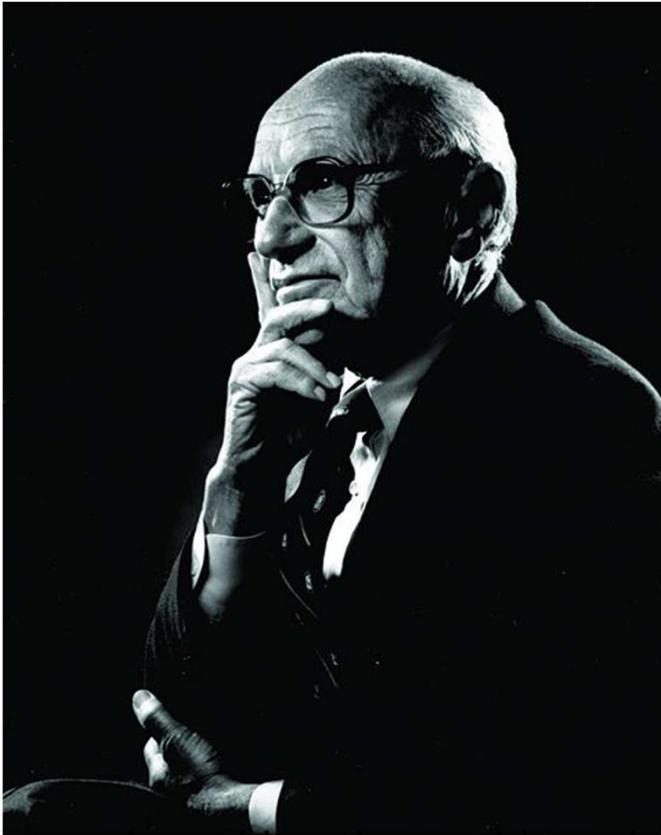


CSR: what did we learn ?

Leonardo Becchetti,

# Is Social Responsibility Useful?

Some say no – at least to CSR  
Friedman



- Few trends could so thoroughly undermine our free society as the acceptance by corporate officials of a social responsibility other than...

Others say yes - Samuelson



- ...a large corporation these days not only may engage in social responsibility, it had damn well better try to do so.

# Friedman's (old pre-globalisation) view

Forces of market competition transform individual and corporate self-interested behavior into an efficient and socially optimal outcome, while the state intervenes with taxes and regulation to address the problem of externalities and public goods and redistributes income and wealth according to the dominating social standards.

# Why Friedman is deeply wrong ....

- GLOBALISATION ARGUMENT: in globally integrated economies in which production is delocalized, with institutions and rules are kept highly heterogeneous amongst nations, regulatory arbitrage and race to the bottom have made the role of CSR progressively more important.
- STRUCTURAL ARGUMENT: regulatory capture by lobbies, inefficiency and high transaction costs limit the scope of state intervention and create room for the emergence of corporate social responsibility as a rational response of concerned consumers who ask (in their own self-interest) corporations to comply with stricter social and environmental norms.
- HAPPINESS ARGUMENT: the corporation is the place where we workers live most of their life. Therefore they cannot separate their humanity from their job

- IS CSR is a "win-win" strategy ?
- Let us investigate the relationship between CSR and corporate performance under different dimensions.

# CSR criteria(KLD)

- i) community
- ii) corporate governance;
- iii) diversity
- iv) employee relations
- v) environment
- vi) human rights
- vii) product quality
- viii) controversial business issues

P.S.: are all stakeholders equal ? No shareholders and workers risk more in the firm...

Is CSR economically sustainable in the competitive globalized scenario ?

- 1) CSR is not a free lunch: most CSR criteria entail higher costs since they transfer income from shareholders to other stakeholders
- Some exceptions: cap to managers' wage, product quality
- ...such costs may be however offset by five potential benefits ...

## First potential gain: the impact on workers' productivity(1)

- A) Efficiency wages (or the productivity-wage nexus upside down): higher workers remuneration reduces shirking, and turnover and triggers gift exchange phenomena (Stiglitz-Shapiro, 1982; Salop, 1979; Malcomson, 1981; Akerlof, 1982)
- B) CSR makes corporate goals closer to workers ideals thereby triggering intrinsic motivations (Deci and Ryan, 2000). The extreme corporate dreams: volunteers are so intrinsically motivated to «work for nothing» (Freeman, 1997)

First potential gain: the impact on workers' productivity (2)

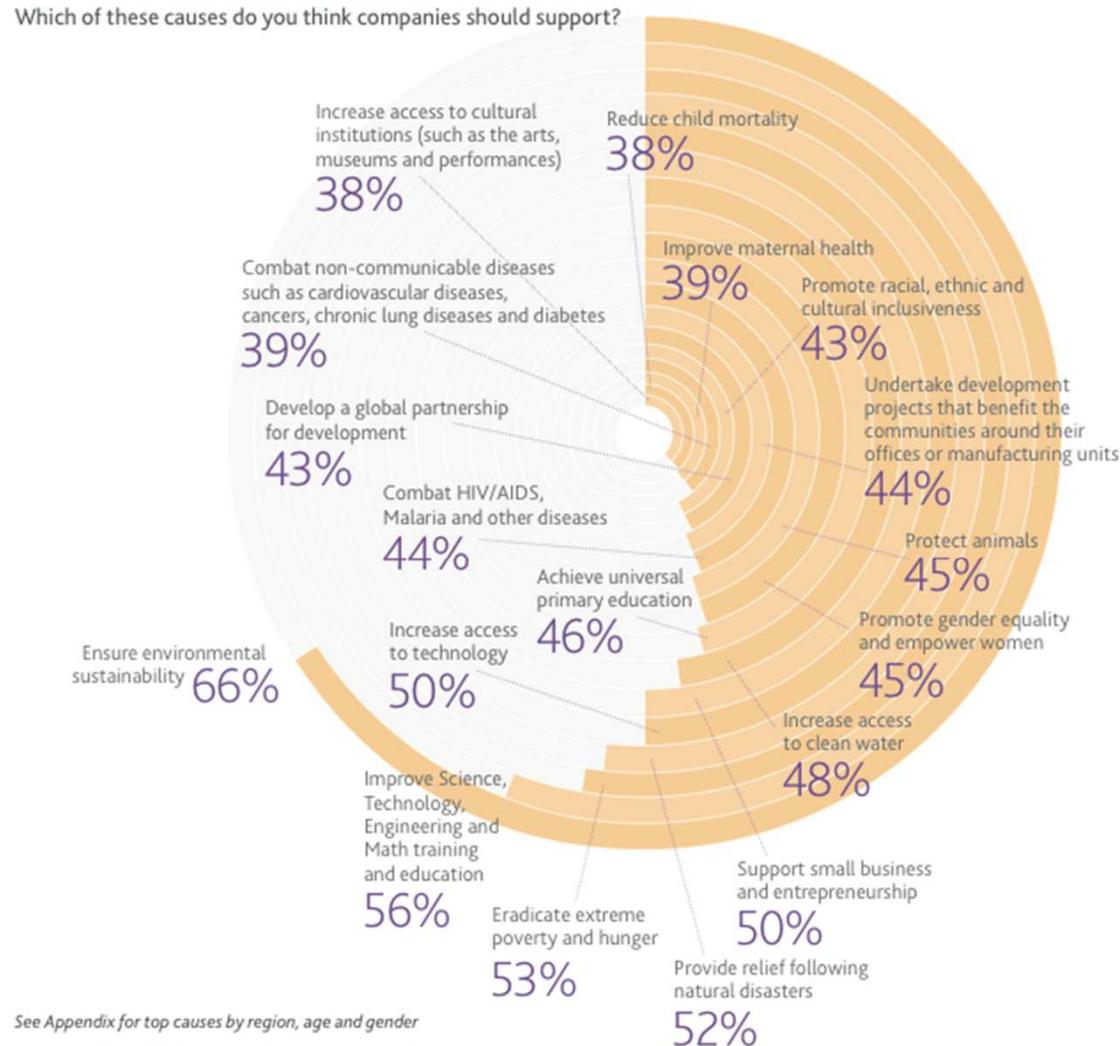
- Edmans (2009) documents that top firms in terms of employee satisfaction in the United States earn a risk adjusted abnormal return (four-factor alpha) of 4 percent per year from 1984 to 2005

## Second potential gain: support from socially responsible consumers «voting with the wallet»

- Nielsen Survey: 28.000 interviews in 56 countries – 46 percent of consumers vote with the wallet



# The second gain: the «vote with the wallet» breakdown



See Appendix for top causes by region, age and gender

Source: Nielsen Global Survey of Corporate Citizenship, Q3 2011

Socially-conscious consumers defined as those who expressed willingness to pay extra for products and services from companies that have implemented programs to give back to society.

# Third potential gain: minimisation of transaction costs with stakeholders

CSR minimises transaction costs with stakeholders (consumers, local communities, suppliers) (Freeman, 1984)

In this sense CSR may reduce «ethical risk» which is becoming an increasingly relevant risk factor taken into account in risk management theory and practice

Every year listed US companies spend millions of dollars to settle conflicts with stakeholders (especially when class actions work)

# The fourth potential gain

CSR is a signal on corporate reputation and product quality under asymmetric information

Minor (2009) shows on a sample of 184 events that product recall generate significantly less negative abnormal returns (3 percent gain) for firms with higher social rating. The rationale is that recalls are more likely to be interpreted as accident not depending on corporate negligence (and with lower consequences on future unobserved product quality)

Considering the median market value of sample firms (23 billions) the net CSR gain per event is 600 million dollars

# The fifth potential gain

- Environmental responsibility may lead to substantial profits when it: i) anticipate future restrictive environmental regulation; ii) triggers innovation in terms of energy saving processes



# What do we know about the CSR-performance nexus (1)

- ❖ **Positive link:** i) employee morale and productivity more than compensate costs (Soloman and Hansen, 1985); ii) CSR and financial performance (Pava and Krausz, 1996 and Preston and O'Bannon, 1997); iii) corporate performance and good stakeholders relationships (Stanwick and Stanwick, 1998; Verschoor, 1998); iv) CSR and growth in sales and returns on sales (Ruf et al., 2001).
- ❖ On the **negative side**, we have contributions of Preston and O'Bannon (1997) Freedman and Jaggi (1982), Ingram and Frazier (1983) and Waddock and Graves (1997).
- ❖ **No directions** results are those of McWilliams and Siegel (2001) Anderson and Frankle (1980), Freedman and Jaggi (1986) and Aupperle, Carroll and Hatfield (1985).
- ❖ Most of these studies **do not take into account** the *endogeneity* and *stationarity* of the time series and panel data.
- ❖ A more recent paper, Barnea and Rubin (2005) refines the empirical methodology and show that the decision to invest in CSR is negatively related to insiders' ownership. CSR is good for shareholders' value up to a given level, but insiders may have an interest to overinvest in it to improve their reputation and they are more likely to do so when their ownership share is lower.
- ❖ Recent papers highlight the increasing diffusion of ethically managed funds and provide theoretical framework and empirical analyses of their relative performance.
- ❖ Bauer, Koedijk and Otten (2002) on active strategies of ethical and traditional investment funds.
- ❖ Geczy, Stambaugh and Levin (2003) calculate the cost of imposing socially responsible investment constraints in terms of risk adjusted returns.

# CSR and the financial crisis (1)

- We analyse with an event study approach the stock market reaction to one of the most important episodes in the global financial crisis (Lehman Brothers going for chapter 11).
- Our inquiry on abnormal returns of about 3,000 stocks around the event date documents that the shock induces investors to incorporate insights from (or re-adjust the pre-event expected impact of) corporate social responsibility (CSR) ratings in stock evaluation in a sort of flight to CSR quality".
- The main CSR domains with significant effects on abnormal returns (corporate governance and product quality) are exactly those in which the defaulted company presented weaknesses according to its ex-ante CSR ratings.

# CSR and the financial crisis (2)

- We also document that the reaction to the Lehman event extends beyond the event date and that investors rationally attribute more value to the direct information on strengths and weaknesses in each CSR rating domain than to aliation/non aliation to the Domini CSR stock market index (FTSE KLD 400 Social Index).
- A more general result of our paper is that investors seem to discover after the event that SR ratings perform a crucial role in nancial markets by providing original information which is not captured by traditional nancial rating indicators.

## Lehman Brothers: September 15, 2008

- First anticipations that Lehman Brothers was going for Chapter 11 arrived at 7 am of the 15th September 2008. The official release of the news was at 11:43.
- Credit default swaps written on Lehman debt amounted to around \$350 billion. The settlement of such contracts would have probably triggered the default of the insuring party.
- The risk of additional defaults coupled with the uncertainty on the rescue plans from governments and central banks to avoid a collapse of the payment system, generated a -4.7% loss of the SP index at the event date.

# Descriptive Results: market reaction



# The hypotheses we tested

H1: CSR net scores (algebraic sum of strengths and weakness) positively affect abnormal returns of observed stocks at the Lehman event date.

H2: The two stronger CSR signals affecting abnormal returns are those on which Lehman was weaker according to ex-ante KLD ratings (corporate governance and product quality).

H3: Financial analysts efficiently exploit CSR information: the significance of direct analytic scores on CSR strengths and weaknesses of the KLD database dominates that of affiliation to a CSR stock market index.

Altri risultati. La reazione del mercato dura più giorni evidenziando una dinamica di reazione diversificata tra fundamentalisti e chartisti

**Excess returns for any additional CSR Strength/Concern  
(sample of 3000 listed companies)**

	LEHMAN BROTHERS			Washington Mutual		
	Event date	Day after	Cumulative effect	Event date	Day after	Cumulative effect
<b>Strengths</b>	<b>0,17%***</b>	<b>--</b>	<b>0,16%***</b>	<b>0,1%***</b>	<b>--</b>	<b>0,2%***</b>
<b>Concerns</b>	<b>-0,3%***</b>	<b>-0,2%***</b>	<b>-0,5%***</b>	<b>-0,1%***</b>	<b>-0,4%***</b>	<b>-0,5%***</b>

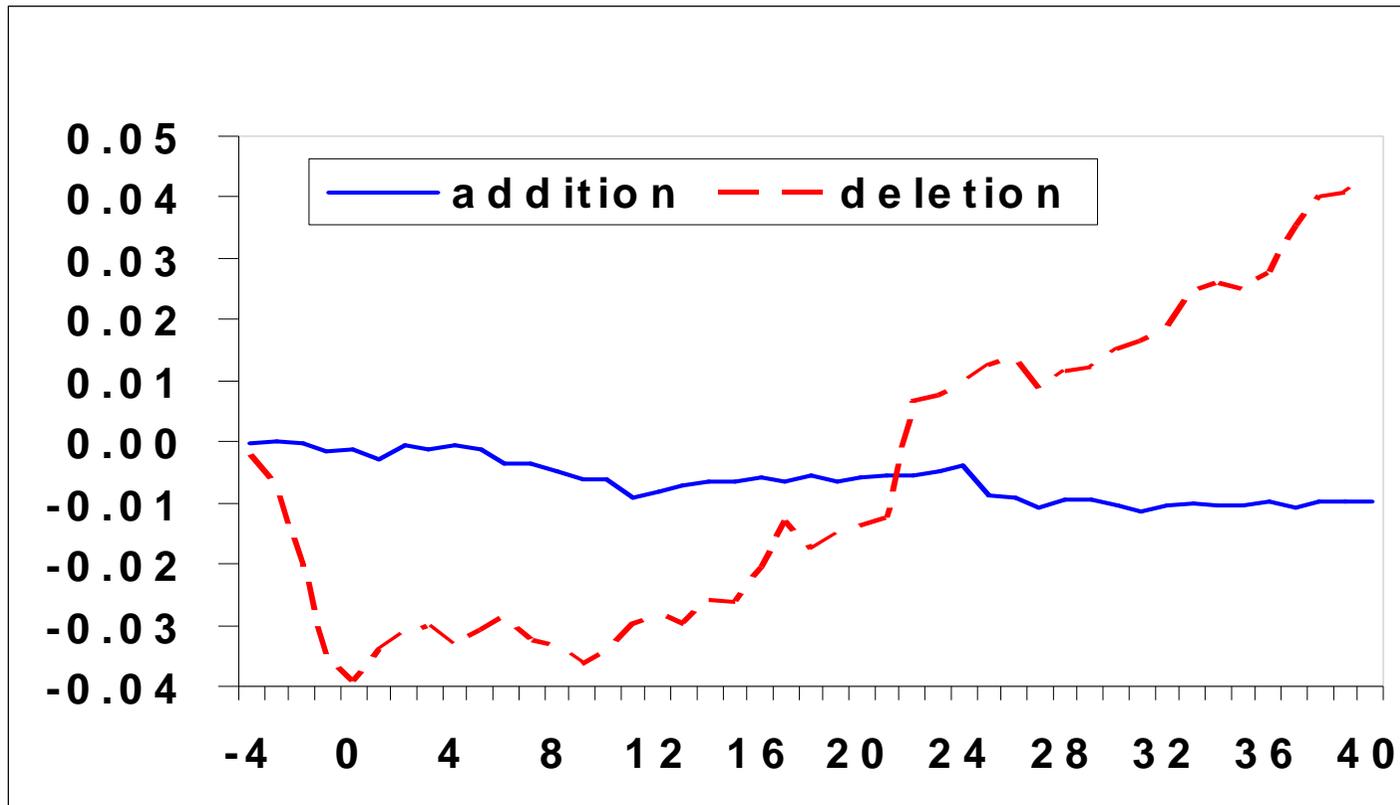
**Nota: results are statistically significant (99%) and robust after controlling for industry dummies.**

# The effect of exit from CSR in financial markets

- We collect a sample of 327 events of entries or exits from the Domini social responsibility index concerning 278 firms (27 firms have a double event of entry and exit from the index in the sample period).
- To calculate abnormal returns we use the market model under the following specification:

$$R_t - R_f = \alpha_0 + \beta_o (R_m - R_f) + \varepsilon_t$$

Deletion CARs, exhibit a sharp drop (up to 4 percent) in the proximity of the event date. The drop is reabsorbed in a period ranging between 11 and 24 days. Addition event CARs remain quite stable around zero before and after the event date.



# Conclusions

- Our main findings document that the impact of SR-related events (and, more specifically, additions and deletions from the Domini index) has risen over time and that the abnormal returns around the event date are significantly negative in case of exit from the Domini index. This result is robust to changes in the estimation window, in the event window and in the model used for estimating abnormal returns;
- Tracking the dynamics of cumulative abnormal returns after the event date we also find that the gap of deletion events tends to bridge in an interval up to 24 days when we estimate the market model and up to 90 days when we use the GARCH (p,q) multi-CAPM model.
- These findings suggest that the penalty for exit from social responsibility depends more from the reaction of ethically screened funds than from an expected negative shock on shareholders' wealth.

This interpretation is consistent with the **growth of volumes intermediated by SR funds**, with their behaviour on financial markets (violation of ethical criteria leads to selling a stock independently from its expected performance) and with the **transfer of wealth** hypothesis which argues that SR leads corporations to redirect its focus from shareholders to stakeholders maximization.

# CSR portfolio and financial performance

- Time Horizon: 1990 – 2003
- Index: DOMINI 400 Social Index  
S&P500 COMPOSITE (as benchmark for the control sample)
- Stock Price: CRSP
- This Index monitors the performance of 400 US corporations that pass multiple, broad-based social screens (CSR Criteria).
- The Domini Social Index consists of approximately 250 companies included in the Standard & Poor's 500 Index, approximately 100 additional large companies not included in the S&P 500 but providing industry representation, and approximately 50 additional companies with particularly strong social characteristics.

# Descriptive Stats on Individual Sample

Overall							
	mean	median	sd	kurt	skew	p25	p75
<i>Mean</i>	.00021	.00017	.0002	62.58	6.04	.00008	.00029
<i>Std. Dev.</i>	.01248	.01047	.0066	10.35	2.23	.00818	.01486
SR (Domini) stocks							
	mean	median	sd	kurt	skew	p25	p75
<i>Mean</i>	.00015	.00014	.0001	9.45	.97	.00007	.00022
<i>Std. Dev.</i>	.01108	.00951	.0048	6.88	1.88	.00799	.01233
Control sample (non Domini) stocks							
	mean	median	sd	kurt	skew	p25	p75
<i>Mean</i>	.00027	.00020	.0003	42.18	5.28	.00012	.00035
<i>Std. Dev.</i>	.01398	.01165	.0078	8.46	1.97	.00879	.01760

# Individual Stocks Performance

- 

## OLS

DOMINI dummy is strongly significant both on stock return and unconditional variance

## GARCH (1,1)

1. No difference in excess return.
2. Inclusion is associated to a significantly lower intercept of the conditional variance

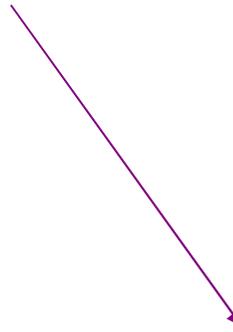
	Var(Robust)	Mean(Robust)
<i>Basic Materials</i>	-.00005	-.00004
(t)	(-1.26)	(-.62)
<i>Chemicals</i>	.00001	-.00002
	(.60)	(-.27)
<i>Consumer cyclical</i>	.00007	.00013
	(1.56)	(1.91)
<i>Energy</i>	-.00004	-.00001
	(-.84)	(-.24)
<i>Financial</i>	.00001	.00006
	(.12)	(1.10)
<i>Healthcare</i>	.00006	.00013
	(1.53)	(2.07)
<i>Industrial</i>	.00006	.00003
	(1.23)	(.50)
<i>Non Cyclical</i>	.00001	.00006
	(.25)	(.97)
<i>Technology</i>	.00024	.00010
	(3.49)	(1.19)
<i>Telecom</i>	-.00002	-.00005
	(-.45)	(-.93)
<i>Utilities</i>	-.00003	-.00004
	(-.47)	(-.81)
<i>S - Domini</i>	-.00009	-.00011
	(-3.68)	(-3.86)
<i>Cons.</i>	.00019	.00020
	(4.39)	(3.25)
<i>R<sup>2</sup> Normal</i>	.12	.07
<i>F - test</i>	5.97	10.42
(Prob > F)	0.0000	0.0000
<i>Obs.</i>	435	435

	$\beta_{0t}$	$\beta_{1t}$	$\beta_{2t}$	$\beta_{3t}$
<i>Basic materials</i>	-.0066	.00003	-.07	.02
(t)	(-.22)	(.72)	(-.76)	(.33)
<i>Chemicals</i>	.0002	.0000	.02	-.03
	(.01)	(.08)	(.25)	(-.62)
<i>Consumer cyclical</i>	-.0059	.00005	-.0003	-.004
	(-.23)	(1.35)	(-.00)	(-1.10)
<i>Energy</i>	-.0066	.00003	-.04	-.02
	(.22)	(.80)	(-.48)	(-1.40)
<i>Financial</i>	.0058	.00005	-.04	.006
	(.22)	(1.34)	(-.54)	(.12)
<i>Healthcare</i>	-.0061	.00004	-.03	-.07
	(-.23)	(1.17)	(-.41)	(-1.39)
<i>Industrial</i>	.0041	.00007	.03	-.03
	(.16)	(1.84)	(.38)	(-.62)
<i>Non Cyclical</i>	-.0058	.00005	-.01	-.01
	(-.20)	(1.25)	(-.20)	(-1.28)
<i>Technology</i>	-.0066	.00005	-.04	.006
	(-.25)	(1.46)	(-.49)	(.12)
<i>Telecom</i>	-.0065	.00003	.03	.01
	(-.20)	(.61)	(.25)	(.21)
<i>Utilities</i>	-.0053	.00005	-.04	.008
	(-.24)	(1.88)	(-.73)	(.20)
<i>S - Domini</i>	-.0015	-.00002	-.02	.03
	(-.24)	(-2.05)	(-1.80)	(1.75)
<i>Cons.</i>	.0073	-.00001	.17	.83
	(.28)	(-1.39)	(2.22)	(16.75)
<i>R<sup>2</sup></i>	.01	.02	.01	.03
<i>F - test</i>	.31	.90	.50	1.01
(Prob > F)	0.9882	0.5482	0.9166	0.4416
<i>Obs.</i>	376	376	376	376

# Descriptive Stats on Portfolio Performance

	SR portfolio	Control sample portfolio
<i>Mean</i>	.00015	.00022
<i>median</i>	.00016	.00022
<i>sd</i>	.0039	.0043
<i>kurt</i>	7.10	6.82
<i>skew</i>	-.18	-.23
<i>p25</i>	-.0017	-.0018
<i>p75</i>	.0021	.0024
<i>Std. Err.</i>	.000065	.000071
<i>Conf. Int.</i>	[.000026; .00028]	[.000085; .000365]
<i>Obs.</i>	3651	3651

Lower mean but not significantly different



The LM test on model residuals plus the excess kurtosis does not reject the hypothesis of conditional heteroskedasticity

# Portfolio Stocks Performance (1)

- Market Model

	SR portfolio	Control sample portfolio
<i>S&amp;P</i>	.81	.86
( <i>z</i> )	(142.38)	(120.67)
<i>Conf. Int.</i>	[.799;.821]	[.843;.877]
<i>Cons.</i>	.000046	.000110
( <i>z</i> )	(1.80)	(3.45)
<i>Adj. R<sup>2</sup></i>	.85	.80
<i>F – test</i>	20273.20	14562.22
( <i>Prob &gt; F</i> )	0.0000	0.0000
<i>Obs.</i>	3651	3651

Significant difference between the two portfolio in terms of Betas. No other differences

- GARCH Model

Stronger effect in the second sub-period

	1990-2003		1997-2003	
	SR portfolio	Control sample portfolio	SR portfolio	Control sample portfolio
$\theta_{1t}$	.80	.84	.77	.84
( <i>z</i> )	(193.76)	(140.80)	(141.95)	(113.47)
<i>Conf. Int.</i>	[.8016;.8180]	[.8283;.8517]	[.7677;.7892]	[.8324;.8616]
$\beta_{0t}$	.00006	.00012	.00006	.00014
( <i>z</i> )	(2.97)	(4.38)	(1.75)	(3.08)
<i>ARCH :</i>				
$\beta_{2t}$	.10	.07	.11	.09
( <i>z</i> )	(13.14)	(8.81)	(7.40)	(6.86)
$\beta_{3t}$	.86	.88	.84	.83
( <i>z</i> )	(109.95)	(62.79)	(39.20)	(33.85)
$\beta_{1t}$	7.34e-08	1.60e-07	1.42e-07	2.86e-07
( <i>z</i> )	(10.79)	(5.25)	(4.39)	(4.16)
<i>Wald <math>\chi^2</math></i>	37544.16	19825.51	20149.86	12875.06
( <i>Prob &gt; <math>\chi^2</math></i> )	0.0000	0.0000	0.0000	0.0000
<i>Obs.</i>	3651	3651	1825	1825

# Portfolio Stocks Performance (2)

- APARCH Model

	1990-2003		1997-2003	
	SR portfolio	Control sample portfolio	SR portfolio	Control sample portfolio
$\psi_1$	.80	.83	.77	.84
(z)	(183.23)	(140.09)	(133.97)	(111.91)
<i>Cons.</i>	.00006	.00011	.00005	.00013
(z)	(2.58)	(3.44)	(1.31)	(2.70)
$\phi_1$	.13	.06	.08	.04
(z)	(8.14)	(3.86)	(3.78)	(1.80)
<i>ARCH :</i>				
$\gamma_1$	.09	.06	.09	.08
(z)	(13.80)	(7.43)	(6.69)	(5.19)
$\delta$	1.32	1.53	2.12	2.01
(z)	(9.13)	(8.86)	(7.99)	(4.01)
<i>Wald <math>\chi^2</math></i>	33574.89	19637.62	18104.32	12526.07
( <i>Prob &gt; <math>\chi^2</math></i> )	0.0000	0.0000	0.0000	0.0000
<i>Obs.</i>	3651	3651	3651	3651

# The Picture from the Results

- Individual SR stocks have on average significantly lower returns and unconditional variance than control sample stocks when controlling for industry effects.

This result is paralleled by descriptive evidence on the lower (daily return) mean and variance of the buy-and-hold strategies on the SR portfolio with respect to those on the control portfolio.

- We also found :
  - i) individual SR stocks are significantly less risky when controlling for conditional heteroskedasticity;
  - ii) there are no significant differences in risk adjusted returns between the two buy and hold strategies on (SR and control sample) portfolios;
  - iii) the buy-and-hold strategies on the SR portfolio exhibits significantly lower exposition to systematic nondiversifiable risk. These last findings are robust to different – market model, GARCH(1,1), APARCH(1,1) - model specifications.

# Survey of other studies

- Twenty studies reviewed,
- ten showed evidence of a positive relationship between ESG factors and portfolio performance, seven reported a neutral effect and three a negative association.
- The results vary depending on the research methods used, and some of the studies still refer to a relatively short sample period that makes statistical analysis difficult to interpret.
- While the results vary depending on the factor being studied, the region and the sample period, the evidence suggests that there does not appear to be a performance penalty from taking ESG factors into account in the portfolio management process.
- Studi che partono da più indietro nel tempo tendono a mostrare effetti negativi. Studi più recenti indicano effetti positivi
- Come applicare principio indeterminazione di Eisenberg a questi risultati ?

# Environmental factors

- Derwall et al. (2005): the benefits of considering environmental criteria in the investment process can be substantial and are statistically significant.
- Van de Velde et al. (2005): companies with high sustainability ratings tend to have a positive impact on alpha, although sustainable portfolios were found to be highly sensitive to style biases.

# Social factors

- The academic papers to date have tended to measure the 'social' effects on performance in terms of 'sin' stocks and the impact of screening out such exposures (e.g., tobacco, arms, sex industry).
- Some of these studies have found a negative effect (e.g., Chong et al., 2006; Geczy et al., 2005; Hong & Kacperczyk, 2006), while others have found a positive effect (e.g., Statman, 2000; 2006).
- Future academic studies that measure the impact of including social factors into company valuations (as opposed to screening) will help to measure the value added of social factors such as a company's relationship with its stakeholders, supply chain management, health and safety, customer satisfaction, labour relations and working conditions.
- Many of these factors already feature as components of strategic management at the company level, but are often overlooked in the appraisal of long-term shareholder value within the investment community.

# Corporate governance factors

- The academic evidence evaluating the impact of good corporate governance on company and portfolio performance suggests that there is a positive relationship between the two, although it is not always straightforward to demonstrate this statistically or to isolate the effects from other 'factors'.
- Gompers et al. (2003): good corporate governance was strongly correlated with stock returns during the 1990s.
- Opler & Sokobin (1995): coordinated shareholder activism is effective in bolstering returns;
- Smith (1996): when activism is successful in changing a company's governance structure, then it can result in a significant increase in shareholder wealth.

# CSR and analysts forecasts

- Absolute earning forecast error and variance is higher for low than for high CSR firms
- The effect is driven mainly by KLD CRS concerns

# CSR and stock market efficiency

Top 20 % CSR Firms on Constraints									
TEST	$\alpha$	$\beta_1$	$\beta_2$	$[\alpha = 0, \beta_1 = 1]$	$[\alpha = 0]$	$[\beta_1 = 0]$	$[\beta_2 = 0]$	Regressors	Controls
1	0.0014 (0.0063)	0.9617*** (0.0875)	-	0.84	0.05	0.1901	-	1, $E[EPS]_{T,h}^{i,j}$	NO
2	0.0027 (0.0075)	0.8393*** (0.1118)	-	1.42	0.13	2.07	-	1, $E[EPS]_{T,h}^{i,j}$	YES
3	-0.0038 (0.0024)	1.0159*** (0.0244)	0.0001 (0.0007)	1.29	2.55	0.43	0.01	1, $E[EPS]_{T,h}^{i,j}$ , $E[EPS]_{T-1,h}^{i,j}$	NO
4	-0.0028 (0.0091)	0.9468*** (0.0332)	-0.0006 (0.0006)	1.3	0.1	2.56	1.15	1, $E[EPS]_{T,h}^{i,j}$ , $E[EPS]_{T-1,h}^{i,j}$	YES
5	-0.0028 (0.0018)	1.0179*** (0.02449)	-0.0984 (0.0864)	1.83	2.48	0.54	1.30	1, $E[EPS]_{T,h}^{i,j}$ , $FE_{T-1}^j$	NO
6	-0.0039 (0.0088)	0.9405*** (0.0327)	0.0316 (0.0479)	1.76	0.19	3.32*	0.44	1, $E[EPS]_{T,h}^{i,j}$ , $FE_{T-1}^j$	YES
7	-0.0029* (0.0017)	1.0122*** (0.0239)	-0.0861 (0.0738)	2.45*	2.92*	0.26	1.36	1, $E[EPS]_{T,h}^{i,j}$ , $FE_{T-1}^j$	NO
8	-0.0320*** (0.0067)	0.9269*** (0.0363)	0.0301 (0.0389)	15.53***	22.88***	4.06**	0.60	1, $E[EPS]_{T,h}^{i,j}$ , $FE_{T-1}^j$	YES

# Conclusions

- Corporate Social Responsibility has been generally considered in the literature as something unconventional with respect to mainstream financial theory postulating maximization of shareholders wealth and supporting the efficient market hypothesis.
- CSR seems indeed to bring markets closer to efficiency since it significantly reduces the earning forecast bias and the variability of analysts' forecasts.

# More on...[www.repec.org](http://www.repec.org)

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