1.3059]	[-1.2504]	[-1.6288]	[-1.4463]		
DWednesday	9.50E-05	0.0001	0.0002	0.0001		
	[0.5886]	[0.7490]	[1.1074]	[0.8124]		
DFriday	-3.67E-05	-5.71E-05	-3.41E-05	-3.56E-05		
	[-0.2425]	[-0.3714]	[-0.2019]	[-0.2008]		
Constant	0.0003**	0.0002**	0.0004**	0.0003**		
	[2.7696]	[2.6070]	[3.2301]	[2.9178]		

DEPENDENT: h_t

VARIABLES	SR-MR	SR-PI	CA-MR	CA-PI
\mathcal{E}_{t-1}^{2}	0.0914**	0.0934**	0.0926**	0.1073**
	[14.0605]	[14.0964]	[12.7800]	[12.6796]
h_{t-1}	0.8870**	0.8822**	0.8678**	0.8422**
	[106.9555]	[100.4197]	[75.5598]	[61.2127]
DBUBBLE	4.16E-07**	4.47E-07**	8.31E-07**	1.29E-06
	[4.9226]	[4.8992]	[5.0562]	[5.2481]
Constant	2.55E-07**	2.88E-07**	4.90E-07**	6.51E-07
	[6.0761]	[6.2784]	[6.9037]	[7.1147]
R ² adjusted	0.0023	0.0027	0.0043	0.0034
F-test on the significance in the difference of DBUBBLE coefficient in the SR and non SR sample (p-value)	(.01))		(.01)
Skewness	-0.4797	-0.4587	-0.5064	-0.4176
Kurtosis	5.2076	5.2618	5.1698	6.0061
Obs	3651	3651	3651	3651

<u>Legend of the model specifications</u>: *SR-MR*: analysis on mean returns for the social responsibility sample; *SR-PI*: analysis on price index for the social responsibility sample; *CA-MR*: analysis on mean returns for the alternative non social responsibility sample; *CA-PI*: analysis on price index for the alternative non social responsibility sample.

Legend of the variables: ht: conditional variance estimated in the GARCH (1,1) model; $\mathcal{E}_{t-1}^{\ 2}$: arch term; h_{t-1} : garch term; DBUBBLE: dummy which takes value of 1 after the March 10 2000 and zero otherwise. T-stats are in square brackets. ** 95 percent significance, * 90 percent significance. Source: Boccardelli-De Santo (2005)

Appendix 1

Criteria of KLD social ratings

SOCIAL ISSUE RATINGS

COMMUNITY

STRENGTHS Charitable Giving. The company has consistently given over 1.5% of trailing hree-year net earnings before taxes (NEBT) to charity [dopo o prima il ROI], or has otherwise been notably generous in its giving. Innovative Giving. The company has a notably innovative giving program that supports nonprofit organizations, particularly those promoting self-sufficiency among the economically disadvantaged. Companies that permit nontraditional federated charitable giving drives in the workplace are often noted in this section as well. Non-US Charitable Giving. The company has made a substantial effort to make charitable contributions abroad, as well as in the U.S. To qualify, a company must make at least 20% of its giving, or have taken notably innovative initiatives in its giving program, outside the U.S. Support for Housing. The company is a prominent participant in public/private partnerships that support housing initiatives for the economically disadvantaged, e.g., the National Equity Fund or the Enterprise Foundation. Support for Education. The company has either been notably innovative in its support for primary or secondary school education, particularly for those programs that benefit the economically disadvantaged, or the company has prominently supported job-training programs for youth. Other Strength. The company has either an exceptionally strong volunteer program, in-kind giving program, or engages in other notably positive community activities.

<u>CONCERNS</u> *Investment Controversies*. The company is a financial institution whose lending or investment practices have led to controversies, particularly ones related to the Community Reinvestment Act. *Negative Economic Impact*. The company's actions have resulted in major controversies concerning its economic impact on the community. These controversies can include issues related to environmental contamination, water rights disputes, plant closings, "put-or-pay" contracts with trash incinerators, or other company actions that adversely affect the quality of life, tax base, or property values in the community. *Other Concern*. The company is involved with a controversy that has mobilized community opposition, or is engaged in other noteworthy community controversies.

CORPORATE GOVERNANCE

STRENGTHS *Limited Compensation*. The company has recently awarded notably low levels of compensation to its top management[migliora bilancio ma quale effetto incentivo?] or its board members. The limit for a rating is total compensation of less than \$500,000 per year for a CEO or \$30,000 per year for outside directors. *Ownership Strength*. The company owns between 20% and 50% of another company KLD has cited as having an area of social strength, or is more than 20% owned by a firm that KLD has rated as having social strengths. When a company owns more than 50% of another firm, it has a controlling interest, and KLD treats the second firm as if it is a division of the first.

Other Strength. The company has an innovative compensation plan for its board or executives, a unique and positive corporate culture, or some other initiative not covered by other KLD ratings.

CONCERNS High Compensation. The company has recently awarded notably high levels of compensation to its top management or its board members. The limit for a rating is total compensation of more than \$10 million per year for a CEO or \$100,000 per year for outside directors. *Tax Disputes*. The company has recently been involved in major tax disputes involving more than \$100 million with the Federal, state, or local authorities. *Ownership Concern*. The company owns between 20% and 50% of a company KLD has cited as having an area of social concern, or is more than 20% owned by a firm KLD has rated as having areas of concern. When a company owns more than 50% of another firm, it has a controlling interest, and KLD treats the second firm as if it is a division of the first. *Other Concern*. The company restated its

earnings over an accounting controversy, has other accounting problems, or is involved with some other controversy not covered by other KLD ratings.

DIVERSITY

STRENGTHS CEO. The company's chief executive officer is a woman or a member of a minority group. **Promotion.** The company has made notable progress in the promotion of women and minorities, particularly to line positions with profit-and-loss responsibilities in the corporation. **Board of Directors.** Women, minorities, and/or the disabled hold four seats or more (with no double counting) on the board of directors, or one-third or more of the board seats if the board numbers less than 12. **Work/Life Benefits.** The company has outstanding employee benefits or other programs addressing work/life concerns, *e.g.*, childcare, elder care, or flextime. **Women & Minority Contracting.** The company does at least 5% of its subcontracting, or otherwise has a demonstrably strong record on purchasing or contracting, with women- and/or minority-owned businesses. **Employment of the Disabled.** The company has implemented innovative hiring programs, other innovative human resource programs for the disabled, or otherwise has a superior reputation as an employer of the disabled. **Gay & Lesbian Policies.** The company has implemented notably progressive policies toward its gay and lesbian employees. In particular, it provides benefits to the domestic partners of its employees. **Other Strength.** The company has made a notable commitment to diversity that is not covered by other KLD ratings.

<u>CONCERNS</u> Controversies. The company has either paid substantial fines or civil penalties as a result of affirmative action controversies, or has otherwise been involved in major controversies related to affirmative action issues. *Non-Representation*. The company has no women on its board of directors or among its senior line managers. *Other Concern*. The company is involved in diversity controversies not covered by other KLD ratings.

EMPLOYEE RELATIONS

STRENGTHS Cash Profit Sharing. The company has a cash profit-sharing program through which it has recently made distributions to a majority of its workforce. Employee Involvement. The company strongly encourages worker involvement [aumenta ??]and/or ownership through stock options available to a majority of its employees, gain sharing, stock ownership, sharing of financial information, or participation in management decision-making. Health and Safety Strength. The company is noted by the US Occupational Health and Safety Administration for its safety programs. Retirement Benefits Strength. The company has a notably strong retirement benefits program. Union Relations. The company has a history of notably strong union relations. Other Strength. The company has strong employee relations initiatives not covered by other KLD ratings.

CONCERNS *Union Relations*. The company has a history of notably poor union relations. *Health and Safety Concern*. The company recently has either paid substantial fines or civil penalties for willful violations of employee health and safety standards, or has been otherwise involved in major health and safety controversies. *Workforce Reductions*. The company has reduced its workforce by 15% in the most recent year or by 25% during the past two years [aumenta produttività], or it has announced plans for such reductions. *Retirement Benefits Concern*. The company has either a substantially underfunded defined benefit pension plan, or an inadequate retirement benefits program. *Other Concern*. The company is involved in an employee relations controversy that is not covered by other KLD ratings.

ENVIRONMENT

STRENGTHS *Beneficial Products and Services*. The company derives substantial revenues from innovative remediation products, environmental services, or products that promote the efficient use of energy [costa], or it has developed innovative products with environmental benefits. (The term "environmental service" does not include services with questionable environmental effects, such as landfills, incinerators, waste-to-energy plants, and deep injection wells.) *Clean Energy*. The company has taken significant measures to reduce its impact on climate change and air pollution through use of renewable energy and clean fuels or through energy efficiency. The company has demonstrated a commitment to promoting climate-friendly policies and practices outside its own operations. *Communications*. The company is a signatory to the CERES Principles, publishes a notably substantive environmental report, or has notably effective internal

communications systems in place for environmental best practices. *Pollution Prevention*. The company has notably strong pollution prevention programs including both emissions reductions and toxic-use reduction programs. *Recycling*. The company either is a substantial user of recycled materials as raw materials in its manufacturing processes, or a major factor in the recycling industry. *Other Strength*. The company has demonstrated a superior commitment to management systems, voluntary programs, or other environmentally proactive activities.

<u>CONCERNS</u> Hazardous Waste. The company's liabilities for hazardous waste sites exceed \$50 million [vantaggio per le SR], or the company has recently paid substantial fines or civil penalties for waste management violations. Regulatory Problems. The company has recently paid substantial fines or civil penalties for violations of air, water, or other environmental regulations, or it has a pattern of regulatory controversies under the Clean Air Act, Clean Water Act or other major environmental regulations. Ozone Depleting Chemicals. The company is among the top manufacturers of ozone depleting chemicals such as HCFCs, methyl chloroform, methylene chloride, or bromines. Substantial Emissions. The company's legal emissions of toxic chemicals (as defined by and reported to the EPA) from individual plants into the air and water are among the highest of the companies followed by KLD.

Agricultural Chemicals. The company is a substantial producer of agricultural chemicals, *i.e.*, pesticides or chemical fertilizers. Climate Change. The company derives substantial revenues from the sale of coal or oil and its derivative fuel products, or the company derives substantial revenues indirectly from the combustion of coal or oil and its derivative fuel products. Such companies include electric utilities, transportation companies with fleets of vehicles, auto and truck manufacturers, and other transportation equipment companies. Other Concern. The company has been involved in an environmental controversy that is not covered by other KLD ratings.

HUMAN RIGHTS

STRENGTHS *Indigenous Peoples Relations Strength.* The company has established relations with indigenous peoples near its proposed or current operations (either in or outside the U.S.) that respect the sovereignty, land, culture, human rights, and intellectual property of the indigenous peoples. *Labor Rights Strength*. The company has outstanding transparency on overseas sourcing disclosure and monitoring, or has particularly good union relations outside the U.S. *Other Strength*. The company has undertaken exceptional human rights initiatives, including outstanding transparency or disclosure on human rights issues, or has otherwise shown industry leadership on human rights issues not covered by other KLD human rights ratings.

CONCERNS Burma Concern. The company has operations or investment in, or sourcing from, Burma. Labor Rights Concern. The company's operations outside the U.S. have had major recent controversies related to employee relations and labor standards or its U.S. operations have had major recent controversies involving sweatshop conditions or child labor. Indigenous Peoples Relations Concern. The company has been involved in serious controversies with indigenous peoples (either in or outside the U.S.) that indicate the company has not respected the sovereignty, land, culture, human rights, and intellectual property of indigenous peoples. Other Concern. The company's operations outside the U.S. have been the subject of major recent human rights controversies not covered by other KLD ratings.

PRODUCT

STRENGTHS *Quality*. The company has a long-term, well-developed, company-wide quality program, or it has a quality program recognized as exceptional in U.S. industry. *R&D/Innovation*. The company is a leader in its industry for research and development (R&D), particularly by bringing notably innovative products to market. *Benefits to Economically Disadvantaged*. The company has as part of its basic mission the provision of products or services for the economically disadvantaged.

Other Strength. The company's products have notable social benefits that are highly unusual or unique for its industry.

<u>CONCERNS</u> *Product Safety.* The company has recently paid substantial fines or civil penalties, or is involved in major recent controversies or regulatory actions, relating to the safety of its products and services. *Marketing/Contracting Controversy.* The company has recently been involved in major marketing or contracting controversies, or has paid substantial fines or civil penalties relating to advertising practices,

consumer fraud, or government contracting. *Antitrust*. The company has recently paid substantial fines or civil penalties for antitrust violations such as price fixing, collusion, or predatory pricing, or is involved in recent major controversies or regulatory actions relating to antitrust allegations. *Other Concern*. The company has major controversies with its franchises, is an electric utility with nuclear safety problems, defective product issues, or is involved in other product-related controversies not covered by other KLD ratings.

CONTROVERSIAL BUSINESS ISSUES

ADULT ENTERTAINMENT

Distributors. The report includes publicly traded U.S. companies that derive 15% or more of total revenues from the *rental*, *sale*, *or distribution* (wholesale or retail) of adult entertainment media products. *Owners and Operators*. The report includes publicly traded U.S. companies that own and/or operate adult entertainment establishment. *Producers*. The report includes publicly traded U.S. companies that produce adult media products including movies, magazines, books, calendars, and websites. *Providers*. The report includes publicly traded U.S. companies that offer pay-per-view adult entertainment. *Ownership of an Adult Entertainment Company*. The company owns more than 20% of another company with adult entertainment involvement. (When a company owns more than 50% of company with adult entertainment involvement, KLD treats the adult entertainment company as a consolidated subsidiary.) *Ownership by an Adult Entertainment Company*. The company is more than 50% owned by a company with adult entertainment involvement.

ALCOHOL

Licensing. The company licenses its company or brand name to alcohol products. Manufacturers. Companies that are involved in the manufacture alcoholic beverages including beer, distilled spirits, or wine. Manufacturers of Products Necessary for Production of Alcoholic Beverages. Companies that derive 15% or more of total revenues from the supply of raw materials and other products necessary for the production of alcoholic beverages. Retailers. Companies that derive 15% or more of total revenues from the distribution (wholesale or retail) of alcoholic beverages. Ownership of an Alcohol Company. The company owns more than 20% of another company with alcohol involvement. (When a company owns more than 50% of company with alcohol involvement, KLD treats the alcohol company as a consolidated subsidiary.) Ownership by an Alcohol Company. The company is more than 50% owned by a company with alcohol involvement.

FIREARMS

Manufacturers. The company is engaged in the production of small arms ammunition or firearms, including, pistols, revolvers, rifles, shotguns, or sub-machine guns. *Retailers.* The company derives 15% or more of total revenues from the distribution (wholesale or retail) of firearms and small arms ammunition. *Ownership of a Firearms Company.* The company owns more than 20% of another company with firearms involvement. (When a company owns more than 50% of company with firearms involvement, KLD treats the firearms company as a consolidated subsidiary.) *Ownership by a Firearms Company.* The company is more than 50% owned by a company with firearms involvement.

GAMBLING

Licensing. The company licenses its company or brand name to gambling products. Manufacturers. Companies that produce goods used exclusively for gambling, such as slot machines, roulette wheels, or lottery terminals. Owners and Operators. Companies that own and/or operate casinos, racetracks, bingo parlors, or other betting establishments, including casinos; horse, dog, or other race tracks that permit wagering; lottery operations; on-line gambling; pari-mutuel wagering facilities; bingo; Jai-alai; and other sporting events that permit wagering. Supporting Products or Services. Companies that provide services in casinos that are fundamental to gambling operations, such as credit lines, consulting services, or gambling technology and technology support. Ownership of a Gambling Company. The company owns more than 20% of another company with gambling involvement. (When a company owns more than 50% of company with gambling involvement, KLD treats the gambling company as a consolidated subsidiary.) Ownership by a Gambling Company. The company is more than 50% owned by a company with gambling involvement.

MILITARY

Manufacturers of Weapons or Weapons Systems. Companies that derive more than 2% of revenues from the sale of conventional weapons or weapons systems, or earned \$50 million or more from the sale of conventional weapons or weapons systems, or earned \$10 million or more from the sale of nuclear weapons or weapons systems. Manufacturers of Components for Weapons or Weapons Systems. Companies that derive more than 2% of revenues from the sale of customized components for conventional weapons or weapons systems, or earned \$50 million or more from the sale of customized components for nuclear weapons or weapons systems, or earned \$10 million or more from the sale of customized components for nuclear weapons or weapons systems. Ownership of a Military Company. The company owns more than 20% of another company with military involvement. (When a company owns more than 50% of company with military involvement, KLD treats the military company as a consolidated subsidiary.) Ownership by a Military Company. The company is more than 50% owned by a company with military involvement.

NUCLEAR POWER

Ownership of Nuclear Power Plants. Companies that own nuclear power plants. Ownership of a Nuclear Power Company. The company owns more than 20% of another company with nuclear power involvement. (When a company owns more than 50% of company with nuclear power involvement, KLD treats the nuclear power company as a consolidated subsidiary.) Ownership by a Nuclear Power Company. The company is more than 50% owned by a company with nuclear power involvement.

TOBACCO

Licensing. The company licenses its company name or brand name to tobacco products. Manufacturers. The company produces tobacco products, including cigarettes, cigars, pipe tobacco, and smokeless tobacco products. Manufacturers of Products Necessary for Production of Tobacco Products. The company derives 15% or more of total revenues from the production and supply of raw materials and other products necessary for the production of tobacco products. Retailers. The company derives 15% or more of total revenues from the distribution (wholesale or retail) of tobacco products. Ownership of a Tobacco Company. The company owns more than 20% of another company with tobacco involvement. (When a company owns more than 50% of company with tobacco involvement, KLD treats the tobacco company as a consolidated subsidiary.) Ownership by a Tobacco Company. The company is more than 50% owned by a company with tobacco involvement.

Maintenance of the Domini 400 Socialsm Index (DS 400 Index)

Through its DS 400 Index Committee (the Committee), KLD maintains the Index at 400 companies at all times. The Committee makes all decisions about additions and removals for the DS 400, adding a company to the index at the same time that another company is removed. The Committee also creates, reviews, and maintains the Working Guidelines, publishes additional background materials, and responds to public inquiries about the maintenance of the DS 400. The Committee meets at least once a month, but may meet more frequently as needed.

Companies may be removed from the DS 400 Index at any time for one of four reasons: Corporate Actions; Failure of Exclusionary Screens⁵; Failure of Qualitative Screens; or Lack of Social and Financial Representation. In cases of corporate actions or failure of an exclusionary screen, a company is removed at the time the action occurs or when the company is added to one of KLD's exclusionary reports. In cases of qualitative screen failure or lack of social and financial representation, the removal generally occurs immediately after the monthly Committee meeting when the decision to remove the company is made.

The Committee maintains a ranked list of companies for addition to the DS 400 Index. The Committee seeks out companies for addition to the Index that fall into at least one of the following three categories: companies with particularly strong social stories; companies that enable the DS 400 Index to approximate the industry diversification and market capitalization of the S&P 500; and/or companies that allow the Committee to maintain the DS 400 Index with approximately 250 S&P companies, 100 Non-S&P companies for sector diversification and market capitalization, and 50 Non-S&P companies with exceptional social stories.

_

⁵ Exclusionary screens include Military-Weapons, Alcohol, Tobacco, Firearms, Nuclear Power, and Gambling.

List of firms which are always in the Domini index in the estimation period

ADVDMICRO DEVC. AIR PRDS& CHEMS, ALBERTO CULVER 'B', ALBERTSONS, AMERICAN, EXPRESS, AMERICAN INTLGP, AMR (AMERICAN AIRLINES), ANADARKO PETROLEUM, ANALOG DEVICES, ANGELICA, APACHE, APPLE COMPUTERS, APPLIED MATS, AUTODESK, AUTOMATIC DATA PROC, AVERY DENNISON, AVON PRODUCTS, BALDOR ELECTRIC, BANK OF AMERICA, BANK ONE, BASSETT FRTR, BECTON DICKINSON &CO, BELLSOUTH, BEMIS, BIOMET, BOB EVANS FARMS, CABOT, CALGON, CARBON, CAMPBELL SOUP, CENTEX, CHUBB, CHURCH & DWIGHT, CIGNA, CINCINNATI FIN, CINTAS, CIRCUIT, CITY STORES, CITIZENS COMMS, CLAIRES STORES, CLARCOR, CLOROX, COCA COLA, COCA COLA ENTS, COMCAST 'A', COMCAST SPECIAL 'A', CONSOL EN, COOPER INDS, CPI, CROSS A T, CUMMINS, CVS, CYPRESS SEMICON, DANA, DELUXE, DIONEX, DOLLAR GENERAL, DONNELLEY R R, DOW JONES &CO, EDWARDS AG, ENERGEN, EQUITABLE RESOURCES, FASTENAL, FLEETWOOD ENTS, FOOT LOCKER, FOREST LABS, FULLER 'H' 'B', GAP, GATX, GENMILLS, GENUINE PARTS, GERBER SCIEN, GOLDEN WEST FINL, GRACO GRAINGER W W, HARLAND JOHN, H HARMAN INTLINDS, HARTMARX, HEALTH CARE REIT, HEINZ HJ, HELMERICH PAYNE, HERSHEY FOODS, HILLENBRAND, HNI, HOME DEPOT, HUBBELL 'B', HUMANA, IDA CORPINCHDG, IKON OFFICE SLTN, ILLINOIS TOOL WKS, INTEL, IONICS, ISCO, JEFFERSON PILOT, JP MORGAN CHASE &CO, KB HOME, KELLY SERVICES 'A', KEYSPAN, KROGER, LAWSON PRODUCTS, LEEENTERPRISES, LEGGETT&PLATT, LIMITED BRANDS, LINCOLN ELECTRIC HDG, LINCOLN NAT, LIZ CLAIBORNE, LONGS DRUG STRS, LOWE'S COMPANIES, LUBY, MANOR CARE, MARSH & MCLENNAN, MATTEL, MAY DEPTSTORES, MAYTAG, MCDONALDS, MCGRAW HILL CO, MCKESSON, MEADWESTVAC,O MEDIA GENERAL, MEDTRONIC, MELLON FINL, MERCK &CO, MEREDITH, MERRILL LYNCH &CO, MICRON TECH, MILACRON, MILLER (HERMAN), MILLIPORE, MODINE, MNFG, MYLAN LABORATORIES, NCR, NEW ENGLBUSSER, NEW YORK TIMES 'A,' NEWELL RUBBERMAID, NORDSON, NORDSTROM, NORFOLK SOUTHERN, NUCOR, OMNICOM GP, OSHKOSH, TRUCK 'B', PENNEY JC, PEP BOYS MANNY, PEPSIAMERICA, PEPSICO, PHILLIPS V HEUSN, PITNEY BOWES, PNC FINLSVSGP, PROCTER & GAMBLE, PROVIDIAN FINL, RADIOSHACK, REEBOK INTL, ROUSE, ROWAN COS, RYDER SYSTEM, SAFECO, SCOTTS 'A', SEALED AIR, SEARS ROEBUCK &CO, SIGMA ALDRICH, SKY FINLGP, SMITH INTL, SMUCKER JM, SNAP ON SOUTHERN, SOUTHWEST AIRLINES, SPRINT FON, SPX STANLEY WORKS, STDREGISTER, STJUDE MED, STPAUL TRAVELLERS, STRIDE RITE, STRYKER, STUDENT LN, SUN MICROSYSTEMS, SUNOCO, SUNTRUST BANKS, SUPERVALU, SYSCO, TARGET, TEKTRONIX, TELEPHONE & DATA SYS, TELLABS, TENNANT, THERMO ELECTRON, THOMAS INDS, TJX COS, TOOTSIE ROLL, TORO, TOYS R, US HOLDINGS CO, UNUMPROVIDENT, V F, VALUE LINE, VERIZON COMMS, WALGREEN ,WALT DISNEY, WASHINGTON PST'B', WELLMAN, WELLS FARGO &CO, WENDY'S INTL, WESCO FINANCIAL, WGL HDG, WHIRLPOOL, WILLIAMS COS, WRIGLEY, WILLIAM JR, XEROX, YELLOW ROADWAY.

List of firms which are always in the Domini index in the estimation period by industry

Utilities: ENERGEN, EQUITABLE RESOURCES, IDACORP INCHDG, KEYSPAN, PEP BOYS MANNY, SOUTHERN, WGL HDG. Basic Materials: AIR PRDS& CHEMS, AVERY DENNISON, BEMIS, CABOT, CALGON CARBON, FULLER 'H' 'B', MEADWESTVACO, NUCOR, SIGMA ALDRICH, WELLMAN. Consumer Cyclical: AMR (AMERICAN AIRLINES), BOB EVANS FARMS, CENTEX, CIRCUIT CITY STORES, CLAIRES STORES, COMCAST 'A', COMCAST SPECIAL 'A', CVS, DANA, DOLLAR GENERAL. DONNELLEY R R, DOW JONES &CO, FASTENAL, FLEETWOOD ENTS, FOOT LOCKER, GAP, GENUINE PARTS, HARMAN INTLINDS, HARTMARX, HNI, HOME DEPOT, KB HOME, LEEENTERPRISES, LEGGETT&PLATT, LIMITED BRANDS, LIZ CLAIBORNE, LONGS DRUG STRS, LOWE'S COMPANIES, LUBY, MATTEL, MAY DEPTSTORES, MAYTAG, MCDONALDS, MCGRAW HILL CO, MCKESSON, MEDIA GENERAL, MEREDITH, MILLER (HERMAN), MODINE, MNFG, NEW YORK TIMES 'A', NORDSTROM, OMNICOM GP, PENNEY JC, PHILLIPS V HEUSN, RADIOSHACK, REEBOK INTL, RUSSELL SEARS, ROEBUCK &CO, STRIDE RITE, TARGET, TJX COS, TOYS R, US HOLDINGS CO, V F, |WALGREEN, WALT DISNEY, WASHINGTON PST'B,' |WENDY'S INTL, WHIRLPOOL. Non Cyclical Consumer: ALBERTO, ALBERTSONS, AVON PRODUCTS, BASSETT FRTR, CAMPBELL SOUP. CHURCH & DWIGHT, CLOROX, COCA COLA, COCA COLA ENTS, CROSS A T, GENMILLS, HERSHEY LAWSON PRODUCTS. NEW KROGER. ENGLBUSSER, NEWELL PEPSIAMERICA, PEPSICO PROCTER & GAMBLE, SCOTTS 'A', SNAP ON. STANLEY WORKS. SUPERVALU, SYSCO, TOOTSIE ROLL. Financial: AMERICAN EXPRESS, AMERICAN INTLGP, BANK OF AMERICA, BANK ONE, CHUBB, CINCINNATI FIN, GOLDEN WEST FINL, HEALTH CARE REIT, JEFFERSON PILOT, JP MORGAN CHASE &CO, LINCOLN NAT, MARSH & MCLENNAN, MELLON FINL, MERRILL LYNCH &CO, PNC FINLSVSGP, PROVIDIAN FINL, ROUSE, SAFECO, SKY FINLGP,

SOUTHWEST AIRLINES, STPAUL TRAVELLERS, SUNTRUST BANKS, UNUMPROVIDENT, VALUE LINE, WELLS FARGO &CO, WESCO FINANCIAL. *Industrial:* ANGELICA, AUTOMATIC DATA PROC, BALDOR ELECTRIC, CINTAS, CLARCOR, COOPER INDS, CPI, CUMMINS, DELUXE, DIONEX, GATX, GRACO, GRAINGER W W, HARLAND JOHN H, HUBBELL 'B', ILLINOIS TOOL WKS, IONICS, ISCO, KELLY SERVICES 'A', LINCOLN ELECTRIC HDG, MILACRON, MILLIPORE, NORDSON, NORFOLK SOUTHERN, OSHKOSH TRUCK 'B', RYDER SYSTEM, SEALED AIR, SPX, STDREGISTER, TEKTRONIX, TENNANT, THERMO ELECTRON, THOMAS INDS, TORO, YELLOW ROADWAY. *Chemicals:* AIR PRDS& CHEMS, AVERY DENNISON, CABOT, CALGON CARBON, FULLER 'H' 'B', SIGMA ALDRICH, WELLMAN. *Energy:* ANADARKO PETROLEUM, APACHE, CONSOL EN, HELMERICH PAYNE, ROWAN COS, SMITH INTL, SUNOCO, WILLIAMS COS. *Health Care:* BECTO, BIOMET, CIGNA, FOREST LABS, HILLENBRAND, HUMANA, MANOR CARE, MEDTRONIC, MERCK &CO, MYLAN LABORATORIES, STJUDE MED, STRYKER. *Technology:* ADVDMICRO DEVC, ANALOG DEVICES, APPLE COMPUTERS, APPLIED MATS, AUTODESK, CYPRESS SEMICON, GERBER SCIEN, IKON OFFICE SLTN, INTEL, MICRON TECH, NCR, PITNEY BOWES, SUN MICROSYSTEMS, TELLABS, XEROX. *Telecommunications:* BELLSOUTH, CITIZENS COMM, SPRINT FO, TELEPHONE & DATA SY, VERIZON COMMS.

List of firms which are always in the Domini index in the estimation period by size

Large Cap: AIR PRDS& CHEMS, ALBERTSONS, AMERICAN EXPRESS, AMERICAN INTLGP, ANADARKO PETROLEUM, ANALOG DEVICES, APACHE, APPLIED MATS, AUTOMATIC DATA PROC, AVON PRODUCTS, BANK OF AMERICA, BECTON DICKINSON &CO, BELLSOUTH CAMPBELL SOUP CHUBB CLOROX COCA COLA COCA COLA ENTS COMCAST 'A' COMCAST SPECIAL 'A', CVS FOREST LABS, GAP, GENMILLS, GOLDEN WEST FINL, HOME DEPOT, ILLINOIS TOOL WKS, INTEL, JP MORGAN CHASE &CO, KROGER, LAWSON PRODUCTS, LIMITED BRANDS, LOWE'S COMPANIES, MARSH & MCLENNAN, MATTEL, MCDONALDS, MCGRAW HILL CO, MCKESSON, MEDTRONIC, MELLON FINL, MERCK &CO, MERRILL LYNCH &CO, OMNICOM GP, PITNEY FINLSVSGP, PROCTER & GAMBLE, SEARS ROEBUCK &CO, SOUTHERN, SOUTHWEST AIRLINES, SPRINT FON, STJUDE MED, STPAUL TRAVELLERS, STRYKER, SUN MICROSYSTEMS, SUNTRUST BANKS, SYSCO, TARGET, TJX COS, VERIZON COMMS, WALGREEN, WALT DISNEY, WELLS FARGO &CO, WESCO FINANCIAL, XEROX. Small Cap: AMR (AMERICAN AIRLINES), BOB EVANS FARMS, CHURCH & DWIGHT, CLAIRES STORES, CLARCOR, CYPRESS SEMICON, DIONEX, DONNELLEY R R, ENERGEN, EQUITABLE RESOURCES, FLEETWOOD ENTS, GATX, GERBER SCIEN, GRACO, HARLAND JOHN H, HELMERICH PAYNE, HNI, IDACORP, INCHDG, IKON OFFICE SLTN, IONICS, KELLY SERVICES 'A', LEEENTERPRISES, LONGS DRUG STRS, MEDIA GENERAL, MEREDITH, MILACRON, MILLER (HERMAN), MILLIPORE, MODINE, MNFG, NORDSON, OSHKOSH TRUCK 'B', PHILLIPS V HEUSN, REEBOK INTL, RUSSELL, RYDER SYSTEM, SCOTTS 'A', SKY FINLGP, SNAP ON, STRIDE RITE, THOMAS INDS, TOOTSIE ROLL, TORO, VALUE LINE, WELLMAN, WGL HDG, YELLOW ROADWAY. Mid Cap: ADVDMICRO DEVC, ALBERTO CULVER 'B', ANGELICA, APPLE COMPUTERS, AUTODESK, AVERY DENNISON, BALDOR ELECTRIC, BANK ONE, BASSETT FRTR, BEMIS, BIOMET, CABOT, CALGON CARBON, CENTEX, CIGNA, CINCINNATI FIN, CINTAS, CIRCUIT, CITY STORES, CITIZENS, COMMS, CONSOL EN, COOPER INDS, CUMMINS, DANA, DELUXE, DOLLAR GENERAL, DOW JONES &CO, FASTENAL, FOOT LOCKER, GENUINE PARTS, GRAINGER W W, HARMAN INTLINDS, HEALTH CARE REIT, HERSHEY FOODS, HILLENBRAND, HUBBELL 'B', HUMANA, JEFFERSON PILOT, KB HOME, KEYSPAN, LEGGETT&PLATT, LINCOLN NAT, LIZ CLAIBORNE, MANOR CARE, MAY DEPTSTORES, MAYTAG, MEADWESTVACO, MICRON TECH, MYLAN LABORATORIES, NCR, NEW YORK TIMES 'A', NEWELL RUBBERMAID, NORDSTROM, NORFOLK SOUTHERN, NUCOR, PENNEY JC, PEPSIAMERICA, PEPSICO, PROVIDIAN FINL, RADIOSHACK, ROUSE, ROWAN COS, SAFECO, SEALED AIR, SIGMA ALDRICH, SMITH INTL, SPX, STANLEY WORKS, SUNOCO, SUPERVALU, TEKTRONIX, TELEPHONE & DATA, SYS TELLABS, THERMO ELECTRON, TOYS R, US HOLDINGS CO, UNUMPROVIDENT, V F, WASHINGTON PST'B', WENDY'S INTL, WHIRLPOOL, WILLIAMS COS, ANGELICA, BALDOR ELECTRIC, BASSETT FRTR, CALGON, CARBON, CP,I CROSS A T, FULLER 'H' 'B', HARTMARX, LINCOLN ELECTRIC, HDG LUBY, NEW ENGLBUSSER, PEP BOYS, MANNY.

Control sample

ABBOTT LABS, ACCREDO HEALTH, ACE, ADOBE SYSTEMS, ADOLPH COORS 'B', ADVAUTO PARTS, AES, AGILENT TECHS, AGL RES, AKAMAI TECHS, ALLEGHANY, ALLERGAN, ALLIANT ENERGY

CORP. AMEREAGOUTFITTERS. AMERICREDIT. AMGEN. AMYLIN PHARMS. ANDRX GP. ARAMARK 'B'. ARDEN REALTY, ASSDBANCORP, AUTONATION, BANCORPSOUTH, BANK OF HAWAII, BANKNORTH GPNEW, BB & T, BRISTOL MYERS SQUIBB, BUNGE, CAESARS ENTM, CARDINAL HEALTH, CATELLUS DEV, CENTERPOINT PR, CERTEGY, CH ROBINSON WWD, CHASRVRLABSINTL, CHIMERCEXHDG, CHIRON CORP, CITY NATIONAL, COLGATE PALM, COMPUTER SCIS, COUNTRYWIDE FINL ,COVENTRY HLTHCR, CRESCENT REAL ESTATE EQ, CROWN, CASTLE INTL, DARDEN RESTAURANTS, DELPHI AUTVSYS ,DENTSPLY INTL, DEVON ENERGY, DOLLAR TREE STORES, DORAL FINANCIAL, DOW CHEMICALSE, DUCATION MANAGEMENT, EDWARDS LIFE SCIENCES, EL PASO, EMULEX NEW, ENDO PHARMSHDG, ENTERCOM COMMS, ENTERGY, EQUITY OFFEPROPSTST, FEDERATED INVRS'B', FIRST MARBLEHEAD, FIRSTMERIT, FISERV, FISHER SCIENINTLNEW, FLORIDA ROCK INDS, GATEWAY, GEN PROBE, GENDYNAMICS, GENENTECH, GREAT PLAINS EN, GREENPOINT FINL, HARRIS, HARSCO, HAWAIIAN ELECINDS, HEALTH NET, HIBERNIA 'A', HORMEL FOODS, HOST MARRIOTT, HOVNANIAN ENTS'A', INAMED, INDEPENDENCE CMTYBK, INGRAM MICRO 'A', INSTINET GROUP, INTERSIL 'A', INTLPAPER, INTUIT, IRON MNT, ISTAR FINL, JEFFERIES GP, JUNIPER NETWORKS, KING PHARMS, KLA TENCOR, LAFARGE NORTH AMERICA, LEGG MASON, LEXMARK INTLGPA, LUCENT TECHNOLOGIES, MACERICH, MACK CALI RLTY, MARVEL ENTS, MARVELL TECHGP, MAXTOR, MBNA, METRO GOLDWYN, MAYER, MGM, MIRAGE, MOHAWK INDS, MOLEX, MOLEX 'A', MONSANTO, MONSTER WORLDWIDE, NATIONAL OILWELL, NATIONAL SEMICON, NATIONWIDE FINLSVS, NETWORK ASSOCIATES, NEWMONT MINING, NEXTEL COMMSA, NORTH FORK BANCORP, NSTARCOM NTL, OCCIDENTAL PTL, OXFORD HEALTH, PLANS, PACKCORPOF AM, PACRHLTHSYS, PACTIV, PENTAIR, PINNACLE WEST CAP, PIONEER NATRES, PIXAR, PLAINS ALL AMERPIPELP, PLUM CREEK TIMBER, POLARIS INDS, POLYCOM, POPULAR, PPG INDUSTRIES, PPL PROLOGIS, PRUDENTIAL FINL, PUBLIC STORAGE, PUBLIX SUPER MARKETS, PUBSERENTERGP, RAMBUS, RAYMOND JAMES FINL, RAYONIER, RED HAT, REGENCY CENTERS, RENAISSANCERE HDG, RENAL CARE GP, RENT A CTR, RITE AID, ROHM & HAAS, ROPER INDSNEW, ROSS STORES, RPM INTL, RUBY TUESDAY, SABRE HDG, SAFEWAY, SANMINA, SCI, SCANA, SCIENTIFIC ATLANTA, SERVICEMASTER, SIMON PRGP, SIRVA, SMITHFIELD FOODS, SONOCO PRDS, SOVEREIGN BANC, SPECTRASITE, STAPLES, STARBUCK,S STHFINLGP, SUNGARD DATA, SYSTEMS, SYNOVUS FINL, TROWE PRICE GP, TALBOTS TCF FINANCIAL, TECH DATA, TECO ENERGY, TELEFLEX, TEMPLE INLAND, TENET HLTHCR, TEPPCO PARTNERS L P, TERADYNE, TEREX, TEXAS GENCO HDG, TEXAS INSTS, TEXTRON, THE DIRECTV GROUP, THORNBURG MGE, TIBCO SOFTWARE, TIDEWATER, TIFFANY & CO, TIME WARNER, TIMKEN TOLL BROS, TRANSATLANTIC HDG, TRANSOCEAN, TRI CONTINENTAL, TRIAD HOSPITALS, TRIBUNE, TRIZEC PROPS, TRUSTMARK, TRW AUTVHDG, TXU, TYCO INTL, TYSON FOODS 'A', UCBH, UNION PACIFIC, UNION PLANTERS, UNIONBANCAL, UNISYS, UNITED PARCEL SER'B', UNITED TECHNOLOGIES, UNITEDGLOBALCOM 'A', UNITEDHEALTH GP, UNITRIN, UNIVERSAL HEALTH, SVS'B', UNOCAL, USCELLULAR, USSTEEL, UTDDOMINION REALTY TST, VENTAS, VERISIGN, VERITAS SOFTWARE, VISHAY INTERTECH, VORNADO REALTY TST, VULCAN MATERIALS, W HOLDING COMPANY, WACHOVIA, WASTE MAN, WATERS, WATSON PHARMS, WEATHERFORD INTL. XILINX XL CAP'A', YAHOO, ZIMMER HDG.

Control sample by industry

Energy: DEVON ENERGY, EL PASO, NATIONAL OILWELL, OCCIDENTAL PTL, TIDEWATER, TRANSOCEAN, UNOCAL, WEATHERFORD INTL. Financial: ACE, AMERICREDIT, ARDEN REALTY, ASSDBANCORP, BANCORPSOUTH, BANK OF HAWAII, BANKNORTH GPNEW, BB & T, CATELLUS DEV, CENTERPOINT PR, CITY NATIONAL COUNTRYWIDE FINL, CRESCENT REAL ESTATE EQ, DORAL FINANCIAL, **EQUITY** OFFEPROPSTST, **FEDERATED** INVRS'B', FIRSTMERIT, GREENPOINTFINL, HIBERNIA 'A', HOST MARRIOTT, INDEPENDENCE CMTYBK, ISTAR FINL, JEFFERIES GP, LEGG MASON, MACERICH, MACK CALI RLTY, MBNA, NATIONWIDE FINLSVS, NORTH FORK BANCORP, PLUM CREEK TIMBER, POPULAR, PROLOGIS, PRUDENTIAL FINL, PUBLIC STORAGE, RAYMOND JAMES FINL, RAYONIER, REGENCY CENTERS, RENAISSANCERE HDG, SIMON PRGP, STHFINLGP, SOVEREIGN BANC, SYNOVUS FINL, T ROWE PRICE GP, TCF FINANCIAL, THORNBURG MGE, TRANSATLANTIC HDG, TRIZEC PROPS, TRUSTMARK, UCBH, UNIONBANCAL, UTDDOMINION REALTY TST, UNITRIN, VENTAS, VORNADO REALTY TST, W HOLDING COMPANY, WACHOVIA, XL CAP'A'. Industrial: AGILENT TECH, CERTEGY, FISERV, FLORIDA ROCK INDS, GENDYNAMICS, HARSCO, INGRAM MICRO 'A', IRON MNT, LAFARGE NORTH AMERICA, MOLEX, MOLEX 'A', MONSTER WORLDWIDE, PACKCORPOF AM, PACTIV, PENTAIR, ROPER INDSNEW, SABRE HDG, SANMINA SCI, SONOCO PRDS, TECH DATA, TECO ENERGY, TELEFLEX, TEMPLE INLAND, TEREX, TEXTRON, TIMKEN, TYCO INTL, UNION PACIFIC, UNITED PARCEL SER'B', UNITED TECHNOLOGIES, VISHAY INTERTECH, VULCAN MATERIALS, WASTE MAN, WATERS. *Technology:* ADOBE SYSTEMS, AKAMAI TECHS, COMPUTER SCIS, CROWN CASTLE INTL, EMULEX NEW, GATEWAY, HARRIS, INTERSIL 'A', INTUIT, JUNIPER NETWORKS, KLA TENCOR, LEXMARK INTLGPA, LUCENT TECHNOLOGIES, MARVELL TECHGP, MAXTOR, NATIONAL SEMICON, POLYCOM, RAMBUS, RED HAT, SCIENTIFIC ATLANTA, SPECTRASITE, SUNGARD DATA SYSTEMS, TERADYNE, TEXAS INSTS, TIBCO SOFTWARE, UNISYS, VERISIGN, VERITAS SOFTWARE, XILINX, YAHOO. *Health Care:* ABBOTT LAB, ACCREDO HEALTH, ALLERGAN, AMGEN, AMYLIN PHARMS, ANDRX GP, BRISTOL MYERS SQUIBB, CHIRON CORP, COVENTRY HLTHCR, DENTSPLY INTL, EDWARDS LIFESCIENCES, FISHER SCIENINTLNEW, GEN PROBE, GENENTECH, HEALTH NET, INAMED, KING PHARMS, MONSANTO, OXFORD HEALTH PLANS, PACRHLTHSYS, RENAL CARE GP, TENET HLTHCR, TRIAD HOSPITALS, UNITEDHEALTH GP, UNIVERSAL HEALTH SVS'B', WATSON PHARMS, ZIMMER HDG *Telecommunications:* NEXTEL COMMS, USCELLULAR. *Utilities:* AES, AGL RES, ALLIANT ENERGY CORP, ENTERGY, GREAT PLAINS EN, HAWAIIAN ELECINDS, NSTARCOM, PINNACLE WEST CAP, PPL, PUBSERENTERGP, SCANA, TEXAS GENCO HDG.

Control sample by size

Large Cap: ABBOTT LABS, ACE, ADOBE SYSTEMS, AGILENT TECHS, ALLERGAN, AMGEN, BB & T, BRISTOL MYERS SQUIBB, BUNGE, CARDINAL HEALTH, COLGATE PALM, COUNTRYWIDE FINL, DEVON ENERGY, DOW CHEMICALS, ENTERGY, EQUITY OFFEPROPSTST, GENDYNAMICS, GENENTECH, INTLPAPER, INTUIT, JUNIPER NETWORKS, KLA TENCOR, LEXMARK INTLGPA, LUCENT TECHNOLOGIES, MBNA, NEWMONT MINING, NEXTEL COMMSA, OCCIDENTAL PTL, PIONEER NATRES, PPG INDUSTRIES, PRUDENTIAL FINL, SAFEWAY, STAPLES, STARBUCKS, TEXAS INSTS, TIME WARNER, TRIBUNE, TYCO INTL, UNION PACIFIC, UNITED PARCEL SER'B', UNITED TECHNOLOGIES, UNITEDHEALTH GP, VERITAS SOFTWARE, WACHOVIA, WASTE MAN, XILINX, XL Small Cap: ACCREDO, AGL RES, AKAMAI YAHOO, ZIMMER HDG. AMEREAGOUTFITTERS, ARAMARK 'B', ARDEN REALTY, BANCORPSOUTH, BANK OF HAWAII, CATELLUS DEV, CENTERPOINT PR, EDUCATION MANAGEMENT, EDWARDS LIFESCIENCES, FIRSTMERIT, FLORIDA ROCK INDS, GATEWAY, GEN PROBE, HARSCO, HAWAIIAN ELECINDS, HOVNANIAN ENTS'A, INAMED, INDEPENDENCE CMTYBK , INGRAM MICRO 'A', JEFFERIES GP, MACERICH, MACK CALI RLTY, MAXTOR, NATION WIDE FINLSVS, POLARIS INDS, RAYMOND JAMES FINL, RAYONIER, RENAL CARE GP, RENT A CTR, ROPER INDSNEW, RPM INTL ,RUBY TUESDAY, STHFINLGP, TALBOTS, TECH DATA, TELEFLEX, TEREX, THORNBURG MGE, TIBCO SOFTWARE, TIMKEN, TRUSTMARK, UCBH, USCELLULAR, UTDDOMINION REALTY TST, VENTAS, W HOLDING COMPANY. Mid Cap: ADOLPH COORS 'B', AES, ALLIANT ENERGY CORP, AMERICREDIT, AMYLIN PHARMS, ANDRX GP, ASSDBANCORP, AUTONATION, BANKNORTH GPNEW, CAESARS ENTM, CERTEGY, CHIRON CORP, CITY NATIONAL, COMPUTER SCIS, COVENTRY HLTHCR, CRESCENT REAL ESTATE EQ. CROWN CASTLE INTL, DARDEN RESTAURANTS, DELPHI AUTVSYS, DENTSPLY INTL, DOLLAR TREE STORES, DORAL FINANCIAL, EL PASO, EMULEX NEW, ENTERCOM COMMS, FEDERATED INVRS'B', FISERV, FISHER SCIENINTLNEW, GREAT PLAINS EN, GREENPOINT FINL, HARRIS, HEALTH NET, HIBERNIA 'A', HORMEL FOODS, HOST MARRIOTT, INTERSIL 'A', IRON MNT, ISTAR FINL, KING PHARMS, LAFARGE NORTH AMERICA, LEGG MASON, MARVEL ENTS, MARVELL TECHGP, METRO GOLDWYN MAYER, MGM MIRAGE, MOHAWK INDS, MOLEX, MOLEX 'A', MONSANTO, MONSTER WORLDWIDE, NATIONAL OILWELL, NATIONAL SEMICON, NORTH FORK BANCORP, NSTARCOM, NTL, OXFORD HEALTH PLANS, PACKCORPOF AM, PACRHLTHSYS, PACTIV, PENTAIR, PINNACLE WEST CAP, PIXAR, PLUM CREEK TIMBER, POLYCOM, POPULAR, PPL, PROLOGIS, PUBLIC STORAGE, PUBLIX SUPER MARKETS, PUBSERENTERGP, RAMBUS, RED HAT, REGENCY, CENTERS, RENAISSANCERE HDG, RITE AID, ROHM & HAAS, ROSS, STORES, SABRE HDG, SANMINA, SCI, SCANA, SCIENTIFIC ATLANTA, SERVICEMASTER, SIMON PRGP, SMITHFIELD FOODS, SONOCO PRDS, SOVEREIGN BANC, SPECTRASITE, SUNGARD DATA, SYSTEMS, SYNOVUS FINL, TROWE PRICE GP, TCF FINANCIAL, TECO ENERGY, TEMPLE INLAND, TENET HLTHCR, TERADYNE, TEXAS GENCO HDG, TEXTRON, THE DIRECTV GROUP, TIDEWATER, TIFFANY & CO, TOLL BROS, TRANSATLANTIC HDG, TRANSOCEAN, TRIAD HOSPITALS, TRIZEC PROPS, TYSON FOODS 'A', UNIONBANCAL, UNISYS, UNITEDGLOBALCOM 'A', UNITRIN, UNIVERSAL, HEALTH SVS'B', UNOCAL, USSTEEL, VERISIGN, VISHAY INTERTECH, VORNADO REALTY TST, VULCAN MATERIALS, WATERS, WATSON PHARMS, WEATHERFORD INTL.

Entries (into) an exits (from) the Domini index by year and motivation

Entries	Community	Corp.gov	Diversity	Empl.Relat.	Environment	Human R.	Product	Contr.Issue
1990	1	4	1	2	-	-	2	-
1991	-	2	3	-	1	-	-	-
1992	1	5	2	2	1	-	1	-
1993	1	11	1	1	2	-	-	-
1994	1	3	-	3	2	-	1	-
1995	6	5	2	2	-	-	-	-
1996	3	8	3	2	-	-	1	-
1997	2	6	2	3	4	-	7	-
1998	2	19	17	15	5	-	3	-
1999	3	11	11	8	3	-	1	-
2000	3	32	5	3	2	-	2	-
2001	4	22	3	1	1	-	4	-
2002	2	1	11	1	3	1	7	-
2003	3	10	1	1	-	-	10	-
2004	1	-	1	1	-	1	-	-

Exits from the Domini index by year and motivation

Exit	Community	Corp.gov	Diversity	Empl.Relat.	Environment	Human R.	Product	Contr.Issue
1990	-	6	-	-	-	-	-	4
1991	-	5	-	1	-	-	-	1
1992	-	8	-	-	1	-	1	1
1993	1	12	-	-	1	-	2	-
1994	-	9	-	-	1	-	-	-
1995	-	15	-	-	-	-	-	-
1996	-	13	-	-	2	-	-	1
1997	1	20	-	-	-	-	-	1
1998	-	45	-	-	1	-	-	2
1999	1	34	-	-	-	-	-	2
2000	-	48	-	-	-	-	-	2
2001	-	34	-	-	-	-	1	2
2002	1	16	1	1	1	1	2	3
2003	-	20	-	-	-	-	-	5
2004	-	1	1	-	-	-	1	1

Date				
Effective	<u>Deletion</u>	Reason	Addition	Reason
5/31/1990	Johnson Controls	Military	Claire's Stores	Diversity
5/31/1990	Systematics	Acquired by Alltel Corporation	Biomet on	Employee
8/31/1990	Black & Decker	Military	Wesco Financial	Product/Quality
8/31/1990	Ametek	Military	Cintas	Industry
8/31/1990	Phillips Industries	Acquired by Tomkins PLC (UK)	U.S. Healthcare	Industry
9/15/1990	Sovran Financial	Acquired by Citizens and Southern Corp.	Fastenal	Product/Quality
9/30/1990	Prime Motor Inns	Financial	Cabot Corporation	Industry
10/15/1990	Corroon & Black	Acquired by Willis Faber (UK)	Dollar General	Community
10/31/1990	Dennison Manufacturing	Acquired by Avery International Corp.	Measurex	Industry
12/31/1990	Acme Cleveland	Nuclear	Tellabs	Employee
3/1/1991	Daccar	Employee, South Africa	CoreStates	Diversity
-, -, -, , -	Thermo Instrument Systems	Nuclear	Alza	Industry
	Tonka Corp.	Acquired by Hasbro	Charming Shoppes	Diversity
5/31/1991	<u> </u>	- · · ·	Zurn Industries	Environment
	America West	Acquired by Schneider SA Financial	Eastern Enterprises	Environment
			*	
9/30/1991		Acquired by AT&T	Alaska Airlines	Industry
10/31/1991	Cross & Trecker	Dropped by S&P	Sunrise Medical	Diversity
2/28/1992	Corning	Product/Quality; breast implants	Cooper Industries	Industry
4/2/1992	Chemical Bank	Merger with Manufacturers Hanover Corp.	BET Holdings	Diversity
4/2/1992	Kansas Power & Light	Acquired by Kansas Gas and Electric Company	Cisco Systems	Industry
5/1/1992	Ameritrust	Acquired by Society Corp.	Borland International	Employee
5/1/1992	Security Pacific	Acquired by Bank of America	Cincinnati Financial	Product/Quality
5/1/1992	INB Financial	Acquired by NBD Bancorp	DeVry	Community
8/19/1992	Wang	Financial	Novell	Employee
9/1/1992	Northern Telecom	South Africa	Perkin-Elmer	Industry
10/1/1992	Burlington Resources	Environment	Turner Broadcasting	Diversity

11/1/1992	Wetterau	Acquired by Supervalu Inc.	El Paso Natural Gas	Environment
12/1/1992	Sara Lee	Tobacco	Raychem	Industry
1992	United Telecommunications	Name change	Sprint Corporation	Name change
2/1/1993	Microsoft	South Africa	Whole Foods Market	Employee
2/15/1993	Lotus	South Africa	Oklahoma Gas & Electric	Industry
2/15/1993	Autodesk	South Africa	Quarterdeck Office Systems	Diversity
4/30/1993	Measurex	South Africa	Praxair	Environment, Industry
	Tambrands	South Africa	Public Service Co.	Industry
5/15/1993	Van Dorn	Acquired by Crown Cork & Seal	MCN Corp.	Environment, Industry
7/31/1993	Digital Equipment Corp.	South Africa	Fifth Third Bancorp	Community
9/30/1993	Johnson Products	Acquired by Ivax	Johnson & Johnson	Industry, South Africa Lifted
9/30/1993	Affiliated Publications	Acquired by NYT	Hewlett-Packard	Industry, South Africa Lifted
10/31/1993	Baxter International	Product, Other (Arab Boycott)	Allergan	Industry, South Africa Lifted
10/31/1993	Chambers Development	Environment (Landfill)	Autodesk	Industry, South Africa Lifted
10/31/1993	Fleet Financial	Community	Digital Equipment	Industry, South Africa Lifted
10/31/1993	National Medical Enterprises	Product/Quality (Criminal Investigations)	Lotus Development	Industry, South Africa Lifted
10/31/1993	Monarch Machine Tools	Industry, Other (Dropped by S&P)	Nalco Chemical	Industry, South Africa Lifted
11/1/1993	Medco Containment Services	Acquired by Merck	Schering Plough on 12/1/93	Industry, South Africa Lifted
12/1/1993	Primerica	Merged with Travelers	Colgate-Palmolive on 1/1/94	Industry, South Africa Lifted
5/13/1994	Capital Holding Corporation	Name change	Providian Corporation	Name change
	Software Toolworks	Acquired by Pearson Plc (Britian)	Sonoco on 6/29/94	Environment, Industry
	ASK Computer	Acquired by Computer Associates International	Kennetech	Environment
7/1/1994	•	Acquired by Sandoz AG (Switzerland)	Spartan Motors	Product/Quality
	Medical Care America	Acquired by HCA Inc.	American Power Conversion	Employee, Product/Quality
9/21/1994		Acquired by AT&T	NYNEX	Employee
	Neutrogena	Acquired by Johnson & Johnson	Kellogg	South Africa Lifted
	Safety-Kleen	Environment (Regulatory Problems)	FirstFed	Community
	McKesson	Acquired by Lilly	Avery Dennison	Industry
	Magma Power	Acquired by California Energy	Xilinx	Employee
12/1/1994	Magnia i owei	Acquired by Camorina Energy	Allina	Employee
# /4 4 /2 0 0 =				a
	Continental Corp.	Acquired by CNA (Owned by Loews)	Scholastic Corporation	Community, Diversity
	Clark Equipment	Acquired by Ingersoll-Rand	United American Healthcare	Diversity
7/6/1995	Lotus Development	Acquired by International Business Machines	Solectron	Diversity, Product/Quality

9/28/1995 11/7/1995 11/13/1995 11/13/1995 11/24/1995 12/1/1995 12/1/1995	Worldway Corporation Santa Fe Pacific Corp. Zenith Electronics US West Wallace Computer Services	Acquired M/A Com (Military Contractors) Acquired by Arkansas Best Corporation Acquired by Burlington Northern, Inc. Acquired by LG Electronics, Inc. (Korea SE) Split into two classes of stock Acquired by Moore Corp. Acquired by Westinghouse Acquired by Fleet Merged with NBD Merged with First Chicago Acquired by Kimberly Clark	International Business Machines Odwalla, Inc. Charles Schwab Corp. Timberland US West Communications US West Media Molex First Chicago NBD Deere Inc. Starbucks Kimberly Clark	Community Employee, Product/Quality Community, Employee Community Industry, Replaced US West Industry, Replaced US West Industry Industry (Merger of First Chicago and NBD) Employee, Product/Quality Community, Employee Industry, Acquired Scott
	First Fidelity Bancshare	Acquired by First Union	Oxford Health Plans	Community, Industry
1/5/1996	CCH Inc.	Acquired by Wolters Kluwer NV	Banta Corp.	Industry
	GEICO Corp.	Acquired by Berkshire Hathaway	Boston Scientific	Industry
	Archer-Daniels-Midland	Alcohol, Other	National Semiconductor	Diversity, Employee
2/12/1996	Capital Cities / ABC	Acquired by The Walt Disney Company	MBNA	Community
	Petrie Stores	Financial	Gerber Scientific	Product/Quality
3/7/1996	Gannett Company	Employee (Labor Problems)	3Com	Employee, Industry
3/7/1996	Knight-Ridder	Employee (Labor Problems)	Case Corporation	Employee, Industry
	Morrison Restaurants	Split into three	Ruby Tuesday	Industry (Retained from Morrison split-up)
4/3/1996	Caliber Systems	Roadway Services split-up	Roadway Express	Industry (Retained from Roadway split-up)
4/17/1996	Premier Industrial	Acquired by foreign firm	Marquette Electronics	Diversity, Employee
6/19/1996	Groundwater Technology	Acquired by Fluor Daniel	Edmark Corporation	Diversity, Product/Quality
7/31/1996	U.S. Healthcare	Acquired by Aetna	W.H. Brady	Community, Diversity, Employee
10/10/1996	Turner Broadcasting	Acquired by Time Warner	Crown, Cork & Seal	Community, Industry
	Melville Corporation	Ticker Change	Melville Corporation	Ticker change
11/21/1996	Melville Corporation	Name change	CVS Corporation	Name change
12/2/1996	Edmark	Acquired by IBM	Microsoft Consolidated Freightways	Industry, Large S&P
12/31/1996	Consolidated Freightways, Inc.	Spinoff	Corporation	Spinoff
	Oklahoma Gas and Electric C	Name change	OGE Energy Corp.	OGE Energy Corp.
	Alexander & Alexander	Acquired by Aon	Merix Corporation	Diversity, Product
1/23/1997	KENETECH	Financial difficulties	Nature's Sunshire	Product

	Briggs & Stratton	Labor and community	Sonat	Environment
	Alco Standard Corporation	Name change	Ikon Office Solutions, Inc.	Name change
	Noram Energy	Acquired by Houston Industries	Western Atlas	Industry, Large S&P
	Pacific Telesis	Merged with SBC Communications	Granite Construction	Product
	Goulds Pumps	Acquired by ITT Industries	Hutchinson Technologies	Product, Diversity
5/28/1997		Acquired by CSX/Norfolk Southern	AT&T	Employee
	Providian Corporation	Aquired by Aergon NV (Neatherlands)	Providian Financial Corporation	Spun-off from Providian Corporation
	National Education	Acquired by Harcourt General	MBIA	Community, Diversity, Employee/S&P
6/20/1997		Acquired by American General	Black & Decker	Product/Large S&P
	Transitional Hospitals	Acquired by Vencor	Broderbund Software	Employee
	Great Western Financial	Acquired by Washington Mutual Acquired by Philips Environmental (Canadian	Washington Mutual	Acquired Great Western Financial
	Allwaste, Inc. Public Service Company of	company)	IMCO Recycling Inc.	Beneficial Product/Service
	Colorado	Name change	New Centuries Energy, Inc.	Name change
	BET Holdings	Labor	Union Pacific Resources Central Louisiana Electric	Environment, Employee
	NYNEX Corporation	Acquired by Bell Atlantic	Company, Inc.	Environment, Diversity
	Tandem Computers	Acquired by Compaq	QuickResponse Services, Inc.	Community, Diversity, Employee, Product
9/15/1997		Acquired by Fujitsu	Champion Enterprises, Inc.	Diversity, Employee
	Hechinger Company	Acquired by Leonard Green & Partners LP	Northwest Natural Gas Company	Employee,Environment,Other
10/10/1997	Thermo Electron Corporation Louisiana Land & Exploration	Substantial Military Involvement	Interface, Inc.	Strong Environmental Record, CERES Signatory
10/27/1997		Acquired by Burlington Resources	Dell Computer Corporation	innovative product, Employee
12/9/1997	NIKE, Inc	International Labor Controversies	Guidant Corporation	innovative product
1/8/1998	International Dairy Queen	Acquired by Berkshire Hathaway	Wendy's International	Diversity, Employee Involvement, Environment-Recycling
1/0/1000	CPC International	Spun off part of their business and changed	Bestfoods	N name for CDC International after eninning off corn by
	Barnett Banks Inc	name Acquired by NationsBank		New name for CPC International after spinning off corn bu
1/14/1770	Barnett Banks Inc	Acquired by NationsBank Acquired Caliber System and changed name to	LSI Logic Corporation	Employee strength
1/28/1998	Federal Express Corporation	FDX Holding	FDX Holding Corp.	Federal Express acquired Caliber System and formed FDX
	CSX Corp	Poor environmental and safety record	Mallinckrodt Inc	Industry Diversification
31211222	CBA Corp	Large ownership by Western Resources, a	Wanner out me	madady Diversification
3/23/1998	ONEOK, Inc	nuclear utility	Texas Instruments	Diversity and Employee Strength
	USF&G Corporation	Acquired by St. Paul Companies	Caraustar Industires, Inc	Environment-Recycling
	CoreStates Financial Corp	Acquired by First Union Corp	Ault Incorporated	Diversity and Employee Strength
	Central Louisiana Electric	Name change	Cleco Corporation	Name change
		<i>5</i>	1	

	Company			
5/1/1998	Stanhome Inc.	Name change	Enesco Group, Inc.	Name change
	Northwestern Public Service			
	Company	Name change	Northwestern Corporation	Name change
	Piper Jaffray Companies Inc.	Acquired by U.S. Bancorp	Synovus Financial Corp.	Employee strength
	QuickResponse Services, Inc.	Name change	QRS Corporation	Name change
	Keyspan Energy Corporation	Name change	MarketSpan	Name change
	Borland International, Inc.	Name change	Inprise Corporation	Name change
	Woolworth Corporation	Name change	Venator Group, Inc.	Name change
	U S West Communications	Name change	U S West, Inc.	Name change
6/12/1998	U S West Media Group	Name change	MediaOne Group, Inc.	Name change
6/17/1998	Zurn Industries, Inc.	Acquired by U.S. Industries, Inc.	EMC Corporation	Innovative Product, Lean Management
6/18/1998	Digital Equipment Corporation	Acquired by Compaq Computer Corporation	Ceridian Corporation	Diversity Strengths
6/30/1998	Pacific Enterprises	merged with Enova Corporation	Adaptec, Inc.	Diversity, Employee Strengths
7/1/1998	Beneficial Corp.	Acquired by Household International, Inc.	Scientific-Atlanta, Inc.	Industry Diversification
7/17/1998	Giant Food Inc.	Acquired by Royal Ahold NV	MGIC Investment Corporation	Product
7/30/1998	ARCO Chemical Company	Acquired by Lyondell Petrochemical Co.	Emerson Electric Co.	Environment, Quality
8/7/1998	Spec's Music, Inc.	Acquired by Camelot Music Holdings Inc.	The Vincam Group, Inc	Diversity, Product
8/12/1998	Western Atlas Inc.	Acquired by Baker Hughes Inc.	Gillette Company	Diversity, Environment
	International Business Machines	Military, sold supercomputers to Russian		
	Corporation	nuclear weapons facility	Lucent Technologies Inc.	Diversity, Employee
8/19/1998	Mercantile Stores Company, Inc. DSC Communications	Acquired by Dillard Department Stores, Inc.	Staples, Inc.	Product
9/21/1998	Corporation	Acquired by Alcatel-Althsom SA	IMS Health Incorporated	Diversity
0/21/1009	MCI Communications	A agricult by World Com	AirTouch Communications	Disconsites
	Corporation Production Software Inc.	Acquired by WorldCom		Diversity Employee Industry Representation
	Broderbund Software, Inc.	Acquired by The Learning Company merged with Health Care and Retirement	HBO & Co.	Employee, Industry Representation
	Manor Care, Inc.	Corporation	ADAC Laboratories	Employee, Quality, Industry Representation
	BankAmerica Corporation	Acquired by NationsBank Corporation	Symantec Corporation	Diversity, Employee
	First Chicago NBD Corp.	Merged with Banc One Corporation	BMC Software, Inc.	Employee
	H.F. Ahmanson & Company	Acquired by Washington Mutual, Inc.	U. S. Bancorp	Community, Diversity
	Travelers Group Inc.	Merged with Citicorp	PeopleSoft, Inc.	Diversity, Employee, Product
	General Signal Corporation	Acquired by SPX Corporation	Ecolab Inc.	Community, Employee, Environment, Product
	Cincinnati Milacron Inc.	Name change	Milacron Inc.	Name change
	Brady (W.H.) Company	Name change	Brady Corporation	Name change
	MarketSpan	Name change	KeySpan Energy	Name change
10/22/1998	Stratus Computer, Inc.	Acquired by Ascend Communications, Inc.	Men's Wearhouse, Inc.	Employee

10/26/1998	BetzDearborn Southern New England Telecommunications	Acquired by Hercules, Inc.	Fred Meyer, Inc.	Diversity
11/2/1998	Corporation	Acquired by SBC Communications Inc.	Aquarion Company	Diversity
	Norwest Corporation	merged with Well Fargo & Company	Osmonics Inc.	Diversity, Environment
	Sun Company, Inc.	Name change	Sunoco, Inc.	Name change
	Quarterdeck Corporation	Acquired by Symantec Corporation	Questar Corporation First Tennessee National	Employee, Environment
11/24/1998	Marquette Medical Systems, Inc.	Acquired by General Electric Company	Corporation	Diversity, Employee
	General Re Corporation	Acquired by Berkshire Hathaway	Wild Oats Markets, Inc.	Diversity, Employee, Environment
12/31/1998	Pennzoil Company	Name change	PennzEnergy Corporation	Name change
1/5/1999	Amoco Corporation	Acquired by British Petroleum Company Plc	Catalytica, Incorporated	Employee, Environment, Product, Other Strengths
1/12/1999	HBO & Co.	Acquired by McKesson Corporation	McKesson HBOC, Inc.	Industry Representation
1/11/1999	Luby's Cafeterias, Inc.	Name change	Luby's Inc.	Name change
2/26/1999	Oryx Energy Company	Acquired by Kerr-McGee Corporation	Cascade Natural Gas Corporation	Environment, Diversity, Other
2/26/1999	Inland Steel Industries, Inc.	Name change	Ryerson Tull, Inc.	Name change
3/10/1999	Tele-Communications, Inc.	Acquired by AT&T	Compuware Corporation	Employee, Diversity Strengths
3/11/1999	The Vincam Group, Inc.	Acquired by Automatic Data Processing, Inc.	Darden Restaurants, Inc. MidAmerican Energy Holdings	Diversity Strengths
3/15/1999	CalEnergy Company, Inc.	Name change	Company	Name change
	MidAmerican Energy Holdings	Derives power from nuclear; joint owner of		
3/16/1999		nuclear plant	Minerals Technologies Inc.	Employee, Environment, Product Strengths
	Rubbermaid Inc.	Acquired by Newell Co.	Tupperware Corporation	Diversity Strengths
	Fred Meyer, Inc.	In anticipation of being Acquired by Kroger Co.	Bandag, Incorporated	Diversity, Environment Strengths
	The Perkin-Elmer Corporation	Name change	PE Corp-PE Biosystems Group	Name change
	Santa Fe Energy Resources Vermont Financial Services	Name change	Santa Fe Snyder Corporation	Name change
	Corporation	Acquired by Chittenden Corporation	Chittenden Corporation	Community Strengths
	Brown Group, Inc.	Name change	Brown Shoe Company, Inc.	Name change
	Bankers Trust Corporation	Acquired by Deutsche Bank	Firstar Corporation	Community Strengths
	KeySpan Energy Corporation	Name change	KeySpan Corporation	Name change
	Morton International, Inc.	Acquired by Rohm and Haas Company	AutoZone, Inc.	Product Strengths
	American Stores Companies	Acquired by Albertson's, Inc.	Capital One Financial Corporation	Diversity, Employee Strengths
	AirTouch Communications	Acquired by Vodafone Group Plc	Arrow Electronics, Inc.	Employee, Diversity, Product Strengths
	UNUM Corporation	Name change	UnumProvident Corporation	Name change
7/27/1999	Transamerica Corporation	Acquired by Aegon NV	Delphi Automotive Systems Corp.	Employee Strength, Industry Representation

8/9/1999	Battle Mountain Gold Company	Community controversy Pending acquisition by Suez Lyonnaise des	Paychex, Inc.	Diversity, Employee Strengths
8/9/1999	Nalco Chemical Company	Eaux	The Progressive Corporation	Employee Strength
	Raychem Corporation	Acquired by Tyco International Ltd.	Steelcase Inc.	Employee Strengths
	PennzEnergy Company	Acquired by Devon Energy Corporation	Qualcomm, Inc.	Diversity, Employee Strengths
	Costco Companies Inc	Name change	Costco Wholesale Corporation	Name change
	Frontier Corporation	Acquired by Global Crossing Ltd.	Lexmark International Group, Inc.	Diversity, Employees Strengths
	BankBoston Corporation	Acquired by Fleet Financial Group	National Fuel Gas Company	Environment Strength
	Ameritech Corporation	Acquired by SBC Communications Inc.	AFLAC Inc.	Diversity, Employee Strengths
	Mellon Bank Corporation	Name change	Mellon Financial Corporation	Name change
10/27/1999	-	Acquired by El Paso Energy Corp.	Watson Pharmaceuticals, Inc.	Diversity Strengths
	Case Corporation	Acquired by New Holland N.V.	Donnelly Corporation	Employee Strength, Industry Representation
	King World Productions, Inc.	Acquired by CBS Corp.	Stillwater Mining Company	Environment, Employee Strengths, Industry Representation
	Egghead.com, Inc.	Acquired by Onsale	ADC Telecommunications, Inc.	Diversity Strength, Large Market Capitalization
	Cyprus Amax Minerals	1		
12/3/1999	Company	Acquired by Phelps Dodge Corporation	Sanmina Corporation	Diversity, Employee Strengths
		Licenses Brand Name to Gambling Services		
12/23/1999	Hasbro, Inc.	Company	Northern Trust Corporation	Community, Diversity, Employee Strengths, Industry Repr
1/6/2000	TJ International, Inc.	Acquired by Weyerhaeuser Company	Manor Care, Inc.	Industry Representation
1/10/2000	Aquarion Company	Acquired by Kelda Group plc	National City Corporation	Community, Diversity, Employee Strengths, Industry Repr
1/21/2000	FDX Holding Corporation Consolidated Natural Gas	Name change	FedEx Corporation	Name change
1/31/2000	Company	Acquired by Dominion Resources, Inc.	AstroPower, Inc.	Environment Strength
	Dayton Hudson Corporation	Name change	Target Corporation	Name change
	Connecticut Energy Corporation	Acquired by Energy East Corporation	KeyCorp	Community & Employee Strengths, Industry Representation
	Gibson Greetings, Inc.	Acquired by American Greetings Corporation	Yahoo! Inc.	Diversity & Employee Strengths, Large Market Capitalizat
	PNC Bank Corp.	Name change	PNC Financial Services Group	T T T T T T T T T T T T T T T T T T T
	Atlantic Richfield Company	Acquired by BP Amoco Plc	America Online	Market Capitalization and Employee Strength
	Worthington Industries, Inc.	Ticker change	Worthington Industries, Inc.	Ticker change
	TCBY Enterprises, Inc.	Acquired by Capricorn Investors III LP	Horizon Organic Holding Corp.	Environment Strength
	United American Healthcare	Ticker change	United American Healthcare	č
5/9/2000	Jostens, Inc.	Acquired by Investcorp Bank	Quintiles Transnational Corp. Citizens Communications	Industry Representation and Diversity Strength
5/19/2000	Citizens Utlities Co.	Name change	Company	
5/31/2000	Tandy Corporation	Name change	RadioShack Corporation	name and ticker change
	Shared Medical Systems	Acquired by Siemens AG	Kansas City Southern Industries,	Industry Representation, Large Market Capitalization

	Corporation		Inc.	
6/12/2000	Marriott International Inc.	Gambling	Univision Communications Inc.	Diversity Strengths, Industry Representation, Large Marke
6/12/2000	Times Mirror Company	Acquired by Tribune Company	Tribune Company	Community and Product Strengths, Market Capitalization
	MediaOne Group, Inc.	Acquired by AT&T Corp.	Donaldson Company, Inc.	Industry Representation, Environment Strength
	Alcoa, Inc.	Military	Comerica Incorporated	Industry Representation, Market Capitalization, Communit
	Bell Atlantic Corporation	Name change	Verizon Communications	name and ticker change
	Lexmark International Group,	E		č
7/3/2000	Inc.	Name change	Lexmark International, Inc.	Name change
		Acquired by Qwest Communications		
	U S West, Inc.	International Inc.	Southern Union Company	Employee, Environment, & Other Strength
	Ben & Jerry's Homemade, Inc.	Acquired by Unilever	Stilwell Financial Inc.	Market Capitalization and Industry Representation
	Hannaford Bros. Co.	Acquired by Delhaize America	Pulte Corporation	Industry Representation
	Union Pacific Resources Group	Acquired by Anadarko Petroleum	AmSouth Bancorporation	Industry Representation, Market Capitalization, Diversity a
	New Century Energies, Inc.	merger with Northern States Power (Nuclear)	Palm, Inc.	Market Capitalization, Spin-off from 3Com (a DSI compar
	Santa Fe Snyder Corporation	Acquired by Devon Energy Corporation	Devon Energy Corporation	Market Capitalization, Industry Representation
	Consolidated Papers, Inc.	Acquired by Stora Enso Oyj	Amgen Inc.	Market Capitalization, Industry Representation, Communit
9/1/2000	ReliaStar Financial Corp.	Acquired by ING Group (Dutch)	Advent Software, Inc.	Diversity and Employee Strengths
0/2/2/2000	United American Healthcare			
	Corporation	Financial	Houghton Mifflin Company	Diversity Strengths
	Men's Wearhouse	Changed ticker from MENS to MW	Men's Wearhouse	Ticker change
	Bestfoods	Acquired by Unilever	MedImmune, Inc.	Market Capitalization, Industry Representation
	Mallinckrodt, Inc.	Acquired by Tyco International, Ltd.	Andrew Corporation	Industry Representation, Diversity Strength
	Tennant Company	Ticker change	Tennant Company	Ticker change
	Eastern Enterprises	Acquired by KeySpan Corporation	Kinder Morgan, Inc.	Diversity, Employee, Environment, and Other Strengths, S
11/1/2000	Washington Gas Light Company	Name change	WGL Holdings	Name change
11/0/0000			Mitchell Energy & Development	
	Acuson Corporation	Acquired by Siemens AG	Corp.	Employee and Environment Strengths, Industry Representa
	Fort James Corporation	Acquired by Georgia-Pacific Corporation	EOG Resources, Inc.	Market Capitalization, Industry Representation, Environme
	HSB Group, Inc.	Acquired by American International Group, Inc.	Baxter International, Inc.	Market Capitalization, Sector Representation, Diversity &
11/28/2000	Sunrise Medical Inc.	Going Private	Charter One Financial, Inc. Applera CorpApplied	Market Capitalization, Industry Representation, and Divers
11/30/2000	PE CorpPE Biosystems Group	Name change	Bioxystems Group	name and ticker change
	Automatic Data Processing, Inc.	Ticker change	Automatic Data Processing, Inc.	ticker change
12/8/2000	LG&E Energy Corp.	Acquired by PowerGen plc	Franklin Resources, Inc.	Market Capitalization, Industry Representation
	ADAC Laboratories	Acquired by Dutch Phillips Electronics	Aon Corporation	Market Capitalization, Industry Representation
	Aetna, Inc.	Acquired by ING Group (Netherlands)	Hartford Financial Services Group	Market Capitalization, Sector Representation, and Diversity
	Catalytica, Incorporated	Acquired by DSM NV	Sapient Corporation	Industry Representation, Diversity and Employee Strengths
	Airborne Freight Corporation	Name change	Airborne, Inc.	Name change
	U 1	Č	•	S

	Morgan (J.P.) & Co. Incorporated	Acquired by Chase Manhattan Corporation	Chase Manhattan Corporation	Market Capitalization, Industry Representation, Communit
12/29/2000	Chase Manhattan Corporation	Name change	Morgan (J.P.) Chase & Co.	name and ticker change
1/8/2001	Shaw Industries	Acquired by Berkshire Hathaway, Inc.	NiSource, Inc.	Market Capitalization, Sector Representation, Diversity and
	Echo Bay Mines Ltd.	Lack of Social and Financial Representation	Radio One, Inc.	Industry Representation, Diversity and Other Strengths
1/11/2001	America Online Kaufman & Broad Home	Name change	AOL Time Warner Inc.	Name change
1/17/2001	Corporation	Name change	KB Home	Name change
	Inprise Corporation	Name change	Borland Software Corporation	name and ticker change
1/29/2001	Whitman Corporation	Name change	PepsiAmericas, Inc.	name and ticker change
		International Labor Controversies (see KLD	Minnesota Mining and	
2/1/2001	Wal-Mart Stores, Inc.	White Paper)	Manufacturing Company	Industry Representation, Market Capitalization, Diversity,
	Moore Corporation	Lack of Social and Financial Representation	Moody's Corporation	Sector Representation, Market Capitalization, Diversity and
2/7/2001	El Paso Energy	Name change	El Paso Corporation	Name change
2/26/2001	U.S. Bancorp	Acquired by Firstar	GreenPoint Financial	Industry Representation, Community and Diversity Strengt
2/26/2001	Firstar Corp.	Name change	U.S. Bancorp	name and ticker change
- (- 0 (- 0 0 d	Arbitron (i.e., Old Ceridian)	Smaller of the two companies resulting from	~ ~	
3/30/2001	•	Old Ceridian Spin-off	Ceridian (i.e., New Ceridian)	Larger of the two companies resulting from Old Ceridian S
	Cummins Engine Company, Inc.	Name change	Cummins, Inc.	Name change
	Oxford Health Plans, Inc.	Ticker change	Oxford Health Plans, Inc.	Ticker change
	Federal Mogul Corporation	Lack of Social and Financial Representation	Visteon Corporation Emmis Communication	Industry Representation, Diversity and Product Strengths
	Huffy Corporation	Lack of Social and Financial Representation	Corporation	Employee Strength
	MCN Energy Group, Inc.	Acquired by DTE Energy Co.	State Street Corporation	Market Capitalization, Community, Diversity and Non-US
6/15/2001	Pulte Corporation	Name change	Pulte Homes, Inc.	Name change
	ALZA Corporation	Acquired by Johnson & Johnson	Imation Corporation	Diversity, Employee Relations, and Environment Strengths
7/6/2001	Houghton Mifflin Company	Acquired by Vivendi Universal SA	AT&T Wireless Services, Inc.	Spin-off from AT&T, a DSI Company
	Ryerson Tull, Inc.	Lack of Social and Financial Representation	Green Mountain Coffee, Inc.	Community and Non-US Operations Strengths
7/11/2001	Harcourt General, Inc.	Acquired by Reed International PLC	Lubrizol Corporation	Industry Representation and Environment Strengths
8/2/2001	Quaker Oats Company	Acquired by PepsiCo	Robert Half International	Diversity Strength and Market Capitalization
	Fedders Corporation	Lack of Social and Financial Representation	Noble Affiliates, Inc.	Industry Representation, Environment and Employee Relat
8/28/2001	Bergen Brunswig Corporation	Acquired by AmeriSource Health Corporation	Mirant Corporation	Market Capitalization, Industry Representation, Diversity a
8/29/2001	American General Corporation	Acquired by American International Group	Engelhard Corporation	Industry Representation and Environment Strength
	Wachovia Corporation	Acquired by First Union	Wachovia Corporation	Market Capitalization, Community, Diversity and Employe
9/5/2001	Springs Industries	Going Private	Electronic Data Systems	Market Capitalization and Diversity Strengths
10/11/2001	Polaroid Corporation	Imminent Bankruptcy	Waters Corporation	Market Capitalization, Sector Representation, Diversity and

	1 *	Lack of Social and Financial Representation Product, Environment, and Other Concerns	Hain Celestial Group, Inc. Masco Corporation	Environment Strength Market Capitalization and Industry Representation
	•	Name change	Foot Locker, Inc.	Name change
	• .	Lack of Social and Financial Representation	Madison Gas & Electric Company	Community, Diversity, Environment and Other Strengths
12/6/2001	Odwalla, Inc.	Being acquired by Coca-Cola Company Acquiring SCI Systems, a military weapons	Zimmer Holdings, Inc.	Market Capitalization, Sector Diversification, and Diversity
	Sanmina Corporation	contractor	Rohm and Haas Company	Market Capitalization, Industry Diversification & Commun
12/12/2001	Ralston Purina Company	Acquired by Nestle SA	Harley-Davidson, Inc.	Market Capitalization and Employee Relations Strengths
	<u>*</u>	Being acquired by Washington Mutual, Inc.	King Pharmaceuticals	Market Capitalization, Sector Representation, and Employe
	-	Lack of Social and Financial Representation	Family Dollar Stores, Inc. Bright Horizons Family Solutions,	Market Capitalization, Sector Representation, Product and
		Lack of Social and Financial Representation	Inc.	Diversity, Employee Relations, and Other Strengths
	Mitchell Energy & Development	Lack of Social and Financial Representation	Trex Company, Inc.	Environment and Other Strength
	=	Acquired by Devon Energy Corporation	Bank of America Corporation	Market Capitalization, Community, Diversity, Employee R
	-	Lack of Social and Financial Representation	Biogen, Inc.	Market Capitalization, Sector Representation, Diversity and
	<u>*</u>	Merging with Mead Corporation	Cooper Cameron Corporation	Sector Representation
		Environment and Product Safety Concerns AFL-CIO Boycott of BET Subsidiary and other	United Natural Foods, Inc.	Environment and Other Strengths
	Viacom, Inc.	concerns	Lincoln Electric Holdings, Inc.	Diversity and Employee Relations Strengths and Sector Re
	•	Lack of Social and Financial Representation	Rock-Tenn Company	Recycling Strength
	1 1 1	Being acquired by Hewlett-Packard	United Parcel Service, Inc.	Market Capitalization, Community and Diversity Strengths
	1	Being acquired by Sears, Roebuck and	Invacare Corporation	Diversity Strength and Sector Representation
		Company	C.R. Bard, Inc.	Sector Representation
	Madison Gas & Electric	Diversity and Product Concerns	Safeway Inc.	Market Capitalization and Diversity Strength
8/12/2002	1 0	Name change	MGE Energy, Inc.	Name change
	Great Atlantic and Pacific Tea	Military Weapons Contracting	Thermo Electron	Diversity, Employee Relations, Environment and Product S
	Consolidated Freightways	Lack of Social and Financial Representation	GAIAM, Inc.	Diversity and Environment Strengths
	•	Bankruptcy	Invitrogen Corporation	Sector Representation and Diversity Strengths
	-	Corporate Governance Concerns	eBay, Inc.	Market Capitalization, Diversity and Product Strengths
	2 2	Product Concerns Acquired by Magna International, a Canadian	Bausch & Lomb Incorporated	Sector Representation and Diversity Strengths
10/1/2002	Donnelly Corporation	Gambling company	Cathay Bancorp	Diversity Strengths

12/5/2002	Comcast Corporation UAL Corporation	Liquidity and Voting Rights Imminent Bankruptcy	Comcast Corporation Plantronics, Inc.	Liquidity and Voting Rights Diversity and Employee Relations Strengths
12/13/2002	Hunt Corporation	Being acquired by Berwind Co. LLC	Pixar	Diversity, Employee Relations, and Product Strengths
12/23/2002	Household International, Inc.	Community Relations Concerns	Electronic Arts, Inc.	Market Capitalization, Diversity and Employee Relations S
1/2/2003	Stilwell Financial, Inc.	Name change Acquired by RWE Aktiengesellschaft and	Janus Capital Group, Inc.	Name change
1/10/2003	American Water Works, Inc. Crown Cork & Seal Company,	Thames Water Aqua Holdings	CDW Computer Centers, Inc.	Market Capitalization, Sector Representation, Diversity and
2/26/2003	Inc.	Name change	Crown Holdings, Inc. Estee Lauder Companies, Inc.,	Name change
	Osmonics, Inc.	Acquired by General Electric Company Marketing & Contracting Concerns, Investment	(The)	Market Capitalization, Board of Directors Strength
3/3/2003	H & R Block, Inc.	Controversies	Allied Capital Corporation	Employee Relations & Product Strengths
	Watts Industries	Lack of Social and Financial Representation	Airgas, Inc.	Sector Representation
3/31/2003	Foot Locker, Inc.	Ticker Change from Z to FL	Foot Locker	Ticker Change from Z to FL
4/3/2003	Fleming Companies, Inc. Applera CorpApplied	Bankruptcy Lack of Social and Financial	D.R. Horton, Inc	Market Capitalization, Sector Representation, Diversity Str
6/5/2003	Biosystems Group	Representation/Trakcing Stock	JetBlue Airways Corporation	Product Qaulity
6/13/2003	National Service Industries, Inc	Acquired by California Investment Fund, LLC	Cross Country Healthcare, Inc	Limited Compensation, Family Benefits, & Promotion
6/18/2003	CDW Computer Centers, Inc.	Name change	CDW Corporation	Name change
7/2/2003	Lillian Vernon Corporation	Acquired by Ripplewood Holdings LLC	Johnson Controls, Inc.	Market Capitalization, Sector Representation, Beneficial Pr
7/15/2003	Mirant Corporation	Bankruptcy	Valspar Corporation	Sector Representation
7/22/2003	Dell Computer Corporation	Name change	Dell Inc.	Name change
7/24/2003	AstroPower, Inc.	Delisted from Nasdaq	Valassis Communications, Inc.	Family Benefits, Promotion, Cash Profit Sharing and Empl
8/15/2003	Airborne, Inc.	Acquired by Deutsche Post AG	Coherent, Inc. Wausau-Mosinee Paper	Gay & Lesbian Policies, Promotion, Cash Profit Sharing, R
9/15/2003	NorthWestern Corporation	Bankruptcy	Corporation	Sector Representation, Environment: Other Strength
9/25/2003	Quintiles Transnational Corp.	The company is going private	Synovis Life Technologies, Inc.	Limited Compensation, CEO, Promotion, Sector Represent
10/16/2003	AOL Time Warner, Inc.	Name change	Time Warner, Inc.	Name change
10/29/2003	Palm, Inc.	Name change	palmOne, Inc.	Name change
11/6/2003	Cathay Bancorp, Inc.	Name change In November 2003, the company was acquired	Cathay General Bancorp, Inc.	Name change
11/12/2003	Biogen, Inc.	by IDEC Pharmaceuticals Corporation	Biogen Idec Inc.	Market Capitalization, Sector Representation, and Employe
12/10/2003	Cummins, Inc.	Ticker change	Cummins, Inc.	Ticker change
12/11/2003	Roadway Corporation	Being acquired by Yellow Corporation	Entegris, Inc.	Beneficial Products & Services strength
12/23/2003	Stillwater Mining Company	Ownership Concern	Red Hat, Inc.	R&D/Innovation Strength

	Horizon Organic Holding			
1/2/2004	Corporation	Being acquired by Dean Foods	Ambac Financial Group, Inc.	Market Capitalization, Employee Involvement, & Benefits
2/24/2004	Dillard's, Inc.	Diversity Concerns	Kadant Inc.	Sector Representation, Limited Compensation & Beneficia
3/5/2004	Cintas Corporation	Union Relations Concern	The E.W. Scripps Company	Market Capitalization, Charitable Giving & Quality Streng
3/31/2004	Bank of America Corporation	Marketing/Contracting Concerns	Genzyme Corporation	Market Capitalization, Support for Education, Gay & Lesb