

Do investors value ethical companies?

The brief answer, as reported at the Financial Services Forum, is apparently not.

Previous Research

Whilst there has not been a lot of previous academic research, that which has been done has either looked at the return on corporations rated as 'ethical' or examined the performance of investment trusts that invested in 'ethical assets'.

There have been several issues with the previous research. Firstly, the definition of what is an ethical company or asset is not universally agreed and secondly, when portfolios are examined, their construction involves issues other than just ethical considerations, so it is not clear what the analysis is indicating. Thirdly, the major flaw is that most research has looked at total return relative to some benchmark but this then includes a multitude of reasons for excess return, not just ethical issues.

The following table summarises the relationship between performance and ethically selected companies/ assets as reported in finance journals over the last 30 years and as can be seen the results vary significantly:

Period	Positive relationship	Inconclusive relationship	Negative relationship
1970s	12/17	4/17	1/17
1980s	14/35	5/35	16/35
1990s	7/10		3/10

Whilst the previous analysis has reported some positive relationships (ie it was perceived that there was some return from the ethical investments), I am of the view that most had flawed methodology that raises questions as to the validity of the results.

Our Methodology

This research was carried out in conjunction with Dr Guido and an honours student at UNSW Maria Guido and will be more fully reported in forthcoming journals.

To overcome the perceived methodological issues with previous analysis we:

- (i) obtained a database of international equities that had

- been selected by a research house based solely on the companies' rankings on what seemed to us as detailed and reasonable ethical issues. The database consisted of 90 global securities with a history from 1998 through 2003.

- (ii) constructed portfolios of these ethically-selected securities using both equal weighting and market capitalisation weighting.

- (iii) regressed the returns of the ethical portfolios against traditional Fama French capital market factors.

The purpose of this methodology was to:

- (i) eliminate extraneous portfolio construction factors to manage tracking error risks against benchmarks.
- (ii) eliminate the traditional capital market factors of big vs small capitalisation and growth vs value.

We argue that if the portfolios still demonstrated superior returns then it would be reasonable to deduce that there was some value placed on 'ethical' issues by investors.

Our Results

The basic statistical analysis indicated:

	Ethical Securities Ave. Monthly Returns	MSCI Securities Ave. Monthly Returns
Mean	0.0052	-0.0029
Standard Deviation	0.0690	0.0526
Kurtosis	-0.7208	-0.2772
Skewness	-0.1782	0.0120

This simple analysis would suggest that ethical securities did add value relative to the universe of global securities but with a greater propensity for monthly returns to be below the average.

We then examined whether the performance of ethical securities could be accounted for by other capital market factors. This was achieved by utilising a Fama French 3-factor model.

We constructed six benchmark portfolios (small value, medium value, big value, small growth, medium growth and big growth) for each of the 17 markets over which the ethical securities were spread. These portfolios then formed the basis of the factor mimicking portfolios, SMB and HML. With the domestic excess market returns SMB and HML portfolios formed, global factors were constructed by value weighting each of the domestic risk factors according to their MSCI country index market value. Three types of test statistics were utilised in this factor analysis. These were the finite sample GRS test introduced by Gibbons, Ross and Shanken (1989), the Wald test under the GMM framework by MacKinlay and Richardson (1991) using small sample corrected p-values by bootstrapping the test statistic as shown in Fisher and Sim (1995) and an alpha inequality test outlined in Boudoukh, Richardson and Smith (1993).

The GRS, GMM, p-value and Wald test for the securities grouped by country are shown in the following table:

T1 – Fama French Risk Analysis For Each Country				
Country (No. of Securities)	GRS	GMM	Empirical P-value	Inequality Wald Test
DKK (4)	0.8285 (0.5128)	8.0990* (0.0800)	0.9580	1.0674e-004 (0.8629)
BEF (4)	1.1836 (0.3282)	675.4834*** (0.0000)	0.1800	0.0013 (0.9480)
FIM (2)	1.2665 (0.2896)	0.1112 (0.9459)	0.7990	1.4590e-005 (0.5925)
DEM (15)	0.5479 (0.8974)	347.2886*** (0.0000)	0.8510	2.7659e-004 (1.0000)
GBP (10)	0.5025 (0.8800)	28.8871*** (0.0013)	0.9200	7.0337e-004 (0.9989)
ITL (2)	0.6430 (0.5295)	12.1308*** (0.0023)	0.6530	7.7518e-005 (0.7864)
CHF (3)	0.3112 (0.8172)	0.5868 (0.8995)	0.6960	0.0028 (0.9516)
ESP (2)	0.2961 (0.7449)	1.4102 (0.4941)	0.6730	2.1696e-004 (0.6750)
NOK (1)	0.5897 (0.4457)	1.0684 (0.3013)	0.5040	1.0993e-005 (0.4827)
FRF (3)	0.3388 (0.7974)	4.3873 (0.2226)	0.3850	1.2595e-005 (0.7707)
SEK (1)	0.6077 (0.4388)	0.5694 (0.4505)	0.6250	2.8159e-005 (0.4780)
NLG (2)	0.2329 (0.7930)	4.0172 (0.1342)	0.6300	1.1646e-004 (0.6257)
JPY (11)	0.5349 (0.8697)	13.6667 (0.2520)	0.9010	1.5657e-004 (1.0000)
AUD (3)	0.2939 (0.8296)	3.3947 (0.3347)	0.5860	2.9414e-005 (0.9103)
NZD (1)	1.0254 (0.3155)	0.6100 (0.4348)	0.6710	7.5590e-005 (0.5253)
USD (27)	1.0071 (0.4883)	175.0936*** (0.0000)	0.9950	0.0011 (1.0000)
CAD (6)	0.6315 (0.7043)	364.2287*** (0.0000)	0.7130	3.4377e-005 (0.9897)

***, ** and * indicates significance at the 1%, 5% and 10% level respectively.

It can be seen from table T1 that under the GRS test, alphas are not significantly different to zero across all 17 countries and the inequality test statistics across all 17 countries cannot reject the null hypothesis, which implies the investment of sustainable securities would not significantly cost investors.

A global factor analysis was also carried out on individual country portfolios. It should be noted that grouping sustainable securities into country portfolios for the factor analysis controls for the country risk factor in addition to the size and book to market risk factors. These results are presented in table T2, where it can be seen that under the GRS test only Finland is able to find a significant alpha out of 17 countries. The other 16 countries cannot reject the hypothesis that alpha is insignificantly different from zero.

T2 – Global Fama French Risk Analysis For Each Country				
Country (No. of Securities)	GRS	GMM	Empirical P-value	Inequality Wald Test
DKK (4)	0.7615 (0.5548)	11.0433** (0.0261)	0.9580	2.1361e-004 (0.9761)
BEF (4)	1.3738 (0.2550)	118.6087*** (0.0000)	0.6080	0.0039 (0.8777)
FIM (2)	3.2183 (0.0474)	0.6213 (0.7330)	0.7770	6.8821e-005 (0.6258)
DEM (15)	0.7656 (0.70614)	19.3530 (0.1982)	0.8870	0.0029 (1.0000)
GBP (10)	0.4514 (0.9126)	19.5294** (0.0340)	0.9490	0.0011 (0.9988)
ITL (2)	0.6280 (0.5373)	1.9123 (0.3844)	0.6730	9.2646e-006 (0.5018)
CHF (3)	0.1771 (0.9115)	0.3339 (0.9535)	0.7540	0.0126 (0.9496)
ESP (2)	0.2619 (0.7705)	1.7976 (0.4071)	0.6560	1.7412e-004 (0.6251)
NOK (1)	0.2122 (0.6468)	0.2205 (0.6386)	0.7170	6.6875e-006 (0.4870)
FRF (3)	0.2466 (0.8634)	2.3450 (0.5040)	0.4320	2.1113e-004 (0.7796)
SEK (1)	0.0021 (0.9634)	0.0025 (0.9599)	0.9670	7.8145e-008 (0.4809)
NLG (2)	0.5505 (0.5797)	7.9405** (0.0189)	0.3680	4.0539e-005 (0.6354)
JPY (11)	0.7299 (0.7046)	9.1656 (0.6066)	0.9550	2.5928e-004 (1.0000)
AUD (3)	0.4036 (0.7510)	1.5036 (0.6814)	0.8010	2.2386e-005 (0.7823)
NZD (1)	1.5703 (0.2152)	0.9021 (0.3422)	0.6800	1.2453e-004 (0.5114)
USD (27)	1.0575 (0.4362)	127.5316*** (0.0000)	0.9940	0.0025 (1.0000)
CAD (6)	0.5014 (0.8045)	16.4604** (0.0115)	0.9280	1.5445e-004 (0.9934)

***, ** and * indicates significance at the 1%, 5% and 10% level respectively.

As well as the global factor analysis carried out on individual countries, analysis for individual sectors was carried out.

As before, a joint test of the significance of alphas was carried out for all sectors under the global Fama French risk factors and the results are shown in table T3 on the following page.

The GRS test statistics cannot reject the null hypothesis, whereas the GMM test did show a strong rejection.

The empirical p-value observed supports the GRS statistic, which suggests the GMM test statistic may suffer from small sample bias and should be disregarded.

For the inequality test, it also showed that there is a high probability that alphas are insignificantly different from zero.

T3 – Joint Test of Alphas Under Global Fama French Factors (Sectors)

Assets (No. of Securities)	GRS	GMM	Empirical P-value	Inequality Wald Test
All Sectors (10)	0.7885 (0.6396)	621.5074*** (0.0000)	0.3710	1.2188e-004 (1.0000)

***, ** and * indicates significance at the 1%, 5% and 10% level respectively.

Consistent with the factor analysis on countries, a global factor analysis was also carried out on individual sectors, so that it in addition to the global risk factors of size and book to market the industry sector risk is also controlled. These results are presented below:

T4 – Global Fama French Risk Analysis For Each Sector

Sector (No. of Securities)	GRS	GMM	Empirical P-value	Inequality Wald Test
Consumer Discretionary (Da, auto, hotel, media, retail) (16)	1 (0.5000)	1581.1*** (0.0000)	0.9000	0.0069 (1.0000)
Consumer Staples (food, drugs, household) (11)	1.1913 (0.3183)	32.4520*** (0.0006)	0.7630	4.3311e-004 (1.0000)
Energy (2)	0.5278 (0.5928)	2.0070 (0.3666)	0.6990	3.7607e-006 (0.7802)
Financials (13)	0.6932 (0.7597)	46.4114*** (0.0000)	0.7520	8.3015e-004 (1.0000)
Health Care (9)	0.2575 (0.9829)	11.8390 (0.2225)	0.7310	0.0021 (0.9999)
Industrials (17)	0.4699 (0.9531)	35.3412*** (0.0056)	0.9390	0.0062 (1.0000)
Information Technology (14)	0.6404 (0.8167)	262.1524*** (0.0000)	0.8360	0.0013 (1.0000)
Materials (8)	0.9494 (0.4853)	398.0765*** (0.0000)	0.6870	0.0190 (0.9996)
Telecommunication (3)	0.1911 (0.9020)	0.1662 (0.9829)	0.8940	4.6794e-004 (0.8477)
Utilities (4)	0.4676 (0.7592)	6.9504 (0.1385)	0.9410	0.0054 (0.9257)

***, ** and * indicates significance at the 1%, 5% and 10% level respectively.

The results obtained show that under the GRS test, all 10 sectors reject the hypothesis that alpha is significantly different from zero. Although the GMM test statistic is inconclusive with respect to the null hypothesis, the empirical p-values again indicate insignificance. Together, they indicate that the test statistic offered under the GMM Wald test may be inaccurate due to the small sampling biases.

Constraints on the Results

Whilst the analysis has eliminated other causes of excess returns for the securities and has not been polluted by portfolio construction issues, there remain the following problems:

- The database used is from one research house only;
- The number of securities tracked is small; and
- The period of tracking is short.

All of these issues are then constraints on the extrapolation of the results to a universal statement with respect to the existence of an ethical factor along the lines of other Fama French factors that seem reasonably well-established.

Conclusion

Subject to the qualifications detailed, the results would indicate that:

- there is no 'ethical' factor similar to other capital market factors that drive security returns and thus the conclusion would be that the capital markets are not valuing superior ethical practices in corporations
- there is no reason to believe that if an ethical filter is used in the selection of securities that the securities selected will underperform the broad markets, ie there is no 'cost' in return terms to being 'ethical'

Post script

The results of this analysis would seem at odds with community attitudes around the world, with the recent collapses of HIH, Enron, Parmalat and World Com from unethical behaviour resulting in major reactions by regulators and governments; why is it that we are so distressed by unethical behaviour but do not apparently value ethical behaviour?

Is it just that most companies are seen or are expected to be following generally accepted ethical behaviour by investors and that better than average is not rewarded? ▲

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