

Do financial markets care about SRI? Evidence from M&As

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Outline

- I. Introduction
- II. Research question and hypothesis
- III. Data and methods
- IV. Findings
- V. Additional checks

The SRI market

- Socially Responsible Ivestment (SRI)
 - ‘An investment process that considers the social and environmental consequences of investments, both positive and negative, within the context of rigorous financial analysis.’
- Important development of the SRI market in U.S.
 - Assets in SRI portfolios have increased by more than **324%** (from \$639 billion in 1995 to \$2.71 trillion in 2007)
 - Total assets under professional management increased by less than **260%** (\$7 trillion to \$25.1 trillion)
- The same trend appears in Europe

Motivation

- The rapid development of the SRI market has also attracted interest from the academic community
- Empirical results are mixed
 - **Investors get a premium**
 - Derwall, Guenster, Bauer and Koedijk (2005) argue that SRI improves portfolio performance
 - **No impact on performance**
 - Bauer, Koedijk and Otten (2005) report that SRI funds in the U.S. and U.K. yield the same risk-adjusted return, on average, as traditional funds
 - **Investors pay a price for ethics**
 - Renneboog, Ter Horst and Zhang (2008) show that SRI funds underperform their domestic benchmarks by -2.2% to -6.5% per annum
- Value effects of SRI for shareholders remain largely open

Motivation

- We use the merger and acquisition (M&A) setting to shed a new light on this question
 - We focus on listed acquirers and measure wealth effects of investment decisions using stock market reactions
 - Then, we assess whether the target's social and environmental performance is related to the acquirer gains
- Benefit of the M&A framework
 - In M&A transactions, the investor is a company
 - So, acquirer stock price reactions to the announcement of an investment decision provides a direct measure of the gain associated with the decision
 - The M&A framework suffers less from an endogeneity issue between environmental and financial performance

Main results

- We confirm that SRI is value creating for shareholders
 - Acquirer abnormal returns are positively associated with targets' social and environmental performance
- The gain is economically substantial
 - An increase in the target rating by one unit (over a 7-unit scale), leads to an abnormal gain of 1.2%.
 - For an acquirer worth \$100 million in equity, this represents a dollar gain of \$1.2 million.
- We also show that acquirer's positive gain does not stem from a lower premium paid to target shareholders

Research question

- Research on acquirer abnormal return determinants is expansive
 - Most important determinants are the *payment means*, the *target's status*, the *relative size* of the deal, ...
- We propose adding a novel determinant to this list
 - The target's ability to cope with social and environmental risks (i.e., social and environmental performance of the target)
- If SRIs are value creating decisions, acquirer abnormal returns should have a positive relationship with the target's social and environmental performance

Research question

- SRI could be value creating because increased social and environmental performance can
 - Enhance a firm's input-output efficiency
 - Improve employee and customer satisfaction
 - Generate new market opportunities
 - Signal management quality
 - Enhance a firm's standing with financial market participants and governments
- Acquiring a socially responsible firm could be a signal about willingness to increase or maintain social and environmental screening and manage social and environmental risks
- Therefore, we hypothesize

a positive relation between acquirer gain and the target's social and environmental performance

Social and environmental performance

- We use the Intangible Value Assessment (IVA) rating from Innovest
 - It is a composite measure of 120 performance factors
- We use also two specific components of the IVA score: the environmental and social ratings
- Several recent articles use Innovest's ratings
 - Becker and Gluck (2004)
 - Derwall, Guenster, Bauer and Koedijk (2005)
 - Ringov and Zollo (2007)
- Ours is the first study to use Innovest ratings as potential determinants of M&A wealth effects

Social and environmental performance

TABLE I
Description of Innovest ratings

Notation	Description
AAA	A company with minimal, well-identified environmental/social risks and liabilities, and with a strong ability to meet any losses which might materialize. Extremely well-positioned to handle any foreseeable tightening of regulatory requirements, and strongly positioned strategically to capitalize on environmentally/socially-driven profit opportunities.
AA	A company with environmental/social risks and liabilities which have been well-identified and provided for. This position is unlikely to be impaired by any foreseeable tightening of regulatory requirements. The company is well-positioned strategically to capitalize on environmentally/socially driven profit opportunities.
A	A company with large but well-identified environmental/social risks and liabilities, and sufficient financial and managerial strength to absorb all but exceptional risks. Able, also, to finance any currently proposed regulatory requirements. Above average positioning with respect to profit opportunities.
BBB	A company with strong managerial capability, but one where environmental/social risks and liabilities are a potential source of loss, though not on any material scale. Average level of positioning vis a vis profit opportunities.
BB	A company with good managerial capability, but one where environmental/social risks and liabilities are a potential source of material loss. Below-average level of strategic positioning.
B	A company whose environmental/social risks and liabilities create a strong likelihood of material losses in both profitability and competitive position. Significantly below-average strategic positioning.
CCC	A company where there are significant doubts about management's ability to handle its environmental/social risks and liabilities, and where these are likely to create a serious loss. Well below-average ability to capitalize on environmentally/socially-driven profit opportunities.

Source: Innovest Strategic Value Advisors, IVA Methodology, Year 2007.

M&A announcements

- M&A sample from the Thomson SDC database
 - Completed deals announced between 2000 and 2007
 - Deal size greater than \$1 million
 - Percentage held by the acquirer after the deal equal to 100%
 - Innovest ratings available for the target
- Our sample includes 117 different deals for which we have at least one of the three Innovest ratings for the target

TABLE II
Sample distribution by announcement year

Year	Number of deals	Proportion
2000	7	5.98%
2001	3	2.56%
2002	2	1.71%
2003	5	4.27%
2004	9	7.69%
2005	32	27.35%
2006	36	30.77%
2007	23	19.66%
Total	117	100.00%

Abnormal stock performance

- Acquirer gain (abnormal return) is measured using standard event study method
 - $\text{Abnormal return} = \text{actual return} - \text{predicted return}$

TABLE V
Abnormal returns

	Acquirer CAR (N=117)	Target CAR (N=112)	Deal CAR (N=112)
Average	-0.87%	9.25%	1.30%
<i>T</i> -stat	-2.01	7.03	2.37
<i>p</i> -value	0.04	0.00	0.02

Do socially responsible investments pay?

- Multivariate analysis

TABLE VI

Multivariate regression analyses: The variable of interest is the rating of the target

Panel A. Dependent variable: acquirer CAR

	IVA (N=70)		ENV (N=84)		SOC (N=82)	
	coef	<i>p-value</i>	coef	<i>p-value</i>	coef	<i>p-value</i>
Targetrating	0.012	0.07	0.012	0.02	0.007	0.08
<i>Control variables</i>						
Deal size	-0.023	0.11	-0.010	0.22	-0.017	0.12
Relative size	0.008	0.19	0.008	0.14	0.010	0.13
Cash	0.029	0.06	0.029	0.02	0.029	0.04
Related	0.023	0.07	0.025	0.03	0.022	0.06
Cross-border	-0.019	0.11	-0.017	0.09	-0.014	0.18
Number of bidders	0.007	0.37	0.000	0.52	0.007	0.34
Control transaction	-1E-4	0.52	-0.017	0.15	-0.010	0.29
Fisher statistic	1.86	0.06	2.25	0.02	1.71	0.08
Adjusted R ²	13.18%		15.77%		9.49%	

Panel B. Dependent variable: target CAR

	IVA (N=69)		ENV (N=83)		SOC (N=81)	
	coef	p-value	coef	p-value	coef	p-value
Target rating	0.012	0.10	0.005	0.31	0.011	0.09
<i>Control variables</i>						
Deal size	-0.062	0.00	-0.052	0.00	-0.057	0.00
Relative size	-0.013	0.21	-0.033	0.11	-0.039	0.08
Cash	0.044	0.17	0.058	0.06	0.053	0.07
Related	-0.019	0.20	-0.003	0.47	-0.003	0.46
Cross-border	0.038	0.20	0.020	0.35	0.022	0.35
Number of bidders	-0.023	0.19	-0.022	0.14	-0.021	0.15
Control transaction	0.126	0.02	0.128	0.00	0.131	0.00
Fisher statistic	2.24	0.02	2.06	0.03	2.05	0.03
Adjusted R ²	18.45%		13.69%		13.92%	

Panel C. Dependent variable: deal CAR

	IVA (N=69)		ENV (N=83)		SOC (N=81)	
	coef	p-value	coef	p-value	coef	p-value
Target rating	0.007	0.12	0.008	0.05	0.005	0.12
<i>Control variables</i>						
Deal size	-0.032	0.03	-0.020	0.04	-0.023	0.03
Relative size	0.037	0.01	0.034	0.03	0.034	0.01
Cash	0.025	0.04	0.026	0.02	0.025	0.03
Related	0.018	0.15	0.018	0.12	0.016	0.14
Cross-border	0.002	0.44	0.001	0.46	0.004	0.39
Number of bidders	-0.007	0.36	-0.005	0.34	-0.002	0.42
Control transaction	0.021	0.11	0.010	0.20	0.013	0.15
Fisher statistic	2.14	0.03	2.28	0.01	2.01	0.03
Adjusted R ²	17.24%		16.25%		13.38%	

Additional checks

- Other scholars argue that social and environmental responsibility might be achieved only to the detriment of shareholders
 - Adopting ethical or higher social and environmental standards will translate into higher costs, which negatively affects the competitiveness and profitability of the firm
- The positive coefficient of target rating in the CAR regression could be also compatible with SRI being value destroying for shareholders
 - Value creation could stem from disciplinary motive underlying the takeover
 - i.e., financial markets appreciate the sanctioning of targets having wasted too much resources in SRI activities
- Our aim is to check whether this disciplinary explanation is at work in our sample

Test 1

If the wealth creation comes from sanctioning SRI intensive companies then on average we should observe SRI intensive targets being bought more often by less SRI aware acquirer in our sample.

TABLE VII
Two-entry table to compare acquirer and target IVA ratings

		Acquirer							Total
		AAA	AA	A	BBB	BB	B	CCC	
Target	AAA	3	0	0	1	0	0	0	4
	AA	1	0	2	1	0	0	0	4
	A	2	3	3	3	0	0	1	12
	BBB	0	5	2	3	2	2	1	15
	BB	1	5	1	4	3	3	3	20
	B	1	3	0	1	1	0	0	6
	CCC	1	0	0	0	1	2	0	4
	Total	9	16	8	13	7	7	5	65

- Only in 29% of the deals the rating of the target is higher than the rating of the acquirer
- This proportion is statistically less than 50%
- This simple univariate test is not consistent with the disciplinary argument

Test 2

Finally, we study the evolution of the acquirer's rating after the deal.

- After acquiring a better target, the IVA rating of the acquirer never declines, but it improves in 33% of the 48 cases.
- For the ENV rating, negative revision occurs in 21% of the cases, compared with 31% positive revisions among the 69 cases.
- Finally, for the SOC rating, out of 66 cases, we find only 10% negative revisions for the acquirers to be compared to 45% for positive revisions.

- These additional analyses prompt us to reject the idea that the value creation for acquirer shareholders originates in the disciplinary acquisition of targets that are over invested in SRI
- Our results support the idea that socially responsible investing pays for acquirer shareholders, at least within our M&A framework.

Conclusion

- Relying on an original empirical framework, we analyze whether SRI benefits shareholders
- Our findings suggest that acquirer gains relate positively to the target's ability to cope with social and environmental risks and more synergistic deals occur with targets that exhibit better environmental performance
- Furthermore, we provide some evidence that our sample of M&A deals is not driven by disciplinary motives

APPENDIX

M&A announcements

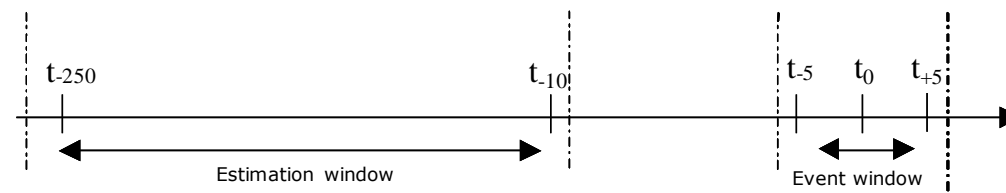
TABLE III
Sample of M&As with available social and environmental performance ratings

	Bidder			Target		
	IVA	ENV	SOC	IVA	ENV	SOC
AAA	13	20	16	5	7	6
AA	21	17	25	7	5	11
A	16	19	21	16	17	13
BBB	17	20	19	23	31	32
BB	9	18	9	27	29	24
B	9	14	10	15	21	18
CCC	8	8	12	5	7	9
Total	93	116	112	98	117	113

Notes: IVA = Intangible Value Assessment, ENV = environmental rating, SOC = social rating. Sample period 2000–2007.

Abnormal stock performance

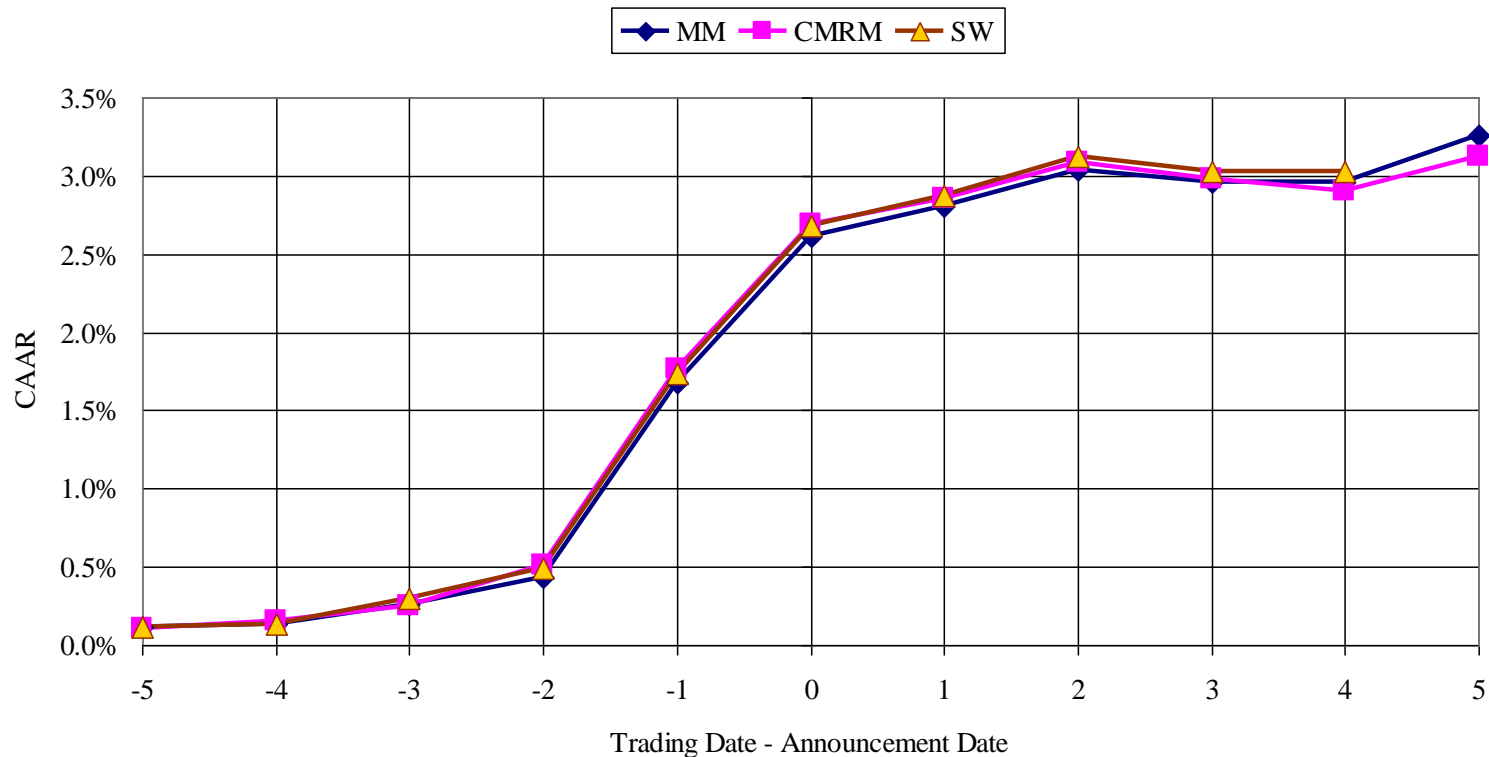
- Since Fama, Fisher, Jensen and Roll (1969) the accepted method for isolating the impact of a particular event on market valuations is the **event study**
 - Price-based event studies originally designed to test market efficiency
 - **Informational efficiency:** Speed and accuracy with which prices reflect new info.
 - In the mid-1970s emergence of « value event studies »
 - Aim is to examine the impact of events on the market value of companies, implicitly assuming that financial markets are efficient (valuation tool)
- Measure of abnormal stock performance
 - First step: Estimation of a normal return model
 - $R_{j,t} = \alpha_j + \beta_j R_{M,t} + \varepsilon_{j,t}$
 - Second step: Computation of the abnormal return
 - $AR_{j,t} = R_{j,t} - (\alpha_j + \beta_j R_{M,t})$



Abnormal stock performance

- Robustness of the short term event study approach to chosen return generating process

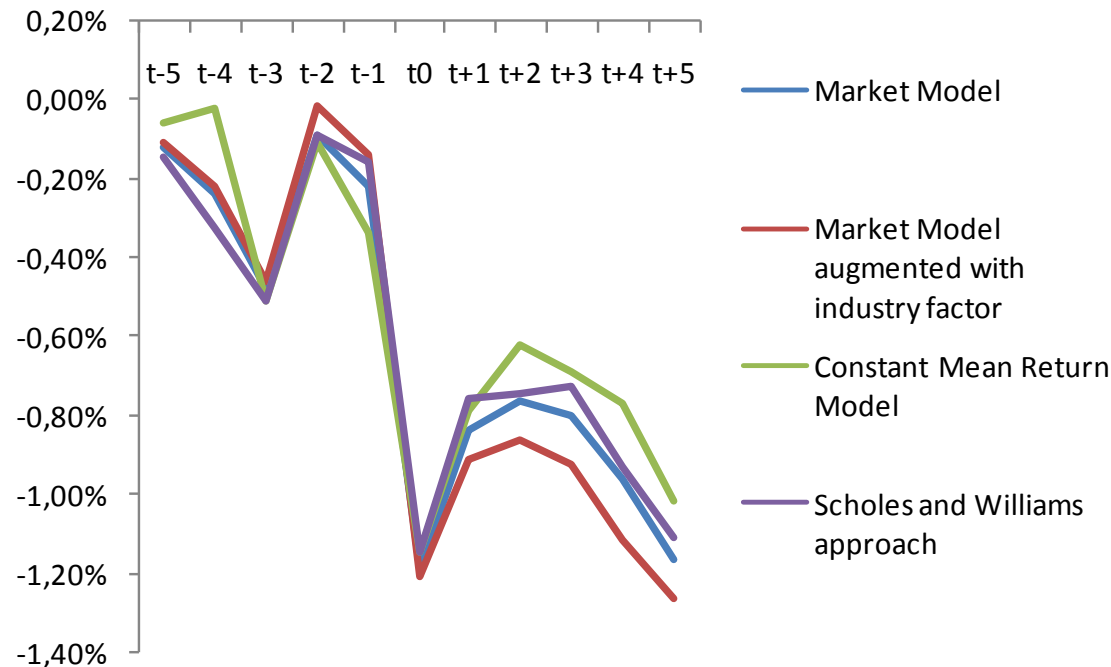
Panel A. Initial Announcement of Combination, All Firms, US\$, Local Indexes



Source: Aktas, de Bodt, and Roll (2004)

Abnormal stock performance

- Robustness of the short term event study approach to chosen return generating process



Takeover premium

Appendix – Multivariate analysis of takeover premium

Dependent variable: the takeover 1-week premium

	IVA (N=70)		ENV (N=84)		SOC (N=82)	
	coef	<i>p-value</i>	coef	<i>p-value</i>	coef	<i>p-value</i>
Target Rating	9E-05	0.45	-0.005	0.38	0.012	0.15
<i>Control variables</i>						
Deal size	0.036	0.28	0.032	0.29	0.032	0.31
Relative size	0.018	0.35	-0.019	0.34	-0.031	0.25
Cash	0.119	0.02	0.118	0.01	0.109	0.01
<u>Related</u>	0.009	0.45	0.016	0.37	0.020	0.35
Cross-Border	0.028	0.27	0.036	0.21	0.039	0.20
Number of Bidders	0.193	0.11	0.205	0.10	0.201	0.10
Control transaction	0.052	0.39	0.071	0.34	0.056	0.36
Fisher	0.058	0.38	-0.029	0.44	-0.042	0.40
Adjusted R ²	10.65%		11.21%		10.20%	